

Installation Manual

MASTR® III MULTIPLE RECEIVER

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NOTICE!

This manual covers Ericsson and General Electric products manufactured and sold by Ericsson Inc.

NOTICE!

Repairs to this equipment should be made only by an authorized service technician or facility designated by the supplier. Any repairs, alterations or substitution of recommended parts made by the user to this equipment not approved by the manufacturer could void the user’s authority to operate the equipment in addition to the manufacturer’s warranty.

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GENERAL

The intent of this instruction book is to guide field installation personnel through the installation of a MASTR III Multiple Receiver System. Instructions are provided for sites with up to 24 channels in various cabinets and configurations. EDACS and conventional sites are described and all necessary material is provided.

RELATED PUBLICATIONS

Title	Publication Number
MASTR III Multiple Receiver	LBI-39112
RF Package, 800 MHz	LBI-39113
RF Package, VHF	LBI-39114
RF Package, UHF	LBI-39115
MASTR Station Blower Kits	LBI-4842
Power Supply	LBI-38550 or LBI-38551
Control Channel Monitor/Rangr	LBI-38343
EDACS Voter Equipment	LBI-38224
EDACS Interface Panel	LBI-38812
EDACS Interface Module 1	LBI-38813
Buffer Board.	LBI-38236

PRODUCT SPECIFICATION FOR CE MARKED EQUIPMENT

The MASTR III® Base Station and Auxiliary Receiver conform to the following Product Specifications.

EUROPEAN STANDARDS:

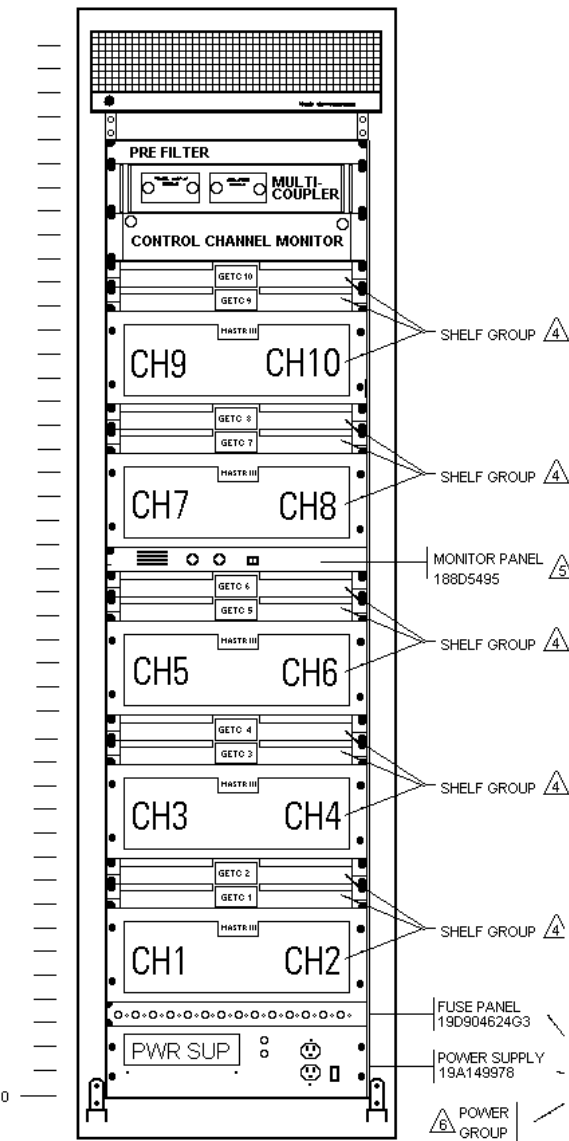
Safety:	EN60950 (220 VAC applications only)
EMC:	prETS 300 279 (August 1995)
TTD:	Not Applicable

SUPPLEMENTARY INFORMATION:

The Mastr III base Station and Auxiliary Receiver may be used in both trunked and conventional applications. Neither the Mastr III Base Station nor the Auxiliary Receiver may be connected to leased lines in Europe without an additional line-barrier protection device.

P10

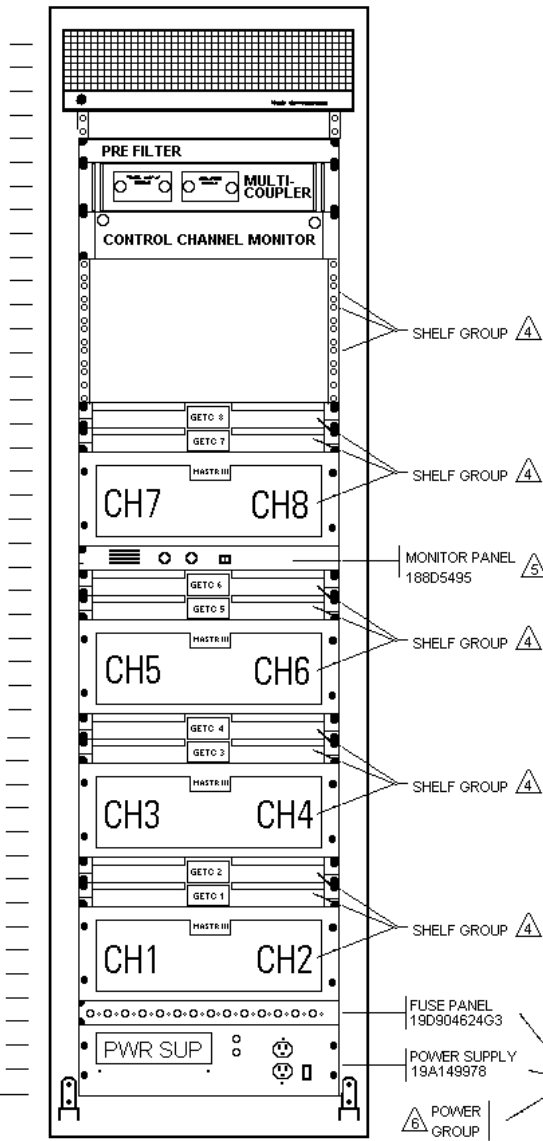
FIRST CABINET
OF AN EDACS MODEM
AND ASYNCHRONOUS
RS-232 SYSTEMS



FRONT VIEW

P16

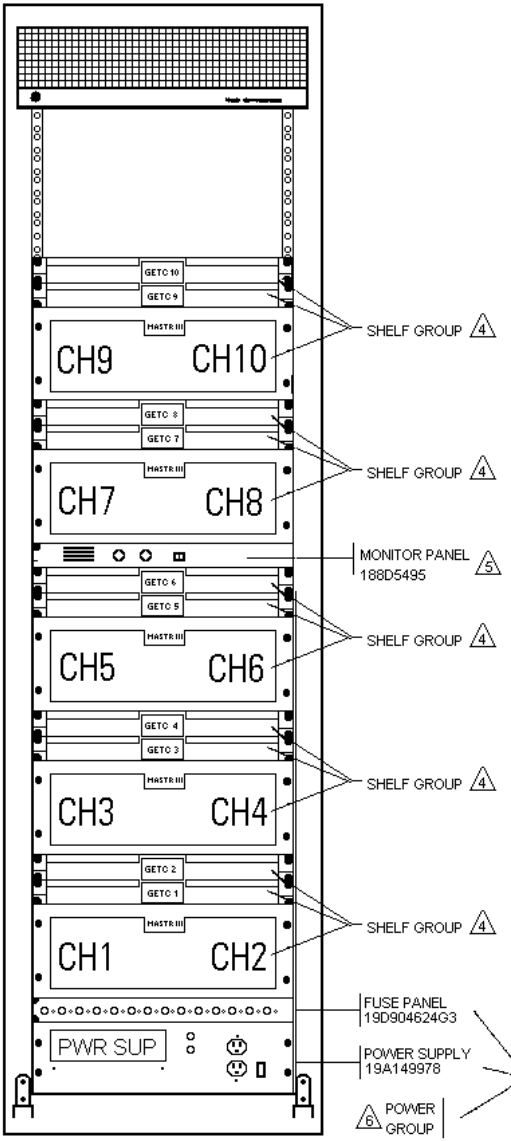
FIRST CABINET OF
A SYNCHRONOUS
RS-232 SYSTEM



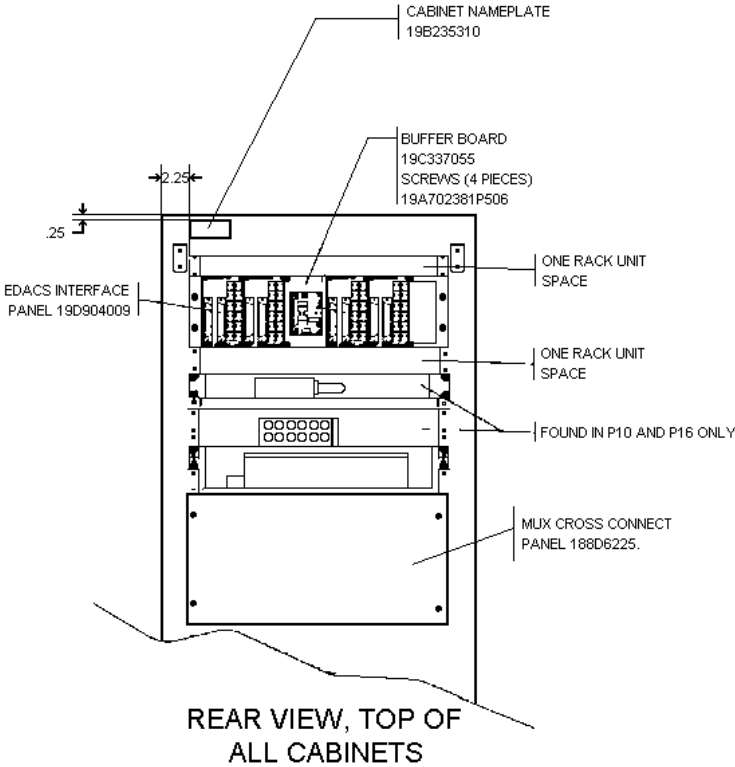
FRONT VIEW
(DOORS REMOVED FOR CLARITY)

P11

REMAINING CABINETS
FOR EDACS MODEM, ASYNCHRONOL
AND SYNCHRONOUS RS-232
SYSTEMS



FRONT VIEW



83" CABINET & 86" OPEN RACK

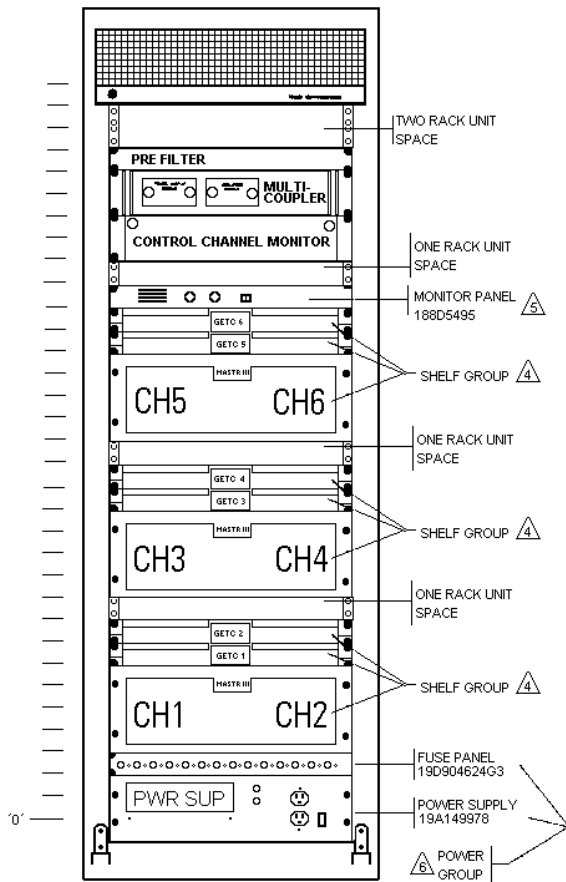
1. MOUNT SHELVES IN CABINET IN ASCENDING ORDER WITH LOWEST CHANNEL IN THE BOTTOM POSITION.
 2. TIE STRAP CABLES TO MOUNTING RAILS.
 3. AS VIEWED FROM THE REAR OF CABINET, RUN POWER CABLES ON RIGHT SIDE OF CAINETS AND SIGNAL CABLES ON THE LEFT SIDE OF CABINETS.
- SEE 188D5450 FIGURE 1 ON SHEET 2 AND 188D5450P3 ON SHEET 4 FOR SHELF GROUP MOUNTING AND CABLE HOOKUP.
- SEE 188D5450P4 ON SHEET 6 FOR MONITOR PANEL MOUNTING AND CABLE HOOKUP.
- SEE 188D5450 FIGURE 4 ON SHEET 6 FOR POWER GROUP MOUNTING AND CABLE HOOKUP.
7. REFER TO 188D6129 FOR CABINET INTERCONNECT DIAGRAM.
- SIX RACK UNITS LEFT EMPTY FOR DROP SHIPPED ITEMS (ONE OR TWO MUX SHELVES)

83" CABINET AND 86" OPEN RACK
188D5450P10, P11, P16

(188D5450, Sh. 7, Rev. 4B)

P12

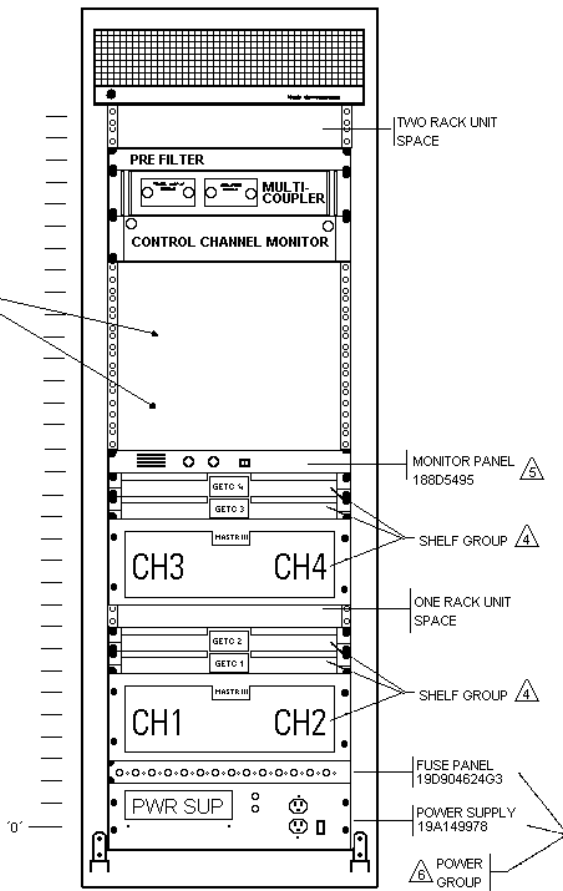
FIRST CABINET
OF AN EDACS MODEM
AND ASYNCHRONOUS
RS-232 SYSTEMS



FRONT VIEW

P17

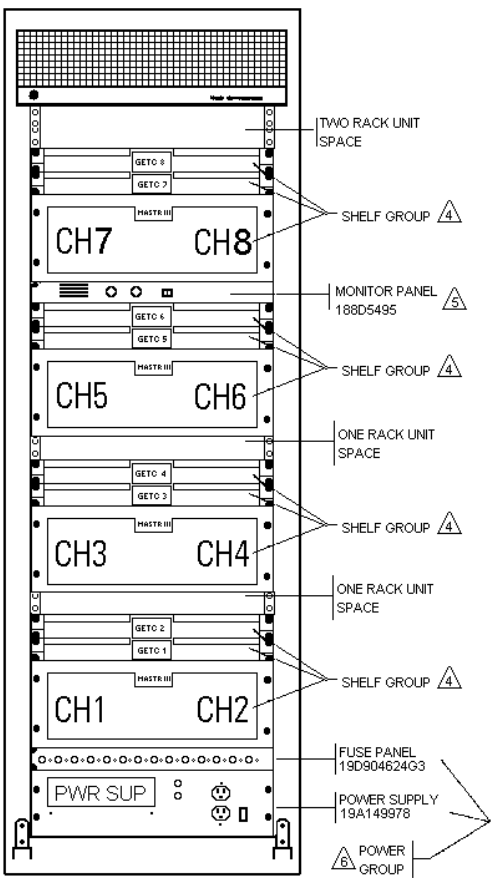
FIRST CABINET OF
A SYNCHRONOUS
RS-232 SYSTEM



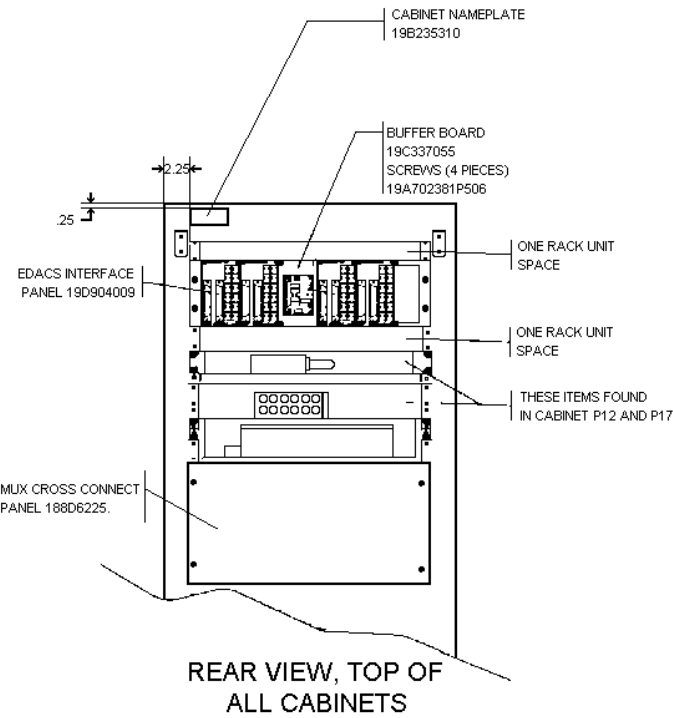
FRONT VIEW

P13

EXPANSION CABINETS
FOR EDACS MODEM, ASYNCHRONOUS
AND SYNCHRONOUS RS-232
SYSTEMS



FRONT VIEW



REAR VIEW, TOP OF
ALL CABINETS

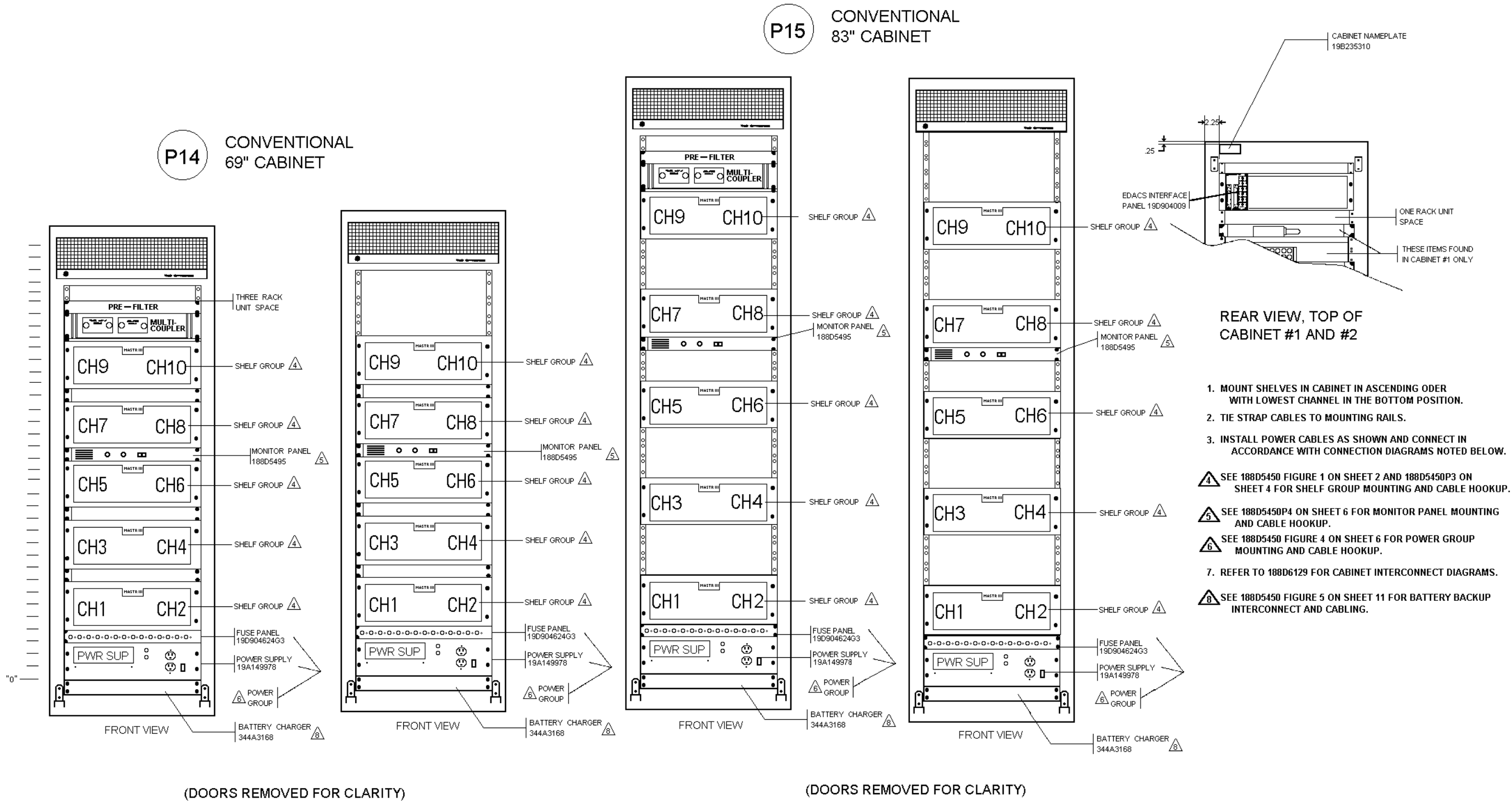
1. MOUNT STATIONS IN CABINET IN ASCENDING ORDER WITH LOWEST CHANNEL IN THE BOTTOM POSITION.
2. TIE STRAP CABLES TO MOUNTING RAILS.
3. INSTALL POWER CABLES AS SHOWN AND CONNECT IN ACCORDANCE WITH CONNECTION DIAGRAMS NOTED BELOW.
- 4 SEE 188D5450 FIGURE 1 ON SHEET 2 AND 188D5450P3 ON SHEET 4 FOR SHELF GROUP MOUNTING AND CABLE HOOKUP.
- 5 SEE 188D5450P4 ON SHEET 6 FOR MONITOR PANEL MOUNTING AND CABLE HOOKUP.
- 6 SEE 188D5450 FIGURE 4 ON SHEET 6 FOR POWER GROUP MOUNTING AND CABLE HOOKUP.
7. REFER TO 188D6129 FOR CABINET INTERCONNECT DIAGRAM.
- 8 SIX RACK UNITS LEFT EMPTY FOR DROP SHIPPED ITEMS (ONE OR TWO MUX SHELVES)

69" CABINETS

(DOORS REMOVED FOR CLARITY)

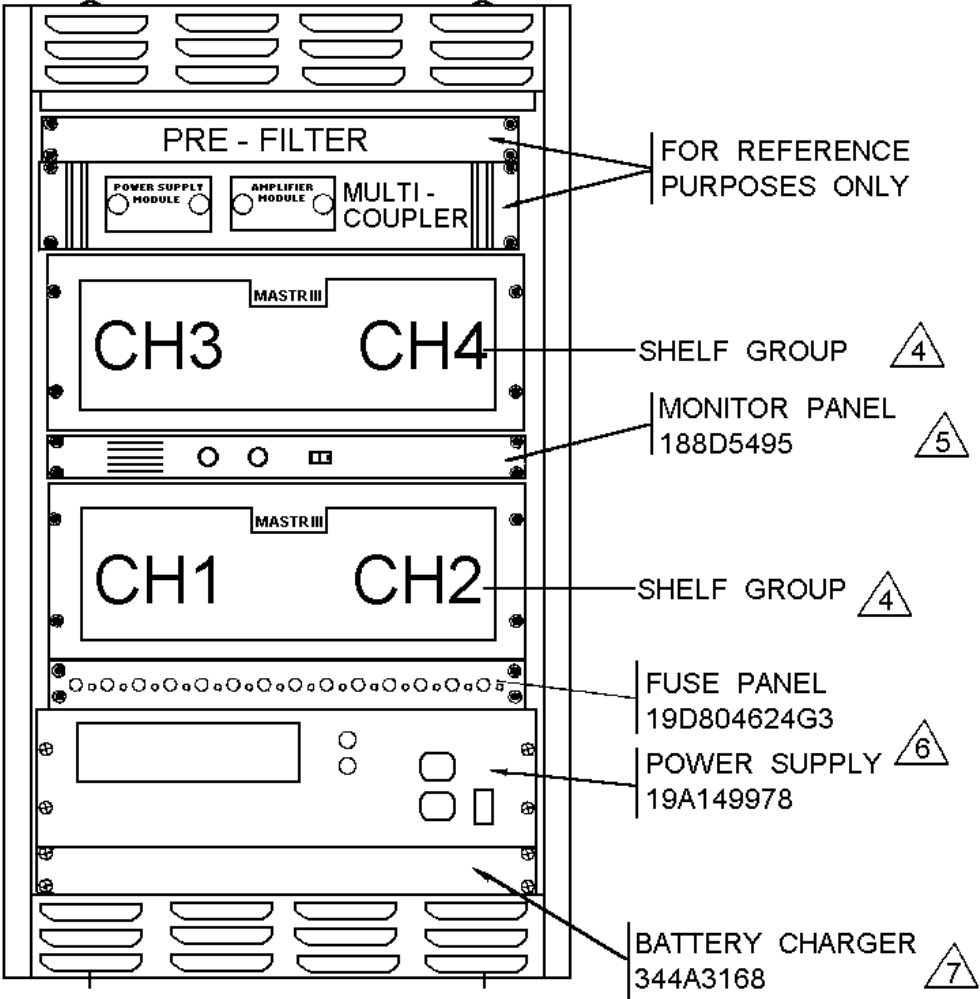
69" CABINET
188D5450P12, P13, P17

(188D5450, Sh. 8, Rev. 4B)



69" & 83" CONVENTIONAL CABINET
188D5450P14 & P15

(188D5450, Sh. 9, Rev. 4B)



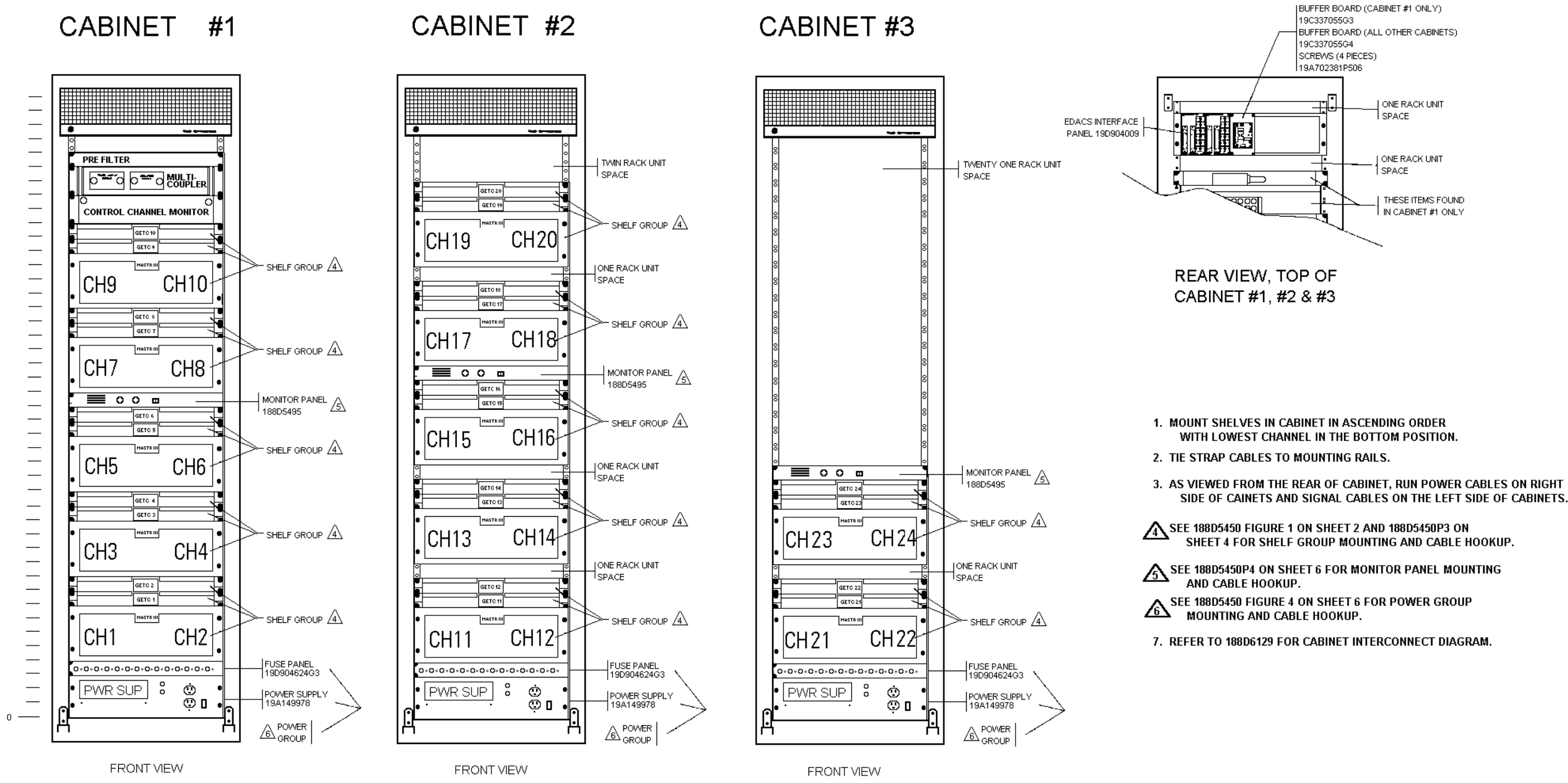
FRONT VIEW

ASSEMBLY OF MULTIPLE RX SHELF FOR THE 37" MASTR III INDOOR CABINET APPLICATION.

- 4 SEE 188D5450 FIGURE 1 ON SHEET 2 AND 188D5450P3 ON SHEET 4 FOR SHELF GROUP MOUNTING AND CABLE HOOKUP (IGNORE GETC REFERENCES.)
- 5 SEE 188D5450P4 ON SHEET 6 FOR MONITOR PANEL MOUNTING AND CABLE HOOKUP.
- 6 SEE 188D5450 FIGURE 4 ON SHEET 6 FOR POWER GROUP MOUNTING AND CABLE HOOKUP.
- 7 SEE 188D5450 FIGURE 5 ON SHEET 11 FOR BATTERY BACKUP INTERCONNECT AND CABLING.

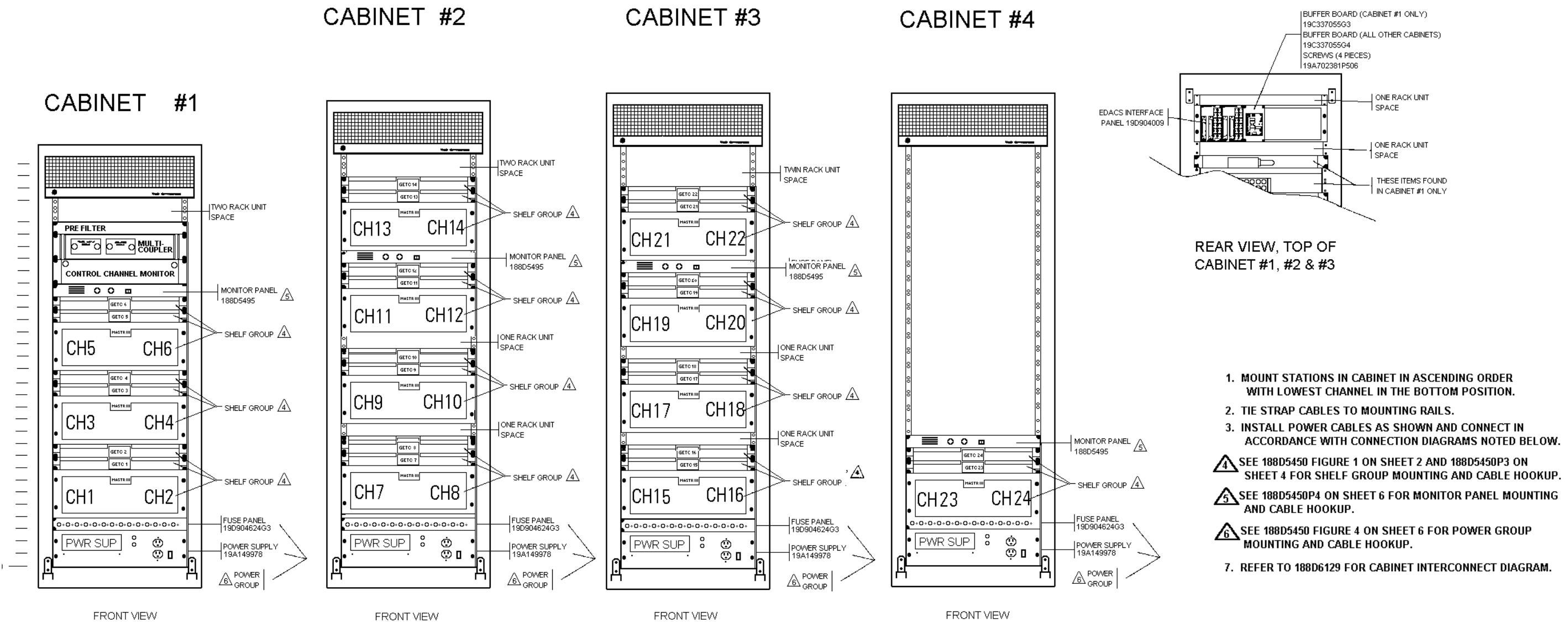
**MULTIPLE RECEIVER SHELF
37" MASTR III INDOOR CABINET
188D5450P5**

(188D5450, Sh. 10, Rev. 4C)



EDACS MODEM OR ASYNCHRONOUS RS-232
83" CABINET OR 86" OPEN RACK

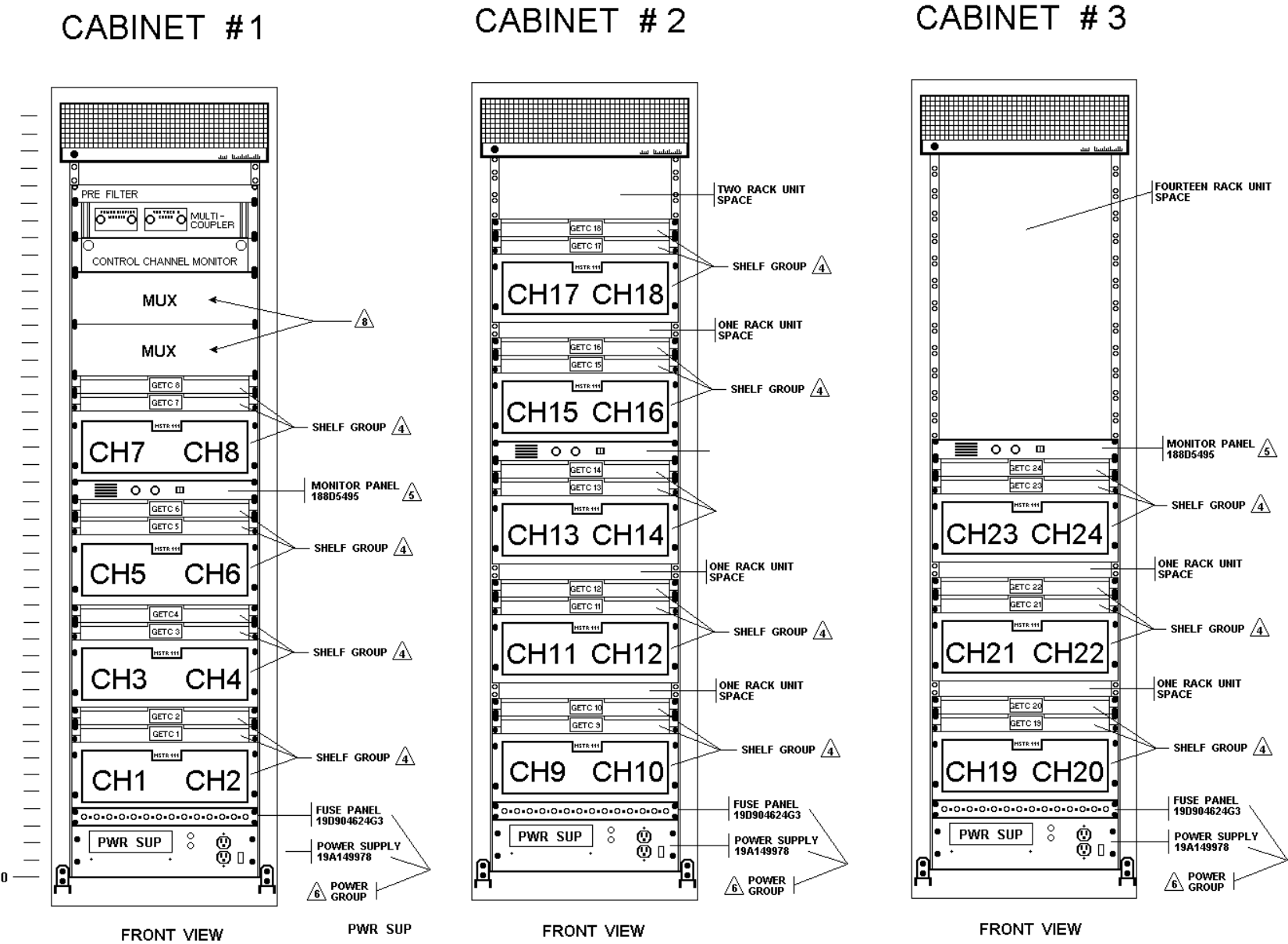
(188D5450, Sh. 7, Rev. 1)



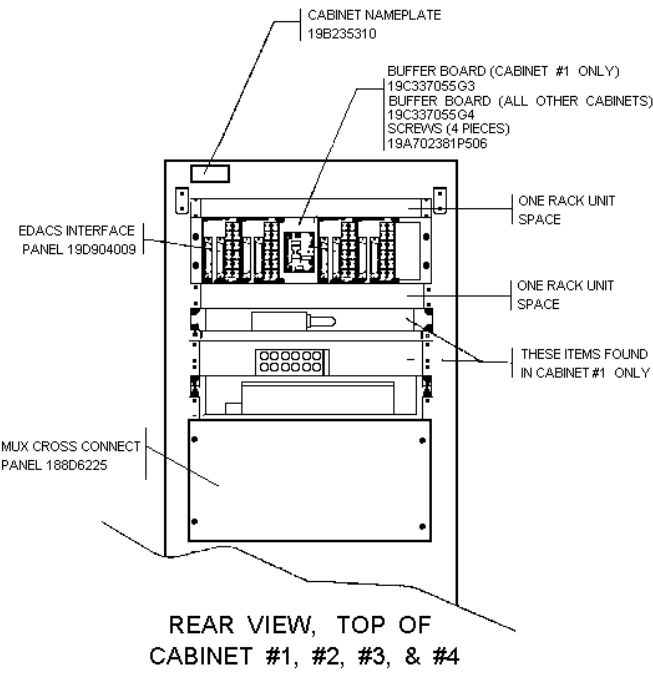
EDACS MODEM OR ASYNCHRONOUS RS-232
69" CABINET

(188D5450, Sh. 8, Rev. 1)

SYNCHRONOUS RS-232 SYSTEM IN
83" CABINETS OR 86" OPEN RACKS



(DOORS REMOVED FOR CLARITY)

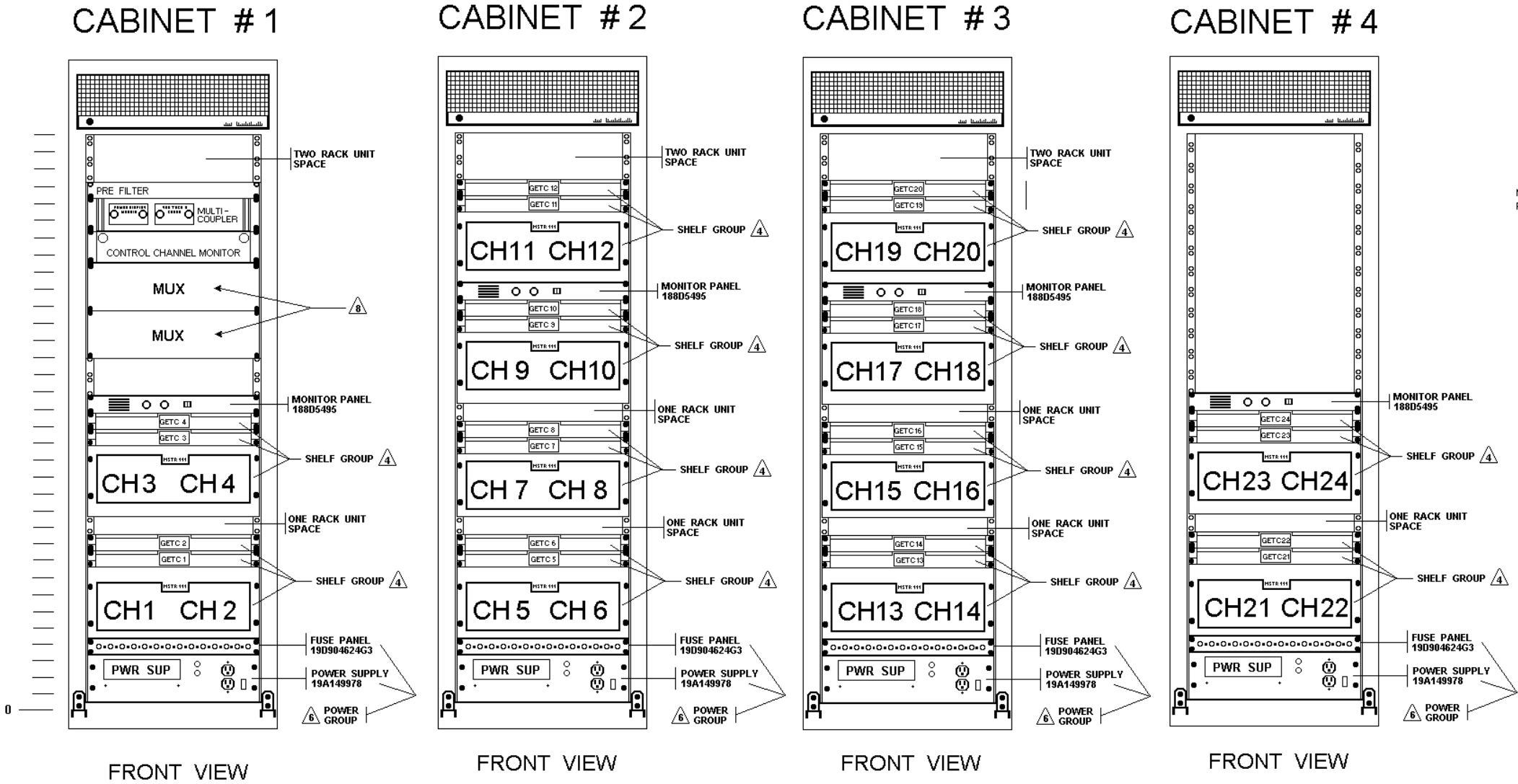


1. MOUNT STATIONS IN CABINET IN ASCENDING ORDER WITH LOWEST CHANNEL IN THE BOTTOM POSITION.
2. TIE STRAP CABLES TO MOUNTING RAILS.
3. INSTALL POWER CABLES AS SHOWN AND CONNECT IN ACCORDANCE WITH CONNECTION DIAGRAMS NOTED BELOW.
4. SEE 188D5450 FIGURE 1 ON SHEET 2 AND 188D5450P3 ON SHEET 4 FOR SHELF GROUP MOUNTING AND CABLE HOOKUP.
5. SEE 188D5450P4 ON SHEET 6 FOR MONITOR PANEL MOUNTING AND CABLE HOOKUP.
6. SEE 188D5450 FIGURE 4 ON SHEET 6 FOR POWER GROUP MOUNTING AND CABLE HOOKUP.
7. REFER TO 188D6129 FOR CABINET INTERCONNECT DIAGRAM.
8. SIX RACK UNITS LEFT EMPTY FOR DROP SHIPPED ITEMS (ONE OR TWO MUX SHELVES)

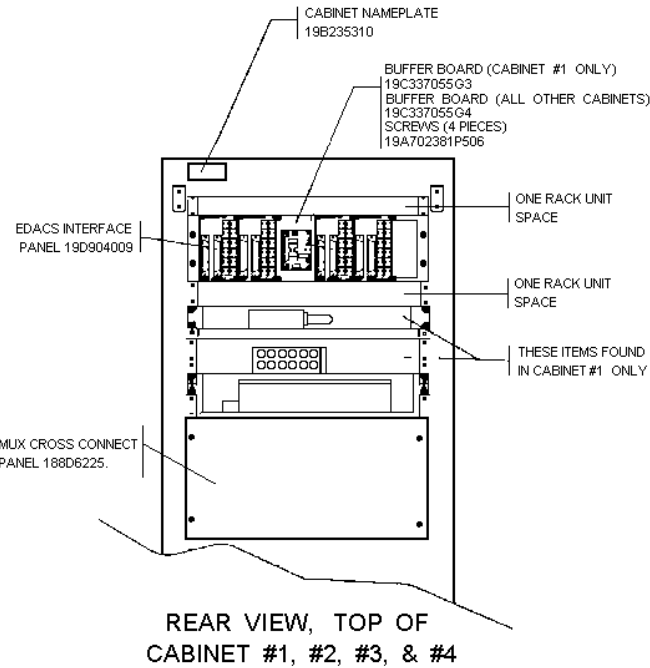
SYNCHRONOUS RS-232 SYSTEM
83" CABINET OR 86" OPEN RACK

(RC-1, Rev. 1)

SYNCHRONOUS RS-232
SYSTEM IN 69" CABINETS



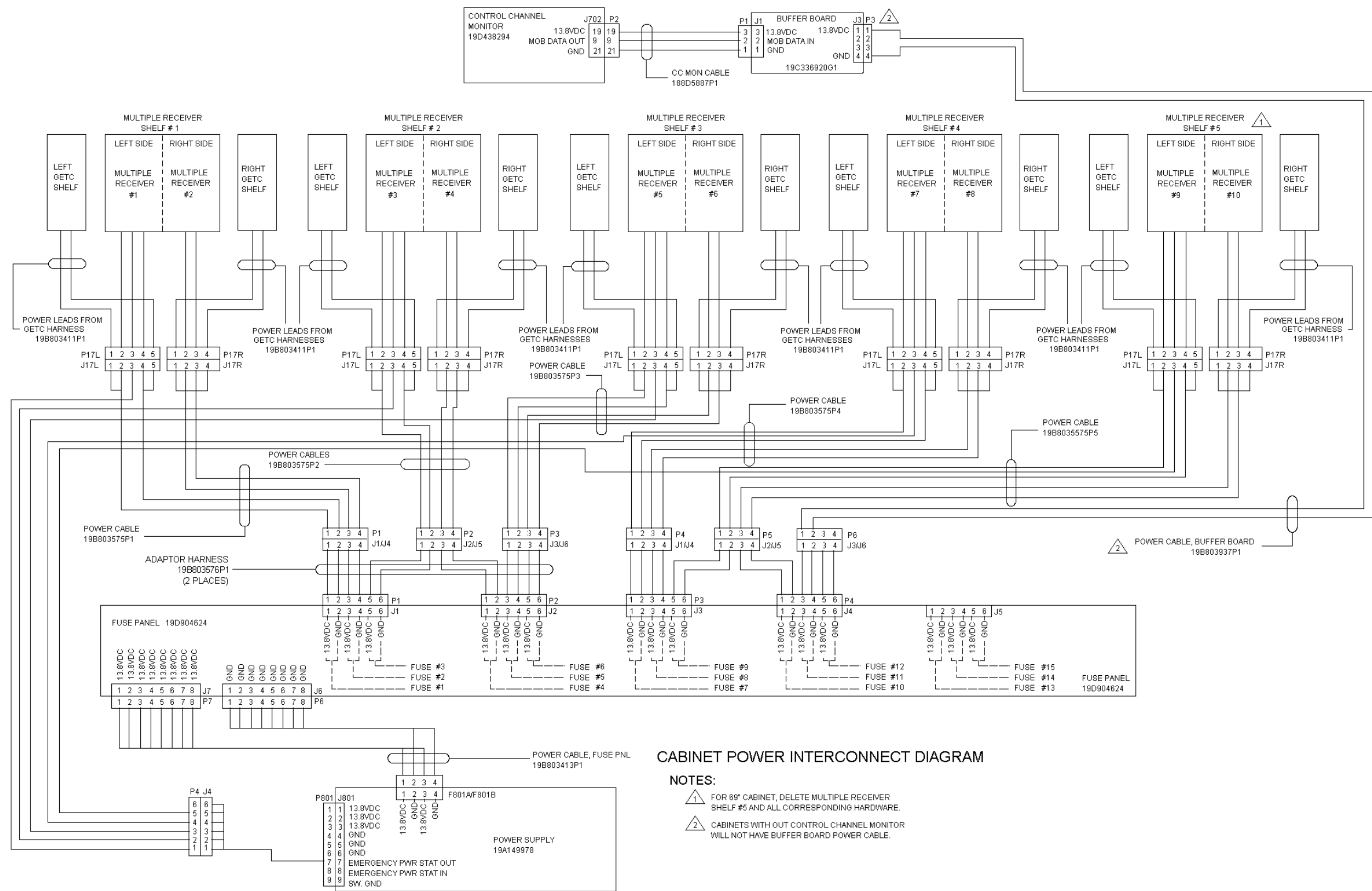
(DOORS REMOVED FOR CLARITY)



1. MOUNT STATIONS IN CABINET IN ASCENDING ORDER WITH LOWEST CHANNEL IN THE BOTTOM POSITION.
2. TIE STRAP CABLES TO MOUNTING RAILS.
3. INSTALL POWER CABLES AS SHOWN AND CONNECT IN ACCORDANCE WITH CONNECTION DIAGRAMS NOTED BELOW.
4. SEE 188D5450 FIGURE 1 ON SHEET 2 AND 188D5450P3 ON SHEET 4 FOR SHELF GROUP MOUNTING AND CABLE HOOKUP.
5. SEE 188D5450P4 ON SHEET 6 FOR MONITOR PANEL MOUNTING AND CABLE HOOKUP.
6. SEE 188D5450 FIGURE 4 ON SHEET 6 FOR POWER GROUP MOUNTING AND CABLE HOOKUP.
7. REFER TO 188D6129 FOR CABINET INTERCONNECT DIAGRAM.
8. SIX RACK UNITS LEFT EMPTY FOR DROP SHIPPED ITEMS (ONE OR TWO MUX SHELVES)

SYNCHRONOUS RS-232 SYSTEM
69" CABINET

(RC-4, Rev. 1)



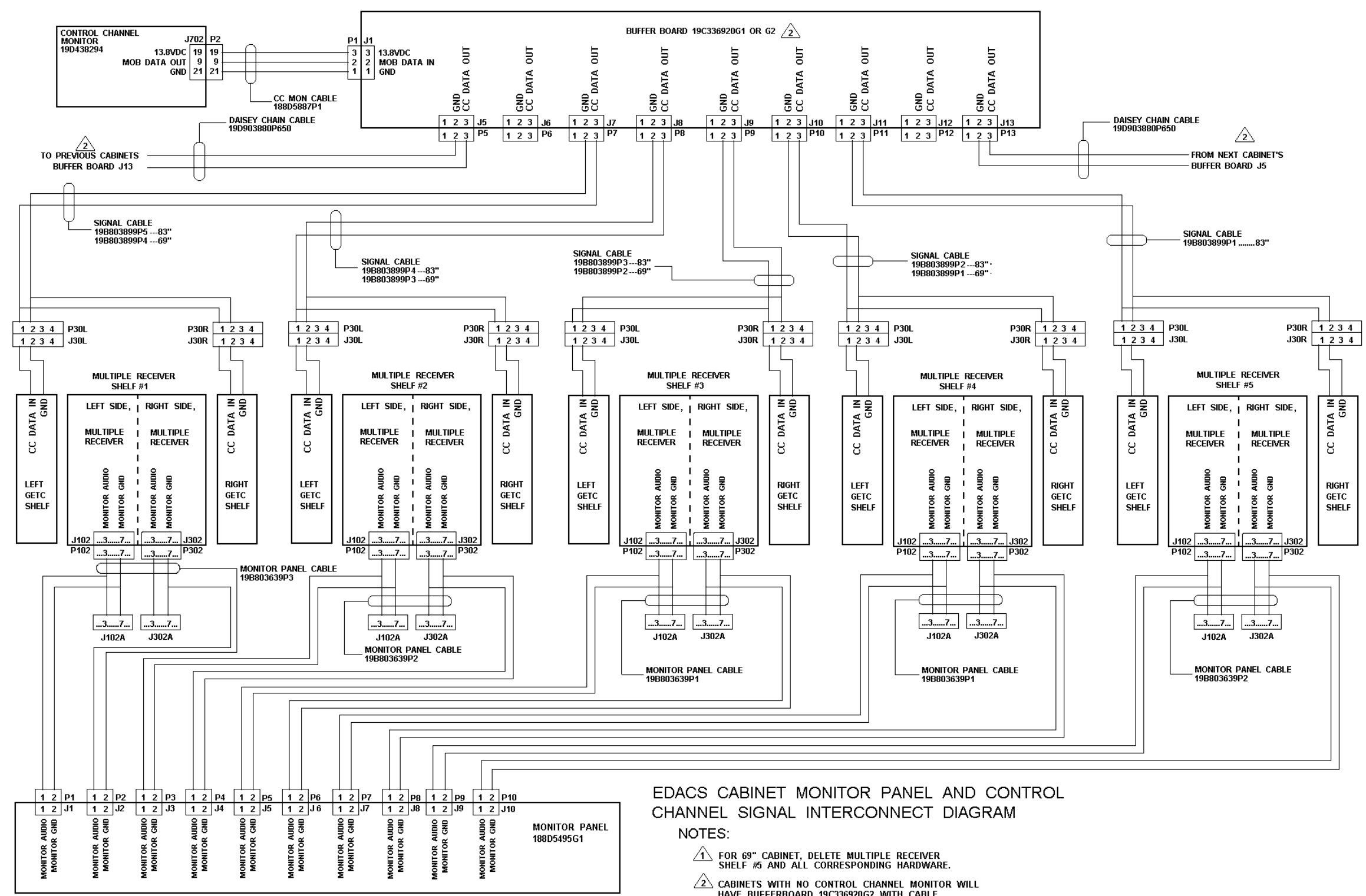
CABINET POWER INTERCONNECT DIAGRAM

NOTES:

- 1 FOR 69" CABINET, DELETE MULTIPLE RECEIVER SHELF #5 AND ALL CORRESPONDING HARDWARE.
- 2 CABINETS WITH OUT CONTROL CHANNEL MONITOR WILL NOT HAVE BUFFER BOARD POWER CABLE.

EDACS VOTER
CABINET POWER

(188D6129, Sh. 1, Rev. 2B)

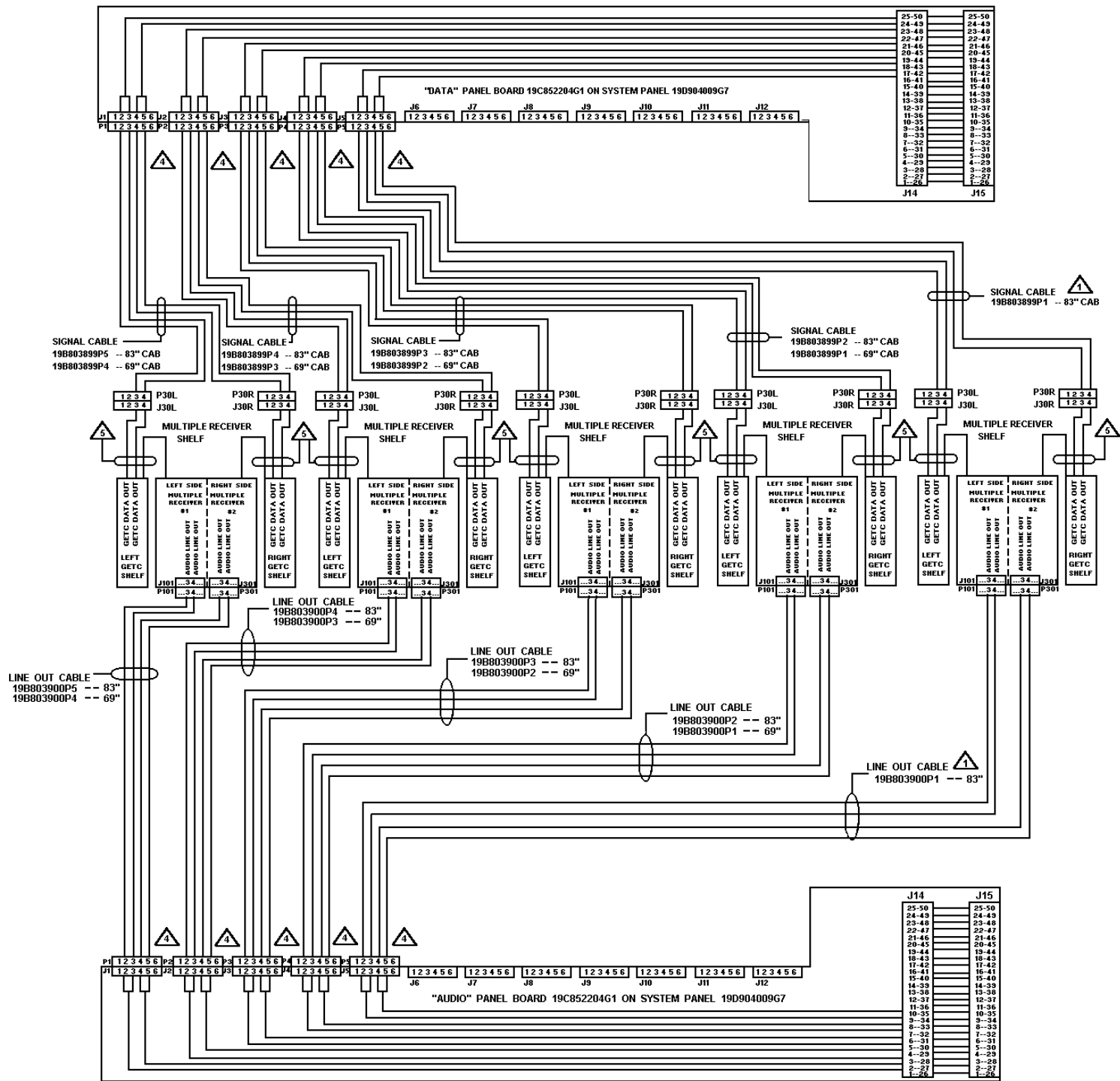


EDACS CABINET MONITOR PANEL AND CONTROL CHANNEL SIGNAL INTERCONNECT DIAGRAM

- NOTES:
- 1 FOR 69" CABINET, DELETE MULTIPLE RECEIVER SHELF #5 AND ALL CORRESPONDING HARDWARE.
 - 2 CABINETS WITH NO CONTROL CHANNEL MONITOR HAVE BUFFERBOARD 19C336920G2 WITH CABLE 19D903880P650 CONNECTING TO PREVIOUS CABINET.

EDACS VOTER
MONITOR PANEL AND CONTROL CHANNEL SIGNAL

(188D6129, Sh. 2, Rev. 2B)



EDACS CABINET GETC MODEM DATA AND MULTIPLE RECEIVER SIGNAL OUT INTERCONNECT DIAGRAM

NOTES:
1 FOR 69" CABINET, DELETE MULTIPLE RECEIVER SHELF #5 AND ALL CORRESPONDING HARDWARE.

4 THIS INTERCONNECT DIAGRAM IS FOR THE FIRST CABINET IN A MULTIPLE RECEIVER SYSTEM. FOLLOW ON CABINET'S WILL CONNECT THE SAME CABLES INTO SYSTEM PANEL BOARD JACKS AS LISTED BELOW:

5 GETC HARNESS 19B803411P1. SEE 188D5450 FIGURE 3 SHEET 5 FOR GETC/MULTIPLE RX INTERCONNECT DIAGRAM.

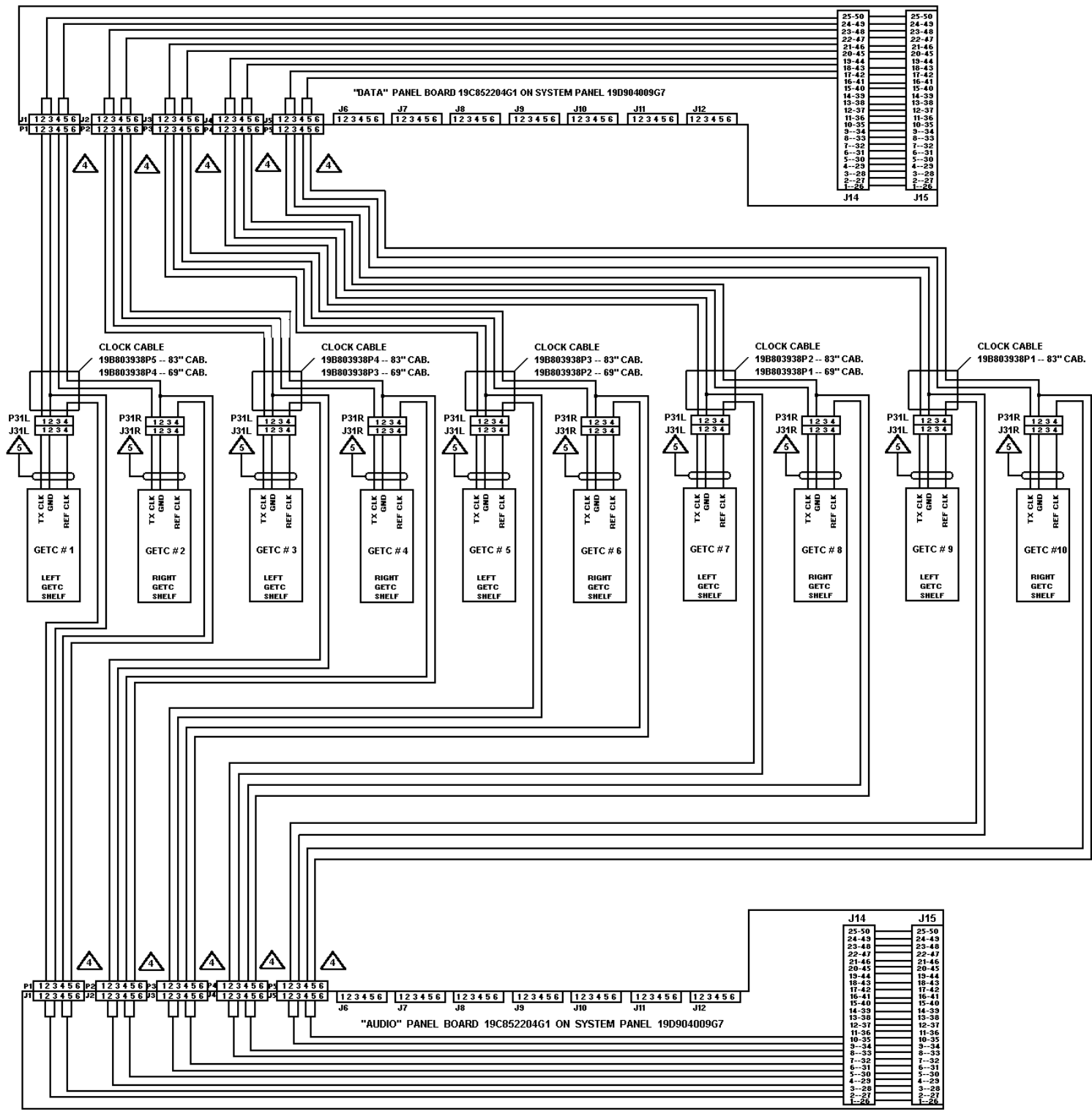
83" CABINET SYSTEM		83" CABINET SYSTEM	
	SYSTEM BOARD JACK		SYSTEM BOARD JACK
FIRST CABINET	MULTIPLE RX #1 & #2	GETC #1 & #2	J1
	MULTIPLE RX #3 & #4	GETC #3 & #4	J2
	MULTIPLE RX #5 & #6	GETC #5 & #6	J3
	MULTIPLE RX #7 & #8	GETC #7 & #8	J4
	MULTIPLE RX #9 & #10	GETC #9 & #10	J5
SECOND CABINET	MULTIPLE RX #11 & #12	GETC #11 & #12	J6
	MULTIPLE RX #13 & #14	GETC #13 & #14	J7
	MULTIPLE RX #15 & #16	GETC #15 & #16	J8
	MULTIPLE RX #17 & #18	GETC #17 & #18	J9
	MULTIPLE RX #19 & #20	GETC #19 & #20	J10
THIRD CABINET	MULTIPLE RX #21 & #22	GETC #21 & #22	J11
	MULTIPLE RX #23 & #24	GETC #23 & #24	J12

69" CABINET SYSTEM		69" CABINET SYSTEM	
	SYSTEM BOARD JACK		SYSTEM BOARD JACK
FIRST CABINET	MULTIPLE RX #1 & #2	GETC #1 & #2	J1
	MULTIPLE RX #3 & #4	GETC #3 & #4	J2
	MULTIPLE RX #5 & #6	GETC #5 & #6	J3
	MULTIPLE RX #7 & #8	GETC #7 & #8	J4
	MULTIPLE RX #9 & #10	GETC #9 & #10	J5
SECOND CABINET	MULTIPLE RX #11 & #12	GETC #11 & #12	J6
	MULTIPLE RX #13 & #14	GETC #13 & #14	J7
	MULTIPLE RX #15 & #16	GETC #15 & #16	J8
	MULTIPLE RX #17 & #18	GETC #17 & #18	J9
	MULTIPLE RX #19 & #20	GETC #19 & #20	J10
THIRD CABINET	MULTIPLE RX #21 & #22	GETC #21 & #22	J11
	MULTIPLE RX #23 & #24	GETC #23 & #24	J12

NOTE: EACH CABINET HAS SEPARATE SYSTEM BOARDS FOR THE MULTIPLE RX AND GETC DATA SIGNALS. PLUG CABLES INTO JACKS AS INDICATED ABOVE. SYSTEM BOARDS ARE DAISEY CHAINED TOGETHER VIA J14 (OUT) AND J15 (IN) USING CABLE 19D903880P120 (AT FIELD SITE).

EDACS VOTER
GETC MODEM DATA AND MULTIPLE RECEIVER SIGNAL

(188D6129, Sh. 3, Rev. 2B)



EDACS CABINET GETC RS-232/SIMULCAST
"TX CLK" & "REF CLK" SIGNAL INTERCONNECT
DIAGRAM

- NOTES:
- ⚠ FOR 69" CABINET, DELETE GETC #9 & #10 AND ALL CORRESPONDING HARDWARE.
 - ⚠ THIS INTERCONNECT DIAGRAM IS FOR THE FIRST CABINET IN A MULTIPLE RECEIVER SYSTEM. FOLLOW ON CABINETS WILL CONNECT THE SAME CABLES INTO SYSTEM PANEL BOARD JACKS AS LISTED BELOW.
 - ⚠ GETC HARNESS 19B803411P2. SEE 188D5450 FIGURE 3 SHEET 5 FOR GETC/MULTIPLE RX INTERCONNECT DIAGRAM.

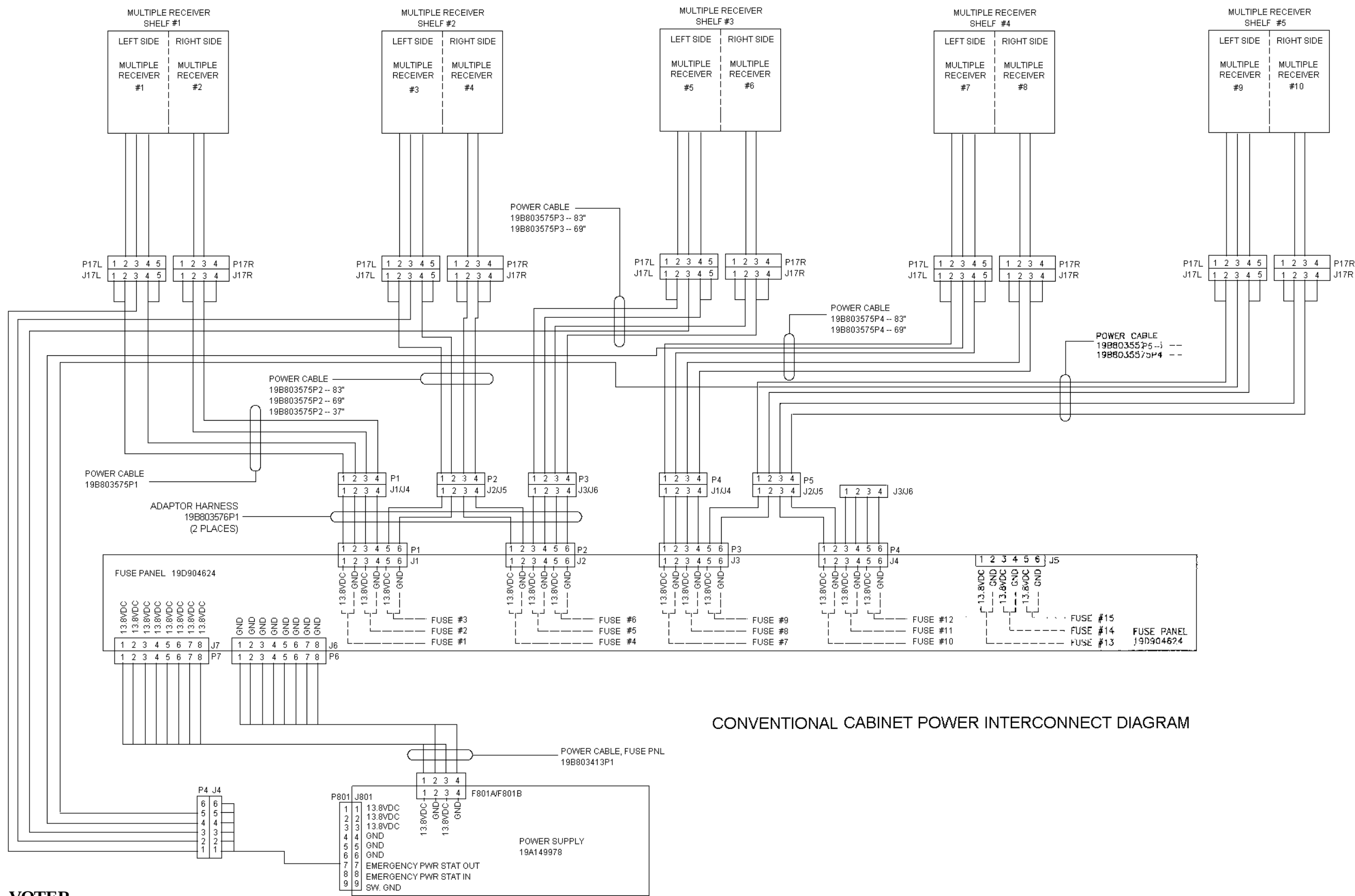
83" CABINET SYSTEM		"TX CLK" BOARD JACK	83" CABINET SYSTEM		"REF CLK" BOARD JACK
FIRST CABINET	MULTIPLE RX #1 & #2	J1	FIRST CABINET	GETC #1 & #2	J1
	MULTIPLE RX #3 & #4	J2		GETC #3 & #4	J2
	MULTIPLE RX #5 & #6	J3		GETC #5 & #6	J3
	MULTIPLE RX #7 & #8	J4		GETC #7 & #8	J4
	MULTIPLE RX #9 & #10	J5		GETC #9 & #10	J5
SECOND CABINET	MULTIPLE RX #11 & #12	J6	SECOND CABINET	GETC #11 & #12	J6
	MULTIPLE RX #13 & #14	J7		GETC #13 & #14	J7
	MULTIPLE RX #15 & #16	J8		GETC #15 & #16	J8
	MULTIPLE RX #17 & #18	J9		GETC #17 & #18	J9
THIRD CABINET	MULTIPLE RX #19 & #20	J10	THIRD CABINET	GETC #19 & #20	J10
	MULTIPLE RX #21 & #22	J11		GETC #21 & #22	J11
	MULTIPLE RX #23 & #24	J12		GETC #23 & #24	J12

69" CABINET SYSTEM		"TX CLK" BOARD JACK	69" CABINET SYSTEM		"REF CLK" BOARD JACK
FIRST CABINET	MULTIPLE RX #1 & #2	J1	FIRST CABINET	GETC #1 & #2	J1
	MULTIPLE RX #3 & #4	J2		GETC #3 & #4	J2
	MULTIPLE RX #5 & #6	J3		GETC #5 & #6	J3
	MULTIPLE RX #7 & #8	J4		GETC #7 & #8	J4
	MULTIPLE RX #9 & #10	J5		GETC #9 & #10	J5
SECOND CABINET	MULTIPLE RX #11 & #12	J6	SECOND CABINET	GETC #11 & #12	J6
	MULTIPLE RX #13 & #14	J7		GETC #13 & #14	J7
	MULTIPLE RX #15 & #16	J8		GETC #15 & #16	J8
	MULTIPLE RX #17 & #18	J9		GETC #17 & #18	J9
THIRD CABINET	MULTIPLE RX #19 & #20	J10	THIRD CABINET	GETC #19 & #20	J10
	MULTIPLE RX #21 & #22	J11		GETC #21 & #22	J11
FOURTH CABINET	MULTIPLE RX #23 & #24	J12	FOURTH CABINET	GETC #23 & #24	J12

NOTE: EACH CABINET HAS SEPARATE SYSTEM BOARDS FOR THE MULTIPLE RX AND GETC DATA SIGNALS. PLUG CABLES INTO JACKS AS INDICATED ABOVE. SYSTEM BOARDS ARE DAISEY CHAINED TOGETHER VIA J14 (OUT) AND J15 (IN) USING CABLE 19D903880P120 (AT FIELD SITE).

EDACS VOTER
GETC RS-232 "TX CLK" & "REF CLK" Signal

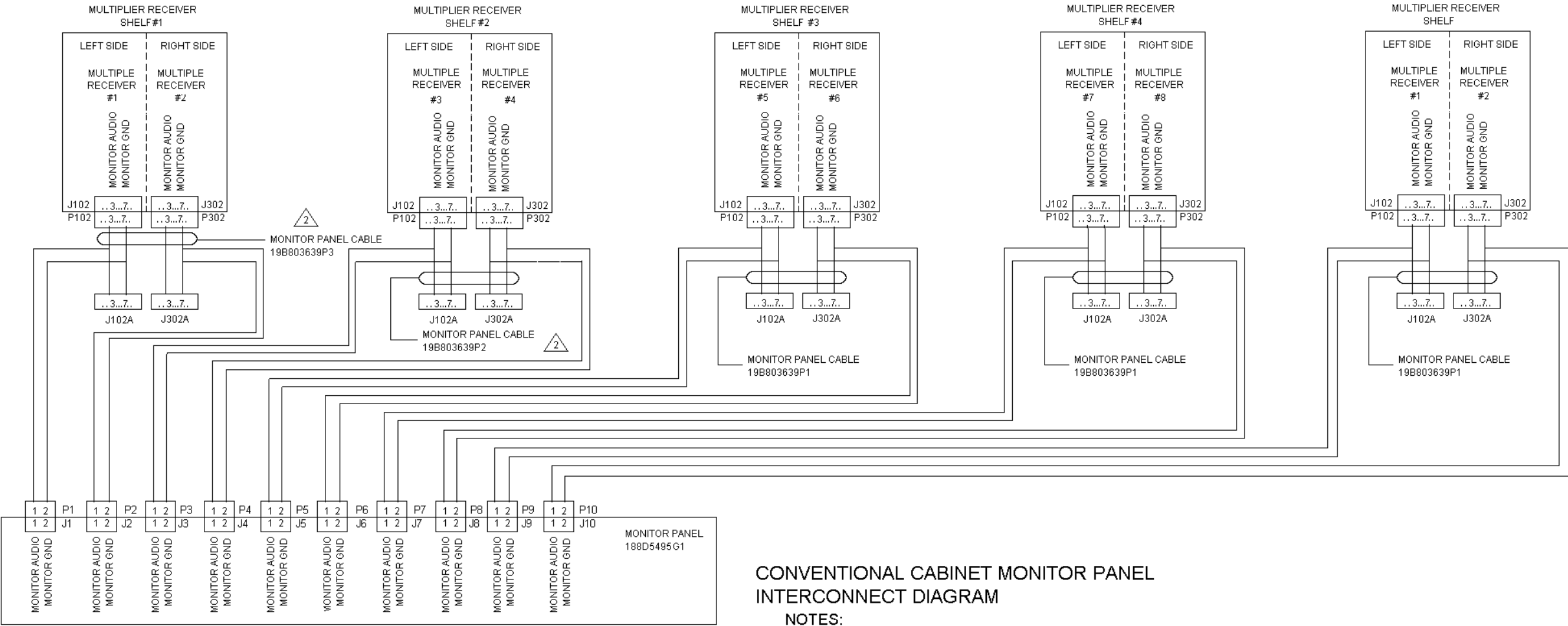
(188D6129, Sh. 4, Rev. 2B)



CONVENTIONAL CABINET POWER INTERCONNECT DIAGRAM

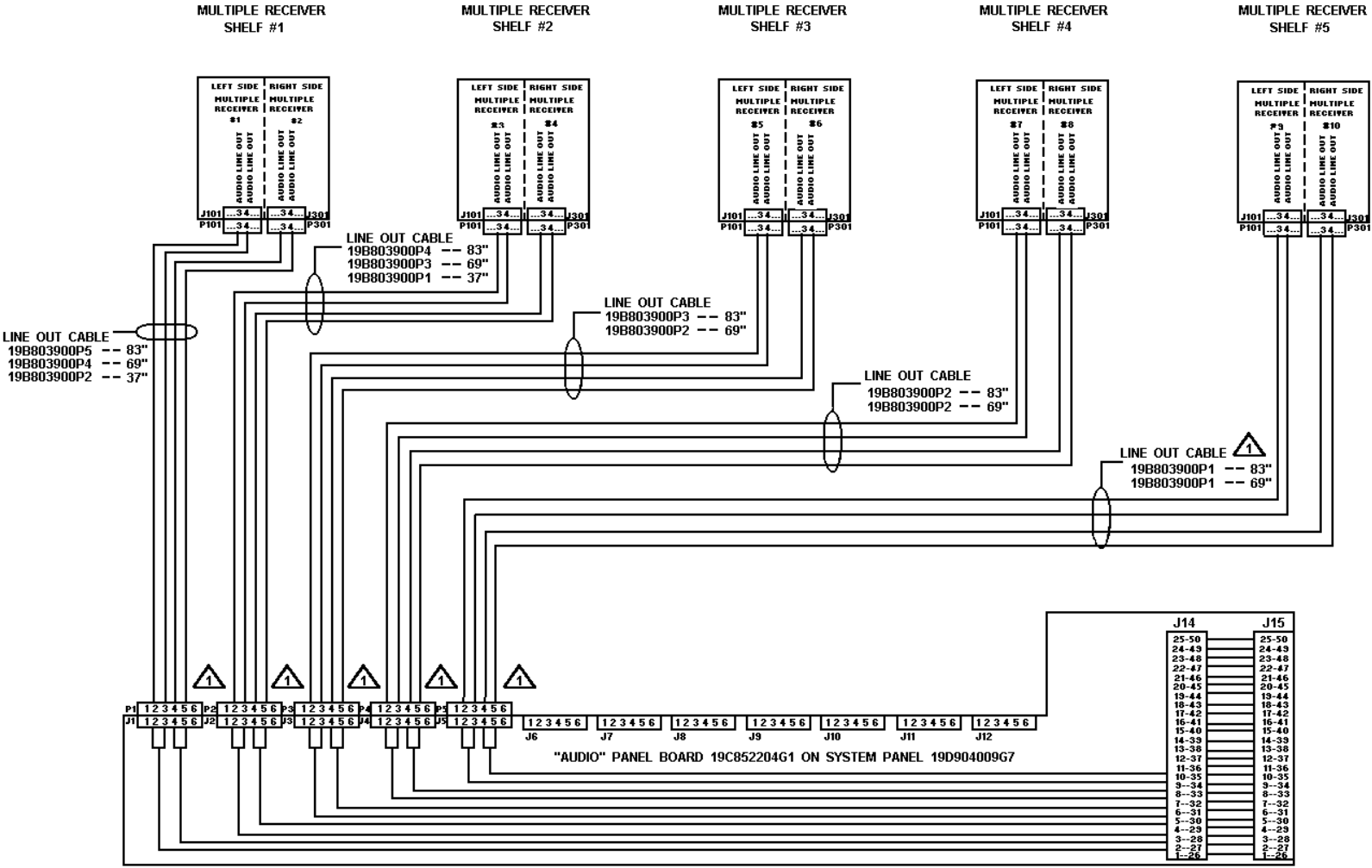
CONVENTIONAL VOTER
CABINET POWER

(188D6129, Sh. 5, Rev. 2B)



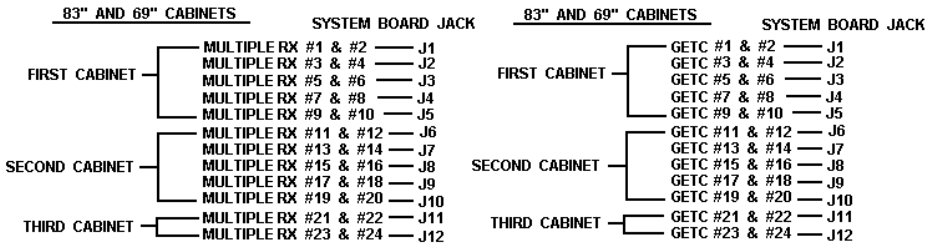
**CONVENTIONAL VOTER
CONVENTIONAL CABINET MONITOR PANEL**

(188D6129, Sh. 6, Rev. 2B)



CONVENTIONAL CABINET MULTIPLE
RECEIVER SIGNAL OUT INTERCONNECT
DIAGRAM

- NOTES:
- THIS INTERCONNECT DIAGRAM IS FOR THE FIRST CABINET IN A MULTIPLE RECEIVER SYSTEM. FOLLOW ON CABINETS WILL CONNECT THE SAME CABLES INTO SYSTEM PANEL BOARD JACKS AS LISTED BELOW:
 - THERE IS NO SYSTEM PANEL FOR THE 37" CABINET (LINE OUT CABLES ARE PRESENT AS NOTED).



NOTE: EACH CABINET HAS SEPARATE SYSTEM BOARDS FOR THE MULTIPLE RX AND GETC DATA SIGNALS. PLUG CABLES INTO JACKS AS INDICATED ABOVE. SYSTEM BOARDS ARE DAISEY CHAINED TOGETHER VIA J14 (OUT) & J15 (IN) USING CABLE 19D903880P120 (AT FIELD SITE).

CONVENTIONAL VOTER
CONVENTIONAL CABINET MULTIPLE RECEIVER SIGNAL OUT

(188D6129, Sh. 7, Rev. 2B)

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