



Mobile Communications



MDX Desk Top Station



Ericsson GE Mobile Communications Inc.
Mountain View Road • Lynchburg, Virginia 24502

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INTRODUCTION

This manual contains instructions for the assembly of an Ericsson GE Desk Top Station. This is done by installing an MDX mobile radio into the Desk Top Station Assembly, using the hardware kit supplied.

Ericsson GE Mobile Radios which can be accommodated by the Desk Top Station are MDX Conventional/EDACS Radios in the 800 and 900 MHz bands.

Included are mounting instructions for the radio, as well as instructions for making the few required cable connections. Installation is made easy with the help of an Installation Diagram and an Interconnection Diagram, included as part of this manual.

UNPACKING AND CHECKING EQUIPMENT

Hardware Kit 349A9526 was used to assemble your station. The unused material was shipped with the station. Remove the kit and store for possible use.

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Installation of the Ericsson GE Desk Top Station includes three parts:

1. Installation of the Mobile Radio in the Desk Top Station Assembly using Hardware Kit 349A9526 (supplied).
2. Installation of Option Boards in the Desk Top Station Assembly, in accordance with options selected. Remote Interface Board Option, with one of the following remote boards:
 - a. DC Remote Board
 - b. 4-Channel Tone Remote Board
 - c. 5-Channel EDACS Tone Remote Board
 - d. Standby Power Transfer Option
3. Installation of the Ericsson GE Desk Top Station in the place of operation with the necessary power, antenna, microphone, and line connections.

INSTALLATION

PREPARATION OF DESK TOP STATION

1. Loosen the two (2) captive screws which hold the top cover on the Desk Top Assembly. Remove the cover.
2. Disconnect cable W2 from J202 on the Interconnect board.
3. Loosen, **Do Not Remove**, the two (2) M3.5 screws that hold the radio mounting bracket on the Desk Top Station Assembly.
4. When external wires for options are to be connected, remove and discard the round knockout button in the rear of the station housing. Insert the rubber grommet 5490407P10 in the hole. Place the cable clamp (344A3480P1) around the wires. Snap the cable clamp retainer into the hole adjacent to the grommet.

PREPARATION OF MOBILE RADIO

1. Remove the bottom cover of the radio by removing the four (4) retaining TORX® screws.
2. Unplug the radio internal speaker cable from J904 on the radio and let it hang.
3. Discard the rubber plug and in its place slip the rubber sleeve on cable W2. P905 of W2 plugs into J905.
4. Replace the bottom cover of the radio with the four (4) retaining TORX® screws removed in Step 1.
5. Using a permanent marker, copy the FCC identification number of the radio onto the Desk Top Station FCC label.
6. Attach the side mounting brackets with four (4) hex mounting screws (2 per side) in the sides of the radio.

INSTALLING THE MOBILE RADIO

1. Connect P202 of cable W2 from the radio to J202 on the Interconnect Board.
2. Connect P101 of the Desk Top Station antenna cable W1 into J101 on the radio.

3. Connect P1 of the Desk Top Assembly power cable W3 to J1 of the radio power cable W901.
4. Place the radio in the mounting bracket and position it for the proper Desk Top Station front appearance and tighten the two (2) M3.5 screws that hold the radio mounting bracket in place.
5. Replace the Desk Top Assembly cover using the two (2) screws loosened in Step 1 of "**PREPARATION OF DESK TOP STATION.**"

This completes the installation of the mobile radio in the Desk Top Station Assembly.

INSTALLING THE DESK TOP STATION

AC Power

The Desk Top Station power supply must be connected to AC power with the fused and ON/OFF-switched AC power cable found at the back of the Desk Top Assembly. The transformer straps are shipped set for a 120 volt power source:

120volts ±10%, Single-Phase, 50/60 Hz, 4 amps, 500 watts

Refer to Power Supply Maintenance Manual LBI-38751 for procedures to change the transformer straps to accommodate a 240 volt power source:

240volts ±10%, Single-Phase, 50/60 Hz, 2 amps, 500 watts

Microphone

A desk microphone, a DTMF microphone, or a standard mobile microphone can be used. The microphone connects to the Desk Top Station at J101 on the Front Cap under the Control Panel.

Antenna

A 50-ohm antenna is required. It should be connected through coax cable to the Type N connector mounted in the rear wall of the Desk Top Assembly.

CAUTION

The Desk Top Station may not operate properly with the antenna mounted near the radio. Always mount the antenna at least five (5) feet from the station.

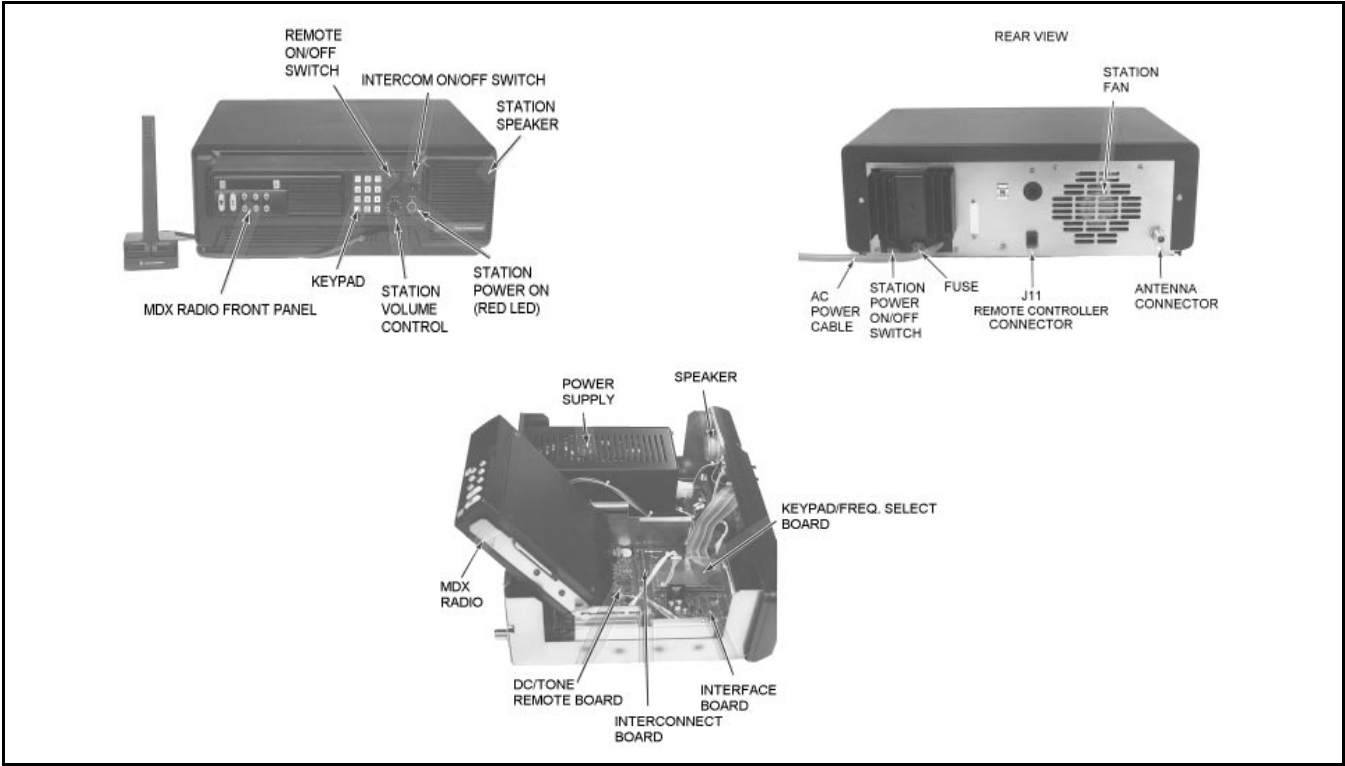


Figure 1 - Desk Top Station Assembly

INSTALLING THE STANDBY POWER TRANSFER OPTION

1. Loosen the two (2) captive screws holding the top cover on the Desk Top Station Assembly and remove the cover.
2. Disconnect cable W3 from the station power supply at J1/P101.
3. Mount Power Transfer Relay K1 inside to the side wall between the power supply and speaker using the single mounting screw supplied.
4. Remove and discard the rectangular knockout button in the rear wall of the Desk Top Assembly. Snap P2 of BATT STBY/PWR cable into the hole.
5. Connect the relay harness as follows:
 - a. Connect P1 to J1 of the station power supply.
 - b. Connect J1 to P1 of W3.
6. Replace the Desk Top Assembly cover using the two screws loosened in Step 1 of these instructions.

INSTALLING THE REMOTE OPTION

1. Remove the two (2) hex screws holding the top cover on the Desk Top Station Assembly. Remove the cover.
2. If the Desk Top Assembly already includes the factory installed "Intercom Remote" Control Panel and the Remote Interface Board, proceed to Step 6 below. Otherwise, replace the standard Control Panel with the "Intercom Remote" control panel.
3. Remove jumper P104 from J204 on the Interconnect Board. Install the Remote Interface Board.
4. Mount the Remote Interface Board onto the Interconnect Board, plugging it in so P204 and P205 seat directly on the horizontally oriented pins of J204 and J205 on the Remote Interface Board.
5. Remove and discard cables included with the Remote Board. Install the Remote Board on the base of the station behind the Interconnect board on standoffs with M3.5 screws. Connect the Remote Board J2 to the Remote Interface Board J302 using cable W7.
6. Connect the Remote Interface Board J301 to the Control Panel J1 using cable W6.

7. Remove the knockout on the rear of the station for J11. Insert J11 of cable W10. Connect the other end of W10 to J1 or TB1 of the Remote Board per the Interconnect Diagram 19D904375 sheet 2.
8. Adjust operating audio levels on the Remote Board

DC Remote Board	19A704686P3 LBI-31594
Tone Remote Board	19A704686P6 LBI-31552
EDACS Remote Board	19A704686P8 LBI-38119

The Remote Control Board should be checked and adjusted when the system is installed. The tone decoder and filter adjustments are set at the factory and should not require adjustment unless the tone filters, decoders, generators or associated circuitry are replaced.

Make sure all connections to the base station and Remote Controller are complete, and that the tone panel and base station have been properly aligned before adjusting the Tone Remote Control Board.

ADJUSTING THE REMOTE OPTION

Equipment Required

1. Ac voltmeter with dBm scale
2. Audio Generator
3. Deviation Monitor

Receive Audio (R2) (R35) (R66)

1. Apply a 1000 Hz tone with a ± 3 kHz deviation to the station receiver that is strong enough to fully quiet the receiver.
2.
 - A. On the DC Remote Board 686P3 set R2 for 0dBm at J1-1 & J1-4.
 - B. On the Tone Remote Board 686P6 set R35 for 0dBm at J1-3 & J1-4.
 - C. On the EDACS Remote Board 686P8 set R66 for 0dBm at TB1-2 & TB1-5.

Tx Mic Audio (R1) (R60) (R82)

1. Apply a 1000 Hz tone at 120mV into the microphone jack of the Remote Controller with the largest line loss (usually farthest from the station).
2.
 - A. On the 686P3 DC Remote Board set R1 for the proper deviation.
 - B. On the 686P6 Tone Remote Board set R60 for the proper deviation.

- C. On the 686P8 PST Remote Board set R82 for the proper deviation.

For detailed instructions, refer to the applicable maintenance manual for the board being adjusted. The audio levels on the Remote Board must be adjusted first, before the two intercom level adjustments can be made on the Remote Interface Board.

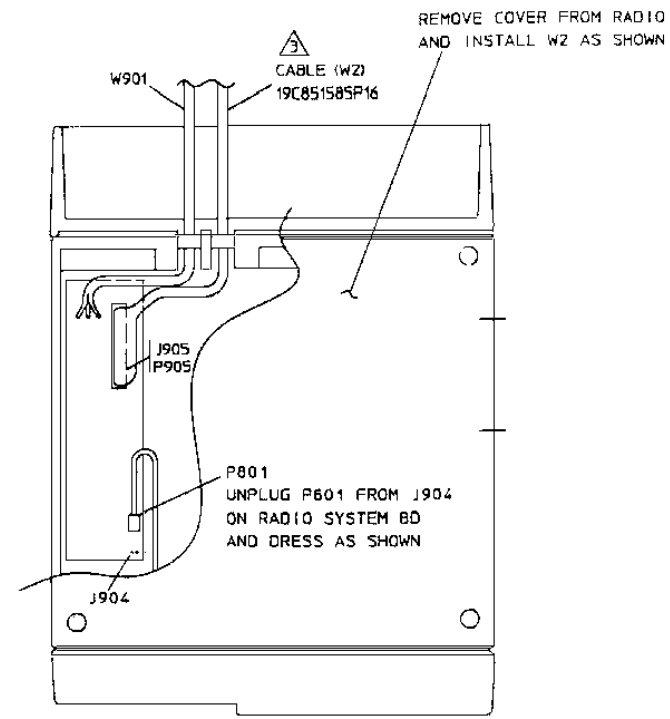
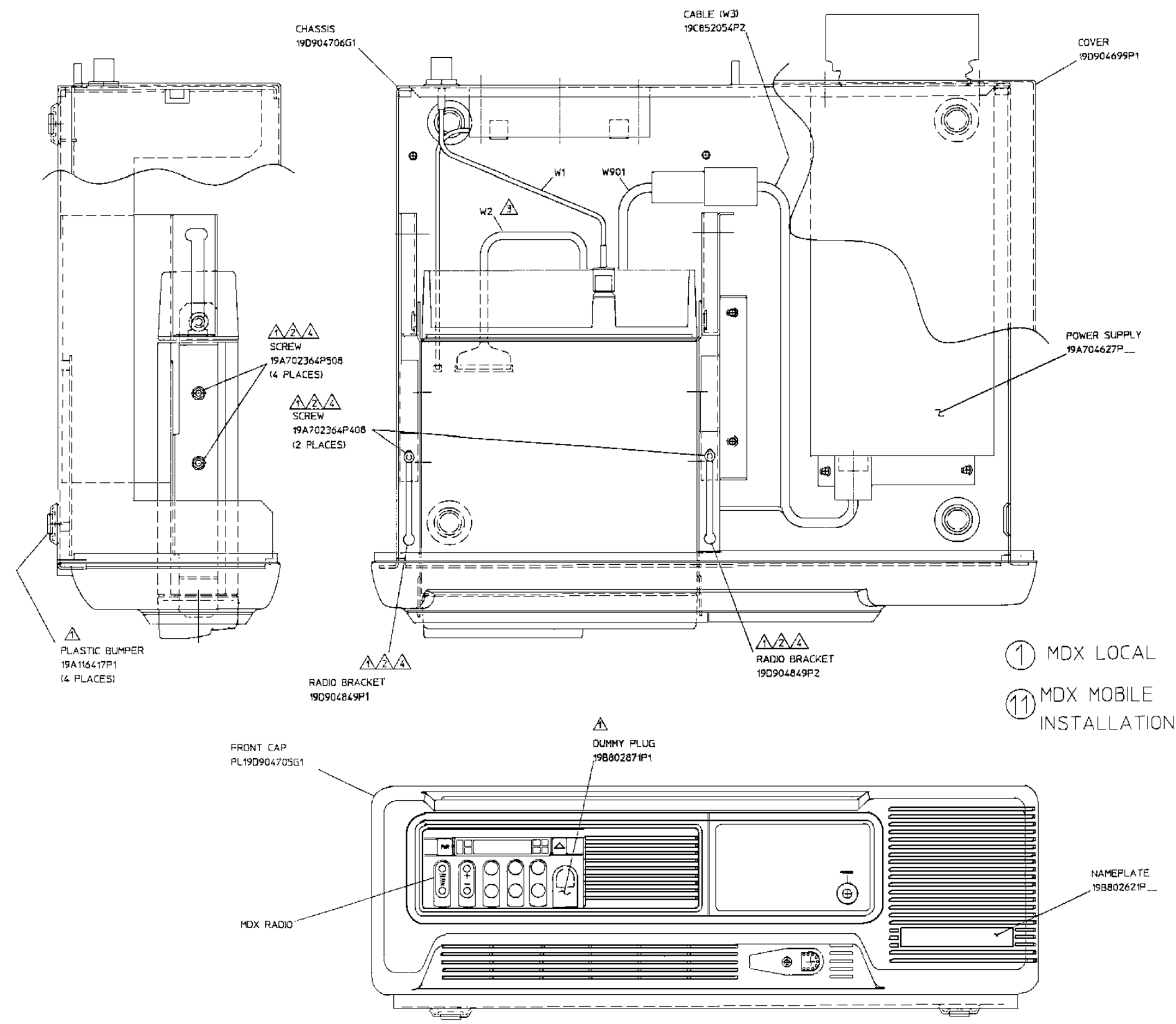
Speaker Level

1. After the Remote Board is set up so that the remote consoles are transmitting and receiving properly with the Desk Top Station radio, adjust the intercom levels on the Remote Interface Board:
 - a. Adjust R323 for the proper remote console speaker level from the station desk microphone.
 - b. Adjust R325 for the proper station speaker level from the remote console microphone.
2. Replace the Desk Top Assembly cover with the two (2) screws loosened previously.

INSTALLING THE KEYPAD BOARD OPTION

1. Loosen the two (2) captive screws holding the top cover on the Desk Top Station Assembly. Remove the cover.
2. Mount the Keypad Board onto the Interconnect Board, plugging it in so that P207 and P208 seat directly on the horizontally oriented pins of J207 and J208 on the Interconnect Board.
3. Connect the end of W9 marked "keypad" onto the keypad pins. Plug the other end onto J401 of the Keypad Board. Observe keyed pins of W9.
4. When remote options are used, connect cable W8 to P2 of the Remote Board. Connect the other end to J401 of the Keypad Board. Orient plug at J402 so the pin with no wire is toward J208.
5. On Remote Interface Board connect jumpers as follows:

P303 on J303 pins 2 and 3
P304 on J304 pins 2 and 3
P305 on J305 pins 2 and 3
P306 on J306 pins 2 and 3
P307 on J307 pins 2 and 3
6. Replace Desk Top Assembly cover with the two (2) screws loosened in Step 1.

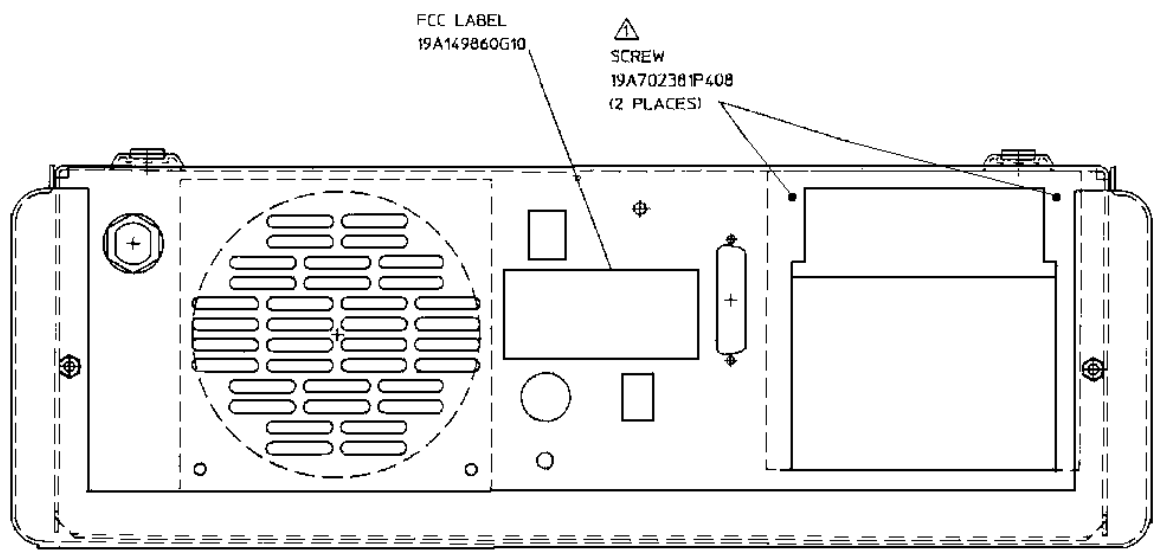
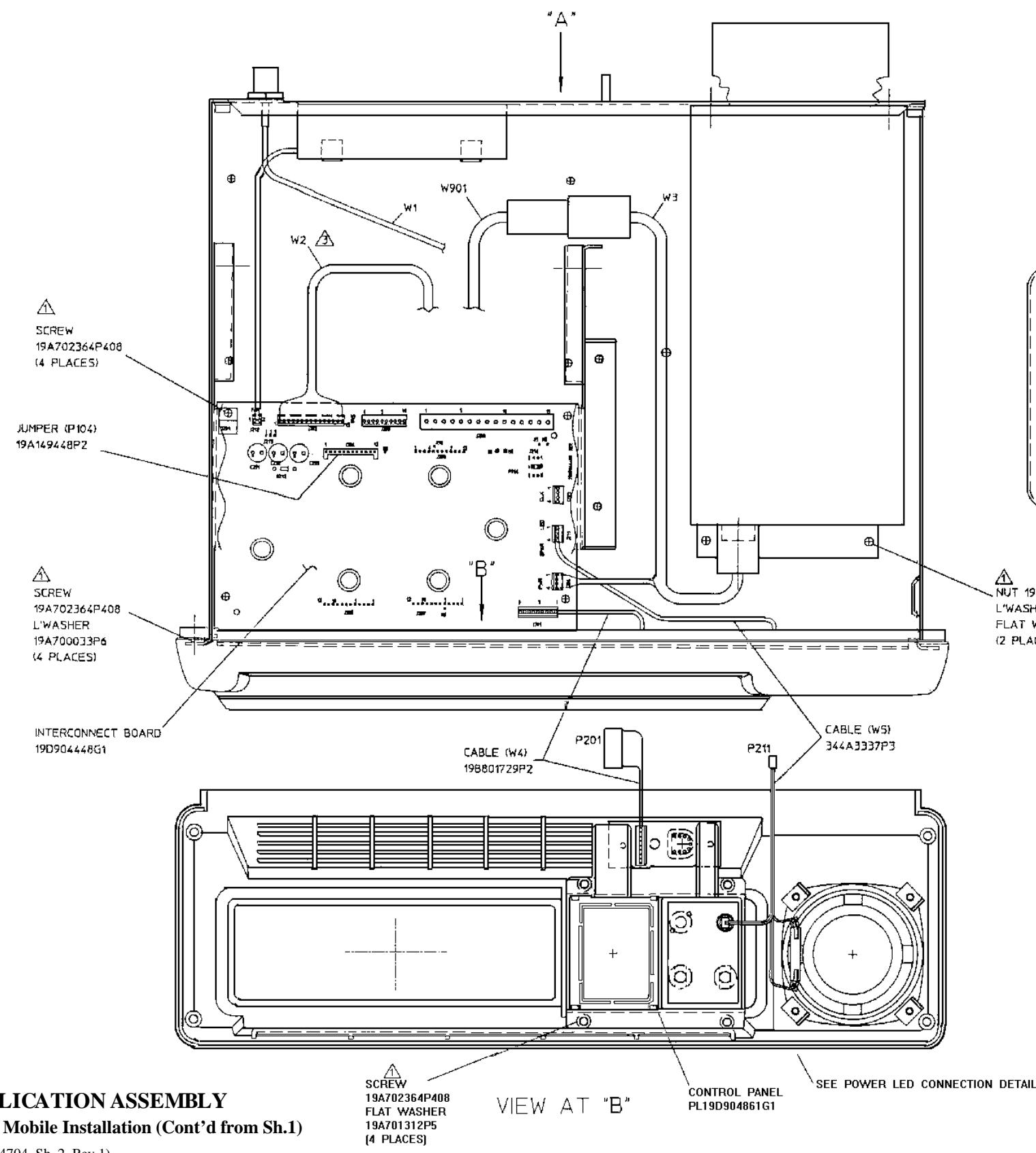


BOTTOM VIEW OF RADIO

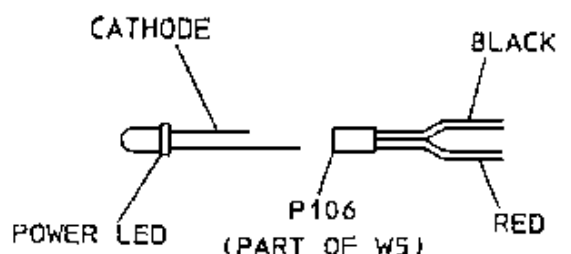
- ① MDX LOCAL
- ⑪ MDX MOBILE INSTALLATION

- NOTES:
- ⚠ PART OF HARDWARE KIT 349A9561G1
 - ⚠ THESE ITEMS ARE USED WHEN MOBILE IS FACTORY INSTALLED. IF MOBILE IS NOT FACTORY INSTALLED THESE ITEMS ARE TO REMAIN PACKAGED AND SHIPPED WITH STATION.
 - ⚠ IF STATION IS SHIPPED LESS MOBILE INSTALL P202 OF W2 (19C851585P16) ONTO J202 OF THE INTERCONNECT BOARD AND LET P905 HANG LOOSE.
 - ⚠ RADIO INSTALLATION
 - a. ASSEMBLE RADIO BRACKETS TO RADIO WITH SCREWS FINGER TIGHT
 - b. ASSEMBLE RADIO WITH BRACKETS ATTACHED ONTO RADIO SUPPORT BRACKETS AND SLIDE FORWARD UNTIL FRONT EDGE OF BRACKETS CONTACTS INSIDE OF FLANGE ON THE FRONT CAP ASSEMBLE 2 SCREWS ON SUPPORT BRACKETS TO SECURE RADIO BRACKETS.
 - c. ALIGN RADIO WITHIN OPENING OF THE FRONT CAP AND TIGHTEN 4 SCREWS IN RADIO BRACKETS TO MAINTAIN RADIO ALIGNMENT.

APPLICATION ASSEMBLY
MDX Mobile Installation
(19D904704, Sh. 1, Rev.1)



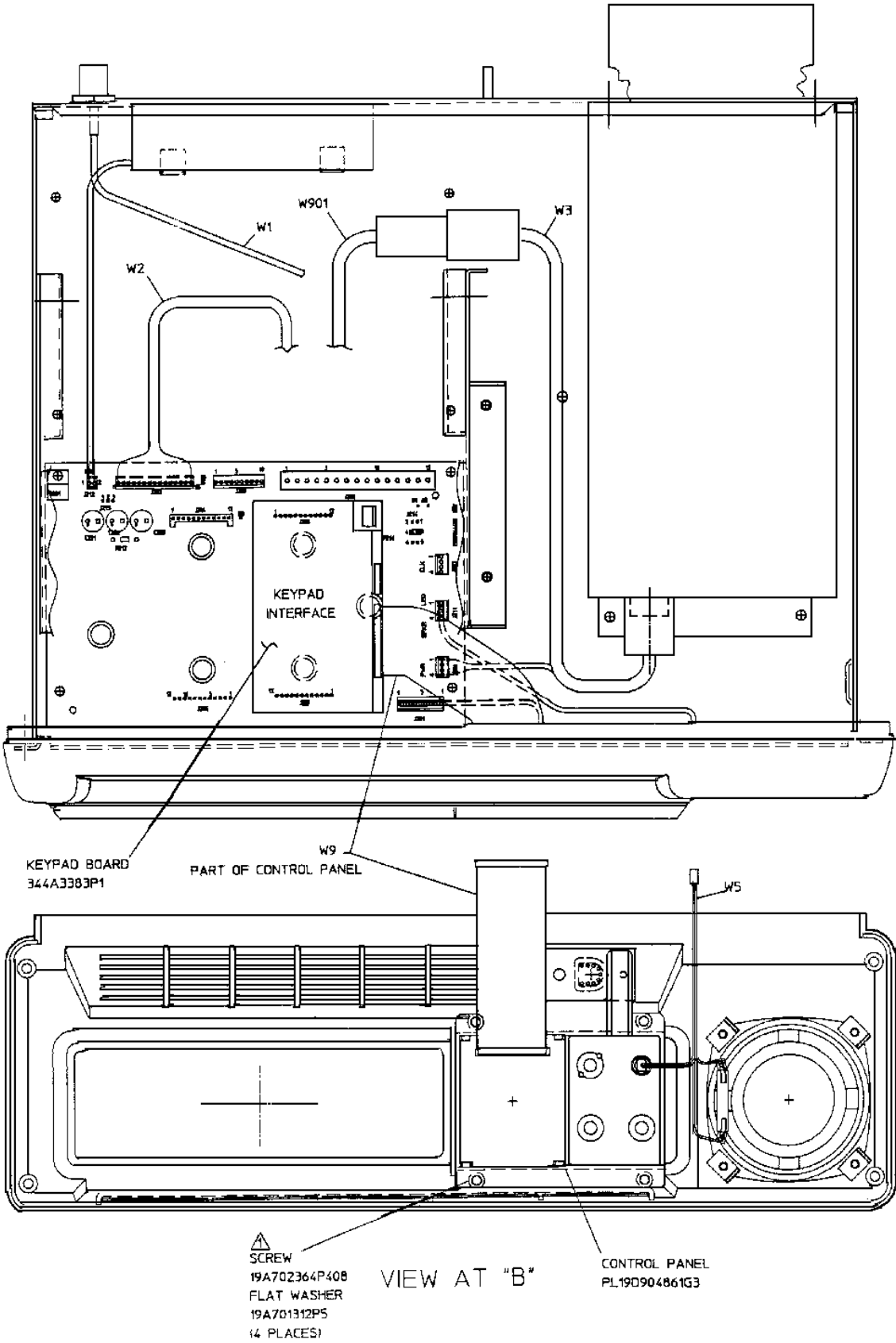
VIEW AT "A"



POWER LED CONNECTION DETAIL

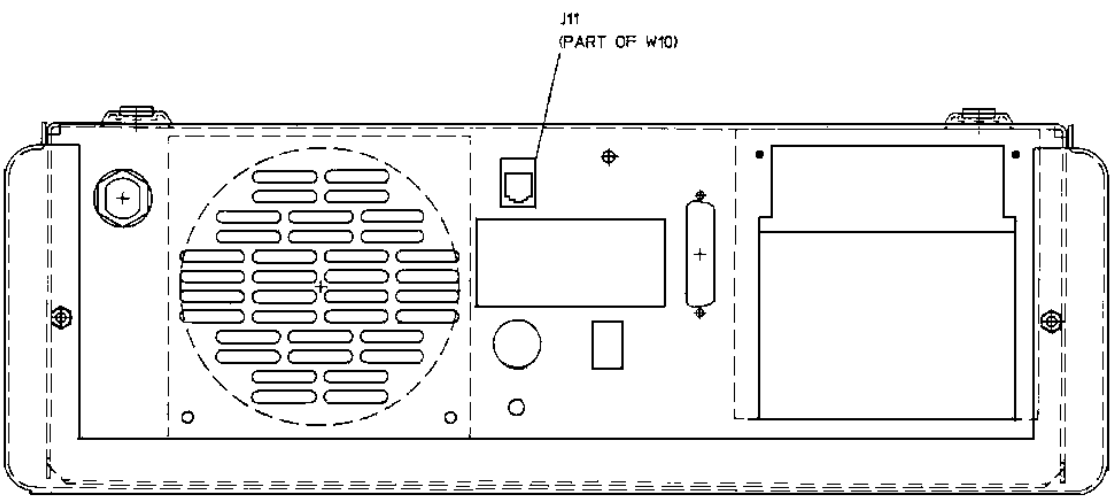
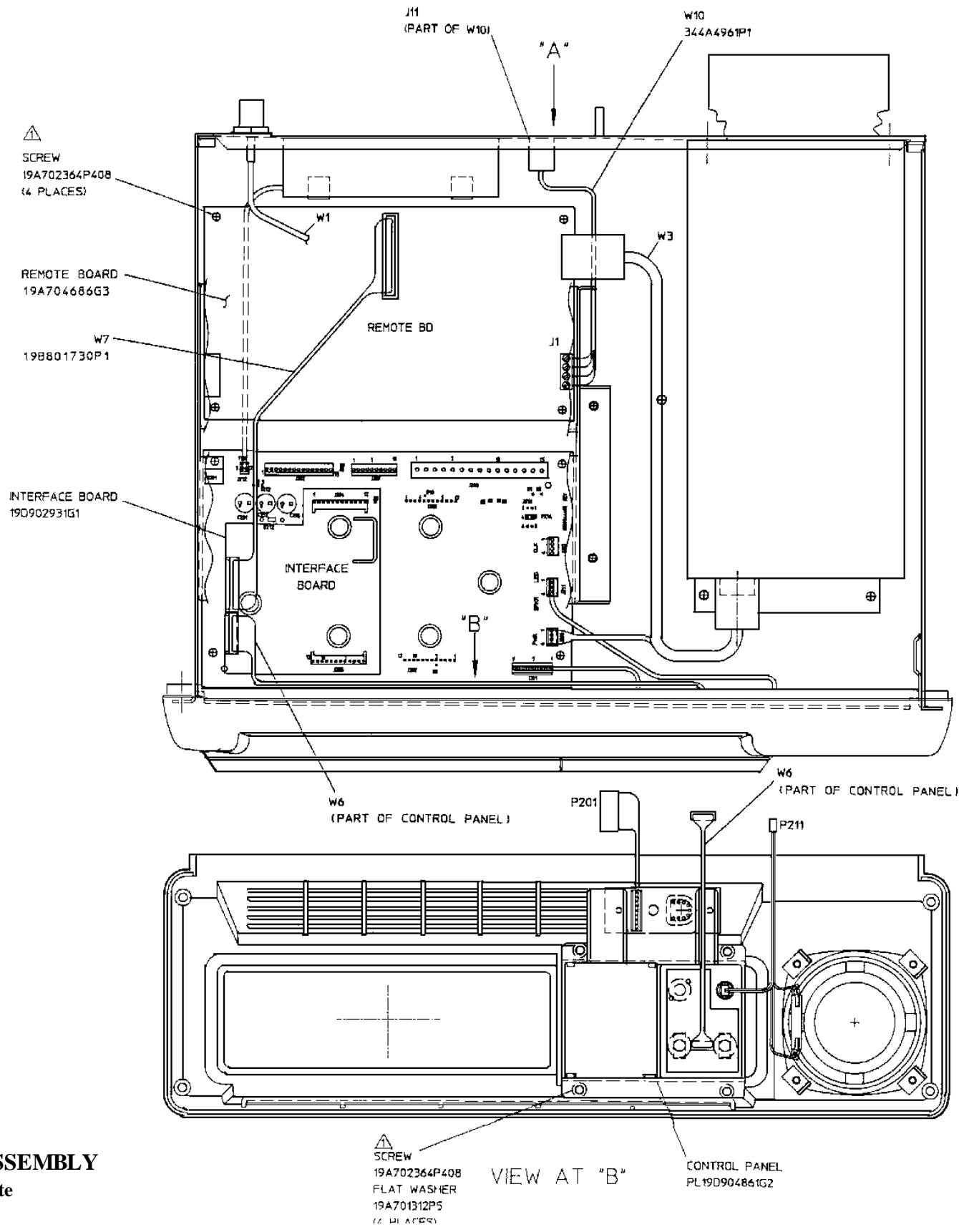
PLUG P106 ONTO LEADS OF POWER LED AS SHOWN (BLACK WIRE TO CATHODE) AND THEN BEND LEADS OVER BODY OF P106 TO RETAIN.

APPLICATION ASSEMBLY
MDX Mobile Installation (Cont'd from Sh.1)
(19D904704, Sh. 2, Rev.1)



② MDX LOCAL W/KEYPAD
SAME AS PART 1 EXCEPT AS SHOWN

APPLICATION ASSEMBLY
MDX Local with Keypad
(19D904704, Sh. 3, Rev. 1)



VIEW AT "A"

③ MDX LOCAL / DC REMOTE

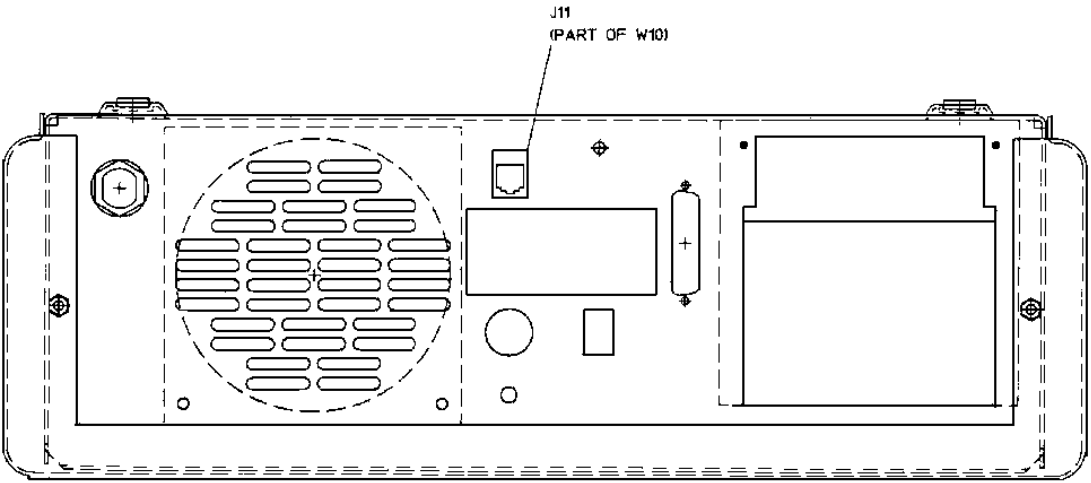
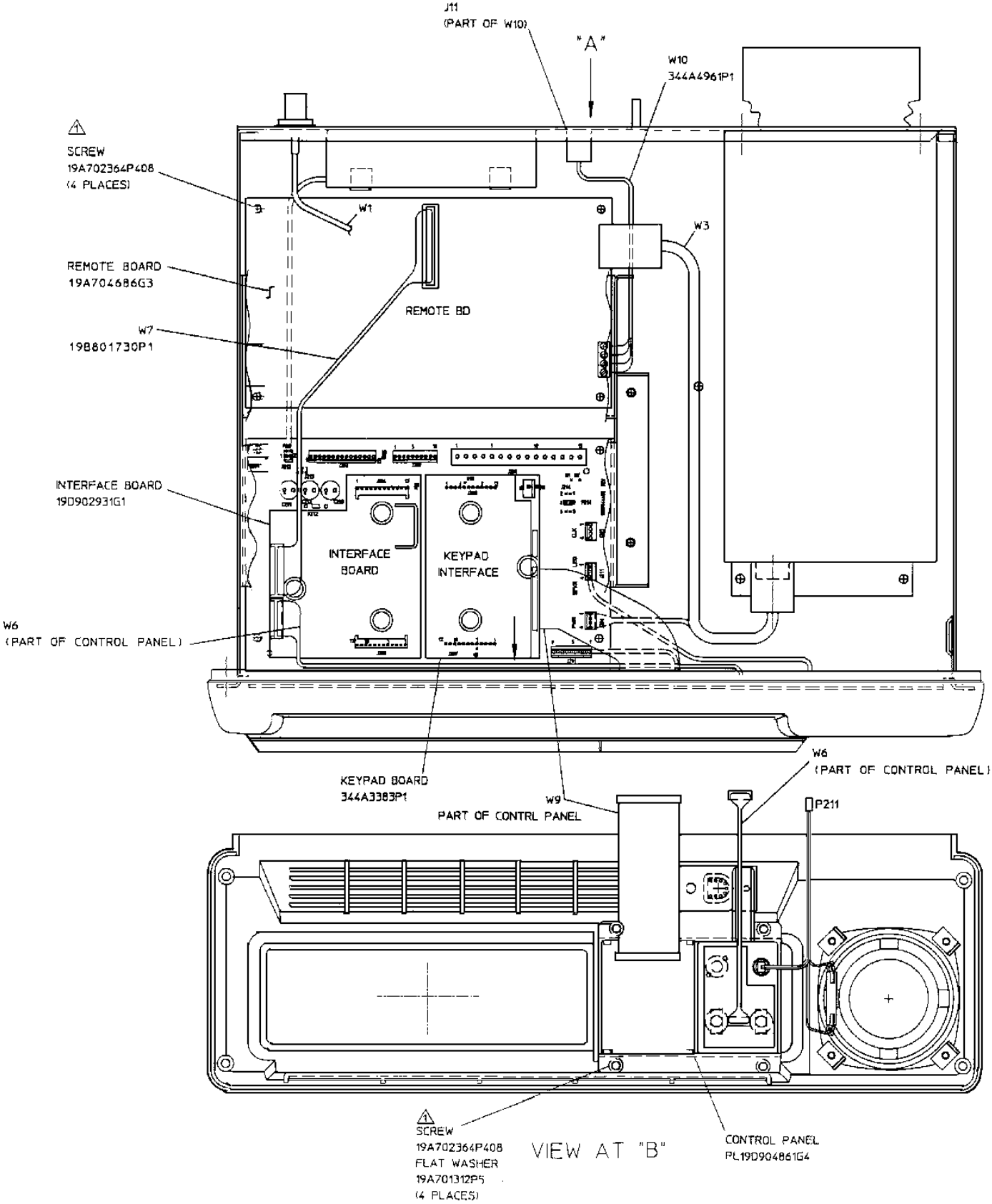
SAME AS PART 1 EXCEPT AS SHOWN

NOTES:

- 1. REMOVE P104 FROM INTERCONNECT BOARD (J204) BEFORE INSTALLING INTERFACE BOARD.
- 2. CONNECT WIRES OF W10 TO REMOTE BOARD J1 PER CHART

FROM	TO
	DC REMOTE BD
W10 (YELLOW)	J1-3
W10 (GREEN)	J1-1
W10 (RED)	J1-4
W10 (BLACK)	J1-2

- 3. DISCARD CABLES SUPPLIED WITH REMOTE BOARD.



VIEW AT "A"

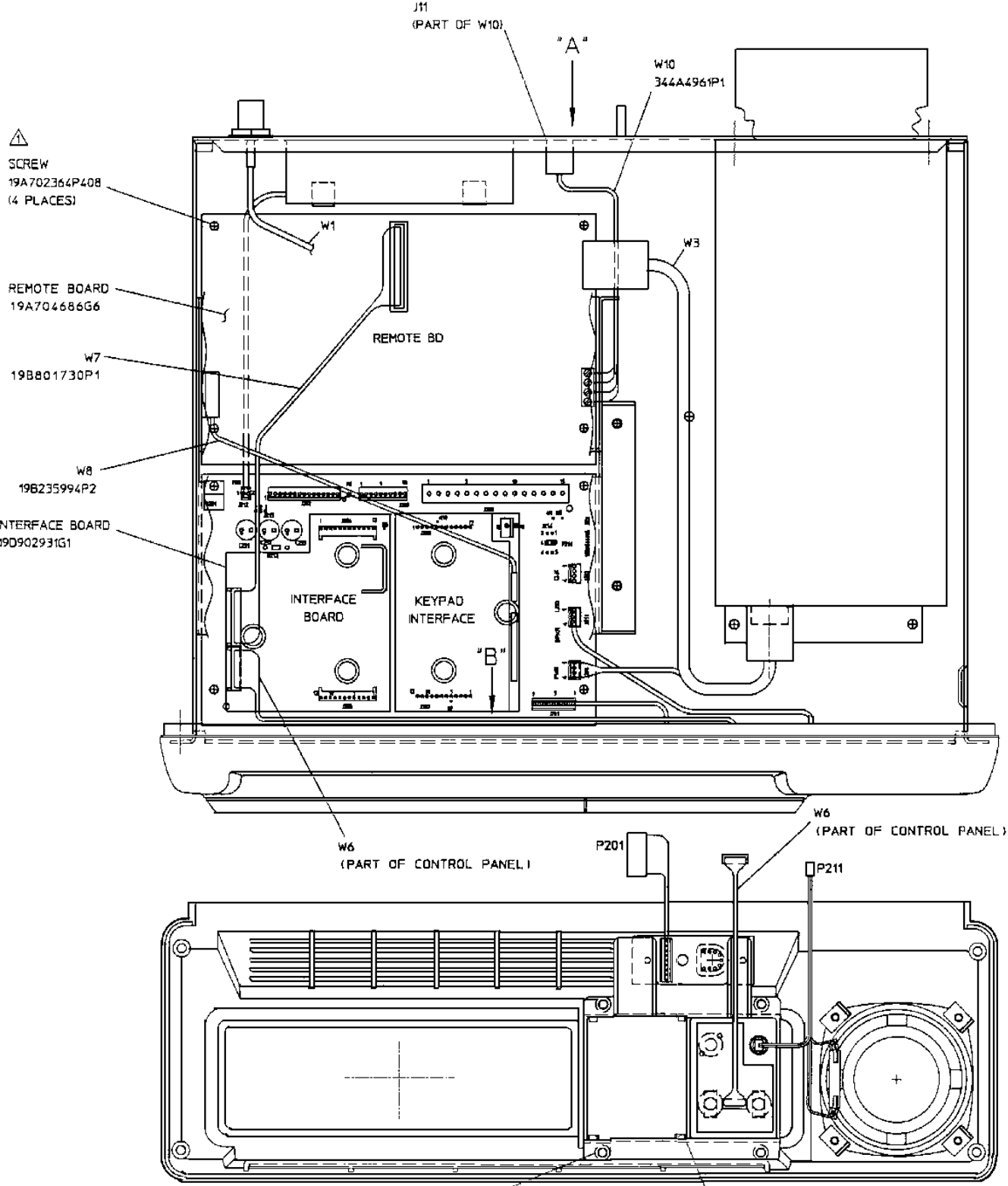
④ MDX LOCAL / DC REMOTE W/KEYPAD
SAME AS PART 1 EXCEPT AS SHOWN

NOTES:

1. REMOVE P104 FROM INTERCONNECT BOARD (J204) BEFORE INSTALLING INTERFACE BOARD.
2. CONNECT WIRES OF W10 TO REMOTE BOARD J1 PER CHART

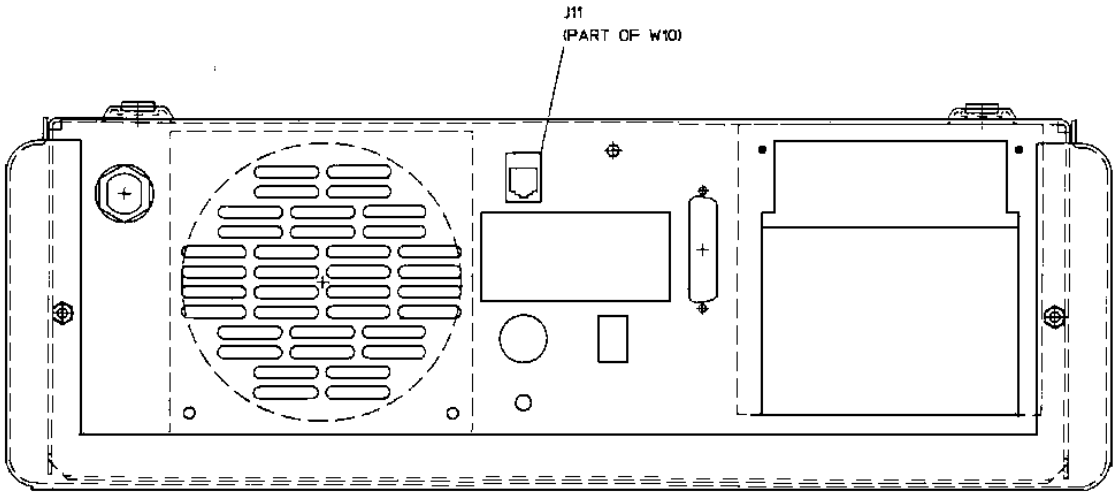
FROM	TO
	DC REMOTE BD
W10 (YELLOW)	J1-3
W10 (GREEN)	J1-1
W10 (RED)	J1-4
W10 (BLACK)	J1-2

3. DISCARD CABLES SUPPLIED WITH REMOTE BOARD.



APPLICATION ASSEMBLY
MDX Local/Tone Remote
(19D904704, Sh. 6, Rev.1)

VIEW AT "B"
SCREW
19A702364P408
FLAT WASHER
19A701312P5
(4 PLACES)



VIEW AT "A"

MDX LOCAL / TONE REMOTE

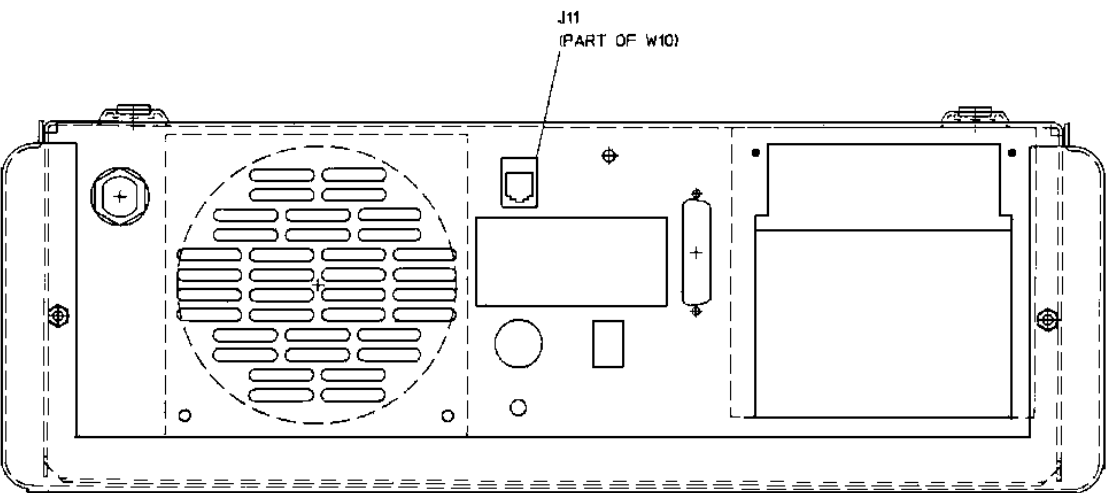
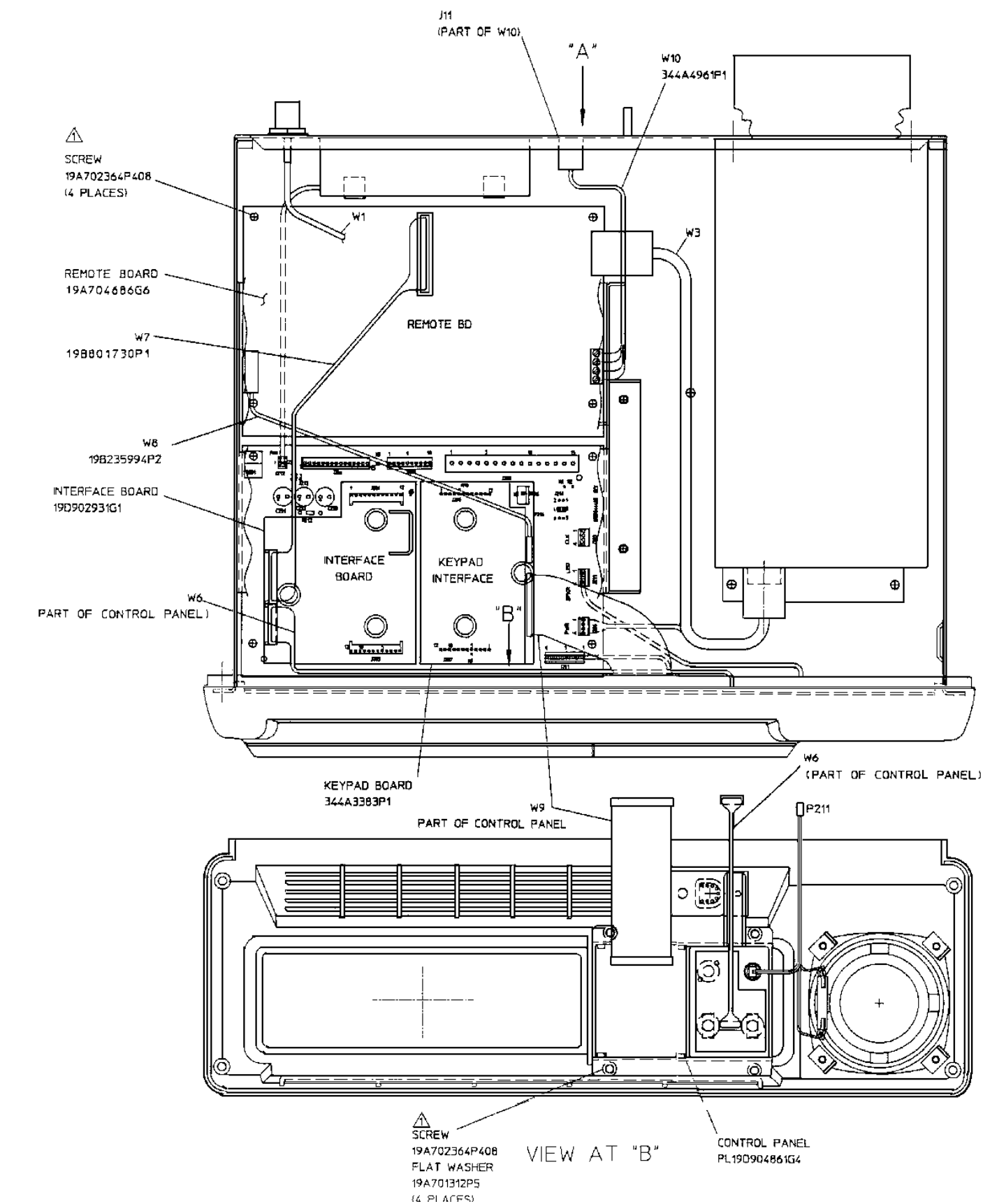
5 SAME AS PART 1 EXCEPT AS SHOWN

NOTES:

- 1. REMOVE P104 FROM INTERCONNECT BOARD (J204) BEFORE INSTALLING INTERFACE BOARD.
- 2. CONNECT WIRES OF W10 TO REMOTE BOARD J1 PER CHART

FROM	TO
	TONE REMOTE BD
W10 (YELLOW)	J1-2
W10 (GREEN)	J1-4
W10 (RED)	J1-3
W10 (BLACK)	J1-1

- 3. DISCARD CABLES SUPPLIED WITH REMOTE BOARD.



VIEW AT "A"

⑥ MDX LOCAL / TONE REMOTE W/KEYPAD

SAME AS PART 1 EXCEPT AS SHOWN

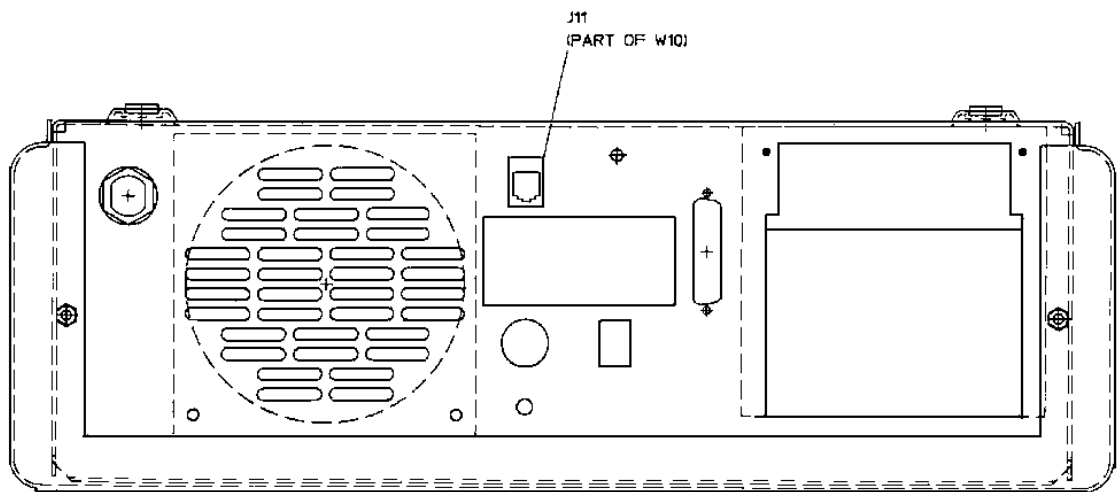
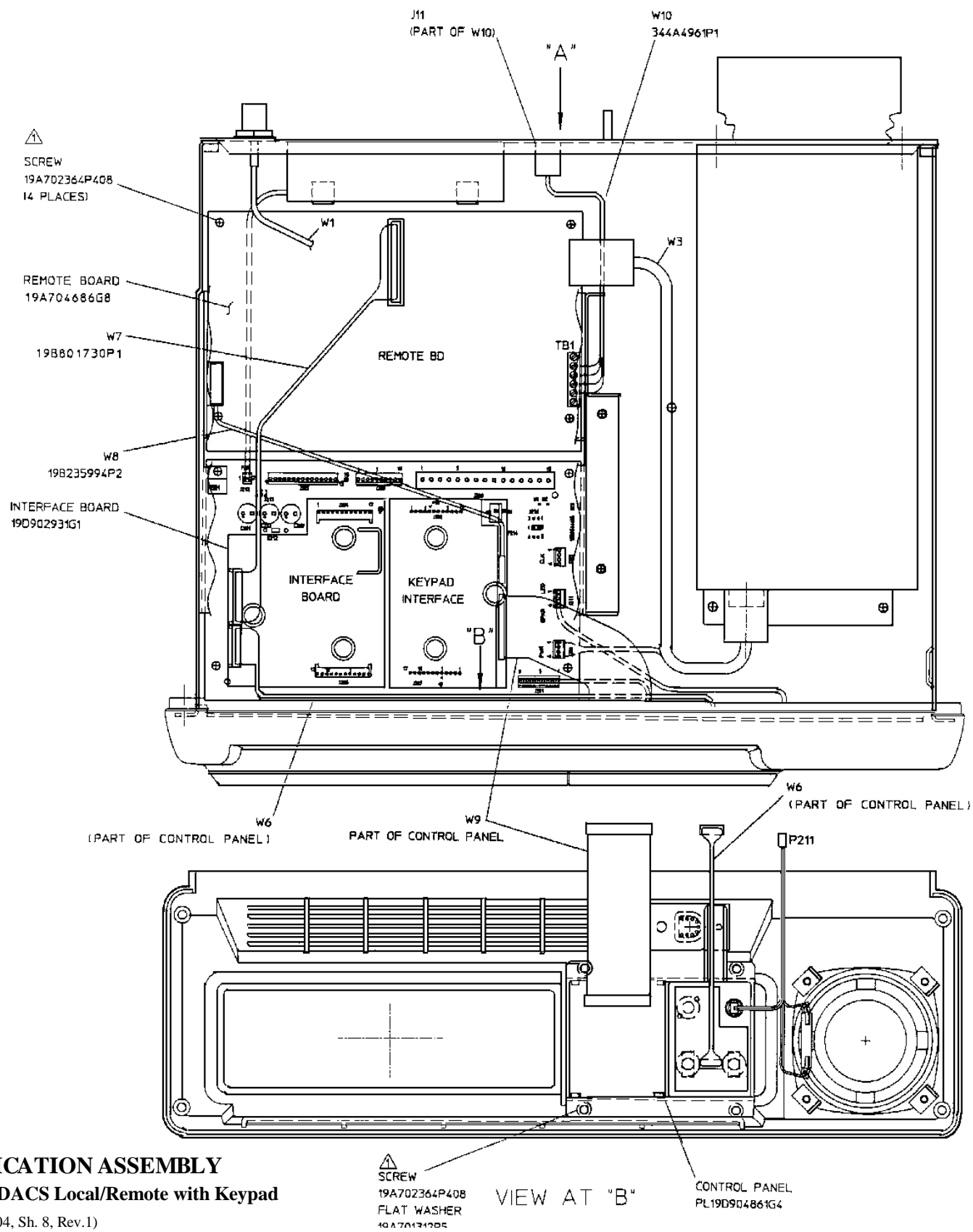
NOTES:

1. REMOVE P104 FROM INTERCONNECT BOARD (J204) BEFORE INSTALLING INTERFACE BOARD.
2. CONNECT WIRES OF W10 TO REMOTE BOARD J1 PER CHART

FROM	TO
	TONE REMOTE BD
W10 (YELLOW)	J1-2
W10 (GREEN)	J1-4
W10 (RED)	J1-3
W10 (BLACK)	J1-1

3. DISCARD CABLES SUPPLIED WITH REMOTE BOARD.

APPLICATION ASSEMBLY
MDX Local/Tone Remote with Keypad
(19D904704, Sh. 7, Rev. 1)



VIEW AT "A"
MDX EDACS LOCAL / REMOTE W/KEYPAD

7 SAME AS PART 1 EXCEPT AS SHOWN

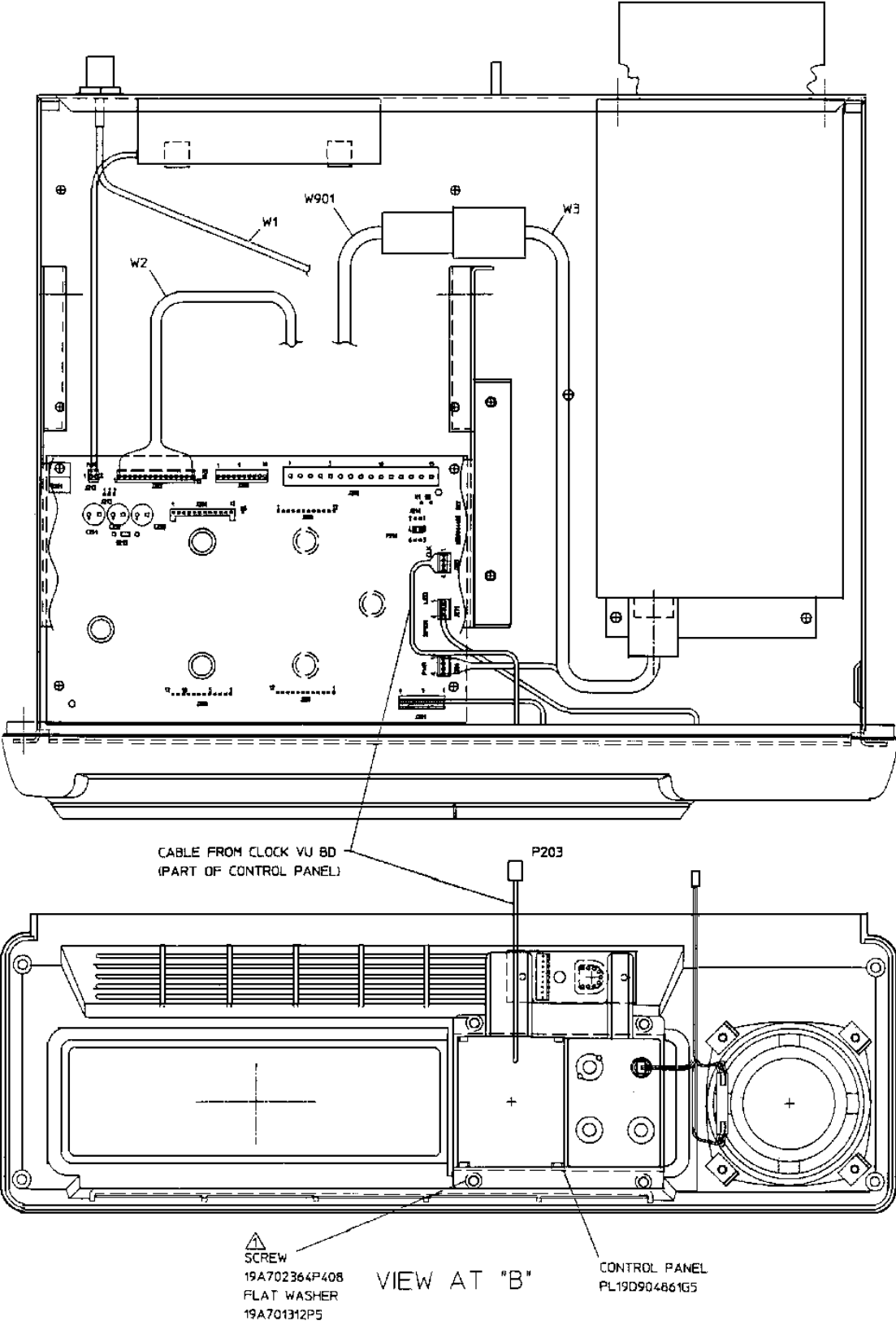
NOTES:

1. REMOVE P104 FROM INTERCONNECT BOARD (J204) BEFORE INSTALLING INTERFACE BOARD.
2. CONNECT WIRES OF W10 TO REMOTE BOARD J1 PER CHART

FROM	TO
	EDACS REMOTE BD
W10 (YELLOW)	J1-5
W10 (GREEN)	J1-4
W10 (RED)	J1-3
W10 (BLACK)	J1-2

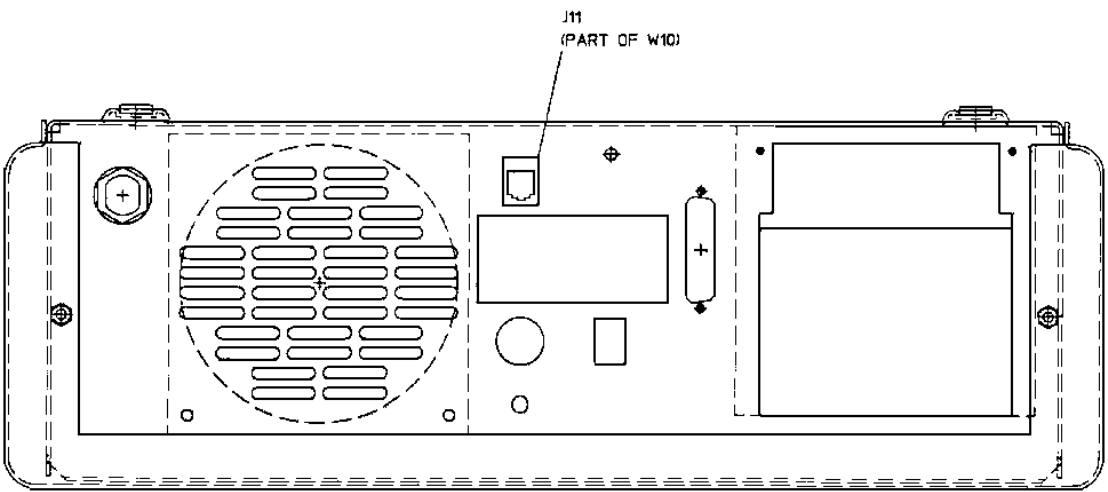
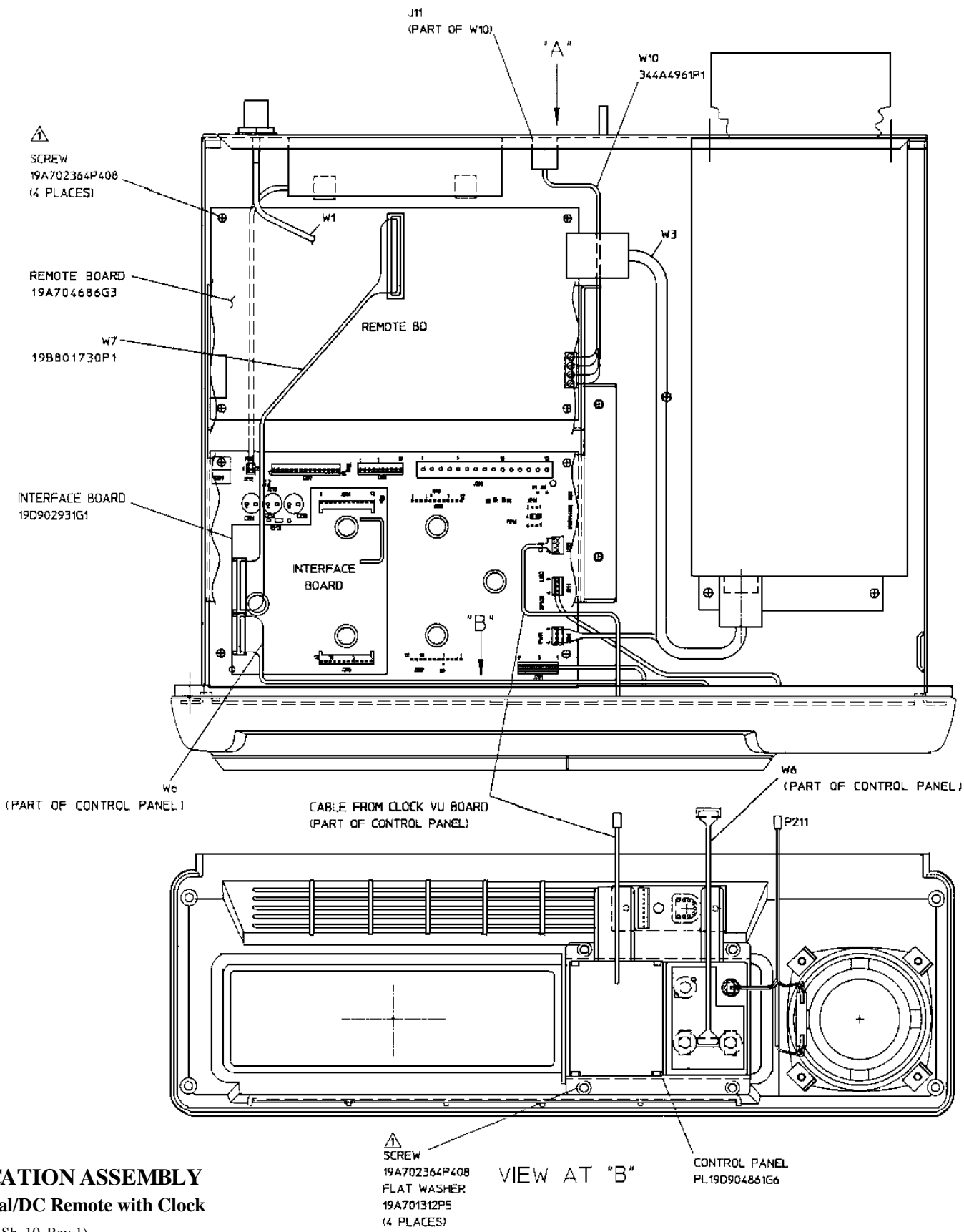
3. DISCARD CABLES SUPPLIED WITH REMOTE BOARD.

APPLICATION ASSEMBLY
MDX EDACS Local/Remote with Keypad
(19D904704, Sh. 8, Rev.1)



⑧ MDX LOCAL W/CLOCK
SAME AS PART 1 EXCEPT AS SHOWN

APPLICATION ASSEMBLY
MDX Local with Clock
(19D904704, Sh. 9, Rev. 1)



VIEW AT "A"

MDX LOCAL / DC REMOTE W/CLOCK

9

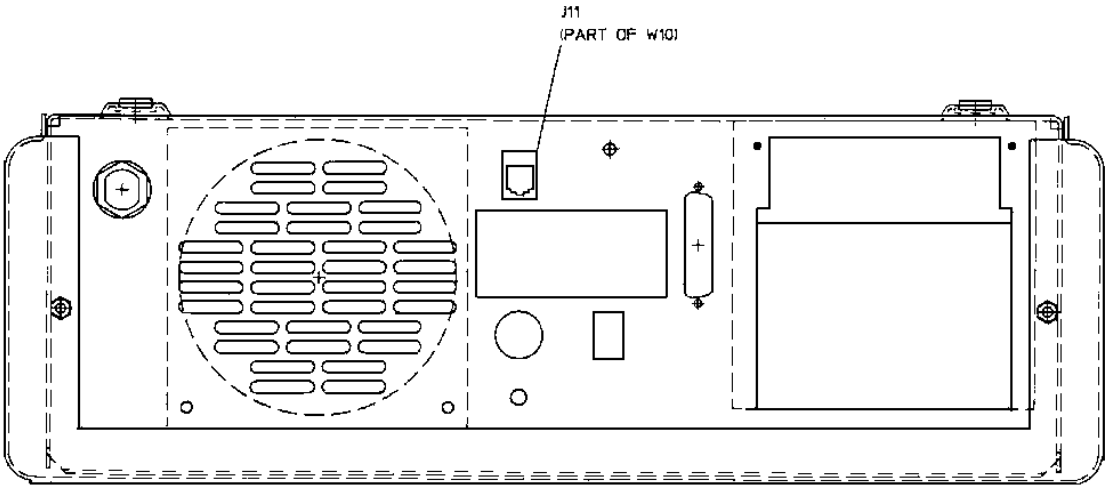
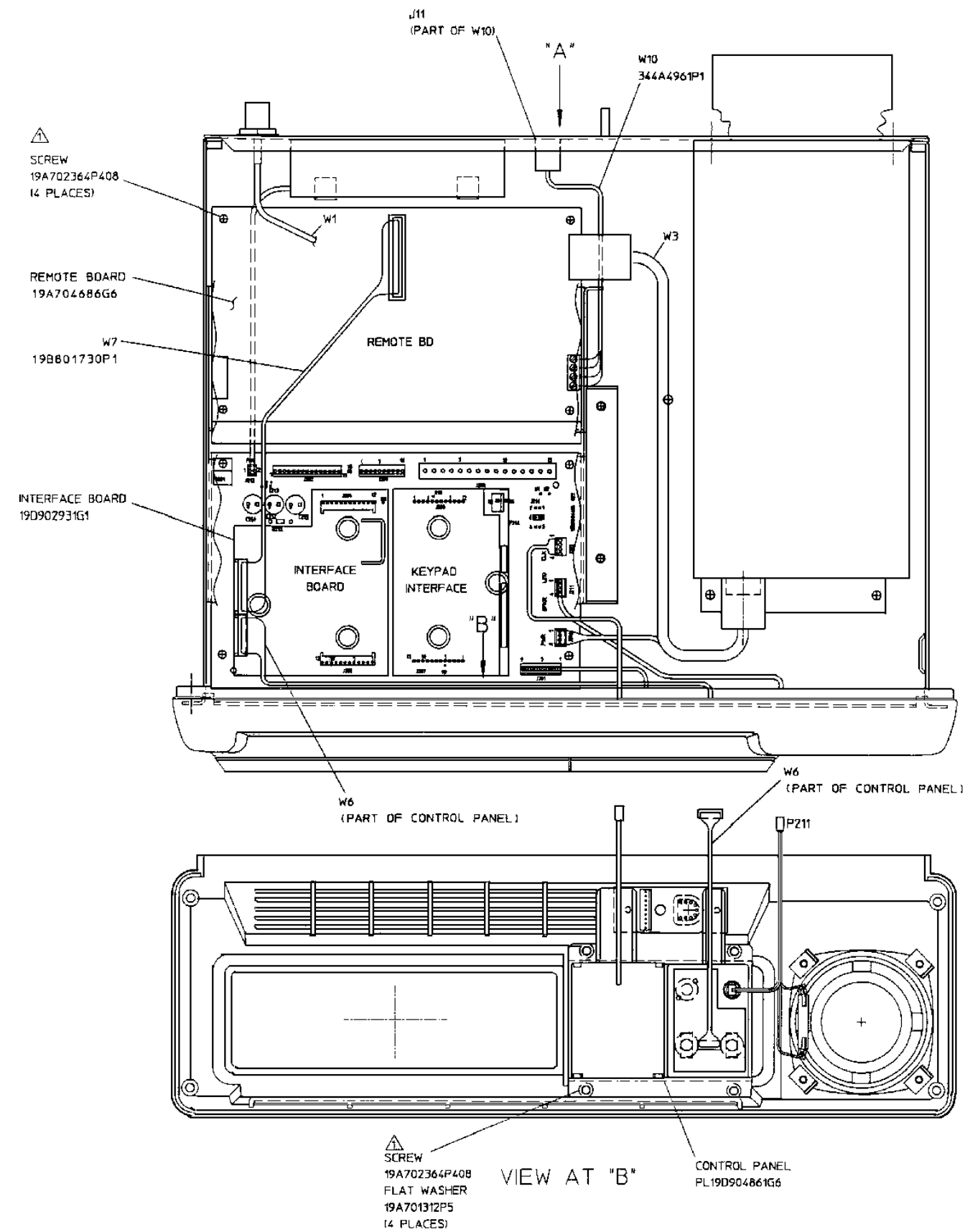
SAME AS PART 1 EXCEPT AS SHOWN

NOTES:

1. REMOVE P104 FROM INTERCONNECT BOARD (J204) BEFORE INSTALLING INTERFACE BOARD.
2. CONNECT WIRES OF W10 TO REMOTE BOARD J1 PER CHART

FROM	TO
	DC REMOTE BD
W10 (YELLOW)	J1-3
W10 (GREEN)	J1-1
W10 (RED)	J1-4
W10 (BLACK)	J1-2

3. DISCARD CABLES SUPPLIED WITH REMOTE BOARD.



VIEW AT "A"

MDX LOCAL / TONE REMOTE W/CLOCK VU

10 SAME AS PART 1 EXCEPT AS SHOWN

NOTES:

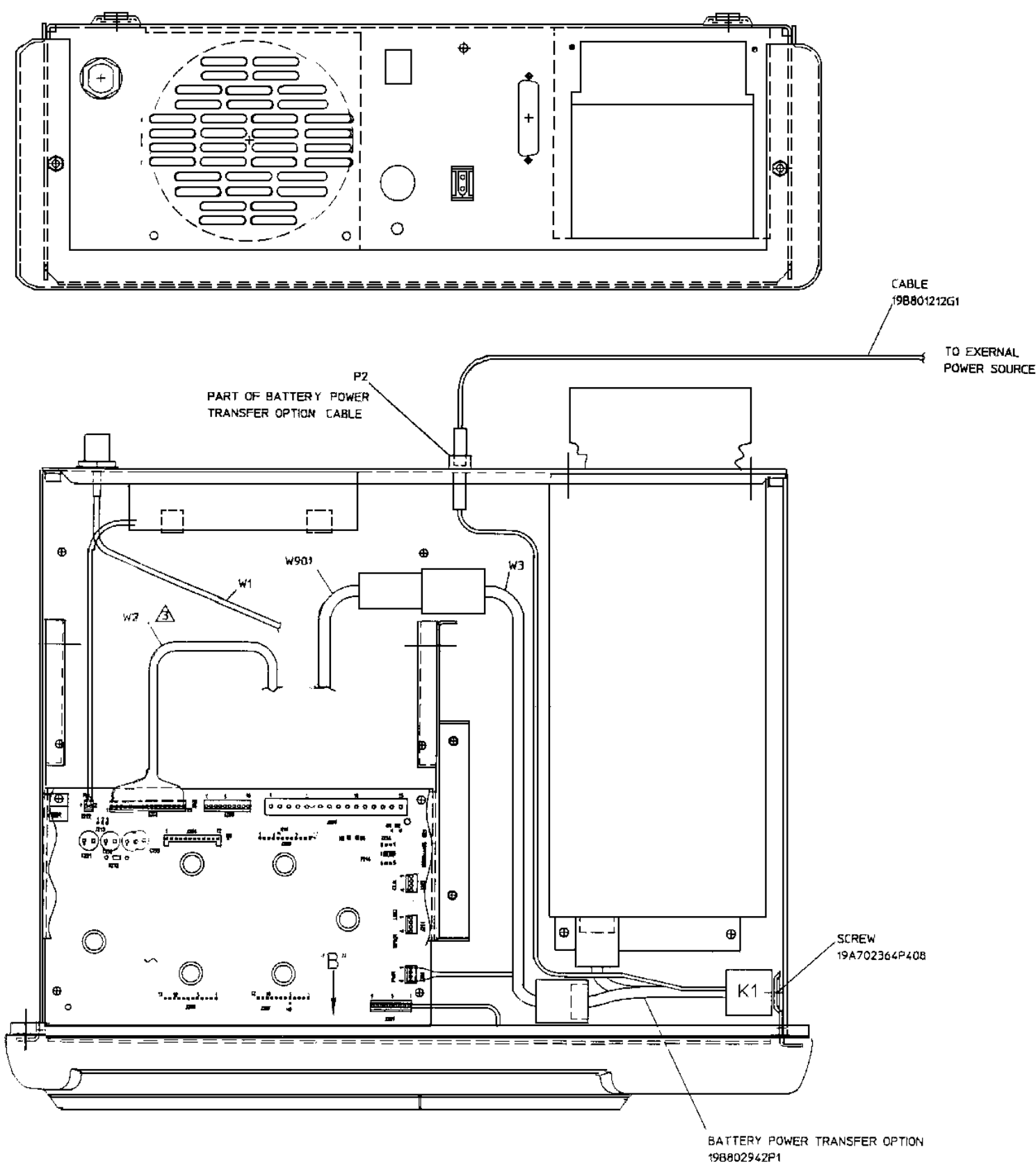
- 1. REMOVE P104 FROM INTERCONNECT BOARD (J204) BEFORE INSTALLING INTERFACE BOARD.
- 2. CONNECT WIRES OF W10 TO REMOTE BOARD J1 PER CHART

FROM	TO
	TONE REMOTE BD
W10 (YELLOW)	J1-2
W10 (GREEN)	J1-4
W10 (RED)	J1-3
W10 (BLACK)	J1-1

- 3. DISCARD CABLES SUPPLIED WITH REMOTE BOARD.

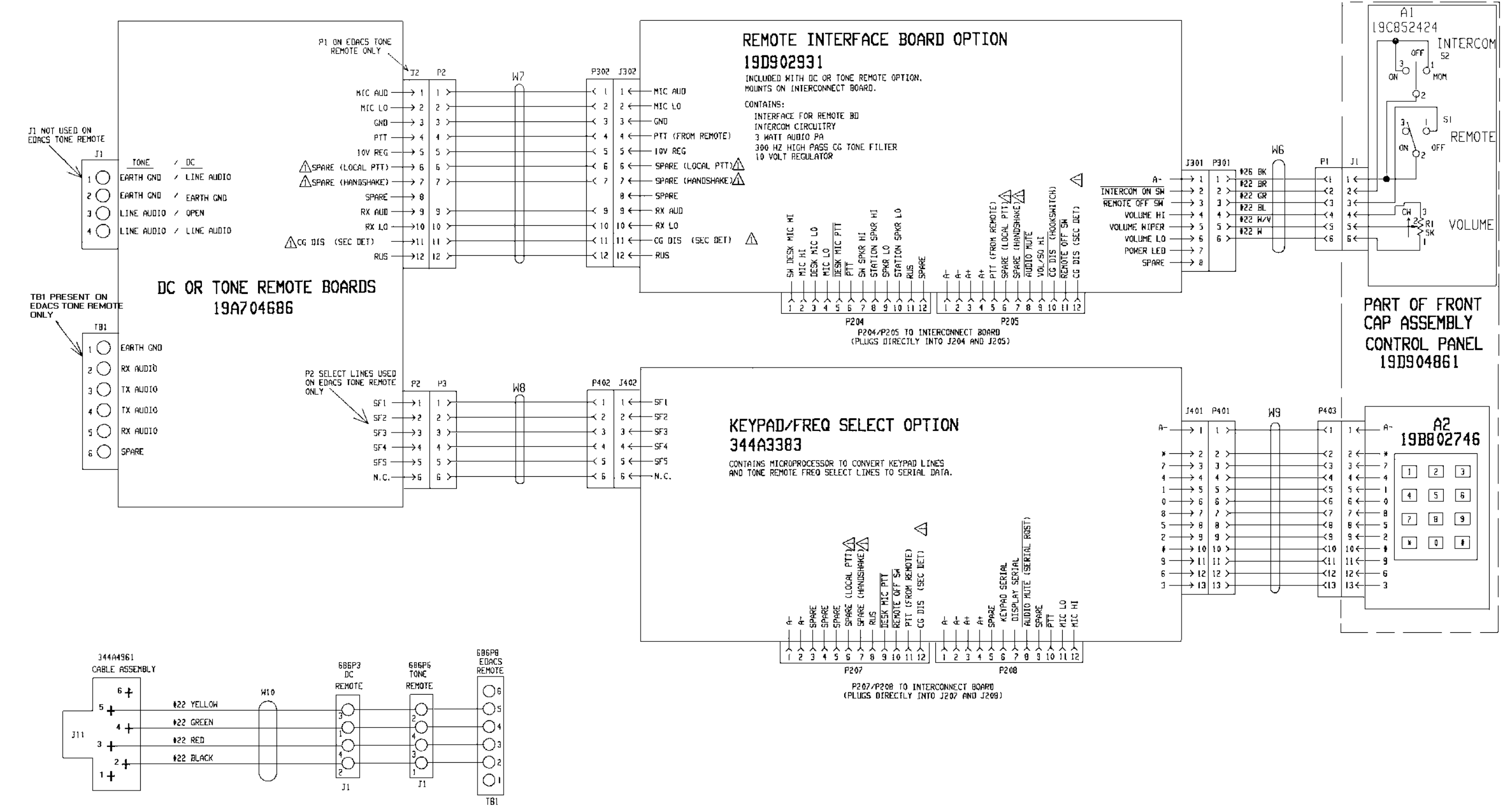
APPLICATION ASSEMBLY
MDX Local/Tone Remote with Clock VU

(19D904704, Sh. 11, Rev. 1)

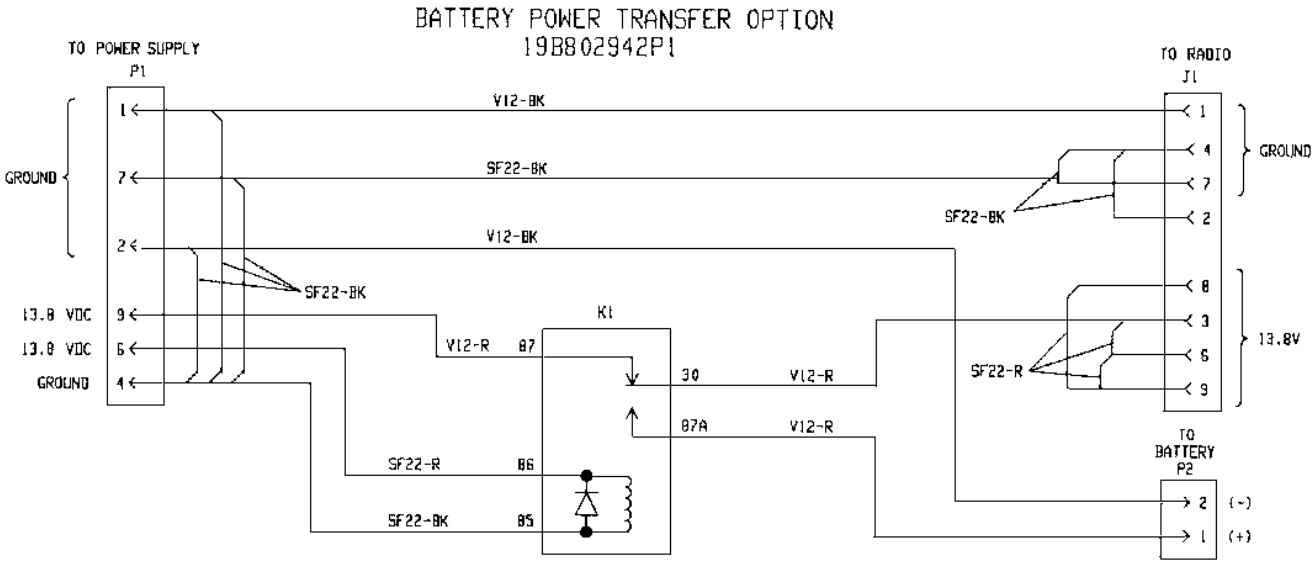
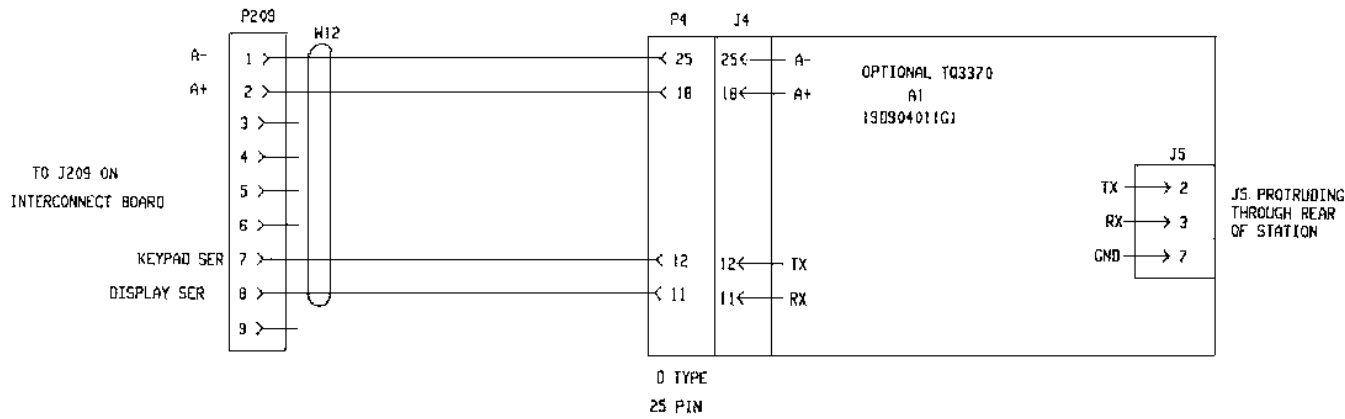
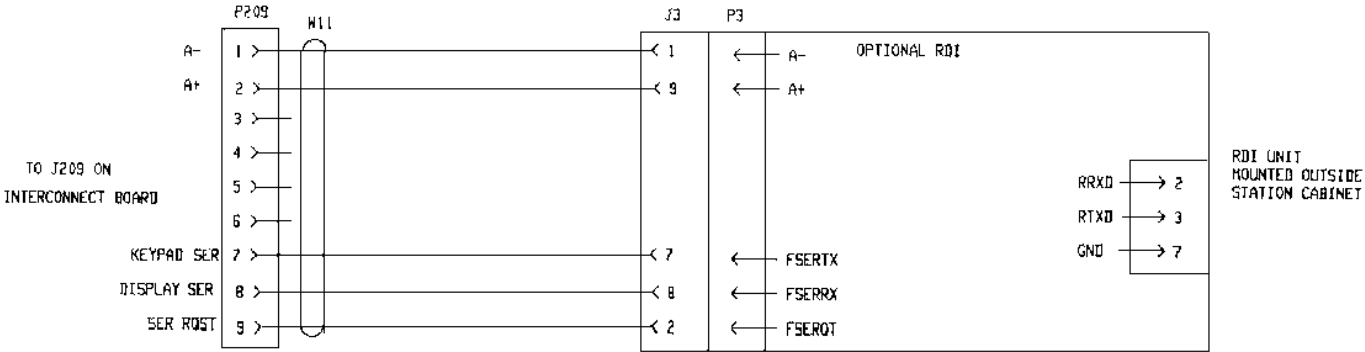
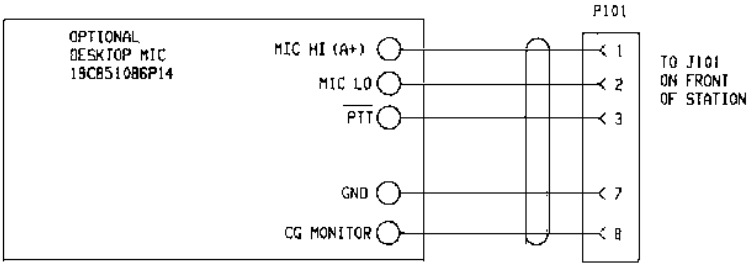
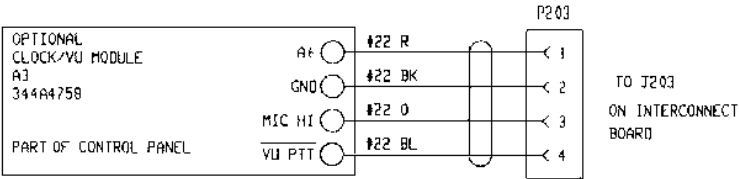


⑫ BATTERY POWER TRANSFER OPTION

APPLICATION ASSEMBLY
Battery Power Transfer Option
(19D904704, Sh. 12, Rev.1)



Remote Interface Board Option, DC or Tone Remote Option, and Keypad/Frequency Select Option
(19D904375, Sh. 2, Rev. 0)



Battery Power Transfer Option
(19D904375, Sh. 3, Rev. 1)