

A Programmer's Guide to Video Display Terminals

STEPHENS

by David Stephens



ATLANTIS PUBLISHING CORPORATION

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**David Stephens**

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DALLAS

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# Preface

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When computers first began to appear the principal input/output device used was the Teletype®. This machine had long been used for sending and receiving coded messages by wire and was readily available in large numbers at reasonable prices. No great attempt was made to improve on it, since it was adequate for the low level of communications necessary to operate the system.

When the first microcomputer appeared the Teletype® was still the primary input/output device, again because it was readily available and relatively inexpensive. The early microcomputer users were served quite well by the Teletype®, since they were interested more in developing programs than displaying data.

The advent of the Video Display Terminal (VDT) was nearly as significant as the microcomputer itself. While the microcomputer brought cheap computing power to users who could not previously afford it, the VDT made possible spreadsheet and word processing programs that would not effectively run on hard-copy terminals.

The earliest VDTs were used as “glass Teletypes,” displaying data line for line and scrolling when the screen filled. The true power of the VDT, however, was in its ability to display data anywhere on the screen in a random manner, something that no hard-copy terminal could do, and to display it at extremely rapid rates. This made it possible to design screen forms and allow a program to fill in the blanks. It also made possible word processing, where the screen was filled with text and editing could be done anywhere on the screen, with the screen redrawn as necessary.

The explosion of demand for VDTs resulted in many companies marketing terminals, and a wide range of features and control code sequences. The programmer was faced with the problem of designing a program which would run on a number of different terminals. While most VDTs operate in a similar manner, the code sequences necessary

to direct their operation vary widely. A program designed to run only on one terminal will face a limited market, as computer users will have a variety of VDTs connected to their computers.

The computer user faces considerable frustration when he purchases a program and discovers that it does not support his terminal. He is left with the task of trying to "custom support" his terminal, or in extreme cases, finding that he cannot use the program at all without buying a different terminal. VDT manuals are as notorious as software documentation in that many people are unable to understand the code structure necessary to get a program running on their terminal.

Commercial programs support a limited number of terminals. It is impractical for most software developers to purchase all available terminals and test installation procedures on them. This manual evolved in response to many months of attempting to obtain control code sequences for a large number of terminals to be used in the installation routine for a software system.

Manufacturers' names were gathered from trade publications, directories, advertisements, and other sources. Most manufacturers were mailed requests for information at least six times and some as many as 27 times. A number of manufacturers consistently failed to respond and some requested that their VDTs not be listed. Some data sheets were completed by the publisher from direct observation or from third-party reports.

The results are contained in this manual, 146 VDTs and microcomputers. Some VDTs are listed more than once to reflect different configurations in different modes. Although there is a chapter on programming for VDTs, the essence of this manual is the data sheets. This manual is not intended to be a complete treatise on VDT programming, but offers a general orientation and some specific tips on programming for VDTs.

# Programming for Video Display Terminals

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## Screen layout and nomenclature

### *Rows and columns*

The typical video display terminal (VDT) has a screen layout consisting of 24 horizontal *rows* and 80 vertical *columns*. Other sizes are available, but less common. Other nomenclature exists for describing the rows and columns, principally *x* and *y*. The problem with using *x* and *y* is that different individuals and organizations assign different meanings to the coordinates. Some consider *x* to be a horizontal row, while others consider it to be a vertical column. For lack of more standard nomenclature, then, *rows* will be considered to run horizontally from top to bottom and *columns* vertically from left to right. See figure 1. *Line* is used interchangeably with *row* in this manual and in most VDT documentation.

Programs which use a pre-designed screen form, such as accounting programs, will find it necessary to use a standard size, such as  $24 \times 80$ , even if the terminal allows more rows and columns. Word processing and text editing programs, among others, may find it desirable to utilize a terminal's larger size or different configuration (portrait rather than landscape). In this case the programmer must allow for the number of rows and columns to be a variable amount.

### *Numbering rows and columns*

It is crucial that a standard row and column numbering scheme be followed in any programming project. Terminal manufacturers are evenly divided on whether the top row is row zero or row one, and the left column is column zero or column one. It is immaterial which scheme is used as long the programmer maintains the scheme properly. Generally, terminals which transmit cursor coordinates in single-byte binary begin numbering with zero. Terminals which transmit cursor coordinates as two- or three-byte ASCII numerals generally begin numbering with one.

It is the programmer's responsibility to determine the scheme used for all terminals on which his program might run, and to make accommodations for the various schemes with his program. This will mean that the programmer must adopt one scheme or the other—he may use either zero or one as his starting point and make the necessary adjustments for different terminals. See *Cursor addressing*.

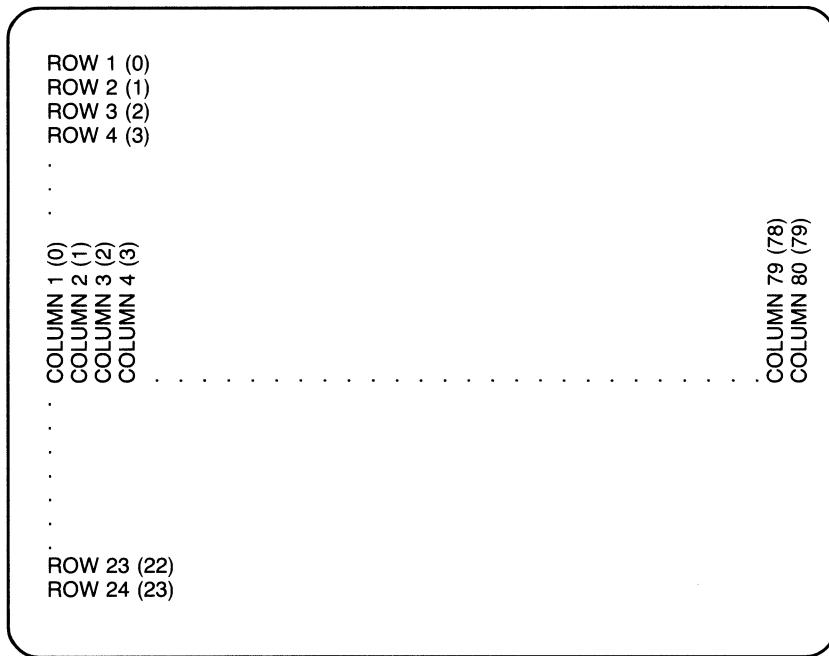


Fig. 1. Screen layout and nomenclature of a Video Display Terminal

### *Home*

The *home* position is normally the upper left-hand corner, although on some terminals it might be some other position, frequently the lower left-hand corner. This may be switch or software selectable. When in doubt, the programmer might prefer to position the cursor explicitly using the cursor addressing sequence.

### **Clearing the screen**

The most common erasure is clearing the screen, and almost all terminals have this function. Unfortunately, all do not accomplish it in the same manner. Some terminals position the cursor to the home position (upper left-hand corner) after clearing the screen, and some

leave the cursor at its previous position. Some terminals have no clear-screen function, but do have a clear-to-end-of-screen function.

For example, the DEC VT52 and IBM 3101 have almost identical control sequences. However, the 3101 has a clear-screen function (clear the screen and move the cursor home regardless of the original cursor position) while the VT52 does not. By using first the home sequence, then the clear-to-end-of-screen sequence, the desired effect is obtained on both terminals. This allows both terminals to use the same control code set.

Many of the manufacturers' data sheets and VDT manuals were vague on whether their clear-screen sequences left the cursor at the home position. Accordingly, it is good programming practice to always explicitly move the cursor home, either through a cursor-home or explicit move to row 1 (or zero), column 1 (or zero), then issue a clear-screen or clear-to-end-of-screen sequence.

#### *Clearing the screen for any terminal*

For terminals which have no clear-screen sequence at all, or in cases where a "standard" sequence is required (such as programs to be run before software is installed and configured for a terminal), the screen may be cleared by simply printing at least as many carriage return line feed combinations as there are rows on the terminal. On a standard-size VDT, printing 24 blank lines will effectively clear the screen. However, it also leaves the cursor at the lower left-hand corner.

### **Cursor addressing**

The chief advantage of a VDT over a hard-copy printer is its ability to write data anywhere on the screen. To do this, a programmer must first position the cursor using the terminal's cursor addressing sequence. Cursor addressing is the programmer's chief concern in supporting a VDT, and occupies most of his time and effort in managing displays.

Cursor addressing sequences differ widely, although a few schemes will support a large number of terminals. The programmer must decide whether to use a few such schemes supporting most terminals, or to devote more programming effort and support the remaining terminals. This manual describes the cursor addressing sequences used by a number of terminals. It is the programmer's responsibility to incorporate them into his programs.

Fig. 2. Character equivalents of binary cursor positioning codes

The *lead-in sequence* is the character or group of characters which tells the terminal that the following data is to be used to position the cursor. The sequence is normally one or two characters in length.

Nearly all terminals use one of two forms for transmitting row and column information. These forms have many different names, varying among manufacturers, but are standardized for this manual.

### *Binary form*

The *binary form* means that the row or column is expressed in binary notation and transmitted as a single-byte value. This single-byte value is frequently expressed as a character. For example, row 7 expressed in binary would be the ASCII bell code. Column 65 would be the ASCII character "A."

Terminals using the binary form almost always add an *offset* to the binary number. This offset is almost always 32 (20H). This has the effect of bringing the binary value into the printing ASCII range and eliminating the transmission of the ASCII control codes (00H–1FH). See figure 2.

It is here that the scheme used for numbering rows and columns becomes critical. Most manufacturers using the binary form begin numbering rows and columns with zero, referring to rows 0–23 and columns 0–79, rather than 1–24 and 1–80. Referring to figure 2 it is obvious that adding 20H to row 0 results in 20H, the correct character to be transmitted to designate row 0. However, a large number of manufacturers, while correctly giving 20H,20H as the coordinates for the top row, left column, gave erroneous coordinates (usually 2AH,52H) for the 10th row, 50th column. Figure 2 shows that the correct coordinates are 29H,51H.

This problem is common among terminal manufacturers and programmers alike. There are well-known commercial programs which have failed to resolve this problem. If the numbering scheme begins with zero, then the 10th row is row 9, not row 10. The 50th column is column 49, not column 50. If the numbering scheme begins with one, then the 10th row is row 10, and the 50th column is column 50.

A number of manufacturers stated their numbering scheme as 1–24 and 1–80, but also stated the offset as 20H. When this was corrected and returned to them, a number of them still insisted that the correct offset was 20H. In these cases, the data sheets reflect the manufacturer's insistence although this will almost certainly result in wrong cursor addressing sequences.

Wherever possible, however, this manual attempts to use the numbering scheme 1-24 and 1-80, and adjusts the offset to 1FH. Note that adding 1FH to row 1 gives the same result as adding 20H to row 0. It allows a more standard numbering scheme to be used, however, one that is compatible with almost all terminals using the ASCII numeral form discussed below.

Most VDT manuals contain a chart showing the characters to send the terminal to represent the row or column position. Few manuals explicitly state that these characters are obtained by adding an offset to the row or column position. In almost all terminals using the binary form the upper left position is designated by sending two spaces (20H,20H). Therefore, regardless of the method the programmer uses to refer to rows and columns, he must output these two spaces to position the cursor to this position.

Shown below are the sequences necessary to position the cursor to the two positions marked in figure 2 for representative terminals.

		Televideo Series	IBM 3101 & DEC VT52
Top row, left column	ASCII HEX	ESC = SP SP 1B 3D 20 20	ESC Y SP SP 1B 59 20 20
10th row, 50th column	ASCII HEX	ESC = ) Q 1B 3D 29 51	ESC Y ) Q 1B 59 29 51

Note that the only difference between the terminals is the second byte of the lead-in sequence. The method of referring to row and column positions is identical. This is true of a large number of terminals—while the lead-in sequence differs, the row and column values remain identical.

The following illustrates the method of arriving at the characters to be transmitted, assuming two different numbering schemes.

	Starting at zero			Starting at one		
	Actual Value	Add Offset	Output Value	Actual Value	Add Offset	Output Value
Top row	0	20H	20H	1	1FH	20H
Left column	0	20H	20H	1	1FH	20H
10th row	9	20H	29H	10	1FH	29H
50th column	49	20H	51H	50	1FH	51H

### *ASCII numeral form*

The other principal method of transmitting row and column values is the *ASCII numeral form*. This method is simpler to understand and easier to read, but requires substantially more programming. Using this method, the row and column values are simply converted to ASCII numerals.

Some terminals might require that two bytes be transmitted for row and two for column, while others might allow variable-length numbers. For example, row 5 would be transmitted as 05 if two bytes were required, but just 5 if variable lengths were allowed. ANSI X3.64 allows variable lengths, and many ANSI terminals allow 132 columns, so row 5 might be transmitted as 5, 05, or 005, all with the same results. It is up to the programmer which method to use. If it is easier for the programmer to transmit a variable length of bytes, he may do so. However, if he wishes to transmit a fixed number (perhaps to "fill in the blanks" in a pre-reserved string) his only penalty will be the very small amount of time necessary to transmit the longer form.

No terminals in this manual show an offset when the ASCII numeral form is used. Almost all terminals using the ASCII numeral form begin numbering with one rather than zero. Therefore the 10th row is row 10 and the 50th column is column 50.

Since the row and column values might be differing lengths, terminals using the ASCII numeral form require a *separator sequence* and an *ending sequence* to separate the values and to designate the end of the entire cursor addressing sequence. This prevents confusion with data to be displayed as text or another control sequence. These sequences are typically one byte in length.

Shown below are the sequences necessary to position the cursor to the two positions marked in figure 2 for ANSI X3.64 terminals.

Top row, left column	ASCII	ESC [ 1 ; 1 H
	HEX	1B 5B 31 3B 31 48
10th row, 50th column	ASCII	ESC [ 1 0 ; 5 0 H
	HEX	1B 5B 31 30 3B 35 30 48

It is important to note that the ANSI X3.64 sequence to home the cursor is the cursor positioning sequence with no parameters, ESC [ ; H. This is equivalent to ESC [ 0 ; 0 H, which might lead the programmer to assume that the terminal begins numbering with zero instead of one. Experimentation with this notion, however, reveals that

the sequences ESC [ 0 ; 0 H and ESC [ 1 ; 1 H are equivalent. The programmer should begin numbering with one rather than zero to avoid overlapping the first two rows.

### *Row or column first?*

So far it has been assumed that the row is always transmitted before the column. While this is almost always the case, there are a small number of terminals that require the column value to be transmitted first, and at least one terminal series that allows either to be first (or either to be sent independently of the other). If the programmer desires to support as many terminals as possible he should allow his program to transmit either the row or column first, as required by the terminal being supported.

### **Delay after cursor positioning**

Some terminals might require a slight delay after receiving a cursor positioning sequence in order to have time to respond and position the cursor. While most manufacturers either left this question blank or reported zero, some did specify a required delay. The programmer might wish to allow for a variable-length delay in his cursor positioning routine.

There are two basic methods of allowing this delay. The simplest is to transmit one or more nulls (00H) following the cursor positioning routine. This method has long been used following carriage returns on Teletype® and similar machines to allow time for the carriage to physically return to the left margin. Some VDTs however, might interpret these nulls as meaningful data and move the cursor or perform some other undesirable function.

The second method might be preferred if the VDT reacts unfavorably to nulls. This method requires putting the program into a “waste time loop” for a specified amount of time. This time should be variable so that the user can adjust it as necessary to fit his particular VDT, computer, modem or other communications line equipment, and other variables.

Note that even VDTs which state a required delay might not require an explicit delay routine. Quite often the time required by execution of instructions between the cursor positioning and writing of data will provide adequate delay, particularly if the program is written in a high-level language.

## **Scrolling**

Since VDTs evolved as a direct replacement to the hard-copy Teletype® and similar machines, nearly all of them will scroll lines off the top as new ones are written on the bottom. This phenomenon is almost always overridden by the programmer who chooses instead to use cursor addressing sequences to write data randomly on the screen. In text editing programs the programmer allows scrolling, but rigidly controls it using the same cursor addressing sequences.

However, there is one instance in which the programmer must pay close attention to the VDT's insistent desire to scroll. When a character is printed in the last column of a row the cursor will frequently return to the following line. While this might be irritating to look at, seeing the cursor jumping around the screen, it poses no problem as long as the programmer positions the cursor before writing the next character. When that row happens to be the bottom row, however, the screen might scroll unexpectedly when the rightmost column is printed.

On some terminals this may be controlled by switch or software selection. Controlling this phenomenon might have undesirable effects, however, on the terminal's scrolling for other applications, and the user might not want to change the terminal's configuration for a single program. A better solution might be to simply *never* write to the rightmost column of the bottom row. This is relatively simple for a program using a screen form, such as accounting, but might require more care in text-editing programs.

## *Carriage returns*

A related problem is that of carriage returns (0DH) and line feeds (0AH). When sent to the terminal, these control characters normally do just what they say. A carriage return will return the cursor to the left column and may or may not line feed. A line feed will usually move the cursor down one row, and if it is the bottom row the terminal will probably scroll.

When sending control sequences, such as cursor addressing sequences, it is important that carriage return line feed sequences *not* be sent. Assembly language programmers should have no trouble with this, but BASIC and other high-level language programmers might find themselves wondering why their data is printing on row 5 column 1 when they specifically addressed row 4 column 50. The problem is that they unknowingly sent a carriage return line feed combination following their cursor addressing sequence.

This problem is avoided in BASIC by simply putting a semicolon after the cursor addressing sequence, for example:

```
100 PRINT CHR$(27)+"="+CHR$(4+31)+CHR$(50+31);  
110 PRINT "ENTER YOUR NAME: ";  
120 INPUT N$
```

The semicolon at the end of statement 100 is frequently left out. The result is that this statement is executed, then a carriage return linefeed sequence is sent, returning the cursor to the first column of the next row. The semicolon following statement 110 would not be necessary if an additional cursor addressing sequence were transmitted prior to statement 120.

The programmer must pay close attention to maintaining the cursor position. Another frequent mistake is transmitting CHR\$(7) to ring the terminal's bell. If not followed by a semicolon (in BASIC) this single-character sequence will return the cursor to the first column of the next row, or scroll the entire screen if it is the right column of the bottom row.

Other high-level languages have similar methods of printing data without a carriage return line feed sequence.

Never hesitate to transmit the cursor addressing sequence even if you believe the cursor to be in the correct position. While the bell code (07H) should not move the cursor one space to the right, on some unusual terminals it might. Therefore, retransmitting the cursor addressing sequence following ringing the bell cannot hurt. The only penalty will be slightly larger program size and a very slight delay.

## **Cursor home**

Most terminals have a unique *cursor home* sequence, designed to position the cursor at the top row, left column. If this sequence is not known then the programmer may simply send a cursor addressing sequence to position the cursor to row 0, column 0 or row 1, column 1, depending on his numbering scheme. Indeed, this method might be preferred, since the programmer can avoid asking the user to provide the cursor home sequence, simplifying VDT installation procedures.

## **Erasures**

In addition to clearing the screen, a number of other erasures are permitted by many terminals. The programmer must use these erasures

carefully, however, as the results may not be what was expected. Despite attempts to standardize terminology on the data sheets, differences remain concerning erasures. For example, the data sheets contain an an erasure for the entire cursor line. Ideally, this erasure should fill the cursor line with blanks and leave the rest of the screen unchanged. Unfortunately, on some terminals this sequence might actually be a *delete line* command. This would delete the line and pull up all lines below, with disastrous effects if unexpected.

Some of the other erasures might also perform unexpectedly. The programmer might wish to use software routines to accomplish these desired erasures. For example, *erase-entire-cursor-line* may be performed by positioning the cursor to the left column of the line to be erased and printing a number of blanks corresponding to the width of the screen (normally 80). The programmer might also wish to allow the *erase-entire-cursor-line* sequence to be used optionally if the terminal supports it and it works as expected. It would be unwise, however, to assume this erasure to be standard on a large number of terminals and forego the software solution.

## **Video attributes**

Many video display terminals and microcomputers now have *video attributes*. The most common attributes are *blinking*, *reverse video*, *underline*, *high intensity* and *half intensity*. With the exception of the standards of ANSI X3.64 terminals, there is a wide range of control code sequences used to obtain these attributes.

As with many other VDT features, there is a range of nomenclature concerning video attributes. High and half intensity, for example, mean different things to different terminal manufacturers. On some VDTs high intensity will be normal and half will be reduced, on others half will be normal and high enhanced, while still others might allow half, normal and high. Proceed with caution when using these attributes in combination.

Some terminals require a character position to be used for the attribute. To turn on blinking, for example, the character position before the blinking data is occupied by the code sequence that turns on blinking, and the character position following the blinking data is occupied by the code sequence that turns off blinking. Other terminals do not require such a character position, choosing instead to store the attribute as part of the displayed characters. This is of particular interest to the programmer. On a typical screen form used for

accounting, database, mailing list, etc., there will be pre-determined fields for the user to fill in. If these fields are to be highlighted with one or more attributes, it is relatively easy to allow the character position before and after the field for the attribute codes. In text editing applications, however, substantial problems arise. If the video attribute occupies a character position then that position appears in the middle of text as a blank. The user might be able to delete it as if it were a character, the cursor may or may not stop on it, and it is generally puzzling to the user. The programmer should therefore take great care in using video attributes, particularly in free-form screens, such as word processing or text-editing applications.

Some terminals and microcomputers, particularly those using memory-mapped video, use the high bit of each character to set the video attribute, rather than using specific code sequences before and after the highlighted data. These can cause problems for a programmer working in a high-level language, or other situations where non-ASCII characters are produced.

### *Cumulative attributes*

In addition to the “standard” video attributes, many VDTs allow *cumulative* attributes. For example, a text-editing program might use underlining to accent a block of text. A block of text to be deleted might be in reverse video. When this underlined block is to be deleted it would then appear with underlining *and* reverse video. Another common combination is the use of reverse and blinking to flash error messages or warnings.

There are generally two ways of obtaining cumulative attributes. The simplest, although requiring more code to be transmitted, is to output the sequence for one attribute, then the sequence for the other. For example, assume ESC B turns on blinking and ESC U turns on underlining. Sending ESC B ESC U would then turn on blinking and underlining at the same time.

Not all VDTs allow such cumulative attributes, but instead have separate control sequences to turn on specific combinations. Continuing the above example, with ESC B as blinking, ESC U as underlining, blinking *and* underlining might be ESC X. ANSI X3.64 terminals allow either method (see ANSI X3.64 data sheet). Multiple attributes can be turned on one at a time until all desired attributes are in effect, or the programmer can use a specific sequence to turn on all desired attributes.

### *Turning off attributes*

Attributes may have to be turned off individually or all at once. There may be a different code to turn off blinking, for example, than to turn off underlining. There may be one code sequence to turn off all attributes. If this is the case and blinking and underlining are both on, then this one sequence would turn both off, without allowing just one to be turned off.

Video attributes can be highly machine-specific and the programmer should give careful consideration to their use before including them in a program designed for wide distribution on a variety of VDTs.

### **Cursor control keys**

VDT users will invariably push the “arrow” keys and expect the cursor to move. The result, unfortunately, can sometimes be disastrous. The cursor key might output a code sequence that the programmer has used for some other purpose. Many programs on the market today do not support the VDT’s cursor keys.

WordStar®, a popular word processing program, and one of the first microcomputer programs to achieve wide distribution, was designed to run on as many terminals as possible, including those without cursor keys. The programmer elected to use control codes (those ASCII codes lying between 00H and 1FH), to move the cursor. The keys selected were control-S, control-E, control-D, and control-X, chosen because they form a diamond pattern on the keyboard. These same keys were used by dBase II®, a widely-distributed database management program, and something of a standard was born. A number of VDTs now use these codes for cursor control (the “up arrow” key outputs a control-E, etc.).

Another popular configuration is the control-H, J, K, L sequence (left, down, up, right), widely used on VDTs, but not supported by many programs.

The ANSI X3.64 standard uses escape sequences rather than control codes. The Escape [ precedes the cursor key sequence, as it does in all ANSI X3.64 sequences. The letters A, B, C and D follow the lead-in sequence to produce up, down, right and left, respectively. A number of other terminals use the same sequences but drop the left bracket (]).

### *Problems in interpreting cursor control keys*

Multiple-character cursor control keys can cause problems for the programmer. Unlike cursor addressing, video attributes, etc. which are

sent by the program *to* the VDT, cursor control keys send sequences *from* the VDT *to* the computer. A VDT's job is to receive and interpret data sent by the computer, and it is capable of doing it so fast that "handshaking" is often not required. The computer must respond to the terminal's input, and in many instances, such as a multi-user or multi-tasking system, it must respond to many other devices (terminals and printers) simultaneously.

There are two general areas of concern regarding this problem. The first is with the program itself. When receiving single-byte data, such as a control-E for cursor up, there is no timing problem, as the single-byte code is no different from any other ASCII code. If the operator strikes another control-E while the program is responding to the last, the worst that can happen is that it will be ignored, losing one cursor movement.

When the cursor control key outputs more than one byte there is substantial room for error. The program must recognize the lead-in sequence, normally an escape sequence, then stand ready to respond to the following character to designate direction. If the program has recognized the lead-in but is occupied with something else when the direction byte is received, then the program fails and the result is generally that the direction byte (usually A, B, C or D) is displayed on the VDT. If the operator holds down or repeats the cursor key a similar problem will result when the programmer's input buffer overflows.

Some VDTs might send the cursor control sequences too fast for the program to respond. If the input routine is overly long and complex it might not be fast enough to recognize and respond to every byte in the cursor control sequence. Typing the sequence one byte at a time might properly move the cursor, while depressing the cursor-up key might not work because the VDT sends the bytes faster than the input routine can handle them.

The second problem area is with the operating system. Regardless of how efficient and "bullet-proof" the applications program is, it still must operate under the control of the operating system. Even "standard" operating systems, such as CP/M®, have modifications made to them by the vendor which affect input and output. A program which properly recognizes the cursor control keys without fail, under all conditions, on one computer, might not recognize the keys at all on a similar computer running the same operating system. On some systems the program will recognize the cursor control keys most of the time, but will occasionally miss one, for no apparent reason.

The programmer should use considerable care in writing input routines to accept cursor control keys and should be prepared for a flood of complaints when the keys do not function as expected.

### **ANSI X3.64 standard**

Many current-model VDTs comply to the ANSI X3.64 standard. This is a standard published by the American National Standards Institute which describes control sequences to be used by VDTs. The standard has gained acceptance with minicomputer companies, but remains largely unsupported by microcomputer companies and programs. If a program supports this standard it should run without modification on any VDT which conforms to the standard. The complete text of the standard may be obtained from the American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018.

# Data Sheets

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## Numeric Data

Number of rows and columns (items 3 and 4), top row (item 5), and left column (item 6) are stated in decimal notation. Delay times (item 16, 18–23) are stated in decimal notation and refer to milliseconds of delay. *All other numeric values are hexadecimal.*

## Code Sequences

Code sequences are displayed in two lines. The top line is the ASCII graphic character, the control sequence (caret “^” followed by character), or the two- or three-letter representation of the ASCII control characters. See Appendix 1 for ASCII character set. Codes in the range 80H–FFH are not displayed on the first line since they are outside the ASCII character set.

The second line of the code sequence display is shown in hexadecimal notation.

## Manufacturer Data

**1. Manufacturer.** This is normally the actual manufacturer of the terminal or microcomputer, but it could be an OEM selling the terminal under a brand name other than the original manufacturer, or a software house selling an operating system which makes the terminal or microcomputer operate in a manner different from its original manufacturer.

**2. Terminal.** One or more terminals may be listed. Where multiple terminals are listed, all must share the code structure shown on the data sheet, although they may have differing features such as screen size and color, character generators, auxiliary ports, keyboard configuration, set-up screens, etc. Manufacturers may group terminals or list them individually. Some manufacturers submitted multiple data sheets for a single terminal, showing code structures for various emulation modes.

## Screen Layout

**3. Number of rows.** Rows are horizontal rows numbered from top to bottom. This item refers to the actual number of rows available to the user, exclusive of any status lines. A number of manufacturers included the status line in this count, and many status lines are available to the user, although they normally require special addressing.

A value here of 25 should be considered with caution, since it may include a status row not accessible without special addressing. Most terminals have 24 rows, and the 25th status row cannot be addressed like the other rows.

**4. Number of columns.** Columns are vertical columns numbered from left to right. The most common number of columns is 80, although many terminals allow 132 by software or hardware selection. In most cases a terminal allowing 132 columns is an 80-column terminal by default, and requires user or program action to convert to a 132-column terminal.

**5. Top row.** Some terminals, primarily those using binary cursor addressing (item 10), start numbering from the top row with row zero. Some terminals, primarily those using the ANSI X3.64 standard cursor addressing, start numbering from the top row with row one. For this manual, wherever possible, this value has been standardized as one by adjusting the offset (item 11) to be added.

**6. Left column.** Some terminals, primarily those using the binary cursor addressing form (item 10), start numbering from the left column with column zero. Some terminals, primarily those using the ANSI X3.64 standard cursor addressing form, start numbering from the left column with column one. For this manual, wherever possible, this value has been standardized as one by adjusting the offset (item 11) to be added.

**7. Printing in bottom right cause scroll?** When a character is printed in the rightmost column of the bottom row (normally row 24, column 80), some terminals will cause the screen to scroll. The top row will be lost and a blank row will be inserted as the bottom row. On some terminals, this does not occur—the screen remains the same. On some terminals this is controlled by switch or software selection. In this case this item is PROG or programmable. Many manufacturers left this item blank or did not understand the item. It is therefore good programming practice to consider that all terminals will scroll when the rightmost column of the bottom row is printed.

## **Cursor addressing**

**8. Lead-in sequence.** This is the sequence of code that precedes the row and column values necessary to position the cursor. This is frequently an escape sequence.

**9. Row or column first.** Most terminals send the row value first, although some send column value first. A small number of terminals allow either to be sent first due to their unique addressing scheme. These terminals have expanded cursor addressing discussion in Notes.

**10. Numeric form of row and column.** The most common forms are binary and variable-length ASCII. Also acceptable are 2-byte ASCII and 3-byte ASCII. Binary means that the row and column values are converted into binary form, frequently with an added offset (item 11), and transmitted as a single byte of binary data. ASCII form means that the row and column values are converted into ASCII numerals. ANSI standard terminals allow one, two or three ASCII digits to be sent. Leading zeros are optional. Some terminals might require that two or three ASCII digits be sent, in which case the leading zeros would be required.

**11. Add offset to.** This value is almost always the same for both row and column, although some terminals have unusual cursor addressing schemes. This is an amount which is added to the row or column value before being transmitted. It is almost always added on terminals using binary form and no terminal in this manual uses an offset for ASCII form.

The most common offset is 20H (for terminals that start row and column numbering with zero), although to maintain consistency, this has been adjusted to 1FH, resulting in 20H as the binary value transmitted to position the cursor at the top row and left column. Note that this brings all row and column values into the printing ASCII character range, avoiding problems of transmitting control characters which might cause unexpected results particularly when communicating over a modem or other communications link.

**12. Separator sequence.** This is the sequence which separates row and column values. When using binary form for row and column values, this is not necessary and normally not used since the values occupy one byte each. In variable-length ASCII form, however, row and column values may occupy from one to three bytes each and it is necessary to separate them.

**13. End sequence.** This is necessary for variable-length ASCII form to distinguish the row and column values from text.

**14. Cursor to top row, left column.** This is a sample cursor addressing sequence showing how the elements are combined to actually position the cursor. The top row, left column are used here to further verify what notation the manufacturer uses to number rows and columns. In binary form, the most common values for this sequence are 20H for both row and column. For ANSI X3.64 terminals and most other terminals using ASCII form, the most common values here are one for both row and column.

**15. Cursor to 10th row, 50th column.** This is another example designed to further verify the row and column numbering scheme. A large number of manufacturers reported erroneous values here, although their manuals showed the correct values. Many programmers fall into the same trap.

The 10th row is row 10 only if the top row is row one. The 10th row is row nine if the top row is row zero.

The 50th column is column 50 only if the left column is column one. The 50th column is column 49 if the left column is column zero.

This is discussed in more detail in the cursor positioning discussion elsewhere in this manual.

**16. Delay after positioning.** Some terminals require time to interpret the sequence and position the cursor following a cursor positioning sequence. This is stated here in milliseconds of delay. Most manufacturers left this blank or reported zero, although a few reported a delay time.

**17. Cursor home.** Most terminals have a sequence which will position the cursor to the home position. On terminals not having such a sequence, the sequence in item 14 will accomplish the same thing. Some terminals might allow "home" to be defined as somewhere other than the upper left corner.

## Erasure

**18. Entire screen.** Some terminals clear the entire screen and home the cursor. Some clear the screen and leave the cursor where it was. Some terminals have only the capability to clear to end of screen, in which case this sequence might be a combination of cursor home and clear-to-end-of-screen.

**19. Cursor to end of screen.** This sequence clears from the cursor to the end of screen without moving the cursor.

**20. Beginning of screen to cursor.** This sequence clears from the beginning of the screen to the cursor without moving the cursor.

**21.** *Cursor to end of line.* This sequence clears from the cursor to the end of line (row) without moving the cursor.

**22.** *Beginning of line to cursor.* This sequence clears from the beginning of the line (row) to the cursor without moving the cursor.

**23.** *Entire cursor line.* This sequence clears the entire line (row) on which the cursor is located. As in clear screen, the cursor may or may not move to the beginning of the line (row). Some terminals do not have this function, and may accomplish it with a carriage return (without a line feed), then clear to end of line.

Note that this sequence is *not* the same as delete line. A delete line normally deletes the cursor line, then pulls up lines below the cursor to fill in the deleted line. The clear-cursor-line should erase the line and leave a blank line.

*Delay.* The required delay, in milliseconds, is shown for the selected erasure. This is the time the host should wait after the erasure before sending additional data or commands.

## **Video Attributes**

**24.–28.** These are the sequences to turn on the specified attribute and to turn it off (or return to normal video). The off sequence is frequently the same for all attributes, and will usually be the same as item 31.

**29.** *Attributes occupy position.* On some terminals video attributes will occupy a character position to the exclusion of other data. These terminals require the programmer to allow for a blank character before and after the highlighted text.

**30.** *Attributes cumulative.* Many terminals allow multiple attributes to be in effect at one time. The simplest way to accomplish this, although requiring longer strings of code, is to turn on one attribute, then turn on another. For example, if ESC B turns on blinking and ESC U turns on underlining, then ESC B ESC U would turn on blinking and underlining at the same time. This concept works on ANSI X3.64 terminals although there is a shorter notation used.

Many terminals have completely separate codes for turning on multiple attributes. These are listed in Notes when provided.

**31.** *All attributes off.* This turns off all video attributes and returns to normal video.

## **Cursor Control (Arrow) Keys**

**32.** *Cursor up.* The code sequence generated by the terminal and sent to the host when the Cursor Up (Up Arrow) key is depressed. This

same sequence sent by the host to the terminal will normally result in movement of the cursor up one row.

**33. Cursor down.** The code sequence generated by the terminal and sent to the host when the Cursor Down (Down Arrow) key is depressed. This same sequence sent by the host to the terminal will normally result in movement of the cursor down one row.

**34. Cursor right.** The code sequence generated by the terminal and sent to the host when the Cursor Right (Right Arrow) key is depressed. This same sequence sent by the host to the terminal will normally result in movement of the cursor right one column.

**35. Cursor left.** The code sequence generated by the terminal and sent to the host when the Cursor Left (Left Arrow) key is depressed. This same sequence sent by the host to the terminal will normally result in movement of the cursor left one column.

## Character Set

**36. Full upper and lower ASCII.** Some terminals do not display the entire ASCII character set. If the answer to this item is NO, then exceptions should be listed in Notes.

**37. Generate all control codes.** Some terminals are not capable of generating all ASCII control codes (01H–1FH). If the answer to this item is NO, then exceptions should be listed in Notes.

**38. Bell or tone sequence.** Nearly all terminals produce a bell or electronic tone on receipt of a BEL (07H) code from the host. If the terminal recognizes a different sequence it is shown here.

## Emulation

**39. Conform to ANSI X3.64?** If the terminal conforms to the ANSI X3.64 standard, the answer to this item should be YES. Note that many terminals have multiple modes, one of which might be ANSI X3.64. A manufacturer might answer YES to this item although the codes shown are not ANSI X3.64 compliant. In this case it is assumed that the ANSI mode is used to obtain ANSI X3.64-compliant operation.

**40. Terminals emulated.** Some terminals have a “native” mode in addition to emulating other terminals. Some terminals have no native mode and *must* emulate another terminal. Generally, the listed terminals emulated are in addition to the control codes shown on the data sheet.

**41. Information provided by.** If the manufacturer provided the information and/or approved the proofs, the information was provided by the MANUFACTURER. If the publisher obtained the information without the aid of the manufacturer the information was provided by the PUBLISHER. In the case of a dealer or user other than the publisher, the information was provided by a THIRD PARTY. OEMs selling terminals under private label are considered to be the MANUFACTURER. Software houses providing operating systems (such as CP/M® for the TRS-80®) are considered to be the MANUFACTURER of the software, but not the terminal or microcomputer.

**42. Program Function Keys.** Some terminals have program function keys which generate one or more characters. The codes produced by these keys are shown. Some terminals have programmable function keys which may be programmed by the user. If these keys have default or standard sequences, these are shown, although they may be changed by the user. There is space for only 16 keys, since this covers most terminals. Some terminals allow more function keys and these are usually described in Notes.

## **Notes**

A numbered note refers to the item of the same number. For example, on many terminals which allow 80 or 132 columns, item 4 has a value of 80 and Note 4 mentions that 132 is optional. An unnumbered note is of general interest. Every effort was made to accommodate all terminal features within strict guidelines, but many terminals required additional explanation.

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1. Manufacturer: Altos Computer Systems  
2. Terminal: Altos II Terminal

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## SCREEN LAYOUT

3. Number of rows: 25  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII

11. Add offset to: Row: 0  
                      Col: 0  
12. Separator sequence:  
    ;  
    3B

13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

- ERASURE                   DELAY
18. Entire screen:  
    ESC [ 2 J           0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ 0 J           0  
    1B 5B 30 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J           0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ 0 K           0  
    1B 5B 30 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K           0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K           0  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

- ON                           OFF
24. Blinking:  
    ESC [ 5 m            ESC [ m  
    1B 5B 35 6D           1B 5B 6D  
25. Reverse video:  
    ESC [ 7 m            ESC [ m  
    1B 5B 37 6D           1B 5B 6D  
26. Underline:  
    ESC [ 4 m            ESC [ m  
    1B 5B 34 6D           1B 5B 6D  
27. High intensity:  
    ESC [ 1 m            ESC [ m  
    1B 5B 31 6D           1B 5B 6D  
28. Half intensity:

29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:

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Manufacturer: Altos Computer Systems  
Terminal: Altos II Terminal

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41. Information provided by:  
MANUFACTURER
42. PROGRAM FUNCTION KEYS                   NOTES
- 1.   3. Optionally 40.
  - 4. Optionally 132.
  - 2.   42. 16/32 programmable function keys.
  - 3.
  - 4.
  - 5.
  - 6.
  - 7.
  - 8.
  - 9.
  - 10.
  - 11.
  - 12.
  - 13.
  - 14.
  - 15.
  - 16.

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1. Manufacturer: Ann Arbor Terminals  
2. Terminal: Ambassador

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## SCREEN LAYOUT

3. Number of rows: 60  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0

12. Separator sequence:  
    ;  
    3B

13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

- ERASURE
18. Entire screen: DELAY  
    ESC [ 2 J 156  
    1B 5B 32 4A
19. Cursor to end of screen: DELAY  
    ESC [ 0 J 0  
    1B 5B 30 4A
20. Beginning of screen to cursor: DELAY  
    ESC [ 1 J 0  
    1B 5B 31 4A
21. Cursor to end of line: DELAY  
    ESC [ 0 K 0  
    1B 5B 30 4B
22. Beginning of line to cursor: DELAY  
    ESC [ 1 K 0  
    1B 5B 31 4B
23. Entire cursor line: DELAY  
    ESC [ 2 K 5  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

- ON OFF
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
    ESC [ 1 m  
    1B 5B 31 6D  
28. Half intensity:

29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41
33. Cursor down:  
    ESC [ B  
    1B 5B 42
34. Cursor right:  
    ESC [ C  
    1B 5B 43
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:

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Manufacturer:  
Terminal:

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Ann Arbor Terminals  
Ambassador

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     | NOTES   |
|-----|---|
| 1.  | 30. Blinking and reverse video:<br>ESC [ 5 ; 7 m  |
| 2.  | 36. DEC mode option gives graphics<br>symbols.  |
| 3.  | 42. 12 programmable function keys.<br>Total of 36 keys on 60 levels<br>are user-programmable. |
| 4.  |   |
| 5.  |   |
| 6.  |   |
| 7.  |   |
| 8.  |   |
| 9.  |   |
| 10. |   |
| 11. |   |
| 12. |   |
| 13. |   |
| 14. |   |
| 15. |   |
| 16. |   |

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1. Manufacturer: Ann Arbor Terminals  
2. Terminal: Genie

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## SCREEN LAYOUT

3. Number of rows: 30  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0  
12. Separator sequence:  
    ;  
    3B

13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

- ERASURE  
18. Entire screen: DELAY  
    ESC [ 2 J 156  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ 0 J 0  
    1B 5B 30 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ 0 K 0  
    1B 5B 30 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 5  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
    ESC [ 1 m  
    1B 5B 31 6D  
28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:

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Manufacturer:  
Terminal:

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Ann Arbor Terminals  
Genie

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41. Information provided by:  
MANUFACTURER
42. PROGRAM FUNCTION KEYS
- |     |   |
|-----|---|
| 1.  | NOTES   |
|     | 30. Blinking and reverse video:<br>ESC [ 5 ; 7 m  |
| 2.  | 36. DEC mode option gives graphics<br>symbols.  |
| 3.  | 42. 12 programmable function keys.<br>Total of 26 keys on 36 levels<br>are user-programmable. |
| 4.  |   |
| 5.  |   |
| 6.  |   |
| 7.  |   |
| 8.  |   |
| 9.  |   |
| 10. |   |
| 11. |   |
| 12. |   |
| 13. |   |
| 14. |   |
| 15. |   |
| 16. |   |

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1. Manufacturer: Ann Arbor Terminals  
2. Terminal: Genie+Plus

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SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	60	ON	OFF	
4. Number of columns:	80			
5. Top Row:	1	24. Blinking:	ESC [ 5 m	ESC [ m
6. Left Column:	1		1B 5B 35 6D	1B 5B 6D
7. Printing in bottom right cause scroll?	PROG	25. Reverse video:	ESC [ 7 m	ESC [ m
			1B 5B 37 6D	1B 5B 6D
CURSOR ADDRESSING		26. Underline:		
8. Lead-in sequence:		ESC [ 4 m	ESC [ m	
		1B 5B 34 6D	1B 5B 6D	
9. Row or column first:	ROW	27. High intensity:	ESC [ 1 m	ESC [ m
10. Numeric form of row and column:			1B 5B 31 6D	1B 5B 6D
VARIABLE-LENGTH ASCII		28. Half intensity:		
11. Add offset to:	Row: 0			
	Col: 0			
12. Separator sequence:		29. Attributes occupy position:	NO	
	;	30. Attributes cumulative:	YES	
	3B	31. All attributes off:		
13. End sequence:			ESC [ m	
	H		1B 5B 6D	
	48			
14. Cursor to top row, left column:				
	ESC [ 1 ; 1 H			
	1B 5B 31 3B 31 48			
15. 10th Row, 50th Column:				
	ESC [ 1 0 ; 5 0 H			
	1B 5B 31 30 3B 35 30 48			
16. Delay after positioning:	0			
17. Cursor home:				
	ESC [ H			
	1B 5B 48			
ERASURE		DELAY	CURSOR CONTROL KEYS	
18. Entire screen:		156	32. Cursor up:	
	ESC [ 2 J			ESC [ A
	1B 5B 32 4A			1B 5B 41
19. Cursor to end of screen:		0	33. Cursor down:	
	ESC [ 0 J			ESC [ B
	1B 5B 30 4A			1B 5B 42
20. Beginning of screen to cursor:		0	34. Cursor right:	
	ESC [ 1 J			ESC [ C
	1B 5B 31 4A			1B 5B 43
21. Cursor to end of line:		0	35. Cursor left:	
	ESC [ 0 K			ESC [ D
	1B 5B 30 4B			1B 5B 44
22. Beginning of line to cursor:		0		
	ESC [ 1 K			
	1B 5B 31 4B			
23. Entire cursor line:		5		
	ESC [ 2 K			
	1B 5B 32 4B			
CHARACTER SET		EMULATION		
36. Full upper and lower ASCII:	YES	39. Conform to ANSI X3.64?	YES	
37. Generate all control codes:	YES	40. Terminals Emulated:		
38. Bell or tone sequence:				
			^G	
			07	

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Manufacturer:  
Terminal:

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Ann Arbor Terminals  
Genie+Plus

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     | NOTES   |
|-----|---|
| 1.  | 30. Blinking and reverse video:<br>ESC [ 5 ; 7 m  |
| 2.  | 36. DEC mode option gives graphics<br>symbols.  |
| 3.  | 42. 12 programmable function keys.<br>Total of 36 keys on 60 levels<br>are user-programmable. |
| 4.  |   |
| 5.  |   |
| 6.  |   |
| 7.  |   |
| 8.  |   |
| 9.  |   |
| 10. |   |
| 11. |   |
| 12. |   |
| 13. |   |
| 14. |   |
| 15. |   |
| 16. |   |

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1. Manufacturer: Ann Arbor Terminals  
2. Terminal: Guru (TM)

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## SCREEN LAYOUT

3. Number of rows: 66  
4. Number of columns: 170  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column: VARIABLE-LENGTH ASCII

11. Add offset to: Row: 0  
                      Col: 0

12. Separator sequence:  
    ;  
    3B

13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## ERASURE

18. Entire screen: DELAY  
    ESC [ 2 J           210  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ 0 J           0  
    1B 5B 30 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J           0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ 0 K           0  
    1B 5B 30 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K           0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K           6  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking:  
    ESC [ 5 m           ESC [ m  
    1B 5B 35 6D        1B 5B 6D  
25. Reverse video:  
    ESC [ 7 m           ESC [ m  
    1B 5B 37 6D        1B 5B 6D  
26. Underline:  
    ESC [ 4 m           ESC [ m  
    1B 5B 34 6D        1B 5B 6D  
27. High intensity:  
    ESC [ 1 m           ESC [ m  
    1B 5B 31 6D        1B 5B 6D  
28. Half intensity:

29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:

---

Manufacturer:  
Terminal:

---

Ann Arbor Terminals  
Guru (TM)

---

41. Information provided by:  
MANUFACTURER
42. PROGRAM FUNCTION KEYS
- |     |   |
|-----|---|
| 1.  | NOTES   |
|     | 30. Blinking and reverse video:<br>ESC [ 5 ; 7 m  |
| 2.  | 36. DEC mode option gives graphics<br>symbols.  |
| 3.  | 42. 12 programmable function keys.<br>Total of 36 keys on 60 levels<br>are user-programmable. |
| 4.  |   |
| 5.  |   |
| 6.  |   |
| 7.  |   |
| 8.  |   |
| 9.  |   |
| 10. |   |
| 11. |   |
| 12. |   |
| 13. |   |
| 14. |   |
| 15. |   |
| 16. |   |

---

1. Manufacturer: ANSI  
2. Terminal: ANSI

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll?

PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## ERASURE

18. Entire screen:  
    ESC [ 2 J 0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J 0  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K 0  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 0  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

- ON OFF
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
    ESC [ 1 m  
    1B 5B 31 6D  
28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

^G

07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:

---

Manufacturer:	ANSI
Terminal:	ANSI

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES  
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---

1. Manufacturer: Beehive International  
2. Terminal: ATL 008

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1	ESC [ 5 m	ESC [ m	
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D	
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D	
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D	ESC [ m 1B 5B 6D	
8. Lead-in sequence: ESC [ 1B 5B		27. High intensity: ESC [ 1 m	ESC [ m 1B 5B 6D	
9. Row or column first:	ROW	1B 5B 31 6D	1B 5B 6D	
10. Numeric form of row and column: VARIABLE-LENGTH ASCII		28. Half intensity: ESC [ 2 m 1B 5B 32 6D	ESC [ m 1B 5B 6D	
11. Add offset to: Row: 0 Col: 0		29. Attributes occupy position: NO		
12. Separator sequence: ; 3B		30. Attributes cumulative: YES		
13. End sequence: H 48		31. All attributes off: ESC [ m 1B 5B 6D		
14. Cursor to top row, left column: ESC [ 1 ; 1 H 1B 5B 31 3B 31 48		CURSOR CONTROL KEYS		
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48		32. Cursor up: ESC [ A 1B 5B 41		
16. Delay after positioning: 0		33. Cursor down: ESC [ B 1B 5B 42		
17. Cursor home: ESC [ H 1B 5B 48		34. Cursor right: ESC [ C 1B 5B 43		
ERASURE	DELAY	35. Cursor left: ESC [ D 1B 5B 44		
18. Entire screen: ESC [ 2 J 1B 5B 32 4A	0	CHARACTER SET		
19. Cursor to end of screen: ESC [ J 1B 5B 4A	0	36. Full upper and lower ASCII: YES		
20. Beginning of screen to cursor: ESC [ 1 J 1B 5B 31 4A	0	37. Generate all control codes: YES		
21. Cursor to end of line: ESC [ K 1B 5B 4B	0	38. Bell or tone sequence: ^G 07		
22. Beginning of line to cursor: ESC [ 1 K 1B 5B 31 4B	0	EMULATION		
23. Entire cursor line: ESC [ 2 K 1B 5B 32 4B	0	39. Conform to ANSI X3.64? YES		
		40. Terminals Emulated: DEC VT100 DEC VT52 (as a subset of VT100)		

---

Manufacturer:  
Terminal:

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Beehive International  
ATL 008

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

				NOTES
1.	P	P	ESC \	4. Optionally 132.
	50	50	1B 5C	30. Also ESC [ 5 ; 7 m.
2.	P	Q	ESC \	42. All function keys are preceded by a control string, which can be ANSI strings of APC, OSC, PM, DCS and SS3..
	50	51	1B 5C	
3.	P	R	ESC \	
	50	52	1B 5C	
4.	P	S	ESC \	
	50	53	1B 5C	
5.	P	T	ESC \	
	50	54	1B 5C	
6.	P	U	ESC \	
	50	55	1B 5C	
7.	P	V	ESC \	
	50	56	1B 5C	
8.	P	W	ESC \	
	50	57	1B 5C	
9.	P	X	ESC \	
	50	58	1B 5C	
10.	P	Y	ESC \	
	50	59	1B 5C	
11.	P	Z	ESC \	
	50	5A	1B 5C	
12.	P	[	ESC \	
	50	5B	1B 5C	
13.	P	\	ESC \	
	50	5C	1B 5C	
14.	P	]	ESC \	
	50	5D	1B 5C	
15.	P	^	ESC \	
	50	5E	1B 5C	
16.	P	~	ESC \	
	50	5F	1B 5C	

---

1. Manufacturer: Beehive International  
2. Terminal: ATL 083

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC ^^	
5. Top Row:	0	ESC ^X	1B 18	1B 1E
6. Left Column:	0	1B OE	1B 1E	
7. Printing in bottom right cause scroll?	NO	25. Reverse video:	ESC ^N	
		26. Underline:	ESC ^O	ESC ^S
			1B OF	1B 13
8. Lead-in sequence:	ESC "	27. High intensity:	ESC ^Z	ESC ^^
	1B 22		1B 1A	1B 1E
9. Row or column first:	COL	28. Half intensity:		
10. Numeric form of row and column: BINARY		29. Attributes occupy position:	YES	
11. Add offset to:	Row: 20 Col: 20	30. Attributes cumulative:	YES	
12. Separator sequence:		31. All attributes off:	ESC ^^ 1B 1E	
13. End sequence:		CURSOR CONTROL KEYS		
14. Cursor to top row, left column:		32. Cursor up:	ESC f	
ESC " SP SP 1B 22 20 20			1B 66	
15. 10th Row, 50th Column:		33. Cursor down:	ESC i	
ESC " Q ) 1B 22 51 29			1B 69	
16. Delay after positioning:	0	34. Cursor right:	ESC h	
17. Cursor home:			1B 68	
ESC e 1B 65		35. Cursor left:	ESC g	
ERASURE	DELAY		1B 67	
18. Entire screen:		CHARACTER SET		
ESC o 1B 6F	0	36. Full upper and lower ASCII:	YES	
19. Cursor to end of screen:		37. Generate all control codes:	YES	
ESC J 1B 4A	0	38. Bell or tone sequence:	ESC ? 1B 3F	
20. Beginning of screen to cursor:		EMULATION		
21. Cursor to end of line:		39. Conform to ANSI X3.64?	NO	
ESC K 1B 4B	0	40. Terminals Emulated:	TD 830 MT 983	
22. Beginning of line to cursor:				
ESC D ESC K 1B 44 1B 4B	0			
23. Entire cursor line:				
ESC M 1B 4D	0			

---

Manufacturer: Beehive International  
Terminal: ATL 083

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 42. Programmable function keys.

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1. Manufacturer: Beehive International  
2. Terminal: ATL-004

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	0	ESC d B	ESC d @
6. Left Column:	0	1B 64 42	1B 64 40
7. Printing in bottom right cause scroll?	PROG	25. Reverse video:	
		ESC d P	ESC d @
		1B 64 50	1B 64 40
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:		ESC d `	ESC d @
ESC F		1B 64 60	1B 64 40
1B 46			
9. Row or column first:	ROW	27. High intensity:	
10. Numeric form of row and column:	BINARY		
11. Add offset to:	Row: 20	28. Half intensity:	
	Col: 20	ESC d A	ESC d @
		1B 64 41	1B 64 40
12. Separator sequence:		29. Attributes occupy position:	NO
13. End sequence:		30. Attributes cumulative:	NO
		31. All attributes off:	
		ESC d @	
		1B 64 40	
14. Cursor to top row, left column:		CURSOR CONTROL KEYS	
ESC F SP SP		32. Cursor up:	
1B 46 20 20		ESC A	
15. 10th Row, 50th Column:		1B 41	
ESC F ) Q		33. Cursor down:	
1B 46 29 51		ESC B	
16. Delay after positioning:	0	1B 42	
17. Cursor home:		34. Cursor right:	
ESC H		ESC C	
1B 48		1B 43	
ERASURE	DELAY	35. Cursor left:	
18. Entire screen:		ESC D	
ESC E	0	1B 44	
1B 45			
19. Cursor to end of screen:		CHARACTER SET	
ESC J	0	36. Full upper and lower ASCII:	YES
1B 4A		37. Generate all control codes:	YES
20. Beginning of screen to cursor:		38. Bell or tone sequence:	
		`G	
		07	
21. Cursor to end of line:		EMULATION	
ESC K	0	39. Conform to ANSI X3.64?	NO
1B 4B		40. Terminals Emulated:	
22. Beginning of line to cursor:		DEC VT100	
23. Entire cursor line:			

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Manufacturer:  
Terminal:

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Beehive International  
ATL-004

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                        | NOTES   |
|-----|------------------------|---|
| 1.  | ^B ESC p<br>02 1B 70   | 2. Dependent upon destructive scroll setting.   |
| 2.  | ^B ESC q<br>02 1B 71   | 30. Alternate sequences provide combinations.   |
| 3.  | ^B ESC r<br>02 1B 72   | 31. 512 characters including line graphics, foreign characters, icons, and math symbols.  |
| 4.  | ^B ESC s<br>02 1B 73   | 42. STX sequence is programmable up to 16 characters.<br>Termination sequence is programmable up to 16 characters OR<br>Entire key is programmable up to 16 characters. |
| 5.  | ^B ESC t<br>02 1B 74   |   |
| 6.  | ^B ESC u<br>02 1B 75   |   |
| 7.  | ^B ESC v<br>02 1B 76   |   |
| 8.  | ^B ESC w<br>02 1B 77   |   |
| 9.  | ^B ESC x<br>02 1B 78   |   |
| 10. | ^B ESC y<br>02 1B 79   |   |
| 11. | ^B ESC z<br>02 1B 7A   |   |
| 12. | ^B ESC {<br>02 1B 7B   |   |
| 13. | ^B ESC  <br>02 1B 7C   |   |
| 14. | ^B ESC }<br>02 1B 7D   |   |
| 15. | ^B ESC ~<br>02 1B 7E   |   |
| 16. | ^B ESC DEL<br>02 1B 7F |   |

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1. Manufacturer: Beehive International  
2. Terminal: ATL-078

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SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC d	@
5. Top Row:	1	1B 64 42	1B 64	40
6. Left Column:	1			
7. Printing in bottom right cause scroll?	NO	25. Reverse video: ESC d P 1B 64 50	ESC d	@ 1B 64 40
CURSOR ADDRESSING		26. Underline: ESC d ~ 1B 64 60	ESC d	@ 1B 64 40
8. Lead-in sequence: ESC F 1B 46		27. High intensity: 	28. Half intensity: 	
9. Row or column first:	ROW		ESC d A 1B 64 41	ESC d @ 1B 64 40
10. Numeric form of row and column: BINARY			29. Attributes occupy position:	NO
11. Add offset to:	Row: 1F Col: 1F		30. Attributes cumulative:	NO
12. Separator sequence:			31. All attributes off: ESC d @ 1B 64 40	
13. End sequence:				
14. Cursor to top row, left column: ESC F SP SP 1B 46 20 20			CURSOR CONTROL KEYS	
15. 10th Row, 50th Column: ESC F ) Q 1B 46 29 51			32. Cursor up: ESC A 1B 41	
16. Delay after positioning:	0		33. Cursor down: ESC B 1B 42	
17. Cursor home: ESC H 1B 48			34. Cursor right: ESC C 1B 43	
ERASURE	DELAY		35. Cursor left: ESC D 1B 44	
18. Entire screen: ESC E 1B 45	0			
19. Cursor to end of screen: ESC J 1B 4A	0		CHARACTER SET	
20. Beginning of screen to cursor:			36. Full upper and lower ASCII:	YES
21. Cursor to end of line: ESC K 1B 4B	0		37. Generate all control codes:	YES
22. Beginning of line to cursor:			38. Bell or tone sequence: ^G 07	
23. Entire cursor line:			EMULATION	
			39. Conform to ANSI X3.64?	NO
			40. Terminals Emulated:	

---

Manufacturer:  
Terminal:

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Beehive International  
ATL-078

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                                 | NOTES  |
|-----|---------------------------------|--|
| 1.  | $\text{^B}$ ESC p<br>02 1B 70   | 2. Dependent upon destructive scroll setting.  |
| 2.  | $\text{^B}$ ESC q<br>02 1B 71   | 30. Alternate sequences provide combinations.  |
| 3.  | $\text{^B}$ ESC r<br>02 1B 72   | 42. All function keys require termination sequence, which is switch selectable between CR; CRLF; EOT; and ETX. |
| 4.  | $\text{^B}$ ESC s<br>02 1B 73   |  |
| 5.  | $\text{^B}$ ESC t<br>02 1B 74   |  |
| 6.  | $\text{^B}$ ESC u<br>02 1B 75   |  |
| 7.  | $\text{^B}$ ESC v<br>02 1B 76   |  |
| 8.  | $\text{^B}$ ESC w<br>02 1B 77   |  |
| 9.  | $\text{^B}$ ESC x<br>02 1B 78   |  |
| 10. | $\text{^B}$ ESC y<br>02 1B 79   |  |
| 11. | $\text{^B}$ ESC z<br>02 1B 7A   |  |
| 12. | $\text{^B}$ ESC {<br>02 1B 7B   |  |
| 13. | $\text{^B}$ ESC  <br>02 1B 7C   |  |
| 14. | $\text{^B}$ ESC }<br>02 1B 7D   |  |
| 15. | $\text{^B}$ ESC ~<br>02 1B 7E   |  |
| 16. | $\text{^B}$ ESC DEL<br>02 1B 7F |  |

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1. Manufacturer: Beehive International  
2. Terminal: DMSB (Standard)

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SCREEN LAYOUT		VIDEO ATTRIBUTES
3. Number of rows:	24	ON OFF
4. Number of columns:	80	24. Blinking: ESC d B 1B 64 42
5. Top Row:	0	25. Reverse video: ESC d P 1B 64 50
6. Left Column:	0	26. Underline: ESC d ~ 1B 64 60
7. Printing in bottom right cause scroll?	PROG	27. High intensity: ESC d @ 1B 64 40
CURSOR ADDRESSING		28. Half intensity: ESC d A 1B 64 41
8. Lead-in sequence: ESC F 1B 46		29. Attributes occupy position: NO
9. Row or column first: ROW		30. Attributes cumulative: NO
10. Numeric form of row and column: BINARY		31. All attributes off: ESC d @ 1B 64 40
11. Add offset to: Row: 20 Col: 20		CURSOR CONTROL KEYS
12. Separator sequence:		32. Cursor up: ESC A 1B 41
13. End sequence:		33. Cursor down: ESC B 1B 42
14. Cursor to top row, left column: ESC F SP SP 1B 46 20 20		34. Cursor right: ESC C 1B 43
15. 10th Row, 50th Column: ESC F ) Q 1B 46 29 51		35. Cursor left: ESC D 1B 44
16. Delay after positioning: 0		CHARACTER SET
17. Cursor home: ESC H 1B 48		36. Full upper and lower ASCII: YES
ERASURE	DELAY	37. Generate all control codes: YES
18. Entire screen: ESC E 1B 45	0	38. Bell or tone sequence: ^G 07
19. Cursor to end of screen: ESC J 1B 4A	0	EMULATION
20. Beginning of screen to cursor:		39. Conform to ANSI X3.64? NO
21. Cursor to end of line: ESC K 1B 4B	0	40. Terminals Emulated:
22. Beginning of line to cursor:		
23. Entire cursor line:		

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Manufacturer:  
Terminal:

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Beehive International  
DMSB (Standard)

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                        | NOTES  |
|-----|------------------------|--|
| 1.  | ^B ESC p<br>02 1B 70   | 2. Dependent upon destructive scroll setting.  |
| 2.  | ^B ESC q<br>02 1B 71   | 30. Alternate sequences provide combinations.  |
| 3.  | ^B ESC r<br>02 1B 72   | 42. All function keys require termination sequence, which is switch selectable between CR; CRLF; EOT; and ETX. |
| 4.  | ^B ESC s<br>02 1B 73   |  |
| 5.  | ^B ESC t<br>02 1B 74   |  |
| 6.  | ^B ESC u<br>02 1B 75   |  |
| 7.  | ^B ESC v<br>02 1B 76   |  |
| 8.  | ^B ESC w<br>02 1B 77   |  |
| 9.  | ^B ESC x<br>02 1B 78   |  |
| 10. | ^B ESC y<br>02 1B 79   |  |
| 11. | ^B ESC z<br>02 1B 7A   |  |
| 12. | ^B ESC {<br>02 1B 7B   |  |
| 13. | ^B ESC  <br>02 1B 7C   |  |
| 14. | ^B ESC }<br>02 1B 7D   |  |
| 15. | ^B ESC ~<br>02 1B 7E   |  |
| 16. | ^B ESC DEL<br>02 1B 7F |  |

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1. Manufacturer: Beehive International  
2. Terminal: DMSC (Basic)

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SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking: ESC d B 1B 64 42	
5. Top Row:	0	25. Reverse video: ESC d P 1B 64 50	
6. Left Column:	0	26. Underline: ESC d ` 1B 64 60	
7. Printing in bottom right cause scroll?	PROG	27. High intensity: 28. Half intensity: ESC d A 1B 64 41	
		ESC d @ 1B 64 40	ESC d @ 1B 64 40
CURSOR ADDRESSING			
8. Lead-in sequence:	ESC F 1B 46	29. Attributes occupy position: NO	
9. Row or column first:	ROW	30. Attributes cumulative: NO	
10. Numeric form of row and column:	BINARY	31. All attributes off: ESC d @ 1B 64 40	
11. Add offset to:	Row: 20 Col: 20	CURSOR CONTROL KEYS	
12. Separator sequence:		32. Cursor up: ESC A 1B 41	
13. End sequence:		33. Cursor down: ESC B 1B 42	
14. Cursor to top row, left column: ESC F SP SP 1B 46 20 20		34. Cursor right: ESC C 1B 43	
15. 10th Row, 50th Column: ESC F ) Q 1B 46 29 51		35. Cursor left: ESC D 1B 44	
16. Delay after positioning:	0	CHARACTER SET	
17. Cursor home: ESC H 1B 48		36. Full upper and lower ASCII: YES	
ERASURE	DELAY	37. Generate all control codes: YES	
18. Entire screen: ESC E 1B 45	0	38. Bell or tone sequence: ^G 07	
19. Cursor to end of screen: ESC J 1B 4A	0	EMULATION	
20. Beginning of screen to cursor:		39. Conform to ANSI X3.64?	NO
21. Cursor to end of line: ESC K 1B 4B	0	40. Terminals Emulated:	
22. Beginning of line to cursor:			
23. Entire cursor line:			

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Manufacturer:  
Terminal:

---

Beehive International  
DMSC (Basic)

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                        | NOTES  |
|-----|------------------------|--|
| 1.  | ^B ESC p<br>02 1B 70   | 2. Dependent upon destructive scroll setting.  |
| 2.  | ^B ESC q<br>02 1B 71   | 30. Alternate sequences provide combinations.  |
| 3.  | ^B ESC r<br>02 1B 72   | 42. All function keys require termination sequence, which is switch selectable between CR; CRLF; EOT; and ETX. |
| 4.  | ^B ESC s<br>02 1B 73   |  |
| 5.  | ^B ESC t<br>02 1B 74   |  |
| 6.  | ^B ESC u<br>02 1B 75   |  |
| 7.  | ^B ESC v<br>02 1B 76   |  |
| 8.  | ^B ESC w<br>02 1B 77   |  |
| 9.  | ^B ESC x<br>02 1B 78   |  |
| 10. | ^B ESC y<br>02 1B 79   |  |
| 11. | ^B ESC z<br>02 1B 7A   |  |
| 12. | ^B ESC {<br>02 1B 7B   |  |
| 13. | ^B ESC  <br>02 1B 7C   |  |
| 14. | ^B ESC }<br>02 1B 7D   |  |
| 15. | ^B ESC ~<br>02 1B 7E   |  |
| 16. | ^B ESC DEL<br>02 1B 7F |  |

---

1. Manufacturer: Beehive International  
2. Terminal: DMSD (Plus)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	ESC d @ 1B 64 40
5. Top Row:	0	25. Reverse video:	ESC d @ 1B 64 40
6. Left Column:	0	26. Underline:	ESC d @ 1B 64 40
7. Printing in bottom right cause scroll?	PROG	27. High intensity:	ESC d @ 1B 64 40
CURSOR ADDRESSING		28. Half intensity:	ESC d @ 1B 64 40
8. Lead-in sequence:	ESC F 1B 46	29. Attributes occupy position:	NO
9. Row or column first:	ROW	30. Attributes cumulative:	NO
10. Numeric form of row and column:	BINARY	31. All attributes off:	ESC d @ 1B 64 40
11. Add offset to:	Row: 20 Col: 20	CURSOR CONTROL KEYS	
12. Separator sequence:		32. Cursor up:	ESC A 1B 41
13. End sequence:		33. Cursor down:	ESC B 1B 42
14. Cursor to top row, left column:	ESC F SP SP 1B 46 20 20	34. Cursor right:	ESC C 1B 43
15. 10th Row, 50th Column:	ESC F ) Q 1B 46 29 51	35. Cursor left:	ESC D 1B 44
16. Delay after positioning:	0	CHARACTER SET	
17. Cursor home:	ESC H 1B 48	36. Full upper and lower ASCII:	YES
ERASURE		37. Generate all control codes:	YES
18. Entire screen:	DELAY ESC E 1B 45	38. Bell or tone sequence:	^G 07
19. Cursor to end of screen:	0	EMULATION	
20. Beginning of screen to cursor:	ESC J 1B 4A	39. Conform to ANSI X3.64?	NO
21. Cursor to end of line:	0	40. Terminals Emulated:	
22. Beginning of line to cursor:	ESC K 1B 4B	23. Entire cursor line:	

---

Manufacturer:  
Terminal:

---

Beehive International  
DMSD (Plus)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                                 | NOTES  |
|-----|---------------------------------|--|
| 1.  | $\text{^B}$ ESC p<br>02 1B 70   | 2. Dependent upon destructive scroll setting.  |
| 2.  | $\text{^B}$ ESC q<br>02 1B 71   | 30. Alternate sequences provide combinations.  |
| 3.  | $\text{^B}$ ESC r<br>02 1B 72   | 42. All function keys require termination sequence, which is switch selectable between CR; CRLF; EOT; and ETX. |
| 4.  | $\text{^B}$ ESC s<br>02 1B 73   |  |
| 5.  | $\text{^B}$ ESC t<br>02 1B 74   |  |
| 6.  | $\text{^B}$ ESC u<br>02 1B 75   |  |
| 7.  | $\text{^B}$ ESC v<br>02 1B 76   |  |
| 8.  | $\text{^B}$ ESC w<br>02 1B 77   |  |
| 9.  | $\text{^B}$ ESC x<br>02 1B 78   |  |
| 10. | $\text{^B}$ ESC y<br>02 1B 79   |  |
| 11. | $\text{^B}$ ESC z<br>02 1B 7A   |  |
| 12. | $\text{^B}$ ESC {<br>02 1B 7B   |  |
| 13. | $\text{^B}$ ESC  <br>02 1B 7C   |  |
| 14. | $\text{^B}$ ESC }<br>02 1B 7D   |  |
| 15. | $\text{^B}$ ESC ~<br>02 1B 7E   |  |
| 16. | $\text{^B}$ ESC DEL<br>02 1B 7F |  |

---

1. Manufacturer: Beehive International  
2. Terminal: Topper (in DM78 mode)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC d B	ESC d @
6. Left Column:	1	1B 64 42	1B 64 40
7. Printing in bottom right cause scroll?	NO	25. Reverse video:	
		ESC d P	ESC d @
		1B 64 50	1B 64 40
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:		ESC d `	ESC d @
		1B 64 60	1B 64 40
9. Row or column first:	ROW	27. High intensity:	
10. Numeric form of row and column:	BINARY		
11. Add offset to:	Row: 1F Col: 1F	28. Half intensity:	
		ESC d A	ESC d @
		1B 64 41	1B 64 40
12. Separator sequence:		29. Attributes occupy position:	NO
13. End sequence:		30. Attributes cumulative:	NO
14. Cursor to top row, left column:		31. All attributes off:	
ESC F SP SP		ESC d @	
1B 46 20 20		1B 64 40	
15. 10th Row, 50th Column:		CURSOR CONTROL KEYS	
ESC F ) Q		32. Cursor up:	
1B 46 29 51		ESC A	
16. Delay after positioning:	0	1B 41	
17. Cursor home:		33. Cursor down:	
ESC H		ESC B	
1B 48		1B 42	
ERASURE	DELAY	34. Cursor right:	
18. Entire screen:		ESC C	
ESC E	0	1B 43	
1B 45		35. Cursor left:	
19. Cursor to end of screen:		ESC D	
ESC J	0	1B 44	
1B 4A		CHARACTER SET	
20. Beginning of screen to cursor:		36. Full upper and lower ASCII:	YES
		37. Generate all control codes:	YES
21. Cursor to end of line:		38. Bell or tone sequence:	
ESC K	0	^G	
1B 4B		07	
22. Beginning of line to cursor:		EMULATION	
23. Entire cursor line:		39. Conform to ANSI X3.64?	NO
		40. Terminals Emulated:	

---

Manufacturer:  
Terminal:

---

Beehive International  
Topper (in DM78 mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                                 | NOTES  |
|-----|---------------------------------|--|
| 1.  | $\text{^B}$ ESC p<br>02 1B 70   | 2. Dependent upon destructive scroll setting.  |
| 2.  | $\text{^B}$ ESC q<br>02 1B 71   | 30. Alternate sequences provide combinations.  |
| 3.  | $\text{^B}$ ESC r<br>02 1B 72   | 42. All function keys require termination sequence, which is switch selectable between CR; CRLF; EOT; and ETX. |
| 4.  | $\text{^B}$ ESC s<br>02 1B 73   |  |
| 5.  | $\text{^B}$ ESC t<br>02 1B 74   |  |
| 6.  | $\text{^B}$ ESC u<br>02 1B 75   |  |
| 7.  | $\text{^B}$ ESC v<br>02 1B 76   |  |
| 8.  | $\text{^B}$ ESC w<br>02 1B 77   |  |
| 9.  | $\text{^B}$ ESC x<br>02 1B 78   |  |
| 10. | $\text{^B}$ ESC y<br>02 1B 79   |  |
| 11. | $\text{^B}$ ESC z<br>02 1B 7A   |  |
| 12. | $\text{^B}$ ESC {<br>02 1B 7B   |  |
| 13. | $\text{^B}$ ESC  <br>02 1B 7C   |  |
| 14. | $\text{^B}$ ESC }<br>02 1B 7D   |  |
| 15. | $\text{^B}$ ESC ~<br>02 1B 7E   |  |
| 16. | $\text{^B}$ ESC DEL<br>02 1B 7F |  |

---

1. Manufacturer:	CIE Terminals
2. Terminal:	CIT-101 and CIT-101e (ANSI mode)

---

## SCREEN LAYOUT

3. Number of rows: 24
4. Number of columns: 80
5. Top Row: 1
6. Left Column: 1
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
ESC [ 1B 5B
9. Row or column first: ROW
10. Numeric form of row and column:  
VARIABLE-LENGTH ASCII
11. Add offset to:  
Row: 0  
Col: 0
12. Separator sequence:  
;  
3B
13. End sequence:  
H  
48

14. Cursor to top row, left column:  
ESC [ 1 ; 1 H  
1B 5B 31 3B 31 48
15. 10th Row, 50th Column:  
ESC [ 1 0 ; 5 0 H  
1B 5B 31 30 3B 35 30 48
16. Delay after positioning: 0
17. Cursor home:  
ESC [ H  
1B 5B 48

## ERASURE

18. Entire screen:  
ESC [ 2 J 0  
1B 5B 32 4A
19. Cursor to end of screen:  
ESC [ J 0  
1B 5B 4A
20. Beginning of screen to cursor:  
ESC [ 1 J 0  
1B 5B 31 4A
21. Cursor to end of line:  
ESC [ K 0  
1B 5B 4B
22. Beginning of line to cursor:  
ESC [ 1 K 0  
1B 5B 31 4B
23. Entire cursor line:  
ESC [ 2 K 0  
1B 5B 32 4B

## VIDEO ATTRIBUTES

- |                                 | ON                       | OFF                 |
|---------------------------------|--------------------------|---------------------|
| 24. Blinking:                   | ESC [ 5 m<br>1B 5B 35 6D | ESC [ m<br>1B 5B 6D |
| 25. Reverse video:              | ESC [ 7 m<br>1B 5B 37 6D | ESC [ m<br>1B 5B 6D |
| 26. Underline:                  | ESC [ 4 m<br>1B 5B 34 6D | ESC [ m<br>1B 5B 6D |
| 27. High intensity:             | ESC [ 1 m<br>1B 5B 31 6D | ESC [ m<br>1B 5B 6D |
| 28. Half intensity:             |                          |                     |
| 29. Attributes occupy position: | NO                       |                     |
| 30. Attributes cumulative:      | YES                      |                     |
| 31. All attributes off:         | ESC [ m<br>1B 5B 6D      |                     |

## CURSOR CONTROL KEYS

32. Cursor up:  
ESC [ A  
1B 5B 41
33. Cursor down:  
ESC [ B  
1B 5B 42
34. Cursor right:  
ESC [ C  
1B 5B 43
35. Cursor left:  
ESC [ D  
1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES
37. Generate all control codes: YES
38. Bell or tone sequence:  
^G  
07

## EMULATION

39. Conform to ANSI X3.64?: YES
40. Terminals Emulated:  
DEC VT100

---

Manufacturer:  
Terminal:

---

CIE Terminals  
CIT-101 and CIT-101e (ANSI mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC O P  
1B 4F 50

NOTES

4. Optionally 132.

30. See ANSI video attribute  
discussion.

2. ESC O Q  
1B 4F 51

36. Plus 32 standard graphics  
characters, 32 alternate graphics  
characters, 96 alternate characters

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer:	CIE Terminals
2. Terminal:	CIT-101 and CIT-101e (VT52 mode)

---

SCREEN LAYOUT	VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1		
6. Left Column:	1		
7. Printing in bottom right cause scroll?	PROG	25. Reverse video:	
CURSOR ADDRESSING			
8. Lead-in sequence: ESC Y 1B 59		26. Underline:	
9. Row or column first:	ROW	27. High intensity:	
10. Numeric form of row and column: BINARY		28. Half intensity:	
11. Add offset to: Row: 1F Col: 1F		29. Attributes occupy position: NO	
12. Separator sequence:		30. Attributes cumulative: NO	
13. End sequence:		31. All attributes off:	
14. Cursor to top row, left column: ESC Y SP SP 1B 59 20 20		CURSOR CONTROL KEYS	
15. 10th Row, 50th Column: ESC Y ) Q 1B 59 29 51		32. Cursor up: ESC A 1B 41	
16. Delay after positioning:	0	33. Cursor down: ESC B 1B 42	
17. Cursor home: ESC H 1B 48		34. Cursor right: ESC C 1B 43	
ERASURE	DELAY	35. Cursor left: ESC D 1B 44	
18. Entire screen: ESC H ESC J 1B 48 1B 4A	0	CHARACTER SET	
19. Cursor to end of screen: ESC J 1B 4A	0	36. Full upper and lower ASCII: YES	
20. Beginning of screen to cursor:		37. Generate all control codes: YES	
21. Cursor to end of line: ESC K 1B 4B	0	38. Bell or tone sequence: ^G 07	
22. Beginning of line to cursor:		EMULATION	
23. Entire cursor line:		39. Conform to ANSI X3.64? NO	
		40. Terminals Emulated: DEC VT52	

---

Manufacturer:	CIE Terminals
Terminal:	CIT-101 and CIT-101e (VT52 mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC P  
1B 50

NOTES

36. Plus 32 standard graphics  
characters, 32 alternate  
graphics characters, 96 alternate  
characters.

2. ESC Q  
1B 51

3. ESC R  
1B 52

4. ESC S  
1B 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: CIE Terminals  
2. Terminal: CIT-161 (ANSI mode)

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll?

PROG

## VIDEO ATTRIBUTES

ON OFF

24. Blinking: ESC [ 5 m ESC [ m  
1B 5B 35 6D 1B 5B 6D  
25. Reverse video: ESC [ 7 m ESC [ m  
1B 5B 37 6D 1B 5B 6D

## CURSOR ADDRESSING

8. Lead-in sequence:  
   ESC [  
      1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

## 26. Underline:

   ESC [ 4 m ESC [ m  
   1B 5B 34 6D 1B 5B 6D

27. High intensity: ESC [ 1 m ESC [ m  
   1B 5B 31 6D 1B 5B 6D  
28. Half intensity:

29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
   ESC [ m  
   1B 5B 6D

14. Cursor to top row, left column:  
   ESC [ 1 ; 1 H  
   1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
   ESC [ 1 0 ; 5 0 H  
   1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
   ESC [ H  
   1B 5B 48

## CURSOR CONTROL KEYS

32. Cursor up:  
   ESC [ A  
   1B 5B 41

33. Cursor down:  
   ESC [ B  
   1B 5B 42

34. Cursor right:  
   ESC [ C  
   1B 5B 43

35. Cursor left:  
   ESC [ D  
   1B 5B 44

- ERASURE DELAY  
18. Entire screen:  
   ESC [ 2 J 0  
   1B 5B 32 4A

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
   ^G  
   07

19. Cursor to end of screen:  
   ESC [ J 0  
   1B 5B 4A  
20. Beginning of screen to cursor:  
   ESC [ 1 J 0  
   1B 5B 31 4A

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
   DEC VT100

21. Cursor to end of line:  
   ESC [ K 0  
   1B 5B 4B  
22. Beginning of line to cursor:  
   ESC [ 1 K 0  
   1B 5B 31 4B

23. Entire cursor line:  
   ESC [ 2 K 0  
   1B 5B 32 4B

---

Manufacturer:  
Terminal:

---

CIE Terminals  
CIT-161 (ANSI mode)

---

41. Information provided by:  
MANUFACTURER
42. PROGRAM FUNCTION KEYS
- |                        |   |
|------------------------|---|
| 1. ESC O P<br>1B 4F 50 | NOTES<br>4. Optionally 132.   |
| 2. ESC O Q<br>1B 4F 51 | 30. See ANSI video attribute<br>discussion.   |
| 3. ESC O R<br>1B 4F 52 | 36. Plus 32 standard graphics<br>characters, 32 alternate graphics<br>characters, 96 alternate characters |
| 4. ESC O S<br>1B 4F 53 | This terminal allows color video  |
| 5.                     |   |
| 6.                     |   |
| 7.                     |   |
| 8.                     |   |
| 9.                     |   |
| 10.                    |   |
| 11.                    |   |
| 12.                    |   |
| 13.                    |   |
| 14.                    |   |
| 15.                    |   |
| 16.                    |   |

---

1. Manufacturer: CIE Terminals  
2. Terminal: CIT-161 (VT52 mode)

---

SCREEN LAYOUT	VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	25. Reverse video:	
6. Left Column:	1	26. Underline:	
7. Printing in bottom right cause scroll?	PROG	27. High intensity:	
CURSOR ADDRESSING	28. Half intensity:		
8. Lead-in sequence: ESC Y 1B 59	29. Attributes occupy position: NO		
9. Row or column first: ROW	30. Attributes cumulative: NO		
10. Numeric form of row and column: BINARY	31. All attributes off:		
11. Add offset to: Row: 1F Col: 1F			
12. Separator sequence:			
13. End sequence:			
14. Cursor to top row, left column: ESC Y SP SP 1B 59 20 20	CURSOR CONTROL KEYS		
15. 10th Row, 50th Column: ESC Y ) Q 1B 59 29 51	32. Cursor up: ESC A 1B 41		
16. Delay after positioning: 0	33. Cursor down: ESC B 1B 42		
17. Cursor home: ESC H 1B 48	34. Cursor right: ESC C 1B 43		
ERASURE	35. Cursor left: ESC D 1B 44		
18. Entire screen: ESC H ESC J 1B 48 1B 4A	CHARACTER SET		
19. Cursor to end of screen: ESC J 1B 4A	36. Full upper and lower ASCII: YES 37. Generate all control codes: YES 38. Bell or tone sequence: ^G 07		
20. Beginning of screen to cursor:			
21. Cursor to end of line: ESC K 1B 4B	EMULATION		
22. Beginning of line to cursor:	39. Conform to ANSI X3.64? NO 40. Terminals Emulated: DEC VT52		
23. Entire cursor line:			

---

Manufacturer: CIE Terminals  
Terminal: CIT-161 (VT52 mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC P  
1B 50

NOTES

36. Plus 32 standard graphics  
characters, 32 alternate  
graphics characters, 96 alternate  
characters.

2. ESC Q  
1B 51

3. ESC R  
1B 52

4. ESC S  
1B 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: CIE Terminals  
 2. Terminal: CIT-467 (ANSI mode)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80		
5. Top Row:	1	24. Blinking:	ESC [ m
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D
		26. Underline: ESC [ 4 m 1B 5B 34 6D	ESC [ m 1B 5B 6D
CURSOR ADDRESSING		27. High intensity: ESC [ 1 m 1B 5B 31 6D	ESC [ m 1B 5B 6D
8. Lead-in sequence: ESC [ 1B 5B		28. Half intensity: .	.
9. Row or column first:	ROW		
10. Numeric form of row and column: VARIABLE-LENGTH ASCII			
11. Add offset to:	Row: 0 Col: 0	29. Attributes occupy position: NO	
12. Separator sequence: ; 3B		30. Attributes cumulative: YES	
13. End sequence: H 48		31. All attributes off: ESC [ m 1B 5B 6D	
14. Cursor to top row, left column: ESC [ 1 ; 1 H 1B 5B 31 3B 31 48		CURSOR CONTROL KEYS	
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48		32. Cursor up: ESC [ A 1B 5B 41	
16. Delay after positioning: 0		33. Cursor down: ESC [ B 1B 5B 42	
17. Cursor home: ESC [ H 1B 5B 48		34. Cursor right: ESC [ C 1B 5B 43	
ERASURE	DELAY	35. Cursor left: ESC [ D 1B 5B 44	
18. Entire screen: ESC [ 2 J 1B 5B 32 4A	0	CHARACTER SET	
19. Cursor to end of screen: ESC [ J 1B 5B 4A	0	36. Full upper and lower ASCII: YES	
20. Beginning of screen to cursor: ESC [ 1 J 1B 5B 31 4A	0	37. Generate all control codes: YES	
21. Cursor to end of line: ESC [ K 1B 5B 4B	0	38. Bell or tone sequence: ^G 07	
22. Beginning of line to cursor: ESC [ 1 K 1B 5B 31 4B	0	EMULATION	
23. Entire cursor line: ESC [ 2 K 1B 5B 32 4B	0	39. Conform to ANSI X3.64?: YES	
		40. Terminals Emulated: Compatible with DEC VT100 and TEK 4010/4014, 4027 Software compatible with DEC VT52	

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Manufacturer:  
Terminal:

---

CIE Terminals  
CIT-467 (ANSI mode)

---

41. Information provided by:  
MANUFACTURER
42. PROGRAM FUNCTION KEYS
- |     |                     | NOTES   |
|-----|---------------------|---|
| 1.  | ESC O P<br>1B 4F 50 | 4. Optionally 132.<br>30. See ANSI video attribute discussion.                                      |
| 2.  | ESC O Q<br>1B 4F 51 | 36. Plus 32 standard graphics characters, 32 alternate graphics characters, 96 alternate characters |
| 3.  | ESC O R<br>1B 4F 52 |   |
| 4.  | ESC O S<br>1B 4F 53 |   |
| 5.  |                     |   |
| 6.  |                     |   |
| 7.  |                     |   |
| 8.  |                     |   |
| 9.  |                     |   |
| 10. |                     |   |
| 11. |                     |   |
| 12. |                     |   |
| 13. |                     |   |
| 14. |                     |   |
| 15. |                     |   |
| 16. |                     |   |

---

1. Manufacturer:	CIE Terminals
2. Terminal:	CIT-467 (VT52 mode)

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SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1	25. Reverse video:		
6. Left Column:	1	26. Underline:		
7. Printing in bottom right cause scroll?	PROG	27. High intensity:		
CURSOR ADDRESSING		28. Half intensity:		
8. Lead-in sequence: ESC Y 1B 59	ROW	29. Attributes occupy position:	NO	
9. Row or column first:	ROW	30. Attributes cumulative:	NO	
10. Numeric form of row and column: BINARY		31. All attributes off:		
11. Add offset to: Row: 1F Col: 1F		CURSOR CONTROL KEYS		
12. Separator sequence:		32. Cursor up: ESC A 1B 41		
13. End sequence:		33. Cursor down: ESC B 1B 42		
14. Cursor to top row, left column: ESC Y SP SP 1B 59 20 20	0	34. Cursor right: ESC C 1B 43		
15. 10th Row, 50th Column: ESC Y ) Q 1B 59 29 51		35. Cursor left: ESC D 1B 44		
16. Delay after positioning:	0	CHARACTER SET		
17. Cursor home: ESC H 1B 48		36. Full upper and lower ASCII:	YES	
ERASURE	DELAY	37. Generate all control codes:	YES	
18. Entire screen: ESC H ESC J 1B 48 1B 4A	0	38. Bell or tone sequence: ^G 07		
19. Cursor to end of screen: ESC J 1B 4A	0	EMULATION		
20. Beginning of screen to cursor:		39. Conform to ANSI X3.64?	NO	
21. Cursor to end of line: ESC K 1B 4B	0	40. Terminals Emulated: Software compatible with DEC VT52		
22. Beginning of line to cursor:				
23. Entire cursor line:				

---

Manufacturer:  
Terminal:

---

CIE Terminals  
CIT-467 (VT52 mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC P

1B 50

NOTES

36. Plus 32 standard graphics  
characters, 32 alternate  
graphics characters, 96 alternate  
characters.

2. ESC Q

1B 51

3. ESC R

1B 52

4. ESC S

1B 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: CIE Terminals  
 2. Terminal: CIT-500 (ANSI mode)

---

## SCREEN LAYOUT

3. Number of rows: 24  
 4. Number of columns: 80  
 5. Top Row: 1  
 6. Left Column: 1  
 7. Printing in bottom right cause scroll?

PROG  
 24  
 80  
 1  
 1  
 25.  
 PROG

## VIDEO ATTRIBUTES

- ON OFF  
 24. Blinking: ESC [ 5 m 1B 5B 35 6D 1B 5B 6D  
 25. Reverse video: ESC [ 7 m 1B 5B 37 6D 1B 5B 6D

## CURSOR ADDRESSING

8. Lead-in sequence:  
 ESC [  
 1B 5B  
 9. Row or column first: ROW  
 10. Numeric form of row and column:  
 VARIABLE-LENGTH ASCII  
 11. Add offset to: Row: 0  
 Col: 0

## 26. Underline:

- ESC [ 4 m 1B 5B 34 6D 1B 5B 6D

27. High intensity: ESC [ 1 m 1B 5B 31 6D 1B 5B 6D  
 28. Half intensity:

29. Attributes occupy position: NO  
 30. Attributes cumulative: YES  
 31. All attributes off:

ESC [ m  
 1B 5B 6D

12. Separator sequence:  
 ;  
 3B

13. End sequence:  
 H  
 48  
 14. Cursor to top row, left column:  
 ESC [ 1 ; 1 H  
 1B 5B 31 3B 31 48  
 15. 10th Row, 50th Column:  
 ESC [ 1 0 ; 5 0 H  
 1B 5B 31 30 3B 35 30 48  
 16. Delay after positioning: 0  
 17. Cursor home:  
 ESC [ H  
 1B 5B 48

## CURSOR CONTROL KEYS

32. Cursor up:  
 ESC [ A  
 1B 5B 41

33. Cursor down:  
 ESC [ B  
 1B 5B 42

34. Cursor right:  
 ESC [ C  
 1B 5B 43

35. Cursor left:  
 ESC [ D  
 1B 5B 44

- ERASURE DELAY  
 18. Entire screen:  
 ESC [ 2 J 0  
 1B 5B 32 4A  
 19. Cursor to end of screen:  
 ESC [ J 0  
 1B 5B 4A  
 20. Beginning of screen to cursor:  
 ESC [ 1 J 0  
 1B 5B 31 4A  
 21. Cursor to end of line:  
 ESC [ K 0  
 1B 5B 4B  
 22. Beginning of line to cursor:  
 ESC [ 1 K 0  
 1B 5B 31 4B  
 23. Entire cursor line:  
 ESC [ 2 K 0  
 1B 5B 32 4B

## CHARACTER SET

36. Full upper and lower ASCII: YES  
 37. Generate all control codes: YES  
 38. Bell or tone sequence:

^G  
 07

## EMULATION

39. Conform to ANSI X3.64? YES  
 40. Terminals Emulated:  
 DEC VT100

---

Manufacturer: CIE Terminals  
Terminal: CIT-500 (ANSI mode)

---

41. Information provided by:

MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC O P  
1B 4F 50

NOTES

3. Optionally 64.  
4. Optionally 120.

2. ESC O Q  
1B 4F 51

30. See ANSI video attribute  
discussion.

3. ESC O R  
1B 4F 52

36. Plus 32 standard graphics  
characters, RAM loadable and down-  
line loadable 128 character set.

4. ESC O S  
1B 4F 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: CIE Terminals  
2. Terminal: CIT-500 (VT52 mode)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	25. Reverse video:	
6. Left Column:	1	26. Underline:	
7. Printing in bottom right cause scroll?	PROG	27. High intensity:	
CURSOR ADDRESSING		28. Half intensity:	
8. Lead-in sequence:	ESC Y 1B 59	29. Attributes occupy position:	NO
9. Row or column first:	ROW	30. Attributes cumulative:	NO
10. Numeric form of row and column:	BINARY	31. All attributes off:	
11. Add offset to:	Row: 1F Col: 1F	CURSOR CONTROL KEYS	
12. Separator sequence:		32. Cursor up:	
13. End sequence:		ESC A 1B 41	
14. Cursor to top row, left column:	ESC Y SP SP 1B 59 20 20	33. Cursor down:	
15. 10th Row, 50th Column:	ESC Y ) Q 1B 59 29 51	ESC B 1B 42	
16. Delay after positioning:	0	34. Cursor right:	
17. Cursor home:	ESC H 1B 48	ESC C 1B 43	
ERASURE	DELAY	35. Cursor left:	
18. Entire screen:	ESC H ESC J 1B 48 1B 4A	ESC D 1B 44	
19. Cursor to end of screen:	ESC J 1B 4A	CHARACTER SET	
20. Beginning of screen to cursor:	0	36. Full upper and lower ASCII:	YES
21. Cursor to end of line:	ESC K 1B 4B	37. Generate all control codes:	YES
22. Beginning of line to cursor:	0	38. Bell or tone sequence:	
23. Entire cursor line:		^G 07	
EMULATION			
39. Conform to ANSI X3.64? NO			
40. Terminals Emulated: DEC VT52			

---

Manufacturer: CIE Terminals  
Terminal: CIT-500 (VT52 mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC P

1B 50

NOTES

36. Plus 32 standard graphics  
characters, RAM loadable and down-  
line loadable 128 character set.

2. ESC Q

1B 51

3. ESC R

1B 52

4. ESC S

1B 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: CIE Terminals  
 2. Terminal: CIT-80 (ANSI mode)

---

## SCREEN LAYOUT

3. Number of rows: 24  
 4. Number of columns: 80  
 5. Top Row: 1  
 6. Left Column: 1  
 7. Printing in bottom right cause scroll?

PROG

## VIDEO ATTRIBUTES

- |                    | ON                       | OFF                 |
|--------------------|--------------------------|---------------------|
| 24. Blinking:      | ESC [ 5 m<br>1B 5B 35 6D | ESC [ m<br>1B 5B 6D |
| 25. Reverse video: | ESC [ 7 m<br>1B 5B 37 6D | ESC [ m<br>1B 5B 6D |

## CURSOR ADDRESSING

8. Lead-in sequence:  
 ESC [  
 1B 5B  
 9. Row or column first: ROW  
 10. Numeric form of row and column:  
 VARIABLE-LENGTH ASCII  
 11. Add offset to: Row: 0  
 Col: 0

## 26. Underline:

- |                          |                     |
|--------------------------|---------------------|
| ESC [ 4 m<br>1B 5B 34 6D | ESC [ m<br>1B 5B 6D |
|--------------------------|---------------------|

- |                     |                          |                     |
|---------------------|--------------------------|---------------------|
| 27. High intensity: | ESC [ 1 m<br>1B 5B 31 6D | ESC [ m<br>1B 5B 6D |
|---------------------|--------------------------|---------------------|

- |                     |                          |
|---------------------|--------------------------|
| 28. Half intensity: | ESC [ 0 m<br>1B 5B 30 6D |
|---------------------|--------------------------|

- |                                    |                     |
|------------------------------------|---------------------|
| 29. Attributes occupy position: NO | ESC [ m<br>1B 5B 6D |
| 30. Attributes cumulative: YES     |                     |
| 31. All attributes off:            |                     |

12. Separator sequence:  
 ;  
 3B

## 13. End sequence:

H  
 48

14. Cursor to top row, left column:  
 ESC [ 1 ; 1 H  
 1B 5B 31 3B 31 48  
 15. 10th Row, 50th Column:  
 ESC [ 1 0 ; 5 0 H  
 1B 5B 31 30 3B 35 30 48  
 16. Delay after positioning: 0  
 17. Cursor home:  
 ESC [ H  
 1B 5B 48

## CURSOR CONTROL KEYS

- |                |                     |
|----------------|---------------------|
| 32. Cursor up: | ESC [ A<br>1B 5B 41 |
|----------------|---------------------|

- |                  |                     |
|------------------|---------------------|
| 33. Cursor down: | ESC [ B<br>1B 5B 42 |
|------------------|---------------------|

- |                   |                     |
|-------------------|---------------------|
| 34. Cursor right: | ESC [ C<br>1B 5B 43 |
|-------------------|---------------------|

- |                  |                     |
|------------------|---------------------|
| 35. Cursor left: | ESC [ D<br>1B 5B 44 |
|------------------|---------------------|

- ERASURE DELAY  
 18. Entire screen:  
 ESC [ 2 J 0  
 1B 5B 32 4A

## CHARACTER SET

- |                                     |           |
|-------------------------------------|-----------|
| 36. Full upper and lower ASCII: YES | ESC [ 0 J |
| 37. Generate all control codes: YES | ESC [ 0 K |
| 38. Bell or tone sequence:          | ^G<br>07  |

19. Cursor to end of screen:  
 ESC [ J 0  
 1B 5B 4A  
 20. Beginning of screen to cursor:  
 ESC [ 1 J 0  
 1B 5B 31 4A

## EMULATION

- |                                 |           |
|---------------------------------|-----------|
| 39. Conform to ANSI X3.64?: YES | ESC [ 0 K |
| 40. Terminals Emulated:         | ESC [ 0 L |

21. Cursor to end of line:  
 ESC [ K 0  
 1B 5B 4B  
 22. Beginning of line to cursor:  
 ESC [ 1 K 0  
 1B 5B 31 4B  
 23. Entire cursor line:  
 ESC [ 2 K 0  
 1B 5B 32 4B

---

Manufacturer:	CIE Terminals
Terminal:	CIT-80 (ANSI mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                     | NOTES                                     |
|-----|---------------------|---|
| 1.  | ESC O P<br>1B 4F 50 | 30. See ANSI video attribute discussion.  |
| 2.  | ESC O Q<br>1B 4F 51 | 36. Plus 32 standard graphics characters. |
| 3.  | ESC O R<br>1B 4F 52 |   |
| 4.  | ESC O S<br>1B 4F 53 |   |
| 5.  |                     |   |
| 6.  |                     |   |
| 7.  |                     |   |
| 8.  |                     |   |
| 9.  |                     |   |
| 10. |                     |   |
| 11. |                     |   |
| 12. |                     |   |
| 13. |                     |   |
| 14. |                     |   |
| 15. |                     |   |
| 16. |                     |   |

---

1. Manufacturer:	CIE Terminals
2. Terminal:	CIT-80 (VT52 mode)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
		ON	OFF
3. Number of rows:	24	24. Blinking:	
4. Number of columns:	80	ESC d B 1B 64 42	ESC d @ 1B 64 40
5. Top Row:	1	25. Reverse video:	
6. Left Column:	1	ESC d P 1B 64 50	ESC d @ 1B 64 40
7. Printing in bottom right cause scroll?	PROG	26. Underline:	
		ESC d \ 1B 64 5C	ESC d @ 1B 64 40
CURSOR ADDRESSING		27. High intensity:	
8. Lead-in sequence:		ESC d A 1B 64 41	ESC d @ 1B 64 40
ESC Y 1B 59		28. Half intensity:	
9. Row or column first:	ROW	29. Attributes occupy position:	NO
10. Numeric form of row and column: BINARY		30. Attributes cumulative:	NO
11. Add offset to:	Row: 1F Col: 1F	31. All attributes off:	
12. Separator sequence:		ESC d @ 1B 64 40	
13. End sequence:		32. Cursor up:	
14. Cursor to top row, left column: ESC Y SP SP 1B 59 20 20		ESC A 1B 41	
15. 10th Row, 50th Column: ESC Y ) Q 1B 59 29 51		33. Cursor down:	
16. Delay after positioning:	0	ESC B 1B 42	
17. Cursor home: ESC H 1B 48		34. Cursor right:	
ERASURE	DELAY	ESC C 1B 43	
18. Entire screen: ESC H ESC J 1B 48 1B 4A	0	35. Cursor left:	
19. Cursor to end of screen: ESC J 1B 4A	0	ESC D 1B 44	
20. Beginning of screen to cursor:		CHARACTER SET	
21. Cursor to end of line: ESC K 1B 4B	0	36. Full upper and lower ASCII:	YES
22. Beginning of line to cursor:		37. Generate all control codes:	YES
23. Entire cursor line:		38. Bell or tone sequence:	
		^G 07	
		EMULATION	
		39. Conform to ANSI X3.64?	NO
		40. Terminals Emulated:	
		DEC VT52	

---

Manufacturer:  
Terminal:

---

CIE Terminals  
CIT-80 (VT52 mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |                   | NOTES  |
|-------------------|--|
| 1. ESC P<br>1B 50 | 30. Half intensity-blinking<br>ESC d C<br>Reverse video-high intensity           |
| 2. ESC Q<br>1B 51 | ESC d Q<br>Reverse video-blinking<br>ESC d R                                     |
| 3. ESC R<br>1B 52 | Reverse video-high intensity-blink<br>ESC d S                                    |
| 4. ESC S<br>1B 53 | Underline-half intensity<br>ESC d a<br>Underline-blink-high intensity<br>ESC d c |
| 5.                | Underline-reverse-high intensity<br>ESC d q                                      |
| 6.                | Underline-reverse-blink<br>ESC d r   |
| 7.                | Underline-reverse video<br>ESC d p   |
| 8.                |  |
| 9.                |  |
| 10.               |  |
| 11.               |  |
| 12.               |  |
| 13.               |  |
| 14.               |  |
| 15.               |  |
| 16.               |  |

---

1. Manufacturer: Cobar  
2. Terminal: Cobar 3100, Cobar 3132

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC [ 5 m	ESC [ m
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D	ESC [ m 1B 5B 6D
8. Lead-in sequence: ESC [ 1B 5B		27. High intensity: ESC [ 1 m 1B 5B 31 6D	ESC [ m 1B 5B 6D
9. Row or column first: ROW		28. Half intensity: ESC [ 0 m 1B 5B 6D	
10. Numeric form of row and column: VARIABLE-LENGTH ASCII		29. Attributes occupy position: NO	
11. Add offset to: Row: 0 Col: 0		30. Attributes cumulative: YES	
12. Separator sequence: ; 3B		31. All attributes off: ESC [ m 1B 5B 6D	
13. End sequence: H 48		CURSOR CONTROL KEYS	
14. Cursor to top row, left column: ESC [ 1 ; 1 H 1B 5B 31 3B 31 48		32. Cursor up: ESC [ A 1B 5B 41	
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48		33. Cursor down: ESC [ B 1B 5B 42	
16. Delay after positioning: 0		34. Cursor right: ESC [ C 1B 5B 43	
17. Cursor home: ESC [ H 1B 5B 48		35. Cursor left: ESC [ D 1B 5B 44	
ERASURE	DELAY	CHARACTER SET	
18. Entire screen: ESC [ 2 J 1B 5B 32 4A	0	36. Full upper and lower ASCII: YES	
19. Cursor to end of screen: ESC [ J 1B 5B 4A	0	37. Generate all control codes: YES	
20. Beginning of screen to cursor: ESC [ 1 J 1B 5B 31 4A	0	38. Bell or tone sequence: ^G 07	
21. Cursor to end of line: ESC [ K 1B 5B 4B	0	EMULATION	
22. Beginning of line to cursor: ESC [ 1 K 1B 5B 31 4B	0	39. Conform to ANSI X3.64? YES	
23. Entire cursor line: ESC [ 2 K 1B 5B 32 4B	0	40. Terminals Emulated: DEC VT100/102 DEC VT52 Cobar 3132 emulates DEC VT132	

---

Manufacturer:  
Terminal:

---

Cobar  
Cobar 3100, Cobar 3132

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                     | NOTES  |
|-----|---------------------|--|
| 1.  | ESC O P<br>1B 4F 50 | 4. Optionally 132.<br>7. Set-up feature.<br>13. Or f (66H).        |
| 2.  | ESC O Q<br>1B 4F 51 | 14. Or ESC [ 1 ; 1 f<br>15. Or ESC [ 1 0 ; 5 0 f<br>17. Or ESC [ f |
| 3.  | ESC O R<br>1B 4F 52 | 30. Blinking and reverse video:<br>ESC [ 5 ; 7 m                   |
| 4.  | ESC O S<br>1B 4F 53 | 42. PF17 ESC O n<br>PF18 ESC O p                                   |
| 5.  | ESC O w<br>1B 4F 77 |  |
| 6.  | ESC O x<br>1B 4F 78 |  |
| 7.  | ESC O y<br>1B 4F 79 |  |
| 8.  | ESC O m<br>1B 4F 6D |  |
| 9.  | ESC O t<br>1B 4F 74 |  |
| 10. | ESC O u<br>1B 4F 75 |  |
| 11. | ESC O v<br>1B 4F 76 |  |
| 12. | ESC O q<br>1B 4F 71 |  |
| 13. | ESC O l<br>1B 4F 6C |  |
| 14. | ESC O s<br>1B 4F 73 |  |
| 15. | ESC O t<br>1B 4F 74 |  |
| 16. | ESC O M<br>1B 4F 4D |  |

---

1. Manufacturer: Colorgraphic Communications Corp.  
 2. Terminal: MVI-100 Model 100, 489, 119, 113

---

## SCREEN LAYOUT

3. Number of rows: 48
4. Number of columns: 80
5. Top Row: 1
6. Left Column: 1
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
ESC [ 1B 5B
9. Row or column first: ROW
10. Numeric form of row and column: VARIABLE-LENGTH ASCII
11. Add offset to: Row: 0  
Col: 0
12. Separator sequence:  
;  
3B
13. End sequence:  
H  
48

14. Cursor to top row, left column:  
ESC [ 1 ; 1 H  
1B 5B 31 3B 31 48
15. 10th Row, 50th Column:  
ESC [ 1 0 ; 5 0 H  
1B 5B 31 30 3B 35 30 48
16. Delay after positioning: 0
17. Cursor home:  
ESC [ H  
1B 5B 48

## ERASURE

18. Entire screen:  
ESC [ 2 J 0  
1B 5B 32 4A
19. Cursor to end of screen:  
ESC [ 0 J 0  
1B 5B 30 4A
20. Beginning of screen to cursor:  
ESC [ 1 J 0  
1B 5B 31 4A
21. Cursor to end of line:  
ESC [ 0 K 0  
1B 5B 30 4B
22. Beginning of line to cursor:  
ESC [ 1 K 0  
1B 5B 31 4B
23. Entire cursor line:  
ESC [ 2 K 0  
1B 5B 32 4B

## VIDEO ATTRIBUTES

- |                                 | ON                       | OFF                           |
|---------------------------------|--------------------------|-------------------------------|
| 24. Blinking:                   | ESC [ 5 m<br>1B 5B 35 6D | ESC [ 2 2 m<br>1B 5B 32 32 6D |
| 25. Reverse video:              | ESC [ 7 m<br>1B 5B 37 6D | ESC [ 2 3 m<br>1B 5B 32 33 6D |
| 26. Underline:                  | ESC [ 4 m<br>1B 5B 34 6D | ESC [ 2 1 m<br>1B 5B 32 31 6D |
| 27. High intensity:             | ESC [ 1 m<br>1B 5B 31 6D | ESC [ 2 m<br>1B 5B 32 6D      |
| 28. Half intensity:             |                          |                               |
| 29. Attributes occupy position: | NO                       |                               |
| 30. Attributes cumulative:      | YES                      |                               |
| 31. All attributes off:         |                          |                               |
|                                 | ESC [ 0 m<br>1B 5B 30 6D |                               |

## CURSOR CONTROL KEYS

32. Cursor up:  
ESC [ A  
1B 5B 41
33. Cursor down:  
ESC [ B  
1B 5B 42
34. Cursor right:  
ESC [ C  
1B 5B 43
35. Cursor left:  
ESC [ D  
1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES
37. Generate all control codes: YES
38. Bell or tone sequence:  
^G  
07

## EMULATION

39. Conform to ANSI X3.64? YES
40. Terminals Emulated:  
DEC VT100, DEC VT52, ADDS, ADM3  
HAZELTINE 1500, IBM 3101

---

Manufacturer: Colorgraphic Communications Corp.  
Terminal: MVI-100 Model 100, 489, 119, 113

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. NOTES  
30. See ANSI cumulative attribute discussion.
2. 36. Also process control set.  
42. PF1-PF12 programmable.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13. ESC O w  
1B 4F 77

14. ESC O x  
1B 4F 78

15. ESC O y  
1B 4F 79

16. ESC O t  
1B 4F 74

1. Manufacturer:	Colorgraphic Communications Corp.						
2. Terminal:	MVI-100 Model 813/819 VT100 mode						
<hr/>							
SCREEN LAYOUT	VIDEO ATTRIBUTES						
3. Number of rows:	48	ON	OFF				
4. Number of columns:	80	24. Blinking:					
5. Top Row:	1	ESC [ 5 m	ESC [ 2 2 m				
6. Left Column:	1	1B 5B 35 6D	1B 5B 32 32 61				
7. Printing in bottom right cause scroll?	PROG	25. Reverse video:					
		ESC [ 7 m	ESC [ 2 3 m				
		1B 5B 37 6D	1B 5B 32 33 61				
CURSOR ADDRESSING	26. Underline:						
8. Lead-in sequence:	ESC [	ESC [ 4 m	ESC [ 2 1 m				
	1B 5B	1B 5B 34 6D	1B 5B 32 31 61				
9. Row or column first:	ROW	27. High intensity:					
10. Numeric form of row and column:	VARIABLE-LENGTH ASCII	ESC [ 1 m	ESC [ 2 m				
11. Add offset to:	Row: 0	1B 5B 31 6D	1B 5B 32 6D				
	Col: 0						
12. Separator sequence:	;	28. Half intensity:					
	3B						
13. End sequence:	H	29. Attributes occupy position:	NO				
	48	30. Attributes cumulative:	YES				
14. Cursor to top row, left column:	ESC [ 1 ; 1 H	31. All attributes off:					
	1B 5B 31 3B 31 48	ESC [ 0 m					
15. 10th Row, 50th Column:	ESC [ 1 0 ; 5 0 H	1B 5B 30 6D					
	1B 5B 31 30 3B 35 30 48						
16. Delay after positioning:	0	CURSOR CONTROL KEYS					
17. Cursor home:	ESC [ H	32. Cursor up:	ESC [ A				
	1B 5B 48		1B 5B 41				
ERASURE	DELAY	33. Cursor down:	ESC [ B				
18. Entire screen:	ESC [ 2 J 0		1B 5B 42				
	1B 5B 32 4A	34. Cursor right:	ESC [ C				
19. Cursor to end of screen:	ESC [ 0 J 0		1B 5B 43				
	1B 5B 30 4A	35. Cursor left:	ESC [ D				
20. Beginning of screen to cursor:	ESC [ 1 J 0		1B 5B 44				
	1B 5B 31 4A	CHARACTER SET					
21. Cursor to end of line:	ESC [ 0 K 0	36. Full upper and lower ASCII:	YES				
	1B 5B 30 4B	37. Generate all control codes:	YES				
22. Beginning of line to cursor:	ESC [ 1 K 0	38. Bell or tone sequence:	^G				
	1B 5B 31 4B		07				
23. Entire cursor line:	ESC [ 2 K 0	EMULATION					
	1B 5B 32 4B	39. Conform to ANSI X3.64?	YES				
		40. Terminals Emulated:	ISC8001G				
			MVI-100-8				
			VT100				
			VT52				

---

Manufacturer:  
Terminal:

---

Colorgraphic Communications Corp.  
MVI-100 Model 813/819 VT100 mode

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 30. See ANSI cumulative attribute discussion.
2. 36. Also process control set.  
42. PF1-PF12 programmable.  
PF13-PF24 fixed sequence.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
13. ESC O w  
1B 4F 77
14. ESC O x  
1B 4F 78
15. ESC O y  
1B 4F 79
16. ESC O t  
1B 4F 74

---

1. Manufacturer: Colorgraphic Communications Corp.  
2. Terminal: MVI-100 Model 813/819 ISC8001G mode

---

SCREEN LAYOUT	VIDEO ATTRIBUTES		
3. Number of rows:	48	ON	OFF
4. Number of columns:	80	24. Blinking:	<sup>^</sup> 0
5. Top Row:	0	1F	OF
6. Left Column:	0	25. Reverse video:	
7. Printing in bottom right cause scroll?	PROG	26. Underline:	
CURSOR ADDRESSING		27. High intensity:	
8. Lead-in sequence:		28. Half intensity:	
<sup>^</sup> C		29. Attributes occupy position:	NO
03		30. Attributes cumulative:	YES
9. Row or column first:	COL	31. All attributes off:	
10. Numeric form of row and column:	BINARY	<sup>^</sup> F <sup>^</sup> B	
11. Add offset to:	Row: 0 Col: 0	06 02	
12. Separator sequence:		CURSOR CONTROL KEYS	
13. End sequence:		32. Cursor up:	<sup>^</sup> \
14. Cursor to top row, left column:	<sup>^</sup> C NUL NUL	1C	
03 00 00		33. Cursor down:	<sup>^</sup> J
15. 10th Row, 50th Column:	<sup>^</sup> C 2 <sup>^</sup> J	0A	
03 32 0A		34. Cursor right:	<sup>^</sup> Z
16. Delay after positioning:	0	1A	
17. Cursor home:	<sup>^</sup> H	35. Cursor left:	<sup>^</sup> Y
08		19	
ERASURE	DELAY	CHARACTER SET	
18. Entire screen:	<sup>^</sup> L	36. Full upper and lower ASCII:	YES
0C	0	37. Generate all control codes:	YES
19. Cursor to end of screen:		38. Bell or tone sequence:	
0		<sup>^</sup> G	
20. Beginning of screen to cursor:		07	
0		EMULATION	
21. Cursor to end of line:		39. Conform to ANSI X3.64?	YES
0		40. Terminals Emulated:	
22. Beginning of line to cursor:		ISC8001G	
0		MVI-100-8	
23. Entire cursor line:	<sup>^</sup> K	VT100	
0B	0	VT52	

---

Manufacturer:  
Terminal:

---

Colorgraphic Communications Corp.  
MVI-100 Model 813/819 ISC8001G mode

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

36. Also process control set.  
42. PF1-PF12 programmable.  
PF13-PF24 fixed sequences.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13. ESC O w  
1B 4F 77

14. ESC O x  
1B 4F 78

15. ESC O y  
1B 4F 79

16. ESC O t  
1B 4F 74

1. Manufacturer:	Colorgraphic Communications Corp.							
2. Terminal:	MVI-7 Models 7, 719							
SCREEN LAYOUT	VIDEO ATTRIBUTES							
3. Number of rows:	24	ON						
4. Number of columns:	80	OFF						
5. Top Row:	1	24. Blinking:	ESC [ 5 m	ESC [ 2 2 m	1B 5B 35 6D	1B 5B 32 32	6I	
6. Left Column:	1		1B 5B 35 6D	1B 5B 32 32	33 6I			
7. Printing in bottom right cause scroll?	PROG	25. Reverse video:	ESC [ 7 m	ESC [ 2 3 m	1B 5B 37 6D	1B 5B 32 33	6I	
			1B 5B 37 6D	1B 5B 32 33	6I			
CURSOR ADDRESSING	26. Underline:							
8. Lead-in sequence:	ESC [	ESC [ 4 m	ESC [ 2 1 m	1B 5B 34 6D	1B 5B 32 31	6I		
	1B 5B	1B 5B 34 6D	1B 5B 32 31	6I				
9. Row or column first:	ROW	27. High intensity:	ESC [ 1 m	ESC [ 2 m	1B 5B 31 6D	1B 5B 32 6D		
10. Numeric form of row and column: VARIABLE-LENGTH ASCII			1B 5B 31 6D	1B 5B 32 6D				
11. Add offset to:	Row: 0	28. Half intensity:						
	Col: 0							
12. Separator sequence:	;	29. Attributes occupy position:	NO					
	3B	30. Attributes cumulative:	YES					
13. End sequence:	H	31. All attributes off:						
	48		ESC [ 0 m					
14. Cursor to top row, left column:	ESC [ 1 ; 1 H		1B 5B 30 6D					
	1B 5B 31 3B 31 48							
15. 10th Row, 50th Column:	ESC [ 1 0 ; 5 0 H	CURSOR CONTROL KEYS						
	1B 5B 31 30 3B 35 30 48	32. Cursor up:	ESC [ A					
16. Delay after positioning:	0		1B 5B 41					
17. Cursor home:	ESC [ H	33. Cursor down:	ESC [ B					
	1B 5B 48		1B 5B 42					
ERASURE	DELAY	34. Cursor right:	ESC [ C					
18. Entire screen:	0		1B 5B 43					
	ESC [ 2 J	35. Cursor left:	ESC [ D					
	1B 5B 32 4A		1B 5B 44					
19. Cursor to end of screen:	0	CHARACTER SET						
	ESC [ 0 J	36. Full upper and lower ASCII:	YES					
	1B 5B 30 4A	37. Generate all control codes:	YES					
20. Beginning of screen to cursor:	0	38. Bell or tone sequence:	^G					
	ESC [ 1 J		07					
	1B 5B 31 4A	EMULATION						
21. Cursor to end of line:	0	39. Conform to ANSI X3.64?	YES					
	ESC [ 0 K	40. Terminals Emulated:						
	1B 5B 30 4B		DEC VT100, DEC VT52, ADDS, ADM3					
22. Beginning of line to cursor:	0		HAZELTINE 1500, IBM 3101					
	ESC [ 1 K							
	1B 5B 31 4B							
23. Entire cursor line:	0							
	ESC [ 2 K							
	1B 5B 32 4B							

---

Manufacturer:  
Terminal:

---

Colorgraphic Communications Corp.  
MVI-7 Models 7, 719

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. NOTES  
30. See ANSI cumulative attribute discussion.
2. 36. Also process control set.  
42. PF1-PF12 programmable.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13. ESC O w  
1B 4F 77

14. ESC O x  
1B 4F 78

15. ESC O y  
1B 4F 79

16. ESC O t  
1B 4F 74

---

1. Manufacturer: Corona Data Systems Inc.  
2. Terminal: Personal Computer

---

## SCREEN LAYOUT

3. Number of rows: 25  
4. Number of columns: 80  
5. Top Row: 0  
6. Left Column: 0  
7. Printing in bottom right cause scroll? YES

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 0 ; 0 H  
    1B 5B 30 3B 30 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## ERASURE

18. Entire screen:  
    ESC [ 2 J 0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J 0  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K 0  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 0  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
    ESC [ 1 m  
    1B 5B 31 6D  
28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    Runs "IBM PC" compatible progra

---

Manufacturer: Corona Data Systems Inc.  
Terminal: Personal Computer

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                    NOTES

1. NUL ;  
00 3B

2. NUL <  
00 3C

3. NUL =  
00 3D

4. NUL >  
00 3E

5. NUL ?  
00 3F

6. NUL @  
00 40

7. NUL A  
00 41

8. NUL B  
00 42

9. NUL C  
00 43

10. NUL D  
00 44

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Cromemco, Inc.  
2. Terminal: C-10

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
		ON	OFF	
3. Number of rows:	24	24. Blinking:	ESC d B	ESC d @
4. Number of columns:	80		1B 64 42	1B 64 40
5. Top Row:	1	25. Reverse video:	ESC d P	ESC d @
6. Left Column:	1		1B 64 50	1B 64 40
7. Printing in bottom right cause scroll?	YES	26. Underline:	ESC d `	ESC d @
			1B 64 60	1B 64 40
CURSOR ADDRESSING		27. High intensity:	ESC d H	ESC d @
8. Lead-in sequence:			1B 64 48	1B 64 40
	ESC Y	28. Half intensity:	ESC d A	ESC d @
	1B 59		1B 64 41	1B 64 40
9. Row or column first:	ROW	29. Attributes occupy position:	NO	
10. Numeric form of row and column:	BINARY	30. Attributes cumulative:	NO	
11. Add offset to:	Row: 1F Col: 1F	31. All attributes off:	ESC d @	
12. Separator sequence:			1B 64 40	
13. End sequence:				
14. Cursor to top row, left column:		CURSOR CONTROL KEYS		
ESC Y SP SP		32. Cursor up:	ESC A	
1B 59 20 20			1B 41	
15. 10th Row, 50th Column:		33. Cursor down:	ESC B	
ESC Y ) Q			1B 42	
1B 59 29 51		34. Cursor right:	ESC C	
16. Delay after positioning:	0		1B 43	
17. Cursor home:		35. Cursor left:	ESC D	
ESC H			1B 44	
1B 48				
ERASURE	DELAY			
18. Entire screen:		CHARACTER SET		
ESC E	0	36. Full upper and lower ASCII:	YES	
1B 45		37. Generate all control codes:	YES	
19. Cursor to end of screen:		38. Bell or tone sequence:		
ESC J	0		^G	
1B 4A			07	
20. Beginning of screen to cursor:				
21. Cursor to end of line:		EMULATION		
ESC K	0	39. Conform to ANSI X3.64?	NO	
1B 4B		40. Terminals Emulated:		
22. Beginning of line to cursor:				
23. Entire cursor line:				

---

Manufacturer:  
Terminal:

---

Cromemco, Inc.  
C-10

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

		NOTES			
1.	<sup>^B</sup> p 02 70	1.	25th status line.		
2.	<sup>^B</sup> q 02 71	8.	Or ESC F.		
3.	<sup>^B</sup> r 02 72	14.	Or ESC F SP SP.		
4.	<sup>^B</sup> s 02 73	15.	Or ESC F ) Q.		
5.	<sup>^B</sup> t 02 74	27.	This sequence selects bold set.		
6.	<sup>^B</sup> u 02 75	30.	All attributes preceeded by ESC d:		
7.	<sup>^B</sup> v 02 76	std	gra bold misc		
8.	<sup>^B</sup> w 02 77	@	D H L normal		
9.	<sup>^B</sup> x 02 78	A	E I M half		
10.	<sup>^B</sup> y 02 79	B	F J N blink		
11.	<sup>^B</sup> z 02 7A	C	G K O half-blink		
12.	<sup>^B</sup> { 02 7B	P	T X \ reverse		
13.	<sup>^B</sup>   02 7C	Q	U Y ] half-reverse		
14.	<sup>^B</sup> } 02 7D	R	V Z ^ blink-reverse		
15.	<sup>^B</sup> ~ 02 7E	S	W [ _ half-blink-rev		
16.	<sup>^B</sup> DEL 02 7F	~	d h l underline		
		a e i m half-under			
		b f j n blink-under			
		c g k o half-blink-und			
		p t x   rev-underlined			
		q u y } half-rev-under			
		r v z ~ blink-rev-und			
		s w { DEL half-blink- rev-underline			
		31. All attributes off returns to normal character set.			
		36. Four character sets standard: normal, graphics, bold, misc.			
		42. Additional program function keys:			
		PF17 STX o			
		PF18 STX n			
		PF19 STX m			
		PF20 STX l			

---

1. Manufacturer: CTi DATA Corporation  
2. Terminal: CTi 3078

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC 0 @ 1B 30 42	
5. Top Row:	1	25. Reverse video:	ESC 0 P 1B 30 50	
6. Left Column:	1	26. Underline:	ESC 0 ~ 1B 30 60	
7. Printing in bottom right cause scroll?	NO	27. High intensity:	ESC 0 0 1B 30 30	
		28. Half intensity:	ESC 0 A 1B 30 41	
8. Lead-in sequence: ESC Y 1B 59		29. Attributes occupy position:	YES	
9. Row or column first:	ROW	30. Attributes cumulative:	NO	
10. Numeric form of row and column: BINARY		31. All attributes off:		
11. Add offset to: Row: 1F Col: 1F		ESC 0 @ 1B 30 40		
12. Separator sequence:				
13. End sequence:				
14. Cursor to top row, left column: ESC Y SP SP 1B 59 20 20		CURSOR CONTROL KEYS		
15. 10th Row, 50th Column: ESC Y ) Q 1B 59 29 51		32. Cursor up: ^Z 1A		
16. Delay after positioning:	0	33. Cursor down: ^J OA		
17. Cursor home: ^A 01		34. Cursor right: ^F 06		
ERASURE	DELAY	35. Cursor left: ^H 08		
18. Entire screen: ^L 0C	0	CHARACTER SET		
19. Cursor to end of screen: ESC k 1B 6B	0	36. Full upper and lower ASCII:	YES	
20. Beginning of screen to cursor:		37. Generate all control codes:	NO	
21. Cursor to end of line: ESC K 1B 4B	0	38. Bell or tone sequence: ^G 07		
22. Beginning of line to cursor:		EMULATION		
23. Entire cursor line: ESC 1 1B 6C	20	39. Conform to ANSI X3.64?	NO	
		40. Terminals Emulated: ADDS VP60 ADDS VP78		

---

Manufacturer: CTi DATA Corporation  
Terminal: CTi 3078

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC SP  
1B 20

2. ESC !  
1B 21

3. ESC "  
1B 22

4. ESC #  
1B 23

5. ESC \$  
1B 24

6. ESC %  
1B 25

7. ESC &  
1B 26

8. ESC '  
1B 27

9. ESC (   
1B 28

10. ESC )  
1B 29

11. ESC \*  
1B 2A

12. ESC +  
1B 2B

13. ESC ,  
1B 2C

14. ESC -  
1B 2D

15. ESC .  
1B 2E

16. ESC /  
1B 2F

NOTES

42. Additional PF keys:

17. ESC 0  
1B 30

18. ESC 1  
1B 31

19. ESC 2  
1B 32

20. ESC 3  
1B 33

21. ESC 4  
1B 34

22. ESC 5  
1B 35

23. ESC 6  
1B 36

24. ESC 7  
1B 37

---

1. Manufacturer: Digital Equipment Corporation  
2. Terminal: VT100, 101, 102, 131, 125

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll?

PROG  
Row:  
Col:

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking: ESC [ 5 m ESC [ m  
1B 5B 35 6D 1B 5B 6D  
25. Reverse video: ESC [ 7 m ESC [ m  
1B 5B 37 6D 1B 5B 6D  
26. Underline: ESC [ 4 m ESC [ m  
1B 5B 34 6D 1B 5B 6D  
27. High intensity: ESC [ 1 m ESC [ m  
1B 5B 31 6D 1B 5B 6D  
28. Half intensity:

## CURSOR ADDRESSING

8. Lead-in sequence: ESC [  
1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column: VARIABLE-LENGTH ASCII  
11. Add offset to: Row: 0  
Col: 0  
12. Separator sequence: ;  
3B  
13. End sequence: H  
48

14. Cursor to top row, left column: ESC [ 1 ; 1 H  
1B 5B 31 3B 31 48  
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H  
1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home: ESC [ H  
1B 5B 48

- ERASURE DELAY  
18. Entire screen: ESC [ 2 J 0  
1B 5B 32 4A  
19. Cursor to end of screen: ESC [ J 0  
1B 5B 4A  
20. Beginning of screen to cursor: ESC [ 1 J 0  
1B 5B 31 4A  
21. Cursor to end of line: ESC [ K 0  
1B 5B 4B  
22. Beginning of line to cursor: ESC [ 1 K 0  
1B 5B 31 4B  
23. Entire cursor line: ESC [ 2 K 0  
1B 5B 32 4B

## CURSOR CONTROL KEYS

32. Cursor up: ESC [ A  
1B 5B 41  
33. Cursor down: ESC [ B  
1B 5B 42  
34. Cursor right: ESC [ C  
1B 5B 43  
35. Cursor left: ESC [ D  
1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

^G

07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
DEC VT52

---

Manufacturer: Digital Equipment Corporation  
Terminal: VT100, 101, 102, 131, 125

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |                        |   |
|------------------------|---|
| 1. ESC O P<br>1B 4F 50 | NOTES   |
| 2. ESC O Q<br>1B 4F 51 | 3. Optionally 14x132.<br>4. Optionally 14x132.<br>VT102 allows 24x132.  |
| 3. ESC O R<br>1B 4F 52 | 36. Includes 32 line drawing and<br>other graphic characters.<br>National Replacement character<br>sets optional. |
| 4. ESC O S<br>1B 4F 53 | VT125 includes 240x768 bit-<br>mapped graphics.   |

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Digital Equipment Corporation  
 2. Terminal: VT220, 240, 241

---

## SCREEN LAYOUT

3. Number of rows: 24  
 4. Number of columns: 80  
 5. Top Row: 1  
 6. Left Column: 1  
 7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
     ESC [  
     1B 5B  
 9. Row or column first: ROW  
 10. Numeric form of row and column:  
     VARIABLE-LENGTH ASCII  
 11. Add offset to:  
     Row: 0  
     Col: 0  
 12. Separator sequence:  
     ;  
     3B  
 13. End sequence:  
     H  
     48

14. Cursor to top row, left column:  
     ESC [ 1 ; 1 H  
     1B 5B 31 3B 31 48  
 15. 10th Row, 50th Column:  
     ESC [ 1 0 ; 5 0 H  
     1B 5B 31 30 3B 35 30 48  
 16. Delay after positioning: 0  
 17. Cursor home:  
     ESC [ H  
     1B 5B 48

## ERASURE

18. Entire screen:  
     ESC [ 2 J 0  
     1B 5B 32 4A  
 19. Cursor to end of screen:  
     ESC [ J 0  
     1B 5B 4A  
 20. Beginning of screen to cursor:  
     ESC [ 1 J 0  
     1B 5B 31 4A  
 21. Cursor to end of line:  
     ESC [ K 0  
     1B 5B 4B  
 22. Beginning of line to cursor:  
     ESC [ 1 K 0  
     1B 5B 31 4B  
 23. Entire cursor line:  
     ESC [ 2 K 0  
     1B 5B 32 4B

## VIDEO ATTRIBUTES

- |                                 | ON                       | OFF                 |
|---------------------------------|--------------------------|---------------------|
| 24. Blinking:                   | ESC [ 5 m<br>1B 5B 35 6D | ESC [ m<br>1B 5B 6D |
| 25. Reverse video:              | ESC [ 7 m<br>1B 5B 37 6D | ESC [ m<br>1B 5B 6D |
| 26. Underline:                  | ESC [ 4 m<br>1B 5B 34 6D | ESC [ m<br>1B 5B 6D |
| 27. High intensity:             | ESC [ 1 m<br>1B 5B 31 6D | ESC [ m<br>1B 5B 6D |
| 28. Half intensity:             |                          |                     |
| 29. Attributes occupy position: | NO                       |                     |
| 30. Attributes cumulative:      | YES                      |                     |
| 31. All attributes off:         | ESC [ m<br>1B 5B 6D      |                     |

## CURSOR CONTROL KEYS

32. Cursor up:  
     ESC [ A  
     1B 5B 41  
 33. Cursor down:  
     ESC [ B  
     1B 5B 42  
 34. Cursor right:  
     ESC [ C  
     1B 5B 43  
 35. Cursor left:  
     ESC [ D  
     1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
 37. Generate all control codes: YES  
 38. Bell or tone sequence:

- ^G  
 07
- EMULATION
39. Conform to ANSI X3.64? YES  
 40. Terminals Emulated:  
     DEC VT52

---

Manufacturer:  
Terminal:

---

Digital Equipment Corporation  
VT220, 240, 241

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC O P  
1B 4F 50

NOTES

4. Optionally 132.  
36. Includes 32 line drawing and  
other graphic characters.  
Multinational character sets.  
Downline loadable character  
sets.

2. ESC O Q  
1B 4F 51

VT240 and VT241 include  
240x800 bit-mapped graphics.

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

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1. Manufacturer: Digital Equipment Corporation  
2. Terminal: VT52, VT55

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SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	25. Reverse video:	
6. Left Column:	1	26. Underline:	
7. Printing in bottom right cause scroll?	PROG	27. High intensity:	
CURSOR ADDRESSING		28. Half intensity:	
8. Lead-in sequence:	ESC Y 1B 59	29. Attributes occupy position:	NO
9. Row or column first:	ROW	30. Attributes cumulative:	NO
10. Numeric form of row and column:	BINARY	31. All attributes off:	
11. Add offset to:	Row: 1F Col: 1F	CURSOR CONTROL KEYS	
12. Separator sequence:		32. Cursor up:	
13. End sequence:		ESC A 1B 41	
14. Cursor to top row, left column:	ESC Y SP SP 1B 59 20 20	33. Cursor down:	
15. 10th Row, 50th Column:	ESC Y ) Q 1B 59 29 51	ESC B 1B 42	
16. Delay after positioning:	0	34. Cursor right:	
17. Cursor home:	ESC H 1B 48	ESC C 1B 43	
ERASURE	DELAY	35. Cursor left:	
18. Entire screen:	ESC H ESC J 1B 48 1B 4A	ESC D 1B 44	
19. Cursor to end of screen:	ESC J 1B 4A	CHARACTER SET	
20. Beginning of screen to cursor:	0	36. Full upper and lower ASCII:	YES
21. Cursor to end of line:	ESC K 1B 4B	37. Generate all control codes:	YES
22. Beginning of line to cursor:	0	38. Bell or tone sequence:	
23. Entire cursor line:		^G 07	
		EMULATION	
		39. Conform to ANSI X3.64?	NO
		40. Terminals Emulated:	

---

Manufacturer: Digital Equipment Corporation  
Terminal: VT52, VT55

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES

1. ESC O P  
1B 4F 50

2. ESC O Q  
1B 4F 51

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

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1. Manufacturer: Digital Microsystems  
2. Terminal: DMS-3/F, DMS-15, DMS-501

---

SCREEN LAYOUT		VIDEO ATTRIBUTES
3. Number of rows:	24	ON OFF
4. Number of columns:	80	
5. Top Row:	1	24. Blinking: ESC B ESC N
6. Left Column:	1	1B 42 1B 4E
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC R ESC N 1B 52 1B 4E
CURSOR ADDRESSING		26. Underline: ESC U ESC N 1B 55 1B 4E
8. Lead-in sequence:		27. High intensity: ESC H ESC N 1B 48 1B 4E
ESC Y		28. Half intensity: 1B 5A 1B 4E
1B 59		29. Attributes occupy position: NO
9. Row or column first:	ROW	30. Attributes cumulative: YES
10. Numeric form of row and column: BINARY		31. All attributes off: ESC N 1B 4E
11. Add offset to:	Row: 1F Col: 1F	CURSOR CONTROL KEYS
12. Separator sequence:		32. Cursor up: ^Z 1A
13. End sequence:		33. Cursor down: ^J OA
14. Cursor to top row, left column: ESC Y SP SP 1B 59 20 20		34. Cursor right: ^F 06
15. 10th Row, 50th Column: ESC Y ) Q 1B 59 29 51		35. Cursor left: ^H 08
16. Delay after positioning:		CHARACTER SET
17. Cursor home: ^A 01		36. Full upper and lower ASCII: YES
ERASURE	DELAY	37. Generate all control codes: YES
18. Entire screen: ^L OC	0	38. Bell or tone sequence: ^G 07
19. Cursor to end of screen: ESC k 1B 6B	0	EMULATION
20. Beginning of screen to cursor:		39. Conform to ANSI X3.64? NO
21. Cursor to end of line: ESC K 1B 4B	0	40. Terminals Emulated: ADDS Regent 20/25 ADDS Viewpoint Hazeltine 1500
22. Beginning of line to cursor:		
23. Entire cursor line:		

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Manufacturer: Digital Microsystems  
Terminal: DMS-3/F, DMS-15, DMS-501

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

36. Foreign character sets.  
42. Programmable function keys.  
90 programmable keys.

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1. Manufacturer: Digital Microsystems  
2. Terminal: DMS-5080, DMS-5086

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SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC B	ESC N
6. Left Column:	1	1B 42	1B 4E
7. Printing in bottom right cause scroll?	YES	25. Reverse video:	
		ESC R	ESC N
		1B 52	1B 4E
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:		ESC U	ESC N
	ESC Y	1B 55	1B 4E
9. Row or column first:	ROW	27. High intensity:	
10. Numeric form of row and column:	BINARY	28. Half intensity:	
11. Add offset to:	Row: 1F Col: 1F	ESC H	ESC N
12. Separator sequence:		1B 48	1B 4E
13. End sequence:		29. Attributes occupy position: NO	
		30. Attributes cumulative: YES	
		31. All attributes off:	
		ESC N	
		1B 4E	
14. Cursor to top row, left column:		CURSOR CONTROL KEYS	
ESC Y SP SP		32. Cursor up:	
1B 59 20 20		^Z	
15. 10th Row, 50th Column:		1A	
ESC Y ) Q		33. Cursor down:	
1B 59 29 51		^J	
16. Delay after positioning:		OA	
17. Cursor home:		34. Cursor right:	
^A		^F	
01		06	
ERASURE	DELAY	35. Cursor left:	
18. Entire screen:	0	^H	
^L		08	
OC		CHARACTER SET	
19. Cursor to end of screen:	0	36. Full upper and lower ASCII: YES	
ESC k		37. Generate all control codes: YES	
1B 6B		38. Bell or tone sequence:	
20. Beginning of screen to cursor:		^G	
		07	
21. Cursor to end of line:		EMULATION	
ESC K	0	39. Conform to ANSI X3.64? NO	
1B 4B		40. Terminals Emulated:	
22. Beginning of line to cursor:		Tektronix 4010 compatible graphics.	
23. Entire cursor line:			

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Manufacturer: Digital Microsystems  
Terminal: DMS-5080, DMS-5086

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     | NOTES  |
|-----|--|
| 1.  | 3. Optionally 24 or 50.<br>4. Optionally 132.            |
| 2.  | 36. Foreign character sets, user-definable characters.   |
|     | 42. Programmable function keys.<br>90 programmable keys. |
| 3.  |  |
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1. Manufacturer: Direct Incorporated  
 2. Terminal: 825-(HP)

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SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC & d A	ESC & d @
6. Left Column:	1	1B 26 64 41	1B 26 64 40
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC & d B 1B 26 64 42	ESC & d @ 1B 26 64 40
CURSOR ADDRESSING		26. Underline: ESC & d D 1B 26 64 44	ESC & d @ 1B 26 64 40
8. Lead-in sequence: ESC & a 1B 26 61		27. High intensity: ESC & d @ 1B 26 64 40	
9. Row or column first:	COL	28. Half intensity: ESC & d H 1B 26 64 48	ESC & d @ 1B 26 64 40
10. Numeric form of row and column:		29. Attributes occupy position: NO	
VARIABLE-LENGTH ASCII		30. Attributes cumulative: YES	
11. Add offset to: Row: 0 Col: 0		31. All attributes off: ESC & d @ 1B 26 64 40	
12. Separator sequence:		CURSOR CONTROL KEYS	
13. End sequence: R 52		32. Cursor up: ESC A 1B 41	
14. Cursor to top row, left column: ESC & a 0 R 0 c 1B 26 61 30 52 30 63		33. Cursor down: ESC B 1B 42	
15. 10th Row, 50th Column: ESC & a 9 R 4 9 c 1B 26 61 39 52 34 39 63		34. Cursor right: ESC C 1B 43	
16. Delay after positioning: 0		35. Cursor left: ESC D 1B 44	
17. Cursor home: ESC H 1B 48		CHARACTER SET	
ERASURE	DELAY	36. Full upper and lower ASCII: YES	
18. Entire screen:	0	37. Generate all control codes: YES	
19. Cursor to end of screen: ESC J 1B 4A	0	38. Bell or tone sequence: ^G 07	
20. Beginning of screen to cursor:	0	EMULATION	
21. Cursor to end of line: ESC K 1B 4B	0	39. Conform to ANSI X3.64? YES	
22. Beginning of line to cursor:	0	40. Terminals Emulated: HP2640, HP2645A HP2622	
23. Entire cursor line: ESC K 1B 4B	0		

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Manufacturer:  
Terminal:

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Direct Incorporated  
825-(HP)

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 4. Optionally 132.  
42. All function keys programmable.
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- 13.
- 14.
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- 16.

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1. Manufacturer: Direct Incorporated  
 2. Terminal: 828/1 (ANSI mode)

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SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1	ESC [ 5 m	ESC [ m	
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D	
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D	
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D	ESC [ m 1B 5B 6D	
8. Lead-in sequence: ESC [ 1B 5B	ROW	27. High intensity: ESC [ 1 m 1B 5B 31 6D	ESC [ m 1B 5B 6D	
9. Row or column first:	ROW	28. Half intensity: ESC [ 1 m 1B 5B 6D	ESC [ m 1B 5B 6D	
10. Numeric form of row and column: VARIABLE-LENGTH ASCII		29. Attributes occupy position: NO 30. Attributes cumulative: YES 31. All attributes off: ESC [ m 1B 5B 6D	ESC [ m 1B 5B 6D	
11. Add offset to: Row: 0 Col: 0		CURSOR CONTROL KEYS		
12. Separator sequence: ; 3B		32. Cursor up: ESC [ A 1B 5B 41		
13. End sequence: H 48		33. Cursor down: ESC [ B 1B 5B 42		
14. Cursor to top row, left column: ESC [ 1 ; 1 H 1B 5B 31 3B 31 48		34. Cursor right: ESC [ C 1B 5B 43		
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48		35. Cursor left: ESC [ D 1B 5B 44		
16. Delay after positioning: 0		CHARACTER SET		
17. Cursor home: ESC [ H 1B 5B 48		36. Full upper and lower ASCII: YES 37. Generate all control codes: YES 38. Bell or tone sequence: ^G 07		
ERASURE	DELAY	EMULATION		
18. Entire screen: ESC [ 2 J 1B 5B 32 4A	0	39. Conform to ANSI X3.64? YES 40. Terminals Emulated: DEC VT100, VT102, VT131, VT52		
19. Cursor to end of screen: ESC [ J 1B 5B 4A	0			
20. Beginning of screen to cursor: ESC [ 1 J 1B 5B 31 4A	0			
21. Cursor to end of line: ESC [ K 1B 5B 4B	0			
22. Beginning of line to cursor: ESC [ 1 K 1B 5B 31 4B	0			
23. Entire cursor line: ESC [ 2 K 1B 5B 32 4B	0			

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Manufacturer:  
Terminal:

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Direct Incorporated  
828/1 (ANSI mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                     | NOTES                                   |
|-----|---------------------|---|
| 1.  | ESC O P<br>1B 4F 50 | 3. Optionally 28.<br>4. Optionally 132. |
| 2.  | ESC O Q<br>1B 4F 51 | 42. All function keys programmable.     |
| 3.  | ESC O R<br>1B 4F 52 |   |
| 4.  | ESC O S<br>1B 4F 53 |   |
| 5.  | ESC O T<br>1B 4F 54 |   |
| 6.  | ESC O U<br>1B 4F 55 |   |
| 7.  | ESC O V<br>1B 4F 56 |   |
| 8.  | ESC O W<br>1B 4F 57 |   |
| 9.  | ESC O X<br>1B 4F 58 |   |
| 10. | ESC O Y<br>1B 4F 59 |   |
| 11. | ESC O Z<br>1B 4F 5A |   |
| 12. | ESC O [<br>1B 4F 5B |   |
| 13. | ESC O \<br>1B 4F 5C |   |
| 14. | ESC O ]<br>1B 4F 5D |   |
| 15. | ESC O ^<br>1B 4F 5E |   |
| 16. | ESC O _<br>1B 4F 5F |   |

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1. Manufacturer:	Direct Incorporated					
2. Terminal:	828/1 (HP2622 mode)					

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SCREEN LAYOUT		VIDEO ATTRIBUTES							
3. Number of rows:	24	ON			OFF				
4. Number of columns:	80	24. Blinking:							
5. Top Row:	1	ESC &	d	A	ESC &	d	@		
6. Left Column:	1	1B	26	64	41	1B	26	64	40
7. Printing in bottom right cause scroll?	PROG	25. Reverse video:							
		ESC &	d	B	ESC &	d	@		
		1B	26	64	42	1B	26	64	40
CURSOR ADDRESSING									
8. Lead-in sequence:	26. Underline:								
ESC & a	ESC &	d	D	ESC &	d	@			
1B 26 61	1B	26	64	44	1B	26	64	40	
9. Row or column first:	COL	27. High intensity:							
10. Numeric form of row and column:		ESC &	d	@					
VARIABLE-LENGTH ASCII		1B	26	64	40				
11. Add offset to:	Row: 0	28. Half intensity:							
	Col: 0	ESC &	d	H	ESC &	d	@		
12. Separator sequence:		1B	26	64	48	1B	26	64	40
13. End sequence:	29. Attributes occupy position: NO								
R	30. Attributes cumulative: YES								
52	31. All attributes off:								
14. Cursor to top row, left column:	ESC & d @								
ESC & a 0 R 0 c	1B	26	64	40					
1B 26 61 30 52 30 63									
15. 10th Row, 50th Column:	CURSOR CONTROL KEYS								
ESC & a 9 R 4 9 c	32. Cursor up:								
1B 26 61 39 52 34 39 63	ESC A								
16. Delay after positioning:	0	1B	41						
17. Cursor home:	33. Cursor down:								
ESC H	ESC B								
1B 48	1B	42							
ERASURE	DELAY	34. Cursor right:							
18. Entire screen:	0	ESC C							
		1B	43						
19. Cursor to end of screen:	35. Cursor left:								
ESC J	ESC D								
1B 4A	1B	44							
20. Beginning of screen to cursor:	0	CHARACTER SET							
		36. Full upper and lower ASCII:	YES						
		37. Generate all control codes:	YES						
21. Cursor to end of line:	38. Bell or tone sequence:								
ESC K	0	^G							
1B 4B		07							
22. Beginning of line to cursor:	0	EMULATION							
		39. Conform to ANSI X3.64?	YES						
23. Entire cursor line:	0	40. Terminals Emulated:							
ESC K		HP2640, HP2645A							
1B 4B		HP2622							

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Manufacturer:  
Terminal:

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Direct Incorporated  
828/1 (HP2622 mode)

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 4. Optionally 132.  
42. All function keys programmable.
- 2.
- 3.
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1. Manufacturer: Direct Incorporated  
 2. Terminal: 831

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SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80		
5. Top Row:	1	ESC [ 5 m	ESC [ m
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D
7. Printing in bottom right cause scroll?	PROG	24. Blinking: ESC [ 7 m 1B 5B 37 6D	25. Reverse video: ESC [ m 1B 5B 6D
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D	27. High intensity: ESC [ 1 m 1B 5B 31 6D
8. Lead-in sequence: ESC [ 1B 5B		28. Half intensity: ESC [ m 1B 5B 6D	
9. Row or column first:	ROW	29. Attributes occupy position: NO	
10. Numeric form of row and column: VARIABLE-LENGTH ASCII		30. Attributes cumulative: YES	
11. Add offset to: Row: 0 Col: 0		31. All attributes off: ESC [ m 1B 5B 6D	
12. Separator sequence: ; 3B		CURSOR CONTROL KEYS	
13. End sequence: H 48		32. Cursor up: ESC [ A 1B 5B 41	
14. Cursor to top row, left column: ESC [ 1 ; 1 H 1B 5B 31 3B 31 48		33. Cursor down: ESC [ B 1B 5B 42	
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48		34. Cursor right: ESC [ C 1B 5B 43	
16. Delay after positioning: 0		35. Cursor left: ESC [ D 1B 5B 44	
17. Cursor home: ESC [ H 1B 5B 48		CHARACTER SET	
ERASURE	DELAY	36. Full upper and lower ASCII: YES	
18. Entire screen: ESC [ 2 J 1B 5B 32 4A	0	37. Generate all control codes: YES	
19. Cursor to end of screen: ESC [ J 1B 5B 4A	0	38. Bell or tone sequence: ^G 07	
20. Beginning of screen to cursor: ESC [ 1 J 1B 5B 31 4A	0	EMULATION	
21. Cursor to end of line: ESC [ K 1B 5B 4B	0	39. Conform to ANSI X3.64?: YES	
22. Beginning of line to cursor: ESC [ 1 K 1B 5B 31 4B	0	40. Terminals Emulated: DEC VT100, VT102, VT131, VT52	
23. Entire cursor line: ESC [ 2 K 1B 5B 32 4B	0		

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Manufacturer: Direct Incorporated  
Terminal: 831

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                     | NOTES  |
|-----|---------------------|--|
| 1.  | ESC O P<br>1B 4F 50 | 3. Optionally 28.<br>4. Optionally 132.<br>42. All function keys programmable. |
| 2.  | ESC O Q<br>1B 4F 51 |  |
| 3.  | ESC O R<br>1B 4F 52 |  |
| 4.  | ESC O S<br>1B 4F 53 |  |
| 5.  | ESC O T<br>1B 4F 54 |  |
| 6.  | ESC O U<br>1B 4F 55 |  |
| 7.  | ESC O V<br>1B 4F 56 |  |
| 8.  | ESC O W<br>1B 4F 57 |  |
| 9.  | ESC O X<br>1B 4F 58 |  |
| 10. | ESC O Y<br>1B 4F 59 |  |
| 11. | ESC O Z<br>1B 4F 5A |  |
| 12. | ESC O [<br>1B 4F 5B |  |
| 13. | ESC O \<br>1B 4F 5C |  |
| 14. | ESC O ]<br>1B 4F 5D |  |
| 15. | ESC O ^<br>1B 4F 5E |  |
| 16. | ESC O _<br>1B 4F 5F |  |

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1. Manufacturer: Esprit Systems Inc.  
2. Terminal: 6310

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SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	23	ON	OFF
4. Number of columns:	79	24. Blinking:	
5. Top Row:	0	25. Reverse video:	
6. Left Column:	0		
7. Printing in bottom right cause scroll?	PROG		
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:	ESC ^Q 1B 11	27. High intensity:	
9. Row or column first:	COL	28. Half intensity:	
10. Numeric form of row and column: BINARY		29. Attributes occupy position: NO	
11. Add offset to:	Row: 0 Col: 0	30. Attributes cumulative: NO	
12. Separator sequence:		31. All attributes off:	
13. End sequence:			
14. Cursor to top row, left column: ESC ^Q NUL NUL 1B 11 00 00		CURSOR CONTROL KEYS	
15. 10th Row, 50th Column: ESC ^Q 1 ^I 1B 11 31 09		32. Cursor up: ESC ^L 1B 0C	
16. Delay after positioning:	0	33. Cursor down: ESC ^K 1B 0B	
17. Cursor home: ESC ^R 1B 12		34. Cursor right: ^P 10	
ERASURE	DELAY	35. Cursor left: ^H 08	
18. Entire screen:			
	ESC ^\br/>1B 1C	CHARACTER SET	
19. Cursor to end of screen:	0	36. Full upper and lower ASCII: YES	
	ESC ^X 1B 18	37. Generate all control codes: YES	
20. Beginning of screen to cursor:		38. Bell or tone sequence: ^G 07	
21. Cursor to end of line: ESC ^O 1B 0F	0	EMULATION	
22. Beginning of line to cursor:		39. Conform to ANSI X3.64? NO	
23. Entire cursor line:		40. Terminals Emulated: ADM 3A Regent 25 Hazeltine 1500, Esprit I, Esprit II, Esprit III, Televideo 925	

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Manufacturer:  
Terminal:

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Esprit Systems Inc.  
6310

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES  
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1. Manufacturer: Esprit Systems Inc.  
2. Terminal: Esprit

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SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	23	ON	OFF
4. Number of columns:	79	24. Blinking:	
5. Top Row:	0		
6. Left Column:	0		
7. Printing in bottom right cause scroll?	NO	25. Reverse video:	
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:	ESC ^Q 1B 11	27. High intensity:	ESC ^Y 1B 19
9. Row or column first:	COL	1B 1F	
10. Numeric form of row and column: BINARY		28. Half intensity:	ESC ^Y 1B 19
11. Add offset to:	Row: 0 Col: 0	ESC ^Y 1B 19	
12. Separator sequence:		29. Attributes occupy position:	NO
13. End sequence:		30. Attributes cumulative:	NO
14. Cursor to top row, left column: ESC ^Q NUL NUL 1B 11 00 00		31. All attributes off:	
15. 10th Row, 50th Column: ESC ^Q 1 ^I 1B 11 31 09		CURSOR CONTROL KEYS	
16. Delay after positioning:	0	32. Cursor up:	ESC ^L 1B 0C
17. Cursor home: ESC ^R 1B 12		33. Cursor down:	ESC ^K 1B 0B
ERASURE	DELAY	34. Cursor right:	^P 10
18. Entire screen: ESC ^\br/>1B 1C	0	35. Cursor left:	^H 08
19. Cursor to end of screen: ESC ^X 1B 18	0	CHARACTER SET	
20. Beginning of screen to cursor:		36. Full upper and lower ASCII:	YES
21. Cursor to end of line: ESC ^O 1B 0F	0	37. Generate all control codes:	YES
22. Beginning of line to cursor:		38. Bell or tone sequence:	^G 07
23. Entire cursor line:		EMULATION	
		39. Conform to ANSI X3.64?	NO
		40. Terminals Emulated:	
		ADM 3A	
		Regent 25	
		Hazeltine 1500	

---

Manufacturer:  
Terminal:

---

Esprit Systems Inc.  
Esprit

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     | NOTES                   |
|-----|-------------------------|
| 1.  | 11. Or 60H.             |
|     | 14. Or 1BH 11H 60H 60H. |
| 2.  | 15. Or 1BH 11H 91H 69H. |
|     | 25. Switch selectable.  |
|     | 26. Switch selectable.  |
| 3.  | 27. Switch selectable.  |
| 4.  |                         |
| 5.  |                         |
| 6.  |                         |
| 7.  |                         |
| 8.  |                         |
| 9.  |                         |
| 10. |                         |
| 11. |                         |
| 12. |                         |
| 13. |                         |
| 14. |                         |
| 15. |                         |
| 16. |                         |

---

1. Manufacturer: Esprit Systems Inc.  
2. Terminal: Esprit II

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	23	ON	OFF
4. Number of columns:	79	24. Blinking:	
5. Top Row:	0		
6. Left Column:	0		
7. Printing in bottom right cause scroll?	PROG	25. Reverse video:	
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:		27. High intensity:	
ESC ^Q		ESC ^	ESC ^Y
1B 11		1B 1F	1B 19
9. Row or column first:	COL	28. Half intensity:	
10. Numeric form of row and column: BINARY		ESC ^Y	ESC ^
11. Add offset to:	Row: 0 Col: 0	1B 19	1B 1F
12. Separator sequence:		29. Attributes occupy position:	NO
13. End sequence:		30. Attributes cumulative:	NO
14. Cursor to top row, left column:		31. All attributes off:	
ESC ^Q NUL NUL			
1B 11 00 00			
15. 10th Row, 50th Column:		CURSOR CONTROL KEYS	
ESC ^Q 1 ^I		32. Cursor up:	
1B 11 31 09		ESC ^L	
16. Delay after positioning:	0	1B OC	
17. Cursor home:		33. Cursor down:	
ESC ^R		ESC ^K	
1B 12		1B OB	
ERASURE	DELAY	34. Cursor right:	
18. Entire screen:		^P	
ESC ^\	0	10	
1B 1C		35. Cursor left:	
19. Cursor to end of screen:		^H	
ESC ^X	0	08	
1B 18		CHARACTER SET	
20. Beginning of screen to cursor:		36. Full upper and lower ASCII:	YES
		37. Generate all control codes:	YES
		38. Bell or tone sequence:	
21. Cursor to end of line:		^G	
ESC ^O	0	07	
1B OF		EMULATION	
22. Beginning of line to cursor:		39. Conform to ANSI X3.64?	NO
		40. Terminals Emulated:	
23. Entire cursor line:		ADM 3A	
		Regent 25	
		Hazeltine 1500	

---

Manufacturer: Esprit Systems Inc.  
Terminal: Esprit II

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     | NOTES                  |
|-----|------------------------|
| 1.  | 25. Switch selectable. |
|     | 26. Switch selectable. |
| 2.  | 27. Switch selectable. |
|     | 31. Switch selectable. |
| 3.  |                        |
| 4.  |                        |
| 5.  |                        |
| 6.  |                        |
| 7.  |                        |
| 8.  |                        |
| 9.  |                        |
| 10. |                        |
| 11. |                        |
| 12. |                        |
| 13. |                        |
| 14. |                        |
| 15. |                        |
| 16. |                        |

---

1. Manufacturer: Esprit Systems Inc.  
2. Terminal: Esprit III

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	ESC G 0
5. Top Row:	1	1B 47 32	1B 47 30
6. Left Column:	1	25. Reverse video:	ESC G 0
7. Printing in bottom right cause scroll?	PROG	ESC G 4 1B 47 34	1B 47 30
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:	ESC = 1B 3D	ESC G 8 1B 47 38	ESC G 0 1B 47 30
9. Row or column first:	COL	27. High intensity:	ESC ) 1B 28
10. Numeric form of row and column: BINARY		28. Half intensity:	1B 29
11. Add offset to:	Row: 1F Col: 1F	29. Attributes occupy position:	YES
12. Separator sequence:		30. Attributes cumulative:	NO
13. End sequence:		31. All attributes off:	ESC G 0 1B 47 30
14. Cursor to top row, left column:		CURSOR CONTROL KEYS	
ESC = SP SP 1B 3D 20 20		32. Cursor up:	^K OB
15. 10th Row, 50th Column:		33. Cursor down:	^V 16
ESC = Q ) 1B 3D 51 29		34. Cursor right:	^L OC
16. Delay after positioning:	0	35. Cursor left:	^H 08
17. Cursor home: ^ 1E		CHARACTER SET	
ERASURE	DELAY	36. Full upper and lower ASCII:	YES
18. Entire screen:	0	37. Generate all control codes:	YES
ESC *	0	38. Bell or tone sequence:	^G 07
19. Cursor to end of screen:	0	EMULATION	
ESC Y 1B 59		39. Conform to ANSI X3.64?	NO
20. Beginning of screen to cursor:		40. Terminals Emulated:	TVI 950
21. Cursor to end of line:	0		
ESC T 1B 54			
22. Beginning of line to cursor:			
23. Entire cursor line:			

---

Manufacturer:  
Terminal:

---

Esprit Systems Inc.  
Esprit III

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ^A @ ^M  
01 40 OD

NOTES

30. Binary add LSBs.  
42. PF1-PF11 shown unshifted.  
PF1-PF11 shifted shown below:

2. ^A A ^M  
01 41 OD

01 60 Od  
01 61 Od

3. ^A B ^M  
01 42 OD

01 62 Od  
01 63 Od

4. ^A C ^M  
01 43 OD

01 64 Od  
01 65 Od

5. ^A D ^M  
01 44 OD

01 66 Od  
01 67 Od

6. ^A E ^M  
01 45 OD

01 68 Od  
01 69 Od

7. ^A F ^M  
01 46 OD

8. ^A G ^M  
01 47 OD

9. ^A H ^M  
01 48 OD

10. ^A I ^M  
01 49 OD

11. ^A J ^M  
01 4A OD

12.

13.

14.

15.

16.

---

1. Manufacturer: Esprit Systems Inc.  
2. Terminal: Esprit III Color

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll?

PROG

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking:  
25. Reverse video:  
ESC G 4 ESC G 0  
1B 47 34 1B 47 30

## CURSOR ADDRESSING

8. Lead-in sequence:

ESC =  
1B 3D

9. Row or column first: COL
- 
10. Numeric form of row and column:
- 
- BINARY

11. Add offset to: Row: 1F
- 
- Col: 1F

12. Separator sequence:

13. End sequence:

14. Cursor to top row, left column:

ESC = SP SP  
1B 3D 20 20

15. 10th Row, 50th Column:

ESC = Q )  
1B 3D 51 29

16. Delay after positioning: 0

17. Cursor home:

^^  
1E

## ERASURE

## DELAY

18. Entire screen:

ESC \* 0  
1B 2A

19. Cursor to end of screen:

ESC Y 0  
1B 59

20. Beginning of screen to cursor:

21. Cursor to end of line:

ESC T 0  
1B 54

22. Beginning of line to cursor:

23. Entire cursor line:

## CURSOR CONTROL KEYS

32. Cursor up:

^K

OB

33. Cursor down:

^V

16

34. Cursor right:

^L

OC

35. Cursor left:

^H

08

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

^G

07

## EMULATION

39. Conform to ANSI X3.64? NO  
40. Terminals Emulated:  
TVI 950

---

Manufacturer:  
Terminal:

---

Esprit Systems Inc.  
Esprit III Color

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ^A @ ^M  
01 40 OD

2. ^A A ^M  
01 41 OD

3. ^A B ^M  
01 42 OD

4. ^A C ^M  
01 43 OD

5. ^A D ^M  
01 44 OD

6. ^A E ^M  
01 45 OD

7. ^A F ^M  
01 46 OD

8. ^A G ^M  
01 47 OD

9. ^A H ^M  
01 48 OD

10. ^A I ^M  
01 49 OD

11. ^A J ^M  
01 4A OD

12.

13.

14.

15.

16.

NOTES

42. PF1-PF11 shown unshifted.  
PF1-PF11 shifted shown below:

01 60 Od

01 61 Od

01 62 Od

01 63 Od

01 64 Od

01 65 Od

01 66 Od

01 67 Od

01 68 Od

01 69 Od

01 6a Od

---

1. Manufacturer: Esprit Systems Inc.  
2. Terminal: Exec 10

---

SCREEN LAYOUT		VIDEO ATTRIBUTES							
3. Number of rows:	23	ON				OFF			
4. Number of columns:	79	24. Blinking:							
5. Top Row:	0	ESC	SP	B	G	ESC	SP	H	G
6. Left Column:	0	1B	20	42	47	1B	20	48	47
7. Printing in bottom right cause scroll?	PROG	25. Reverse video:							
		ESC	SP	I	G	ESC	SP	H	G
		1B	20	49	47	1B	20	48	47
CURSOR ADDRESSING									
8. Lead-in sequence:		26. Underline:							
ESC ^Q		ESC	SP	H	I	ESC	SP	H	G
1B 11		1B	20	48	49	1B	20	48	47
9. Row or column first:	COL	27. High intensity:							
10. Numeric form of row and column: BINARY		ESC	SP	@	G	ESC	SP	H	G
11. Add offset to:	Row: 0 Col: 0	1B	20	48	47	1B	20	48	47
12. Separator sequence:		28. Half intensity:							
13. End sequence:		ESC	SP	H	G	ESC	SP	@	G
		1B	20	48	47	1B	20	40	47
14. Cursor to top row, left column:		CURSOR CONTROL KEYS							
ESC ^Q NUL NUL		32. Cursor up:							
1B 11 00 00		ESC	^L			1B	OC		
15. 10th Row, 50th Column:		33. Cursor down:							
ESC ^Q 1 ^I		ESC	^K			1B	OB		
1B 11 31 09		34. Cursor right:							
16. Delay after positioning:	0	^P				10			
17. Cursor home:		35. Cursor left:							
ESC ^R		^H				08			
1B 12		CHARACTER SET							
ERASURE	DELAY	36. Full upper and lower ASCII: YES							
18. Entire screen:	0	37. Generate all control codes: YES							
ESC ^\	0	38. Bell or tone sequence:							
1B 1C		^G				07			
19. Cursor to end of screen:	0	EMULATION							
ESC ^X	0	39. Conform to ANSI X3.64? NO							
1B 18		40. Terminals Emulated:							
20. Beginning of screen to cursor:		Hazeltine 1500							
21. Cursor to end of line:	0								
ESC ^O	0								
1B OF									
22. Beginning of line to cursor:									
23. Entire cursor line:									

---

Manufacturer: Esprit Systems Inc.  
Terminal: Exec 10

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC 0 0 0 ^Y  
1B 4F 30 30 19

NOTES

42. F1-F8 shown unshifted.  
F1-F8 shifted shown below:

1b 4f 30 38 19

2. ESC 0 0 1 ^Y  
1B 4F 30 31 19

1b 4f 30 39 19

1b 4f 31 30 19

3. ESC 0 0 2 ^Y  
1B 4F 30 32 19

1b 4f 31 31 19

1b 4f 31 32 19

4. ESC 0 0 3 ^Y  
1B 4F 30 33 19

1b 4f 31 34 19

1b 4f 31 35 19

5. ESC 0 0 4 ^Y  
1B 4F 30 34 19

6. ESC 0 0 5 ^Y  
1B 4F 30 35 19

7. ESC 0 0 6 ^Y  
1B 4F 30 36 19

8. ESC 0 0 7 ^Y  
1B 4F 30 37 19

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Esprit Systems Inc.  
2. Terminal: Exec 10/102

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80			
5. Top Row:	1	24. Blinking:	ESC m 0	
6. Left Column:	1	1B 6D 35	1B 6D 30	
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC m 7 1B 6D 37	ESC m 0 1B 6D 30	
CURSOR ADDRESSING		26. Underline: ESC m 4 1B 6D 34		
8. Lead-in sequence: ESC Y 1B 59		27. High intensity: ESC m 1 1B 6D 31	ESC m 0 1B 6D 30	
9. Row or column first:	COL	28. Half intensity: ESC m 0 1B 6D 30	ESC m 1 1B 6D 31	
10. Numeric form of row and column: BINARY		29. Attributes occupy position: NO		
11. Add offset to:	Row: 1F Col: 1F	30. Attributes cumulative: YES		
12. Separator sequence:		31. All attributes off: ESC m 0 1B 6D 30		
13. End sequence:				
14. Cursor to top row, left column: ESC Y SP SP 1B 59 20 20				
15. 10th Row, 50th Column: ESC Y Q ) 1B 59 51 29		CURSOR CONTROL KEYS		
16. Delay after positioning:	0	32. Cursor up: ESC A 1B 41		
17. Cursor home: ESC H 1B 48		33. Cursor down: ESC B 1B 42		
ERASURE	DELAY	34. Cursor right: ESC C 1B 43		
18. Entire screen: ESC J 2 1B 4A 32	0	35. Cursor left: ESC D 1B 44		
19. Cursor to end of screen: ESC J 0 1B 4A 30	0	CHARACTER SET		
20. Beginning of screen to cursor: ESC J 1 1B 4A 31	0	36. Full upper and lower ASCII: YES		
21. Cursor to end of line: ESC K 0 1B 4B 30	0	37. Generate all control codes: YES		
22. Beginning of line to cursor: ESC K 1 1B 4B 31	0	38. Bell or tone sequence: ^G 07		
23. Entire cursor line: ESC K 2 1B 4B 32	0	EMULATION		
		39. Conform to ANSI X3.64? NO		
		40. Terminals Emulated: DEC VT52 DEC VT100, 101, 102, 131		

---

Manufacturer:  
Terminal:

---

Esprit Systems Inc.  
Exec 10/102

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES  
1.

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---

1. Manufacturer: Esprit Systems Inc.  
2. Terminal: Exec 10/102 (ANSI mode)

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## ERASURE

18. Entire screen:  
    ESC [ 2 J  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
    ESC [ 1 m  
    1B 5B 31 6D  
28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64?: YES  
40. Terminals Emulated:

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Manufacturer:  
Terminal:

---

Esprit Systems Inc.  
Exec 10/102 (ANSI mode)

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES  
1.

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1. Manufacturer:	Esprit Systems Inc.									
2. Terminal:	Exec 10/25									
SCREEN LAYOUT	VIDEO ATTRIBUTES									
3. Number of rows:	23	ON			OFF					
4. Number of columns:	79	24. Blinking:								
5. Top Row:	0	ESC	SP	B	G	ESC	SP	H	G	
6. Left Column:	0	1B	20	42	47	1B	20	48	47	
7. Printing in bottom right cause scroll?	PROG	25. Reverse video:	ESC	SP	I	G	ESC	SP	H	G
			1B	20	49	47	1B	20	48	47
CURSOR ADDRESSING	26. Underline:									
8. Lead-in sequence:		ESC	SP	H	I	ESC	SP	H	G	
		ESC	^Q			1B	20	48	49	
		1B	11			1B	20	48	47	
9. Row or column first:	COL	27. High intensity:	ESC	SP	@	G	ESC	SP	H	G
10. Numeric form of row and column:			1B	20	40	47	1B	20	48	47
			BINARY							
11. Add offset to:	Row: 0	28. Half intensity:	ESC	SP	H	G	ESC	SP	@	G
	Col: 0		1B	20	48	47	1B	20	40	47
12. Separator sequence:		29. Attributes occupy position:	NO							
		30. Attributes cumulative:	NO							
13. End sequence:		31. All attributes off:								
			ESC	SP	H	G				
			1B	20	48	47				
14. Cursor to top row, left column:	CURSOR CONTROL KEYS									
ESC ^Q NUL NUL	32. Cursor up:									
1B 11 00 00			ESC	^L						
15. 10th Row, 50th Column:				1B	0C					
ESC ^Q 1 ^I	33. Cursor down:									
1B 11 31 09			ESC	^K						
16. Delay after positioning:	0			1B	0B					
17. Cursor home:		34. Cursor right:								
ESC ^R			^P							
1B 12				10						
ERASURE	DELAY	35. Cursor left:								
18. Entire screen:			^H							
ESC ^\	0			08						
1B 1C										
19. Cursor to end of screen:		CHARACTER SET								
ESC ^X	0	36. Full upper and lower ASCII:	YES							
1B 18		37. Generate all control codes:	YES							
20. Beginning of screen to cursor:		38. Bell or tone sequence:								
			^G							
				07						
21. Cursor to end of line:		EMULATION								
ESC ^O	0	39. Conform to ANSI X3.64?	NO							
1B OF		40. Terminals Emulated:								
22. Beginning of line to cursor:			Hazeltine EXEC 80/30							
			Hazeltine EXEC 80/20							
23. Entire cursor line:										

---

Manufacturer:  
Terminal:

---

Esprit Systems Inc.  
Exec 10/25

---

41. Information provided by:

MANUFACTURER

42. PROGRAM FUNCTION KEYS

					NOTES
1.	ESC	0	0	0	^Y 27. Also ESC US
	1B	4F	30	30	19
					42. F1-F8 shown unshifted. F1-F8 shifted shown below:
2.	ESC	0	0	1	^Y 1b 4f 30 38 19
	1B	4F	30	31	19
					1b 4f 30 39 19
3.	ESC	0	0	2	^Y 1b 4f 31 30 19
	1B	4F	30	32	19
					1b 4f 31 31 19
4.	ESC	0	0	3	^Y 1b 4f 31 32 19
	1B	4F	30	33	19
					1b 4f 31 33 19
5.	ESC	0	0	4	^Y 1b 4f 31 34 19
	1B	4F	30	34	19
6.	ESC	0	0	5	^Y 1b 4f 30 35 19
7.	ESC	0	0	6	^Y 1B 4F 30 36 19
8.	ESC	0	0	7	^Y 1B 4F 30 37 19

9.

10.

11.

12.

13.

14.

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16.

---

1. Manufacturer: Falco Data Products  
 2. Terminal: Fame 100

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC [ 5 m	ESC [ m
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D	ESC [ m 1B 5B 6D
8. Lead-in sequence: ESC [ 1B 5B	ROW	27. High intensity: ESC [ 1 m 1B 5B 31 6D	ESC [ m 1B 5B 6D
9. Row or column first:	ROW	28. Half intensity: ESC [ 0 m 1B 5B 6D	
10. Numeric form of row and column: VARIABLE-LENGTH ASCII		29. Attributes occupy position: NO	
11. Add offset to: Row: 0	Col: 0	30. Attributes cumulative: YES	
12. Separator sequence: ; 3B		31. All attributes off: ESC [ m 1B 5B 6D	
13. End sequence: H 48		CURSOR CONTROL KEYS	
14. Cursor to top row, left column: ESC [ 1 ; 1 H 1B 5B 31 3B 31 48		32. Cursor up: ESC [ A 1B 5B 41	
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48		33. Cursor down: ESC [ B 1B 5B 42	
16. Delay after positioning: 0		34. Cursor right: ESC [ C 1B 5B 43	
17. Cursor home: ESC [ H 1B 5B 48		35. Cursor left: ESC [ D 1B 5B 44	
ERASURE		CHARACTER SET	
18. Entire screen: ESC [ 2 J 1B 5B 32 4A	DELAY 0	36. Full upper and lower ASCII: YES	
19. Cursor to end of screen: ESC [ J 1B 5B 4A	0	37. Generate all control codes: YES	
20. Beginning of screen to cursor: ESC [ 1 J 1B 5B 31 4A	0	38. Bell or tone sequence: ^G 07	
21. Cursor to end of line: ESC [ K 1B 5B 4B	0	EMULATION	
22. Beginning of line to cursor: ESC [ 1 K 1B 5B 31 4B	0	39. Conform to ANSI X3.64? YES	
23. Entire cursor line: ESC [ 2 K 1B 5B 32 4B	0	40. Terminals Emulated: DEC VT100, VT102 DEC VT52	

Manufacturer:  
Terminal:

Falco Data Products  
Fame 100

- | 41. | Information provided by:<br>MANUFACTURER |       |
|-----|--|-------|
| 42. | PROGRAM FUNCTION KEYS                    | NOTES |
| 1.  | ESC O P<br>1B 4F 50                      |       |
| 2.  | ESC O Q<br>1B 4F 51                      |       |
| 3.  | ESC O R<br>1B 4F 52                      |       |
| 4.  | ESC O S<br>1B 4F 53                      |       |
| 5.  |  |       |
| 6.  |  |       |
| 7.  |  |       |
| 8.  |  |       |
| 9.  |  |       |
| 10. |  |       |
| 11. |  |       |
| 12. |  |       |
| 13. |  |       |
| 14. |  |       |
| 15. |  |       |
| 16. |  |       |

---

1. Manufacturer: Falco Data Products  
2. Terminal: Fame 78

---

SCREEN LAYOUT		VIDEO ATTRIBUTES
3. Number of rows:	24	ON
4. Number of columns:	80	OFF
5. Top Row:	1	
6. Left Column:	1	
7. Printing in bottom right cause scroll?	NO	24. Blinking: 25. Reverse video: 26. Underline: 27. High intensity: 28. Half intensity: ESC d @                    ESC d A 1B 64 40                1B 64 41 29. Attributes occupy position: YES 30. Attributes cumulative: NO 31. All attributes off: CURSOR CONTROL KEYS 32. Cursor up: ESC A 1B 41 33. Cursor down: ESC B 1B 42 34. Cursor right: ESC C 1B 43 35. Cursor left: ESC D 1B 44 CHARACTER SET 36. Full upper and lower ASCII: YES 37. Generate all control codes: YES 38. Bell or tone sequence: ^G 07 EMULATION 39. Conform to ANSI X3.64?        YES 40. Terminals Emulated: Beehive DM78 DEC VT100
10. Numeric form of row and column: BINARY	ROW	
11. Add offset to:	Row: 1F Col: 1F	
12. Separator sequence:		
13. End sequence:		
14. Cursor to top row, left column: ESC F SP SP 1B 46 20 20		CURSOR CONTROL KEYS
15. 10th Row, 50th Column: ESC F ) Q 1B 46 29 51		32. Cursor up: ESC A 1B 41
16. Delay after positioning:	0	33. Cursor down: ESC B 1B 42
17. Cursor home: ESC H 1B 48		34. Cursor right: ESC C 1B 43
ERASURE	DELAY	35. Cursor left: ESC D 1B 44
18. Entire screen: ESC E 1B 45	0	CHARACTER SET
19. Cursor to end of screen: ESC J 1B 4A	0	36. Full upper and lower ASCII: YES 37. Generate all control codes: YES 38. Bell or tone sequence: ^G 07
20. Beginning of screen to cursor:		
21. Cursor to end of line: ESC K 1B 4B	0	EMULATION
22. Beginning of line to cursor:		39. Conform to ANSI X3.64?        YES 40. Terminals Emulated: Beehive DM78 DEC VT100
23. Entire cursor line:		

---

Manufacturer: Falco Data Products  
Terminal: Fame 78

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                        | NOTES                 |
|-----|------------------------|-----------------------|
| 1.  | ^B ESC p<br>02 1B 70   | 42. 24 function keys. |
| 2.  | ^B ESC q<br>02 1B 71   |                       |
| 3.  | ^B ESC r<br>02 1B 72   |                       |
| 4.  | ^B ESC s<br>02 1B 73   |                       |
| 5.  | ^B ESC t<br>02 1B 74   |                       |
| 6.  | ^B ESC u<br>02 1B 75   |                       |
| 7.  | ^B ESC v<br>02 1B 76   |                       |
| 8.  | ^B ESC w<br>02 1B 77   |                       |
| 9.  | ^B ESC x<br>02 1B 78   |                       |
| 10. | ^B ESC y<br>02 1B 79   |                       |
| 11. | ^B ESC z<br>02 1B 7A   |                       |
| 12. | ^B ESC {<br>02 1B 7B   |                       |
| 13. | ^B ESC  <br>02 1B 7C   |                       |
| 14. | ^B ESC }<br>02 1B 7D   |                       |
| 15. | ^B ESC ~<br>02 1B 7E   |                       |
| 16. | ^B ESC DEL<br>02 1B 7F |                       |

---

1. Manufacturer: Falco Data Products  
2. Terminal: Fame III

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1			
6. Left Column:	1			
7. Printing in bottom right cause scroll?	PROG	25. Reverse video:		
CURSOR ADDRESSING		26. Underline:		
8. Lead-in sequence:	ESC [ 1B 5B	27. High intensity:	ESC ( ESC ) 1B 28 1B 29	
9. Row or column first:	ROW	28. Half intensity:	ESC ( ESC ) 1B 29 1B 28	
10. Numeric form of row and column:		29. Attributes occupy position:	NO	
VARIABLE-LENGTH ASCII		30. Attributes cumulative:	YES	
11. Add offset to:	Row: 0 Col: 0	31. All attributes off:		
12. Separator sequence:	; 3B			
13. End sequence:	H 48			
14. Cursor to top row, left column:	ESC [ 1 ; 1 H 1B 5B 31 3B 31 48	CURSOR CONTROL KEYS		
15. 10th Row, 50th Column:	ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48	32. Cursor up:	ESC [ A 1B 5B 41	
16. Delay after positioning:	0	33. Cursor down:	ESC [ B 1B 5B 42	
17. Cursor home:	ESC [ H 1B 5B 48	34. Cursor right:	ESC [ C 1B 5B 43	
ERASURE	DELAY	35. Cursor left:	ESC [ D 1B 5B 44	
18. Entire screen:	ESC [ 2 J 0 1B 5B 32 4A	CHARACTER SET		
19. Cursor to end of screen:	ESC [ J 0 1B 5B 4A	36. Full upper and lower ASCII:	YES	
20. Beginning of screen to cursor:	ESC [ 1 J 0 1B 5B 31 4A	37. Generate all control codes:	YES	
21. Cursor to end of line:	ESC [ K 0 1B 5B 4B	38. Bell or tone sequence:	^G 07	
22. Beginning of line to cursor:	ESC [ 1 K 0 1B 5B 31 4B	EMULATION		
23. Entire cursor line:	ESC [ 2 K 0 1B 5B 32 4B	39. Conform to ANSI X3.64?	YES	
		40. Terminals Emulated:		

---

Manufacturer: Falco Data Products  
Terminal: Fame III

---

41. Information provided by:  
MANUFACTURER
  
42. PROGRAM FUNCTION KEYS   NOTES  
1. ESC a  
1B 61
  
2. ESC b  
1B 62
  
3. ESC c  
1B 63
  
4. ESC d  
1B 64
  
5. ESC e  
1B 65
  
6. ESC f  
1B 66
  
7. ESC g  
1B 67
  
8. ESC h  
1B 68
  
9. ESC i  
1B 69
  
10. ESC j  
1B 6A
  
11. ESC k  
1B 6B
  
12. ESC l  
1B 6C
  
- 13.
  
- 14.
  
- 15.
  
- 16.

---

1. Manufacturer: Falco Data Products  
2. Terminal: TS 2624-B

---

SCREEN LAYOUT		VIDEO ATTRIBUTES			
3. Number of rows:	24	ON	OFF		
4. Number of columns:	80	24. Blinking:			
5. Top Row:	0	ESC & d A	ESC & d @		
6. Left Column:	0	1B 26 64 41	1B 26 64 40		
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC & d B 1B 26 64 42	ESC & d @ 1B 26 64 40		
CURSOR ADDRESSING		26. Underline: ESC & d D 1B 26 64 44	ESC & d @ 1B 26 64 40		
8. Lead-in sequence: ESC & a 1B 26 61		27. High intensity: ESC & d H 1B 26 64 48	ESC & d @ 1B 26 64 40		
9. Row or column first:	COL	28. Half intensity: ESC & d H 1B 26 64 48	ESC & d @ 1B 26 64 40		
10. Numeric form of row and column: VARIABLE-LENGTH ASCII		29. Attributes occupy position: NO			
11. Add offset to:	Row: 0 Col: 0	30. Attributes cumulative: NO			
12. Separator sequence:		31. All attributes off: ESC & d @ 1B 26 64 40			
13. End sequence:					
14. Cursor to top row, left column: ESC & a 0 c 0 R 1B 26 61 30 63 30 52		CURSOR CONTROL KEYS			
15. 10th Row, 50th Column: ESC & a 4 9 c 9 R 1B 26 61 34 39 63 39 52		32. Cursor up: ESC A 1B 41			
16. Delay after positioning:	0	33. Cursor down: ESC B 1B 42			
17. Cursor home: ESC h 1B 68		34. Cursor right: ESC C 1B 43			
ERASURE	DELAY	35. Cursor left: ESC D 1B 44			
18. Entire screen: ESC h ESC J 1B 68 1B 4A	0	CHARACTER SET			
19. Cursor to end of screen: ESC J 1B 4A	0	36. Full upper and lower ASCII: YES			
20. Beginning of screen to cursor:		37. Generate all control codes: YES			
21. Cursor to end of line: ESC K 1B 4B	0	38. Bell or tone sequence: ^G 07			
22. Beginning of line to cursor:		EMULATION			
23. Entire cursor line:		39. Conform to ANSI X3.64? NO			
		40. Terminals Emulated:			

---

Manufacturer:  
Terminal:

---

Falco Data Products  
TS 2624-B

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC p  
1B 70

2. ESC q  
1B 71

3. ESC r  
1B 72

4. ESC s  
1B 73

5. ESC t  
1B 74

6. ESC u  
1B 75

7. ESC v  
1B 76

8. ESC w  
1B 77

9.

10.

11.

12.

13.

14.

15.

16.

NOTES

9. Either row or column first is acceptable, depending on sequence sent. See notes 12, 13, 14, and 15.

12. To send row first, use r (72H).

13. To send row first, use C (43H).

14. To send row first:

ESC & a 0 r 0 C  
1B 26 61 30 72 30 43

15. To send row first:

ESC & a 9 r 4 9 C  
1B 26 61 39 72 34 39 43

23. To delete entire cursor line:

ESC & a 0 C ESC K  
1B 26 61 30 43 1B 4B

30. Combinations preceded by ESC & d:

@ABCDEFGHIJKLMNOS

Half-intensity XXXXXXXX

Underline XXXX XXXX

Reverse XX XX XX XX

Blinking X X X X X X X X

Security X

End enhancement X

Example: Reverse, blinking and underline:

ESC & d G  
1B 26 64 47

36. Three complete 128-character sets (base, line drawing and mathematics) are available standard. The 8-bit extended ASCII code is used to generate an additional 128-character foreign set.

ESC ) @ selects base set

ESC ) A selects math set

ESC ) B selects line drawing set

42. Sequences shown are default. All 8 function keys are programmable.

---

1. Manufacturer: Falco Data Products  
2. Terminal: TS-1

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC g	0
5. Top Row:	1	1B 67 32	1B 67	30
6. Left Column:	1			
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC g 4 1B 67 34	ESC g	0 1B 67 30
CURSOR ADDRESSING		26. Underline: ESC g 1 1B 67 31	ESC g	0 1B 67 30
8. Lead-in sequence: ESC = 1B 3D		27. High intensity:		
9. Row or column first:	ROW	28. Half intensity: ESC (	ESC )	
10. Numeric form of row and column: BINARY		1B 28	1B 29	
11. Add offset to:	Row: 1F Col: 1F	29. Attributes occupy position:	NO	
12. Separator sequence:		30. Attributes cumulative:	NO	
13. End sequence:		31. All attributes off:		
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		CURSOR CONTROL KEYS		
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		32. Cursor up: ESC [ A 1B 5B 41		
16. Delay after positioning:	0	33. Cursor down: ESC [ B 1B 5B 42		
17. Cursor home: ESC [ H 1B 5B 48		34. Cursor right: ESC [ C 1B 5B 43		
ERASURE	DELAY	35. Cursor left: ESC [ D 1B 5B 44		
18. Entire screen: ESC * 1B 2A	0	CHARACTER SET		
19. Cursor to end of screen: ESC Y 1B 59	0	36. Full upper and lower ASCII:	YES	
20. Beginning of screen to cursor:		37. Generate all control codes:	YES	
21. Cursor to end of line: ESC t 1B 74	0	38. Bell or tone sequence: ^G 07		
22. Beginning of line to cursor:		EMULATION		
23. Entire cursor line:		39. Conform to ANSI X3.64?	YES	
		40. Terminals Emulated: DEC VT100 Lear Diegler ADM-31		

---

Manufacturer: Falco Data Products  
Terminal: TS-1

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1.

NOTES

30. See manual for combination  
attributes.

42. 12 programmable function keys.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Falco Data Products  
2. Terminal: TS-100/132

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll?

PROG

## VIDEO ATTRIBUTES

ON	OFF
24. Blinking:	ESC [ 5 m 1B 5B 35 6D
25. Reverse video:	ESC [ 7 m 1B 5B 37 6D
26. Underline:	ESC [ 4 m 1B 5B 34 6D
27. High intensity:	ESC [ 1 m 1B 5B 31 6D
28. Half intensity:	1B 5B 6D

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
    1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII

11. Add offset to: Row: 0  
                      Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

- ERASURE                   DELAY
18. Entire screen:  
    ESC [ 2 J 0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J 0  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K 0  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 0  
    1B 5B 32 4B

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

- ^G  
07
- EMULATION
39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    DEC VT100, VT102  
    DEC VT52

---

Manufacturer: Falco Data Products  
Terminal: TS-100/132

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS   NOTES

1. ESC O P  
1B 4F 50

2. ESC O Q  
1B 4F 51

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Falco Data Products  
2. Terminal: TS-42

---

SCREEN LAYOUT		VIDEO ATTRIBUTES
3. Number of rows:	24	ON OFF
4. Number of columns:	80	
5. Top Row:	1	ESC G 2
6. Left Column:	1	1B 47 32
7. Printing in bottom right cause scroll?	YES	ESC G 0 1B 47 30
CURSOR ADDRESSING		24. Blinking:
8. Lead-in sequence:		ESC G 4
ESC =		1B 47 34
1B 3D		ESC G 0 1B 47 30
9. Row or column first:	ROW	26. Underline:
10. Numeric form of row and column:	BINARY	ESC G 1
11. Add offset to:	Row: 1F	1B 47 31
	Col: 1F	1B 47 30
12. Separator sequence:		27. High intensity:
13. End sequence:		28. Half intensity:
14. Cursor to top row, left column:		29. Attributes occupy position: YES
ESC = SP SP		30. Attributes cumulative: NO
1B 3D 20 20		31. All attributes off:
15. 10th Row, 50th Column:		ESC G 0 1B 47 30
ESC = ) Q		CURSOR CONTROL KEYS
1B 3D 29 51		32. Cursor up: ^K
16. Delay after positioning:	0	OB
17. Cursor home:		33. Cursor down: ^J
ERASURE	DELAY	OA
18. Entire screen:		34. Cursor right: ^L
ESC *	0	OC
1B 2A		35. Cursor left: ^H
19. Cursor to end of screen:		08
ESC y	0	CHARACTER SET
1B 79		36. Full upper and lower ASCII: YES
20. Beginning of screen to cursor:		37. Generate all control codes: YES
21. Cursor to end of line:		38. Bell or tone sequence: ^G
ESC t	0	07
1B 74		EMULATION
22. Beginning of line to cursor:		39. Conform to ANSI X3.64? NO
23. Entire cursor line:		40. Terminals Emulated: Lear Siegler ADM-42

---

Manufacturer:  
Terminal:

---

Falco Data Products  
TS-42

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. ^A @ ^M                          42. Function keys are programmable.  
01 40 OD
2. ^A A ^M  
01 41 OD
3. ^A B ^M  
01 42 OD
4. ^A C ^M  
01 43 OD
5. ^A D ^M  
01 44 OD
6. ^A E ^M  
01 45 OD
7. ^A F ^M  
01 46 OD
8. ^A G ^M  
01 47 OD
9. ^A H ^M  
01 48 OD
10. ^A I ^M  
01 49 OD
11. ^A J ^M  
01 4A OD
12. ^A K ^M  
01 4B OD
13. ^A L ^M  
01 4C OD
14. ^A M ^M  
01 4D OD
15. ^A N ^M  
01 4E OD
16. ^A O ^M  
01 4F OD

---

1. Manufacturer: FMG Corporation  
2. Terminal: FMG CP/M for TRS80 Model II

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? YES

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC ^Q  
    1B 11  
9. Row or column first: COL  
10. Numeric form of row and column: BINARY  
11. Add offset to: Row: 27  
                      Col: 27  
12. Separator sequence:

## 13. End sequence:

14. Cursor to top row, left column:  
    ESC ^Q ( ( 1B 11 28 28  
15. 10th Row, 50th Column:  
    ESC ^Q 1 Y 1B 11 31 59  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC ^R  
    1B 12

## ERASURE

18. Entire screen: DELAY  
    ESC ^S 0  
    1B 13  
19. Cursor to end of screen:

## 20. Beginning of screen to cursor:

## 21. Cursor to end of line:

    ESC ^O 0  
    1B OF

## 22. Beginning of line to cursor:

## 23. Entire cursor line:

## VIDEO ATTRIBUTES

ON OFF  
24. Blinking:

## 25. Reverse video:

ESC ^W                    ESC ^X  
1B 17                    1B 18

## 26. Underline:

## 27. High intensity:

## 28. Half intensity:

29. Attributes occupy position: NO  
30. Attributes cumulative: NO

## 31. All attributes off:

ESC ^X  
1B 18

## CURSOR CONTROL KEYS

## 32. Cursor up:

^A

1E

## 33. Cursor down:

^

1F

## 34. Cursor right:

^]

1D

## 35. Cursor left:

^\\

1C

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

## EMULATION

39. Conform to ANSI X3.64? NO  
40. Terminals Emulated:

---

Manufacturer:  
Terminal:

---

FMG Corporation  
FMG CP/M for TRS80 Model II

---

41. Information provided by:  
PUBLISHER

42. PROGRAM FUNCTION KEYS

- |     | NOTES   |
|-----|---|
| 1.  | This is an implementation of CP/M for the Radio Shack TRS-80 Model II. FMG Corporation is not the manufacturer of the hardware. |
| 3.  | At publication FMG Corporation was no longer in operation. Data was obtained by the publisher from documentation.               |
| 4.  |   |
| 5.  |   |
| 6.  |   |
| 7.  |   |
| 8.  |   |
| 9.  |   |
| 10. |   |
| 11. |   |
| 12. |   |
| 13. |   |
| 14. |   |
| 15. |   |
| 16. |   |

---

1. Manufacturer: Franklin Computer Corp.  
2. Terminal: Ace Display

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? YES

## CURSOR ADDRESSING

8. Lead-in sequence:  
    <sup>^</sup>  
        1E

9. Row or column first: COL  
10. Numeric form of row and column: BINARY  
11. Add offset to: Row: 1F  
                      Col: 1F  
12. Separator sequence:

13. End sequence:

14. Cursor to top row, left column:  
    <sup>^</sup>  
        SP SP  
        1E 20 20  
15. 10th Row, 50th Column:  
    <sup>^</sup>  
        Q )  
        1E 51 29  
16. Delay after positioning: 0  
17. Cursor home:  
    <sup>^</sup>  
        Y  
        19

## ERASURE

18. Entire screen:  
    <sup>^</sup>  
        L  
        OC  
19. Cursor to end of screen:  
    <sup>^</sup>  
        K  
        OB  
20. Beginning of screen to cursor:  
    <sup>^</sup>  
        G  
        1D  
21. Cursor to end of line:  
    <sup>^</sup>  
        ] 0  
        1D  
22. Beginning of line to cursor:

23. Entire cursor line:

## VIDEO ATTRIBUTES

ON OFF  
24. Blinking:

25. Reverse video:

<sup>^</sup>O ^N  
    OF OE

26. Underline:

27. High intensity:

28. Half intensity:

29. Attributes occupy position: NO  
30. Attributes cumulative: NO  
31. All attributes off:

<sup>^</sup>Z 0  
    1A 30

## CURSOR CONTROL KEYS

32. Cursor up:

33. Cursor down:

<sup>^</sup>J

    0A

34. Cursor right:

<sup>^</sup>U

    15

35. Cursor left:

<sup>^</sup>H

    08

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

<sup>^</sup>G

    07

## EMULATION

39. Conform to ANSI X3.64? NO  
40. Terminals Emulated:

---

Manufacturer:  
Terminal:

---

Franklin Computer Corp.  
Ace Display

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES  
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1. Manufacturer: General Terminal Corporation  
2. Terminal: SW 10 (ANSI mode)

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
    1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to: Row: 0  
                      Col: 0

12. Separator sequence:  
    ;  
    3B

13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## ERASURE

18. Entire screen: DELAY  
    ESC [ 2 J 0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J 0  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K 0  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 0  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
    ESC [ 1 m  
    1B 5B 31 6D  
28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    DEC VT100

---

Manufacturer: General Terminal Corporation  
Terminal: SW 10 (ANSI mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- 1.
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NOTES

42. 12 programmable function keys,  
each capable of holding up to 20  
user-defined characters.

---

1. Manufacturer: General Terminal Corporation  
2. Terminal: SW 10 (VT52 mode)

---

SCREEN LAYOUT	VIDEO ATTRIBUTES
3. Number of rows:	24
4. Number of columns:	80
5. Top Row:	1
6. Left Column:	1
7. Printing in bottom right cause scroll?	PROG
CURSOR ADDRESSING	
8. Lead-in sequence:	ESC Y 1B 59
9. Row or column first:	ROW
10. Numeric form of row and column:	BINARY
11. Add offset to:	Row: 1F Col: 1F
12. Separator sequence:	
13. End sequence:	
14. Cursor to top row, left column:	ESC Y SP SP 1B 59 20 20
15. 10th Row, 50th Column:	ESC Y ) Q 1B 59 29 51
16. Delay after positioning:	0
17. Cursor home:	ESC H 1B 48
ERASURE	DELAY
18. Entire screen:	ESC H ESC J 1B 48 1B 4A
19. Cursor to end of screen:	ESC J 1B 4A
20. Beginning of screen to cursor:	
21. Cursor to end of line:	ESC K 1B 4B
22. Beginning of line to cursor:	
23. Entire cursor line:	
CURSOR CONTROL KEYS	
32. Cursor up:	ESC A 1B 41
33. Cursor down:	ESC B 1B 42
34. Cursor right:	ESC C 1B 43
35. Cursor left:	ESC D 1B 44
CHARACTER SET	
36. Full upper and lower ASCII:	YES
37. Generate all control codes:	YES
38. Bell or tone sequence:	^G 07
EMULATION	
39. Conform to ANSI X3.64?	NO
40. Terminals Emulated:	DEC VT52

---

Manufacturer:	General Terminal Corporation
Terminal:	SW 10 (VT52 mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 42. 12 programmable function keys,  
each capable of holding up to  
20 user-defined characters.
- 2.
- 3.
- 4.
- 5.
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- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer: General Terminal Corporation  
2. Terminal: SW 80

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC k ^D	ESC a
6. Left Column:	1	1B 6B 04	1B 61
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC k ^B 1B 6B 02	ESC a 1B 61
CURSOR ADDRESSING		26. Underline: ESC k ^P 1B 6B 10	ESC a 1B 61
8. Lead-in sequence: ESC = 1B 3D		27. High intensity: 28. Half intensity: ESC k ^A	
9. Row or column first:	ROW	1B 6B 01	ESC a 1B 61
10. Numeric form of row and column: BINARY		29. Attributes occupy position:	NO
11. Add offset to:	Row: 1F Col: 1F	30. Attributes cumulative:	NO
12. Separator sequence:		31. All attributes off: ESC a 1B 61	
13. End sequence:		CURSOR CONTROL KEYS	
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		32. Cursor up: ESC A 1B 41	
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		33. Cursor down: ESC B 1B 42	
16. Delay after positioning:	0	34. Cursor right: ESC C 1B 43	
17. Cursor home: ESC H 1B 48		35. Cursor left: ESC D 1B 44	
ERASURE	DELAY	CHARACTER SET	
18. Entire screen: ESC H ESC J 1B 48 1B 4A	0	36. Full upper and lower ASCII:	YES
19. Cursor to end of screen: ESC J 1B 4A	0	37. Generate all control codes:	YES
20. Beginning of screen to cursor:		38. Bell or tone sequence: ^G 07	
21. Cursor to end of line: ESC K 1B 4B	0	EMULATION	
22. Beginning of line to cursor:		39. Conform to ANSI X3.64?	NO
23. Entire cursor line:		40. Terminals Emulated:	

---

Manufacturer: General Terminal Corporation  
Terminal: SW 80

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     | NOTES  |
|-----|--|
| 1.  | 3. 25th status line.<br>30. Additional attribute combinations available.                               |
| 2.  | 36. 96 ASCII characters, 32 systems characters, 96 graphic and special characters.                     |
| 3.  | 42. 12 programmable function keys plus 12 in shift mode, each capable of storing up to 254 characters. |
| 4.  |  |
| 5.  |  |
| 6.  |  |
| 7.  |  |
| 8.  |  |
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| 10. |  |
| 11. |  |
| 12. |  |
| 13. |  |
| 14. |  |
| 15. |  |
| 16. |  |

---

1. Manufacturer: GraphOn Corporation  
2. Terminal: GO-100

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	ESC [ m 1B 5B 35 6D
5. Top Row:	1	25. Reverse video:	ESC [ m 1B 5B 37 6D
6. Left Column:	1	26. Underline:	ESC [ 4 m 1B 5B 34 6D
7. Printing in bottom right cause scroll?	PROG	27. High intensity:	ESC [ 1 m 1B 5B 31 6D
		28. Half intensity:	ESC [ m 1B 5B 6D
CURSOR ADDRESSING		29. Attributes occupy position: NO	
8. Lead-in sequence:	ESC [ 1B 5B	30. Attributes cumulative: YES	
9. Row or column first:	ROW	31. All attributes off:	ESC [ m 1B 5B 6D
10. Numeric form of row and column:	VARIABLE-LENGTH ASCII		
11. Add offset to:	Row: 0 Col: 0	CURSOR CONTROL KEYS	
12. Separator sequence:	;	32. Cursor up:	ESC [ A 1B 5B 41
	3B	33. Cursor down:	ESC [ B 1B 5B 42
13. End sequence:	H 48	34. Cursor right:	ESC [ C 1B 5B 43
14. Cursor to top row, left column:	ESC [ 1 ; 1 H 1B 5B 31 3B 31 48	35. Cursor left:	ESC [ D 1B 5B 44
15. 10th Row, 50th Column:	ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48	CHARACTER SET	
16. Delay after positioning:	0	36. Full upper and lower ASCII: YES	
17. Cursor home:	ESC [ H 1B 5B 48	37. Generate all control codes: YES	
ERASURE	DELAY	38. Bell or tone sequence:	^G 07
18. Entire screen:	ESC [ 2 J 1B 5B 32 4A	EMULATION	
19. Cursor to end of screen:	ESC [ J 1B 5B 4A	39. Conform to ANSI X3.64?: YES	
20. Beginning of screen to cursor:	ESC [ 1 J 1B 5B 31 4A	40. Terminals Emulated:	DEC VT100 DEC VT52
21. Cursor to end of line:	ESC [ K 1B 5B 4B		
22. Beginning of line to cursor:	ESC [ 1 K 1B 5B 31 4B		
23. Entire cursor line:	ESC [ 2 K 1B 5B 32 4B		

---

Manufacturer:  
Terminal:

---

GraphOn Corporation  
GO-100

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC O P  
1B 4F 50

2. ESC O Q  
1B 4F 51

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

5.

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NOTES

42. In addition to four program function keys shown (PF1-PF4), terminal supports 8 programmable function keys (F1-F8), in shift and unshift mode, for a total of 16 programmable function keys which may be set by the user or host.

Additional editing functions:  
Insert line                   ESC [ L  
Delete line                  ESC [ M  
Delete character            ESC [ P  
Enter char insert mode    ESC [ 4 h  
Exit char insert mode     ESC [ 4 l

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---

1. Manufacturer: GraphOn Corporation  
2. Terminal: GO-140

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80			
5. Top Row:	1	ESC [ 5 m	ESC [ m	
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D	
7. Printing in bottom right cause scroll?	PROG	24. Blinking: ESC [ 7 m 1B 5B 37 6D	25. Reverse video: ESC [ 1 m 1B 5B 31 6D	26. Underline: ESC [ 4 m 1B 5B 34 6D
CURSOR ADDRESSING				27. High intensity: ESC [ 1 m 1B 5B 31 6D
8. Lead-in sequence:				28. Half intensity: ESC [ 1 m 1B 5B 6D
		ESC [ 1B 5B		
9. Row or column first:	ROW			
10. Numeric form of row and column:				29. Attributes occupy position: NO
		VARIABLE-LENGTH ASCII		30. Attributes cumulative: YES
11. Add offset to:	Row: 0 Col: 0			31. All attributes off: ESC [ m 1B 5B 6D
12. Separator sequence:				
		;		
		3B		
13. End sequence:				
		H		
		48		
14. Cursor to top row, left column:				CURSOR CONTROL KEYS
	ESC [ 1 ; 1 H 1B 5B 31 3B 31 48			32. Cursor up: ESC [ A 1B 5B 41
15. 10th Row, 50th Column:				33. Cursor down: ESC [ B 1B 5B 42
	ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48			34. Cursor right: ESC [ C 1B 5B 43
16. Delay after positioning:	0			35. Cursor left: ESC [ D 1B 5B 44
17. Cursor home:				
	ESC [ H 1B 5B 48			
ERASURE	DELAY			CHARACTER SET
18. Entire screen:				36. Full upper and lower ASCII: YES
	ESC [ 2 J 1B 5B 32 4A	0		37. Generate all control codes: YES
19. Cursor to end of screen:				38. Bell or tone sequence: ^G 07
	ESC [ J 1B 5B 4A	0		
20. Beginning of screen to cursor:				EMULATION
	ESC [ 1 J 1B 5B 31 4A	0		39. Conform to ANSI X3.64? YES
21. Cursor to end of line:				40. Terminals Emulated: DEC VT100 DEC VT52
	ESC [ K 1B 5B 4B	0		
22. Beginning of line to cursor:				
	ESC [ 1 K 1B 5B 31 4B	0		
23. Entire cursor line:				
	ESC [ 2 K 1B 5B 32 4B	0		

---

Manufacturer:  
Terminal:

---

GraphOn Corporation  
GO-140

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC O P  
1B 4F 50

2. ESC O Q  
1B 4F 51

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

NOTES

36. Also graphics mode.  
42. In addition to four program function keys shown (PF1-PF4), terminal supports 8 programmable function keys (F1-F8), in shift and unshift mode, for a total of 16 programmable function keys which may be set by the user or host.

Additional editing functions:

Insert line	ESC [ L
Delete line	ESC [ M
Delete character	ESC [ P
Enter char insert mode	ESC [ 4 h
Exit char insert mode	ESC [ 4 l

5.

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8.

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16.

---

1. Manufacturer: Hewlett-Packard  
2. Terminal: HP 262X, 264X and HP 2382A

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	0	ESC & d A	ESC & d @
6. Left Column:	0	1B 26 64 41	1B 26 64 40
7. Printing in bottom right cause scroll?	YES	25. Reverse video:	
		ESC & d B	ESC & d @
		1B 26 64 42	1B 26 64 40
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:		ESC & d D	ESC & d @
		1B 26 64 44	1B 26 64 40
9. Row or column first:	COL	27. High intensity:	
10. Numeric form of row and column:		28. Half intensity:	
VARIABLE-LENGTH ASCII			
11. Add offset to:	Row: 0	ESC & d H	ESC & d @
	Col: 0	1B 26 64 48	1B 26 64 40
12. Separator sequence:		29. Attributes occupy position: NO	
13. End sequence:		30. Attributes cumulative: NO	
		31. All attributes off:	
		ESC & d @	
		1B 26 64 40	
14. Cursor to top row, left column:		CURSOR CONTROL KEYS	
ESC & a 0 c 0 R		32. Cursor up:	
1B 26 61 30 63 30 52		ESC A	
15. 10th Row, 50th Column:		1B 41	
ESC & a 4 9 c 9 R		33. Cursor down:	
1B 26 61 34 39 63 39 52		ESC B	
16. Delay after positioning:	0	1B 42	
17. Cursor home:		34. Cursor right:	
ESC h		ESC C	
1B 68		1B 43	
ERASURE		35. Cursor left:	
18. Entire screen:	DELAY	ESC D	
ESC h ESC J	0	1B 44	
1B 68 1B 4A		CHARACTER SET	
19. Cursor to end of screen:		36. Full upper and lower ASCII: YES	
ESC J	0	37. Generate all control codes: YES	
1B 4A		38. Bell or tone sequence:	
20. Beginning of screen to cursor:		^G	
		07	
21. Cursor to end of line:		EMULATION	
ESC K	0	39. Conform to ANSI X3.64? NO	
1B 4B		40. Terminals Emulated:	
22. Beginning of line to cursor:			
23. Entire cursor line:			

---

Manufacturer:  
Terminal:

---

Hewlett-Packard  
HP 262X, 264X and HP 2382A

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC p  
1B 70

2. ESC q  
1B 71

3. ESC r  
1B 72

4. ESC s  
1B 73

5. ESC t  
1B 74

6. ESC u  
1B 75

7. ESC v  
1B 76

8. ESC w  
1B 77

9.

10.

11.

12.

13.

14.

15.

16.

NOTES

2. This data applies to the alpha-  
numeric capabilities of the fol-  
lowing HP terminals:  
2621B 2622A 2623A 2624B  
2626A 2645A 2648A 2647F  
2382A

9. Either row or column first is  
acceptable, depending on sequence  
sent. See notes 12, 13, 14, and 15.

12. To send row first, use r (72H).

13. To send row first, use C (43H).

14. To send row first:

ESC & a 0 r 0 C  
1B 26 61 30 72 30 43

15. To send row first:

ESC & a 9 r 4 9 C  
1B 26 61 39 72 34 39 43

23. To delete entire cursor line:

ESC & a 0 C ESC K  
1B 26 61 30 43 1B 4B

30. Combinations preceded by ESC & d:  
@ABCDEFGHIJKLMNOS

Half-intensity XXXXXXXX

Underline XXXX XXXX

Reverse XX XX XX XX

Blinking X X X X X X X X

Security X X X X X X X X X

End enhancement X

Example: Reverse, blinking and

underline:

ESC & d G  
1B 26 64 47

36. Three complete 128-character sets  
(base, line drawing and mathematics)  
are available standard. The 8-bit  
extended ASCII code is used to  
generate an additional 128-charac-  
ter foreign set.

ESC ) @ selects base set

ESC ) A selects math set

ESC ) B selects line drawing set

42. Sequences shown are default. All 8  
function keys are programmable.

---

1. Manufacturer: Hewlett-Packard  
2. Terminal: HP-150

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	0	ESC & d A	ESC & d @
6. Left Column:	0	1B 26 64 41	1B 26 64 40
7. Printing in bottom right cause scroll?	YES	25. Reverse video:	
		ESC & d B	ESC & d @
		1B 26 64 42	1B 26 64 40
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:		ESC & d D	ESC & d @
		1B 26 64 44	1B 26 64 40
9. Row or column first:	COL	27. High intensity:	
10. Numeric form of row and column:		28. Half intensity:	
VARIABLE-LENGTH ASCII		ESC & d H	ESC & d @
11. Add offset to:	Row: 0	1B 26 64 48	1B 26 64 40
	Col: 0		
12. Separator sequence:		29. Attributes occupy position:	NO
13. End sequence:		30. Attributes cumulative:	NO
		31. All attributes off:	
		ESC & d @	
		1B 26 64 40	
14. Cursor to top row, left column:		CURSOR CONTROL KEYS	
ESC & a 0 c 0 R		32. Cursor up:	
1B 26 61 30 63 30 52		ESC A	
15. 10th Row, 50th Column:		1B 41	
ESC & a 4 9 c 9 R		33. Cursor down:	
1B 26 61 34 39 63 39 52		ESC B	
16. Delay after positioning:	0	1B 42	
17. Cursor home:		34. Cursor right:	
ESC h		ESC C	
1B 68		1B 43	
ERASURE		35. Cursor left:	
18. Entire screen:	DELAY	ESC D	
ESC h ESC J	0	1B 44	
1B 68 1B 4A			
19. Cursor to end of screen:	0	CHARACTER SET	
ESC J		36. Full upper and lower ASCII:	YES
1B 4A		37. Generate all control codes:	YES
20. Beginning of screen to cursor:		38. Bell or tone sequence:	
		^G	
		07	
21. Cursor to end of line:		EMULATION	
ESC K	0	39. Conform to ANSI X3.64?	NO
1B 4B		40. Terminals Emulated:	
22. Beginning of line to cursor:			
23. Entire cursor line:			

---

Manufacturer: Hewlett-Packard  
Terminal: HP-150

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC p  
1B 70

2. ESC q  
1B 71

3. ESC r  
1B 72

4. ESC s  
1B 73

5. ESC t  
1B 74

6. ESC u  
1B 75

7. ESC v  
1B 76

8. ESC w  
1B 77

9.

10.

11.

12.

13.

14.

15.

16.

NOTES

9. Either row or column first is acceptable, depending on sequence sent. See notes 12, 13, 14, and 15.

12. To send row first, use r (72H).

13. To send row first, use C (43H).

14. To send row first:

ESC & a 0 r 0 C  
1B 26 61 30 72 30 43

15. To send row first:

ESC & a 9 r 4 9 C  
1B 26 61 39 72 34 39 43

23. To delete entire cursor line:

ESC & a 0 C ESC K  
1B 26 61 30 43 1B 4B

30. Combinations preceded by ESC & d:  
@ABCDEFGHIJKLMNOS

Half-intensity XXXXXXXX

Underline XXXX XXXX

Reverse XX XX XX XX

Blinking X X X X X X X X

Security X

End enhancement X

Example: Reverse, blinking and underline:

ESC & d G  
1B 26 64 47

36. Three complete 128-character sets (base, line drawing and mathematics) are available standard. The 8-bit extended ASCII code is used to generate an additional 128-character foreign set.

ESC ) @ selects base set

ESC ) A selects math set

ESC ) B selects line drawing set

The HP-150 also emulates certain features of the Tektronics 4010 and 4014 graphics terminals.

37. Foreign language keyboards are available.

42. Sequences shown are default. All 8 function keys are programmable.

---

1. Manufacturer: Honeywell Information Systems  
2. Terminal: VIP 7201

---

SCREEN LAYOUT		VIDEO ATTRIBUTES
3. Number of rows:	24	ON OFF
4. Number of columns:	80	
5. Top Row:	1	24. Blinking: ESC 4 ESC 3
6. Left Column:	1	1B 34 1B 33
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC 4 ESC 3 1B 34 1B 33
CURSOR ADDRESSING		26. Underline: ESC 4 ESC 3 1B 34 1B 33
8. Lead-in sequence:		27. High intensity: ESC 4 ESC 3 1B 34 1B 33
ESC f		28. Half intensity: ESC 4 ESC 3 1B 34 1B 33
1B 66		29. Attributes occupy position: NO
9. Row or column first:	ROW	30. Attributes cumulative: YES
10. Numeric form of row and column:		31. All attributes off: ESC 3 1B 33
BINARY		
11. Add offset to:	Row: 1F Col: 1F	CURSOR CONTROL KEYS
12. Separator sequence:		32. Cursor up: ESC A 1B 41
13. End sequence:		33. Cursor down: ESC B 1B 42
14. Cursor to top row, left column:		34. Cursor right: ESC C 1B 43
ESC f SP SP		35. Cursor left: ESC D 1B 44
1B 66 20 20		CHARACTER SET
15. 10th Row, 50th Column:		36. Full upper and lower ASCII: YES
ESC f ) Q		37. Generate all control codes: YES
1B 66 29 51		38. Bell or tone sequence: ^G 07
16. Delay after positioning:	0	EMULATION
17. Cursor home:		39. Conform to ANSI X3.64? NO
ESC H		40. Terminals Emulated: Honeywell VIP 7200, VIP 7205
1B 48		
ERASURE	DELAY	
18. Entire screen:		
ESC `	0	
1B 60		
19. Cursor to end of screen:		
ESC J	0	
1B 4A		
20. Beginning of screen to cursor:		
21. Cursor to end of line:		
ESC K	0	
1B 4B		
22. Beginning of line to cursor:		
23. Entire cursor line:		

---

Manufacturer: Honeywell Information Systems  
Terminal: VIP 7201

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC 0  
1B 30

NOTES

24.-28. Operator selects video  
attributes by terminal set-up  
instruction.

2. ESC 2  
1B 32

42. Function keys shown are unshift.  
Shifted function keys are:

F1 ESC 1  
F2 ESC 5  
F3 ESC 7  
F4 ESC 9  
F5 ESC ;  
F6 ESC =  
F7 ESC ?

5. ESC :  
1B 3A

6. ESC <  
1B 3C

7. ESC >  
1B 3E

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Honeywell Information Systems  
2. Terminal: VIP 7301

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1	ESC s B	ESC s R	
6. Left Column:	1	1B 73 42	1B 73 52	
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC s I 1B 73 49	ESC s R 1B 73 52	
CURSOR ADDRESSING		26. Underline: ESC s 1B 73 5F	ESC s R 1B 73 52	
8. Lead-in sequence: ESC f 1B 66		27. High intensity: ESC s 1B 73	ESC s R 1B 73 52	
9. Row or column first:	ROW	28. Half intensity: ESC s L 1B 73 4C	ESC s R 1B 73 52	
10. Numeric form of row and column: BINARY		29. Attributes occupy position: NO		
11. Add offset to:	Row: 1F Col: 1F	30. Attributes cumulative: YES		
12. Separator sequence:		31. All attributes off: ESC s R 1B 73 52		
13. End sequence:				
14. Cursor to top row, left column: ESC f SP SP 1B 66 20 20		CURSOR CONTROL KEYS		
15. 10th Row, 50th Column: ESC f ) Q 1B 66 29 51		32. Cursor up: ESC A 1B 41		
16. Delay after positioning:	0	33. Cursor down: ESC B 1B 42		
17. Cursor home: ESC H 1B 48		34. Cursor right: ESC C 1B 43		
ERASURE	DELAY	35. Cursor left: ESC D 1B 44		
18. Entire screen: ESC ` 1B 60	0			
19. Cursor to end of screen: ESC J 1B 4A	0	CHARACTER SET		
20. Beginning of screen to cursor:		36. Full upper and lower ASCII: YES		
21. Cursor to end of line: ESC K 1B 4B	0	37. Generate all control codes: YES		
22. Beginning of line to cursor:		38. Bell or tone sequence: ^G 07		
23. Entire cursor line:		EMULATION		
		39. Conform to ANSI X3.64?	NO	
		40. Terminals Emulated:		

---

Manufacturer: Honeywell Information Systems  
Terminal: VIP 7301

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC 0  
1B 30

2. ESC 2  
1B 32

3. ESC 6  
1B 36

4. ESC 8  
1B 38

5. ESC :  
1B 3A

6. ESC <  
1B 3C

7. ESC >  
1B 3E

8. ESC P  
1B 50

9. ESC R  
1B 52

10. ESC T  
1B 54

11. ESC \  
1B 5C

12. ESC ^  
1B 5E

13.

14.

15.

16.

NOTES

42. Function keys are shown unshifted.  
Shifted function keys are:

PF1 ESC 1

PF2 ESC 5

PF3 ESC 7

PF4 ESC 9

PF5 ESC ;

PF6 ESC =

PF7 ESC ?

PF8 ESC Q

PF9 ESC S

PF10 ESC V

PF11 ESC ]

PF12 ESC \_

---

1. Manufacturer: Human Designed Systems, Inc.  
2. Terminal: Concept AVT Series

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC [ m	ESC [ m
5. Top Row:	1	1B 5B 35 6D	1B 5B 6D	
6. Left Column:	1	25. Reverse video:	ESC [ m	ESC [ m
7. Printing in bottom right cause scroll?	YES	1B 5B 37 6D	1B 5B 6D	
CURSOR ADDRESSING		26. Underline:	ESC [ 4 m	ESC [ m
8. Lead-in sequence:	ESC [	1B 5B 34 6D	1B 5B 6D	
	1B 5B	27. High intensity:	ESC [ 1 m	ESC [ m
9. Row or column first:	ROW	1B 5B 31 6D	1B 5B 6D	
10. Numeric form of row and column:	VARIABLE-LENGTH ASCII	28. Half intensity:	ESC [ m	
11. Add offset to:	Row: 0 Col: 0	29. Attributes occupy position:	NO	
12. Separator sequence:	;	30. Attributes cumulative:	YES	
	3B	31. All attributes off:	ESC [ m	
13. End sequence:	H 48		1B 5B 6D	
14. Cursor to top row, left column:	ESC [ 1 ; 1 H 1B 5B 31 3B 31 48	CURSOR CONTROL KEYS		
15. 10th Row, 50th Column:	ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48	32. Cursor up:	ESC [ A 1B 5B 41	
16. Delay after positioning:	0	33. Cursor down:	ESC [ B 1B 5B 42	
17. Cursor home:	ESC [ H 1B 5B 48	34. Cursor right:	ESC [ C 1B 5B 43	
ERASURE		35. Cursor left:	ESC [ D 1B 5B 44	
18. Entire screen:	DELAY	CHARACTER SET		
	ESC [ 2 J 1B 5B 32 4A	36. Full upper and lower ASCII:	YES	
19. Cursor to end of screen:	96	37. Generate all control codes:	YES	
	ESC [ J 1B 5B 4A	38. Bell or tone sequence:	^G 07	
20. Beginning of screen to cursor:	96	EMULATION		
	ESC [ 1 J 1B 5B 31 4A	39. Conform to ANSI X3.64?	YES	
21. Cursor to end of line:	6	40. Terminals Emulated:	DEC VT100, DEC VT52 Tektronix 4010/4013 (GVT+ and GVT-APL+)	
	ESC [ K 1B 5B 4B			
22. Beginning of line to cursor:	6			
	ESC [ 1 K 1B 5B 31 4B			
23. Entire cursor line:	6			
	ESC [ 2 K 1B 5B 32 4B			

---

Manufacturer:  
Terminal:

---

Human Designed Systems, Inc.  
Concept AVT Series

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ^\ 0 0 1 ^M  
1C 30 30 31 OD
2. ^\ 0 0 2 ^M  
1C 30 30 32 OD
3. ^\ 0 0 3 ^M  
1C 30 30 33 OD
4. ^\ 0 0 4 ^M  
1C 30 30 34 OD
5. ^\ 0 0 5 ^M  
1C 30 30 35 OD
6. ^\ 0 0 6 ^M  
1C 30 30 36 OD
7. ^\ 0 0 7 ^M  
1C 30 30 37 OD
8. ^\ 0 0 8 ^M  
1C 30 30 38 OD
9. ^\ 0 0 9 ^M  
1C 30 30 39 OD
10. ^\ 0 1 0 ^M  
1C 30 31 30 OD
11. ^\ 0 1 1 ^M  
1C 30 31 31 OD
12. ^\ 0 1 2 ^M  
1C 30 31 32 OD
13. ^\ 0 1 3 ^M  
1C 30 31 33 OD
14. ^\ 0 1 4 ^M  
1C 30 31 34 OD
15. ^\ 0 1 5 ^M  
1C 30 31 35 OD
16. ^\ 0 1 6 ^M  
1C 30 31 36 OD

NOTES

2. Series includes:
  - AVT+ ASCII alphanumeric
  - AVT-APL+ APL/ASCII alphanumeric
  - GVT+ Graphics and alphanumeric
  - GVT-APL+ Graphics and alphanumeric
3. All of display memory is accessible (96 or 192 lines) but only 24 lines appear on the screen at a time.
4. Software selectable 132.
18. Also FF (OCH). Delay is 38 ms per page. One page equals 24 lines. Delay required depends on how large a window is being cleared.
19. Delay is 96 ms per page. See note 18.
20. Delay is 96 ms per page. See note 18.
36. Also VT100/Concept Special Graphics characters and other optional (up to 4) software selectable character sets.
42. Each of the 46 programmable key functions can either execute a terminal function or transmit a sequence of characters to the host system.

ADDITIONAL FEATURES

- 4-8 pages of display memory
- 1-4 user-definable windows
- 4 software selectable character sets (total of 512 characters)
- full editing functions (insert/delete line, character; erase, etc.)
- multiple attribute lists
- 46 programmable key functions (execute, transmit, or disabled)

---

1. Manufacturer: IBM  
2. Terminal: 3101

---

SCREEN LAYOUT

3. Number of rows: 24

4. Number of columns: 80

5. Top Row: 1

6. Left Column: 1

7. Printing in bottom right cause scroll? PROG

CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC Y  
    1B 59

9. Row or column first: ROW

10. Numeric form of row and column:  
    BINARY

11. Add offset to: Row: 1F  
                      Col: 1F

12. Separator sequence:

13. End sequence:

14. Cursor to top row, left column:  
    ESC Y SP SP  
    1B 59 20 20

15. 10th Row, 50th Column:  
    ESC Y ) Q  
    1B 59 29 51

16. Delay after positioning: 0

17. Cursor home:  
    ESC H  
    1B 48

ERASURE

18. Entire screen:  
    ESC K  
    1B 4B

19. Cursor to end of screen:  
    ESC J  
    1B 4A

20. Beginning of screen to cursor:

21. Cursor to end of line:  
    ESC K  
    1B 4B

22. Beginning of line to cursor:

23. Entire cursor line:

VIDEO ATTRIBUTES

ON OFF

24. Blinking:

25. Reverse video:

26. Underline:

27. High intensity:

28. Half intensity:

29. Attributes occupy position: NO

30. Attributes cumulative: NO

31. All attributes off:

CURSOR CONTROL KEYS

32. Cursor up:  
    ESC A  
    1B 41

33. Cursor down:  
    ESC B  
    1B 42

34. Cursor right:  
    ESC C  
    1B 43

35. Cursor left:  
    ESC D  
    1B 44

CHARACTER SET

36. Full upper and lower ASCII: YES

37. Generate all control codes: YES

38. Bell or tone sequence:  
    ^G  
    07

EMULATION

39. Conform to ANSI X3.64? NO

40. Terminals Emulated:

---

Manufacturer: IBM  
Terminal: 3101

---

41. Information provided by:  
PUBLISHER

42. PROGRAM FUNCTION KEYS

1. ESC a ^C  
1B 61 03

2. ESC b ^C  
1B 62 03

3. ESC c ^C  
1B 63 03

4. ESC d ^C  
1B 64 03

5. ESC e ^C  
1B 65 03

6. ESC f ^C  
1B 66 03

7. ESC g ^C  
1B 67 03

8. ESC h ^C  
1B 68 03

9.

10.

11.

12.

13.

14.

15.

16.

NOTES

18. ESC H ESC J will also clear the screen by homing the cursor then clearing to end of screen and will maintain complete compatibility with the DEC VT52 except for PF keys.

24.-28. 3101/20 has attributes but only in the block mode.

---

1. Manufacturer: Intecolor Corporation  
 2. Terminal: 2405

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC [ 5 m	ESC [ m
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D
7. Printing in bottom right cause scroll?	NO	25. Reverse video:	
		ESC [ 7 m	ESC [ m
		1B 5B 37 6D	1B 5B 6D
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:		ESC [ 4 m	ESC [ m
		1B 5B 34 6D	1B 5B 6D
9. Row or column first:	ROW	27. High intensity:	
10. Numeric form of row and column:		28. Half intensity:	
VARIABLE-LENGTH ASCII			
11. Add offset to:	Row: 0	29. Attributes occupy position:	NO
	Col: 0	30. Attributes cumulative:	YES
12. Separator sequence:		31. All attributes off:	
	;	ESC [ m	
	3B	1B 5B 6D	
13. End sequence:		CURSOR CONTROL KEYS	
	H	32. Cursor up:	
	48	ESC [ A	
14. Cursor to top row, left column:		1B 5B 41	
ESC [ 1 ; 1 H		33. Cursor down:	
1B 5B 31 3B 31 48		ESC [ B	
15. 10th Row, 50th Column:		1B 5B 42	
ESC [ 1 0 ; 5 0 H		34. Cursor right:	
1B 5B 31 30 3B 35 30 48		ESC [ C	
16. Delay after positioning:	0	1B 5B 43	
17. Cursor home:		35. Cursor left:	
ESC [ H		ESC [ D	
1B 5B 48		1B 5B 44	
ERASURE	DELAY	CHARACTER SET	
18. Entire screen:		36. Full upper and lower ASCII:	YES
ESC [ 2 J	0	37. Generate all control codes:	YES
1B 5B 32 4A		38. Bell or tone sequence:	
19. Cursor to end of screen:		^G	
ESC [ J	0	07	
1B 5B 4A		EMULATION	
20. Beginning of screen to cursor:		39. Conform to ANSI X3.64?	YES
ESC [ 1 J	0	40. Terminals Emulated:	
1B 5B 31 4A		VT100, VT52	
21. Cursor to end of line:			
ESC [ K	0		
1B 5B 4B			
22. Beginning of line to cursor:			
ESC [ 1 K	0		
1B 5B 31 4B			
23. Entire cursor line:			
ESC [ 2 K	0		
1B 5B 32 4B			

---

Manufacturer: Intecolor Corporation  
Terminal: 2405

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES

1. ESC O P  
1B 4F 50

2. ESC O Q  
1B 4F 51

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Intecolor Corporation  
2. Terminal: 2427

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll?

## VIDEO ATTRIBUTES

	ON	OFF
24. Blinking:	ESC [ 5 m 1B 5B 35 6D	ESC [ m 1B 5B 6D
25. Reverse video:	ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D
26. Underline:	ESC [ 4 m 1B 5B 34 6D	ESC [ m 1B 5B 6D
27. High intensity:		

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B

28. Half intensity:

9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII

29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:

11. Add offset to: Row: 0  
                      Col: 0

12. Separator sequence:  
    ;  
    3B

ESC [ m  
1B 5B 6D

13. End sequence:  
    H  
    48

## CURSOR CONTROL KEYS

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
        1B 5B 31 3B 31 48

15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
        1B 5B 31 30 3B 35 30 48

16. Delay after positioning: 0

17. Cursor home:  
    ESC [ H  
        1B 5B 48

32. Cursor up:  
    ESC [ A  
        1B 5B 41

ERASURE DELAY

18. Entire screen:  
    ESC [ 2 J 0  
        1B 5B 32 4A

33. Cursor down:  
    ESC [ B  
        1B 5B 42

19. Cursor to end of screen:  
    ESC [ J 0  
        1B 5B 4A

20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
        1B 5B 31 4A

34. Cursor right:  
    ESC [ C  
        1B 5B 43

21. Cursor to end of line:  
    ESC [ K 0  
        1B 5B 4B

22. Beginning of line to cursor:  
    ESC [ 1 K 0  
        1B 5B 31 4B

23. Entire cursor line:  
    ESC [ 2 K 0  
        1B 5B 32 4B

35. Cursor left:  
    ESC [ D  
        1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    VT100, VT52, 4010, 4027

---

Manufacturer: Intecolor Corporation  
Terminal: 2427

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES

1. ESC O P  
1B 4F 50

2. ESC O Q  
1B 4F 51

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Intecolor Corporation  
2. Terminal: E8001G

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	48	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	0	^	^O
6. Left Column:	0	1F	OF
7. Printing in bottom right cause scroll?	YES	25. Reverse video:	
		^F ^P	^F ^B
		06 10	06 02
CURSOR ADDRESSING			
8. Lead-in sequence:		26. Underline:	
	^C		
	03		
9. Row or column first:	COL	27. High intensity:	
10. Numeric form of row and column:	BINARY		
11. Add offset to:	Row: 0	28. Half intensity:	
	Col: 0		
12. Separator sequence:		29. Attributes occupy position:	NO
		30. Attributes cumulative:	YES
13. End sequence:		31. All attributes off:	
		^F ^B ^O	
		06 02 OF	
14. Cursor to top row, left column:		CURSOR CONTROL KEYS	
^C NUL NUL		32. Cursor up:	
03 00 00		^V	
15. 10th Row, 50th Column:		1C	
^C 1 ^I		33. Cursor down:	
03 31 09		^J	
16. Delay after positioning:	51	0A	
17. Cursor home:		34. Cursor right:	
	^H	^Y	
	08	19	
ERASURE	DELAY	CHARACTER SET	
18. Entire screen:		36. Full upper and lower ASCII:	YES
^L	46	37. Generate all control codes:	YES
0C		38. Bell or tone sequence:	
19. Cursor to end of screen:		^G	
		07	
20. Beginning of screen to cursor:		EMULATION	
		39. Conform to ANSI X3.64?	NO
21. Cursor to end of line:		40. Terminals Emulated:	
22. Beginning of line to cursor:			
23. Entire cursor line:			
^K	46		
0B			

---

Manufacturer: Intecolor Corporation  
Terminal: E8001G

---

41. Information provided by:  
MANUFACTURER
42. PROGRAM FUNCTION KEYS                   NOTES
- 1.   36. ISA Available.  
    F0
  - 2.   F1
  - 3.   F2
  - 4.   F3
  - 5.   F4
  - 6.   F5
  - 7.   F6
  - 8.   F7
  - 9.   F8
  - 10.    F9
  - 11.   FA
  - 12.   FB
  - 13.   FC
  - 14.   FD
  - 15.   FE
  - 16.   FF

---

1. Manufacturer: Intecolor Corporation  
2. Terminal: E8001R

---

SCREEN LAYOUT

3. Number of rows: 48      4. Number of columns: 80      5. Top Row: 0      6. Left Column: 0      7. Printing in bottom right cause scroll? YES

CURSOR ADDRESSING

8. Lead-in sequence:  
  ^C  
  03

9. Row or column first: COL

10. Numeric form of row and column: BINARY

11. Add offset to: Row: 0  
                      Col: 0

12. Separator sequence:

13. End sequence:

14. Cursor to top row, left column:  
  ^C NUL NUL  
  03 00 00

15. 10th Row, 50th Column:  
  ^C 1 ^I  
  03 31 09

16. Delay after positioning: 51

17. Cursor home:  
  ^H  
  08

ERASURE

18. Entire screen: DELAY  
  ^L  
  0C

19. Cursor to end of screen:

20. Beginning of screen to cursor:

21. Cursor to end of line:

22. Beginning of line to cursor:

23. Entire cursor line:  
  ^K  
  0B

VIDEO ATTRIBUTES

ON OFF

24. Blinking:  
  ^ 0

1F OF

25. Reverse video:  
  ^F ^P ^F ^B  
  06 10 06 02

26. Underline:

27. High intensity:

28. Half intensity:

29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
  ^F ^B ^O  
  06 02 OF

CURSOR CONTROL KEYS

32. Cursor up:  
  ^V  
  1C

33. Cursor down:  
  ^J  
  0A

34. Cursor right:  
  ^Y  
  19

35. Cursor left:  
  ^Z  
  1A

CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
  ^G  
  07

EMULATION

39. Conform to ANSI X3.64? NO  
40. Terminals Emulated:  
  E8001R

---

Manufacturer:  
Terminal:

---

Intecolor Corporation  
E8001R

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

- |     |    |                    |
|-----|----|--------------------|
| 1.  | F0 | 36. ISA Available. |
| 2.  | F1 |                    |
| 3.  | F2 |                    |
| 4.  | F3 |                    |
| 5.  | F4 |                    |
| 6.  | F5 |                    |
| 7.  | F6 |                    |
| 8.  | F7 |                    |
| 9.  | F8 |                    |
| 10. | F9 |                    |
| 11. | FA |                    |
| 12. | FB |                    |
| 13. | FC |                    |
| 14. | FD |                    |
| 15. | FE |                    |
| 16. | FF |                    |

---

1. Manufacturer: Intecolor Corporation  
2. Terminal: VHR19

---

## SCREEN LAYOUT

3. Number of rows: 32  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? NO

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## ERASURE

18. Entire screen: DELAY  
    ESC [ 2 J 0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J 0  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K 0  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 0  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

ON OFF  
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
    ESC [ 6 m  
    1B 5B 36 6D

28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    VT100, VT52, 4014

---

Manufacturer:  
Terminal:

---

Intecolor Corporation  
VHR19

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES

1. ESC O   P  
1B  4F  50

2. ESC O   Q  
1B  4F  51

3. ESC O   R  
1B  4F  52

4. ESC O   S  
1B  4F  53

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1. Manufacturer: Interaction Systems Inc.  
2. Terminal: TT150

---

SCREEN LAYOUT	VIDEO ATTRIBUTES
3. Number of rows:	24                   ON                   OFF
4. Number of columns:	80                   24. Blinking:
5. Top Row:	1                   ESC G ^B           ESC G NUL
6. Left Column:	1                   1B 47 02           1B 47 00
7. Printing in bottom right cause scroll?	YES                   25. Reverse video: ESC X              ^X 1B 58              18
CURSOR ADDRESSING	26. Underline:
8. Lead-in sequence: ESC = 1B 3D	ESC G ^H           ESC G NUL 1B 47 08           1B 47 00
9. Row or column first:           ROW	27. High intensity:
10. Numeric form of row and column: BINARY	28. Half intensity:
11. Add offset to:           Row: 1F Col: 1F	ESC )              ESC (              1B 29           1B 28
12. Separator sequence:	29. Attributes occupy position: NO 30. Attributes cumulative:       NO 31. All attributes off:
13. End sequence:	ESC G NUL 1B 47 00
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20	CURSOR CONTROL KEYS
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51	32. Cursor up: ^K OB
16. Delay after positioning:    0	33. Cursor down: ^V 16
17. Cursor home: ESC H 1B 48	34. Cursor right: ^L OC
ERASURE	35. Cursor left: ^H 08
18. Entire screen: ^Z 1A	CHARACTER SET
19. Cursor to end of screen: ESC Y 1B 59	36. Full upper and lower ASCII: YES 37. Generate all control codes: YES 38. Bell or tone sequence: ^G 07
20. Beginning of screen to cursor: 0	EMULATION
21. Cursor to end of line: ESC T 1B 54	39. Conform to ANSI X3.64?       NO
22. Beginning of line to cursor:	40. Terminals Emulated: TT100, Televideo 950
23. Entire cursor line:	

---

Manufacturer:  
Terminal:

---

Interaction Systems Inc.  
TT150

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                     | NOTES                 |
|-----|---------------------|-----------------------|
| 1.  | ^A @ ^M<br>01 40 OD | 42. 20 function keys. |
| 2.  | ^A A ^M<br>01 41 OD |                       |
| 3.  | ^A B ^M<br>01 42 OD |                       |
| 4.  | ^A C ^M<br>01 43 OD |                       |
| 5.  | ^A D ^M<br>01 44 OD |                       |
| 6.  | ^A E ^M<br>01 45 OD |                       |
| 7.  | ^A F ^M<br>01 46 OD |                       |
| 8.  | ^A G ^M<br>01 47 OD |                       |
| 9.  | ^A H ^M<br>01 48 OD |                       |
| 10. | ^A I ^M<br>01 49 OD |                       |
| 11. | ^A P ^M<br>01 50 OD |                       |
| 12. | ^A Q ^M<br>01 51 OD |                       |
| 13. | ^A R ^M<br>01 52 OD |                       |
| 14. | ^A S ^M<br>01 53 OD |                       |
| 15. | ^A T ^M<br>01 54 OD |                       |
| 16. | ^A U ^M<br>01 55 OD |                       |

---

1. Manufacturer: Ithaca Intersystems, Inc.  
2. Terminal: Graphos I

---

## SCREEN LAYOUT

3. Number of rows: 30  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll?

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking: ESC [ 5 m ESC [ m  
1B 5B 35 6D 1B 5B 6D  
25. Reverse video: ESC [ 7 m ESC [ m  
1B 5B 37 6D 1B 5B 6D

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
    1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to: Row: 0  
                      Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

26. Underline: ESC [ 4 m ESC [ m  
1B 5B 34 6D 1B 5B 6D  
27. High intensity: ESC [ 1 m ESC [ m  
1B 5B 31 6D 1B 5B 6D  
28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## CURSOR CONTROL KEYS

- ERASURE DELAY  
18. Entire screen:  
    ESC [ 2 J 0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J 0  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K 0  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 0  
    1B 5B 32 4B

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

- ^G  
    07  
EMULATION  
39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    DEC VT100  
    Tektronix 4010

---

Manufacturer:  
Terminal:

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Ithaca Intersystems, Inc.  
Graphos I

---

41. Information provided by:

MANUFACTURER

42. PROGRAM FUNCTION KEYS   NOTES

- |     |                     |
|-----|---------------------|
| 1.  | ESC O P<br>1B 4F 50 |
| 2.  | ESC O Q<br>1B 4F 51 |
| 3.  | ESC O R<br>1B 4F 52 |
| 4.  | ESC O S<br>1B 4F 53 |
| 5.  |                     |
| 6.  |                     |
| 7.  |                     |
| 8.  |                     |
| 9.  |                     |
| 10. |                     |
| 11. |                     |
| 12. |                     |
| 13. |                     |
| 14. |                     |
| 15. |                     |
| 16. |                     |

---

1. Manufacturer: Ithaca Intersystems, Inc.  
2. Terminal: Graphos II

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## SCREEN LAYOUT

3. Number of rows: 30  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## ERASURE

18. Entire screen:  
    ESC [ 2 J 0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J 0  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K 0  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 0  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
    ESC [ 1 m  
    1B 5B 31 6D  
28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    DEC VT100  
    Tektronix 4010

---

Manufacturer: Ithaca Intersystems, Inc.  
Terminal: Graphos II

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS   NOTES

1. ESC O P  
1B 4F 50

2. ESC O Q  
1B 4F 51

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

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---

1. Manufacturer: Ithaca Intersystems, Inc.  
2. Terminal: Graphos III

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## SCREEN LAYOUT

3. Number of rows: 30  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to: Row: 0  
                      Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

- ERASURE                   DELAY  
18. Entire screen:  
    ESC [ 2 J           0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J           0  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J           0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K           0  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K           0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K           0  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

- ON                           OFF  
24. Blinking:  
    ESC [ 5 m            ESC [ m  
    1B 5B 35 6D           1B 5B 6D  
25. Reverse video:  
    ESC [ 7 m            ESC [ m  
    1B 5B 37 6D           1B 5B 6D  
26. Underline:  
    ESC [ 4 m            ESC [ m  
    1B 5B 34 6D           1B 5B 6D  
27. High intensity:  
    ESC [ 1 m            ESC [ m  
    1B 5B 31 6D           1B 5B 6D  
28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    DEC VT100  
    Tektronix 4010

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Manufacturer:  
Terminal:

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Ithaca Intersystems, Inc.  
Graphos III

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                           NOTES

1. ESC O P  
1B 4F 50

2. ESC O Q  
1B 4F 51

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

5.

6.

7.

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12.

13.

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16.

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1. Manufacturer:	Kaypro Corporation
2. Terminal:	Kaypro 2 <sup>1</sup> /84, 4 <sup>1</sup> /84, 10 and Robie

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC B 2	ESC C 2
6. Left Column:	1	1B 42 32	1B 43 32
7. Printing in bottom right cause scroll?	YES	25. Reverse video:	
		ESC B 0	ESC C 0
		1B 42 30	1B 43 30
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:		ESC B 3	ESC C 3
ESC =		1B 42 33	1B 43 33
1B 3D			
9. Row or column first:	ROW	27. High intensity:	
10. Numeric form of row and column:	BINARY		
11. Add offset to:	Row: 1F Col: 1F	28. Half intensity:	
		ESC B 1	ESC B 1
		1B 42 31	1B 42 31
12. Separator sequence:		29. Attributes occupy position:	NO
13. End sequence:		30. Attributes cumulative:	YES
		31. All attributes off:	
14. Cursor to top row, left column:		CURSOR CONTROL KEYS	
ESC = SP SP		32. Cursor up:	
1B 3D 20 20			^E
15. 10th Row, 50th Column:			05
ESC = ) Q		33. Cursor down:	
1B 3D 29 51			^X
16. Delay after positioning:	0		18
17. Cursor home:	^A	34. Cursor right:	
	1E		^D
ERASURE	DELAY		04
18. Entire screen:		35. Cursor left:	
^Z	0		^S
1A			13
19. Cursor to end of screen:		CHARACTER SET	
^W	0	36. Full upper and lower ASCII:	YES
17		37. Generate all control codes:	YES
20. Beginning of screen to cursor:		38. Bell or tone sequence:	
			^G
			07
21. Cursor to end of line:	0	EMULATION	
^X		39. Conform to ANSI X3.64?	NO
18		40. Terminals Emulated:	
22. Beginning of line to cursor:			ADM 3A (Partial)
23. Entire cursor line:	0		
ESC R			
1B 52			

---

Manufacturer: Kaypro Corporation  
Terminal: Kaypro 2'84, 4'84, 10 and Robie

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. NOTES  
Models 2'84 and 4'84 identified by  
half-high drives and two serial ports.
- 2.
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- 4.
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- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer: Kaypro Corporation  
2. Terminal: KP 2'83, KP 4'83

---

SCREEN LAYOUT		VIDEO ATTRIBUTES
3. Number of rows:	24	ON
4. Number of columns:	80	OFF
5. Top Row:	1	
6. Left Column:	1	
7. Printing in bottom right cause scroll?	YES	
CURSOR ADDRESSING		
8. Lead-in sequence:		24. Blinking:
ESC =		
1B 3D		25. Reverse video:
9. Row or column first:	ROW	
10. Numeric form of row and column:		26. Underline:
BINARY		
11. Add offset to:	Row: 1F	27. High intensity:
	Col: 1F	
12. Separator sequence:		28. Half intensity:
13. End sequence:		29. Attributes occupy position: NO
		30. Attributes cumulative: NO
		31. All attributes off:
14. Cursor to top row, left column:		CURSOR CONTROL KEYS
ESC = SP SP		32. Cursor up:
1B 3D 20 20		^K
15. 10th Row, 50th Column:		OB
ESC = ) Q		33. Cursor down:
1B 3D 29 51		^J
16. Delay after positioning:	0	OA
17. Cursor home:		34. Cursor right:
^^		^L
		OC
1E		35. Cursor left:
ERASURE	DELAY	^H
18. Entire screen:		OB
^Z		CHARACTER SET
1A		36. Full upper and lower ASCII: YES
19. Cursor to end of screen:		37. Generate all control codes: YES
^W	0	38. Bell or tone sequence:
17		^G
20. Beginning of screen to cursor:		07
21. Cursor to end of line:		EMULATION
^X	0	39. Conform to ANSI X3.64? NO
18		40. Terminals Emulated:
22. Beginning of line to cursor:		ADM 3A (Partial)
23. Entire cursor line:		
ESC R	0	
1B 52		

---

Manufacturer: Kaypro Corporation  
Terminal: KP 2'83, KP 4'83

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. NOTES  
The '83 series were the original 2 and 4 with full height drives and one serial port.
- 2.
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- 6.
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- 9.
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- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer:	Kimtron Corporation				
2. Terminal:	KT-10				

---

SCREEN LAYOUT		VIDEO ATTRIBUTES			
3. Number of rows:	24	ON		OFF	
4. Number of columns:	80				
5. Top Row:	1	24. Blinking:	ESC [ 5 m	ESC [ m	
6. Left Column:	1		1B 5B 35 6D	1B 5B	6D
7. Printing in bottom right cause scroll?	PROG	25. Reverse video:	ESC [ 7 m	ESC [ m	
			1B 5B 37 6D	1B 5B	6D
CURSOR ADDRESSING		26. Underline:	ESC [ 4 m	ESC [ m	
8. Lead-in sequence:			1B 5B 34 6D	1B 5B	6D
ESC [		27. High intensity:	ESC [ 1 m	ESC [ m	
1B 5B			1B 5B 31 6D	1B 5B	6D
9. Row or column first:	ROW	28. Half intensity:	ESC [ 0 m	ESC [ m	
10. Numeric form of row and column:			1B 5B 15 6D	1B 5B	6D
VARIABLE-LENGTH ASCII					
11. Add offset to:	Row: 0	29. Attributes occupy position:	NO		
	Col: 0	30. Attributes cumulative:	YES		
12. Separator sequence:		31. All attributes off:	ESC [ m		
;			1B 5B 6D		
3B					
13. End sequence:					
H					
48					
14. Cursor to top row, left column:		CURSOR CONTROL KEYS			
ESC [ 1 ; 1 H		32. Cursor up:	ESC [ A		
1B 5B 31 3B 31 48			1B 5B 41		
15. 10th Row, 50th Column:		33. Cursor down:	ESC [ B		
ESC [ 1 0 ; 5 0 H			1B 5B 42		
1B 5B 31 30 3B 35 30 48		34. Cursor right:	ESC [ C		
16. Delay after positioning:	0		1B 5B 43		
17. Cursor home:		35. Cursor left:	ESC [ D		
ESC [ H			1B 5B 44		
1B 5B 48					
ERASURE	DELAY				
18. Entire screen:		CHARACTER SET			
ESC [ 2 J	0	36. Full upper and lower ASCII:	YES		
1B 5B 32 4A		37. Generate all control codes:	YES		
19. Cursor to end of screen:		38. Bell or tone sequence:	~G		
ESC [ J	0		07		
1B 5B 4A					
20. Beginning of screen to cursor:		EMULATION			
ESC [ 1 J	0	39. Conform to ANSI X3.64?	YES		
1B 5B 31 4A		40. Terminals Emulated:			
21. Cursor to end of line:					
ESC [ K	0				
1B 5B 4B					
22. Beginning of line to cursor:					
ESC [ 1 K	0				
1B 5B 31 4B					
23. Entire cursor line:					
ESC [ 2 K	0				
1B 5B 32 4B					

---

Manufacturer:  
Terminal:

---

Kimtron Corporation  
KT-10

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES

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1. Manufacturer: Lear Siegler, Inc.  
2. Terminal: ADM 11

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SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC G 2	ESC G 0
6. Left Column:	1	1B 47 32	1B 47 30
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC G 4 1B 47 34	ESC G 0 1B 47 30
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence: ESC = 1B 3D		27. High intensity:	
9. Row or column first:	ROW	28. Half intensity:	
10. Numeric form of row and column: BINARY		ESC ) 1B 29	ESC ( 1B 28
11. Add offset to:	Row: 1F Col: 1F	29. Attributes occupy position:	YES
12. Separator sequence:		30. Attributes cumulative:	NO
13. End sequence:		31. All attributes off: ESC G 0 1B 47 30	
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		CURSOR CONTROL KEYS	
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		32. Cursor up: ^K 0B	
16. Delay after positioning:	0	33. Cursor down: ^J 0A	
17. Cursor home: ^^ 1E		34. Cursor right: ^L 0C	
ERASURE	DELAY	35. Cursor left: ^H 08	
18. Entire screen: ^Z 1A	0	CHARACTER SET	
19. Cursor to end of screen: ESC y 1B 79	0	36. Full upper and lower ASCII:	YES
20. Beginning of screen to cursor:		37. Generate all control codes:	YES
21. Cursor to end of line: ESC t 1B 74	0	38. Bell or tone sequence: ^G 07	
22. Beginning of line to cursor:		EMULATION	
23. Entire cursor line:		39. Conform to ANSI X3.64?	NO
		40. Terminals Emulated:	

---

Manufacturer:  
Terminal:

---

Lear Siegler, Inc.  
ADM 11

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |                        |   |
|------------------------|---|
| 1. ^A @ ^M<br>01 40 OD | NOTES   |
| 2. ^A A ^M<br>01 41 OD | 29. Half intensity does not occupy<br>a character position, all others<br>do.   |
| 3. ^A B ^M<br>01 42 OD | 30. Combinations as follows:<br>ESC G 0 Normal video<br>ESC G 1 Blank<br>ESC G 2 Blink<br>ESC G 3 Blank and blink<br>ESC G 4 Reverse<br>ESC G 5 Reverse and blank<br>ESC G 6 Reverse and blink<br>ESC G 7 Blank, blink and reverse<br>ESC G 8 Business graphics<br>ESC G 9 Bus. graphics and blank<br>ESC G A Bus. graphics and blink<br>ESC G B Bus. graph., blank & blink<br>ESC G C Bus. graphics and reverse<br>ESC G D Bus. graph., rev. & blank<br>ESC G E Bus. graph., rev. & blink<br>ESC G F Bus. graph., rev., blank &<br>blink |
| 4. ^A C ^M<br>01 43 OD | 8. ^A G ^M<br>01 47 OD  |
| 5. ^A D ^M<br>01 44 OD | ESC G ) Set reduced intensity<br>ESC G ( Reset reduced intensity  |
| 6. ^A E ^M<br>01 45 OD | 36. 128 displayable characters, includ-<br>ing control codes. Optional inter-<br>national sets available. Block<br>graphics, wide point graphics and<br>line drawing characters.  |
| 7. ^A F ^M<br>01 46 OD | 42. F5-F8 are F1-F4 shifted. Defaults<br>shown, all function keys are pro-<br>grammable up to 8 characters each.  |
| 9.                     |   |
| 10.                    |   |
| 11.                    |   |
| 12.                    |   |
| 13.                    |   |
| 14.                    |   |
| 15.                    |   |
| 16.                    |   |

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1. Manufacturer: Lear Siegler, Inc.  
2. Terminal: ADM 12

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SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC G 2	ESC G 0
5. Top Row:	1	1B 47 32	1B 47 30	
6. Left Column:	1	25. Reverse video:	ESC G 4	ESC G 0
7. Printing in bottom right cause scroll?	YES	1B 47 34	1B 47 30	
CURSOR ADDRESSING		26. Underline:		
8. Lead-in sequence: ESC = 1B 3D		ESC G 8	ESC G 0	
9. Row or column first:	ROW	1B 47 38	1B 47 30	
10. Numeric form of row and column: BINARY		27. High intensity:	ESC G 0	
11. Add offset to:	Row: 1F Col: 1F	28. Half intensity:	ESC G @	ESC G 0
12. Separator sequence:			1B 47 40	1B 47 30
13. End sequence:		29. Attributes occupy position:	NO	
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		30. Attributes cumulative:	NO	
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		31. All attributes off:	ESC G 0	
16. Delay after positioning:	0		1B 47 30	
17. Cursor home: ^ 1E		CURSOR CONTROL KEYS		
ERASURE	DELAY	32. Cursor up:	^K	
18. Entire screen: ^Z	0		OB	
1A		33. Cursor down:	^J	
19. Cursor to end of screen: ESC y	0		OA	
1B 79		34. Cursor right:	^L	
20. Beginning of screen to cursor:			OC	
21. Cursor to end of line: ESC t	0	35. Cursor left:	^H	
1B 74			08	
22. Beginning of line to cursor:		CHARACTER SET		
23. Entire cursor line:		36. Full upper and lower ASCII:	YES	
		37. Generate all control codes:	YES	
		38. Bell or tone sequence:		
		^G		
		07		
		EMULATION		
		39. Conform to ANSI X3.64?		NO
		40. Terminals Emulated:		

---

Manufacturer:  
Terminal:

---

Lear Siegler, Inc.  
ADM 12

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

			NOTES
1.	^A @ ^M	01 40 OD	3. Optionally 48. 4. Optionally 158 (x24 rows).
2.	^A A ^M	01 41 OD	29. Embedded attributes also available.
3.	^A B ^M	01 42 OD	36. 128 displayable characters, including control codes. Optional international sets available. Block graphics, wide point graphics and line drawing characters.
4.	^A C ^M	01 43 OD	42. F17-F32 are F1-F16 shifted. Defaults shown, all function keys are programmable up to 8 characters each.
5.	^A D ^M	01 44 OD	F17 SOH P CR      F25 SOH X CR F18 SOH Q CR      F26 SOH Y CR F19 SOH R CR      F27 SOH Z CR
6.	^A E ^M	01 45 OD	F20 SOH S CR      F28 SOH [ CR F21 SOH T CR      F29 SOH \ CR F22 SOH U CR      F30 SOH ] CR F23 SOH V CR      F31 SOH ^ CR F24 SOH W CR      F32 SOH _ CR
7.	^A F ^M	01 46 OD	
8.	^A G ^M	01 47 OD	
9.	^A H ^M	01 48 OD	
10.	^A I ^M	01 49 OD	
11.	^A J ^M	01 4A OD	
12.	^A K ^M	01 4B OD	
13.	^A L ^M	01 4C OD	
14.	^A M ^M	01 4D OD	
15.	^A N ^M	01 4E OD	
16.	^A O ^M	01 4F OD	

---

1. Manufacturer: Lear Siegler, Inc.  
2. Terminal: ADM 22

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1		
6. Left Column:	1		
7. Printing in bottom right cause scroll?	YES	25. Reverse video:	
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence: ESC = 1B 3D		27. High intensity:	
9. Row or column first:	ROW		
10. Numeric form of row and column: BINARY		28. Half intensity:	
11. Add offset to: Row: 1F Col: 1F		29. Attributes occupy position:	NO
12. Separator sequence:		30. Attributes cumulative:	NO
13. End sequence:		31. All attributes off:	
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		CURSOR CONTROL KEYS	
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		32. Cursor up: ^K	
16. Delay after positioning:	0	OB	
17. Cursor home: ^^ 1E		33. Cursor down: ^J	
ERASURE	DELAY	OA	
18. Entire screen: ^Z 1A	0	34. Cursor right: ^L	
19. Cursor to end of screen: ESC y 1B 79	0	OC	
20. Beginning of screen to cursor:		35. Cursor left: ^H	
		08	
21. Cursor to end of line: ESC t 1B 74	0	CHARACTER SET	
22. Beginning of line to cursor:		36. Full upper and lower ASCII:	YES
		37. Generate all control codes:	YES
		38. Bell or tone sequence: ^G 07	
23. Entire cursor line: ESC > 1B 3E	0	EMULATION	
		39. Conform to ANSI X3.64?	NO
		40. Terminals Emulated: Hazeltine 1500, ADDS Regent 25	

---

Manufacturer:  
Terminal:

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Lear Siegler, Inc.  
ADM 22

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ^A @ ^M  
01 40 OD

NOTES

24.-28. Blinking, reverse video,  
underline, half-intensity and  
combinations thereof may be  
selected by switch settings  
and used with write protected  
fields.

2. ^A A ^M  
01 41 OD

36. Plus 32 graphics characters.

3. ^A B ^M

01 42 OD

4. ^A C ^M  
01 43 OD

5. ^A D ^M  
01 44 OD

6. ^A E ^M  
01 45 OD

7. ^A F ^M  
01 46 OD

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Lear Siegler, Inc.  
2. Terminal: ADM 24E

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? YES

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC =  
    1B 3D  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    BINARY  
11. Add offset to:  
    Row: 1F  
    Col: 1F  
12. Separator sequence:  
13. End sequence:

14. Cursor to top row, left column:  
    ESC = SP SP  
    1B 3D 20 20  
15. 10th Row, 50th Column:  
    ESC = ) Q  
    1B 3D 29 51  
16. Delay after positioning: 0  
17. Cursor home:  
    ^^  
    1E

## ERASURE

18. Entire screen: DELAY  
    ^Z  
    1A  
19. Cursor to end of screen:  
20. Beginning of screen to cursor:  
21. Cursor to end of line:  
22. Beginning of line to cursor:  
23. Entire cursor line:

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking:  
    ESC G 2  
    1B 47 32  
25. Reverse video:  
    ESC G 4  
    1B 47 34  
26. Underline:  
    ESC G 8  
    1B 47 38  
27. High intensity:  
28. Half intensity:  
    ESC G @  
    1B 47 40  
29. Attributes occupy position: NO  
30. Attributes cumulative: NO  
31. All attributes off:  
    ESC c  
    1B 63

## CURSOR CONTROL KEYS

32. Cursor up:  
    ^K  
    OB  
33. Cursor down:  
    ^J  
    OA  
34. Cursor right:  
    ^L  
    OC  
35. Cursor left:  
    ^H  
    08

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? NO  
40. Terminals Emulated:

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Manufacturer:  
Terminal:

---

Lear Siegler, Inc.  
ADM 24E

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |    |    | NOTES |
|-----|----|----|-------|
| 1.  | ^A | @  | ^M    |
|     | 01 | 40 | OD    |
| 2.  | ^A | A  | ^M    |
|     | 01 | 41 | OD    |
| 3.  | ^A | B  | ^M    |
|     | 01 | 42 | OD    |
| 4.  | ^A | C  | ^M    |
|     | 01 | 43 | OD    |
| 5.  | ^A | D  | ^M    |
|     | 01 | 44 | OD    |
| 6.  | ^A | E  | ^M    |
|     | 01 | 45 | OD    |
| 7.  | ^A | F  | ^M    |
|     | 01 | 46 | OD    |
| 8.  | ^A | G  | ^M    |
|     | 01 | 47 | OD    |
| 9.  | ^A | H  | ^M    |
|     | 01 | 48 | OD    |
| 10. | ^A | I  | ^M    |
|     | 01 | 49 | OD    |
| 11. | ^A | J  | ^M    |
|     | 01 | 4A | OD    |
| 12. | ^A | K  | ^M    |
|     | 01 | 4B | OD    |
| 13. | ^A | L  | ^M    |
|     | 01 | 4C | OD    |
| 14. | ^A | M  | ^M    |
|     | 01 | 4D | OD    |
| 15. | ^A | N  | ^M    |
|     | 01 | 4E | OD    |
| 16. | ^A | O  | ^M    |
|     | 01 | 4F | OD    |

---

1. Manufacturer: Lear Siegler, Inc.  
2. Terminal: ADM 3A

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SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	25. Reverse video:	
6. Left Column:	1	26. Underline:	
7. Printing in bottom right cause scroll?	YES	27. High intensity:	
CURSOR ADDRESSING		28. Half intensity:	
8. Lead-in sequence: ESC = 1B 3D	ROW	29. Attributes occupy position:	NO
9. Row or column first:	ROW	30. Attributes cumulative:	NO
10. Numeric form of row and column: BINARY		31. All attributes off:	
11. Add offset to: Row: 1F Col: 1F		CURSOR CONTROL KEYS	
12. Separator sequence:		32. Cursor up: ^K	
13. End sequence:		OB	
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		33. Cursor down: ^J	
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		OA	
16. Delay after positioning:	0	34. Cursor right: ^L	
17. Cursor home: ^ 1E		OC	
ERASURE	DELAY	35. Cursor left: ^H	
18. Entire screen: ^Z 1A	0	08	
19. Cursor to end of screen:		CHARACTER SET	
20. Beginning of screen to cursor:		36. Full upper and lower ASCII:	NO
21. Cursor to end of line:		37. Generate all control codes:	YES
22. Beginning of line to cursor:		38. Bell or tone sequence: ^G 07	
23. Entire cursor line:		EMULATION	
		39. Conform to ANSI X3.64?	NO
		40. Terminals Emulated:	

---

Manufacturer:  
Terminal:

---

Lear Siegler, Inc.  
ADM 3A

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |  |
|-----|--|
| 1.  | NOTES<br>36. 64-character ASCII standard,<br>95-character ASCII optional |
| 2.  | 37. Generates 128 ASCII characters                                       |
| 3.  |  |
| 4.  |  |
| 5.  |  |
| 6.  |  |
| 7.  |  |
| 8.  |  |
| 9.  |  |
| 10. |  |
| 11. |  |
| 12. |  |
| 13. |  |
| 14. |  |
| 15. |  |
| 16. |  |

---

1. Manufacturer: Lear Siegler, Inc.  
2. Terminal: ADM 5

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1		
6. Left Column:	1		
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC G 1B 47	ESC G 1B 47
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence: ESC = 1B 3D		27. High intensity:	
9. Row or column first:	ROW	28. Half intensity: ESC ) 1B 29	ESC ( 1B 28
10. Numeric form of row and column: BINARY		29. Attributes occupy position: NO	
11. Add offset to:	Row: 1F Col: 1F	30. Attributes cumulative: NO	
12. Separator sequence:		31. All attributes off: ESC ( 1B 28	
13. End sequence:		CURSOR CONTROL KEYS	
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		32. Cursor up: ^K	
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		33. Cursor down: ^J	
16. Delay after positioning:	0	34. Cursor right: ^L	
17. Cursor home: ^H		35. Cursor left: ^H	
	1E		08
ERASURE	DELAY	CHARACTER SET	
18. Entire screen: ^Z	0	36. Full upper and lower ASCII: YES	
	1A	37. Generate all control codes: YES	
19. Cursor to end of screen:		38. Bell or tone sequence: ^G	
20. Beginning of screen to cursor:			07
21. Cursor to end of line:		EMULATION	
22. Beginning of line to cursor:		39. Conform to ANSI X3.64?: NO	
23. Entire cursor line:		40. Terminals Emulated:	

---

Manufacturer: Lear Siegler, Inc.  
Terminal: ADM 5

---

41. Information provided by:  
MANUFACTURER
42. PROGRAM FUNCTION KEYS                   NOTES
- 1.
  - 2.
  - 3.
  - 4.
  - 5.
  - 6.
  - 7.
  - 8.
  - 9.
  - 10.
  - 11.
  - 12.
  - 13.
  - 14.
  - 15.
  - 16.

---

1. Manufacturer: Liberty Electronics  
2. Terminal: Freedom 100

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SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC G 2	ESC G 0
6. Left Column:	1	1B 47 32	1B 47 30
7. Printing in bottom right cause scroll?	YES	25. Reverse video:	
		ESC G 4	ESC G 0
		1B 47 34	1B 47 30
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:		ESC G 8	ESC G 0
ESC =		1B 47 38	1B 47 30
1B 3D		27. High intensity:	
9. Row or column first:	ROW	28. Half intensity:	
10. Numeric form of row and column:	BINARY	ESC G @	ESC G 0
11. Add offset to:	Row: 1F Col: 1F	1B 47 40	1B 47 30
12. Separator sequence:		29. Attributes occupy position:	NO
13. End sequence:		30. Attributes cumulative:	NO
		31. All attributes off:	
		ESC G 0	
		1B 47 30	
14. Cursor to top row, left column:		CURSOR CONTROL KEYS	
ESC = SP SP		32. Cursor up:	
1B 3D 20 20		^K	
15. 10th Row, 50th Column:		OB	
ESC = ) Q		33. Cursor down:	
1B 3D 29 51		^V	
16. Delay after positioning:	0	16	
17. Cursor home:	~~ 1E	34. Cursor right:	
		^L	
ERASURE	DELAY	OC	
18. Entire screen:		35. Cursor left:	
ESC *	0	^H	
1B 2A		08	
19. Cursor to end of screen:		CHARACTER SET	
ESC Y	0	36. Full upper and lower ASCII:	YES
1B 59		37. Generate all control codes:	YES
20. Beginning of screen to cursor:		38. Bell or tone sequence:	
		^G	
		07	
21. Cursor to end of line:		EMULATION	
ESC T	0	39. Conform to ANSI X3.64?	NO
1B 54		40. Terminals Emulated:	
22. Beginning of line to cursor:		Televideo 950	
		ADM 31	
23. Entire cursor line:			
ESC R	0		
1B 52			

---

Manufacturer:  
Terminal:

---

Liberty Electronics  
Freedom 100

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS   NOTES

1. ^A @ ^M  
01 40 OD

2. ^A A ^M  
01 41 OD

3. ^A B ^M  
01 42 OD

4. ^A C ^M  
01 43 OD

5. ^A D ^M  
01 44 OD

6. ^A E ^M  
01 45 OD

7. ^A F ^M  
01 46 OD

8. ^A G ^M  
01 47 OD

9. ^A H ^M  
01 48 OD

10. ^A I ^M  
01 49 OD

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Liberty Electronics  
2. Terminal: Freedom 110

---

SCREEN LAYOUT		VIDEO ATTRIBUTES
3. Number of rows:	24	ON OFF
4. Number of columns:	80	24. Blinking: ESC G 0 2 1B 47 32
5. Top Row:	1	25. Reverse video: ESC G 0 4 1B 47 34
6. Left Column:	1	26. Underline: ESC G 0 8 1B 47 38
7. Printing in bottom right cause scroll?	YES	27. High intensity: ESC G 0 30 1B 47 30
CURSOR ADDRESSING		28. Half intensity: ESC G 0 @ 1B 47 40
8. Lead-in sequence:		29. Attributes occupy position: NO
ESC =		30. Attributes cumulative: NO
1B 3D		31. All attributes off: ESC G 0 1B 47 30
9. Row or column first:	ROW	
10. Numeric form of row and column:	BINARY	
11. Add offset to:	Row: 1F Col: 1F	
12. Separator sequence:		
13. End sequence:		
14. Cursor to top row, left column:		CURSOR CONTROL KEYS
ESC = SP SP 1B 3D 20 20		32. Cursor up: ^K OB
15. 10th Row, 50th Column:		33. Cursor down: ^V 16
ESC = ) Q 1B 3D 29 51		34. Cursor right: ^L OC
16. Delay after positioning:	0	35. Cursor left: ^H 08
17. Cursor home: ^^ 1E		
ERASURE	DELAY	CHARACTER SET
18. Entire screen:		36. Full upper and lower ASCII: YES
ESC *	0	37. Generate all control codes: YES
1B 2A		38. Bell or tone sequence: ^G 07
19. Cursor to end of screen:		
ESC Y	0	EMULATION
1B 59		39. Conform to ANSI X3.64? NO
20. Beginning of screen to cursor:		40. Terminals Emulated: Televideo 950 ADM 31
21. Cursor to end of line:	0	
ESC T 1B 54		
22. Beginning of line to cursor:		
23. Entire cursor line:	0	
ESC R 1B 52		

---

Manufacturer:  
Terminal:

---

Liberty Electronics  
Freedom 110

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |       |    | NOTES                           |
|-----|-------|----|---------------------------------|
| 1.  | ^A @  | ^M | 42. All function keys are user- |
|     | 01 40 | OD | programmable up to 256 bytes.   |
| 2.  | ^A A  | ^M |                                 |
|     | 01 41 | OD |                                 |
| 3.  | ^A B  | ^M |                                 |
|     | 01 42 | OD |                                 |
| 4.  | ^A C  | ^M |                                 |
|     | 01 43 | OD |                                 |
| 5.  | ^A D  | ^M |                                 |
|     | 01 44 | OD |                                 |
| 6.  | ^A E  | ^M |                                 |
|     | 01 45 | OD |                                 |
| 7.  | ^A F  | ^M |                                 |
|     | 01 46 | OD |                                 |
| 8.  | ^A G  | ^M |                                 |
|     | 01 47 | OD |                                 |
| 9.  | ^A H  | ^M |                                 |
|     | 01 48 | OD |                                 |
| 10. | ^A I  | ^M |                                 |
|     | 01 49 | OD |                                 |
| 11. |       |    |                                 |
| 12. |       |    |                                 |
| 13. |       |    |                                 |
| 14. |       |    |                                 |
| 15. |       |    |                                 |
| 16. |       |    |                                 |

---

1. Manufacturer: Liberty Electronics  
2. Terminal: Freedom 200

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SCREEN LAYOUT	VIDEO ATTRIBUTES
3. Number of rows:	24                    ON                    OFF
4. Number of columns:	80                    24. Blinking:            ESC G 0
5. Top Row:	1                    ESC G 2
6. Left Column:	1                    1B 47 32
7. Printing in bottom right cause scroll?	YES                    25. Reverse video:            ESC G 0
	1B 47 34                    1B 47 30
CURSOR ADDRESSING	26. Underline:            ESC G 8
8. Lead-in sequence:	1B 47 38                    ESC G 0
ESC =	1B 47 30
1B 3D	
9. Row or column first:	ROW
10. Numeric form of row and column:	BINARY
11. Add offset to:	Row: 1F                    28. Half intensity:            ESC G 0
	Col: 1F                    1B 47 40                    1B 47 30
12. Separator sequence:	29. Attributes occupy position: NO
	30. Attributes cumulative: NO
13. End sequence:	31. All attributes off:            ESC G 0
	1B 47 30
14. Cursor to top row, left column:	CURSOR CONTROL KEYS
ESC = SP SP	32. Cursor up:            ^K
1B 3D 20 20	OB
15. 10th Row, 50th Column:	33. Cursor down:            ^V
ESC = ) Q	16
1B 3D 29 51	34. Cursor right:            ^L
16. Delay after positioning:	OC
17. Cursor home:	35. Cursor left:            ^H
^H	08
1E	
ERASURE	CHARACTER SET
18. Entire screen:	36. Full upper and lower ASCII: YES
ESC *	37. Generate all control codes: YES
1B 2A	38. Bell or tone sequence:            ^G
19. Cursor to end of screen:	07
ESC Y	
1B 59	
20. Beginning of screen to cursor:	EMULATION
	39. Conform to ANSI X3.64?            NO
21. Cursor to end of line:	40. Terminals Emulated:
ESC T	Televideo 910
1B 54	ADM 3A/5
22. Beginning of line to cursor:	Hazeltine 1420
	ADDS Regent 25
23. Entire cursor line:	
ESC R	
1B 52	

---

Manufacturer:  
Terminal:

---

Liberty Electronics  
Freedom 200

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ^A @ ^M  
01 40 0D

NOTES

42. All function keys are user-programmable up to 256 bytes.

2. ^A A ^M  
01 41 0D

3. ^A B ^M  
01 42 0D

4. ^A C ^M  
01 43 0D

5. ^A D ^M  
01 44 0D

6. ^A E ^M  
01 45 0D

7. ^A F ^M  
01 46 0D

8. ^A G ^M  
01 47 0D

9. ^A H ^M  
01 48 0D

10. ^A I ^M  
01 49 0D

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Morrow Inc.  
2. Terminal: MDT 60

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1		
6. Left Column:	1		
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC G 4 1B 47 34	ESC G 0 1B 47 30
CURSOR ADDRESSING		26. Underline: ESC G 1 1B 47 31	
8. Lead-in sequence: ESC = 1B 3D		ESC G 0 1B 47 30	ESC G 0 1B 47 30
9. Row or column first:	ROW	27. High intensity: ESC G 0 1B 47 30	ESC G 0 1B 47 30
10. Numeric form of row and column: BINARY		28. Half intensity: ESC G 2 1B 47 32	ESC G 0 1B 47 30
11. Add offset to: Row: 1F Col: 1F		29. Attributes occupy position: NO 30. Attributes cumulative: NO 31. All attributes off: ESC G 0 1B 47 30	
12. Separator sequence:			
13. End sequence:			
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		CURSOR CONTROL KEYS 32. Cursor up: ^V J 1C 4A	
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		33. Cursor down: ^V K 1C 4B	
16. Delay after positioning:	0	34. Cursor right: ^V M 1C 4D	
17. Cursor home: ^H 1E		35. Cursor left: ^V L 1C 4C	
ERASURE	DELAY	CHARACTER SET	
18. Entire screen: ^Z 1A	0	36. Full upper and lower ASCII: YES 37. Generate all control codes: YES 38. Bell or tone sequence: ^G 07	
19. Cursor to end of screen: ESC Y 1B 59	0	EMULATION	
20. Beginning of screen to cursor:		39. Conform to ANSI X3.64? NO	
21. Cursor to end of line: ESC T 1B 54	0	40. Terminals Emulated: Televideo 925, Freedom 100	
22. Beginning of line to cursor:			
23. Entire cursor line: ESC R 1B 52	0		

---

Manufacturer:  
Terminal:

---

Morrow Inc.  
MDT 60

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                    NOTES

1. ^\ @  
1C 40

2. ^\ A  
1C 41

3. ^\ B  
1C 42

4. ^\ C  
1C 43

5. ^\ D  
1C 44

6. ^\ E  
1C 45

7. ^\ F  
1C 46

8. ^\ G  
1C 47

9. ^\ H  
1C 48

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: NCR Corp.  
2. Terminal: NCR 7910 (ANSI mode)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1	25. Reverse video:		
6. Left Column:	1	26. Underline:		
7. Printing in bottom right cause scroll?	PROG	27. High intensity:		
CURSOR ADDRESSING		28. Half intensity:		
8. Lead-in sequence:	ESC [ 1B 5B	29. Attributes occupy position:	YES	
9. Row or column first:	ROW	30. Attributes cumulative:	NO	
10. Numeric form of row and column:	VARIABLE-LENGTH ASCII	31. All attributes off:		
11. Add offset to:	Row: 0 Col: 0	ESC P @ @ ESC \ 1B 50 40 40 1B 5C		
12. Separator sequence:	;	32. Cursor up:		
	3B	ESC [ A 1B 5B 41		
13. End sequence:	H	33. Cursor down:		
	48	ESC [ B 1B 5B 42		
14. Cursor to top row, left column:	ESC [ 1 ; 1 H 1B 5B 31 3B 31 48	34. Cursor right:		
15. 10th Row, 50th Column:	ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48	ESC [ C 1B 5B 43		
16. Delay after positioning:	0	35. Cursor left:		
17. Cursor home:	ESC [ H 1B 5B 48	ESC [ D 1B 5B 44		
ERASURE	DELAY	CURSOR CONTROL KEYS		
18. Entire screen:	^L 0C	32. Cursor up:		
19. Cursor to end of screen:	ESC [ 0 1B 5B 4F	33. Cursor down:		
20. Beginning of screen to cursor:	0	34. Cursor right:		
21. Cursor to end of line:	ESC [ K 1B 5B 4B	35. Cursor left:		
22. Beginning of line to cursor:	0	36. Full upper and lower ASCII:	YES	
23. Entire cursor line:	ESC [ 2 K 1B 5B 32 4B	37. Generate all control codes:	YES	
	0	38. Bell or tone sequence:		
		^G 07		
CHARACTER SET				
21. Cursor to end of line:	0	39. Conform to ANSI X3.64?	YES	
22. Beginning of line to cursor:	0	40. Terminals Emulated:		
23. Entire cursor line:	0	NCR 7900 Model 1 NCR 7900 Model 4 ANSI Standard X3.64		

---

Manufacturer:  
Terminal:

---

NCR Corp.  
NCR 7910 (ANSI mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ^B 1 ^M  
02 31 OD
2. ^B 2 ^M  
02 32 OD
3. ^B 3 ^M  
02 33 OD
4. ^B 4 ^M  
02 34 OD
5. ^B 5 ^M  
02 35 OD
6. ^B 6 ^M  
02 36 OD
7. ^B 7 ^M  
02 37 OD
8. ^B 8 ^M  
02 38 OD
9. ^B 9 ^M  
02 39 OD
10. ^B 0 ^M  
02 30 OD

11.

12.

13.

14.

15.

16.

NOTES

3. Terminal may be configured to have a total of 24, 48, 72 or 96 lines, of which 24 are displayed on the screen at one time (plus status line).
4. Terminal may be configured to either 80 or 132 columns.
7. Terminal may be configured so that entering a character in the last column of any row (including the last one on the screen) will not cause a scroll to the next line until a CR LF (or another control sequence) is entered.
14. Row 1 and column 1 are default parameters that do not need to be specifically transmitted.
- 24.-28. Field attributes:

Blinking	ESC P @ C ESC \
Reverse	ESC P @ B ESC \
Underline	ESC P @ A ESC \
High intensity	ESC P P @ ESC \
Normal	ESC P @ @ ESC \
29. Attributes in 24-28 are field attributes, which do take up character positions. Character attributes, which do not take up a character position, can also be accessed by using different parameters [see ANSI X3.64].
30. Combinations of attributes (plus double wide, protected, and numeric entry) are possible in one sequence by changing the middle two parameters of the sequence. Concatenated attribute sequences are not cumulative. See manual.
31. The sequence to clear character attributes is ESC P b @ ESC \.
36. An extended character set, containing international language and block graphics characters is also available.
42. Terminal has PF0-PF9. PF10 shown here is PF0 on the terminal. Besides the 10 PF keys, there are 20 user keys that can be programmed with any sequence desired.

---

1. Manufacturer: NCR Corp.  
2. Terminal: NCR 7910 (Model 1 mode)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	0	ESC 0 B	ESC 0 @	
6. Left Column:	0	1B 30 42	1B 30 40	
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC 0 P 1B 30 50	ESC 0 @ 1B 30 40	
CURSOR ADDRESSING		26. Underline: ESC 0 ~ 1B 30 60	ESC 0 @ 1B 30 40	
8. Lead-in sequence: ESC 1 1B 31		27. High intensity: ESC 0 A 1B 30 41	ESC 0 @ 1B 30 40	
9. Row or column first:	COL	28. Half intensity:		
10. Numeric form of row and column: BINARY		29. Attributes occupy position:	YES	
11. Add offset to:	Row: 0 Col: 0	30. Attributes cumulative:	NO	
12. Separator sequence:		31. All attributes off: ESC 0 @ 1B 30 40		
13. End sequence:		CURSOR CONTROL KEYS		
14. Cursor to top row, left column: ESC 1 P 0 1B 31 50 30		32. Cursor up: ^Z 1A		
15. 10th Row, 50th Column: ESC 1 1 9 1B 31 31 39		33. Cursor down: ^J 0A		
16. Delay after positioning:	0	34. Cursor right: ^F 06		
17. Cursor home: ^A 01		35. Cursor left: ^U 15		
ERASURE	DELAY	CHARACTER SET		
18. Entire screen: ^L 0C	0	36. Full upper and lower ASCII:	YES	
19. Cursor to end of screen: ESC k 1B 6B	0	37. Generate all control codes:	YES	
20. Beginning of screen to cursor:		38. Bell or tone sequence: ^G 07		
21. Cursor to end of line: ESC K 1B 4B	0	EMULATION		
22. Beginning of line to cursor:		39. Conform to ANSI X3.64?	NO	
23. Entire cursor line:		40. Terminals Emulated: NCR 7900 Model 1 NCR 7900 Model 4 ANSI Standard X3.64		

---

Manufacturer:  
Terminal:

---

NCR Corp.  
NCR 7910 (Model 1 mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ^B 1 ^M  
02 31 OD

2. ^B 2 ^M  
02 32 OD

3. ^B 3 ^M  
02 33 OD

4. ^B 4 ^M  
02 34 OD

5. ^B 5 ^M  
02 35 OD

6. ^B 6 ^M  
02 36 OD

7. ^B 7 ^M  
02 37 OD

8. ^B 8 ^M  
02 38 OD

9. ^B 9 ^M  
02 39 OD

10. ^B 0 ^M  
02 30 OD

11.

12.

13.

14.

15.

16.

NOTES

3. Terminal may be configured to have a total of 24, 48, 72 or 96 lines, of which 24 are displayed on the screen at one time (plus a status line).
4. Terminal may be configured to have either 80 or 132 columns.
7. Terminal may be configured so that entering a character in the last column of any row (including the last one on the screen) will not cause a scroll to the next line until a CR LF (or another control sequence) is entered.
5. & 11. In 7900 Model 1 mode, row and column parameters are binary, but the column parameter is taken modulo 80, and the row parameter is taken modulo 24.
17. If the terminal is configured to scroll data rather than wrap the cursor to the top of screen, the home position is the lower left-hand corner.
30. Some combinations of these attributes are possible in one sequence by changing the last parameter of the sequence. Concatenated attribute sequences are not cumulative.
36. An extended character set, containing international language and block graphics characters is also available.
42. Terminal uses PF0-PF9. PF10 shown here is PF0 on the terminal.  
The CR character shown can be configured to send CR, ETX, EOT or none.

---

1. Manufacturer: NCR Corp.  
2. Terminal: NCR 7910 (Model 4 mode)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	0	^N	^0
6. Left Column:	0	OE	OF
7. Printing in bottom right cause scroll?	YES	25. Reverse video:	
		^N	^0
		OE	OF
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:		^N	^0
^K		OE	OF
OB			
9. Row or column first:	ROW	27. High intensity:	
10. Numeric form of row and column: SEE NOTE 10		28. Half intensity:	
11. Add offset to:	Row: 40 Col: 0	29. Attributes occupy position:	NO
12. Separator sequence: ESC ^E 1B 05		30. Attributes cumulative:	NO
13. End sequence:		31. All attributes off:	
		^O	
		OF	
14. Cursor to top row, left column: ^K @ OB 40		CURSOR CONTROL KEYS	
15. 10th Row, 50th Column: ^K I ESC ^E 4 9 OB 49 1B 05 34 39		32. Cursor up:	
16. Delay after positioning:	0	33. Cursor down:	
17. Cursor home: ^K @ OB 40		34. Cursor right:	
ERASURE	DELAY	35. Cursor left:	
18. Entire screen: ^L OC	0		
19. Cursor to end of screen:		CHARACTER SET	
20. Beginning of screen to cursor:		36. Full upper and lower ASCII:	YES
21. Cursor to end of line:		37. Generate all control codes:	YES
22. Beginning of line to cursor:		38. Bell or tone sequence:	
23. Entire cursor line:		^G 07	
		EMULATION	
		39. Conform to ANSI X3.64?	NO
		40. Terminals Emulated:	
		NCR 7900 Model 1	
		NCR 7900 Model 4	
		ANSI Standard X3.64	

---

Manufacturer:  
Terminal:

---

NCR Corp.  
NCR 7910 (Model 4 mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ^B 1 ^M  
02 31 OD

2. ^B 2 ^M  
02 32 OD

3. ^B 3 ^M  
02 33 OD

4. ^B 4 ^M  
02 34 OD

5. ^B 5 ^M  
02 35 OD

6. ^B 6 ^M  
02 36 OD

7. ^B 7 ^M  
02 37 OD

8. ^B 8 ^M  
02 38 OD

9. ^B 9 ^M  
02 39 OD

10. ^B 0 ^M  
02 30 OD

11.

12.

13.

14.

15.

16.

NOTES

3. Terminal may be configured to have 24, 48, 72 or 96 lines, of which 24 are displayed on the screen at one time (plus a status line).

4. Terminal may be configured to either 80 or 132 columns.

7. Terminal may be configured so that entering a character in the last column of any row (including the last one on the screen) will not cause a scroll to the next line until a CR LF (or another control sequence) is entered.

10. 7900 Model 4 uses two separate sequences for cursor positioning: line address, and horizontal address. The listed row/column sequence separator is really the lead-in sequence for the horizontal address command.

Row is binary plus 40H offset. Column is 2-byte or 3-byte ASCII.

12. See note 10.

19. & 21. Although there are no sequences for these functions that can be transmitted by the host, the following erasure functions can be done from the keyboard:

From cursor to end of screen.

From cursor to end of line.

30. The 7900 Model 4 can only use one video attribute at a time. There can not be cumulative or multiple attributes.

32.-35. All are local in block mode only. No sequence generated.

36. A limited set of block graphics characters is also available.

42. Terminal has PF0-PF9. PF10 shown is PF0 on the terminal. The CR character may be CR, ETX, EOT or none.

---

1. Manufacturer: Paradyne  
2. Terminal: 7811-01 Async

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1			
6. Left Column:	1			
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC G 4 1B 47 34	ESC G 0 1B 47 30	
CURSOR ADDRESSING		26. Underline: ESC G 1 1B 47 31	ESC G 0 1B 47 30	
8. Lead-in sequence: ESC = 1B 3D		27. High intensity: ESC G 2 1B 47 32	ESC G 0 1B 47 30	
9. Row or column first:	ROW	28. Half intensity: ESC G 2 1B 47 32	ESC G 0 1B 47 30	
10. Numeric form of row and column: BINARY		29. Attributes occupy position: YES		
11. Add offset to:	Row: 1F Col: 1F	30. Attributes cumulative: YES		
12. Separator sequence:		31. All attributes off: ESC G 0 1B 47 30		
13. End sequence:		CURSOR CONTROL KEYS		
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		32. Cursor up: ^A J ^M 01 4A OD		
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		33. Cursor down: ^A K ^M 01 4B OD		
16. Delay after positioning:	0	34. Cursor right: ^A M ^M 01 4D OD		
17. Cursor home: ^N OE		35. Cursor left: ^A L ^M 01 4C OD		
ERASURE	DELAY	CHARACTER SET		
18. Entire screen: ESC + 1B 2B	0	36. Full upper and lower ASCII: YES		
19. Cursor to end of screen: ESC Y 1B 59	0	37. Generate all control codes: YES		
20. Beginning of screen to cursor:		38. Bell or tone sequence: ^G 07		
21. Cursor to end of line: ESC T 1B 54	0	EMULATION		
22. Beginning of line to cursor:		39. Conform to ANSI X3.64? NO		
23. Entire cursor line: ESC R 1B 52	0	40. Terminals Emulated: Televideo 910 ADM 31		

---

Manufacturer: Paradyne  
Terminal: 7811-01 Async

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                      | NOTES  |
|-----|----------------------|--|
| 1.  | ^A @ ^M<br>01 40 OD  | 30. ESC G 5 gives reverse video and underline. |
| 2.  | ^A A ^M<br>01 41 OD  |  |
| 3.  | ^A B ^M<br>01 42 OD  |  |
| 4.  | ^A C ^M<br>01 43 OD  |  |
| 5.  | ^A D ^M<br>01 44 OD  |  |
| 6.  | ^A E ^M<br>01 45 OD  |  |
| 7.  | ^A F ^M<br>01 46 OD  |  |
| 8.  | ^A G ^M<br>01 47 OD  |  |
| 9.  | ^A H ^M<br>01 48 OD  |  |
| 10. | ^A P ^M<br>01 50 OD  |  |
| 11. | ^A ^\ ^M<br>01 1C OD |  |
| 12. | ^A ^] ^M<br>01 1D OD |  |
| 13. | ^A ^^ ^M<br>01 1E OD |  |
| 14. | ^A ^_ ^M<br>01 1F OD |  |
| 15. |                      |  |
| 16. |                      |  |

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1. Manufacturer: Pickles & Trout  
2. Terminal: CP/M - TRS-80 Models II, 12, 16

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	0	25. Reverse video:	
6. Left Column:	0	PROG ^N ^O	OF
7. Printing in bottom right cause scroll?	PROG 0E	26. Underline:	
CURSOR ADDRESSING		27. High intensity:	
8. Lead-in sequence: ESC Y 1B 59	ROW	28. Half intensity:	
9. Row or column first:	ROW	29. Attributes occupy position:	NO
10. Numeric form of row and column: BINARY		30. Attributes cumulative:	NO
11. Add offset to: Row: 20 Col: 20		31. All attributes off: ^O ^T OF 14	
12. Separator sequence:		CURSOR CONTROL KEYS	
13. End sequence:  14. Cursor to top row, left column: ESC Y SP SP 1B 59 20 20		32. Cursor up: ^_	
15. 10th Row, 50th Column: ESC Y ) Q 1B 59 29 51		33. Cursor down: ^	
16. Delay after positioning:	0	34. Cursor right: ^ ] 1D	
17. Cursor home: ^F 06		35. Cursor left: ^ \ 1C	
ERASURE	DELAY	CHARACTER SET	
18. Entire screen: ^L 0C	0	36. Full upper and lower ASCII:	YES
19. Cursor to end of screen: ^B 02	0	37. Generate all control codes:	YES
20. Beginning of screen to cursor:		38. Bell or tone sequence: ^G 07	
21. Cursor to end of line: ^A 01	0	EMULATION	
22. Beginning of line to cursor:		39. Conform to ANSI X3.64?	NO
23. Entire cursor line: ^K 0B	0	40. Terminals Emulated:	ADM 3A

---

Manufacturer:  
Terminal:

---

Pickles & Trout  
CP/M - TRS-80 Models II, 12, 16

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ^A  
01
2. ^B  
02
3. ^D  
04
4. ^L  
0C
5. ^U  
15
6. ^P  
10
7. ^C  
03
8. ^S  
13
- 9.

NOTES

- 1.-2. This is a version of the CP/M operating system which runs on the stated micro-computers. Pickles & Trout is not the manufacturer of the micro-computers.
7. If line wrap is enabled, yes;  
if line wrap is disabled, no.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Prime Computer, Inc.  
2. Terminal: PST100

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1	ESC [ 5 m	ESC [ m	
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D	
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D	
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D	ESC [ m 1B 5B 6D	
8. Lead-in sequence: ESC [ 1B 5B		27. High intensity: ESC [ 2 m		
9. Row or column first:	ROW	28. Half intensity: ESC [ 1B 5B 32 6D	ESC [ m 1B 5B 6D	
10. Numeric form of row and column: VARIABLE-LENGTH ASCII		29. Attributes occupy position: NO 30. Attributes cumulative: YES		
11. Add offset to:	Row: 0 Col: 0	31. All attributes off: ESC [ m 1B 5B 6D		
12. Separator sequence: ;				
13. End sequence: H 48				
14. Cursor to top row, left column: ESC [ 1 ; 1 H 1B 5B 31 3B 31 48			CURSOR CONTROL KEYS	
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48			32. Cursor up: ESC [ A 1B 5B 41	
16. Delay after positioning:	0		33. Cursor down: ESC [ B 1B 5B 42	
17. Cursor home: ESC [ H 1B 5B 48			34. Cursor right: ESC [ C 1B 5B 43	
ERASURE	DELAY		35. Cursor left: ESC [ D 1B 5B 44	
18. Entire screen: ESC [ 2 J 1B 5B 32 4A	0			CHARACTER SET
19. Cursor to end of screen: ESC [ J 1B 5B 4A	0		36. Full upper and lower ASCII: YES	
20. Beginning of screen to cursor: ESC [ 1 J 1B 5B 31 4A	0		37. Generate all control codes: YES	
21. Cursor to end of line: ESC [ K 1B 5B 4B	0		38. Bell or tone sequence: ^G 07	
22. Beginning of line to cursor: ESC [ 1 K 1B 5B 31 4B	0		EMULATION	
23. Entire cursor line: ESC [ 2 K 1B 5B 32 4B	0		39. Conform to ANSI X3.64? YES	
			40. Terminals Emulated:	

---

Manufacturer:  
Terminal:

---

Prime Computer, Inc.  
PST100

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC O !  
1B 4F 21

NOTES

3. Plus 25th status line.  
36. 128 ASCII characters, 8 graphic  
symbols, 64 block graphic symbols.

2. ESC O "  
1B 4F 22

42. F1-F8 shown unaugmented.

3. ESC O #  
1B 4F 23

F1-F8 and PF1-PF14 may be used  
unaugmented, shifted, control or  
control-shift. All 22 keys are  
user programmable.

4. ESC O \$  
1B 4F 24

5. ESC O %  
1B 4F 25

6. ESC O &  
1B 4F 26

7. ESC O '  
1B 4F 27

8. ESC O (  
1B 4F 28

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Qume  
2. Terminal: QVT-102

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1	ESC G 2	ESC G	0
6. Left Column:	1	1B 47 32	1B 47	30
7. Printing in bottom right cause scroll?	YES	25. Reverse video:		
		ESC G 4	ESC G	0
		1B 47 34	1B 47	30
CURSOR ADDRESSING				
8. Lead-in sequence:		26. Underline:		
ESC =		ESC G 8	ESC G	0
1B 3D		1B 47 38	1B 47	30
9. Row or column first:	ROW	27. High intensity:		
10. Numeric form of row and column:	BINARY	ESC (	ESC )	
11. Add offset to:	Row: 1F Col: 1F	1B 28	1B 29	
12. Separator sequence:		28. Half intensity:	ESC (	1B 28
13. End sequence:		29. Attributes occupy position:	YES	
		30. Attributes cumulative:	NO	
		31. All attributes off:		
		ESC *		
		1B 2A		
14. Cursor to top row, left column:		CURSOR CONTROL KEYS		
ESC = SP SP		32. Cursor up:		
1B 3D 20 20		^K		
15. 10th Row, 50th Column:		OB		
ESC = ) Q		33. Cursor down:		
1B 3D 29 51		^V		
16. Delay after positioning:	0	16		
17. Cursor home:		34. Cursor right:		
ESC = SP SP		^L		
1B 3D 20 20		OC		
ERASURE	DELAY	35. Cursor left:		
18. Entire screen:		^H		
ESC *	16	08		
1B 2A		CHARACTER SET		
19. Cursor to end of screen:		36. Full upper and lower ASCII:	YES	
ESC Y	2	37. Generate all control codes:	YES	
1B 59		38. Bell or tone sequence:		
20. Beginning of screen to cursor:		^G		
		07		
21. Cursor to end of line:		EMULATION		
ESC T	2	39. Conform to ANSI X3.64?	NO	
1B 54		40. Terminals Emulated:		
22. Beginning of line to cursor:		Lear Siegler ADM 3A/5		
		Televideo 910		
23. Entire cursor line:		Hazeltine 1500		
ESC R	0			
1B 52				

---

Manufacturer: Qume  
Terminal: QVT-102

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ^A @ ^M  
01 40 OD

2. ^A A ^M  
01 41 OD

3. ^A B ^M  
01 42 OD

4. ^A C ^M  
01 43 OD

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

NOTES

16. For current page the execution time is negligible. For different page it will take 20ms waiting time (worst case).

29. High/Half intensity do not occupy screen position.

42. PF1-PF4 shown unshifted.

Shifted:

PF1 SOH D CR

PF2 SOH E CR

PF3 SOH F CR

PF4 SOH G CR

Control:

PF1 SOH H CR

PF2 SOH I CR

PF3 SOH J CR

PF4 SOH K CR

---

1. Manufacturer: Qume  
2. Terminal: QVT-108

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC G	0
5. Top Row:	1	1B 47 32	1B 47	30
6. Left Column:	1			
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC G 4 1B 47 34	ESC G	0 1B 47 30
CURSOR ADDRESSING		26. Underline: ESC G 8 1B 47 38		
8. Lead-in sequence: ESC = 1B 3D		ESC G	0	1B 47 30
9. Row or column first:	ROW	27. High intensity: ESC (	ESC )	
10. Numeric form of row and column: BINARY		1B 28	1B 29	
11. Add offset to:	Row: 1F Col: 1F	28. Half intensity: ESC ) 1B 29	ESC (	1B 28
12. Separator sequence:			29. Attributes occupy position:	YES
13. End sequence:			30. Attributes cumulative:	NO
			31. All attributes off: ESC * 1B 2A	
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		CURSOR CONTROL KEYS		
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		32. Cursor up: ^K		
16. Delay after positioning:	0		OB	
17. Cursor home: ESC = SP SP 1B 3D 20 20		33. Cursor down: ^V		
ERASURE	DELAY	16		16
18. Entire screen: ESC * 1B 2A		34. Cursor right: ^L		
19. Cursor to end of screen: ESC Y 1B 59	2		OC	
20. Beginning of screen to cursor:		35. Cursor left: ^H		
			08	
21. Cursor to end of line: ESC T 1B 54	2	CHARACTER SET		
22. Beginning of line to cursor:		36. Full upper and lower ASCII:	YES	
23. Entire cursor line: ESC R 1B 52	0	37. Generate all control codes:	YES	
		38. Bell or tone sequence: ^G 07		
		EMULATION		
		39. Conform to ANSI X3.64?	NO	
		40. Terminals Emulated: Televideo 925, 920, 912		

---

Manufacturer: Qume  
Terminal: QVT-108

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ^A @ ^M  
01 40 OD

2. ^A A ^M  
01 41 OD

3. ^A B ^M  
01 42 OD

4. ^A C ^M  
01 43 OD

5. ^A D ^M  
01 44 OD

6. ^A E ^M  
01 45 OD

7. ^A F ^M  
01 46 OD

8. ^A G ^M  
01 47 OD

9. ^A H ^M  
01 48 OD

10. ^A I ^M  
01 49 OD

11. ^A J ^M  
01 4A OD

12.

13.

14.

15.

16.

NOTES

16. For current page the execution time is negligible. For different page it will take 20ms waiting time (worst case).

29. High/Half intensity do not occupy screen position.

42. All 11 function keys are programmable. Refer to operator's manual.

---

1. Manufacturer:	Radio Shack
2. Terminal:	TRS-80 DT-1

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC G 0	1B 47 30
5. Top Row:	1	1B 47 32	ESC G 0	1B 47 30
6. Left Column:	1	25. Reverse video:	ESC G 0	1B 47 30
7. Printing in bottom right cause scroll?	PROG	1B 47 34	ESC G 0	1B 47 30
CURSOR ADDRESSING		26. Underline:	ESC G 0	1B 47 30
8. Lead-in sequence:	ESC >	1B 47 38	ESC G 0	1B 47 30
	1B 3E	27. High intensity:	ESC G 0	1B 47 30
9. Row or column first:	ROW	28. Half intensity:	ESC )	1B 29
10. Numeric form of row and column:	BINARY	1B 28	1B 29	
11. Add offset to:	Row: 1F Col: 1F	29. Attributes occupy position:	YES	
12. Separator sequence:		30. Attributes cumulative:	NO	
13. End sequence:		31. All attributes off:	ESC G 0	1B 47 30
14. Cursor to top row, left column:	ESC > SP SP 1B 3E 20 20	CURSOR CONTROL KEYS		
15. 10th Row, 50th Column:	ESC > ) Q 1B 3E 29 51	32. Cursor up:	^K	
16. Delay after positioning:	0		OB	
17. Cursor home:	^^ 1E	33. Cursor down:	^J	
ERASURE	DELAY		OA	
18. Entire screen:	ESC * 1B 2A	34. Cursor right:	^L	
19. Cursor to end of screen:	ESC Y 1B 59		OC	
20. Beginning of screen to cursor:		35. Cursor left:	^H	
21. Cursor to end of line:	ESC T 1B 54		08	
22. Beginning of line to cursor:		CHARACTER SET		
23. Entire cursor line:		36. Full upper and lower ASCII:	YES	
		37. Generate all control codes:	YES	
		38. Bell or tone sequence:		
			^G	
			07	
		EMULATION		
		39. Conform to ANSI X3.64?	NO	
		40. Terminals Emulated:		
			Televideo 910	
			ADDS 25	
			Lear Siegler ADM-5	
			Hazeltine 1410	

---

Manufacturer: Radio Shack  
Terminal: TRS-80 DT-1

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- NOTES  
This terminal emulates any of the four terminals shown in item 40. It has no "native" mode. Codes shown are for Televideo 910.

---

1. Manufacturer: RCA  
2. Terminal: APT VP3801/VP4801

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? YES

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC Y  
    1B 59  
9. Row or column first: ROW  
10. Numeric form of row and column: BINARY  
11. Add offset to: Row: 1F  
                      Col: 1F  
12. Separator sequence:  
13. End sequence:

14. Cursor to top row, left column:  
    ESC Y SP SP  
    1B 59 20 20  
15. 10th Row, 50th Column:  
    ESC Y ) Q  
    1B 59 29 51  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC H  
    1B 48

## ERASURE

18. Entire screen:  
    ESC j  
    1B 6A  
19. Cursor to end of screen:  
    ESC J  
    1B 4A  
20. Beginning of screen to cursor:  
21. Cursor to end of line:  
    ESC K  
    1B 4B  
22. Beginning of line to cursor:

23. Entire cursor line:

## VIDEO ATTRIBUTES

3. Number of rows: 24                   ON                   OFF

4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? YES  
24. Blinking:  
    ESC ESC S 4 ^N ^O  
    1B 1B 53 34 OE OF  
25. Reverse video:  
    ESC ESC S 3 ^N ^O  
    1B 1B 53 33 OE OF

26. Underline:

27. High intensity:

28. Half intensity:

29. Attributes occupy position: NO  
30. Attributes cumulative: NO  
31. All attributes off:

    ESC ESC S 0  
    1B 1B 53 30

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC A  
    1B 41  
33. Cursor down:  
    ESC B  
    1B 42  
34. Cursor right:  
    ESC C  
    1B 43  
35. Cursor left:  
    ESC D  
    1B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? NO  
40. Terminals Emulated:

---

Manufacturer: RCA  
Terminal: APT VP3801/VP4801

---

41. Information provided by:

MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |                   | NOTES  |
|-------------------|--|
| 1. ESC 1<br>1B 31 | 3. Or 23.<br>4. Or 40.<br>8. User-definable.   |
| 2. ESC 2<br>1B 32 | 17. User-definable.<br>18. Or ^L (0CH). User-definable.<br>19. User-definable.   |
| 3. ESC 3<br>1B 33 | 21. User-definable.<br>31. Or ^O (0FH). User-definable.  |
| 4. ESC 4<br>1B 34 | 32.-35. No dedicated cursor keys.<br>38. User-definable.<br>42. All function keys can be user or host programmed to send any string of up to 31 ASCII characters. The default strings are shown. |
| 5. ESC 5<br>1B 35 |  |
| 6. ESC 6<br>1B 36 | RCA APT terminals allow the user to redefine the lead-in sequence for all command functions.   |
| 7. ESC 7<br>1B 37 |  |
| 8. ESC 8<br>1B 38 |  |
| 9.                |  |
| 10.               |  |
| 11.               |  |
| 12.               |  |
| 13.               |  |
| 14.               |  |
| 15.               |  |
| 16.               |  |

---

1. Manufacturer: Sanyo  
2. Terminal: CRX-1100

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1	ESC T A	ESC T @	
6. Left Column:	1	1B 54 41	1B 54 40	
7. Printing in bottom right cause scroll?	NO	25. Reverse video:		
		ESC T D	ESC T @	
		1B 54 44	1B 54 40	
CURSOR ADDRESSING		26. Underline:		
8. Lead-in sequence:		ESC T B	ESC T @	
ESC F		1B 54 42	1B 54 40	
1B 46		27. High intensity:		
9. Row or column first:	ROW	28. Half intensity:		
10. Numeric form of row and column:	BINARY	ESC )	ESC (	
11. Add offset to:	Row: 20 Col: 20	1B 29	1B 28	
12. Separator sequence:		29. Attributes occupy position:	NO	
13. End sequence:		30. Attributes cumulative:	NO	
14. Cursor to top row, left column:		31. All attributes off:		
ESC F SP SP		ESC -		
1B 46 20 20		1B 2D		
15. 10th Row, 50th Column:		CURSOR CONTROL KEYS		
ESC F ) Q		32. Cursor up:		
1B 46 29 51		ESC A		
16. Delay after positioning:	0	1B 41		
17. Cursor home:		33. Cursor down:		
ESC H		ESC B		
1B 48		1B 42		
ERASURE		34. Cursor right:		
18. Entire screen:	DELAY	ESC C		
^L	0	1B 43		
OC		35. Cursor left:		
19. Cursor to end of screen:		ESC D		
ESC J	0	1B 44		
1B 4A		CHARACTER SET		
20. Beginning of screen to cursor:		36. Full upper and lower ASCII:	YES	
		37. Generate all control codes:	YES	
		38. Bell or tone sequence:		
21. Cursor to end of line:		^G		
ESC K	0	07		
1B 4B		EMULATION		
22. Beginning of line to cursor:		39. Conform to ANSI X3.64?	NO	
		40. Terminals Emulated:		
		Televideo 910		
		Hazeltine 1410		
23. Entire cursor line:		ADDS R25		
ESC M	0			
1B 4D				

---

Manufacturer: Sanyo  
Terminal: CRX-1100

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 18. Or ESC E (1BH 45H).
2. 42. 8 ASCII programmable function keys.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer: Sanyo  
2. Terminal: MBC-1100

---

SCREEN LAYOUT		VIDEO ATTRIBUTES
3. Number of rows:	25	ON OFF
4. Number of columns:	80	24. Blinking: ESC t ^A 1B 74 01 ESC t NUL 1B 74 00
5. Top Row:	0	
6. Left Column:	0	
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC t ^D 1B 74 04 ESC t NUL 1B 74 00
CURSOR ADDRESSING		26. Underline: ESC t ^B 1B 74 02 ESC t NUL 1B 74 00
8. Lead-in sequence:		27. High intensity: ESC t @ 1B 74 40 ESC t NUL 1B 74 00
ESC F 1B 46		28. Half intensity: ESC t @ 1B 74 40 ESC t NUL 1B 74 00
9. Row or column first:	ROW	
10. Numeric form of row and column: BINARY		29. Attributes occupy position: NO
11. Add offset to:	Row: 20 Col: 20	30. Attributes cumulative: NO
12. Separator sequence:		31. All attributes off: ESC t NUL 1B 74 00
13. End sequence:		
14. Cursor to top row, left column: ESC F SP SP 1B 46 20 20		CURSOR CONTROL KEYS
15. 10th Row, 50th Column: ESC F ) Q 1B 46 29 51		32. Cursor up: ESC A 1B 41
16. Delay after positioning:	0	33. Cursor down: ESC B 1B 42
17. Cursor home: ESC H 1B 48		34. Cursor right: ESC C 1B 43
ERASURE	DELAY	35. Cursor left: ESC D 1B 44
18. Entire screen: ^Z 1A	0	CHARACTER SET
19. Cursor to end of screen: ESC J 1B 4A	0	36. Full upper and lower ASCII: YES 37. Generate all control codes: YES 38. Bell or tone sequence: ^G 07
20. Beginning of screen to cursor:		
21. Cursor to end of line: ESC K 1B 4B	0	EMULATION
22. Beginning of line to cursor:		39. Conform to ANSI X3.64? NO 40. Terminals Emulated: ADM-3A
23. Entire cursor line: ESC M 1B 4D	0	

---

Manufacturer: Sanyo  
Terminal: MBC-1100

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 8. Or ESC = (1BH 3DH).  
18. Or ESC E (1BH 45H).  
42. 15 function keys.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer: Sanyo  
2. Terminal: MBC-1200

---

SCREEN LAYOUT

3. Number of rows: 33

4. Number of columns: 80

5. Top Row: 0

6. Left Column: 0

7. Printing in bottom right cause scroll? YES

CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC =  
    1B 3D

9. Row or column first: ROW

10. Numeric form of row and column:  
    BINARY

11. Add offset to: Row: 20  
                      Col: 20

12. Separator sequence:

13. End sequence:

14. Cursor to top row, left column:  
    ESC F SP SP  
    1B 46 20 20

15. 10th Row, 50th Column:  
    ESC F ) Q  
    1B 46 29 51

16. Delay after positioning: 0

17. Cursor home:  
    ESC F SP SP  
    1B 46 20 20

ERASURE

18. Entire screen:  
    ^Z  
    1A

19. Cursor to end of screen:

20. Beginning of screen to cursor:

21. Cursor to end of line:  
    ESC T  
    1B 54

22. Beginning of line to cursor:

23. Entire cursor line:  
    ESC B  
    1B 42

VIDEO ATTRIBUTES

ON OFF

24. Blinking:

25. Reverse video:  
    ESC t ^D  
    1B 74 04

26. Underline:  
    ESC t ^B  
    1B 74 02

27. High intensity:

28. Half intensity:

29. Attributes occupy position: NO

30. Attributes cumulative: NO

31. All attributes off:  
    ESC t NUL  
    1B 74 00

CURSOR CONTROL KEYS

32. Cursor up:

33. Cursor down:

34. Cursor right:

35. Cursor left:

CHARACTER SET

36. Full upper and lower ASCII: YES

37. Generate all control codes: YES

38. Bell or tone sequence:  
    ^G  
    07

EMULATION

39. Conform to ANSI X3.64? NO

40. Terminals Emulated:

---

Manufacturer: Sanyo  
Terminal: MBC-1200

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 3. Or 40.
2. 36. Dot graphics computer.
3. 42. 15 function keys.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer: Sanyo  
2. Terminal: MBC-4000 (CP/M-86 O.S.)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	25	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	0	ESC	ESC @	
6. Left Column:	0	1B 60	1B 40	
7. Printing in bottom right cause scroll?	YES	25. Reverse video:		
		ESC P	ESC @	
		1B 50	1B 40	
CURSOR ADDRESSING		26. Underline:		
8. Lead-in sequence:		ESC F		
		1B 46		
9. Row or column first:	ROW	27. High intensity:	ESC C	
10. Numeric form of row and column:	BINARY	ESC G	1B 43	
11. Add offset to:	Row: 20 Col: 20	28. Half intensity:	ESC A	
		ESC A	1B 43	
12. Separator sequence:		29. Attributes occupy position:	NO	
13. End sequence:		30. Attributes cumulative:	NO	
14. Cursor to top row, left column:		31. All attributes off:	ESC C	
ESC F SP SP			1B 43	
1B 46 20 20				
15. 10th Row, 50th Column:		CURSOR CONTROL KEYS		
ESC F ) Q		32. Cursor up:	ESC A	
1B 46 29 51			1B 41	
16. Delay after positioning:	0	33. Cursor down:	ESC B	
17. Cursor home:			1B 42	
ESC H		34. Cursor right:	ESC C	
1B 48			1B 43	
ERASURE	DELAY	35. Cursor left:	ESC D	
18. Entire screen:			1B 44	
^Z	0			
1A		CHARACTER SET		
19. Cursor to end of screen:		36. Full upper and lower ASCII:	YES	
ESC J	0	37. Generate all control codes:	YES	
1B 4A		38. Bell or tone sequence:		
20. Beginning of screen to cursor:		^G		
		07		
21. Cursor to end of line:		EMULATION		
ESC K	0	39. Conform to ANSI X3.64?	NO	
1B 4B		40. Terminals Emulated:		
22. Beginning of line to cursor:				
23. Entire cursor line:				
ESC M	0			
1B 4D				

---

Manufacturer:  
Terminal:

---

Sanyo  
MBC-4000 (CP/M-86 O.S.)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

- 1. 8. Or ESC = (1BH 3DH).
- 18. Or ESC E (1BH 45H).
- 2. 42. 15 ASCII programmable function keys.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer: Sony Corporation of America  
2. Terminal: SMC-70 (IBM 3101)

---

## SCREEN LAYOUT

3. Number of rows: 25  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? YES

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC Y  
    1B 59  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    BINARY  
11. Add offset to: Row: 1F  
                      Col: 1F  
12. Separator sequence:  
13. End sequence:

14. Cursor to top row, left column:  
    ESC Y SP SP  
    1B 59 20 20

15. 10th Row, 50th Column:  
    ESC Y ) Q  
    1B 59 29 51

16. Delay after positioning: 0  
17. Cursor home:  
    ESC H  
    1B 48

## ERASURE

18. Entire screen: DELAY  
    ESC L  
    1B 4C

19. Cursor to end of screen:  
    ESC J  
    1B 4A

20. Beginning of screen to cursor:  
    ^G  
    07

21. Cursor to end of line:  
    ESC I  
    1B 49

22. Beginning of line to cursor:

23. Entire cursor line:

## VIDEO ATTRIBUTES

ON OFF  
24. Blinking:  
    ESC 3 I  
    1B 33 49  
25. Reverse video:  
    ESC 3 E  
    1B 33 45  
26. Underline:

27. High intensity:

28. Half intensity:

29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:

## CURSOR CONTROL KEYS

32. Cursor up:  
    ^W

17  
33. Cursor down:  
    ^V

1C  
34. Cursor right:  
    ^Y

19  
35. Cursor left:  
    ^V

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? NO

40. Terminals Emulated:  
    IBM 3101 emulation built into  
    CP/M. Multiterminal emulator:  
    DEC VT100, Lear Siegler ADM 3A,  
    ADM 31, Televideo 910, ADDS  
    Viewpoint, Hazeltine Esprit,  
    IBM 3101, Dasher 0200.

---

Manufacturer:  
Terminal:

---

Sony Corporation of America  
SMC-70 (IBM 3101)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

- |              |   |
|--------------|---|
| 1. ^A<br>01  | 18. Or FF (0CH).  |
| 2. ^B<br>02  | 42. F1-F5 shown unshifted.<br>F6-10 are F1-F5 shifted.<br>F11-F15 are CTRL F1-F5. |
| 3. ^C<br>03  |   |
| 4. ^D<br>04  |   |
| 5. ^E<br>05  |   |
| 6. ^I<br>09  |   |
| 7. ^J<br>0A  |   |
| 8. ^K<br>0B  |   |
| 9. ^L<br>0C  |   |
| 10. ^M<br>0D |   |
| 11. ^Q<br>11 |   |
| 12. ^R<br>12 |   |
| 13. ^S<br>13 |   |
| 14. ^T<br>14 |   |
| 15. ^U<br>15 |   |
| 16.          |   |

---

1. Manufacturer: Soroc  
2. Terminal: Challenger Series

---

SCREEN LAYOUT		VIDEO ATTRIBUTES
3. Number of rows:	24	ON OFF
4. Number of columns:	80	24. Blinking:
5. Top Row:	1	ESC ^G ESC ^D
6. Left Column:	1	1B 07 1B 04
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC ^F ESC ^D 1B 06 1B 04
CURSOR ADDRESSING		26. Underline: ESC ^U ESC ^D 1B 15 1B 04
8. Lead-in sequence: ESC = 1B 3D		27. High intensity: ESC ^D NO
9. Row or column first:	ROW	28. Half intensity: ESC ) ESC ( 1B 29 1B 28
10. Numeric form of row and column: BINARY		29. Attributes occupy position: YES
11. Add offset to: Row: 1F Col: 1F		30. Attributes cumulative: NO
12. Separator sequence:		31. All attributes off: ESC ^D 1B 04
13. End sequence:		
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		CURSOR CONTROL KEYS
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		32. Cursor up: ^K OB
16. Delay after positioning:	0	33. Cursor down: ^J OA
17. Cursor home: ^^ 1E		34. Cursor right: ^L OC
ERASURE	DELAY	35. Cursor left: ^H 08
18. Entire screen: ESC * 1B 2A	0	CHARACTER SET
19. Cursor to end of screen: ESC Y 1B 59	0	36. Full upper and lower ASCII: YES 37. Generate all control codes: YES 38. Bell or tone sequence: ^G 07
20. Beginning of screen to cursor:		EMULATION
21. Cursor to end of line: ESC T 1B 54	0	39. Conform to ANSI X3.64? YES 40. Terminals Emulated: Televideo 925 (Challenger 525) Lear Siegler ADM1, 2, 3 (Challenger 550) Tandem 6510 (Challenger 550)
22. Beginning of line to cursor:		
23. Entire cursor line:		

---

Manufacturer:  
Terminal:

---

Soroc  
Challenger Series

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                     | NOTES   |
|-----|---------------------|---|
| 1.  | ^A @ ^M<br>01 40 0D | 30. Terminal has combination attribute codes. |
| 2.  | ^A A ^M<br>01 41 0D |   |
| 3.  | ^A B ^M<br>01 42 0D |   |
| 4.  | ^A C ^M<br>01 43 0D |   |
| 5.  | ^A D ^M<br>01 44 0D |   |
| 6.  | ^A E ^M<br>01 45 0D |   |
| 7.  | ^A F ^M<br>01 46 0D |   |
| 8.  | ^A G ^M<br>01 47 0D |   |
| 9.  | ^A H ^M<br>01 48 0D |   |
| 10. | ^A I ^M<br>01 49 0D |   |
| 11. | ^A J ^M<br>01 4A 0D |   |
| 12. | ^A K ^M<br>01 4B 0D |   |
| 13. | ^A L ^M<br>01 4C 0D |   |
| 14. | ^A M ^M<br>01 4D 0D |   |
| 15. | ^A N ^M<br>01 4E 0D |   |
| 16. | ^A O ^M<br>01 4F 0D |   |

---

1. Manufacturer: Tab Products  
2. Terminal: TAB 132/15

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC [ 5 m	ESC [ m
5. Top Row:	1		1B 5B 35 6D	1B 5B 6D
6. Left Column:	1	25. Reverse video:	ESC [ 7 m	ESC [ m
7. Printing in bottom right cause scroll?	YES		1B 5B 37 6D	1B 5B 6D
CURSOR ADDRESSING		26. Underline:		
8. Lead-in sequence:	ESC [	ESC [ 4 m	ESC [ m	
	1B 5B	1B 5B 34 6D	1B 5B 6D	
9. Row or column first:	ROW	27. High intensity:	ESC [ 1 m	ESC [ m
10. Numeric form of row and column:	VARIABLE-LENGTH ASCII		1B 5B 31 6D	1B 5B 6D
11. Add offset to:	Row: 0	28. Half intensity:	ESC [ 1 m	ESC [ m
	Col: 0		1B 5B 31 6D	1B 5B 6D
12. Separator sequence:	;	29. Attributes occupy position:	NO	
	3B	30. Attributes cumulative:	YES	
13. End sequence:	H	31. All attributes off:	ESC [ m	
	48		1B 5B 6D	
14. Cursor to top row, left column:	ESC [ 1 ; 1 H	CURSOR CONTROL KEYS		
	1B 5B 31 3B 31 48	32. Cursor up:	ESC [ A	
15. 10th Row, 50th Column:	ESC [ 1 0 ; 5 0 H		1B 5B 41	
	1B 5B 31 30 3B 35 30 48	33. Cursor down:	ESC [ B	
16. Delay after positioning:	0		1B 5B 42	
17. Cursor home:	ESC [ H	34. Cursor right:	ESC [ C	
	1B 5B 48		1B 5B 43	
ERASURE		35. Cursor left:		
18. Entire screen:	DELAY	ESC [ D		
	ESC [ 2 J		1B 5B 44	
	1B 5B 32 4A	CHARACTER SET		
19. Cursor to end of screen:		36. Full upper and lower ASCII:	YES	
	ESC [ J	37. Generate all control codes:	YES	
	1B 5B 4A	38. Bell or tone sequence:	^G	
20. Beginning of screen to cursor:			07	
	ESC [ 1 J	EMULATION		
	1B 5B 31 4A	39. Conform to ANSI X3.64?	YES	
21. Cursor to end of line:		40. Terminals Emulated:		
	ESC [ K		DEC VT100, VT132, VT52	
	1B 5B 4B			
22. Beginning of line to cursor:				
	ESC [ 1 K			
	1B 5B 31 4B			
23. Entire cursor line:				
	ESC [ 2 K			
	1B 5B 32 4B			

---

Manufacturer:  
Terminal:

---

Tab Products  
TAB 132/15

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC O P

1B 4F 50

NOTES

4. Or 132.

42. 14 user-programmable function  
keys.

2. ESC O Q

1B 4F 51

8 host-programmable function keys.

3. ESC O R

1B 4F 52

4. ESC O S

1B 4F 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Tandberg Data, Inc.  
2. Terminal: TDV 2220

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	25	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC [ 5 m	ESC [ m
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D	ESC [ m 1B 5B 6D
8. Lead-in sequence: ESC [ 1B 5B		27. High intensity: ESC [ 2 m	
9. Row or column first:	ROW	28. Half intensity: ESC [ 1B 5B 32 6D	ESC [ m 1B 5B 6D
10. Numeric form of row and column: VARIABLE-LENGTH ASCII		29. Attributes occupy position: NO	
11. Add offset to:	Row: 0 Col: 0	30. Attributes cumulative: YES	
12. Separator sequence: ;		31. All attributes off: ESC [ m 1B 5B 6D	
13. End sequence: H 48		CURSOR CONTROL KEYS	
14. Cursor to top row, left column: ESC [ 1 ; 1 H 1B 5B 31 3B 31 48		32. Cursor up: ESC [ A 1B 5B 41	
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48		33. Cursor down: ESC [ B 1B 5B 42	
16. Delay after positioning:	0	34. Cursor right: ESC [ C 1B 5B 43	
17. Cursor home: ESC [ H 1B 5B 48		35. Cursor left: ESC [ D 1B 5B 44	
ERASURE	DELAY	CHARACTER SET	
18. Entire screen:		36. Full upper and lower ASCII: YES	
ESC [ 2 J 1B 5B 32 4A	0	37. Generate all control codes: YES	
19. Cursor to end of screen:		38. Bell or tone sequence: ^G 07	
ESC [ J 1B 5B 4A	0	EMULATION	
20. Beginning of screen to cursor: ESC [ 1 J 1B 5B 31 4A	0	39. Conform to ANSI X3.64? YES	
21. Cursor to end of line: ESC [ K 1B 5B 4B	0	40. Terminals Emulated:	
22. Beginning of line to cursor: ESC [ 1 K 1B 5B 31 4B	0		
23. Entire cursor line: ESC [ 2 K 1B 5B 32 4B	0		

---

Manufacturer: Tandberg Data, Inc.  
Terminal: TDV 2220

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 42. All function keys programmable.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer: TEC Inc.  
2. Terminal: ET 80B

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll?

PROG

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking: ESC [ 5 m ESC [ m  
1B 5B 35 6D 1B 5B 6D  
25. Reverse video: ESC [ 7 m ESC [ m  
1B 5B 37 6D 1B 5B 6D

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
    1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to: Row: 0  
                      Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

26. Underline:  
    ESC [ 4 m ESC [ m  
    1B 5B 34 6D 1B 5B 6D  
27. High intensity:

28. Half intensity:

29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

- ERASURE DELAY  
18. Entire screen:  
    ESC [ 2 J 0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J 0  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K 0  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 0  
    1B 5B 32 4B

- CHARACTER SET  
36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

- ^G  
07  
EMULATION  
39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:

---

Manufacturer:  
Terminal:

---

TEC Inc.  
ET 80B

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 4. Or 132.
2. 42. F1-F15 programmable to 17 chars.  
F16 programmable to 60 chars.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer: Tektronix  
2. Terminal: 4105, 4107, 4109 (ANSI mode)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	30	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1	ESC [ 5 m	ESC [ m	
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D	
7. Printing in bottom right cause scroll?	NO	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D	
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D	ESC [ m 1B 5B 6D	
8. Lead-in sequence: ESC [ 1B 5B		27. High intensity: ESC [ 1 m	ESC [ m	
9. Row or column first:	ROW	1B 5B 31 6D	1B 5B 6D	
10. Numeric form of row and column:		28. Half intensity: ESC [ 3 m 1B 5B 33 6D	ESC [ m 1B 5B 6D	
VARIABLE-LENGTH ASCII		29. Attributes occupy position: NO		
11. Add offset to:	Row: 0 Col: 0	30. Attributes cumulative: YES		
12. Separator sequence: ; 3B		31. All attributes off: ESC [ m 1B 5B 6D		
13. End sequence: H 48		CURSOR CONTROL KEYS		
14. Cursor to top row, left column: ESC [ 1 ; 1 H 1B 5B 31 3B 31 48		32. Cursor up: ESC [ A 1B 5B 41		
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48		33. Cursor down: ESC [ B 1B 5B 42		
16. Delay after positioning:	0	34. Cursor right: ESC [ C 1B 5B 43		
17. Cursor home: ESC [ H 1B 5B 48		35. Cursor left: ESC [ D 1B 5B 44		
ERASURE		CHARACTER SET		
18. Entire screen:	DELAY	36. Full upper and lower ASCII: YES		
ESC [ 2 J 1B 5B 32 4A	0	37. Generate all control codes: YES		
19. Cursor to end of screen:		38. Bell or tone sequence: ^G 07		
ESC [ J 1B 5B 4A	0	EMULATION		
20. Beginning of screen to cursor:		39. Conform to ANSI X3.64? YES		
ESC [ 1 J 1B 5B 31 4A	0	40. Terminals Emulated: DEC VT100 DEC VT52		
21. Cursor to end of line:				
ESC [ K 1B 5B 4B	0			
22. Beginning of line to cursor:				
ESC [ 1 K 1B 5B 31 4B	0			
23. Entire cursor line:				
ESC [ 2 K 1B 5B 32 4B	0			

---

Manufacturer: Tektronix  
Terminal: 4105, 4107, 4109 (ANSI mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     | NOTES  |
|-----|--|
| 1.  | 3. 30 for 4105,<br>32 for 4107, 4109.<br>4. Or 132 (all models).                         |
| 2.  | 42. All keys including function keys<br>are definable by either the host<br>or operator. |
| 3.  |  |
| 4.  |  |
| 5.  |  |
| 6.  |  |
| 7.  |  |
| 8.  |  |
| 9.  |  |
| 10. |  |
| 11. |  |
| 12. |  |
| 13. |  |
| 14. |  |
| 15. |  |
| 16. |  |

---

1. Manufacturer: Teleray  
2. Terminal: Model 100

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	132	24. Blinking:		
5. Top Row:	1	ESC [ 5 m	ESC [ m	
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D	
7. Printing in bottom right cause scroll?	NO	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D	
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D		
8. Lead-in sequence:	ESC [ 1B 5B	27. High intensity: ESC [ 1 m 1B 5B 31 6D	ESC [ m 1B 5B 6D	
9. Row or column first:	ROW	28. Half intensity: ESC [ 1 m 1B 5B 31 6D	ESC [ m 1B 5B 6D	
10. Numeric form of row and column:		29. Attributes occupy position: NO		
VARIABLE-LENGTH ASCII		30. Attributes cumulative: YES		
11. Add offset to:	Row: 0 Col: 0	31. All attributes off: ESC [ m 1B 5B 6D		
12. Separator sequence:	;			
	3B			
13. End sequence:	H 48			
14. Cursor to top row, left column:	ESC [ 1 ; 1 H 1B 5B 31 3B 31 48	CURSOR CONTROL KEYS		
15. 10th Row, 50th Column:	ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48	32. Cursor up: ESC [ A 1B 5B 41		
16. Delay after positioning:	0	33. Cursor down: ESC [ B 1B 5B 42		
17. Cursor home:	ESC [ H 1B 5B 48	34. Cursor right: ESC [ C 1B 5B 43		
ERASURE		35. Cursor left: ESC [ D 1B 5B 44		
18. Entire screen:	DELAY	CHARACTER SET		
	ESC [ 2 J 1B 5B 32 4A	36. Full upper and lower ASCII: YES		
19. Cursor to end of screen:	0	37. Generate all control codes: YES		
	ESC [ J 1B 5B 4A	38. Bell or tone sequence: ^G 07		
20. Beginning of screen to cursor:	ESC [ 1 J 1B 5B 31 4A	EMULATION		
	0	39. Conform to ANSI X3.64? YES		
21. Cursor to end of line:	ESC [ K 1B 5B 4B	40. Terminals Emulated: DEC VT100, VT101, VT131, VT132, etc., VT52		
22. Beginning of line to cursor:	ESC [ 1 K 1B 5B 31 4B			
23. Entire cursor line:	ESC [ 2 K 1B 5B 32 4B			

---

Manufacturer: Teleray  
Terminal: Model 100

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 13. Or f (66H).  
42. All function keys user-defined.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Teleray  
2. Terminal: Model 16

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1	ESC [ 5 m	ESC [ m	
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D	
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D	
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D	ESC [ m 1B 5B 6D	
8. Lead-in sequence: ESC [ 1B 5B		27. High intensity: ESC [ 1 m 1B 5B 32 6D	ESC [ m 1B 5B 6D	
9. Row or column first:	ROW	28. Half intensity: ESC [ 2 m 1B 5B 32 6D	ESC [ m 1B 5B 6D	
10. Numeric form of row and column: VARIABLE-LENGTH ASCII		29. Attributes occupy position: NO 30. Attributes cumulative: YES 31. All attributes off: ESC [ m 1B 5B 6D		
11. Add offset to: Row: 0 Col: 0				
12. Separator sequence: ; 3B				
13. End sequence: H 48				
14. Cursor to top row, left column: ESC [ 1 ; 1 H 1B 5B 31 3B 31 48				CURSOR CONTROL KEYS
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48				32. Cursor up: ESC [ A 1B 5B 41
16. Delay after positioning: 0				33. Cursor down: ESC [ B 1B 5B 42
17. Cursor home: ESC [ H 1B 5B 48				34. Cursor right: ESC [ C 1B 5B 43
ERASURE	DELAY			35. Cursor left: ESC [ D 1B 5B 44
18. Entire screen: ESC [ 2 J 1B 5B 32 4A	0			
19. Cursor to end of screen: ESC [ J 1B 5B 4A	0			CHARACTER SET
20. Beginning of screen to cursor: ESC [ 1 J 1B 5B 31 4A	0			36. Full upper and lower ASCII: YES 37. Generate all control codes: YES 38. Bell or tone sequence: ^G 07
21. Cursor to end of line: ESC [ K 1B 5B 4B	0			EMULATION
22. Beginning of line to cursor: ESC [ 1 K 1B 5B 31 4B	0			39. Conform to ANSI X3.64? YES 40. Terminals Emulated: DEC VT100 family.
23. Entire cursor line: ESC [ 2 K 1B 5B 32 4B	0			

---

Manufacturer:  
Terminal:

---

Teleray  
Model 16

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     | NOTES   |
|-----|---|
| 1.  | 3. 24 to 555.<br>4. 80 to 255.<br>13. Or f (66H). |
| 2.  | 42. All function keys user-defined.               |
| 3.  |   |
| 4.  |   |
| 5.  |   |
| 6.  |   |
| 7.  |   |
| 8.  |   |
| 9.  |   |
| 10. |   |
| 11. |   |
| 12. |   |
| 13. |   |
| 14. |   |
| 15. |   |
| 16. |   |

---

1. Manufacturer: Teleray  
2. Terminal: Model 7

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80			
5. Top Row:	1	24. Blinking:		
6. Left Column:	1	ESC [ 5 m 1B 5B 35 6D	ESC [ m 1B 5B 6D	
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D	
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D		
8. Lead-in sequence:	ESC [ 1B 5B	27. High intensity: ESC [ m 1B 5B 6D	ESC [ m 1B 5B 6D	
9. Row or column first:	ROW			
10. Numeric form of row and column:	VARIABLE-LENGTH ASCII			
11. Add offset to:	Row: 0 Col: 0	28. Half intensity: ESC [ 2 m 1B 5B 32 6D	ESC [ m 1B 5B 6D	
12. Separator sequence:	;	29. Attributes occupy position: NO		
	3B	30. Attributes cumulative: YES		
13. End sequence:	H 48	31. All attributes off: ESC [ m 1B 5B 6D		
14. Cursor to top row, left column:	ESC [ 1 ; 1 H 1B 5B 31 3B 31 48	CURSOR CONTROL KEYS		
15. 10th Row, 50th Column:	ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48	32. Cursor up: ESC [ A 1B 5B 41		
16. Delay after positioning:	0	33. Cursor down: ESC [ B 1B 5B 42		
17. Cursor home:	ESC [ H 1B 5B 48	34. Cursor right: ESC [ C 1B 5B 43		
ERASURE		35. Cursor left: ESC [ D 1B 5B 44		
18. Entire screen:	DELAY	CHARACTER SET		
	ESC [ 2 J 1B 5B 32 4A	36. Full upper and lower ASCII: YES		
19. Cursor to end of screen:	0	37. Generate all control codes: YES		
	ESC [ J 1B 5B 4A	38. Bell or tone sequence: ^G 07		
20. Beginning of screen to cursor:	0	EMULATION		
	ESC [ 1 J 1B 5B 31 4A	39. Conform to ANSI X3.64? YES		
21. Cursor to end of line:	0	40. Terminals Emulated: All ASCII asynchronous, non-polled. Protocol is user definable.		
	ESC [ K 1B 5B 4B			
22. Beginning of line to cursor:	0			
	ESC [ 1 K 1B 5B 31 4B			
23. Entire cursor line:	0			
	ESC [ 2 K 1B 5B 32 4B			

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Manufacturer:  
Terminal:

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Teleray  
Model 7

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |   |
|-----|---|
| 1.  | NOTES   |
|     | 3. 24 to 555.   |
|     | 4. 80 to 255.   |
|     | 13. Or f (66H).   |
| 2.  | 42. All function keys user-defined.   |
| 3.  | All sequences may be user<br>programmed to be the characters/<br>sequences of his choice. |
| 4.  |   |
| 5.  |   |
| 6.  |   |
| 7.  |   |
| 8.  |   |
| 9.  |   |
| 10. |   |
| 11. |   |
| 12. |   |
| 13. |   |
| 14. |   |
| 15. |   |
| 16. |   |

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1. Manufacturer: Teletype Corporation  
2. Terminal: 5410

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SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC [ 5 m	ESC [ m
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	
		26. Underline: ESC [ 4 m 1B 5B 34 6D	
CURSOR ADDRESSING		27. High intensity:	
8. Lead-in sequence:	ESC [	28. Half intensity:	
	1B 5B	ESC [ 2 m 1B 5B 32 6D	
9. Row or column first:	ROW	29. Attributes occupy position:	NO
10. Numeric form of row and column:	VARIABLE-LENGTH ASCII	30. Attributes cumulative:	YES
11. Add offset to:	Row: 0 Col: 0	31. All attributes off:	
12. Separator sequence:	;	ESC [ m 1B 5B 6D	
	3B		
13. End sequence:	H 48	CURSOR CONTROL KEYS	
14. Cursor to top row, left column:	ESC [ 1 ; 1 H 1B 5B 31 3B 31 48	32. Cursor up:	
15. 10th Row, 50th Column:	ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48	ESC [ A 1B 5B 41	
16. Delay after positioning:	0	33. Cursor down:	
17. Cursor home:	ESC [ H 1B 5B 48	ESC [ B 1B 5B 42	
ERASURE	DELAY	34. Cursor right:	
18. Entire screen:	ESC [ 2 J 1B 5B 32 4A	ESC [ C 1B 5B 43	
19. Cursor to end of screen:	ESC [ J 1B 5B 4A	35. Cursor left:	
20. Beginning of screen to cursor:	ESC [ 1 J 1B 5B 31 4A	ESC [ D 1B 5B 44	
21. Cursor to end of line:	ESC [ K 1B 5B 4B	CHARACTER SET	
22. Beginning of line to cursor:	ESC [ 1 K 1B 5B 31 4B	36. Full upper and lower ASCII:	YES
23. Entire cursor line:	ESC [ 2 K 1B 5B 32 4B	37. Generate all control codes:	YES
		38. Bell or tone sequence:	
		^G 07	
		EMULATION	
		39. Conform to ANSI X3.64?	YES
		40. Terminals Emulated:	

---

Manufacturer:  
Terminal:

---

Teletype Corporation  
5410

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- NOTES
3. 24 text lines plus host addressable  
25th line. Lines 26 and 27 contain  
downloadable and user-programmable  
labels for PF keys.
4. Or 132.
36. 5 resident character sets:  
United States ASCII  
United Kingdom  
Line Drawing Graphics  
Securities Industry  
Mosaics
42. 16 programmable function keys,  
accessible 8 at a time.

1. Manufacturer:	Teletype Corporation		
2. Terminal:	5420		
SCREEN LAYOUT	VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC [ 5 m	ESC [ m
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D
CURSOR ADDRESSING	26. Underline:		
8. Lead-in sequence:		ESC [ 4 m	ESC [ m
		1B 5B 34 6D	1B 5B 6D
		27. High intensity:	
9. Row or column first:	ROW	28. Half intensity:	
10. Numeric form of row and column:	VARIABLE-LENGTH ASCII	ESC [ 2 m	
11. Add offset to:	Row: 0	1B 5B 32 6D	
	Col: 0		
12. Separator sequence:		29. Attributes occupy position: NO	
	;	30. Attributes cumulative: YES	
	3B	31. All attributes off:	
13. End sequence:		ESC [ m	
	H	1B 5B 6D	
	48		
14. Cursor to top row, left column:		CURSOR CONTROL KEYS	
ESC [ 1 ; 1 H		32. Cursor up:	
1B 5B 31 3B 31 48		ESC [ A	
15. 10th Row, 50th Column:		1B 5B 41	
ESC [ 1 0 ; 5 0 H		33. Cursor down:	
1B 5B 31 30 3B 35 30 48		ESC [ B	
16. Delay after positioning:	0	1B 5B 42	
17. Cursor home:		34. Cursor right:	
ESC [ H		ESC [ C	
1B 5B 48		1B 5B 43	
ERASURE	DELAY	35. Cursor left:	
18. Entire screen:		ESC [ D	
ESC [ 2 J	0	1B 5B 44	
1B 5B 32 4A			
19. Cursor to end of screen:		CHARACTER SET	
ESC [ J	0	36. Full upper and lower ASCII: YES	
1B 5B 4A		37. Generate all control codes: YES	
20. Beginning of screen to cursor:		38. Bell or tone sequence:	
ESC [ 1 J	0	^G	
1B 5B 31 4A		07	
21. Cursor to end of line:		EMULATION	
ESC [ K	0	39. Conform to ANSI X3.64? YES	
1B 5B 4B		40. Terminals Emulated:	
22. Beginning of line to cursor:			
ESC [ 1 K	0		
1B 5B 31 4B			
23. Entire cursor line:			
ESC [ 2 K	0		
1B 5B 32 4B			

---

Manufacturer:  
Terminal:

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Teletype Corporation  
5420

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     | NOTES   |
|-----|---|
| 1.  | 3. 24 text lines plus host addressable<br>25th line. Lines 26 and 27 contain<br>downloadable and user-programmable<br>labels for PF keys. |
| 2.  | 4. Or 132.  |
| 3.  | 36. Plus 96 graphics characters.<br>42. 16 programmable function keys,<br>accessible 8 at a time.   |
| 4.  |   |
| 5.  |   |
| 6.  |   |
| 7.  |   |
| 8.  |   |
| 9.  |   |
| 10. |   |
| 11. |   |
| 12. |   |
| 13. |   |
| 14. |   |
| 15. |   |
| 16. |   |

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1. Manufacturer: Televideo  
2. Terminal: 910

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC G 2	ESC G 0
6. Left Column:	1	1B 47 32	1B 47 30
7. Printing in bottom right cause scroll?	YES	25. Reverse video:	
		ESC G 4	ESC G 0
		1B 47 34	1B 47 30
CURSOR ADDRESSING			
8. Lead-in sequence:		26. Underline:	
ESC =		ESC G 8	ESC G 0
1B 3D		1B 47 38	1B 47 30
9. Row or column first:	ROW	27. High intensity:	
10. Numeric form of row and column:		ESC G 0	ESC G 0
BINARY		1B 47 30	1B 47 30
11. Add offset to:	Row: 1F Col: 1F	28. Half intensity:	
		ESC )	ESC (
		1B 29	1B 28
12. Separator sequence:		29. Attributes occupy position:	YES
		30. Attributes cumulative:	NO
13. End sequence:		31. All attributes off:	
		ESC G 0	
		1B 47 30	
14. Cursor to top row, left column:		CURSOR CONTROL KEYS	
ESC = SP SP		32. Cursor up:	
1B 3D 20 20		^K	
15. 10th Row, 50th Column:		OB	
ESC = ) Q		33. Cursor down:	
1B 3D 29 51		^J	
16. Delay after positioning:	0	OA	
17. Cursor home:	~~ 1E	34. Cursor right:	
		^L	
		OC	
ERASURE	DELAY	35. Cursor left:	
18. Entire screen:		^H	
^Z	0	08	
1A		CHARACTER SET	
19. Cursor to end of screen:		36. Full upper and lower ASCII:	YES
ESC Y	0	37. Generate all control codes:	YES
1B 59		38. Bell or tone sequence:	
20. Beginning of screen to cursor:		^G	
		07	
21. Cursor to end of line:		EMULATION	
ESC T	0	39. Conform to ANSI X3.64?	NO
1B 54		40. Terminals Emulated:	
22. Beginning of line to cursor:		ADDS Regent 25	
		Lear Siegler ADM 3A/5	
23. Entire cursor line:		Hazeltine 1410	
^M ESC T	0		
OD 1B 54			

---

Manufacturer: Televideo  
Terminal: 910

---

41. Information provided by:  
MANUFACTURER
42. PROGRAM FUNCTION KEYS                   NOTES  
1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
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- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

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1. Manufacturer: Televideo  
2. Terminal: 910+

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SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC G 0	0
5. Top Row:	1	1B 47 32	1B 47	30
6. Left Column:	1	1B 47 34	1B 47	30
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC G 4 1B 47 38	ESC G 0 1B 47 30	
CURSOR ADDRESSING		26. Underline: ESC G 8 1B 47 38	ESC G 0 1B 47 30	
8. Lead-in sequence: ESC = 1B 3D		27. High intensity: ESC G 0 1B 47 30	ESC G 0 1B 47 30	
9. Row or column first:	ROW	28. Half intensity: ESC ) 1B 29	ESC (	
10. Numeric form of row and column: BINARY		29. Attributes occupy position: YES		
11. Add offset to: Row: 1F Col: 1F		30. Attributes cumulative: NO		
12. Separator sequence:		31. All attributes off: ESC G 0 1B 47 30		
13. End sequence:				
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		CURSOR CONTROL KEYS		
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		32. Cursor up: ^K		
16. Delay after positioning:	0	OB		
17. Cursor home: ^H 1E		33. Cursor down: ^J		
ERASURE	DELAY	OA		
18. Entire screen: ^Z 1A	0	34. Cursor right: ^L		
19. Cursor to end of screen: ESC Y 1B 59	0	OC		
20. Beginning of screen to cursor:		35. Cursor left: ^H		
		08		
21. Cursor to end of line: ESC T 1B 54	0	CHARACTER SET		
22. Beginning of line to cursor:		36. Full upper and lower ASCII: YES		
23. Entire cursor line: ^M ESC T OD 1B 54	0	37. Generate all control codes: YES		
		38. Bell or tone sequence: ^G		
		07		
		EMULATION		
		39. Conform to ANSI X3.64?: NO		
		40. Terminals Emulated:		

---

Manufacturer: Televideo  
Terminal: 910+

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES  
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16.

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1. Manufacturer: Televideo  
2. Terminal: 914

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SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC G 0	
5. Top Row:	1	ESC G 2	1B 47 30	
6. Left Column:	1	1B 47 32	1B 47 30	
7. Printing in bottom right cause scroll?	YES	25. Reverse video:	ESC G 0	
		ESC G 4	1B 47 30	
		1B 47 34	1B 47 30	
CURSOR ADDRESSING		26. Underline:		
8. Lead-in sequence:		ESC G 8	ESC G 0	
ESC =		1B 47 38	1B 47 30	
1B 3D				
9. Row or column first:	ROW	27. High intensity:	ESC G 0	
10. Numeric form of row and column:		ESC G 0	1B 47 30	
BINARY		1B 47 30	1B 47 30	
11. Add offset to:	Row: 1F Col: 1F	28. Half intensity:	ESC (	
		ESC )	1B 29	
12. Separator sequence:		29. Attributes occupy position:	YES	
		30. Attributes cumulative:	NO	
13. End sequence:		31. All attributes off:		
		ESC G 0		
		1B 47 30		
14. Cursor to top row, left column:		CURSOR CONTROL KEYS		
ESC = SP SP		32. Cursor up:		
1B 3D 20 20		^K		
15. 10th Row, 50th Column:		OB		
ESC = ) Q		33. Cursor down:		
1B 3D 29 51		^J		
16. Delay after positioning:	0	OA		
17. Cursor home:		34. Cursor right:		
^A		^L		
1E		OC		
ERASURE	DELAY	35. Cursor left:		
18. Entire screen:		^H		
^Z	0	08		
1A		CHARACTER SET		
19. Cursor to end of screen:		36. Full upper and lower ASCII:	YES	
ESC Y	0	37. Generate all control codes:	YES	
1B 59		38. Bell or tone sequence:		
20. Beginning of screen to cursor:		^G		
		07		
21. Cursor to end of line:		EMULATION		
ESC T	0	39. Conform to ANSI X3.64?	NO	
1B 54		40. Terminals Emulated:		
22. Beginning of line to cursor:		ADDS Viewpoint A-2		
23. Entire cursor line:				
^M ESC T	0			
OD 1B 54				

---

Manufacturer: Televideo  
Terminal: 914

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES

1. ^A @ ^M  
01 40 OD

2. ^A A ^M  
01 41 OD

3. ^A B ^M  
01 42 OD

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

1. Manufacturer:	Televideo		
2. Terminal:	924		
<hr/>			
SCREEN LAYOUT	VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC G 2	ESC G 0
6. Left Column:	1	1B 47 32	1B 47 30
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC G 4 1B 47 34	ESC G 0 1B 47 30
CURSOR ADDRESSING	26. Underline: ESC G 8 1B 47 38		
8. Lead-in sequence: ESC = 1B 3D		27. High intensity: ESC G 0 1B 47 30	ESC G 0 1B 47 30
9. Row or column first:	ROW	28. Half intensity: ESC ) 1B 29	ESC (
10. Numeric form of row and column: BINARY			1B 28
11. Add offset to:	Row: 1F Col: 1F	29. Attributes occupy position: YES	
12. Separator sequence:		30. Attributes cumulative: NO	
13. End sequence:		31. All attributes off: ESC G 0 1B 47 30	
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20	CURSOR CONTROL KEYS		
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51	32. Cursor up: ^K OB		
16. Delay after positioning:	0	33. Cursor down: ^J OA	
17. Cursor home: ^^ 1E		34. Cursor right: ^L OC	
ERASURE	DELAY	35. Cursor left: ^H 08	
18. Entire screen: ^Z 1A	0	CHARACTER SET	
19. Cursor to end of screen: ESC Y 1B 59	0	36. Full upper and lower ASCII: YES	
20. Beginning of screen to cursor:		37. Generate all control codes: YES	
21. Cursor to end of line: ESC T 1B 54	0	38. Bell or tone sequence: ^G 07	
22. Beginning of line to cursor:		EMULATION	
23. Entire cursor line: ^M ESC T OD 1B 54	0	39. Conform to ANSI X3.64? NO	
		40. Terminals Emulated:	

---

Manufacturer: Televideo  
Terminal: 924

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES

1. ^A @ ^M  
01 40 OD

2. ^A A ^M  
01 41 OD

3. ^A B ^M  
01 42 OD

4. ^A C ^M  
01 43 OD

5. ^A D ^M  
01 44 OD

6. ^A E ^M  
01 45 OD

7. ^A F ^M  
01 46 OD

8. ^A G ^M  
01 47 OD

9. ^A H ^M  
01 48 OD

10. ^A I ^M  
01 49 OD

11. ^A J ^M  
01 4A OD

12. ^A K ^M  
01 4B OD

13. ^A L ^M  
01 4C OD

14. ^A M ^M  
01 4D OD

15. ^A N ^M  
01 4E OD

16. ^A O ^M  
01 4F OD

---

1. Manufacturer:	Televideo		
2. Terminal:	925		
<b>SCREEN LAYOUT</b>			
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC G 2	ESC G 0
6. Left Column:	1	1B 47 32	1B 47 30
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC G 4 1B 47 34	ESC G 0 1B 47 30
<b>CURSOR ADDRESSING</b>			
8. Lead-in sequence: ESC = 1B 3D	26. Underline: ESC G 8 1B 47 38	ESC G 0 1B 47 30	
9. Row or column first: ROW	27. High intensity: ESC G 0 1B 47 30	ESC G 0 1B 47 30	
10. Numeric form of row and column: BINARY	28. Half intensity: ESC ) 1B 29	ESC ( 1B 28	
11. Add offset to: Row: 1F Col: 1F	29. Attributes occupy position: YES 30. Attributes cumulative: NO 31. All attributes off: ESC G 0 1B 47 30		
12. Separator sequence:			
13. End sequence:			
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20	<b>CURSOR CONTROL KEYS</b>		
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51	32. Cursor up: ^K OB		
16. Delay after positioning: 0	33. Cursor down: ^J OA		
17. Cursor home: ^^ 1E	34. Cursor right: ^L OC		
ERASURE	DELAY	35. Cursor left: ^H 08	
18. Entire screen: ^Z 1A			
19. Cursor to end of screen: ESC Y 1B 59	<b>CHARACTER SET</b>		
20. Beginning of screen to cursor:	36. Full upper and lower ASCII: YES 37. Generate all control codes: YES 38. Bell or tone sequence: ^G 07		
21. Cursor to end of line: ESC T 1B 54	<b>EMULATION</b>		
22. Beginning of line to cursor:	39. Conform to ANSI X3.64? NO 40. Terminals Emulated: TVI 912/920		
23. Entire cursor line: ^M ESC T OD 1B 54			

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---

Manufacturer: Televideo  
Terminal: 925

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                    NOTES

1. ^A @ ^M  
01 40 OD

2. ^A A ^M  
01 41 OD

3. ^A B ^M  
01 42 OD

4. ^A C ^M  
01 43 OD

5. ^A D ^M  
01 44 OD

6. ^A E ^M  
01 45 OD

7. ^A F ^M  
01 46 OD

8. ^A G ^M  
01 47 OD

9. ^A H ^M  
01 48 OD

10. ^A I ^M  
01 49 OD

11. ^A J ^M  
01 4A OD

12.

13.

14.

15.

16.

---

1. Manufacturer: Televideo  
2. Terminal: 950

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SCREEN LAYOUT		VIDEO ATTRIBUTES		
		ON		OFF
3. Number of rows:	24	24. Blinking:	ESC G 0	
4. Number of columns:	80	1	1B 47 32	1B 47 30
5. Top Row:	1	25. Reverse video:	ESC G 0	
6. Left Column:	1	ESC G 4	1B 47 34	1B 47 30
7. Printing in bottom right cause scroll?	YES	26. Underline:	ESC G 0	
		ESC G 8	1B 47 38	1B 47 30
CURSOR ADDRESSING		27. High intensity:	ESC G 0	
8. Lead-in sequence:	ESC = 1B 3D	ESC G 0	1B 47 30	1B 47 30
9. Row or column first:	ROW	28. Half intensity:	ESC (	
10. Numeric form of row and column: BINARY		ESC )	1B 29	1B 28
11. Add offset to:	Row: 1F Col: 1F	29. Attributes occupy position:	YES	
12. Separator sequence:		30. Attributes cumulative:	NO	
13. End sequence:		31. All attributes off:		
		ESC G 0	1B 47 30	
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		CURSOR CONTROL KEYS		
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		32. Cursor up:	^K	
16. Delay after positioning:	0		OB	
17. Cursor home: ~~ 1E		33. Cursor down:	^J	
			OA	
ERASURE	DELAY	34. Cursor right:	^L	
18. Entire screen: ^Z 1A	0		OC	
19. Cursor to end of screen: ESC Y 1B 59	0	35. Cursor left:	^H	
20. Beginning of screen to cursor: ~~			08	
21. Cursor to end of line: ESC T 1B 54	0	CHARACTER SET		
22. Beginning of line to cursor:		36. Full upper and lower ASCII:	YES	
23. Entire cursor line: ^M ESC T OD 1B 54	0	37. Generate all control codes:	YES	
		38. Bell or tone sequence:		
		^G	07	
		EMULATION		
		39. Conform to ANSI X3.64?	NO	
		40. Terminals Emulated:		

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Manufacturer: Televideo  
Terminal: 950

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                    NOTES

1. ^A @ ^M  
01 40 OD

2. ^A A ^M  
01 41 OD

3. ^A B ^M  
01 42 OD

4. ^A C ^M  
01 43 OD

5. ^A D ^M  
01 44 OD

6. ^A E ^M  
01 45 OD

7. ^A F ^M  
01 46 OD

8. ^A G ^M  
01 47 OD

9. ^A H ^M  
01 48 OD

10. ^A I ^M  
01 49 OD

11. ^A J ^M  
01 4A OD

12.

13.

14.

15.

16.

---

1. Manufacturer: Televideo  
2. Terminal: 970

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SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1	ESC [ 5 m	ESC [ m	
6. Left Column:	1	1B 5B 35 6D	1B 5B 6D	
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D	
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D	ESC [ m 1B 5B 6D	
8. Lead-in sequence: ESC [ 1B 5B	ROW	27. High intensity: ESC [ 1 m 1B 5B 31 6D	ESC [ m 1B 5B 6D	
9. Row or column first:	ROW	28. Half intensity: ESC [ 0 m 1B 5B 30 6D	ESC [ m 1B 5B 6D	
10. Numeric form of row and column: VARIABLE-LENGTH ASCII		29. Attributes occupy position: NO		
11. Add offset to: Row: 0 Col: 0		30. Attributes cumulative: YES		
12. Separator sequence: ; 3B		31. All attributes off: ESC [ m 1B 5B 6D		
13. End sequence: H 48		CURSOR CONTROL KEYS		
14. Cursor to top row, left column: ESC [ 1 ; 1 H 1B 5B 31 3B 31 48		32. Cursor up: ESC [ A 1B 5B 41		
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48		33. Cursor down: ESC [ B 1B 5B 42		
16. Delay after positioning: 0		34. Cursor right: ESC [ C 1B 5B 43		
17. Cursor home: ESC [ H 1B 5B 48		35. Cursor left: ESC [ D 1B 5B 44		
ERASURE		CHARACTER SET		
18. Entire screen: ESC [ 2 J 1B 5B 32 4A	DELAY	36. Full upper and lower ASCII: YES		
19. Cursor to end of screen: ESC [ J 1B 5B 4A	0	37. Generate all control codes: YES		
20. Beginning of screen to cursor: ESC [ 1 J 1B 5B 31 4A	0	38. Bell or tone sequence: ^G 07		
21. Cursor to end of line: ESC [ K 1B 5B 4B	0	EMULATION		
22. Beginning of line to cursor: ESC [ 1 K 1B 5B 31 4B	0	39. Conform to ANSI X3.64? YES		
23. Entire cursor line: ESC [ 2 K 1B 5B 32 4B	0	40. Terminals Emulated: 970 ANSI DEC VT100 DEC VT52		

---

Manufacturer: Televideo  
Terminal: 970

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                     | NOTES                   |
|-----|---------------------|-------------------------|
| 1.  | ESC ? a<br>1B 3F 61 | 36. Includes soft font. |
| 2.  | ESC ? b<br>1B 3F 62 |                         |
| 3.  | ESC ? c<br>1B 3F 63 |                         |
| 4.  | ESC ? d<br>1B 3F 64 |                         |
| 5.  | ESC ? e<br>1B 3F 65 |                         |
| 6.  | ESC ? f<br>1B 3F 66 |                         |
| 7.  | ESC ? g<br>1B 3F 67 |                         |
| 8.  | ESC ? h<br>1B 3F 68 |                         |
| 9.  | ESC ? i<br>1B 3F 69 |                         |
| 10. | ESC ? j<br>1B 3F 6A |                         |
| 11. | ESC ? k<br>1B 3F 6B |                         |
| 12. | ESC ? l<br>1B 3F 6C |                         |
| 13. | ESC ? m<br>1B 3F 6D |                         |
| 14. | ESC ? n<br>1B 3F 6E |                         |
| 15. | ESC ? o<br>1B 3F 6F |                         |
| 16. | ESC ? p<br>1B 3F 70 |                         |

---

1. Manufacturer:	Televideo		
2. Terminal:	Personal Terminal		
<b>SCREEN LAYOUT</b>		<b>VIDEO ATTRIBUTES</b>	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	25. Reverse video:	
6. Left Column:	1	26. Underline:	
7. Printing in bottom right cause scroll?	YES	27. High intensity:	
<b>CURSOR ADDRESSING</b>		28. Half intensity:	
8. Lead-in sequence: ESC = 1B 3D		ESC (	ESC )
9. Row or column first:	ROW	1B 28	1B 29
10. Numeric form of row and column: BINARY		29. Attributes occupy position: YES	
11. Add offset to:	Row: 1F Col: 1F	30. Attributes cumulative: NO	
12. Separator sequence:		31. All attributes off: ESC G 0 1B 47 30	
13. End sequence:		<b>CURSOR CONTROL KEYS</b>	
14. Cursor to top row, left column: ESC = SP SP 1B 3D 20 20		32. Cursor up: ^K	
15. 10th Row, 50th Column: ESC = ) Q 1B 3D 29 51		33. Cursor down: ^J	
16. Delay after positioning:	0	34. Cursor right: ^L	
17. Cursor home: ^ 1E		35. Cursor left: ^H	
<b>ERASURE</b>	<b>DELAY</b>	36. Full upper and lower ASCII: YES	
18. Entire screen: ^Z 1A	0	37. Generate all control codes: YES	
19. Cursor to end of screen: ESC Y 1B 59	0	38. Bell or tone sequence: ^G 07	
20. Beginning of screen to cursor:		<b>CHARACTER SET</b>	
21. Cursor to end of line: ESC T 1B 54	0	36. Full upper and lower ASCII: YES	
22. Beginning of line to cursor:		37. Generate all control codes: YES	
23. Entire cursor line: ^M ESC T OD 1B 54	0	38. Bell or tone sequence: ^G 07	
<b>EMULATION</b>			
		39. Conform to ANSI X3.64?	NO
		40. Terminals Emulated:	

---

---

Manufacturer:  
Terminal:

---

Televideo  
Personal Terminal

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 4. Or 40.  
2. 42. Function keys default to null.  
3.  
4.  
5.  
6.  
7.  
8.  
9.  
10.  
11.  
12.  
13.  
14.  
15.  
16.

---

1. Manufacturer: Termiflex  
2. Terminal: HT/1000

---

SCREEN LAYOUT

3. Number of rows: 4

4. Number of columns: 16

5. Top Row: 1

6. Left Column: 1

7. Printing in bottom right cause scroll? NO

CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC Y  
    1B 59

9. Row or column first: ROW

10. Numeric form of row and column:  
    BINARY

11. Add offset to:  
    Row: 1F  
    Col: 1F

12. Separator sequence:

13. End sequence:

14. Cursor to top row, left column:  
    ESC Y SP SP  
    1B 59 20 20

15. 10th Row, 50th Column:

16. Delay after positioning: 0

17. Cursor home:  
    ESC H  
    1B 48

ERASURE

18. Entire screen:

19. Cursor to end of screen:  
    ESC J  
    1B 4A

20. Beginning of screen to cursor:

21. Cursor to end of line:  
    ESC K  
    1B 4B

22. Beginning of line to cursor:

23. Entire cursor line:

VIDEO ATTRIBUTES

ON OFF

24. Blinking:  
    ^Z  
    ^X

1A 18

25. Reverse video:

26. Underline:

27. High intensity:

28. Half intensity:

29. Attributes occupy position: NO

30. Attributes cumulative: NO

31. All attributes off:

CURSOR CONTROL KEYS

32. Cursor up:  
    ESC A  
    1B 41

33. Cursor down:  
    ESC B  
    1B 42

34. Cursor right:  
    ESC C  
    1B 43

35. Cursor left:  
    ESC D  
    1B 44

CHARACTER SET

36. Full upper and lower ASCII: YES

37. Generate all control codes: YES

38. Bell or tone sequence:  
    ^G  
    07

EMULATION

39. Conform to ANSI X3.64? NO

40. Terminals Emulated:

---

**Manufacturer:** Termiflex  
**Terminal:** HT/1000

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 17. Home is lower left.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer: Texas Instruments  
2. Terminal: 931

---

SCREEN LAYOUT

3. Number of rows: 24 ON OFF  
4. Number of columns: 80 24. Blinking:  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC Y  
    1B 59  
9. Row or column first: ROW  
10. Numeric form of row and column: BINARY  
11. Add offset to: Row: 1F  
                              Col: 1F  
12. Separator sequence:  
13. End sequence:

14. Cursor to top row, left column:  
    ESC Y SP SP  
    1B 59 20 20  
15. 10th Row, 50th Column:  
    ESC Y ) Q  
    1B 59 29 51  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC H  
    1B 48

ERASURE DELAY

18. Entire screen:  
    ESC L 0  
    1B 4C  
19. Cursor to end of screen:  
    ESC J 0  
    1B 4A  
20. Beginning of screen to cursor:  
21. Cursor to end of line:  
    ESC I 0  
    1B 49  
22. Beginning of line to cursor:  
23. Entire cursor line:

VIDEO ATTRIBUTES

25. Reverse video:  
26. Underline:  
27. High intensity:  
28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: NO  
31. All attributes off:

CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

EMULATION

39. Conform to ANSI X3.64? NO  
40. Terminals Emulated:

---

Manufacturer:  
Terminal:

---

Texas Instruments  
931

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     | NOTES   |
|-----|---|
| 1.  | 3. Also 25th status line.<br>24.-31. Refer to manual.   |
| 2.  | 36. 96 ASCII characters and 32<br>line drawing characters. Nine<br>international keyboards and<br>character sets are available. |
| 3.  | 42. 12 programmable function keys.  |
| 4.  |   |
| 5.  |   |
| 6.  |   |
| 7.  |   |
| 8.  |   |
| 9.  |   |
| 10. |   |
| 11. |   |
| 12. |   |
| 13. |   |
| 14. |   |
| 15. |   |
| 16. |   |

---

1. Manufacturer: Texas Instruments  
2. Terminal: Professional Computer

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? NO

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    f  
    66

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 f  
    1B 5B 31 3B 31 66  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 f  
    1B 5B 31 30 3B 35 30 66  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## ERASURE

18. Entire screen:  
    ESC [ 2 J  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J  
    1B 5B 4A  
20. Beginning of screen to cursor:  
21. Cursor to end of line:  
    ESC [ K  
    1B 5B 4B  
22. Beginning of line to cursor:  
23. Entire cursor line:  
    ^M ESC [ K  
    OD 1B 5B 4B

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
    ESC [ 1 m  
    1B 5B 31 6D  
28. Half intensity:  
29. Attributes occupy position: YES  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

~G  
07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    IBM 3101  
    IBM 3270  
    TI 931

---

Manufacturer:	Texas Instruments
Terminal:	Professional Computer

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     | NOTES   |
|-----|---|
| 1.  | 28. Half intensity on:<br>ESC [ 3 2 m   |
| 2.  | 30. Combinations of attributes are set<br>by placing the specifications in<br>the ESC [ Pn ; Pn ; Pn m<br>sequence. They may be turned off<br>individually by sending a "set<br>sequence" without the attribute in<br>question. |
| 3.  | 40. This is a PC, not a terminal. TI<br>currently supports TTY, 3101, 3270<br>and TI 931 emulation. Application<br>packages could be written to<br>emulate any terminal.  |
| 4.  | 42. 24 function keys are totally<br>mappable to any sequence using the<br>key-reassignment command.   |
| 5.  |   |
| 6.  |   |
| 7.  |   |
| 8.  |   |
| 9.  |   |
| 10. |   |
| 11. |   |
| 12. |   |
| 13. |   |
| 14. |   |
| 15. |   |
| 16. |   |

---

1. Manufacturer: Tymshare  
2. Terminal: Scanset 410, 415/HS, XL-HS

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1		
6. Left Column:	1		
7. Printing in bottom right cause scroll?	YES	25. Reverse video:	
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:			
ESC Y			
1B 59			
9. Row or column first:	ROW	27. High intensity:	
10. Numeric form of row and column:		28. Half intensity:	
BINARY			
11. Add offset to:	Row: 1F Col: 1F	29. Attributes occupy position:	NO
12. Separator sequence:		30. Attributes cumulative:	NO
13. End sequence:		31. All attributes off:	
14. Cursor to top row, left column:		CURSOR CONTROL KEYS	
ESC Y SP SP		32. Cursor up:	
1B 59 20 20		ESC A	
15. 10th Row, 50th Column:		1B 41	
ESC Y ) Q		33. Cursor down:	
1B 59 29 51		ESC B	
16. Delay after positioning:	0	1B 42	
17. Cursor home:		34. Cursor right:	
ESC H		ESC C	
1B 48		1B 43	
ERASURE	DELAY	35. Cursor left:	
18. Entire screen:		ESC D	
ESC >	0	1B 44	
1B 3E		CHARACTER SET	
19. Cursor to end of screen:		36. Full upper and lower ASCII:	YES
ESC J	0	37. Generate all control codes:	YES
1B 4A		38. Bell or tone sequence:	
20. Beginning of screen to cursor:		^G	
		07	
21. Cursor to end of line:		EMULATION	
ESC K	0	39. Conform to ANSI X3.64?	NO
1B 4B		40. Terminals Emulated:	
22. Beginning of line to cursor:		VT52	
23. Entire cursor line:			

---

Manufacturer: Tymshare  
Terminal: Scanset 410, 415/HS, XL-HS

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     | NOTES                              |
|-----|------------------------------------|
| 1.  | 4. Or 40.                          |
|     | 42. 12 programmable function keys. |
| 2.  |                                    |
| 3.  |                                    |
| 4.  |                                    |
| 5.  |                                    |
| 6.  |                                    |
| 7.  |                                    |
| 8.  |                                    |
| 9.  |                                    |
| 10. |                                    |
| 11. |                                    |
| 12. |                                    |
| 13. |                                    |
| 14. |                                    |
| 15. |                                    |
| 16. |                                    |

---

1. Manufacturer: Vector Graphic, Inc.  
2. Terminal: Vector 4 & 4S & VSX

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	25. Reverse video:	
6. Left Column:	1	ESC [ 7 m	ESC [ m
7. Printing in bottom right cause scroll?	YES	1B 5B 37 6D	1B 5B 6D
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:		27. High intensity:	
ESC [		28. Half intensity:	
1B 5B		29. Attributes occupy position: NO	
9. Row or column first:	ROW	30. Attributes cumulative: NO	
10. Numeric form of row and column:		31. All attributes off:	
VARIABLE-LENGTH ASCII		ESC [ m	1B 5B 6D
11. Add offset to:	Row: 0	CURSOR CONTROL KEYS	
	Col: 0	32. Cursor up:	
12. Separator sequence:		8A	
;		33. Cursor down:	
3B		8B	
13. End sequence:		34. Cursor right:	
H		8D	
48		35. Cursor left:	
14. Cursor to top row, left column:		8C	
ESC [ 1 ; 1 H		CHARACTER SET	
1B 5B 31 3B 31 48		36. Full upper and lower ASCII: YES	
15. 10th Row, 50th Column:		37. Generate all control codes: YES	
ESC [ 1 0 ; 5 0 H		38. Bell or tone sequence:	
1B 5B 31 30 3B 35 30 48		^G	07
16. Delay after positioning:	0	EMULATION	
17. Cursor home:		39. Conform to ANSI X3.64? YES	
ESC [ 1 ; 1 H		40. Terminals Emulated:	
1B 5B 31 3B 31 48			
ERASURE		DELAY	
18. Entire screen:		287	
ESC [ 2 J	0	CONTINUED =====>	
1B 5B 32 4A			
19. Cursor to end of screen:			
ESC [ J	0		
1B 5B 4A			
20. Beginning of screen to cursor:			
ESC [ 1 J	0		
1B 5B 31 4A			
21. Cursor to end of line:			
ESC [ K	0		
1B 5B 4B			
22. Beginning of line to cursor:			
ESC [ 1 K	0		
1B 5B 31 4B			
23. Entire cursor line:			
ESC [ 2 K	0		
1B 5B 32 4B			

---

Manufacturer: Vector Graphic, Inc.  
Terminal: Vector 4 & 4S & VSX

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

	NOTES
1.	32.-35. Shift arrow keys 9A-9D. Ctrl arrow keys AA-AD. Shift-ctrl arrow keys BA-BD.
2.	42. Help key C0 Shift D0 Ctrl E0 Shift-ctrl F0
3.	F1-F14 shift D1-DE F1-F14 ctrl E1-EE F1-F14 shift-ctrl F1-FE
4.	C4
5.	C5
6.	C6
7.	C7
8.	C8
9.	C9
10.	CA
11.	CB
12.	CC
13.	CD
14.	CE
15.	
16.	

---

1. Manufacturer: Visual Technology  
2. Terminal: V102

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? YES

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## ERASURE

18. Entire screen:  
    ESC [ 2 J  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

ON OFF  
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
    ESC [ 1 m  
    1B 5B 31 6D  
28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    DEC VT52, VT100, VT102

---

Manufacturer:  
Terminal:

---

Visual Technology  
V102

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |     |    |          | NOTES   |
|-----|-----|----|----------|---|
| 1.  | ESC | A  | ESC \    | 4. Or 132.  |
|     | 1B  | 5F | 41 1B 5C | 42. Default values are shown for PF keys. PF keys are programmable. |
| 2.  | ESC | B  | ESC \    |   |
|     | 1B  | 5F | 42 1B 5C |   |
| 3.  | ESC | C  | ESC \    |   |
|     | 1B  | 5F | 43 1B 5C |   |
| 4.  | ESC | D  | ESC \    |   |
|     | 1B  | 5F | 44 1B 5C |   |
| 5.  | ESC | E  | ESC \    |   |
|     | 1B  | 5F | 45 1B 5C |   |
| 6.  | ESC | F  | ESC \    |   |
|     | 1B  | 5F | 46 1B 5C |   |
| 7.  | ESC | G  | ESC \    |   |
|     | 1B  | 5F | 47 1B 5C |   |
| 8.  | ESC | H  | ESC \    |   |
|     | 1B  | 5F | 48 1B 5C |   |
| 9.  | ESC | I  | ESC \    |   |
|     | 1B  | 5F | 49 1B 5C |   |
| 10. | ESC | J  | ESC \    |   |
|     | 1B  | 5F | 4A 1B 5C |   |
| 11. | ESC | K  | ESC \    |   |
|     | 1B  | 5F | 4B 1B 5C |   |
| 12. | ESC | L  | ESC \    |   |
|     | 1B  | 5F | 4C 1B 5C |   |
| 13. | ESC | M  | ESC \    |   |
|     | 1B  | 5F | 4D 1B 5C |   |
| 14. | ESC | N  | ESC \    |   |
|     | 1B  | 5F | 4E 1B 5C |   |
| 15. | ESC | O  | ESC \    |   |
|     | 1B  | 5F | 4F 1B 5C |   |
| 16. | ESC | P  | ESC \    |   |
|     | 1B  | 5F | 50 1B 5C |   |

---

1. Manufacturer: Visual Technology  
2. Terminal: V330 (DG D200 mode)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	^O	
5. Top Row:	1	^N		
6. Left Column:	1	OE	OF	
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ^^ D 1E 44	^^ E 1E 45	
CURSOR ADDRESSING		26. Underline: ^T 14	^U 15	
8. Lead-in sequence: ^P 10		27. High intensity:		
9. Row or column first:	COL	28. Half intensity: ^\ 1C	^]	1D
10. Numeric form of row and column: BINARY		29. Attributes occupy position:	NO	
11. Add offset to: Row: 0 Col: 0		30. Attributes cumulative:	YES	
12. Separator sequence:		31. All attributes off:		
13. End sequence:				
14. Cursor to top row, left column: ^P NUL NUL 10 00 00		CURSOR CONTROL KEYS		
15. 10th Row, 50th Column: ^P 1 ^I 10 31 09		32. Cursor up: ^W 17		
16. Delay after positioning:	0	33. Cursor down: ^Z 1A		
17. Cursor home: ^H 08		34. Cursor right: ^X 18		
ERASURE	DELAY	35. Cursor left: ^Y 19		
18. Entire screen: ^L OC	0	CHARACTER SET		
19. Cursor to end of screen: ^^ J 1E 4A	0	36. Full upper and lower ASCII:	YES	
20. Beginning of screen to cursor:		37. Generate all control codes:	YES	
21. Cursor to end of line: ^K OB	0	38. Bell or tone sequence: ^G 07		
22. Beginning of line to cursor:		EMULATION		
23. Entire cursor line: ^^ t 1E 74	0	39. Conform to ANSI X3.64?	NO	
		40. Terminals Emulated: VT52, ADM3A, HZ 1500, DG D200 DG D200 codes shown here.		

---

Manufacturer:  
Terminal:

---

Visual Technology  
V330 (DG D200 mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |                   |   |
|-------------------|---|
| 1. ^^ q<br>1E 71  | NOTES<br>42. Default values are shown for<br>PF keys. PF keys are programmable. |
| 2. ^^ r<br>1E 72  |   |
| 3. ^^ s<br>1E 73  |   |
| 4. ^^ t<br>1E 74  |   |
| 5. ^^ u<br>1E 75  |   |
| 6. ^^ v<br>1E 76  |   |
| 7. ^^ w<br>1E 77  |   |
| 8. ^^ x<br>1E 78  |   |
| 9. ^^ y<br>1E 79  |   |
| 10. ^^ z<br>1E 7A |   |
| 11. ^^ {<br>1E 7B |   |
| 12. ^^  <br>1E 7C |   |
| 13.               |   |
| 14.               |   |
| 15.               |   |
| 16.               |   |

---

1. Manufacturer: Visual Technology  
2. Terminal: V500 (LSI ADM3A mode)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	33	ON	OFF	
4. Number of columns:	80	24. Blinking:		
5. Top Row:	1	ESC ^B	ESC ^A	
6. Left Column:	1	1B 02	1B 01	
7. Printing in bottom right cause scroll?	YES	25. Reverse video:		
		ESC ^H	ESC ^G	
		1B 08	1B 07	
CURSOR ADDRESSING		26. Underline:		
8. Lead-in sequence:		ESC ^D	ESC ^C	
ESC =		1B 04	1B 03	
1B 3D				
9. Row or column first:	ROW	27. High intensity:		
10. Numeric form of row and column:	BINARY			
11. Add offset to:	Row: 1F	28. Half intensity:		
	Col: 1F	ESC 4	ESC 3	
		1B 34	1B 33	
12. Separator sequence:		29. Attributes occupy position:	NO	
13. End sequence:		30. Attributes cumulative:	YES	
14. Cursor to top row, left column:		31. All attributes off:		
ESC = SP SP				
1B 3D 20 20				
15. 10th Row, 50th Column:		CURSOR CONTROL KEYS		
ESC O ) Q		32. Cursor up:		
1B 30 29 51		ESC A		
16. Delay after positioning:	0	1B 41		
17. Cursor home:		33. Cursor down:		
ESC H		ESC B		
1B 48		1B 42		
ERASURE	DELAY	34. Cursor right:		
18. Entire screen:		ESC C		
ESC w	0	1B 43		
1B 77		35. Cursor left:		
19. Cursor to end of screen:		ESC D		
ESC J	0	1B 44		
1B 4A		CHARACTER SET		
20. Beginning of screen to cursor:		36. Full upper and lower ASCII:	YES	
		37. Generate all control codes:	YES	
		38. Bell or tone sequence:		
21. Cursor to end of line:	0	^G		
ESC K		07		
1B 4B		EMULATION		
22. Beginning of line to cursor:		39. Conform to ANSI X3.64?	NO	
23. Entire cursor line:	0	40. Terminals Emulated:		
ESC t		VT52, LSI ADM3A, Haz 1500,		
1B 74		DG D200, Tektronix 4010-4014		
		graphics emulation.		
		LSI ADM3A codes shown here.		

---

Manufacturer: Visual Technology  
Terminal: V500 (LSI ADM3A mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |                | NOTES  |
|-----|----------------|--|
| 1.  | ESC A<br>1B 41 | 3. Or 24.  |
| 2.  | ESC B<br>1B 42 | 42. Default values are shown for<br>PF keys. PF keys are programmable. |
| 3.  | ESC C<br>1B 43 |  |
| 4.  | ESC D<br>1B 44 |  |
| 5.  | ESC E<br>1B 45 |  |
| 6.  | ESC F<br>1B 46 |  |
| 7.  | ESC G<br>1B 47 |  |
| 8.  | ESC H<br>1B 48 |  |
| 9.  | ESC I<br>1B 49 |  |
| 10. | ESC J<br>1B 4A |  |
| 11. | ESC K<br>1B 4B |  |
| 12. | ESC L<br>1B 4C |  |
| 13. |                |  |
| 14. |                |  |
| 15. |                |  |
| 16. |                |  |

---

1. Manufacturer: Visual Technology  
 2. Terminal: Visual 100

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80			
5. Top Row:	1	24. Blinking: ESC [ 5 m 1B 5B 35 6D		
6. Left Column:	1		ESC [ m 1B 5B 6D	
7. Printing in bottom right cause scroll?	PROG	25. Reverse video: ESC [ 7 m 1B 5B 37 6D		
			ESC [ m 1B 5B 6D	
CURSOR ADDRESSING		26. Underline: ESC [ 4 m 1B 5B 34 6D		
8. Lead-in sequence:	ESC [ 1B 5B		ESC [ m 1B 5B 6D	
9. Row or column first:	ROW	27. High intensity: ESC [ 1 m 1B 5B 31 6D		
10. Numeric form of row and column:	VARIABLE-LENGTH ASCII		ESC [ m 1B 5B 6D	
11. Add offset to:	Row: 0 Col: 0	28. Half intensity: ESC [ m 1B 5B 6D		
12. Separator sequence:	;	29. Attributes occupy position: NO 30. Attributes cumulative: YES 31. All attributes off: ESC [ m 1B 5B 6D		
13. End sequence:	H 48			
14. Cursor to top row, left column:	ESC [ 1 ; 1 H 1B 5B 31 3B 31 48	CURSOR CONTROL KEYS		
15. 10th Row, 50th Column:	ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48	32. Cursor up: ESC [ A 1B 5B 41		
16. Delay after positioning:	0	33. Cursor down: ESC [ B 1B 5B 42		
17. Cursor home:	ESC [ H 1B 5B 48	34. Cursor right: ESC [ C 1B 5B 43		
ERASURE	DELAY	35. Cursor left: ESC [ D 1B 5B 44		
18. Entire screen:	ESC [ 2 J 1B 5B 32 4A	CHARACTER SET		
19. Cursor to end of screen:	ESC [ J 1B 5B 4A	36. Full upper and lower ASCII: YES 37. Generate all control codes: YES 38. Bell or tone sequence: ^G 07		
20. Beginning of screen to cursor:	ESC [ 1 J 1B 5B 31 4A	EMULATION		
21. Cursor to end of line:	ESC [ K 1B 5B 4B	39. Conform to ANSI X3.64?: YES 40. Terminals Emulated: DEC VT100, VT52		
22. Beginning of line to cursor:	ESC [ 1 K 1B 5B 31 4B			
23. Entire cursor line:	ESC [ 2 K 1B 5B 32 4B			

---

Manufacturer:  
Terminal:

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Visual Technology  
Visual 100

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC O P  
1B 4F 50

NOTES

- 4. Or 132 (in ANSI mode only).
- 7. Selectable.
- 13. Optionally f (66H).

2. ESC O Q  
1B 4F 51

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

5.

6.

7.

8.

9.

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11.

12.

13.

14.

15.

16.

---

1. Manufacturer:	Visual Technology
2. Terminal:	Visual 100 (VT52 mode)

---

SCREEN LAYOUT	VIDEO ATTRIBUTES
3. Number of rows:	24 ON OFF
4. Number of columns:	80
5. Top Row:	1
6. Left Column:	1
7. Printing in bottom right cause scroll?	PROG
CURSOR ADDRESSING	24. Blinking:
8. Lead-in sequence: ESC Y 1B 59	25. Reverse video:
9. Row or column first: ROW	26. Underline:
10. Numeric form of row and column: BINARY	27. High intensity:
11. Add offset to: Row: 1F Col: 1F	28. Half intensity:
12. Separator sequence:	29. Attributes occupy position: NO 30. Attributes cumulative: NO 31. All attributes off:
13. End sequence:	
14. Cursor to top row, left column: ESC Y SP SP 1B 59 20 20	CURSOR CONTROL KEYS
15. 10th Row, 50th Column: ESC Y ) Q 1B 59 29 51	32. Cursor up: ESC A 1B 41
16. Delay after positioning: 0	33. Cursor down: ESC B 1B 42
17. Cursor home: ESC H 1B 48	34. Cursor right: ESC C 1B 43
ERASURE	35. Cursor left: ESC D 1B 44
18. Entire screen: ESC H ESC J 1B 48 1B 4A	CHARACTER SET
19. Cursor to end of screen: ESC J 1B 4A	36. Full upper and lower ASCII: YES 37. Generate all control codes: YES 38. Bell or tone sequence: ^G 07
20. Beginning of screen to cursor:	
21. Cursor to end of line: ESC K 1B 4B	EMULATION
22. Beginning of line to cursor:	39. Conform to ANSI X3.64? NO 40. Terminals Emulated:
23. Entire cursor line:	

---

Manufacturer: Visual Technology  
Terminal: Visual 100 (VT52 mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. ESC O P Product discontinued.  
1B 4F 50

2. ESC O Q  
1B 4F 51

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Visual Technology  
 2. Terminal: Visual 300 (VT100 mode)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	
5. Top Row:	1	ESC [ 5 m 1B 5B 35 6D	ESC [ m 1B 5B 6D
6. Left Column:	1		
7. Printing in bottom right cause scroll?	YES	25. Reverse video: ESC [ 7 m 1B 5B 37 6D	ESC [ m 1B 5B 6D
		26. Underline: ESC [ 4 m 1B 5B 34 6D	ESC [ m 1B 5B 6D
CURSOR ADDRESSING		27. High intensity: ESC [ 1 m 1B 5B 31 6D	ESC [ m 1B 5B 6D
8. Lead-in sequence:		28. Half intensity: ESC [ m 1B 5B 6D	
ESC [ 1B 5B			
9. Row or column first:	ROW	29. Attributes occupy position: NO	
10. Numeric form of row and column: VARIABLE-LENGTH ASCII		30. Attributes cumulative: YES	
11. Add offset to:	Row: 0 Col: 0	31. All attributes off: ESC [ m 1B 5B 6D	
12. Separator sequence: ; 3B			
13. End sequence: H 48			
14. Cursor to top row, left column: ESC [ 1 ; 1 H 1B 5B 31 3B 31 48		CURSOR CONTROL KEYS	
15. 10th Row, 50th Column: ESC [ 1 0 ; 5 0 H 1B 5B 31 30 3B 35 30 48		32. Cursor up: ESC [ A 1B 5B 41	
16. Delay after positioning: 0		33. Cursor down: ESC [ B 1B 5B 42	
17. Cursor home: ESC [ H 1B 5B 48		34. Cursor right: ESC [ C 1B 5B 43	
ERASURE	DELAY	35. Cursor left: ESC [ D 1B 5B 44	
18. Entire screen: ESC [ 2 J 1B 5B 32 4A	0		
19. Cursor to end of screen: ESC [ J 1B 5B 4A	0	CHARACTER SET	
20. Beginning of screen to cursor: ESC [ 1 J 1B 5B 31 4A	0	36. Full upper and lower ASCII: YES	
21. Cursor to end of line: ESC [ K 1B 5B 4B	0	37. Generate all control codes: YES	
22. Beginning of line to cursor: ESC [ 1 K 1B 5B 31 4B	0	38. Bell or tone sequence: ^G 07	
23. Entire cursor line: ESC [ 2 K 1B 5B 32 4B	0	EMULATION	
		39. Conform to ANSI X3.64? YES	
		40. Terminals Emulated: DEC VT100, VT52	

---

Manufacturer: Visual Technology  
Terminal: Visual 300 (VT100 mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES

1. ESC O P  
1B 4F 50

2. ESC O Q  
1B 4F 51

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Visual Technology  
2. Terminal: Visual 50/55 (Esprit mode)

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	~	W
5. Top Row:	1	7E	69	7E 57
6. Left Column:	1	25. Reverse video:	~	W
7. Printing in bottom right cause scroll?	YES	7E	6A	7E 57
CURSOR ADDRESSING		26. Underline:	~	W
8. Lead-in sequence:	~ ^Q	7E	53	73 57
	7E 11	27. High intensity:	~	W
9. Row or column first:	COL	28. Half intensity:	~	W
10. Numeric form of row and column: BINARY		29. Attributes occupy position:	NO	
11. Add offset to:	Row: 0 Col: 0	30. Attributes cumulative:	NO	
12. Separator sequence:		31. All attributes off:	~	W
13. End sequence:			7E	57
14. Cursor to top row, left column: ~ ^Q NUL NUL 7E 11 00 00		CURSOR CONTROL KEYS		
15. 10th Row, 50th Column: ~ ^Q 1 ^I 7E 11 31 09		32. Cursor up:	~	^L 7E 0C
16. Delay after positioning:	0	33. Cursor down:	~	^K 7E 0B
17. Cursor home: ~ ^R 7E 12		34. Cursor right:	~	C 7E 43
ERASURE	DELAY	35. Cursor left:	~	D 7E 44
18. Entire screen: ~ R 7E 52	0	CHARACTER SET		
19. Cursor to end of screen: ~ J 7E 4A	0	36. Full upper and lower ASCII:	YES	
20. Beginning of screen to cursor:		37. Generate all control codes:	YES	
		38. Bell or tone sequence:	^G 07	
21. Cursor to end of line: ~ K 7E 4B	0	EMULATION		
22. Beginning of line to cursor:		39. Conform to ANSI X3.64?	NO	
23. Entire cursor line: ~ E 7E 45	0	40. Terminals Emulated:		
			DEC VT52, ADDS Viewpoint, Lear Siegler ADM3A, Hazeltine Esprit V55 also Hazeltine 1500-1510, Visual 200/210.	

---

Manufacturer:  
Terminal:

---

Visual Technology  
Visual 50/55 (Esprit mode)

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |               | NOTES   |
|-----|---------------|---|
| 1.  | ~ P<br>7E 50  | 42. Default values are shown for PF keys. PF keys are programmable. |
| 2.  | ~ Q<br>7E 51  |   |
| 3.  | ~ R<br>7E 52  |   |
| 4.  | ~ SP<br>7E 20 |   |
| 5.  | ~ !<br>7E 21  |   |
| 6.  | ~ "<br>7E 22  |   |
| 7.  | ~ #<br>7E 23  |   |
| 8.  | ~ \$<br>7E 24 |   |
| 9.  | ~ %<br>7E 25  |   |
| 10. | ~ &<br>7E 26  |   |
| 11. | ~ '<br>7E 27  |   |
| 12. | ~ (<br>7E 28  |   |
| 13. |               |   |
| 14. |               |   |
| 15. |               |   |
| 16. |               |   |

---

1. Manufacturer: Visual Technology  
2. Terminal: Visual 50/55 (VT52 mode)

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SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC W	
5. Top Row:	1	1B 69	1B 57	
6. Left Column:	1	25. Reverse video:	ESC W	
7. Printing in bottom right cause scroll?	YES	ESC j	1B 57	
		1B 6A		
CURSOR ADDRESSING		26. Underline:		
8. Lead-in sequence:		ESC S	ESC W	
ESC Y		1B 53	1B 57	
1B 59		27. High intensity:		
9. Row or column first:	ROW	28. Half intensity:		
10. Numeric form of row and column:	BINARY	ESC O	ESC W	
11. Add offset to:	Row: 1F Col: 1F	1B 4F	1B 57	
12. Separator sequence:		29. Attributes occupy position:	NO	
13. End sequence:		30. Attributes cumulative:	NO	
14. Cursor to top row, left column:		31. All attributes off:		
ESC Y SP SP		ESC W		
1B 59 20 20		1B 57		
15. 10th Row, 50th Column:		CURSOR CONTROL KEYS		
ESC Y ) Q		32. Cursor up:	ESC A	
1B 59 29 51			1B 41	
16. Delay after positioning:	0	33. Cursor down:	ESC B	
17. Cursor home:			1B 42	
ESC H		34. Cursor right:	ESC C	
1B 48			1B 43	
ERASURE		35. Cursor left:		
18. Entire screen:	DELAY		ESC D	
ESC ^Z	0		1B 44	
1B 1A		CHARACTER SET		
19. Cursor to end of screen:		36. Full upper and lower ASCII:	YES	
ESC ^	0	37. Generate all control codes:	YES	
1B 1F		38. Bell or tone sequence:		
20. Beginning of screen to cursor:		^G		
21. Cursor to end of line:		07		
ESC ^]	0	EMULATION		
1B 1D		39. Conform to ANSI X3.64?	NO	
22. Beginning of line to cursor:		40. Terminals Emulated:		
23. Entire cursor line:		DEC VT52, ADDS Viewpoint, Lear Siegler ADM3A, Hazeltine Esprit V55 also Hazeltine 1510, Visual 200-210.		
ESC E	0			
1B 45				

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Manufacturer:  
Terminal:

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Visual Technology  
Visual 50/55 (VT52 mode)

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41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. ESC P                   42. Default values are shown for  
1B 50                   PF keys. PF keys are programmable.
2. ESC Q  
1B 51
3. ESC R  
1B 52
4. ESC SP  
1B 20
5. ESC !  
1B 21
6. ESC "  
1B 22
7. ESC #  
1B 23
8. ESC \$  
1B 24
9. ESC %  
1B 25
10. ESC &  
1B 26
11. ESC ^  
1B 27
12. ESC (  
1B 28
- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer: Wyse Technology  
2. Terminal: WY-100

---

SCREEN LAYOUT		VIDEO ATTRIBUTES		
3. Number of rows:	24	ON	OFF	
4. Number of columns:	80	24. Blinking:	ESC G 0	
5. Top Row:	1	1B 47 32	1B 47 30	
6. Left Column:	1	25. Reverse video:	ESC G 0	
7. Printing in bottom right cause scroll?	PROG	ESC G 4 1B 47 34	1B 47 30	
CURSOR ADDRESSING		26. Underline:	ESC G 0	
8. Lead-in sequence:	ESC = 1B 3D	ESC G 8 1B 47 38	1B 47 30	
9. Row or column first:	ROW	27. High intensity:	ESC G 0	
10. Numeric form of row and column:	BINARY	28. Half intensity:	ESC G 0	
11. Add offset to:	Row: 1F Col: 1F	ESC G p 1B 47 70	1B 47 30	
12. Separator sequence:		29. Attributes occupy position:	YES	
13. End sequence:		30. Attributes cumulative:	NO	
14. Cursor to top row, left column:		31. All attributes off:	ESC G 0	
ESC = SP SP 1B 3D 20 20			1B 47 30	
15. 10th Row, 50th Column:		CURSOR CONTROL KEYS		
ESC = ) Q 1B 3D 29 51		32. Cursor up:	^K	
16. Delay after positioning:	0		OB	
17. Cursor home: ^^ 1E		33. Cursor down:	^J	
ERASURE	DELAY		OA	
18. Entire screen: ^Z 1A	0	34. Cursor right:	^L	
19. Cursor to end of screen: ESC Y 1B 59	0		OC	
20. Beginning of screen to cursor:		35. Cursor left:	^H	
			08	
21. Cursor to end of line: ESC T 1B 54	0	CHARACTER SET		
22. Beginning of line to cursor:		36. Full upper and lower ASCII:	YES	
23. Entire cursor line:		37. Generate all control codes:	YES	
		38. Bell or tone sequence:	^G 07	
EMULATION				
		39. Conform to ANSI X3.64?	NO	
		40. Terminals Emulated:		

---

Manufacturer: Wyse Technology  
Terminal: WY-100

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ^A @ ^M  
01 40 OD

2. ^A A ^M  
01 41 OD

3. ^A B ^M  
01 42 OD

4. ^A C ^M  
01 43 OD

5. ^A D ^M  
01 44 OD

6. ^A E ^M  
01 45 OD

7. ^A F ^M  
01 46 OD

8. ^A G ^M  
01 47 OD

9. ^A H ^M  
01 48 OD

10. ^A I ^M  
01 49 OD

11. ^A J ^M  
01 4A OD

12. ^A K ^M  
01 4B OD

13. ^A L ^M  
01 4C OD

14. ^A M ^M  
01 4D OD

15. ^A N ^M  
01 4E OD

16. ^A O ^M  
01 4F OD

NOTES

30. Multiple attributes available,  
refer to manual.

36. Plus graphics characters.

42. F1-F8 shown unshifted.  
F9-F16 refer to F1-F8 shifted.

---

1. Manufacturer: Wyse Technology  
2. Terminal: WY-300

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SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	ESC G 0
5. Top Row:	1	ESC G 2	1B 47 30
6. Left Column:	1	1B 47 32	1B 47 30
7. Printing in bottom right cause scroll?	PROG	25. Reverse video:	ESC G 0
		ESC G 4	1B 47 30
		1B 47 34	1B 47 30
CURSOR ADDRESSING		26. Underline:	ESC G 0
8. Lead-in sequence:	ESC =	ESC G 8	1B 47 30
	1B 3D	1B 47 38	1B 47 30
9. Row or column first:	ROW	27. High intensity:	
10. Numeric form of row and column:	BINARY	28. Half intensity:	
11. Add offset to:	Row: 1F Col: 1F	ESC G p	ESC G 0
		1B 47 70	1B 47 30
12. Separator sequence:		29. Attributes occupy position:	YES
13. End sequence:		30. Attributes cumulative:	NO
14. Cursor to top row, left column:		31. All attributes off:	
ESC = SP SP		ESC G 0	
1B 3D 20 20		1B 47 30	
15. 10th Row, 50th Column:		CURSOR CONTROL KEYS	
ESC = ) Q		32. Cursor up:	
1B 3D 29 51		^K	
16. Delay after positioning:	0	OB	
17. Cursor home:	~~	33. Cursor down:	
	1E	^J	
ERASURE	DELAY	OA	
18. Entire screen:	^Z	34. Cursor right:	
	1A	^L	
19. Cursor to end of screen:	ESC Y	OC	
	1B 59	35. Cursor left:	
20. Beginning of screen to cursor:		^H	
		08	
21. Cursor to end of line:		CHARACTER SET	
ESC T	0	36. Full upper and lower ASCII:	YES
1B 54		37. Generate all control codes:	YES
22. Beginning of line to cursor:		38. Bell or tone sequence:	
23. Entire cursor line:		^G	
		07	
		EMULATION	
		39. Conform to ANSI X3.64?	NO
		40. Terminals Emulated:	

---

Manufacturer:  
Terminal:

---

Wyse Technology  
WY-300

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |     |    |    | NOTES |
|-----|----|----|-------|
| 1.  | ^A | @  | ^M    |
|     | 01 | 40 | OD    |
| 2.  | ^A | A  | ^M    |
|     | 01 | 41 | OD    |
| 3.  | ^A | B  | ^M    |
|     | 01 | 42 | OD    |
| 4.  | ^A | C  | ^M    |
|     | 01 | 43 | OD    |
| 5.  | ^A | D  | ^M    |
|     | 01 | 44 | OD    |
| 6.  | ^A | E  | ^M    |
|     | 01 | 45 | OD    |
| 7.  | ^A | F  | ^M    |
|     | 01 | 46 | OD    |
| 8.  | ^A | G  | ^M    |
|     | 01 | 47 | OD    |
| 9.  | ^A | H  | ^M    |
|     | 01 | 48 | OD    |
| 10. | ^A | I  | ^M    |
|     | 01 | 49 | OD    |
| 11. | ^A | J  | ^M    |
|     | 01 | 4A | OD    |
| 12. | ^A | K  | ^M    |
|     | 01 | 4B | OD    |
| 13. | ^A | L  | ^M    |
|     | 01 | 4C | OD    |
| 14. | ^A | M  | ^M    |
|     | 01 | 4D | OD    |
| 15. | ^A | N  | ^M    |
|     | 01 | 4E | OD    |
| 16. | ^A | O  | ^M    |
|     | 01 | 4F | OD    |

---

1. Manufacturer: Wyse Technology  
2. Terminal: WY-50

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC =  
        1B 3D  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    BINARY  
11. Add offset to: Row: 1F  
                      Col: 1F  
12. Separator sequence:

13. End sequence:

14. Cursor to top row, left column:  
    ESC = SP SP  
    1B 3D 20 20

15. 10th Row, 50th Column:  
    ESC = ) Q  
    1B 3D 29 51

16. Delay after positioning: 0

17. Cursor home:  
    ^^  
    1E

ERASURE

18. Entire screen:  
    ^Z  
    1A

19. Cursor to end of screen:

20. Beginning of screen to cursor:

21. Cursor to end of line:

22. Beginning of line to cursor:

23. Entire cursor line:

## VIDEO ATTRIBUTES

ON OFF

24. Blinking:  
    ESC G 2  
    1B 47 32  
25. Reverse video:  
    ESC G 4  
    1B 47 34  
26. Underline:  
    ESC G 8  
    1B 47 38  
27. High intensity:

28. Half intensity:  
    ESC G p  
    1B 47 70  
29. Attributes occupy position: YES  
30. Attributes cumulative: NO  
31. All attributes off:  
    ESC G 0  
    1B 47 30

## CURSOR CONTROL KEYS

32. Cursor up:  
    ^K  
    OB  
33. Cursor down:  
    ^J  
    OA  
34. Cursor right:  
    ^L  
    OC  
35. Cursor left:  
    ^H  
    08

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? NO  
40. Terminals Emulated:  
    Televideo 910/920/925  
    Hazeltine 1500  
    ADDS Viewpoint

---

Manufacturer: Wyse Technology  
Terminal: WY-50

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

- |                         |   |
|-------------------------|---|
| 1. ^A @ ^M<br>01 40 OD  | NOTES<br>4. Or 132.<br>8. In 132 column mode:<br>ESC a                                    |
| 2. ^A A ^M<br>01 41 OD  | 10. In 132 column mode:<br>VARIABLE-LENGTH ASCII  |
| 3. ^A B ^M<br>01 42 OD  | 11. In 132 column mode:<br>no offset  |
| 4. ^A C ^M<br>01 43 OD  | 12. In 132 column mode:<br>R  |
| 5. ^A D ^M<br>01 44 OD  | 13. In 132 column mode:<br>C  |
| 6. ^A E ^M<br>01 45 OD  | 14. In 132 column mode:<br>ESC a 1 R 1 C  |
| 7. ^A F ^M<br>01 46 OD  | 15. In 132 column mode:<br>ESC a 10 R 50 C  |
| 8. ^A G ^M<br>01 47 OD  | 30. Multiple attributes available,<br>refer to manual.                                    |
| 9. ^A H ^M<br>01 48 OD  | 36. Plus graphics characters.   |
| 10. ^A I ^M<br>01 49 OD | 42. Also shifted F1-F16. All function<br>keys user programmable. Default<br>values shown. |
| 11. ^A J ^M<br>01 4A OD |   |
| 12. ^A K ^M<br>01 4B OD |   |
| 13. ^A L ^M<br>01 4C OD |   |
| 14. ^A M ^M<br>01 4D OD |   |
| 15. ^A N ^M<br>01 4E OD |   |
| 16. ^A O ^M<br>01 4F OD |   |

---

1. Manufacturer: Wyse Technology  
2. Terminal: WY-75

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## ERASURE

18. Entire screen: DELAY  
    ESC [ 2 J 0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J 0  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K 0  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 0  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

ON OFF  
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
    ESC [ 1 m  
    1B 5B 31 6D  
28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:  
    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:

---

Manufacturer:  
Terminal:

---

Wyse Technology  
WY-75

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

NOTES

1. 4. Or 132.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer: Zenith Data Systems  
2. Terminal: ZT-10

---

SCREEN LAYOUT		VIDEO ATTRIBUTES	
3. Number of rows:	24	ON	OFF
4. Number of columns:	80	24. Blinking:	ESC s 0
5. Top Row:	1	ESC s 2	1B 73 32
6. Left Column:	1	1B 73 31	1B 73 30
7. Printing in bottom right cause scroll?	YES	25. Reverse video:	ESC s 0
		1B 73 31	1B 73 30
CURSOR ADDRESSING		26. Underline:	
8. Lead-in sequence:		ESC s 0	
	ESC Y	1B 73 30	
9. Row or column first:	ROW	27. High intensity:	
10. Numeric form of row and column:	BINARY	28. Half intensity:	ESC s 0
11. Add offset to:	Row: 1F Col: 1F	ESC s 4	1B 73 34
12. Separator sequence:		1B 73 30	
13. End sequence:		29. Attributes occupy position:	NO
14. Cursor to top row, left column:	ESC Y SP SP 1B 59 20 20	30. Attributes cumulative:	NO
15. 10th Row, 50th Column:	ESC Y ) Q 1B 59 29 51	31. All attributes off:	
16. Delay after positioning:	0	ESC s 0	
17. Cursor home:	ESC H 1B 48	1B 73 30	
ERASURE	DELAY	CURSOR CONTROL KEYS	
18. Entire screen:	0	32. Cursor up:	ESC A 1B 41
	ESC E 1B 45	33. Cursor down:	ESC B 1B 42
19. Cursor to end of screen:	0	34. Cursor right:	ESC C 1B 43
	ESC J 1B 4A	35. Cursor left:	ESC D 1B 44
20. Beginning of screen to cursor:	0	CHARACTER SET	
	ESC b 1B 62	36. Full upper and lower ASCII:	YES
21. Cursor to end of line:	0	37. Generate all control codes:	YES
	ESC K 1B 4B	38. Bell or tone sequence:	
22. Beginning of line to cursor:	0	^G 07	
	ESC o 1B 6F	EMULATION	
23. Entire cursor line:	0	39. Conform to ANSI X3.64?	NO
	ESC I 1B 49	40. Terminals Emulated:	
		DEC VT-52	

---

Manufacturer: Zenith Data Systems  
Terminal: ZT-10

---

41. Information provided by:  
MANUFACTURER
42. PROGRAM FUNCTION KEYS   NOTES
1. ESC S   30. Blinking & reverse video:  
          1B  53    ESC s  3  
  1B  73  33
2. ESC T  
    1B  54
3. ESC U  
    1B  55
4. ESC V  
    1B  56
5. ESC W  
    1B  57
6. ESC P  
    1B  50
7. ESC Q  
    1B  51
8. ESC R  
    1B  52
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

---

1. Manufacturer: Zenith Data Systems  
2. Terminal: Z-19-HW

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? NO

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to: Row: 0  
                      Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
        1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
        1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ 1 ; 1 H  
        1B 5B 31 3B 31 48

## ERASURE

18. Entire screen: DELAY  
    ESC [ 2 J 0  
        1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ 0 J 0  
        1B 5B 30 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
        1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ 0 K 0  
        1B 5B 30 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
        1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 0  
        1B 5B 32 4B

## VIDEO ATTRIBUTES

ON OFF  
24. Blinking:  
    ESC [ 7 m  
        1B 5B 37 6D  
    ESC [ 0 m  
        1B 5B 30 6D  
25. Reverse video:  
26. Underline:  
27. High intensity:  
28. Half intensity:  
29. Attributes occupy position: NO  
30. Attributes cumulative: NO  
31. All attributes off:

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
        1B 5B 41  
33. Cursor down:  
    ESC [ B  
        1B 5B 42  
34. Cursor right:  
    ESC [ C  
        1B 5B 43  
35. Cursor left:  
    ESC [ D  
        1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: NO  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    VT-52

---

Manufacturer: Zenith Data Systems  
Terminal: Z-19-HW

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                   NOTES

1. ESC O S  
1B 4F 53

2. ESC O T  
1B 4F 54

3. ESC O U  
1B 4F 55

4. ESC O V  
1B 4F 56

5. ESC O W  
1B 4F 57

6. ESC O P  
1B 4F 50

7. ESC O Q  
1B 4F 51

8. ESC O R  
1B 4F 52

9.

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Zenith Data Systems  
2. Terminal: Z-29

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0  
12. Separator sequence:  
    ;  
    3B  
13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48

## ERASURE

18. Entire screen: DELAY  
    ESC [ 2 J 0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ 0 J 0  
    1B 5B 30 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ 0 K 0  
    1B 5B 30 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 0  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
28. Half intensity:  
    ESC [ 2 m  
    1B 5B 32 6D  
29. Attributes occupy position: NO  
30. Attributes cumulative: NO  
31. All attributes off:  
    ESC [ 0 m  
    1B 5B 30 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:  
    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    Heath/Zenith H/Z-19  
    ANSI X3.64-1979 (VT100)  
    Lear Siegler ADM 3A  
    Hazeltine 1500

---

Manufacturer: Zenith Data Systems  
Terminal: Z-29

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS                    NOTES

1. ESC O S  
1B 4F 53

2. ESC O T  
1B 4F 54

3. ESC O U  
1B 4F 55

4. ESC O V  
1B 4F 56

5. ESC O W  
1B 4F 57

6. ESC O P  
1B 4F 50

7. ESC O Q  
1B 4F 51

8. ESC O R  
1B 4F 52

9. ESC O X  
1B 4F 58

10.

11.

12.

13.

14.

15.

16.

---

1. Manufacturer: Zenith Data Systems  
2. Terminal: Z-49

---

## SCREEN LAYOUT

3. Number of rows: 24  
4. Number of columns: 80  
5. Top Row: 1  
6. Left Column: 1  
7. Printing in bottom right cause scroll? PROG

## CURSOR ADDRESSING

8. Lead-in sequence:  
    ESC [  
        1B 5B  
9. Row or column first: ROW  
10. Numeric form of row and column:  
    VARIABLE-LENGTH ASCII  
11. Add offset to:  
    Row: 0  
    Col: 0

12. Separator sequence:  
    ;  
    3B

13. End sequence:  
    H  
    48

14. Cursor to top row, left column:  
    ESC [ 1 ; 1 H  
    1B 5B 31 3B 31 48  
15. 10th Row, 50th Column:  
    ESC [ 1 0 ; 5 0 H  
    1B 5B 31 30 3B 35 30 48  
16. Delay after positioning: 0  
17. Cursor home:  
    ESC [ H  
    1B 5B 48

## ERASURE

18. Entire screen: DELAY  
    ESC [ 2 J 0  
    1B 5B 32 4A  
19. Cursor to end of screen:  
    ESC [ J 0  
    1B 5B 4A  
20. Beginning of screen to cursor:  
    ESC [ 1 J 0  
    1B 5B 31 4A  
21. Cursor to end of line:  
    ESC [ K 0  
    1B 5B 4B  
22. Beginning of line to cursor:  
    ESC [ 1 K 0  
    1B 5B 31 4B  
23. Entire cursor line:  
    ESC [ 2 K 0  
    1B 5B 32 4B

## VIDEO ATTRIBUTES

- ON OFF  
24. Blinking:  
    ESC [ 5 m  
    1B 5B 35 6D  
25. Reverse video:  
    ESC [ 7 m  
    1B 5B 37 6D  
26. Underline:  
    ESC [ 4 m  
    1B 5B 34 6D  
27. High intensity:  
    ESC [ 1 m  
    1B 5B 31 6D  
28. Half intensity:

29. Attributes occupy position: NO  
30. Attributes cumulative: YES  
31. All attributes off:

    ESC [ m  
    1B 5B 6D

## CURSOR CONTROL KEYS

32. Cursor up:  
    ESC [ A  
    1B 5B 41  
33. Cursor down:  
    ESC [ B  
    1B 5B 42  
34. Cursor right:  
    ESC [ C  
    1B 5B 43  
35. Cursor left:  
    ESC [ D  
    1B 5B 44

## CHARACTER SET

36. Full upper and lower ASCII: YES  
37. Generate all control codes: YES  
38. Bell or tone sequence:

    ^G  
    07

## EMULATION

39. Conform to ANSI X3.64? YES  
40. Terminals Emulated:  
    DEC VT-100

---

Manufacturer: Zenith Data Systems  
Terminal: Z-49

---

41. Information provided by:  
MANUFACTURER

42. PROGRAM FUNCTION KEYS

1. ESC O P  
1B 4F 50

NOTES

4. Optionally 132.  
36. Plus VT-100 graphics and  
Z-29 graphics.

2. ESC O Q  
1B 4F 51

42. PF keys programmable.

3. ESC O R  
1B 4F 52

4. ESC O S  
1B 4F 53

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

## APPENDIX 1 — ASCII CODE CONVERSION CHART

<b>Binary</b>	<b>Decimal</b>	<b>Octal</b>	<b>Hex</b>	<b>ASCII</b>	<b>Ctrl</b>	<b>Binary</b>	<b>Decimal</b>	<b>Octal</b>	<b>Hex</b>	<b>ASCII</b>
0000 0000	000	000	00	NUL	^@	0100 0000	064	100	40	@
0000 0001	001	001	01	SOH	^A	0100 0001	065	101	41	A
0000 0010	002	002	02	STX	^B	0100 0010	066	102	42	B
0000 0011	003	003	03	ETX	^C	0100 0011	067	103	43	C
0000 0100	004	004	04	EOT	^D	0100 0100	068	104	44	D
0000 0101	005	005	05	ENQ	^E	0100 0101	069	105	45	E
0000 0110	006	006	06	ACK	^F	0100 0110	070	106	46	F
0000 0111	007	007	07	BEL	^G	0100 0111	071	107	47	G
0000 1000	008	010	08	BS	^H	0100 1000	072	110	48	H
0000 1001	009	011	09	HT	^I	0100 1001	073	111	49	I
0000 1010	010	012	0A	LF	^J	0100 1010	074	112	4A	J
0000 1011	011	013	0B	VT	^K	0100 1011	075	113	4B	K
0000 1100	012	014	0C	FF	^L	0100 1100	076	114	4C	L
0000 1101	013	015	0D	CR	^M	0100 1101	077	115	4D	M
0000 1110	014	016	0E	SO	^N	0100 1110	078	116	4E	N
0000 1111	015	017	0F	SI	^O	0100 1111	079	117	4F	O
0001 0000	016	020	10	DLE	^P	0101 0000	080	120	50	P
0001 0001	017	021	11	DC1	^Q	0101 0001	081	121	51	Q
0001 0010	018	022	12	DC2	^R	0101 0010	082	122	52	R
0001 0011	019	023	13	DC3	^S	0101 0011	083	123	53	S
0001 0100	020	024	14	DC4	^T	0101 0100	084	124	54	T
0001 0101	021	025	15	NAK	^U	0101 0101	085	125	55	U
0001 0110	022	026	16	SYN	^V	0101 0110	086	126	56	V
0001 0111	023	027	17	ETB	^W	0101 0111	087	127	57	W
0001 1000	024	030	18	CAN	^X	0101 1000	088	130	58	X
0001 1001	025	031	19	EM	^Y	0101 1001	089	131	59	Y
0001 1010	026	032	1A	SUB	^Z	0101 1010	090	132	5A	Z
0001 1011	027	033	1B	ESC	^_	0101 1011	091	133	5B	_
0001 1100	028	034	1C	FS	^`	0101 1100	092	134	5C	\
0001 1101	029	035	1D	GS	^]	0101 1101	093	135	5D	]
0001 1110	030	036	1E	RS	^~	0101 1110	094	136	5E	~
0001 1111	031	037	1F	US	^=	0101 1111	095	137	5F	=
0010 0000	032	040	20	SP		0110 0000	096	140	60	'
0010 0001	033	041	21	!		0110 0001	097	141	61	a
0010 0010	034	042	22	"		0110 0010	098	142	62	b
0010 0011	035	043	23	#		0110 0011	099	143	63	c
0010 0100	036	044	24	\$		0110 0100	100	144	64	d
0010 0101	037	045	25	%		0110 0101	101	145	65	e
0010 0110	038	046	26	&		0110 0110	102	146	66	f
0010 0111	039	047	27	'		0110 0111	103	147	67	g
0010 1000	040	050	28	(		0110 1000	104	150	68	h
0010 1001	041	051	29	)		0110 1001	105	151	69	i
0010 1010	042	052	2A	*		0110 1010	106	152	6A	j
0010 1011	043	053	2B	+		0110 1011	107	153	6B	k
0010 1100	044	054	2C	,		0110 1100	108	154	6C	l
0010 1101	045	055	2D	-		0110 1101	109	155	6D	m
0010 1110	046	056	2E	,		0110 1110	110	156	6E	n
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0011 0000	048	060	30	0		0111 0000	112	160	70	p
0011 0001	049	061	31	1		0111 0001	113	161	71	q
0011 0010	050	062	32	2		0111 0010	114	162	72	r
0011 0011	051	063	33	3		0111 0011	115	163	73	s
0011 0100	052	064	34	4		0111 0100	116	164	74	t
0011 0101	053	065	35	5		0111 0101	117	165	75	u
0011 0110	054	066	36	6		0111 0110	118	166	76	v
0011 0111	055	067	37	7		0111 0111	119	167	77	w
0011 1000	056	070	38	8		0111 1000	120	170	78	x
0011 1001	057	071	39	9		0111 1001	121	171	79	y
0011 1010	058	072	3A	:		0111 1010	122	172	7A	z
0011 1011	059	073	3B	;		0111 1011	123	173	7B	{
0011 1100	060	074	3C	<		0111 1100	124	174	7C	!
0011 1101	061	075	3D	=		0111 1101	125	175	7D	}
0011 1110	062	076	3E	>		0111 1110	126	176	7E	~
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**A Programmer's Guide to Video Display Terminals** is an indispensable guide for the programmer designing a software system which must able to run on a wide variety of video display terminals and microcomputers.

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