Technical Support Division
Transmission Engineering District
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CONVERSION CHART FOR VOICE NETWORK CHANNEL TERMINATING EQUIPMENT

2/4-4/4 E&M-DX

FUNCTIONS	TELLABS 6168	TELTREND 5631	WESCOM 7306-06	WESCOM 7306-00
LINE IMPEDANCE		S2 150,600,1200	S1 150,600,1200	S1 150,600,1200
4 W Input(RCV)	S10 150,600,1200			
4 W Output(TRN)	S11 150,600,1200			
INTERFACE	S10 2W, 4W	S5 2W, 4W	S16 2W, 4W	FIXED4W
INTERFACE IMPEDANCE				
2W	S11=600+2.15 900+2.15	Fixed 600	Fixed 600+2.16	
4W	S11=600	Fixed 600	FIXED 600	FIXED 600
EQUALIZATION				
ENABLE	S21-1=IN,OUT	S203=EQL,FLAT	S3-1=IN,OUT	S3-1=IN
RCV EQUALIZER	S22=HT/BW S21-2=L/NL S21-3,4,5,6=SL	HT,BW,L/NL,SL	S2=HT/BW S3-2=L/NL S3-3,4,5,6=SL	S2=HT/BW S3-2=L/NL S3-3,4,5,6=SL
LEVEL				
GAIN/ATTN	FRONT GN,LS	S209=GAIN,LOSS	FRONT(S10) G,A	FRONT G/A
A TO B(TRN) LEVEL	FRONT +24dB	FRONT +24dB	FRONT +24dB	FRONT +24dB
GAIN/ATTN	FRONT GN,LS	S208=GAIN,LOSS	FRONT(S4) A,G	FRONT G/A
B TO A(RCV) LEVEL	FRONT +24dB	FRONT +24dB	FRONT +24dB	FRONT +24dB
SIMPLEX SIGNALING	S14=NORM,REV	S6=NORM,REV	S7=NORM,SXRV	S7=NORM,SXRV
DX SIGNALING	S13=DX1,DX2	S7=DX1,DX2	S11,S12=DX1,DX2	S11,S12=DX1,DX2
E&M SIGNALING	S12=1/111,11	S10=1/111	S13=1/111,11	S13=1/111,11
DX BOR	NONE	S11=250,500, 1K,2K,4K	S14=25,50, 1,2,2K	S14=25,50, 1,2,2K
DX BOR	NONE	S12=1,2,4uF, A&B	NONE	NONE

CONVERSION CHART FOR VOICE NETWORK CHANNEL TERMINATING EQUIPMENT

2/4-REPEATER

FUNCTIONS	TELLABS 4024C	TELTREND 5617	WESCOM 7306-17
LINE IMPEDANCE		S1 150,600,1200	S1 150,600,1200
4 W Input(RCV)	S1 150,600,1200		
4 W Output(TRN)	S2 150,600,1200		
INTERFACE IMPEDANCE			
2W	S3=600,900	S7=600,900 S8=RES,2.16	S4=600,900 S18=RES,2.6
EQUALIZATION			
ENABLE	NONE	EQL FLAT	S3-1=IN,OUT
RCV EQUALIZER	S22=HT/BW S21-2=L/NL S21-3,4,5,6=SL	HT,BW,L/NL,SL	S2=HT/BW S3-2=L/NL S3-3,4,5,6=SL
LEVEL			
GAIN/ATTN	FRONT GN,LS	S5=GAIN,LOSS	FRONT GN,ATN
A TO B(TRN) LEVEL	FRONT +24dB	FRONT +24dB	FRONT +24dB
GAIN/ATTN	FRONT GN,LS	S20=GAIN,LOSS	FRONT GN,ATN
B TO A(RCV) LEVEL	FRONT +24dB	FRONT +24dB	FRONT +24dB
SIMPLEX SIGNALING	S51=OPEN,NORM REV	S10=NORM,REV S11=NORM,SXRV S12=NORM,RV/T	S7=NORM,RV S8=NOR,RV/T S9=NOR,RV
BALANCE NETWORK	S4-1,2,3=ON,OFF	none	none
BOC CAPACITANCE	S4-4 to 10= 1,2, 4,8,16,32,64	S15=1,2,4,8 16,32,64	S16=1,2,4,8 16,32,64
A&B LEAD CAPACITOR	S53=NORM,OPEN	none	none
A&B LEAD INDUCTOR	S50=NORM,SHORT A&B	S9=NORM,OUT	S19=NOR,OUT

CONVERSION CHART FOR VOICE NETWORK CHANNEL TERMINATING EQUIPMENT

4/4-REPEATER

FUNCTIONS	TELTREND 5426	WESCOM 7306-50
LINE IMPEDANCE	S1	S1
4W	150,600,1200	150,600,1200
INTERFACE IMPEDANCE		
4W	FIXED 600	FIXED 600
EQUALIZATION		
ENABLE	EQL,FLAT	S3-1=IN,OUT
RCV EQUALIZER	HT,BW,L/NL,SL	S2=HT/BW S3-2=L/NL S3-3,4,5,6=SL
LEVEL		
GAIN/ATTN	S4=0,24dB LOSS	FRONT GN,ATN
A TO B(TRN) LEVEL	FRONT +24dB	FRONT +24dB
GAIN/ATTN	S3=0,24dB LOSS	FRONT GN,ATN
B TO A(RCV) LEVEL	FRONT +24dB	FRONT +24dB
SIMPLEX SIGNALING	none	S7=NOR,SX RV S8=NOR,RV/T S9=NOR,RV
SEALING CURRENT	S100=SUPPLY, SINK,OFF	S10=NORM,SCL,SCG

CONVERSION CHART FOR VOICE NETWORK CHANNEL TERMINATING EQUIPMENT

Loop Signaling Repeater

FUNCTIONS	TELLABS 7001A	WESCOM 7305-30
LINE IMPEDANCE	S2 600,900	S1 600,900,A&B
INTERFACE	S8 2W,4W	FIXED 2W
INTERFACE IMPEDANCE	S7 600,900	S2 600,900,A&B
Talk Battery (TIP)	S3 INTA,EXTA	 +INT,+EXT
Talk Battery (RING)	S4 INTB,EXTB	 -INT,-EXT
Ringing Mode	S1 BYP,RGB,RPI	S3 BYP,RPI
Ringing Interval	S10 NORM,EXT	RS IN,OUT
Pulse Corrector	S6 OFF,PC	PC PCO,PCI
Reverse Battery	S9 OUT,IN	A&B CLOSED,OPEN
Grounded/Superimposed Ringing	none	S4 GRG,SRG
Isolated Ring Detector	none	S5 R,H
Build Out Resistance	none	SWGBOR- IN,OUT

SPECIAL SERVICES VOICE AND DATA

CONVERSION CHART FOR DATA CHANNEL TERMINATING EQUIPMENT

PASSIVE 4/4-4/2 FUNCTIONS	COMFAB 4829AJ	TELTREND DST5434	WESCOM 7306-41LB	WESCOM 7306-40	TELLABS 4417B-B
LINE IMPEDANCE	S2 & S3 150,600,1200	S2 150,600,1200	S1 150,600,1200	S1 150,600,1200	S1 & S6 150,600,1200
CUSTOMER INTERFACE	S4,10 4W or 2W	S11 4W or 2W	S3 4W or 2W	FIXED4W	FIXED4W
16dB LOOPBACK GAIN*	S5-LB16=ON S5-8=OFF	S1-16=ON S1-8=0	S8-2=ON S8-1=0	S4-2=0 S4-1=8	S6-5=16 S6-4=0
8dB GAIN	S5-16=OFF S5-8=OFF	S1-16=0 S1-8=ON	S8-2=0 S8-1=8	S4-2=0 S4-1=8	S6-5=0 S6-4=8
0dB LOOPBACK GAIN	S5-16=OFF S5-8=OFF	S1-16=0 S1-8=0	S8-2=0 S8-1=0	S4-2=0 S4-1=0	S6-5=0 S6-4=0
TONE LOOPBACK ENABLED*	S5-DTD=OFF	S201=NORM	S8-DTD=0	S4-3=OFF	S6-2=TONE LB
TONE LOOPBACK DISABLED	S5-DTD=ON	S201=LB DIS	S8-DTD ON	S4-3=DTD	S6-2=OFF
MANUAL LOOPBACK*	S5-ML=ON	SEE NOTE 1	S8-MLB=ON	S4-4=MLB	S6-1=MLNB
NORMAL LOOPBACK	S5-ML=OFF	NO OPTION	S8-MLB=OFF	S4-4=OFF	S6-1=OFF
20 MINUTE TIMEOUT (POINT-to-POINT CKTS.)	S5=20	S201=20TO	S8-TO=20	S4-5=20	SA6-3=20
4 MINUTE TIMEOUT (MULTI-POINT CKTS.)	S5=4	S201=4,TO	S8-TO=4	S4-5=4	S63=4
SIMPLEX NORMAL	S1-SCL	S10=NORM	S2=NOR	S5=NOR	S8=NOR
SIMPLEX BYPASS	S1=BYP	S10-SX/T	NO OPTION	S6=SX/T	S8=BYP
SIMPLEX REVERSE	NO OPTION	S9=REV	S2=REV	S5=SXRV	NO OPTION
LOOP SEALING CURRENT*	S1=SCL	S100=TERM	S9-SCL	S9=SCL	S7=ESC
GENERATED SEALING CURRENT	S1=SCG	S100-SUPPLY	S9=SCG	S9=SCG	S7=ISC

*"NORMAL" OPTIONS

NOTE 1: No manual loopback switch provided on the TELTREND Card, If a ground is placed on Edgecard pin 1 it will loopback (as will all of the other cards).

WESTERN
829-A
829A-L1

WESCOM
7306-40

TELLABS
4417B-B

SPECIAL SERVICES VOICE AND DATA

CONVERSION CHART FOR DATA CHANNEL TERMINATING EQUIPMENT

PASSIVE 4/4-4/2 FUNCTIONS	COMFAB 4829AJ B	TELTREND DST5434	WESCOM 7306-41LB	WESCOM 7306-40	TELLABS 4417B-B
LINE IMPEDANCE	S2 & S3 150,600,1200	S2 150,600,1200	S1 150,600,1200	S1 150,600,1200	S1 & S6 150,600,1200
CUSTOMER INTERFACE	S4,10 4W or 2W	S11 4W or 2W	S3 4W or 2W	FIXED4W	FIXED4W
16dB LOOPBACK GAIN*	S5-LB16=ON S5-8=OFF	S1-16=ON S1-8=0	S8-2=ON S8-1=0	S4-2=0 S4-1=8	S6-5=16 S6-4=0
8dB GAIN	S5-16=OFF S5-8=OFF	S1-16=0 S1-8=ON	S8-2=0 S8-1=8	S4-2=0 S4-1=8	S6-5=0 S6-4=8
0dB LOOPBACK GAIN	S5-16=OFF S5-8=OFF	S1-16=0 S1-8=0	S8-2=0 S8-1=0	S4-2=0 S4-1=0	S6-5=0 S6-4=0
TONE LOOPBACK ENABLED*	S5-DTD=OFF	S201=NORM	S8-DTD=0	S4-3=OFF	S6-2=TONE LB
TONE LOOPBACK DISABLED	S5-DTD=ON	S201=LB DIS	S8-DTD ON	S4-3=DTD	S6-2=OFF
MANUAL LOOPBACK*	S5-ML=ON	SEE NOTE 1	S8-MLB=ON	S4-4=MLB	S6-1=MLNB
NORMAL LOOPBACK	S5-ML=OFF	NO OPTION	S8-MLB=OFF	S4-4=OFF	S6-1=OFF
20 MINUTE TIMEOUT (POINT-to-POINT CKTS.)	S5=20	S201=20TO	S8-TO=20	S4-5=20	SA6-3=20
4 MINUTE TIMEOUT (MULTI-POINT CKTS.)	S5=4	S201=4,TO	S8-TO=4	S4-5=4	S63=4
SIMPLEX NORMAL	S1-SCL	S10=NORM	S2=NOR	S5=NOR	S8=NOR
SIMPLEX BYPASS	S1=BYP	S10-SX/T	NO OPTION	S6=SX/T	S8=BYP
SIMPLEX REVERSE	NO OPTION	S9=REV	S2=REV	S5=SXRV	NO OPTION
LOOP SEALING CURRENT*	S1=SCL	S100=TERM	S9-SCL	S9=SCL	S7=ESC
GENERATED SEALING CURRENT	S1=SCG	S100-SUPPLY	S9=SCG	S9=SCG	S7=ISC

*"NORMAL" OPTIONS

NOTE 1: No manual loopback switch provided on the TELTREND Card, If a ground is placed on Edgecard pin 1 it will loopback (as will all of the other cards).

WESTERN
829-A
829A-L1

WESCOM
7306-40

TELLABS
4417B-B

CONVERSION CHART FOR ANALOG DATA CHANNEL TERMINATING EQUIPMENT-DCTE

ACTIVE 4/4-4/2 FUNCTIONS	COMFAB 4829EJ~~F~~B	TELTREND DST5436C	WESCOM 7306-45LA	TELLABS 4416B-SA1
LINE IMPEDANCE	S2 & S3 150,600,1200	S2 150,600,1200	S1 150,600,1200	S1 & S6 150,600,1200
CUSTOMER INTERFACE	S4-7,8,9,10 4W or 2W	S6 4W or 2W	S6 4W or 2W	S6 4W or 2W
16dB LOOPBACK GAIN*	S4-LB16=ON S4-LB8=OFF	S1-16=ON S1-8=ON	S8-2=ON S8-1=ON	S103-5=16 S103-4=OFF
8 dB GAIN	S4-LB16=OFF S4-LB8=ON	S1-16=OFF S1-8=ON	S8-2=OFF S8-1=ON	S103-5=OFF S103-4=8
0dB LOOPBACK GAIN	S4-LB16=OFF S4-LB8=OFF	S1-16=OFF S1-8=OFF	S8-2=OFF S8-1=OFF	S103-5=OFF S103-4=OFF
TONE LOOPBACK ENABLED* TONE LOOPBACK DISABLED	S4-DTD=OFF S4-DTD=ON	S1=NORM S1=LB DIS	S8-3=OFF S8-3=DTD	S103-2=TT S103-2=OFF
MANUAL LOOPBACK* NORMAL LOOPBACK	S4-MLB=ON S4-MLB=OFF	SEE NOTE 1 NO OPTION	S8-4=MLB S8-4=OFF	S103-1=MLB S103-1=OFF
20 MINUTE TIMEOUT (POINT-to-POINT CKTS.)	S4-2=20	S1=20,TO	S8-5=20	S103-3=OFF
4 MINUTE TIMEOUT (MULTI-POINT CKTS.)	S4-2=4	S1=4,TO	S8-5=4	S103-3=ON
SIMPLEX NORMAL SIMPLEX BYPASS SIMPLEX REVERSE	S7-SCL S7=BYP NO OPTION	S8-S9=NORM S9-SX/T S8=REV	S11,12=NOR S11-SX/T S12=SXRY	S8=NORM S8=BYP NO OPTION
LOOP SEALING CURRENT*	S7=SCL	S100=TERM	S9-SCL S11-SC	S4=ESC
GENERATED SEALING CURRENT	S7=SCG	S100-SUPPLY	S9=SCG S11-SC	S14=15
RECV. 309B EQUALIZER IN RECV. 309B EQUALIZER OUT	SEE NOTE 2 NO OPTION	S204=EQL S204=FLAT	S5=IN S5-IN=OFF	S7=EQ S7=BYP
TRANS. 309B EQUALIZER IN TRANS. 309B EQUALIZER OUT	SH1=OUT SH1=IN	S207=EQL S207=FLAT	S15=IN s15-IN=OFF	9908B=IN 9908B=OUT/OFF
RECV. 309B EQUALIZER	S5=HT,BW,SL	RCV=HT,BW,SL	S4=HT,BW S5=SL	RECV=HT,BW,SL
TRANS. 309B EQUALIZER	XMT=HT,BW,SL	XMT=HT,BW,SL	S14=HT,BW S15=S1	9908B=HT,BW,SL

*"NORMAL" OPTIONS

NOTE 1: No manual switch provided on the TELETREND CARD, however it will loopback manually if a ground is placed on edgecard pin 1 (as will all of the other cards).

NOTE 2: The COMFAB RECV. 309B Equalizer is out of the circuit if all HT, BW, and SL switches are set to off.

WESTERN 829B or C REPLACEMENTS ALL ABOVE