

MAINTENANCE MANUAL
SIMULCAST SYSTEM DRAWINGS
CONTROL POINT ALIGNMENT EQUIPMENT

TABLE OF CONTENTS	
	<u>Page</u>
Cable Connections, Module Location/Identification (344A4244)	1
Equipment Rackup	3
PTT-A/D Cross Connect Diagram	4
Master Alarm Block Diagram	5
Master Alarm Cable Connection	7
Function Generator	8
Digitizing Oscilloscope	9
Network Analyzer	9
Board Extender and Test Unit	10
C120/EX1 Module	11
Intra Cabinet Wiring	13

CABLE CONNECTION FOR SIMULCAST CONTROL POINT COMMON EQUIPMENT
TEST EQUIPMENT RACK

SITE 1-6
RACK #TEST APPLCIATION ASM 19D904160P23

S1-3 PTT	CNTL CROSS CONNECT	J11	CNTL PANEL C900	P01	19D903985P14
S1-3 PTT	CNTL CROSS CONNECT	J12	CNTL PANEL C900	P02	19D903985P14
S1-3 PTT	CNTL CROSS CONNECT	J13	CNTL PANEL C900	P03	19D903985P14
S1-3 PTT	CNTL CROSS CONNECT	J14	CNTL PANEL C900	P04	19D903985P14
S1-3 PTT	CNTL CROSS CONNECT	J15	CNTL PANEL C900	P05	19D903985P14

S4-6 PTT	CNTL CROSS CONNECT	J21	CNTL PANEL C902	P01	19D903985P14
S4-6 PTT	CNTL CROSS CONNECT	J22	CNTL PANEL C902	P02	19D903985P14
S4-6 PTT	CNTL CROSS CONNECT	J23	CNTL PANEL C902	P03	19D903985P14
S4-6 PTT	CNTL CROSS CONNECT	J24	CNTL PANEL C902	P04	19D903985P14
S4-6 PTT	CNTL CROSS CONNECT	J25	CNTL PANEL C902	P15	19D903985P14

S1-3 A/D	CNTL CROSS CONNECT	J16	CNTL PANEL C901	P01	19D903985P14
S1-3 A/D	CNTL CROSS CONNECT	J17	CNTL PANEL C901	P02	19D903985P14
S1-3 A/D	CNTL CROSS CONNECT	J18	CNTL PANEL C901	P03	19D903985P14
S1-3 A/D	CNTL CROSS CONNECT	J19	CNTL PANEL C901	P04	19D903985P14
S1-3 A/D	CNTL CROSS CONNECT	J20	CNTL PANEL C901	P05	19D903985P14

S4-6 A/D	CNTL CROSS CONNECT	J26	CNTL PANEL C903	P01	19D903985P14
S4-6 A/D	CNTL CROSS CONNECT	J27	CNTL PANEL C903	P02	19D903985P14
S4-6 A/D	CNTL CROSS CONNECT	J28	CNTL PANEL C903	P03	19D903985P14
S4-6 A/D	CNTL CROSS CONNECT	J29	CNTL PANEL C903	P04	19D903985P14
S4-6 A/D	CNTL CROSS CONNECT	J20	CNTL PANEL C903	P05	19D903985P14

CCC	CNTL CROSS CONNECT	J01	CONNECTOR PANEL #01	P01	19D903985P24
CCC	CNTL CROSS CONNECT	J02	CONNECTOR PANEL #01	P02	19D903985P24
CCC	CNTL CROSS CONNECT	J03	CONNECTOR PANEL #01	P03	19D903985P24
CCC	CNTL CROSS CONNECT	J04	CONNECTOR PANEL #01	P04	19D903985P24
CCC	CNTL CROSS CONNECT	J05	CONNECTOR PANEL #01	P05	19D903985P24
CCC	CNTL CROSS CONNECT	J06	CONNECTOR PANEL #01	P06	19D903985P24
CCC	CNTL CROSS CONNECT	J53	CONNECTOR PANEL #01	P11	19D903985P24
CCC	CNTL CROSS CONNECT	J52	CONNECTOR PANEL #01	P12	19D903985P24
CCC	CNTL CROSS CONNECT	J51	CONNECTOR PANEL #01	P13	19D903985P24

AH	ALARM STN MASTER	J10	ALARM HYBRID SHELF	J01	19D903985P34
AH	ALARM STN MASTER	J01	CONNECTOR PANEL	P14	19D903985P24
AH	ALARM STN MASTER	J05	CONNECTOR PANEL	P15	19D903985P24
AH	ALARM STN MASTER	J07	CONNECTOR PANEL	P16	19D903985P24
AH	ALARM HYBRID SHELF	J03	CONNECTOR PANEL	P17	19D903985P54
AH	ALARM STN MASTER	J08	ALARM MON. COMPUTER	J01	19D903985P71

POWER CONNECTION

ALIGNMENT/TEST RADIO

TB1-1	RED	POWER IN 13.3	J01-1 POWER SUPPLY	19D903880P901
TB1-2	BLACK	POWER IN 13.3	J01-2 POWER SUPPLY	19D903880P902
TB1-5	BLACK LEAD	ANALOG RACK PWR DIST PANEL	J16	19D903880P900
TB1-6	GREEN -24 VOLTS	(PART OF 19D903880P900 CABLE)*		

MASTER ALARM STATION TB1 AND HYBRID ALARM SHELF J16/J17

MASTER ALARM PWR INPUT CONNECTOR	RACK #1 PWR DIST PNL P09	19D903880P740
ALARM HBYRID SHELF J16/J17	(PART OF CABLE 19D903880P740)	

CABINET TO CABINET CONNECTION (FIELD)

4 SITE 10 CHAN	RACK TEST CONNECT PANEL #1 P12	RACK #1 CONNECT PANEL #1 P11	*
4 SITE 20 CHAN	RACK TEST CONNECT PANEL #1 P12	RACK #1 CONNECT PANEL #2 P05	*
5 SITE 5 CHAN	RACK TEST CONNECT PANEL #1 P12	RACK #1 CONNECT PANEL #1 P06	*
4 SITE 10 CHAN	RACK TEST CONNECT PANEL #1 P13	RACK #1 CONNECT PANEL #1 P12	*
4 SITE 20 CHAN	RACK TEST CONNECT PANEL #1 P13	RACK #1 CONNECT PANEL #2 P06	*
5 SITE 5 CHAN	RACK TEST CONNECT PANEL #1 P13	RACK #1 CONNECT PANEL #1 P07	*
10 SITE 10 CHAN	RACK TEST CONNECT PANEL #1 P13	RACK #1 CONNECT PANEL #2 P12	*
10 SITE 20 CHAN	RACK TEST CONNECT PANEL #1 P13	RACK #1 CONNECT PANEL #2 P18	*

* CABLE SUPPLIED AS PART OF SIMULCAST CONTROL POINT EQUIPMENT

REFERENCE FOR CONNECTION TO PTT-A/D INPUT FROM MUX

SITE #01 PTT - A/D	RACK TEST CONNECT PANEL #1 P01
SITE #02 PTT - A/D	RACK TEST CONNECT PANEL #1 P02
SITE #03 PTT - A/D	RACK TEST CONNECT PANEL #1 P03
SITE #04 PTT - A/D	RACK TEST CONNECT PANEL #1 P04
SITE #05 PTT - A/D	RACK TEST CONNECT PANEL #1 P05
SITE #06 PTT - A/D	RACK TEST CONNECT PANEL #1 P06

SITE #01-10 GND	RACK TEST CONNECT PANEL #1 P11
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ALARM DIGITAL OUTPUT #2	RACK TEST CONNECTOR PANEL #2 P02
ALARM DIGITAL OUTPUT #3	RACK TEST CONNECTOR PANEL #2 P03
ALARM DIGITAL OUTPUT #4	RACK TEST CONNECTOR PANEL #2 P04

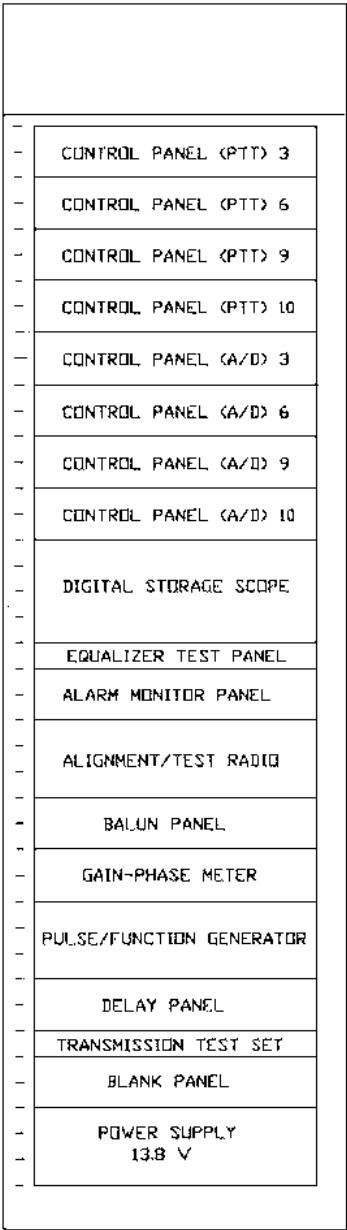
SITE IF SITE =7 -10

RACK #1 APPLCIATION ASM 19D903160P24

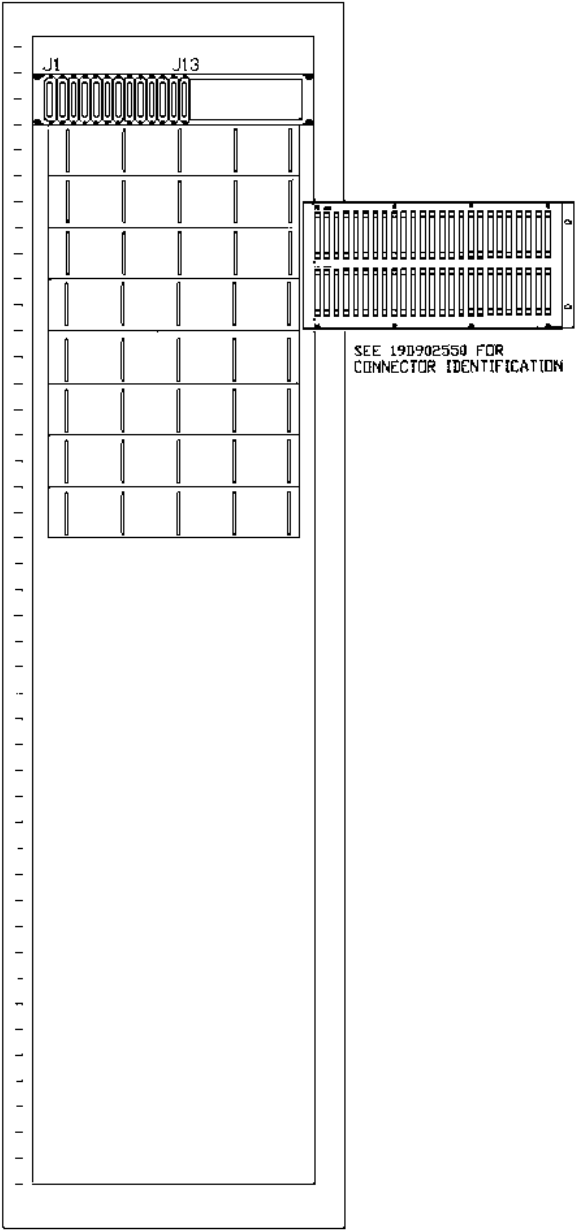
S1-3 PTT	CNTL CROSS CONNECT	J11	CNTL PANEL C900	P01	19D903985P14
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S1-3 PTT	CNTL CROSS CONNECT	J13	CNTL PANEL C900	P03	19D903985P14
S1-3 PTT	CNTL CROSS CONNECT	J14	CNTL PANEL C900	P04	19D903985P14
S1-3 PTT	CNTL CROSS CONNECT	J15	CNTL PANEL C900	P05	19D903985P14

S4-6 PTT	CNTL CROSS CONNECT	J21	CNTL PANEL C902	P01	19D903985P14
S4-6 PTT	CNTL CROSS CONNECT	J22	CNTL PANEL C902	P02	19D903985P14
S4-6 PTT	CNTL CROSS CONNECT	J23	CNTL PANEL C902	P03	19D903985P14
S4-6 PTT	CNTL CROSS CONNECT	J24	CNTL PANEL C902	P04	19D903985P14
S4-6 PTT	CNTL CROSS CONNECT	J25	CNTL PANEL C902	P05	19D903985P14

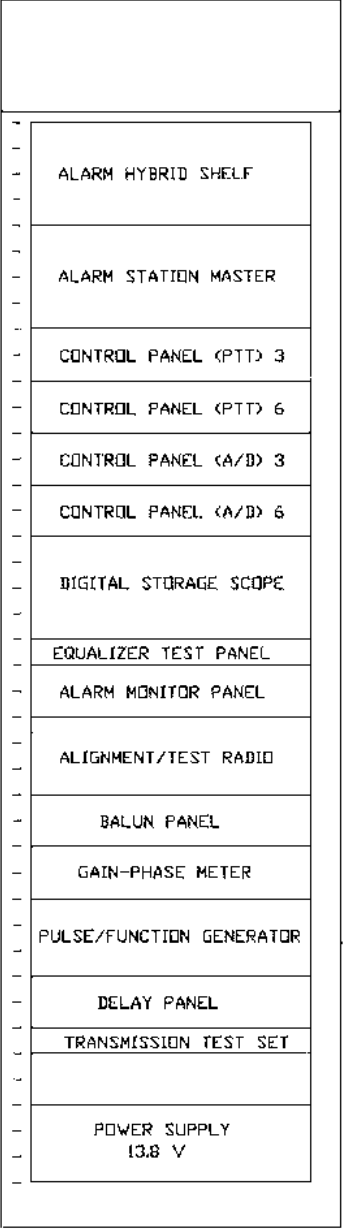
(344A4244, Sh. 2, Rev. 1)



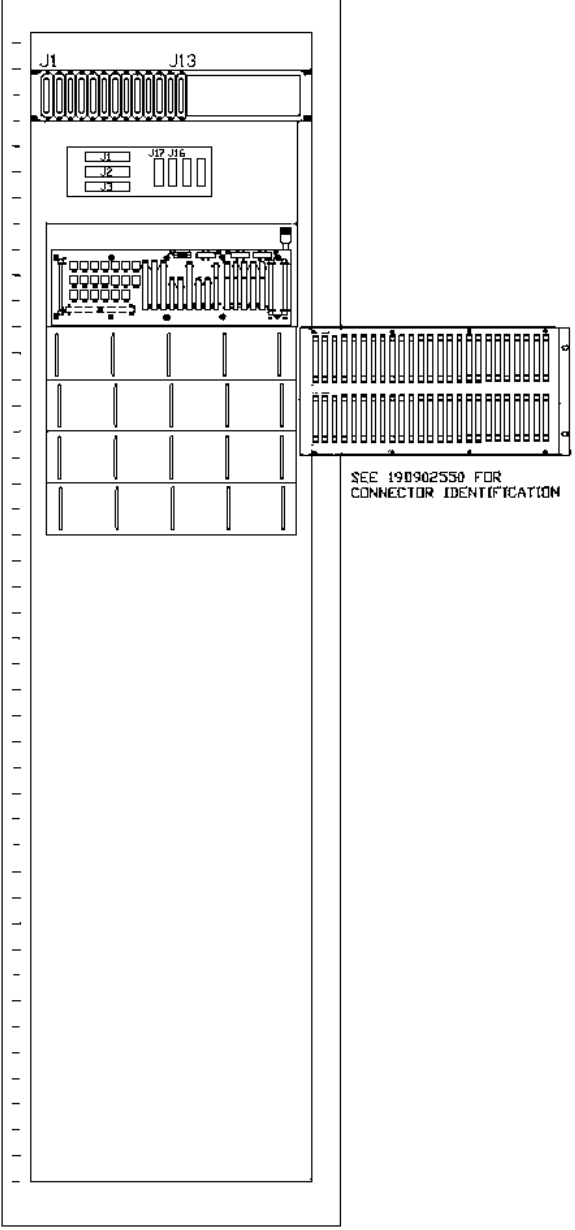
23 TEST RACK
FRONT VIEW



TEST RACK
REAR VIEW



24 TEST RACK
FRONT VIEW



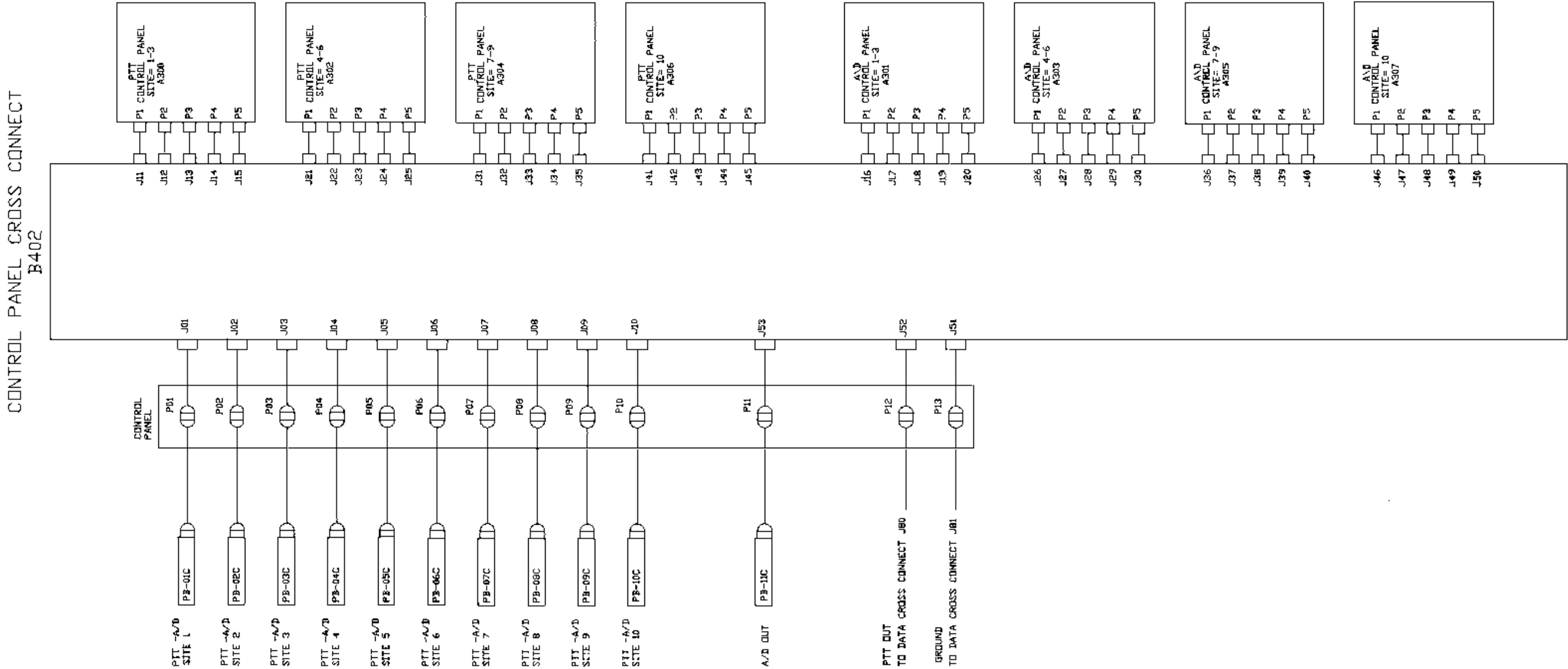
TEST RACK
REAR VIEW

PTT/A/D CONTROL RACK
Equipment Rackup
System Configurations With Less Than 6 Sites
19D904160P24
System Configurations With More Than 6 Sites
19D904160P23

(19D904160 Sh. 15, Rev.2)

PTT/A/D CONTROL RACK
PTT/A/D Cross Connect Block Diagram

(19D904178 Rev. 0)



CONTROL POINT 1 TO 10 SITES

DIGITAL INPUT CARD
CPU
DIGITAL OUTPUT CARD #4
DIGITAL OUTPUT CARD #3
DIGITAL OUTPUT CARD #2
MODEM CARD - SITE 1
MODEM CARD - SITE 2
MODEM CARD - SITE 3
MODEM CARD - SITE 4
MODEM CARD - SITE 5
MODEM CARD - SITE 6
MODEM CARD - SITE 7
MODEM CARD - SITE 8
MODEM CARD - SITE 9
MODEM CARD - SITE 10
DIGITAL OUTPUT CARD #1

ALARM SYSTEM CARD CAGE 19D902821P2

HYBRID SHELF - SITES 1 TO 10

HYBRID CARD - SITE 1
HYBRID CARD - SITE 2
HYBRID CARD - SITE 3
HYBRID CARD - SITE 4
HYBRID CARD - SITE 5
HYBRID CARD - SITE 6
HYBRID CARD - SITE 7
HYBRID CARD - SITE 8
HYBRID CARD - SITE 9
HYBRID CARD - SITE 10

HYBRID SHELF CARD CAGE 19D902544P2

TX SITE - REMOTE

DIGITAL INPUT CARD
CPU
A/D CARD # 1
A/D CARD # 2
A/D CARD # 3
A/D CARD # 4
MODEM CARD
DIGITAL OUTPUT CARD
HYBRID CARD

ALARM SYSTEM CARD CAGE 19D902821P1

MODULE NAME	MODULE IDENTIFICATION	SIMILAR TO
CPU	19C33751SP1	WINSYSTEMS, INC. LPM-SBC5-6
A/D CARD	19C33751SP2	WINSYSTEMS, INC. LPM-A/D12M
DIGITAL INPUT CARD	19C33751SP3	ENLORIE, INC-1 339C-1
DIGITAL OUTPUT CARD	19C33751SP4	ENLORIE, INC. 339C-1
MODEM CARD (1200 BAUD)	19C33751SP5	WINSYSTEMS, INC. LPM-MODEM
MODEM CARD (2400 BAUD)	19C33751SP6	ZIATECH CORP. ZT6843
HYBRID CARD	19C33751SP7	TELLABS 4201

① PST SIMULCAST ALARM SYSTEM

NOTES:

1. MODULE JUMPERS TO BE POSITIONED PER JUMPER TABLES

MODEM CARD (2400 BAUD)					
JUMPER	REMARKS				
W2 W9 W12 W13 W14 W16 W18 W20 W21 W22 W23 W24 W25 W26 W36 W37	CARD MUST BE JUMPED EXACTLY AS SHOWN FOR OPERATION IN PST SIMULCAST SYSTEM. NO ADDITIONAL JUMPERS PERMISSIBLE.				
W31 (LSB) W30 W29 W28 W27 (MSB)	1's POSITION 2's POSITION 4's POSITION 8's POSITION 16's POSITION	BINARY SUM MUST EQUAL MODEM NUMBER PLUS 3 (MODEM NO. 3 = BINARY SUM 6) (VALID RANGE 4 TO 23 FOR MODEMS 1 THRU 20) (OPEN JUMPER = BINARY 1)			
CARD MODIFICATIONS: REMOVE 4E (SOCKETED IC) REPLACE 4E WITH PL 344A3098GE					
JUMPER TABLE - (MODEM NUMBER)					
JUMPER NUMBERS	W27	W28	W29	W30	W31
BINARY VALUE	16 (MSB)	8	4	2	1 (LSB)
FOR MODEM 1	JUMPER	JUMPER	OMIT	JUMPER	JUMPER
FOR MODEM 2	JUMPER	JUMPER	OMIT	JUMPER	OMIT
FOR MODEM 3	JUMPER	JUMPER	OMIT	OMIT	JUMPER
FOR MODEM 4	JUMPER	JUMPER	OMIT	OMIT	OMIT
FOR MODEM 5	JUMPER	OMIT	JUMPER	JUMPER	JUMPER
FOR MODEM 6	JUMPER	OMIT	JUMPER	JUMPER	OMIT
FOR MODEM 7	JUMPER	OMIT	JUMPER	OMIT	JUMPER
FOR MODEM 8	JUMPER	OMIT	JUMPER	OMIT	OMIT
FOR MODEM 9	JUMPER	OMIT	OMIT	JUMPER	JUMPER
FOR MODEM 10	JUMPER	OMIT	OMIT	JUMPER	OMIT
FOR MODEM 11	JUMPER	OMIT	OMIT	OMIT	JUMPER
FOR MODEM 12	JUMPER	OMIT	OMIT	OMIT	OMIT
FOR MODEM 13	OMIT	JUMPER	JUMPER	JUMPER	JUMPER
FOR MODEM 14	OMIT	JUMPER	JUMPER	JUMPER	OMIT
FOR MODEM 15	OMIT	JUMPER	JUMPER	OMIT	JUMPER
FOR MODEM 16	OMIT	JUMPER	JUMPER	OMIT	OMIT
FOR MODEM 17	OMIT	JUMPER	OMIT	JUMPER	JUMPER
FOR MODEM 18	OMIT	JUMPER	OMIT	JUMPER	OMIT
FOR MODEM 19	OMIT	JUMPER	OMIT	OMIT	JUMPER
FOR MODEM 20	OMIT	JUMPER	OMIT	OMIT	OMIT

A/D CARD		
JUMPER	PINS	REMARKS
J2 J2	1-2 3-4	CARD MUST BE JUMPED EXACTLY AS SHOWN FOR OPERATION IN PST SIMULCAST SYSTEM. NO ADDITIONAL JUMPERS PERMISSIBLE.
J4 J5	3-4 1-2	
J5 J6	5-6 7-8	
J10	1-2	
J3 J9 J9	1-3-4 1-2 3-4	WIRE WRAP SOLDERED WIRE JUMPER SOLDERED WIRE JUMPER
J6 J6 J6 J6	1-2 3-4 5-6 7-8	FOR A/D # 1 ONLY
J6 J6 J6	1-2 3-4 5-6	FOR A/D # 2 ONLY
J6 J6 J6	1-2 3-4 7-8	FOR A/D # 3 ONLY
J6 J6	1-2 3-4	FOR A/D # 4 ONLY
CARD MODIFICATIONS: INSTALL R15 H212CRP510C INSTALL R16 H212CRP510C		

CPU CARD		
JUMPER	PINS	REMARKS
J7 J7 J8 J8 J12 J14 J14 J14 J14 J14 J14 J14 J14 J14 J15 J16 J16 J17 J17 J17 J19	5-6 7-8 1-2 3-4 3-4 1-2 3-4 5-6 7-8 9-10 11-12 13-14 15-16 1-2 1-2 5-6 9-10 3-4 7-8 9-10 1-2	CARD MUST BE JUMPED EXACTLY AS SHOWN FOR OPERATION IN PST SIMULCAST SYSTEM. NO ADDITIONAL JUMPERS PERMISSIBLE.
CARD MODIFICATIONS: INSTALL U11 PL 344A3095 EPROM INSTALL U12 19A705981P2 32K X 8 RAM HM62256-12		

NOTES:

1. REFER TO INSTRUCTION MANUAL FOR JUMPER LOCATIONS

DIGITAL INPUT CARD		
JUMPER	REMARKS	
JS1 JS2 JS4 JS4 JS5	I/O NON EXP A4 A5 EXP	CARD MUST BE JUMPED EXACTLY AS SHOWN FOR OPERATION IN PST SIMULCAST SYSTEM. NO ADDITIONAL JUMPERS PERMISSIBLE.

DIGITAL OUTPUT CARD #1		
JUMPER	PINS	REMARKS
JS1 BLOCK X BLOCK Y	C TO A 6 5	(NON EXP) CARD MUST BE JUMPED EXACTLY AS SHOWN FOR OPERATION IN PST SIMULCAST SYSTEM. NO ADDITIONAL JUMPERS PERMISSIBLE.

DIGITAL OUTPUT CARD #2		
JUMPER	PINS	REMARKS
JS1 BLOCK X BLOCK Y	C TO A 6 6	(NON EXP) CARD MUST BE JUMPED EXACTLY AS SHOWN FOR OPERATION IN PST SIMULCAST SYSTEM. NO ADDITIONAL JUMPERS PERMISSIBLE.

DIGITAL OUTPUT CARD #3		
JUMPER	PINS	REMARKS
JS1 BLOCK X BLOCK Y	C TO A 6 7	(NON EXP) CARD MUST BE JUMPED EXACTLY AS SHOWN FOR OPERATION IN PST SIMULCAST SYSTEM. NO ADDITIONAL JUMPERS PERMISSIBLE.

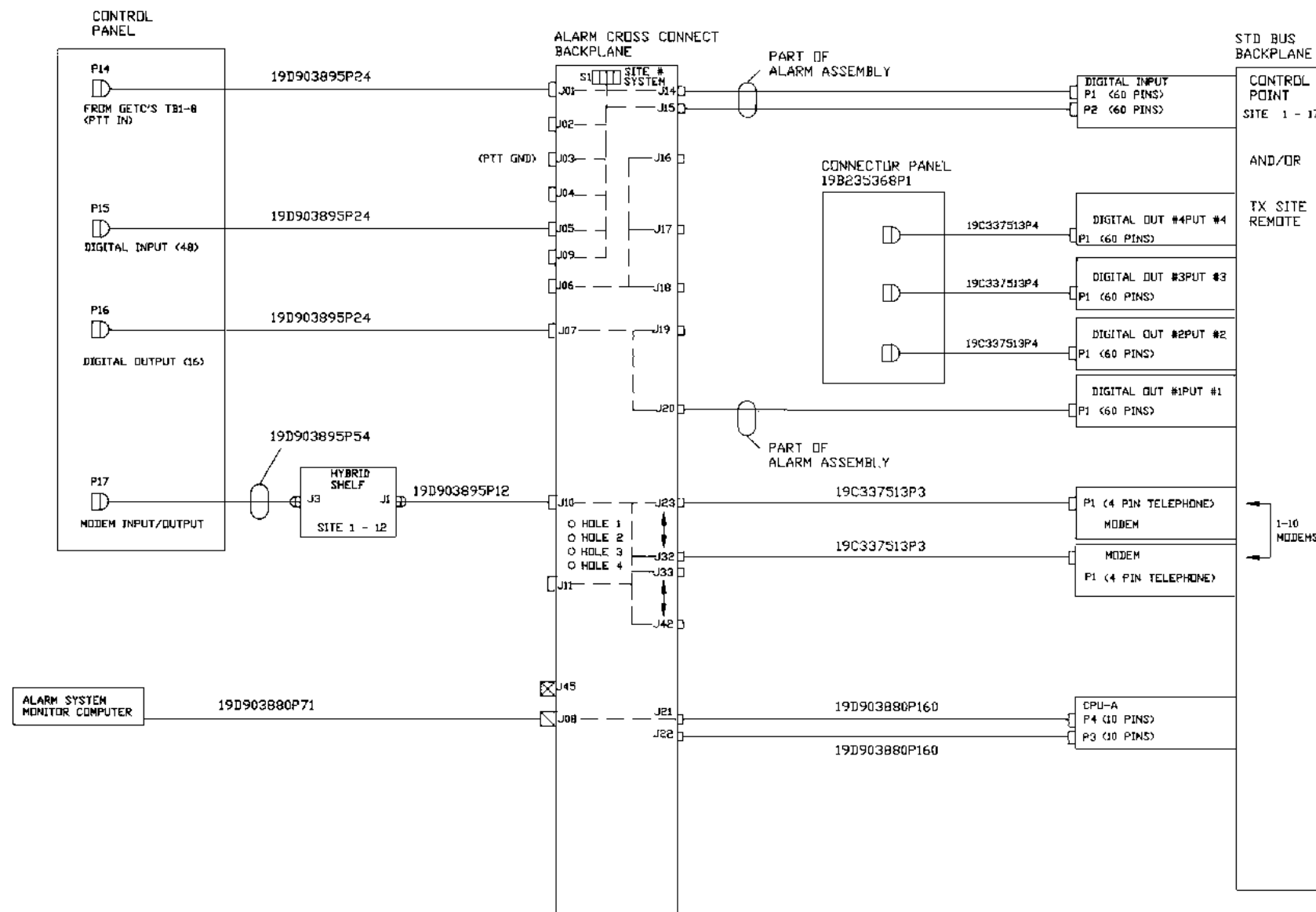
DIGITAL OUTPUT CARD #4		
JUMPER	PINS	REMARKS
JS1 BLOCK X BLOCK Y	C TO A 7 0	(NON EXP) CARD MUST BE JUMPED EXACTLY AS SHOWN FOR OPERATION IN PST SIMULCAST SYSTEM. NO ADDITIONAL JUMPERS PERMISSIBLE.

PTT/A/D CONTROL RACK
Master Alarm Block Diagram

(19D904177 Sh.1 Rev. 0)

CONTROL POINT MASTER ALARM

ALSO SEE APPLICATION ASSEMBLY 19D904013
AND CONNECTION LIST 344A4244

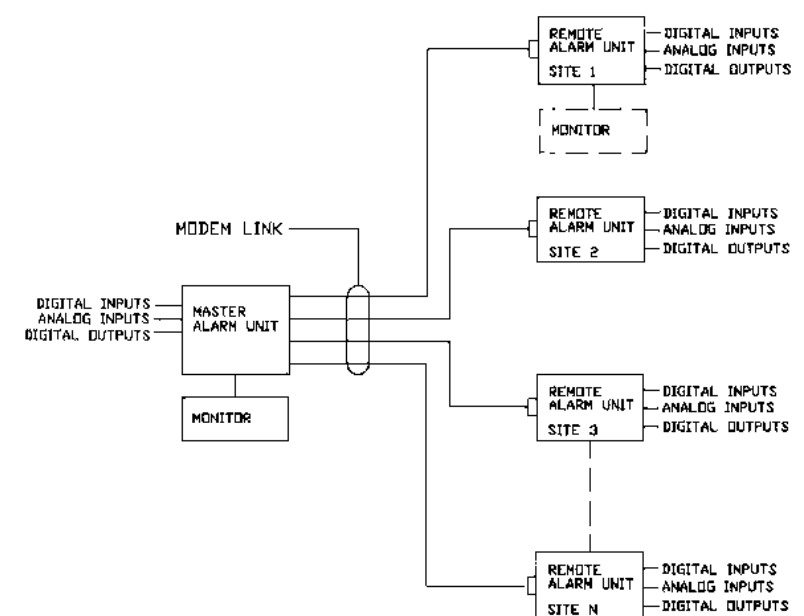


SEE 344A4244 FOR WIRING CONNECTIONS
SEE 19D904013P7 FOR ALARM ASSEMBLY CONNECTION

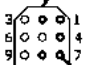
PTT/A/D CONTROL RACK

Master Alarm Block Diagram

(19D904177 Sh.2 Rev. 0)



POWER CONNECTION CHART	+12	-12	+5	GND
HYBRID SHELF STD BACKPLANE	PWR PIN 7	PIN4	PIN 1	GND PIN 2, 8

CONNECTOR STYLE IDENTIFICATION		STD BACKPLANE POWER CONNECTIONS	
DB-9	☒	STD BACKPLANE POWER CONNECTOR	POWER CABLE CONNECTOR
4 PIN J56 CTR	☒	SUPPLIED PREWIRED AS PART OF ALARM CARD CAGE ASSEMBLY	(GE 19B209288P21) (MOLEX 03-09-1093)
10, 26, 50 OR 60 PIN HEADER	☐		
25 PR TELCO	☐		
		(CONTACT SIDE SHOWN)	(WIRING SIDE SHOWN)

ALARM SYSTEM INTERCONNECTION DIAGRAM

PART 4 CONNECTION TO CTIS COMPUTER CABINET

RIC AUDIO MODULE #1		
CHANNEL 01	J01	RIC LIX J01 19D903880P45
CHANNEL 02	J02	RIC LIX J02 19D903880P45
CHANNEL 03	J03	RIC LIX J03 19D903880P45
CHANNEL 04	J04	RIC LIX J04 19D903880P45
CHANNEL 05	J05	RIC LIX J05 19D903880P45
CHANNEL 06	J06	RIC LIX J06 19D903880P45
CHANNEL 07	J07	RIC LIX J07 19D903880P45
CHANNEL 08	J08	RIC LIX J08 19D903880P45
CHANNEL 09	J09	RIC LIX J09 19D903880P45
CHANNEL 10	J10	RIC LIX J10 19D903880P45
CHANNEL 11	J11	RIC LIX J11 19D903880P45
CHANNEL 12	J12	RIC LIX J12 19D903880P45
RIC AUDIO MODULE #2		
CHANNEL 13	J01	RIC LIX J13 19D903880P45
CHANNEL 14	J02	RIC LIX J14 19D903880P45
CHANNEL 15	J03	RIC LIX J15 19D903880P45
CHANNEL 16	J04	RIC LIX J16 19D903880P45
CHANNEL 17	J05	RIC LIX J17 19D903880P45
CHANNEL 18	J06	RIC LIX J18 19D903880P45
CHANNEL 19	J07	RIC LIX J19 19D903880P45
CHANNEL 20	J08	RIC LIX J20 19D903880P45
SERIAL MODULE		
RIC SERIAL	J03	EMULEX PANEL 14B 19D903880P145
DATA LINK MODULE (MSCII CONTROLLER TO CTIS COMPUTER)		
DATA LINK (MAIN)	J01	EMULEX PANEL 16B 19D903880P60
DATA LINK (RDN)	J02	EMULEX PANEL 15B 19D903880P60

EXTERNAL CONNECTION TO CTIS CABINET AND RIC CABINET

FROM CTIS CABINET (SERIAL MODULE J4) TO RIC CABINET (SERIAL MODULE 'B'-J24)
USE CABLE 19D903880P161

FROM CTIS CABINET (RIC MODULE #1 J14) TO RIC CABINET (RIC MODULE #1-J124)
USE CABLE 19D903880P120

FROM CTIS CABINET (RIC MODULE #2 J14) TO RIC CABINET (RIC MODULE #2-J124)
USE CABLE 19D903880P120

FROM RIC CABINET (AUDIO IN #1 J14) CONNECT TO MSCII SWITCH
USE CABLE 19D903880P120

FROM RIC CABINET (AUDIO IN #2 J14) CONNECT TO MSCII SWITCH
USE CABLE 19D903880P120

PART 5

INSTALLATION INSTRUCTION FOR DOWNLINK GETC FOR BASIC EDACS
(CONNECTION OF A BASIC EDACS SYSTEM TO MSCII)

MOUNT GETC IN TOP OF STATION CABINET

CONNECT CABLE 19D903880P150 (POWER CABLE)
DOWNLINK GETC FIRST GETC OR RIC MOUNTING BELOW UNIT
TB10-7 RED LEAD
TB10-6 BLACK LEAD
CONNECT CABLE 19D903880P400 (SERIAL LINK)
J102 SERIAL INTERFACE MODULE J1

PTT/A/D CONTROL RACK
Master Alarm Cable Connection

19D904103P7

(19D904013 Sh.3 Rev. 2)

PART 6

SIMULCAST REMOTE ALARM SYSTEM --- 19D902821P1 --- (TX SITE LOCATION)			
SEE SCHEMATIC 19D903997			
MODULE LOCATION IN CARD CAGE			
SLOT 01	DIGITAL INPUT MODULE		
SLOT 02	CPU		
SLOT 03	A/D #1		
SLOT 04	A/D #2		
SLOT 05	A/D #3		
SLOT 06	A/D #4		
SLOT 07	A/D #4		
SLOT 08	A/D #4		
SLOT 09	A/D #4		
SLOT 10	A/D #4		
SLOT 11	2400 BAUD MODEM		
SLOT 12	DIGITAL OUTPUT MODULE		
HORZ POSITION	HYBRID		
MODULE	FROM	TO	CABLE
DIGITAL INPUT MODULE	P01	ALARM CC J14	PART OF CARD CAGE
	P02	ALARM CC J15	PART OF CARD CAGE
CPU	P03	ALARM CC J22	19C337513P2
	P04	ALARM CC J21	19C337513P2
A/D #1	P01	ALARM CC J16	19C336513P3
A/D #2	P01	ALARM CC J17	19C336513P3
A/D #3	P01	ALARM CC J18	19C336513P3
A/D #4	P01	ALARM CC J19	19C336513P3
2400 BAUD MODEM	P01	ALARM CC J23	19D904880P160
DIGITAL OUTPUT MODULE	P01	ALARM CC J20	PART OF CARD CAGE
HYBRID	PXX	ALARM CC J44	PART OF CARD CAGE

SET DIP SWITCH (S1) ON ALARM CC TO SITE NUMBER

CONTROL POINT 00000000

SITE #01 10000000

SITE #02 01000000

SITE #03 11000000

SITE #04 00100000

SITE #05 10100000

SITE #06 01100000

SITE #07 11100000

SITE #08 00010000

SITE #09 10010000

SITE #10 01010000

MODIFICATION TO MODULE IN ALARM SYSTEM -- SEE APPLICATION ASM 19D902831

SET JUMPERS ON ALL MODULES

19C337515P1 CPU MODULE ----- INSTALL U11 & U12

19C337515P2 A/D MODULE ----- INSTALL R15 & R16

19C337515P3 DIGITAL INPUT MODULE

19C337515P4 DIGITAL OUTPUT MODULE

19C337515P6 2400 MODEM ----- INSTALL U4E

19C337515P7 HYBRID MODULE

PART 7

SIMULCAST MASTER ALARM SYSTEM --- 19D902821P2 --- (CONTROL POINT)			
SEE SCHEMATIC 19D902831			
MODULE LOCATION IN CARD CAGE			
SLOT 01	DIGITAL INPUT MODULE		
SLOT 02	CPU		
SLOT 03	DIGITAL OUTPUT MODULE #4		
SLOT 04	DIGITAL OUTPUT MODULE #3		
SLOT 05	DIGITAL OUTPUT MODULE #2		
SLOT 06	DIGITAL OUTPUT MODULE #2		
SLOT 07	DIGITAL OUTPUT MODULE #2		
SLOT 08	DIGITAL OUTPUT MODULE #2		
SLOT 09	DIGITAL OUTPUT MODULE #2		
SLOT 10	DIGITAL OUTPUT MODULE #2		
SLOT 11	MODEM SITE #01		
SLOT 12	MODEM SITE #02		
SLOT 13	MODEM SITE #03		
SLOT 14	MODEM SITE #04		
SLOT 15	MODEM SITE #05		
SLOT 16	MODEM SITE #06		
SLOT 17	MODEM SITE #07		
SLOT 18	MODEM SITE #08		
SLOT 19	MODEM SITE #09		
SLOT 20	MODEM SITE #10		
SLOT 21	DIGITAL OUTPUT MODULE #1		

MODULE	FROM	TO	CABLE
DIGITAL INPUT MODULE	P01	ALARM CC J14	PART OF CARD CAGE
	P02	ALARM CC J15	PART OF CARD CAGE
CPU	P03	ALARM CC J22	19C337513P3
	P04	ALARM CC J21	19C337513P3
DIGITAL OUTPUT MODULE #4	P01	CONNECTOR PANEL P04	19D337513P4
DIGITAL OUTPUT MODULE #3	P01	CONNECTOR PANEL P03	19D337513P4
DIGITAL OUTPUT MODULE #2	P01	CONNECTOR PANEL P02	19D337513P4
MODEM SITE #01	P01	ALARM CC J23	19D903880P160
MODEM SITE #02	P01	ALARM CC J24	19D903880P160
MODEM SITE #03	P01	ALARM CC J25	19D903880P160
MODEM SITE #04	P01	ALARM CC J26	19D903880P160
MODEM SITE #05	P01	ALARM CC J27	19D903880P160
MODEM SITE #06	P01	ALARM CC J28	19D903880P160
MODEM SITE #07	P01	ALARM CC J29	19D903880P160
MODEM SITE #08	P01	ALARM CC J30	19D903880P160
MODEM SITE #09	P01	ALARM CC J31	19D903880P160
MODEM SITE #10	P01	ALARM CC J32	19D903880P160
DIGITAL OUTPUT MODULE #1	P01	ALARM CC J20	PART OF CARD CAGE

SET DIP SWITCH (S1) ON ALARM CC TO SITE NUMBER

CONTROL POINT 000000

MODIFICATION TO MODULE IN ALARM SYSTEM -- SEE APPLICATION ASM 19D902831

SET JUMPERS ON ALL MODULES

19C337515P1 CPU MODULE ----- INSTALL U11 & U12

19C337515P3 DIGITAL INPUT MODULE

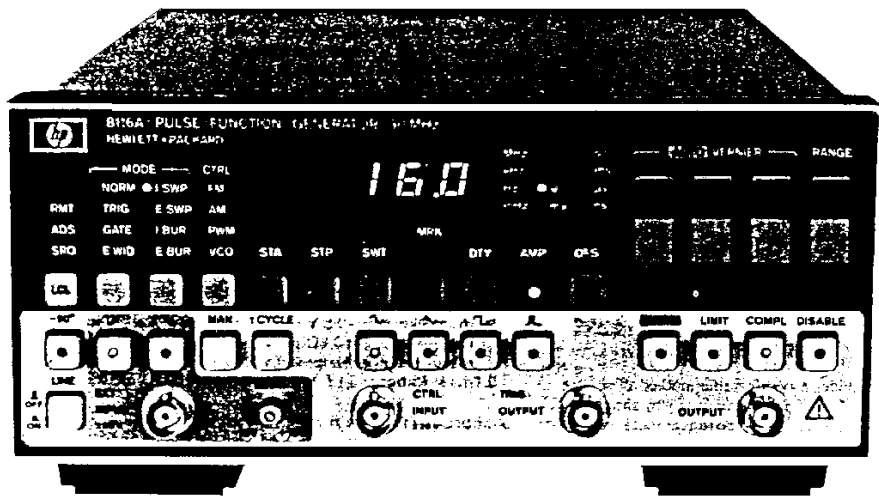
19C337515P4 DIGITAL OUTPUT MODULE

19C337515P6 2400 MODEM ----- INSTALL U4E

ON ALARM CC INSTALL JUMPER FROM SW01-6 TO HOLE H02

FUNCTION GENERATORS & WAVEFORM SYNTHESIZERS
1 mHz–50 MHz Pulse/Function Generator
HP 8116A

- Sine, triangle, square, haversine and dc
 - 1 mHz–50 MHz, 32 Vpp for all waveforms
 - Variable (10 ns min) pulse width, 6 ns transitions
- Modulation
 - Self-prompting operating concept
 - Error recognition and self test



Picture shows 8116A with Option 001, Burst and Logarithmic Sweep.

Supported by HP ITG Software

The fully programmable HP 8116A features pulse as well as function generator capabilities in one small unit. A broad 1 mHz–50 MHz band for all waveforms and a wide choice of operating and modulating modes assure high flexibility. These factors, plus good repeatability, make the HP 8116A a sound, long-term investment.

Unique Operating Concept Saves Engineering Time
HP's custom IC's have made it feasible to put the many HP 8116A capabilities into such a small volume. Handling is simplified by a unique, microprocessor-controlled, operating concept which ensures a clear overview of the compact front panel at all times. When the mode and waveform have been selected, illuminated labels show which parameters must be set. There's no clutter, no confusion.

Auto vernier. In normal mode, the HP 8116A's auto-vernier increments any desired parameter continuously until a stop signal is applied. This means that thresholds can be measured automatically, without a controller.

Level or amplitude programming. The HP 8116A's output can be programmed in terms of high and low levels or in terms of amplitude and offset. Consequently a direct, automatic, conversion is always feasible so that the HP 8116A can be programmed in the same terms as the device is specified.

Safe limit. Devices can be protected by the limit feature. This prevents the output from exceeding a given magnitude.

Rectangular Waveforms
For applications such as laser diodes or dc motors, square waves can be programmed for constant duty cycles from 10% to 90%. For digital test, or for simulating very low duty-cycle events, pulse width can be programmed down to 10 ns. Square wave and Pulse modes provide clean 6 ns edges that are ideal for many technologies. Pulse width modulation and pulse recovery capability are available in Pulse mode.

Sine and Triangle Functions
10% to 90% duty cycle, programmable in 1% steps, provides ramps and asymmetrical sine waves for testing VCO's, servos, amplifier linearity and industrial process control systems. Haversine functions,

available in External Trigger, Gate and Burst modes, extend the applications to areas such as telephone line and vibration testing.

Modulation
All waveforms can be amplitude or frequency modulated. VCO operation allows frequency variation over two decades with an external voltage; consequently transducer output can be conditioned for mag tape recording, or frequency-shift keying or linear sweep can be carried out.

Option 001
10 1/2-decade log sweep. Sweep mode covers the wide 1 mHz – 50 MHz band in a single up sweep. Test setups require no more than an X-Y recorder or scope because all necessary control signals are available. The HP 8116A sweeps can be internally triggered, if desired.

Accurate, counted bursts. A preprogrammed number of cycles of any waveform can be generated in Burst mode. With sine, triangle and square functions, bursts can be triggered internally as well as externally.

Hold capability. For material stress testing, low frequency functions can be held at instantaneous levels. Hold is controlled by an external signal.

Low-Cost Automation for Bench and Systems
Powerful capability, small size and wide specified temperature range make the HP 8116A a good choice for automatic test systems. Also, the low cost means that it's now realistic to automate those routine bench jobs and leave more time for design. Comfortable software features such as easy syntax and flexible format contribute to rapid system design.

Operating Confidence
There's reliance in the HP 8116A's output because proper operation is always ensured by the instrument's error detector. This helps the user to recover from an incorrect front panel or programming operation by indicating the offending parameter. Also, the built-in test and diagnosis feature verifies correct function each time the instrument is switched on.

Specifications
Specifications apply with 50-ohm load and temperatures in the range 0° C to 55° C.

Functions
Sine, triangle, ramp, square, pulse, haversine, haversine, triangle, dc.

Timing
Frequency
Range: 1 mHz to 50 MHz (3-digit resolution).
Accuracy¹ (pulse mode, 50% d/c): $\pm 3\% \pm 0.3$ MHz below 100 kHz, $\pm 5\%$ above 100 kHz.
Jitter (pulse mode, 50% d/c): $< 0.1\% + 100$ ps.
Stability: $\pm 2\%$ (1 hour), $\pm 5\%$ (24 hours).
Duty cycle: (sine, triangle, square, haversine, haversine, triangle).
Range: 10% to 90% (20% to 80% above 1 MHz, 50% above 10 MHz), 2-digit resolution.
Accuracy¹: ± 0.5 digits (± 3 digits above 1 MHz).
Pulse Width
Range: 10.0 ns to 999 ms (3-digit resolution).
Accuracy¹: $\pm 5\% \pm 2$ ns.
Jitter: $< 0.1\%$ ($0.2\% + 200$ ps for width ≤ 10 μ s).

Output Characteristics
(voltages double into high impedance).

Amplitude
Range: 10.0 mVpp to 16.0 Vpp (3-digit resolution).
Accuracy¹: $\pm 5\%$ (at 1 kHz for sine and triangle).
Flatness (sine): $\pm 3\%$ ($\pm 5\%$ above 1 MHz, $+5 -15\%$ above 10 MHz).
Flatness (triangle): $\pm 3\%$ ($\pm 5\%$ above 1 MHz, $+5 -25\%$ above 10 MHz).

Offset and dc Mode
Range: 0.00 to ± 7.95 V (0 to ± 795 mV for amplitude < 100 mVpp).
Resolution: 3 digits.
Accuracy¹: 0.5% of setting $\pm 1\%$ of ampl ± 40 mV ($+2$ mV if ampl < 100 mVpp, ± 20 mV in dc mode).
Distortion (sine, normal mode, 50% duty cycle).
Total harmonic distortion (10 Hz–50 kHz): $< 1\%$ (-40 dB)*.
Harmonic related signals (50 kHz–1 MHz): < -34 dB, (1 MHz–50 MHz): < -23 dB*.
¹May increase by 1 dB below 10° C and above 45° C.

Non-linearity (triangle, ramp, 100 mHz–1 MHz): $< \pm 3\%$.

Pulse and Square Wave Characteristics
Transitions: < 7 ns.
Pulse perturbations: $< \pm 5\% \pm 2$ mV.
Output impedance: 50 ohm $\pm 5\%$.

Operating Modes
Normal, trigger*, gate*, external width.

Additional Modes in HP 8116A Option 001
Logarithmic Up Sweep (for all waveforms).
Range: Start and stop frequencies selectable up to full range (1 mHz–50 MHz).
Sweep time: selectable in 1-2-5 sequence from 10 ms to 500 seconds per decade.
Sweep repetition: continuous sweeps (internal sweep) or externally triggered.

Counted Burst* (for all waveforms).
Burst length: 1 to 1999 cycles.
Burst repetition: internally triggered at selectable intervals from 100 ns to 999 ms (except in Pulse mode), or externally triggered, up to 40 MHz.

^{*}Selectable (-90°) start-phase for haversine, haversine, triangle.

Control Modes
Frequency modulation: $\pm 5\%$ max deviation.
Sensitivity: 1 V for 1% deviation.
Modulating frequency: dc to 20 kHz.
Amplitude Modulation
Sensitivity: ± 2.5 V for 100% mod. ($+2.5$ V to -7.5 V for DSBSC).
Modulating frequency: dc to 1 MHz.

¹Applies from 16° C to 30° C, %-error increases 0.05 per °C outside this range.

Pulse Width Modulation
Range: 10 ns to 1 s in 8 non-overlapping decade ranges.
Max. width ratio: 10:1.
Sensitivity: ± 9 V for 1:10 ratio.

Voltage-Controlled Oscillator
Range: 2 decades in range 1 MHz–50 MHz.
Sensitivity: 0.1 V to 10 V for 2 decades.
Modulating frequency: dc to 1 kHz.

Auxiliary Modes
Manual: simulates external input.
1 cycle (option 001): triggers single output cycle in Trigger, Gate and Ext Burst modes.
Auto vernier: continuous vernier which can be remotely or manually stopped.

Limit: programmable maximum output levels to protect DUT.
Complement: selectable normal/complement output.
Disable: relay disconnects output.

Auxiliary Inputs and Outputs
External Input
Threshold: ± 10 V adjustable.
Max input voltage: ± 20 V.
Sensitivity: 500 mVpp.
Min pulse width: 10 ns.
Input impedance: 10 k Ω typ.
Trigger slope: positive, negative and off.

Control Input
Max input voltage: ± 20 V.
Input impedance: 10 k Ω typ.

Trigger Output
Output levels: 0/2.4 V typ.
Output impedance: 50 ohm typ.

X-Output (Option 001) for sweep X-Y recording (rear panel).
Output levels: 0 V (= start frequency) to 10 V max.
Slope: 1.5 V per sweep decade.

Marker Output (Option 001) for sweep (rear panel).
Output levels: TTL.
Leading edge: positive at selected marker frequency.

Hold Input (Option 001), rear panel.
Input levels: TTL.
Leading edge: positive transition causes HP 8116A output ($f < 10$ Hz) to hold at instantaneous level. Output droop 0.01% per second.

Max input voltage: ± 20 V

HP-IB Capability
All manual key operations are programmable. Talk mode provides learn, status byte and error report capabilities.

Memory
Battery-backup RAM retains current operating state.

General
Repeatability: factor 4 better than accuracy.

Environmental
Storage temperature: -40° C to $+70^\circ$ C.
Operating temperature: 0° C to 55° C.
Humidity: 95% RH, 0° C to 40° C.
Power: 100/120/220/240 V rms; $\pm 5\%$, -10% ; 48 to 440 Hz, 120 VA max

Ordering information:

Part 1 Consist of HP 8116A (Programmable Pulse/Function Generator)

With Option 001 (Burst & Logarithmic Sweep)

And HP 5062-3972 Rack Mounting Kit.

TEST EQUIPMENT

Function Generators & Waveform Synthesizers

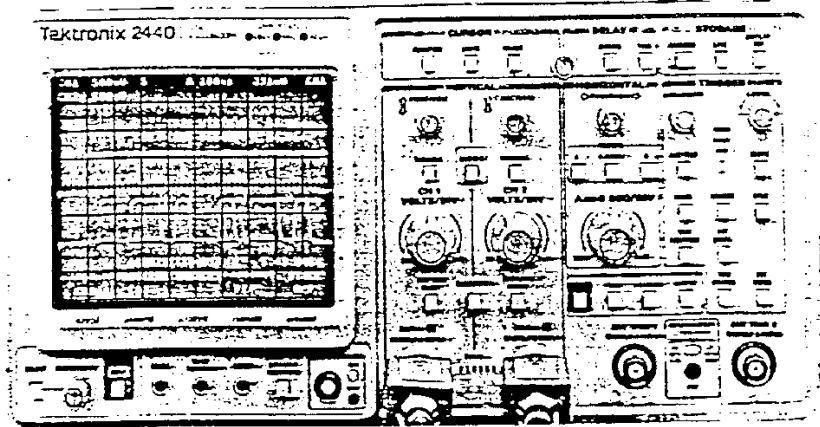
(344A4227, Sh. 1 Rev. 1)

PURCHASE FROM AN APPROVED VENDOR

THIS DRAWING SUBJECT TO THE PROVISIONS OF 19A700070
PURCHASING TO SUPPLY VENDOR
WITH COPIES OF THIS DRAWING
AND 19A700070 PLUS:
MATERIAL MUST MEET G.E.
INCOMING INSPECTION & TEST
SAMPLE PER 19A700070P3

Specifications overleaf

DIGITIZING OSCILLOSCOPES
100 TO 500-MS/s 2430A



HIGH PERFORMANCE COMPACT
DIGITIZING OSCILLOSCOPES
FEATURES THAT SPEED UP
MEASUREMENTS, SIMPLIFY SETUPS, &
AUTOMATE TESTING

Auto Setup — At the push of a button, the scope displays automatically scaled and triggered signals. The P6137 autoprobe supplied with the 2440 extends this capability to its probe-tip button. (Optional for 2430A.)

Auto Measure — 21 waveform measurements are available for CRT readout and over the GPIB. Up to 4 may be selected for live (3 Hz) update, along with measurement aids and user-definable algorithms.

Auto Pass/Fail Testing — Use this special feature to compare incoming signals against reference waveforms. If the signals are out of limits, the scope time stamps it, alerts the operator or controller, or sends the offending waveform to a printer/plotter. References can be previously-acquired waveforms or templates transferred from a computer.

Auto Sequence — Routines built from the front panel (without writing code!) can include steps to make measurements, compare live waveforms against references, and send data to a printer or plotter automatically. Eliminates or decreases the need for a computer/controller for many repetitive tests. Stores typically 50 to 200 setups and actions in up to 40 named sequences.

SAVE TIME AND REDUCE COST IN SYSTEMS
OF ALL SIZES

In large systems, 2400 Series Digitizing Scopes cut controller time and bus traffic to increase throughput. Averaging, smoothing, measuring, and pass/fail testing can all be done by the scope upon a single command by the controller.

EXTEND CAPABILITIES WITH 2402A
TekMate™

- PC-compatible 3.5-inch floppy mass storage (optional 44 MByte hard disk)
- FFT analysis on waveform data
- Automatic waveform data logging
- Easy creation of interactive test sequences

TekSecure® MEMORY ERASE

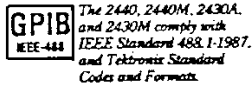
2400 Series Digitizing Oscilloscopes can be instantly declassified for removal from secure areas. Invoking the TekSecure feature completely erases waveform, front-panel, and sequence memories, restarts the instrument with factory settings, then gives positive indication that erasure has been accomplished.

MATE/CIL COMPATIBILITY

The 2440M and 2430M include Control Intermediate Interface Language (CIL) capability. This is essential for operation in Modular Automatic Test Equipment (MATE) used in testing military systems.

A Well-Balanced
Combination of Perfor-
mance, Automation, and
Convenience Features.

- 500 MS/s Digitizing (100 MS/s: 2430A)
- 300 MHz Bandwidth (150 MHz: 2430A)
- 2 ns Glitch Capture
- 8-Bit Vertical Resolution (Single-shot and Repetitive)
- 0.0015% Crystal-Controlled Time Base
- Simultaneous Two-Channel Sampling
- Auto Pass/Fail Testing
- Fast, Reliable Automatic Measurements
- Fast Update Rate
- Extensive Triggering Capabilities
- Direct Printer/Plotter Output
- Disk Storage with 2402A
- On-Screen "HELP"
- MATE/CIL versions



ORDERING INFORMATION

Part 1
Consists of 2430A 100-MS/s Digitizing Oscilloscope

Includes: Same as 2440 Except
2 P6133 Opt. 25 10X (1.3m) Probes

With Option 1R - Rackmount

2400 SERIES DIGITIZING OSCILLOSCOPES SELECTION GUIDE						
	Sampling Rate	Bandwidth (Repetitive)	Bandwidth (Single-Shot)	Vertical*1 Resolution	Glitch Capture	Time Bases
2430A/	100 MS/s	150 MHz	40 MHz	8 bits	2 ns	Main, Div

*1 Digitizer resolution for single-shot acquisition. Averaging of repetitive signals increases resolution to as much as 11 bits.

PURCHASE FROM AN APPROVED VENDOR
THIS DRAWING SUBJECT TO THE PROVISIONS OF 19A700070
PURCHASING TO SUPPLY VENDOR
WITH COPIES OF THIS DRAWING
AND 19A700070 PLUS:
MATERIAL MUST MEET G.E.
INCOMING INSPECTION & TEST
SAMPLE PER 19A700070P3

NETWORK ANALYZERS
Audio/Video/Baseband/IF Network Analyzer, 5 Hz to 200 MHz
3575A



HP 3575A

HP 3575A Gain-Phase Meter

The HP 3575A gain-phase meter is a broadband two-channel analyzer typically used to measure transfer functions such as amplifier gain/loss or the frequency response of filters. It can be used to measure the ratio and relative phase of any two signals on its two-channel inputs and for absolute measurements of signals on each channel. A wide range of input waveforms can be measured, including sine, square, and triangular waveforms. A three-digit display can be selected to read amplitude level/ratio or phase of the input signals. An optional three-digit readout and analog output is available for simultaneous amplitude and phase measurements.

Specifications Summary

Frequency: 1 Hz to 13 MHz.
Level: 200 μ V rms to 20 V rms.
Number of channels: 2.
Impedance: 1 M Ω in parallel with 30 pF.
Protection: $\pm$ 40 V dc, 20 V rms.
Nominal amplitude accuracy: $\pm$ 1 dB (See data sheet for complete accuracy specifications)
Amplitude functions: A dBV, B dBV or B/A dB.
Range: A dBV, B dBV: -74 dBV to +26 dBV (in two ranges). B/A dB: -100 to +100 dB.
Resolution: 0.1 dB.
Nominal phase accuracy: $\pm$ 0.5 degrees (See data sheet for complete accuracy specifications)
Range: $\pm$ 180° with 12° of overrange.
Resolution: 0.1°

General

Power: 115 V / 230 V $\pm$ 10%, 48 Hz to 440 Hz, 40 VA.
Weight: net. 8.3 kg (18.4 lb); shipping, 11.3 kg (25.8 lb)

Contact your local HP sales office for more information including a data sheet containing complete specifications.

Ordering Information

Part 1 Consist of HP 3575A Gain/Phase Meter

Option 001 Dual Readouts/Dual outputs

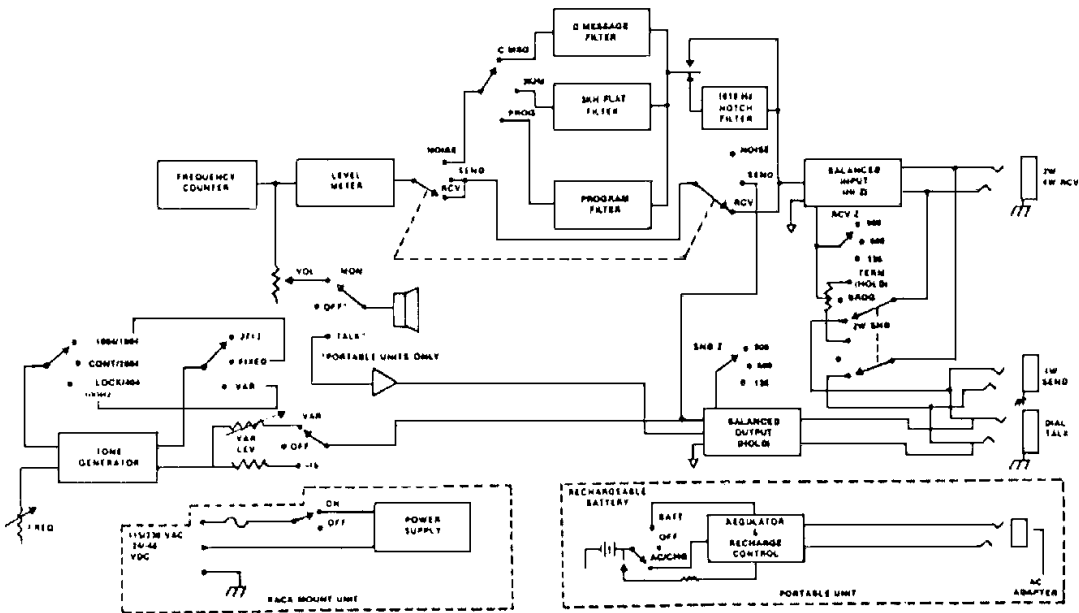
Option 908 - Rack Flange Kit

TEST EQUIPMENT
Oscilloscope & Network Analyzer

SPECIFICATIONS

GENERAL		FREQUENCY MEASUREMENT	
Measurements	Level (dBm), Weighted Noise (dBrn), Noise with Tone (dBrn), Noise-to-Ground (dBrn), and Frequency (KHz).	Frequency Range	30 Hz to 19.9 KHz
Displays	Dual 4 1/2 digit displays with bold 1/2 inch digits	Level Range	-50 dBm to +10 dBm
I/O	Input/Output has full 2W/4W operation with dual line hold	Resolution	.001 KHz
Generator	Sine wave, four fixed frequencies plus variable frequency, 100 Hz frequency lock, variable level and fixed level	Update Rate	2 times per second
Audio	Internal audio monitor Push-to-talk feature on portable units	Accuracy	± .001 KHz
INPUT		GENERATOR	
Impedance	135, 600, or 900 ohm, balanced; 25K ohm bridging	Frequency Range	30 Hz to 19.9 KHz
Return Loss	> 30 dB, 200 Hz to 20 KHz	404, 1004, 2804 Hz fixed	
Balance	> 60 dB up to 20 KHz	2713 Hz fixed	
Line Hold	28mA nominal	VAR - Continuously variable frequency	
LEVEL MEASUREMENT		LOCK - frequency lock to 100 Hz increments	
Frequency Range	30 Hz to 20 KHz flat	Continuously adjustable -40 to +10 dBm, -16 dBm fixed	
Dynamic Range	-70.0 dBm to +10.0 dBm, auto-ranged	< -50 dB at 820 Hz, -40 dB at other frequencies	
Resolution	0.1 dB		
Accuracy	+10dBm -70dBm		
	± .5dB ± .2dB ± .5dB		
	30Hz 100Hz 4KHz 20KHz		
Detector	± .1 dB at 1 KHz, +10 to -50 dBm		
Update Rate	Average responding 4 times per second		
NOISE MEASUREMENT		OUTPUT	
Weighting Filters	C message, 3KHz Flat, Program	Impedance	135, 600, or 900 ohm, balanced
Notch Filter	-50 dB, 995 to 1025 Hz	Return Loss	> 30 dB 200 Hz to 20 KHz
Dynamic Range	10 to 90 dBrn	Balance	> 60 dB up to 20 KHz
Resolution	0.1 dB	Line Hold	28mA nominal
Accuracy	± 1 dB	AUDIO	
Detector	Quasi-RMS	Modes	TALK, MONITOR, OFF (Monitor, Rack Mount) TALK Imposes voice in place of generator signals at output MONITOR speaker with variable volume control monitors receive signals OFF Disables speaker
NOISE-TO-GROUND MEASUREMENT		POWER	
Weighting Filters	C message, 3KHz Flat, Program	806-RM	115/230 VAC 45-65 Hz, 5 watts.
Dynamic Range	-40 to +40 dBm autoran	OPERATING TEMPERATURE	
Resolution	0.1 dB	0° to 50° C	
Accuracy	± 1 dB	DIMENSIONS	
Detector	Quasi-RMS	Rack Mount	4.45cm x 48.3cm x 25.4cm (1 1/4" x 19" x 10"); 58.4cm (23") panel width available on special order

BLOCK DIAGRAM



PART ①

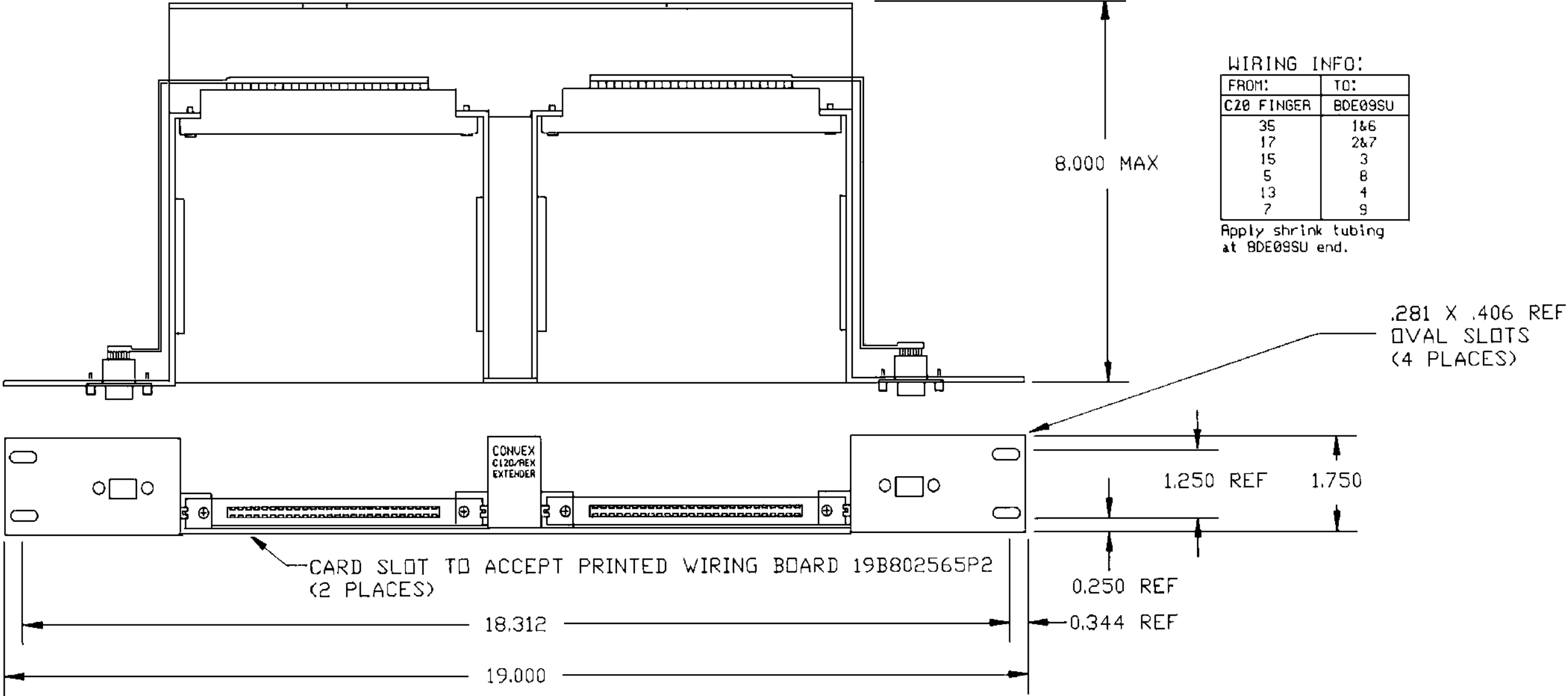
CONVEX CATALOG NO. 806-RA-03-03
OR EQUIVALENT
806 = TRANSMISSION TEST UNIT
RA = 1 RACK UNIT HIGH 19 INCH WIDE
(WITH MOUNTING HOLES PER EIA)
03 = 115/230 VAC 45-65 HZ
03 = DUAL LED DISPLAY



TEST EQUIPMENT

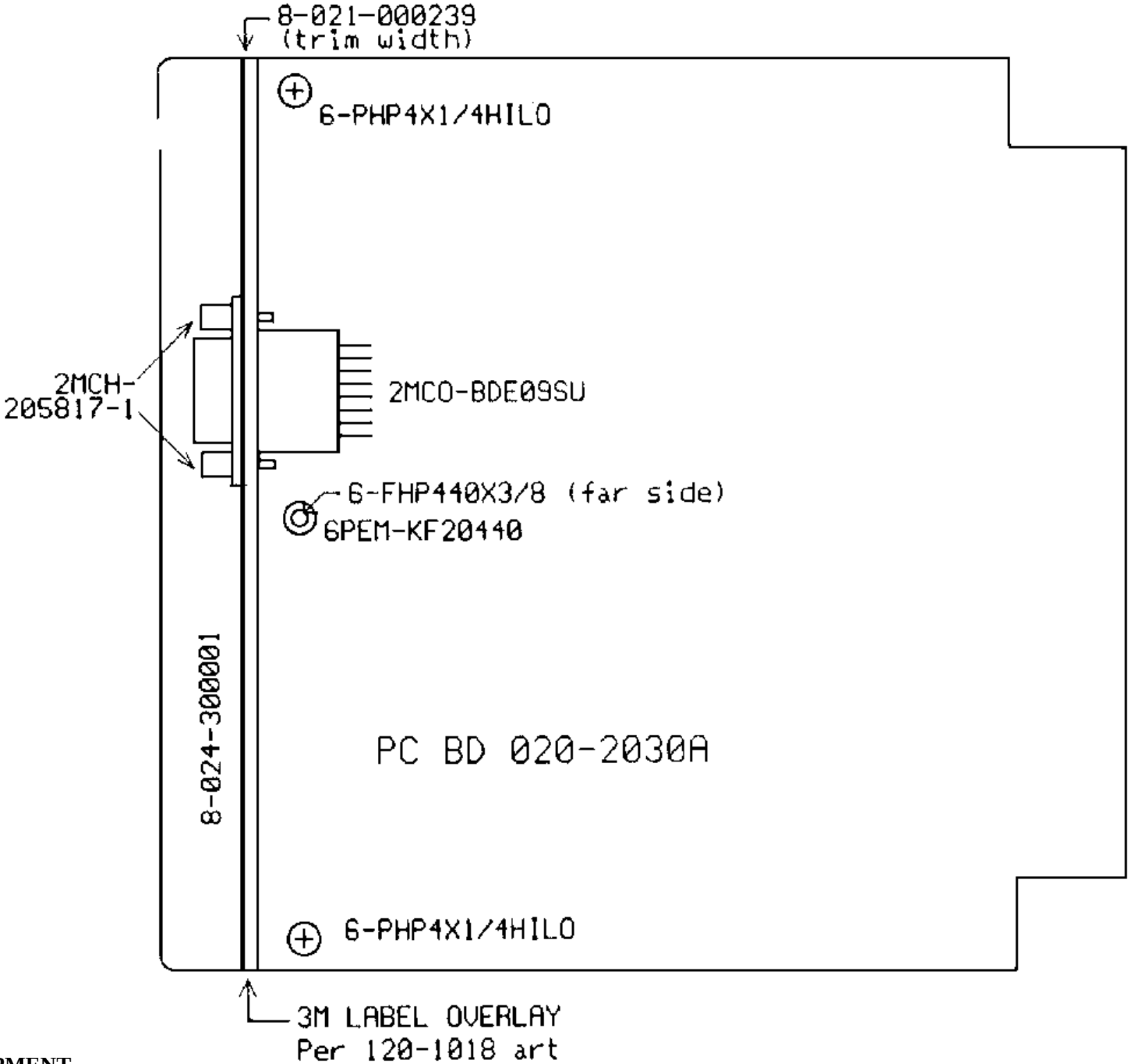
Board Extender & Test Unit

(19B802566 Rev. 0)



TEST EQUIPMENT
C120/EX1 Module

(19B802565 Sh. 1, Rev. 0)



dimensions
5.58" (14.17cm) high
1.42" (3.61cm) wide
5.96" (15.14cm) deep

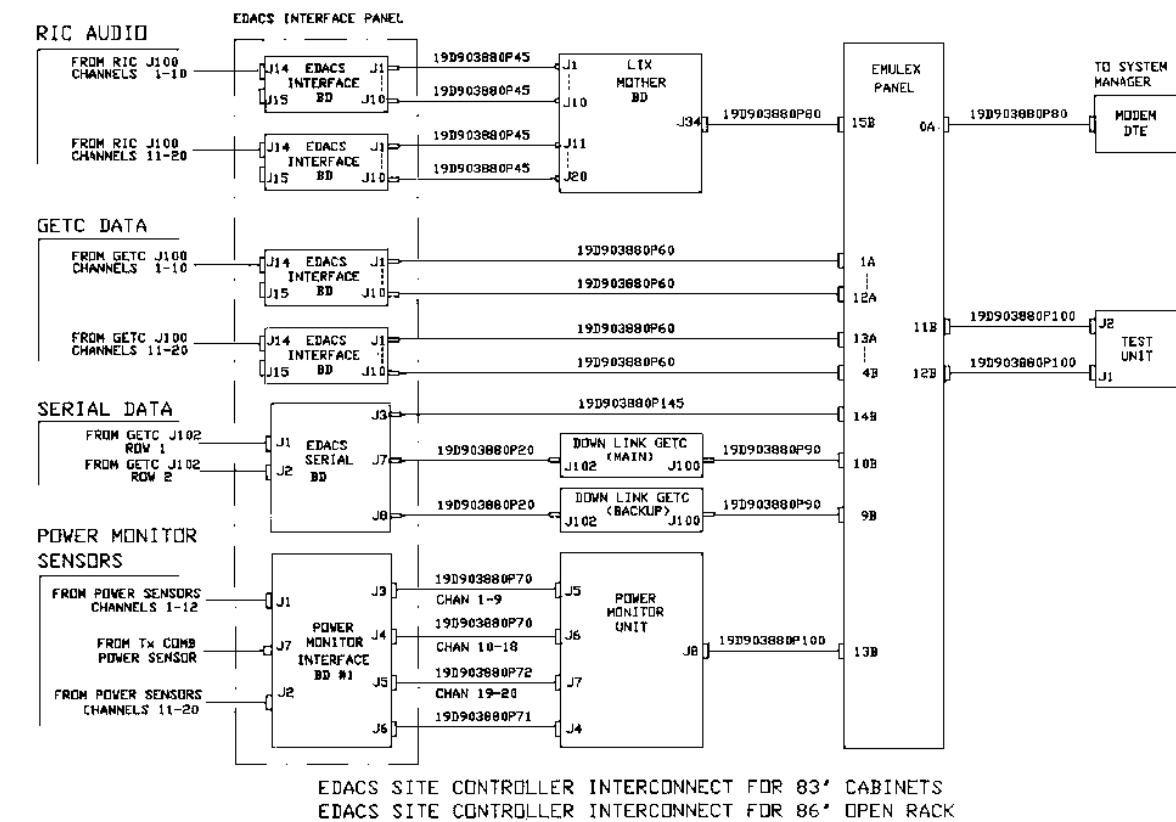
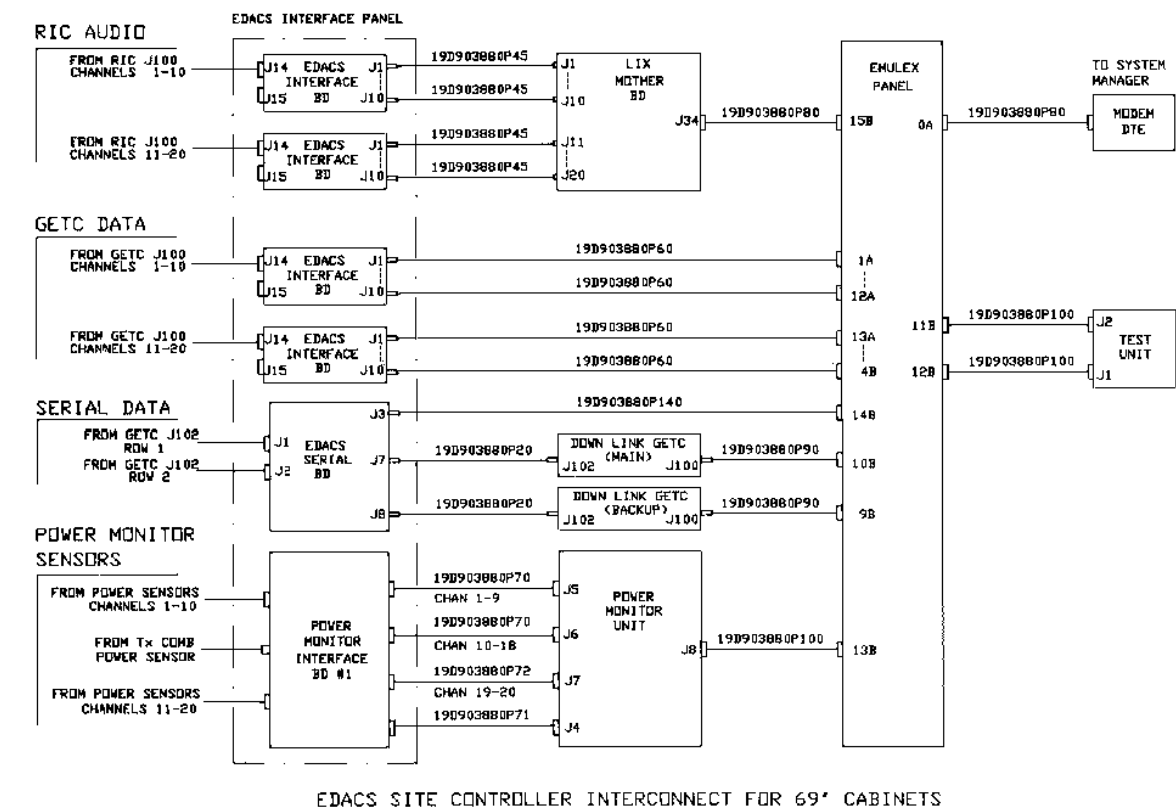
WIRING INFO:

FROM:	TO:
C20 FINGER	BDE09SU
35	1&6
17	2&7
15	3
5	8
13	4
7	9

Apply shrink tubing
at BDE09SU end.

TEST EQUIPMENT
C120/EX1 Module

(19B802565 Sh. 2, Rev. 0)



PART 3 CABLE CONNECTION TO EDACS SITE CONTROLLER

SITE CONTROLLER CONNECT TO STATION WITH 3 IN A CABINET		
FROM	TO	CABLE
POWER MODULE J03	POWER MONITOR P5	19D903880P70
POWER MODULE J04	POWER MONITOR P6	19D903880P70
POWER MODULE J05	POWER MONITOR P7	19D903880P72
POWER MODULE J06	POWER MONITOR P4	19D903880P71
GETC DATA MODULE #1		
CHANNEL 01 J01	EMULEX 1A	19D903880P60
CHANNEL 02 J02	EMULEX 2A	19D903880P60
CHANNEL 03 J03	EMULEX 3A	19D903880P60
CHANNEL 04 J04	EMULEX 4A	19D903880P60
CHANNEL 05 J05	EMULEX 5A	19D903880P60
CHANNEL 06 J06	EMULEX 6A	19D903880P60
CHANNEL 07 J07	EMULEX 7A	19D903880P60
CHANNEL 08 J08	EMULEX 8A	19D903880P60
CHANNEL 09 J09	EMULEX 9A	19D903880P60
CHANNEL 10 J10	EMULEX 10A	19D903880P60
CHANNEL 11 J11	EMULEX 11A	19D903880P60
CHANNEL 12 J12	EMULEX 12A	19D903880P60
GETC DATA MODULE #2		
CHANNEL 13 J01	EMULEX 13A	19D903880P60
CHANNEL 14 J02	EMULEX 14A	19D903880P60
CHANNEL 15 J03	EMULEX 15A	19D903880P60
CHANNEL 16 J04	EMULEX 0B	19D903880P60
CHANNEL 17 J05	EMULEX 1B	19D903880P60
CHANNEL 18 J06	EMULEX 2B	19D903880P60
CHANNEL 19 J07	EMULEX 3B	19D903880P60
CHANNEL 20 J08	EMULEX 4B	19D903880P60
SERIAL MODULE		
RIC SERIAL J03	EMULEX 14B	19D903880P145
GETC SERIAL J07	DOWN LINK GETC J102	19D903880P21
GETC SERIAL J08	DOWN LINK GETC J102	19D903880P21
RIC AUDIO MODULE #1		
CHANNEL 01 J01	RIC LIX J01	19D903880P45
CHANNEL 02 J02	RIC LIX J02	19D903880P45
CHANNEL 03 J03	RIC LIX J03	19D903880P45
CHANNEL 04 J04	RIC LIX J04	19D903880P45
CHANNEL 05 J05	RIC LIX J05	19D903880P45
CHANNEL 06 J06	RIC LIX J06	19D903880P45
CHANNEL 07 J07	RIC LIX J07	19D903880P45
CHANNEL 08 J08	RIC LIX J08	19D903880P45
CHANNEL 09 J09	RIC LIX J09	19D903880P45
CHANNEL 10 J10	RIC LIX J10	19D903880P45
CHANNEL 11 J11	RIC LIX J11	19D903880P45
CHANNEL 12 J12	RIC LIX J12	19D903880P45
RIC AUDIO MODULE #2		
CHANNEL 13 J01	RIC LIX J13	19D903880P45
CHANNEL 14 J02	RIC LIX J14	19D903880P45
CHANNEL 15 J03	RIC LIX J15	19D903880P45
CHANNEL 16 J04	RIC LIX J16	19D903880P45
CHANNEL 17 J05	RIC LIX J17	19D903880P45
CHANNEL 18 J06	RIC LIX J18	19D903880P45
CHANNEL 19 J07	RIC LIX J19	19D903880P45
CHANNEL 20 J08	RIC LIX J20	19D903880P45

SITE CONTROLLER CONNECT TO STATION WITH 2 IN A CABINET (69' INCH CABINETS)		
FROM	TO	CABLE
POWER MODULE J03	POWER MONITOR P5	19D903880P70
POWER MODULE J04	POWER MONITOR P6	19D903880P70
POWER MODULE J05	POWER MONITOR P7	19D903880P72
POWER MODULE J06	POWER MONITOR P4	19D903880P71
GETC DATA MODULE #1		
CHANNEL 01 J01	EMULEX 1A	19D903880P60
CHANNEL 02 J02	EMULEX 2A	19D903880P60
CHANNEL 03 J03	EMULEX 3A	19D903880P60
CHANNEL 04 J04	EMULEX 4A	19D903880P60
CHANNEL 05 J05	EMULEX 5A	19D903880P60
CHANNEL 06 J06	EMULEX 6A	19D903880P60
CHANNEL 07 J07	EMULEX 7A	19D903880P60
CHANNEL 08 J08	EMULEX 8A	19D903880P60
CHANNEL 09 J09	EMULEX 9A	19D903880P60
CHANNEL 10 J10	EMULEX 10A	19D903880P60
GETC DATA MODULE #2		
CHANNEL 11 J01	EMULEX 11A	19D903880P60
CHANNEL 12 J02	EMULEX 12A	19D903880P60
CHANNEL 13 J03	EMULEX 13A	19D903880P60
CHANNEL 14 J04	EMULEX 14A	19D903880P60
CHANNEL 15 J05	EMULEX 15A	19D903880P60
CHANNEL 16 J06	EMULEX 0B	19D903880P60
CHANNEL 17 J07	EMULEX 1B	19D903880P60
CHANNEL 18 J08	EMULEX 2B	19D903880P60
CHANNEL 19 J09	EMULEX 3B	19D903880P60
CHANNEL 20 J10	EMULEX 4B	19D903880P60
SERIAL MODULE		
RIC SERIAL J03	EMULEX 14B	19D903880P145
GETC SERIAL J07	DOWN LINK GETC J102	19D903880P21
GETC SERIAL J08	DOWN LINK GETC J102	19D903880P21
RIC AUDIO MODULE #1		
CHANNEL 01 J01	RIC LIX J01	19D903880P45
CHANNEL 02 J02	RIC LIX J02	19D903880P45
CHANNEL 03 J03	RIC LIX J03	19D903880P45
CHANNEL 04 J04	RIC LIX J04	19D903880P45
CHANNEL 05 J05	RIC LIX J05	19D903880P45
CHANNEL 06 J06	RIC LIX J06	19D903880P45
CHANNEL 07 J07	RIC LIX J07	19D903880P45
CHANNEL 08 J08	RIC LIX J08	19D903880P45
CHANNEL 09 J09	RIC LIX J09	19D903880P45
CHANNEL 10 J10	RIC LIX J10	19D903880P45
RIC AUDIO MODULE #2		
CHANNEL 11 J01	RIC LIX J11	19D903880P45
CHANNEL 12 J02	RIC LIX J12	19D903880P45
CHANNEL 13 J03	RIC LIX J13	19D903880P45
CHANNEL 14 J04	RIC LIX J14	19D903880P45
CHANNEL 15 J05	RIC LIX J15	19D903880P45
CHANNEL 16 J06	RIC LIX J16	19D903880P45
CHANNEL 17 J07	RIC LIX J17	19D903880P45
CHANNEL 18 J08	RIC LIX J18	19D903880P45
CHANNEL 19 J09	RIC LIX J19	19D903880P45
CHANNEL 20 J10	RIC LIX J20	19D903880P45

SITE CONTROLLER
Intra Cabinet Wiring

19D904013P3
(19D904013, Sh.2 Rev. 1)