MODEL 2426

ALARM MONITORING STATION

USERS MANUAL

SOFTWARE REVISION LEVEL: 5.0

SCIENTIFIC-ATLANTA
SECURITY & ENERGY PRODUCTS DIVISION

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**Scientific
Atlanta**

SCREEN IMAGE

```
Scientific Atlanta  Model 2426  MDAS      Date:  2/21/84   Time:  6:35
  MDAS Master Menu
  COMM        Communications Monitor    SLEEP       Suspend CRT Operations
  DATE        Set Date  MM/DD/YY        TIME        Set Time  HH:MM
  MONITOR     MDAS Monitor
```

```
==> COMM
```

```
Scientific Atlanta  Model 2426  MDAS      Date:  2/21/84   Time:  6:25
  Communications Monitor
```

⊠:⊠:⊠: >052100013800⦙>052100012000⦙>052100010000⦙⊠⦙>0114⦙>05240005E01E⦙⊠:

MASTER MENU INSTRUCTIONS

COMMAND TYPE   COMMUNICATIONS MONITOR

COMMAND ENTRY   ENTER COMM (PRESS RETURN KEY)

FUNCTION KEY FORMAT   F4 = RETURN, F7 = PRINT SCREEN

COMMAND PURPOSE   PRESENTS A VISUAL INDICATION OF THE COMMUNICATION
                        ACTIVITY BETWEEN THE HEADEND SCANNER AND THE
                        CENTRAL MONITORING COMPUTER. NORMAL VIDEO
                        CHARACTERS REPRESENT SCANNER COMMUNICATION WHILE
                        INVERSE VIDEO REPRESENTS THE CENTRAL MONITORING
                        COMPUTER COMMUNICATIONS LINK.

COMMAND RESULTS   A STREAM OF CHARACTERS IN NORMAL VIDEO AND
                        INVERSE VIDEO IS PRESENTED ON THE CRT DISPLAY.
                        TO RETURN TO THE MASTER MENU, PRESS F4.

SCREEN IMAGE

ientific Atlanta   Model 2426   MDAS   Date: 2/20/84   Time: 10:13
MDAS Master Menu
COMM   Communications Monitor   SLEEP   Suspend CRT Operations
DATE   Set Date MM/DD/YY   TIME   Set Time HH:MM
MONITOR   MDAS Monitor   •

==> DA 2 20 84

MASTER MENU INSTRUCTIONS

COMMAND TYPE   SET DATE

COMMAND ENTRY   ENTER DA-MM-DD-YY (PRESS RETURN) WHERE – REPRESENTS A
                      SPACE, MM REPRESENTS THE MONTH, DD REPRESENTS THE DAY
                      AND YY REPRESENTS THE YEAR.

FUNCTION KEY FORMAT   F7 = PRINT SCREEN

COMMAND PURPOSE   ALLOWS THE DATE TO BE ENTERED INTO THE SCANNER'S
                      COMPUTER SO THAT THE DATE CAN BE AUTOMATICALLY UPDATED
                      EACH DAY.

COMMAND RESULTS   THE DATE APPEARS IN THE UPPER RIGHT-HAND CORNER OF THE
                      DISPLAY SCREEN. A PREVIOUSLY ENTERED DATE WILL BE
                      CHANGED TO THE NEWLY ENTERED DATE UPON COMMAND COMPLETION.

SCREEN IMAGE

```
ientific Atlanta  Model 2426  MDAS      Date: 2/20/84    Time: 10:38
MDAS Master Menu
COMM           Communications Monitor    SLEEP     Suspend CRT Operations
DATE           Set Date  MM/DD/YY         TIME      Set Time  HH:MM
MONITOR        MDAS Monitor



==> SL
```

MASTER MENU INSTRUCTIONS

COMMAND TYPE   SLEEP OR SUSPEND CRT OPERATIONS

COMMAND ENTRY   ENTER SLEEP (PRESS RETURN KEY)

FUNCTION KEY FORMAT   F7 = PRINT SCREEN

COMMAND PURPOSE   INTENDED TO DISABLE THE KEYBOARD TO DISCOURAGE
                         UNAUTHORIZED PERSONNEL FROM USING THE SECURITY
                         SYSTEM IN THE ABSENCE OF THE SYSTEM OPERATOR.

COMMAND RESULTS   ALL COMMAND TITLES PRESENTED ON THE CRT DISPLAY
                         SCREEN ARE ERASED. ALL KEYS ON THE KEYBOARD ARE
                         DISABLED EXCEPT FOR THE ESCAPE (ESC) KEY. TO
                         RETURN TO THE MASTER MENU PRESS ESC KEY.

SCREEN IMAGE

cientific Atlanta Model 2426 MDAS   Date: 2/20/84   Time: 10:13
MDAS Master Menu
COMM   Communications Monitor   SLEEP   Suspend CRT Operations
DATE   Set Date MM/DD/YY   TIME   Set Time HH:MM
MONITOR   MDAS Monitor

==> TI 10 13

MASTER MENU INSTRUCTIONS

COMMAND TYPE   SET TIME

COMMAND ENTRY   ENTER TI-HH-MM (PRESS RETURN KEY) WHERE - REPRESENTS
                       A SPACE, HH REPRESENTS THE HOUR AND MM REPRESENTS
                       THE MINUTES. ENTER TIME IN THE TWENTY-FOUR HOUR
                       CLOCK FORMAT.

FUNCTION KEY FORMAT   F7 = PRINT SCREEN

COMMAND PURPOSE   ALLOWS THE TIME TO BE ENTERED INTO THE SCANNER'S
                       COMPUTER SO THAT THE TIME CAN BE AUTOMATICALLY BE
                       UPDATED EACH HOUR AND MINUTE.

COMMAND RESULTS   THE TIME APPEARS IN THE UPPER RIGHT-HAND CORNER OF
                       THE DISPLAY SCREEN. A PREVIOUSLY ENTERED TIME
                       WILL BE CHANGED TO THE NEWLY ENTERED TIME UPON
                       COMMAND COMPLETION.

SCREEN IMAGE

==> MO

MASTER MENU INSTRUCTIONS

COMMAND TYPE   CHANGE TO MONITOR SCREEN

COMMAND ENTRY   ENTER MO (PRESS RETURN KEY)

FUNCTION KEY FORMAT   F7 = PRINT SCREEN

COMMAND PURPOSE   INITIATION OF THIS COMMAND CAUSES THE DISPLAY
                       SCREEN TO CHANGE TO THE MONITOR MENU SCREEN
                       WHERE ALL ALARM MONITORING AND PROCESSING IS
                       PERFORMED.

COMMAND RESULTS   THE MONITOR MENU SCREEN APPEARS IN PLACE OF THE
                       MASTER MENU SCREEN.

SCREEN IMAGE

Scientific Atlanta   Model 2426 MDAS   Date: 2/20/84   Time: 10:34
Scan=OFF   CMC=ON   Chan=P   Alarms=0   N.R.Rept=ON   Timer=30   STUs=0

==>
                                  Alarms Pending
                                                      BIN=OFF   LOG=OFF   AUTO=OFF
 Address   Date   Time   Status

MONITOR MENU INSTRUCTIONS

DEFAULT COMMANDS

DEFAULT COMMANDS ARE DEFINED AS THOSE COMMANDS AUTOMATICALLY SET FOR CERTAIN SYSTEM PARAMETERS UPON INITIAL BOOT-UP OF THE CABLE SECURITY SOFT- WARE. THE DEFAULT COMMAND VALUES INCLUDE:

SCAN = OFF, CMC = ON, NO RESPONSE REPORT = ON, TIMER = 30 SECONDS, BINARY STATUS = OFF, LOG ALARMS = OFF AND AUTO LOAD = OFF

CHANGING DEFAULT VALUES

COMMANDS WITH ON OR OFF DEFAULT VALUES MAY BE CHANGED BY ENTERING THE COMMAND AND PRESSING RETURN.

EXAMPLE: SCAN = OFF
           ENTER SCAN (PRESS RETURN KEY)
           SCAN = ON

FOR NUMERIC COMMAND CHANGES SUCH AS TIMER = 30 TO TIMER = 15 SECONDS, THE FOLLOWING PROCEDURE APPLIES:

EXAMPLE: TIMER = 30
           ENTER TIMER- 15 (PRESS RETURN KEY)
           WHERE - REPRESENTS A SPACE
           TIMER = 15

SCREEN IMAGE

```
entific Atlanta  Model 2426  MDAS       Date:  2/20/84    Time: 10:37
Scan=ON    CMC=OFF    Chan=P    Alarms=4    N.R.Rept=OFF   Timer=10     STUs=119

==> ACK 2
                              Alarms Pending
                                                   BIN=OFF   LOG=OFF   AUTO=OFF
  Address    Date    Time   Status
     3     2/20/84  10:37   MEDICAL
     2     2/20/84  10:37   INTRUSION
     1     2/20/84  10:37   FIRE
     2     2/20/84  10:37   ALL CLEAR
```

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   ACKNOWLEDGE ALARM

COMMAND ENTRY   ENTER ACK- ADDRESS (PRESS RETURN KEY) WHERE -
                       REPRESENTS A SPACE FOLLOWED BY THE TRANSPONDER
                       ADDRESS

FUNCTION KEY FORMAT   F5 = BINARY STATUS,   F6 = LOG ALARMS,
                       F7 = PRINT SCREEN,   F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   ALLOWS THE OPERATOR THE ABILITY TO ACKNOWLEDGE
                       SPECIFIC ALARMS FROM AN ALARM GROUP DISPLAYED ON
                       THE CRT SCREEN.

COMMAND RESULTS   THE SPECIFIC ALARM THAT WAS ACKNOWLEDGE IS RE-
                       MOVED FROM THE SCREEN AND ALARMS LISTED BELOW
                       IT MOVE UP ONE LINE ON THE CRT DISPLAY. AN
                       ALARM ACKNOWLEDGE STATEMENT APPEARS ON THE CRT
                       DISPLAY AND THE HARD COPY PRINTER

SCREEN IMAGE

```
Scientific Atlanta  Model 2426  MDAS       Date:  2/20/84    Time: 10:28
Scan=ON     CMC=ON    Chan=P   Alarms=0    N.R.Rept=OFF   Timer=30    STUs=115

==> ADD 56,100-250,67
                                    Alarms Pending
  Address    Date    Time    Status                 BIN=OFF  LOG=OFF  AUTO=OFF
------------------------------------------------------------------------------
```

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   ADD ADDRESS (ES)

COMMAND ENTRY   ENTER ADD- ADDRESS(ES) (PRESS RETURN KEY) WHERE -
                      REPRESENTS A SPACE FOLLOWED BY A SINGLE ADDRESS OR
                      GROUP OF ADDRESSES

FUNCTION KEY FORMAT   F5 = BINARY STATUS,   F6 = LOG ALARMS
                      F7 = PRINT SCREEN,   F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   ALLOWS THE OPERATOR TO ENTER SINGULAR OR MULTIPLE
                      TRANSPONDER ADDRESSES INTO THE SCANNER ADDRESS
                      DATA BASE.

COMMAND RESULTS   THE STU (STANDARD TRANSPONDER UNITS) NUMBER IS
                      INCREMENTED BY THE TOTAL NUMBER OF ADDRESSES
                      ADDED TO THE DATA BASE. DEPENDING UPON THE
                      STATUS OF THE NEW TRANSPONDER ADDITIONS, A
                      CORRESPONDING STATUS MAY APPEAR ON THE CRT DISPLAY
                      SCREEN. THE OPERATOR MAY ACKNOWLEDGE THESE
                      RESULTS USING FUNCTION KEY F8.

SCREEN IMAGE

```
 Scientific Atlanta  Model 2426  MDAS      Date: 2/20/84    Time: 10:29
 Scan=ON    CMC=ON    Chan=P   Alarms=0    N.R.Rept=OFF   Timer=30   STUs=119

 ==> DEL 22,100-250, 67
                                  Alarms Pending
                                                   BIN=OFF  LOG=OFF  AUTO=OFF
 Address   Date    Time    Status
------------------------------------------------------------------------------
```

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   DELETE ADDRESS(ES)

COMMAND ENTRY   ENTER DELETE- ADDRESS(ES) (PRESS RETURN KEY) WHERE -
    '   REPRESENTS A SPACE FOLLOWED BY A SINGLE ADDRESS OR
                             A GROUP OF ADDRESSES.

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                             F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   ALLOWS THE OPERATOR TO DELETE SINGULAR OR MULTIPLE
                             TRANSPONDER ADDRESSES FROM THE SCANNER ADDRESS
                             DATA BASE.

COMMAND RESULTS   THE STU (STANDARD TRANSPONDER UNITS) NUMBER IS
                             DECREMENTED BY THE TOTAL NUMBER OF ADDRESS DELETED
                             FROM THE DATA BASE

SCREEN IMAGE

Scientific Atlanta Model 2426 MDAS   Date: 2/20/84   Time: 10:29
Scan=ON   CMC=ON   Chan=P   Alarms=0   N.R.Rept=OFF   Timer=30   STUs=119

==> RETURN
                                    Alarms Pending
                                                    BIN=OFF LOG=OFF AUTO=OFF
  Address   Date   Time   Status

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   RETURN   TURS SCAN OFF
                                        ?

COMMAND ENTRY   ENTER SCAN (PRESS RETURN KEY). NEXT ENTER
                       RETURN (PRESS RETURN KEY).

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                       F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   RETURNS THE OPERATOR TO THE MASTER MENU

COMMAND RESULTS   THE MASTER MENU SCREEN WHICH APPEARS ALLOWS FOR
                       INITIATION OF VARIOUS SYSTEM MAINTENANCE COMMANDS.

SCREEN IMAGE

```
 Scientific Atlanta  Model 2426  MDAS        Date: 2/20/84    Time: 10:30
 Scan=ON    CMC=ON     Chan=P   Alarms=0     N.R.Rept=OFF   Timer=30   STUs=119

==> SC
                                 Alarms Pending
 Address   Date   Time   Status                    BIN=OFF  LOG=OFF  AUTO=OFF
-----------------------------------------------------------------------------
```

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   SCAN ON, SCAN OFF

COMMAND ENTRY   ENTER SCAN (PRESS RETURN KEY)

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                       F7 = PRINT SCREENT, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   ALLOWS THE OPERATOR THE ABILITY TO TURN THE SCAN
                       ON OR OFF. THE SCAN MUST BE OFF BEFORE THE
                       OPERATOR CAN EXIT FROM THE MONITOR MENU.

CAUTION

TOGGLING THE SCAN FROM ON TO OFF TO ON FLUSHES
ALL EXISTING ALARMS HELD IN THE SCANNER ALARM
QUEUE INCLUDING THE ALARMS DISPLAYED ON THE CRT
SCREEN.

COMMAND RESULTS   THE SCAN CHANGES FROM SCAN=ON TO SCAN=OFF. ALL
                       COMMUNICATIONS BETWEEN SCANNER AND THE SUBSCRIBER-
                       BASED TRANSPONDERS IS SUSPENDED UNTIL THE SCAN IS
                       REACTIVATED.

SCREEN IMAGE

Scientific Atlanta Model 2426 MDAS   Date: 2/20/84   Time: 10:30
Scan=ON   CMC=ON   Chan=P   Alarms=0   N.R.Rept=OFF   Timer=30   STUs=119

==> SEND
                                 Alarms Pending
 Address   Date   Time   Status   BIN=OFF LOG=OFF AUTO=OFF

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   SEND

COMMAND ENTRY   ENTER SEND- ADDRESS- NUMBER (PRESS RETURN KEY)
                         WHERE - REPRESENTS A SPACE FOLLOWED BY A TRANSPONDER
                         ADDRESS, A SPACE AND A WHOLE NUMBER.

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                         F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   ALLOWS THE OPERATOR TO SEND TO A SPECIFIC COMMAND
                         TO THE TRANSPONDER DESIGNATED IN THE ENTRY FORMAT
                         ABOVE. THE COMMAND NUMBER IS TRANSLATED BY THE
                         SCANNER INTO A BINARY WORD FOR INTERPRETATION
                         BY THE TRANSPONDER'S MICROPROCESSOR FOR PERFORM-
                         ING A SPECIFIC ACTION.

                         A LISTING OF SEND COMMANDS WILL BE PUBLISHED IN
                         FUTURE REVISIONS TO THIS OPERATOR'S MANUAL.

COMMAND RESULTS

SCREEN IMAGE

```
Scientific Atlanta  Model 2426  MDAS        Date:  2/20/84    Time: 10:31
Scan=ON     CMC=ON    Chan=P   Alarms=0    N.R.Rept=OFF   Timer=30     STUs=119

==> ST 2
                                    Alarms Pending
  Address    Date    Time   Status                    BIN=OFF  LOG=OFF  AUTO=OFF
    2      ** STATUS **    ALL CLEAR
---------------------------------------------------------------------------------
```

MONITOR MENU INSTRUCTIONS

COMMAND TYPE | STATUS

COMMAND ENTRY | ENTER STATUS- ADDRESS (PRESS RETURN KEY) WHERE - REPRESENTS A SPACE FOLLOWED BY A TRANSPONDER ADDRESS.

FUNCTION KEY FORMAT | F5 = BINARY STATUS, F6 = LOG ALARMS
F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE | ALLOWS THE OPERATOR THE ABILITY TO REQUEST A GENERAL STATUS CONDITION (AS OPPOSED TO READ COMMAND) OF A SPECIFIC TRANSPONDER. POSSIBLE RESPONSES INCLUDE:

ALL CLEAR - INDICATES THAT SPECIFIC TRANSPONDER IS PROPERLY COMMUNICATING WITH THE HEADEND SCANNER AND NO PENDING OR ACTIVE ALARMS EXIST AT THE TRANSPONDER ALARM INPUTS.

NO RESPONSE - INDICATES THAT SPECIFIC TRANSPONDER IS NOT COMMUNICATING WITH THE HEADEND SCANNER.

ALARM REPORT - INDICATES THAT TRANSPONDER HAS AN ACTIVE, UNACKNOWLEDGED ALARM OR ALARMS

COMMAND RESULTS | A STATUS REQUEST ON A SPECIFIC TRANSPONDER WILL REPORT EITHER A NO RESPONSE, AN ALARM OR AN ALL CLEAR TO THE CRT DISPLAY SCREEN AND PRINTER.

SCREEN IMAGE

```
.cientific Atlanta  Model 2426  MDAS        Date: 2/20/84   Time: 10:33
Scan=ON    CMC=ON    Chan=P   Alarms=0      N.R.Rept=OFF   Timer=30    STUs=119

** WARNING **   SAVE DESTROYS CURRENT BACKUP DATABASE.  PROCEED? (Y/N)
                           Alarms Pending
 Address   Date   Time   Status                    BIN=OFF  LOG=OFF  AUTO=OFF
        2/20/84 10:34   >> CHECKSUM VERIFIED - DATABASE SAVED <<
```

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   SAVE

COMMAND ENTRY   SAVE (PRESS RETURN KEY). NEXT SELECT YES OR
                      NO (Y OR N) AND PRESS THE RETURN KEY.

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                      F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   ALLOWS THE OPERATOR THE ABILITY TO SAVE THE NEW
                      NUMBER OF ENABLED TRANSPONDERS INTO THE CON-
                      TINUOUS MEMORY RAM LOCATED IN THE SCANNER.
                      THIS FEATURE ASSURES THE OPERATOR THAT THERE
                      WILL BE DATA BASE INTEGRITY IN THE EVENT OF
                      LOSS POWER OR VOLTAGE TRANSIENTS.

COMMAND RESULTS   THE OPERATOR RECEIVES A WARNING NOTIFICATION
                      THAT THE CURRENT DATA BASE WILL BE REPLACED
                      (DESTROYED) BY THE NEW DATA BASE ENTERED. A
                      YES OR NO SELECTION (Y OR N) IS REQUIRED TO
                      SAVE THE NEW DATA BASE

                      NOTIFICATION TO THE OPERATOR OF A DATA BASE
                      SAVE APPEARS DIRECTLY BELOW THE ALARMS PENDING
                      HEADING.

SCREEN IMAGE

```
 scientific Atlanta  Model 2426  MDAS        Date:  2/20/84    Time:  10:34
Scan=ON    CMC=ON    Chan=F   Alarms=0    N.R.Rept=OFF   Timer=30    STUs=119

==> HELP
                              Alarms Pending
 Address   Date    Time   Status                BIN=OFF  LOG=OFF  AUTO=OFF
                                                       :: :
```

MDAS Command Menu

ACK	Acknowledge Alarm	RESET	Reset Transponder
ADD	STU Address Enable	RESPONSE	Display NO Responses
DELETE	STU Address Disable	CMC	CMC Communications
RETURN	Return to Master Menu	DIAL	Dialer Trigger
SCAN	STU Scanner	EXAMINE	Examine/Modify AER Map
SEND	Send Transponder Cmd	LIST	List Enabled Addresses
STATUS	Demand STU Status	POWER	Adjust Power Level
READ	Read Status Reg	TEST	Toggle Test Bit
SAVE	Save Current D-base	LOAD	Load Backup D-base
HELP	This Menu		

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   HELP

COMMAND ENTRY   ENTER HELP (PRESS RETURN KEY)

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                       F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   TO PROVIDE THE OPERATOR WITH A LIST OF ALL
                       MONITOR MENU COMMANDS AND CORRESPONDING
                       DESCRIPTIONS.

COMMAND RESULTS   THE OPERATOR OBTAINS A CRT DISPLAY LISTING OF
                       ALL MONITOR MENU COMMANDS DIRECTLY BELOW THE
                       ALARMS PENDING HEADING. IF ALARM REPORTS OCCUPY
                       THIS SPACE, THE OPERATOR MUST FIRST ACKNOWLEDGE
                       THESE ALARMS TO ALLOW ROOM FOR THE HELP MENU.

SCREEN IMAGE

```
 Scientific Atlanta  Model 2426  MDAS      Date:  2/20/84    Time: 10:43
 Scan=ON    CMC=OFF    Chan=P   Alarms=0      N.R.Rept=OFF   Timer=10    STUs=119

==> RESET 14
                                      Alarms Pending
                                                    BIN=OFF  LOG=OFF  AUTO=OFF
 Address   Date   Time   Status
-----------------------------------------------------------------------------
```

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   RESET TRANSPONDER

COMMAND ENTRY   ENTER RESET- ADDRESS (PRESS RETURN KEY). WHERE -
                       REPRESENTS A SPACE FOLLOWED BY THE TRANSPONDER
                       ADDRESS.

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                       F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   THIS COMMAND CAUSES A SPECIFIC TRANSPONDER'S
                       MICROPORCESSOR TO ENTER A SOFTWARE ROUTINE
                       WHERE IT WAITS FOR A RESET FROM ITS ON-BOARD
                       "WATCH DOG" CIRCUIT.

COMMAND RESULTS   A TRANSPONDER RESET IS PERFORMED.

SCREEN IMAGE

Scientific Atlanta Model 2426 MDAS   Date: 2/20/84   Time: 10:37
Scan=ON   CMC=ON   Chan=P   Alarms=0   N.R.Rept=OFF   Timer=30   STUs=119

==> RESPONSE
                                Alarms Pending
                                                 BIN=OFF LOG=OFF AUTO=OFF
 Address   Date   Time   Status

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   RESPONSE

COMMAND ENTRY   ENTER RESPONSE (PRESS RETURN KEY)

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                          F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   ALLOWS THE OPERATOR TO TOGGLE THE NO RESPONSE
                          REPORT FROM OFF TO ON AND VICE VERSA. AN ACTIVE
                          NO RESPONSE REPORT INDICATES THAT THE SCANNER
                          IS UNABLE TO COMMUNICATE WITH A SUBSCRIBER-BASED
                          TRANSPONDER. WHEN SETTING THE NO RESPONSE
                          REPORT=OFF USING THE COMMAND ENTRY SEQUENCE ABOVE,
                          ALL NO RESPONSE ALARMS ARE NOT REPORTED TO THE
                          OPERATOR. NO RESPONSE ALARMS ARE HOWEVER,
                          HELD IN THE SCANNER QUEUE AND MAY BE REPORTED BY
                          SETTING THE NO RESPONSE REPORT = ON.

COMMAND RESULTS   AFTER ENTERING THE RESPONSE COMMAND, THE OPERATOR
                          WILL NOTE THE NO RESPONSE REPORT HEADING TOGGLE
                          EITHER ON OR OFF. WHEN TOGGLING ON, THE OPERATOR
                          WILL RECEIVE A LISTING OF NO RESPONSE ALARMS AT THE
                          CRT DISPLAY AND LINE PRINTER.

                          DEACTIVATION OF THE NO RESPONSE REPORT RESULTS IN
                          A STATEMENT OF THIS ACTIVITY INCLUDING DATE AND
                          TIME OF DEACTIVATION. THIS MESSAGE WILL ALSO
                          APPEAR ON THE PRINTOUT.

SCREEN IMAGE

Scientific Atlanta Model 2426 MDAS   Date: 2/20/84   Time: 10:32
Scan=ON   CMC=ON   Chan=P   Alarms=0   N.R.Rept=OFF   Timer=30   STUs=119

==> READ 2
                              Alarms Pending
 Address   Date   Time   Status   BIN=OFF LOG=OFF AUTO=OFF
    2   ** READ **   RFPWR: 2 RFC: P ALMCHAN: O DIALER: ON

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   READ

COMMAND ENTRY   ENTER READ- ADDRESS (PRESS RETURN KEY) WHERE -
                       REPRESENTS A SPACE FOLLOWED BY THE TRANSPONDER
                       ADDRESS.

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                       F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   ALLOWS THE OPERATOR THE ABILITY TO DETERMINE
                       THE FOLLOWING SPECIFIC STATUS CONDITIONS FOR
                       THAT TRANSPONDER:

                       RFPWR - STATES A NUMBER REPRESENTING THE
                       RELATIVE REVERSE RF POWER LEVEL FROM THE
                       TRANSPONDER. A POWER LEVEL OF 16 INDICATES
                       MAXIMUM ATTENUATION (MINIMUM POWER) FOR THE
                       REVERSE RF SIGNAL. A POWER LEVEL OF 1 INDICATES
                       MINIMUM ATTENUATION (MAXIMUM POWER) FOR THE
                       REVERSE RF SIGNAL.

                       RFC - STATES THAT THE SCANNER IS COMMUNICATING
                       ON EITHER THE POLLING CHANNEL (P) OR THE INTERRUPT
                       (I) REVERSE CHANNEL. THE POLLING CHANNEL IS
                       STANDARD IN THE MDAS SYSTEM WITH THE INTERRUPT
                       CHANNEL AS AN OPTIONAL DEVICE.

MONITOR MENU INSTRUCTIONS

COMMAND PURPOSE CONTINUED:

ALMCHAN - STATES A NUMBER FROM 1 TO 4 CORRESPONDING TO THE ZONE OF THE ALARM INPUT EXPANDER/TRANSPONDER COMBINATION.

DIALER - INDICATES IF THE DIALER INTERFACE PORT HAS BEEN ACTIVATED (ON) OR IS NON-ACTIVATED (OFF). THE DIALER INTERFACE ACTIVATES 45 SECONDS SUBSEQUENT TO A NON-ACKNOWLEDGEMENT OF AN ALARM BY THE CENTRAL STATION OPERATOR.

COMMAND RESULTS   ACTIVATION OF THE READ COMMAND RESULTS IN A STATUS MESSAGE ON THE CRT DISPLAY SCREEN DIRECTLY BELOW THE ALARMS PENDING HEADING.

SCREEN IMAGE

Scientific Atlanta Model 2426 MDAS   Date: 2/20/84   Time: 10:37
Scan=ON   CMC=ON   Chan=P   Alarms=0   N.R.Rept=OFF   Timer=10   STUs=119

==> RESPONSE 10
                                    Alarms Pending
 Address   Date   Time   Status   BIN=OFF LOG=OFF AUTO=OFF

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   TIMED RESPONSE

COMMAND ENTRY   ENTER RESPONSE- NUMBER (PRESS RETURN KEY) WHERE -
                            REPRESENTS A SPACE FOLLOWED BY A NUMBER 0 TO 255

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                            F7 = PRINT SCREEN,   F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   WHEN THE NO RESPONSE REPORT=ON THE OPERATOR
                            MAY SET THE NO RESPONSE TIMER FROM 0 TO 255
                            SECONDS. THIS GLOBAL TIMER CAUSES ALL ALARMS
                            REPORTING TO BE DELAYED UNTIL THE TIME-OUT
                            EXPIRES FOR EACH OCCURENCE. AFTER THE TIME-OUT
                            OCCURS, THE ALARM IS DISPLAYED ON THE CRT SCREEN
                            AND THE PRINTER.

                            THE TIMER FEATURE WAS INCORPORATED TO COMPENSATE
                            FOR INSTANTANEOUS CHANGES IN THE CATV CABLE SYSTEM
                            NOT RELATED TO A REAL ALARM. THIS FEATURE IS
                            ESPECIALLY USEFUL WHEN MAINTENANCE IS REQUIRED
                            ON THE CATV CABLE AND THE OPERATOR MAY ADJUST
                            THE TIMER FOR TEMPORARY CABLE DISCONNECTS AS
                            REQUIRED.

                            _____
                                NOTE
                            _____

                            THE NO RESPONSE TIME DELAYS ONLY NO RESPONSE
                            ALARMS AND ALLOWS ALL OTHER TYPES OF ALARMS TO
                            IMMEDIATELY REPORT TO THE CRT DISPLAY AND PRINTER
                            (I.E., MEDICAL, FIRE, PANIC)

SCREEN IMAGE

MONITOR MENU INSTRUCTIONS

COMMAND RESULTS   AN INITIAL NO RESPONSE ALARM CAUSES THE
                         NO RESPONSE REPORT = ON TO FLASH THE TOTAL
                         NUMBER OF NO RESPONSE ALARMS. IF THE NO
                         REPONSE ALARM EXCEEDS THE TIME-OUT PERIOD,
                         THE ALARM WILL BE REPORTED ON THE CRT DISPLAY
                         AND PRINTER. AT THAT TIME THE FLASHING
                         NUMBER IS DECREMENTED BY THE TOTAL NO RESPONSE
                         ALARMS REPORTED TO THE OPERATOR.

SCREEN IMAGE

```
Scientific Atlanta  Model 2426  MDAS        Date:  2/20/84    Time: 10:41
Scan=ON    CMC=OFF    Chan=P   Alarms=O     N.R.Rept=OFF   Timer=10    STUs=119

==> CMC
                                 Alarms Pending
                                               BIN=OFF  LOG=OFF  AUTO=OFF
 Address    Date    Time    Status
--------------------------------------------------------------------------
```

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   CMC

COMMAND ENTRY   ENTER CMC (PRESS RETURN KEY)

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                          F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   THIS COMMAND ALLOWS THE OPERATOR THE ABILITY TO
                          TOGGLE THE CENTRAL MONITORING COMPUTER ON OR OFF.
                          THE DEFAULT SETTING IS CMC=ON.

                          WITH THE COMMAND SET FOR CMC=ON, THE CENTRAL
                          MONITORING COMPUTER IS LINKED TO THE HEADEND
                          SCANNER AND AUTOMATICALLY ACKNOWLEDGES ALARMS.

                          FOR OPERATION OF THE MDAS SYSTEM ONLY, SET THE
                          CMC=OFF

COMMAND RESULTS   INITIATION OF THIS COMMAND CHANGES THE CMC=ON
                          TO CMC=OFF AND VICE VERSA.

SCREEN IMAGE

```
 Scientific Atlanta  Model 2426  MDAS      Date:  2/20/84    Time: 10:39
 Scan=ON    CMC=OFF   Chan=P   Alarms=0     N.R.Rept=OFF  Timer=10    STUs=119

==> DIAL 3
                              Alarms Pending
 Address   Date   Time   Status                    BIN=OFF  LOG=OFF  AUTO=OFF
    3    ** READ **   RFPWR: 1 RFC: P ALMCHAN: 0  DIALER: ON
-----------------------------------------------------------------------------
```

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   DIAL

COMMAND ENTRY   ENTER DIAL- ADDRESS (PRESS RETURN KEY) WHERE -
                       REPRESENTS A SPACE FOLLOWED BY THE TRANSPONDER
                       ADDRESS.

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                       F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   THE DIAL COMMAND ALLOWS THE OPERATOR TO ACTIVATE
                       THE TRANSPONDER'S DIALER INTERFACE CIRCUIT
                       FROM THE SYSTEM KEYBOARD. WHEN THE TRANSPONDER
                       IS CONNECTED TO AN EXTERNAL DIALER, THE DIALER
                       MAY BE ACTIVATED TO REPORT BACK TO A STAND-ALONE
                       DIGITAL TELEPHONE RECEIVER. THEREFORE, THIS
                       FEATURE ALLOWS FOR A COMPLETE TEST OF THE
                       TELEPHONE ALARM REPORTING PATH VIA THE REMOTE
                       CENTRAL STATION KEYBOARD AND SUBSCRIBER-BASED
                       TRANSPONDER.

COMMAND RESULTS   INITIATION OF THIS COMMAND ACTIVATES AN EXTERNAL
                       TELEPHONE DIALER CONNECTED TO THE TRANSPONDER'S
                       DIALER INTERFACE PORT.

                       THE OPERATOR MAY VERIFY COMMAND ACTIVATION VIA
                       THE READ COMMAND BY OBSERVING THE LABELED DIALER.

SCREEN IMAGE

```
 Scientific Atlanta  Model 2426  MDAS       Date:  2/20/84    Time: 10:39
 Scan=ON    CMC=OFF   Chan=P   Alarms=0     N.R.Rept=OFF   Timer=10    STUs=119

==> EX 24
                              Alarms Pending
                                                 BIN=OFF  LOG=OFF  AUTO=OFF
 Address   Date   Time   Status




                                         .





 Scientific Atlanta  Model 2426  MDAS       Date:  2/20/84    Time: 10:39
 Scan=ON    CMC=OFF   Chan=P   Alarms=0     N.R.Rept=OFF   Timer=10    STUs=119

      . 24     OFF
                              Alarms Pending
 Address   Date   Time   Status               BIN=OFF  LOG=OFF  AUTO=OFF
```

MONITOR MENU INSTRUCTIONS

COMMAND TYPE	EXAMINE ADDRESS
COMMAND ENTRY	ENTER EX- ADDRESS (PRESS RETURN KEY) WHERE - REPRESENTS A SPACE FOLLOWED BY A TRANSPONDER ADDRESS.
FUNCTION KEY FORMAT	F1 = ADDRESS ON/OFF, F2 = NEXT ADDRESS, F3 = PREVIOUS ADDRESS, F4 = RETURN
COMMAND PURPOSE	SAME AS EXAMINE COMMAND BUT IT PROVIDES OPERATOR WITH AN IMMEDIATE REPORT FOR A SPECIFIC TRANSPONDER ADDRESS. THE ON OR OFF STATUS INDICATES IF THAT TRANSPONDER ADDRESS IS ENABLED OR DISABLED IN THE DATA BASE.
COMMAND RESULTS	THE TRANSPONDER ADDRESS WILL BE FOLLOWED BY AN ON OR OFF LABEL. TO INCREMENT OR DECREMENT ADDRESSES, PRESS F2 OR F3 RESPECTIVELY. TO RETURN TO THE MONITOR MENU PRESS F4.

SCREEN IMAGE

```
cientific Atlanta  Model 2426  MDAS      Date: 2/20/84.    Time: 10:42
bcan=ON    CMC=OFF   Chan=P   Alarms=0    N.R.Rept=OFF   Timer=10    STUs=119

==> LI
                              Alarms Pending
 Address   Date   Time   Status                      BIN=ON   LOG=OFF  AUTO=OFF


    1      2      3      4      5      6      7      8      9     10
   11     12     13     14     15     16     17     18     19    100
  101    102    103    104    105    106    107    108    109    110
  111    112    113    114    115    116    117    118    119    120
  121    122    123    124    125    126    127    128    129    130
  131    132    133    134    135    136    137    138    139    140
  141    142    143    144    145    146    147    148    149    150
  151    152    153    154    155    156    157    158    159    160
  161    162    163    164    165    166    167    168    169    170
  171    172    173    174    175    176    177    178    179    180
  181    182    183    184    185    186    187    188    189    190
```

MONITOR MENU INSTRUCTIONS

COMMAND TYPE	LIST
COMMAND ENTRY	ENTER LI (PRESS RETURN KEY)
FUNCTION KEY FORMAT	F5 = BINARY STATUS, F6 = LOG ALARMS F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE
COMMAND PURPOSE	ALLOWS OPERATOR THE ABILITY TO OBTAIN A HARD COPY LISTING OF ALL THE ENABLED TRANSPONDER ADDRESSES IN THE DATA BASE. THE ALARM RECEIVING AND PROCESSING FUNCTIONS ARE STILL OPERATIVE DURING THIS LISTING.
COMMAND RESULTS	SEE ABOVE SCREEN IMAGE FOR EXAMPLE OF LISTING.

SCREEN IMAGE

```
Scientific Atlanta  Model 2426  MDAS      Date:  2/20/84    Time: 10:43
Scan=ON    CMC=OFF    Chan=P   Alarms=1    N.R.Rept=OFF   Timer=10    STUs=119

==> PO 5

                                    Alarms Pending
 Address    Date     Time    Status              BIN=OFF   LOG=OFF   AUTO=OFF
    5    2/20/84  10:43    RF OK
```

_OR ON ?_

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   ADJUST RF POWER LEVEL

COMMAND ENTRY   ENTER PO- ADDRESS (PRESS RETURN KEY) WHERE -
                            REPRESENTS A SPACE FOLLOWED BY THE TRANSPONDER
                            ADDRESS.

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                            F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   ALLOWS THE OPERATOR THE ABILITY TO PERFORM MANUAL
                            RF POWER LEVEL ADJUSTMENTS TO SUBSCRIBER BASED
                            TRANSPONDERS.

COMMAND RESULTS   THE HEADEND SCANNER MEASURES THE RF POWER LEVEL
                            FROM THE TRANSPONDER. NEXT IT INCREMENTS OR
                            DECREMENTS THE TRANSPONDER'S RF OUTPUT POWER TO
                            OBTAIN AN ACCEPTABLE SIGNAL TO NOISE RATIO AT THE
                            SCANNER.

                            THE OPERATOR RECEIVES ONE OF THREE RESPONSES:
                                        1. RF OK
                                        2. RF LOW
                                        3. RF HIGH

CAUTION

A LOW OR HIGH RF LEVEL SHOULD NOT BE IMMEDIATELY
INTERPRETED AS AN ALARM. A RF LOW WHICH BECOMES
A NO RESPONSE ALARM IS HOWEVER CAUSE FOR CONCERN
AND BEARS INVESTIGATION.

SCREEN IMAGE

Scientific Atlanta   Model 2426 MDAS   Date: 2/20/84   Time: 10:44
Scan=ON   CMC=OFF   Chan=F   Alarms=0   N.R.Rept=OFF   Timer=10   STUs=119

==> TEST 4
                                   Alarms Pending
 Address   Date   Time   Status   BIN=OFF LOG=OFF AUTO=OFF

MONITOR MENU INSTRUCTIONS

COMMAND TYPE

TEST

COMMAND ENTRY

ENTER TEST- ADDRESS (PRESS RETURN KEY) WHERE -
REPRESENTS A SPACE FOLLOWED BY A TRANSPONDER
ADDRESS.

FUNCTION KEY FORMAT

F5 = BINARY STATUS, F6 = LOG ALARMS
F7 = PRINT SCREEN,   F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE

ALLOWS THE OPERATOR TO ACTIVATE THE TEST OUTPUT
ON A SUBSCRIBER-BASED TRANSPONDER. DEPENDING
UPON THE TRANSPONDER'S OUTPUT CONFIGURATION, A
TWO SECOND VOLTAGE OUTPUT OR VOLTAGE WITHDRAWAL
OF 5 VDC WILL OCCUR USING THE TEST COMMAND.

A CUSTOMER DEVISED RELAY CIRCUIT MAY BE USED IN
CONJUNCTION WITH THE TEST OUTPUT TO CONTROL
EQUIPMENT.

COMMAND RESULTS

THE TRANSPONDER OUTPUTS OR WITHDRAWS A VOLTAGE
AT ITS TEST OUTPUT.

SCREEN IMAGE

:ientific Atlanta Model 2426 MDAS   Date: 2/20/84   Time: 10:44
Scan=ON   CMC=OFF   Chan=P   Alarms=0   N.R.Rept=OFF   Timer=10   STUs=119

==> LOAD
                              Alarms Pending
 Address   Date   Time   Status   BIN=OFF LOG=OFF AUTO=OFF
         2/20/84 10:44   >> CHECKSUM VERIFIED - DATABASE LOADED <<

MONITOR MENU INSTRUCTIONS

COMMAND TYPE   LOAD

COMMAND ENTRY   ENTER LOAD (PRESS RETURN KEY)

FUNCTION KEY FORMAT   F5 = BINARY STATUS, F6 = LOG ALARMS
                         F7 = PRINT SCREEN, F8 = ALARM ACKNOWLEDGE

COMMAND PURPOSE   ALLOWS THE OEPRATOR TO LOAD THE ADDRESS DATA
                         BASE CURRENTLY RESIDING IN THE SCANNER'S
                         CONTINUOUS MEMORY RAM

COMMAND RESULTS   THE OPERATOR RECEIVES AN INDICATION THAT THE
                         DATA BASE HAS BEEN LOADED INTO RAM (SEE ABOVE
                         EXAMPLE)

SCREEN IMAGE

```
Scientific Atlanta  Model 2426  MDAS      Date:  2/20/84    Time: 11:39
Scan=ON    CMC=OFF    Chan=P    Alarms=6   N.R.Rept=OFF  Timer=30    STUs=119

==>
                              Alarms Pending
                                            BIN=OFF   LOG=OFF   AUTO=OFF
 Address    Date    Time    Status
    2    2/20/84  11:39   BATTERY LOW
    2    2/20/84  11:39   MEDICAL/BATTERY LOW
    2    2/20/84  11:39   INTRUSION/MEDICAL/BATTERY LOW
    2    2/20/84  11:39   FIRE/INTRUSION/MEDICAL/BATTERY LOW
    2    2/20/84  11:39   PANIC/FIRE/INTRUSION/MEDICAL/BATTERY LOW
    2    2/20/84  11:39   PANIC/FIRE/INTRUSION/MEDICAL/BATTERY LOW/AUX #1
```

```
Scientific Atlanta  Model 2426  MDAS      Date:  2/20/84    Time: 11:42
Scan=ON    CMC=OFF    Chan=P    Alarms=6   N.R.Rept=OFF  Timer=30    STUs=119

==>
                              Alarms Pending
                                            BIN=ON    LOG=OFF   AUTO=OFF
 Address    Date    Time    Status
    2    2/20/84  11:41   00000001000000000
    2    2/20/84  11:41   00000011000000000
    2    2/20/84  11:42   00001111000000000
    2    2/20/84  11:42   00101111000000000
    2    2/20/84  11:42   01101111000000000
    2    2/20/84  11:42   01101110000000010
```

MASTER MENU INSTRUCTIONS

COMMAND TYPE   ACTIVATE BINARY STATUS

COMMAND ENTRY   PRESS F5

FUNCTION KEY FORMAT   F5 = BINARY STATUS

COMMAND PURPOSE   ALLOWS OPERATOR TO RECEIVE THE BINARY EQUIVALENT
                       OF THE VARIOUS ALARM TYPES PER THE FOLLOWING:

                       TEST   0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
                       BATTERY LOW   0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0
                       MEDICAL   0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0
                       INTRUSION   0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0
                       PANIC   0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
                       TAMPER   0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
                       NO RESPONSE   1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

SCANNER ERROR CODES

E004: Scanner has stopped scanning the subscriber data
base due to an overflow in the alarm queue.

E005: The power-adjust circuit is not functioning
properly.

E011: No response voting block Queue overflow.