

Mobile Communications

*EDACS*TM INTERFACE PANEL 19D904009G1-G18

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Maintenance Manual

LBI-38812

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SPECIFICATIONS*

DIMENSIONS	19" X 3RU
MOUNTING	Fits Standard 19 inch rack Uses standard EIA mounting
MODULES	Provides mounting for five (5) parallel interface modules and one serial interface module.

* These specifications are intended primarily for the use of the service technician.Refer to the appropriate Specifications Sheet in the applicable maintenance manual for the complete specifications.

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DESCRIPTION

Interface Panel 19D904009G1 through G18 allows quick and easy interconnection of all audio and control functions in an Enhanced Digital Access Communication System (EDACSTM). This Interface Panel provides the ability to couple audio and control functions of multiple stations on single 25 pair cables. The Interface Panel can connect to as many as five (5) such cables plus one serial cable. This panel also provides all intra-cabinet wiring to common connector panels which is covered in other publications.

The Interface Panel consist of multiple modules mounted to a common panel frame assembly. The modules are as follows:

Interface Module 19C852204G1 - Used to route audio/data throughout the communication system. These audio/data connections consist of Audio In, General Electric Telephone Card (GETC) data, Modem Data, Repeater Interface Card (RIC) Audio, Station Audio and Test Unit Alarm Interface (TUAI) GETC data. The Interface Module also serves as a power monitor. See LBI-38813.

Power Monitor Module 19C852213G1 - Used to monitor the proportional DC voltage from the power sensor to produce and indication of the transmitter power output to the antenna system. See LBI-38815.

PTT Module 19D852215G1 - Used to connect the E&M signaling from the microwave link to the station transmitters. See LBI-38816.

TUAI Module 19C852339G1 - (Replaces module 19C852219G1) Used to connect to **T**est Unit Alarm Interface (**TUAI**) output through J1-J5, to the Transmit Alarm system via J9, and provides access to Digital Alarm Inputs DIN31- DIN-48. See LBI-38948.

CTIS Module 19C852226G1 - Used to connect the Centralized Telephone Interconnect System (CTIS). See LBI-38818.

Power Monitor for Simulcast 19C852218G1 - Used to monitor the proportional DC voltage from the power sensor to produce an indication of the transmitter power output to the antenna. See LBI-38819.

Serial Module 19C852323G1 - Used to route serial data throughout the communication system. See LBI-38930. There are two (2) kinds of serial data:

1. Fail Soft backup serial link.

2. Radio Interface Control (RIC) serial data.

EDACS[™] Interface VAX Site Connection 19C852313G1 - Used to connect communications to the Site Computer. See LBI-38943.

Power Monitor Channel Select Module 19C852379G1 - Used to disable unused power monitor ports. See LBI-38944.

Simulcast 150 BAUD Data Interface Module 19D904427G1 - Used to remap jackfield appearances of 150 baud data. See LBI-38945.

EDACS[™] Interface Module 2 19C852327G1 - Used to improve line matching for all panel connections. See LBI-38946.

RIC Transformer Signal Input/Output Isolation 19C852349G1 - Used to provide transformer isolation of input and output to the RIC panel. See LBI-38947.

Each EDACS trunked repeater and site controller cabinet includes an Interface Panel. This panel mounts on rear rails near the top of the cabinet.Control and audio is routed through the Interface Panel and connected to a point within the repeater or site controller cabinet.

Each EDACS Interface Panel accommodates up to five (5) parallel interface modules and one (1) serial interface module. The modules included with each repeater cabinet consist of **POWER MONITOR, STATION AUDIO, RIC AUDIO, MODEM DATA, GETC DATA** and **SERIAL DATA** functions. These modules are included even when the function is not required for a particular system.

The site controller Interface Panel interconnects **POWER MONITOR, RIC AUDIO, GETC DATA** and **SERIAL DATA** functions with the repeater cabinets.

Cabinet to cabinet connection requires only that cables be connected from a module on the Interface Panel in one cabinet to the same module on an Interface Panel in a neighboring cabinet (Refer to EDACS Installation Manual LBI-38762).

The common cables required for external connections to the various **EDACS** elements (station functions) are the 19D903880P120/121 and the 19D903880P130/131 cables. The 19D903880P120/121 cables connect the parallel connections cabinet to cabinet and consist of twenty five (25) twisted pair shielded cables with right angle male connectors P01 and P02. These cables have straight through connections 1-1, 2-2, etc. 19D903880P120 is 5 feet long. 19D903880P121 is 15 feet long.

The 19D903880P130/131 cables connect the serial data link cabinet to cabinet and consist of DB-15 male connectors P01 and P02. They have straight through connections 1-1, 2-2, etc.

19D903880P130 is 5 feet long. 19D903880P131 is 15 feet long.

The groups and applications of the EDACS Interface Panel are as follows:

Interface Panel 19D904009G1-G18:

- <u>Group 1 (G1)</u> Panel Assembly includes five (5) 19C852204G1 Interface Modules and one (1) 19C852323G1 Serial Module (Application part number P1, **STATION ASSEMBLY** (refer to Assembly Drawing 19D904009, Sheet 1)).
- <u>Group 2 (G2)</u> Panel Assembly includes a single 19C852323G1 Serial Module and two (2) 19C852204G1 Interface Modules (Application part number P7, **CTIS MAIN COMPUTER**.A third Interface Module is added by Option PSZA1J-S (refer to Assembly Drawing 19D904009, Sheet 2)).
- <u>Group 3 (G3)</u> Panel Assembly includes four (4) 19C852204G1 Interface Modules and one (1) 19C852226G1 CTIS Module (Application part number P9, **CTIS RIC CABINET** (refer to Assembly Drawing 19D904009, Sheet 3)).
- <u>Group 4 (G4)</u> Panel Assembly includes two (2) 19C852204G1 Interface Modules and one (1) 19C852323G1 Serial Module (Application part number P12, **SIMULCAST STATION** (refer to Assembly Drawing 19D904009, Sheet 4)).
- <u>Group 5 (G5)</u> Panel Assembly includes one (1) 19C852204G1 Interface Module, one (1) 19C852215G1 PTT Module, one (1) 19C852339G1 TUAI Module, one (1) 19C852218G1 Power Monitor Module for Simulcast and one (1) 19C852323G1 Serial Module (Application part number P14, SIMULCAST TX COMMON EQUIPMENT (refer to Assembly Drawing 19D904009, Sheet 5)).
- Group 6 (G6) Panel Assembly includes two (2) 19C852204G1 Interface Modules, one (1) 19C852213G1 Power Monitor Module and one (1) 19C852323G1 Serial Module (Application part number P20, SITE CONTROLLER - PDP11. Two (2) additional 19C852204G1 Interface Modules are added as part of Option PSZA1J-S. These additional Interface Modules are used with telephone

interconnect for RIC audio (refer to Assembly Drawing 19D904009, Sheet 6)).

- <u>Group 7 (G7)</u> Panel Assembly includes two (2) 19C852204G1 Interface Modules (Application part number P37, AUX REC (refer to Assembly Drawing 19D904009, Sheet 7)).
- <u>Group 8 (G8)</u> Panel Assembly includes two (2) 19C852204G1 Interface Modules (Application part number P38, **EUROEDACS** (refer to Assembly Drawing 19D904009, Sheet 8)).
- Group 9 (G9) Panel Assembly includes two (2) 19C852204G1 Interface Modules and two (2) 19C852226G1 CTIS Modules (Application part number P39, GETC SIMULCAST CONTROL POINT (1-12) (refer to Assembly Drawing 19D904009, Sheet 9)).
- <u>Group 10 (G10)</u> Panel Assembly includes two (2) 19C852204G1 Interface Modules (Application part number P40, GETC SIMULCAST CONTROL POINT (13-20) (refer to Assembly Drawing 19D904009, Sheet 10)).
- <u>Group 11 (G11)</u> Panel Assembly includes two (2) 19C852204G1 Interface Modules (Application part number P41, VOTER INTERFACE PANEL (refer to Assembly Drawing 19D904009, Sheet 11)).
- Group 12 (G12) Panel Assembly includes one (1) 19C852323G1 Serial Interface Module, one (1) 19C852213G1 Power Monitor Module, two (2) 19C852313G1 VAX Site Controller Interface boards, and two (2) 19C852379G1 Power Monitor Channel Select modules. Two additional Interface Modules 19C852204G1 are added as part of Option PSZA1J-S. These optional modules are used with the telephone interconnect system for RIC audio channels 1-12 and RIC data channels 13-20. (Application part number P42, SITE CONTROLLER VAX-DEC (#1) (refer to Assembly Drawing 19D904009, Sheet 12)).
- <u>Group 13 (G13)</u> Panel Assembly includes three (3) 19C852204G1 Interface Modules.One of the modules is used for downlink transfer, and two are used for phone lines: channels 1-16 and 17-20 (Application part number P43, **SITE CONTROLLER VAX-DEC** (#2) (refer to Assembly Drawing 19D904009, Sheet 13)).
- <u>Group 14 (G14)</u> Panel Assembly includes four (4) 19C852204G1 Interface Modules, one (1) 19C852313G1 Serial Interface, one (1) 19C852313G1 VAX Site Controller Interface. Two (2) Interface Modules (204) connect to Phone lines 1-16 and 17-32, and (2) modules connect to RIC audio 1-12 and 13-30. (Application part number P44,

CTIS MAIN COMPUTER VAX-DEC (refer to Assembly Drawing 19D904009, Sheet 14)).

- <u>Group 15 (G15)</u> Panel Assembly includes one (1) 19D904427G1 Simulcast 150 baud Data Interface (Application part number P45, **SIMULCAST CONTROL POINT** (refer to Assembly Drawing 19D904009, Sheet 15)).
- Group 16 (G16) Panel Assembly includes two (2) 19C852204G1 Interface Modules for Data In and Audio In and two (2) 19C852327G1 EUROEDACS Interface Panels for Data Out and Audio Out (Application part number P46, EUROEDACS LEASE LINE INTERFACE (refer to Assembly Drawing 19D904009, Sheet 16)).
- <u>Group 17 (G17)</u> Panel Assembly includes two (2) 19C852349G1 RIC Xfmr Signal In/Out Isolation panels, three (3) additional panels of this same type are an option with this Group (Application part number P47, **RIC TRANSFORMER PANEL** (refer to Assembly Drawing 19D904009, Sheet 17)).
- <u>Group 18 (G18)</u> Panel Assembly includes one (1) 19C852204G1 Interface Module (Application part number P48, NDC CONTROL (refer to Assembly Drawing 19D904009, Sheet 18)).

INSTALLATION

To install the EDACS Interface Panel:

- 1. Install the required panel modules into the Interconnection Panel. Be careful to conform with the cabinet configuration (refer to Assembly Diagram 19D904009, Sheets 1 through 18). Mount each panel assembly in the location shown, even though all panels are not included.
- 2. Apply the appropriate label.
- 3. Install the Interconnection Panel in the rear of the cabinet or open rack using four (4) spring nuts and screws (refer to the Parts List for numbers).

In the cabinet, mount the interconnection panel two racks units from the top. In the open rack, mount the interconnection panel three rack units from the top.

To Connect Cables:

Interconnecting cables, connecting control and audio circuits from one Interface Panel to the next, are provided in lengths that are based on standard floor plans (refer to the floor plans in Installation Manual LBI-38762).

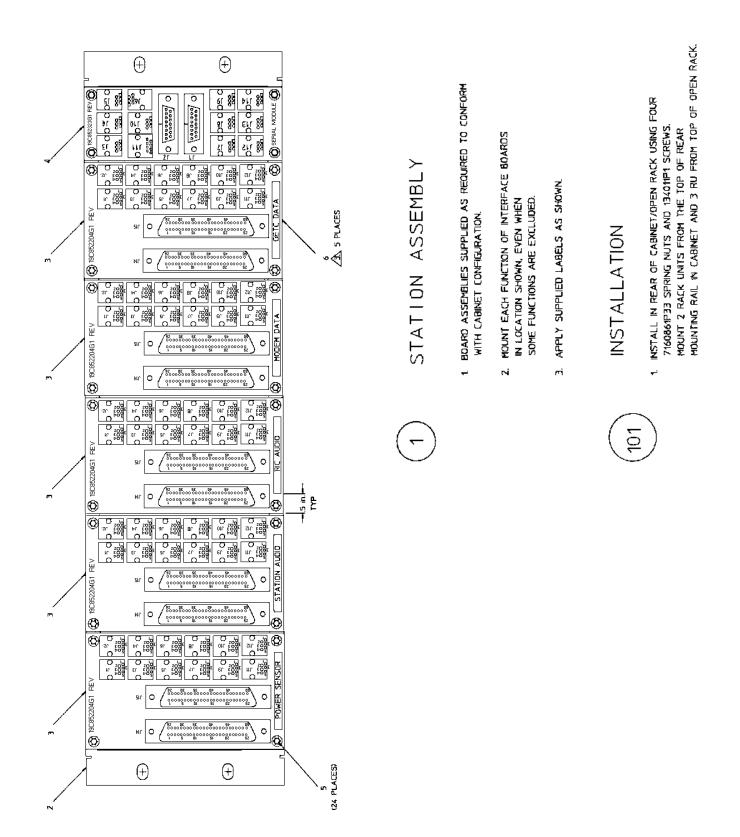
To complete cabinet to cabinet interconnection just add cables from the Interface Panel in one cabinet to the same panel in neighboring cabinets.



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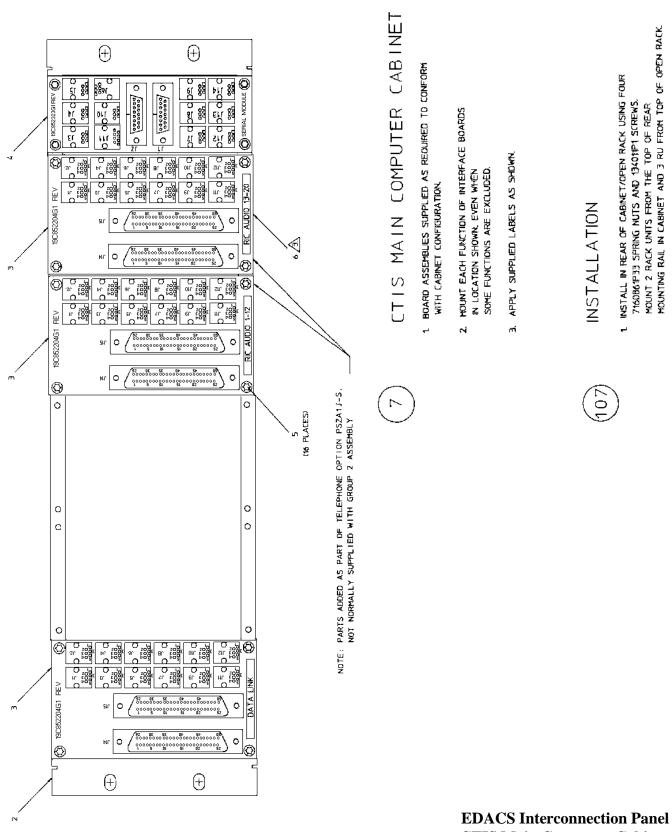
LBI-38812

ASSEMBLY DIAGRAM



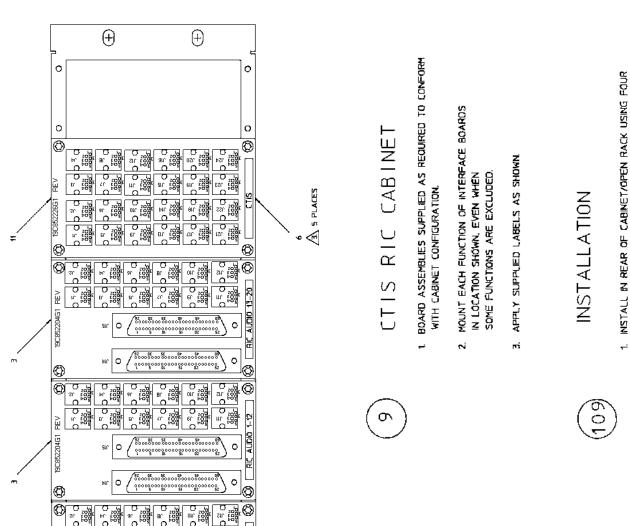
EDACS Interconnection Panel Station Assembly

(19D904009, Sheet 1, Rev. 2)



CTIS Main Computer Cabinet

(19D904009, Sheet 2, Rev. 3)



OF OPEN RACK

7160861P33 SPRING NUTS AND 134011P1 SCREWS. MOUNT 2 RACK UNITS FROM THE TOP OF REAR MOUNTING RAL IN CABINET AND 3 RU FROM TOP

EDACS Interconnection Panel CTIS RIC Cabinet

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(19D904009, Sheet 3, Rev. 0)

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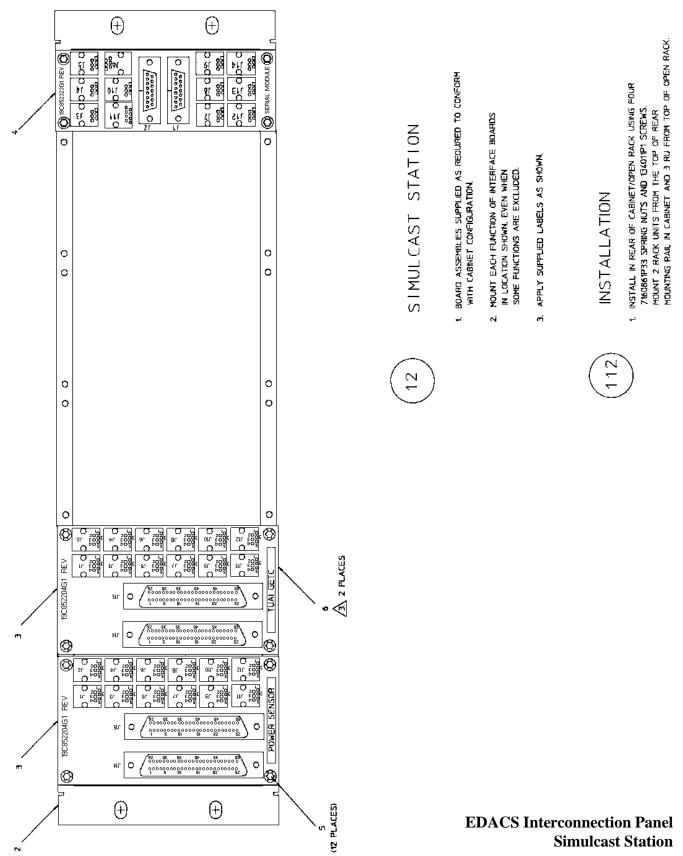
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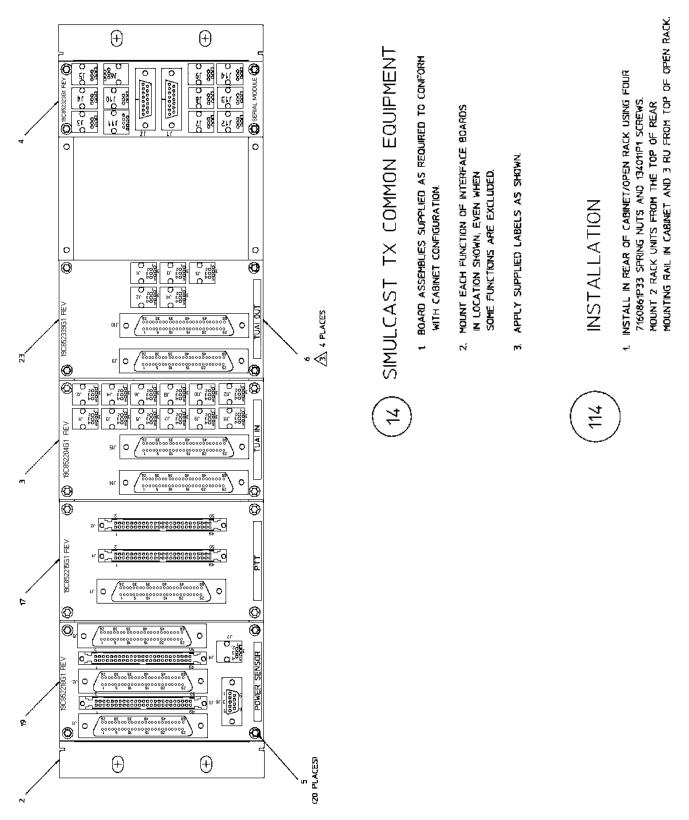
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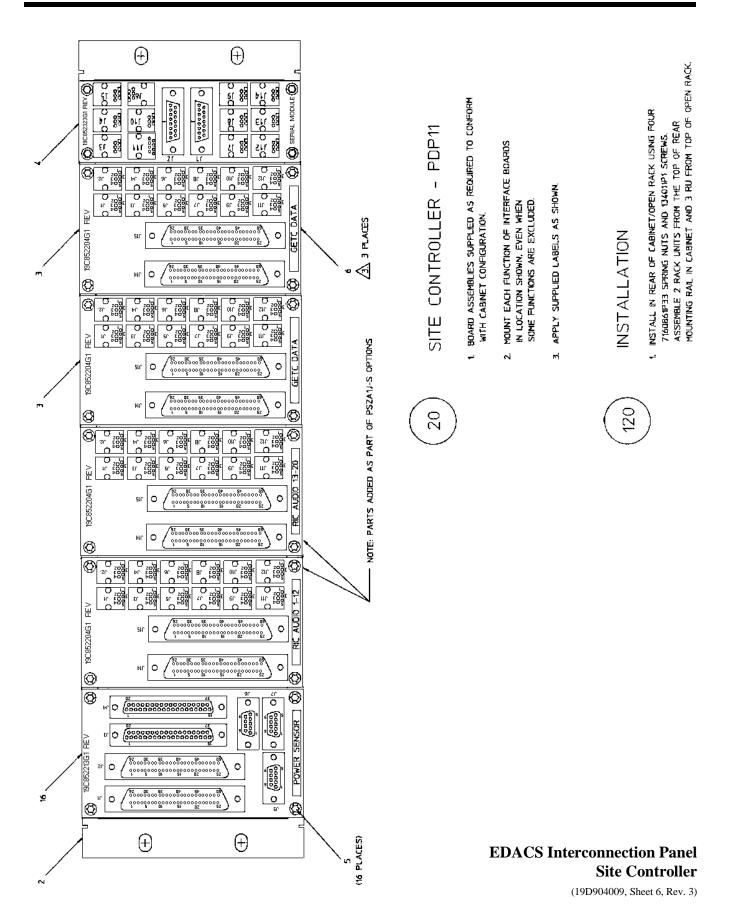


⁽¹⁹D904009, Sheet 4, Rev. 2)

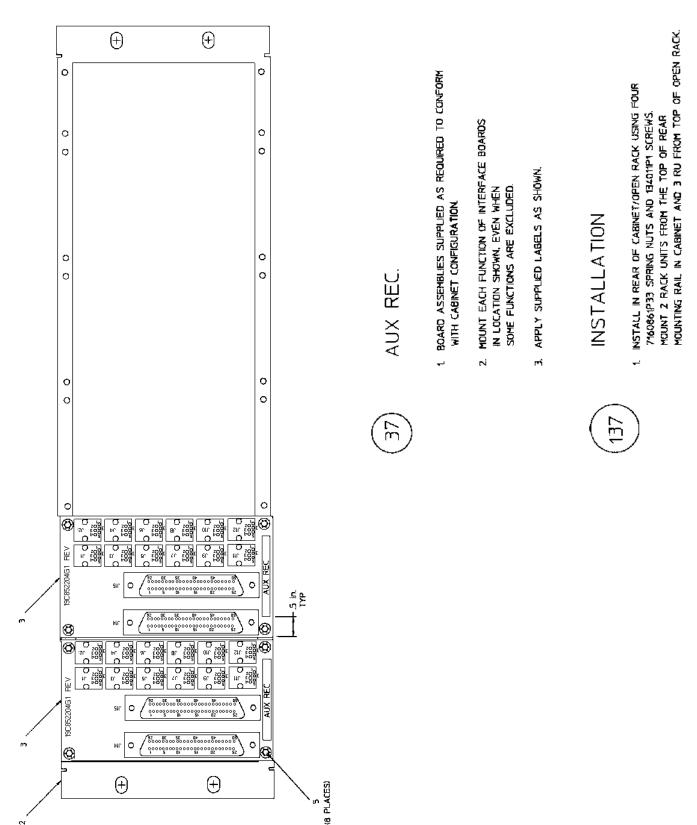


EDACS Interconnection Panel Simulcast TX Common Equipment

(19D904009, Sheet 5, Rev. 3)



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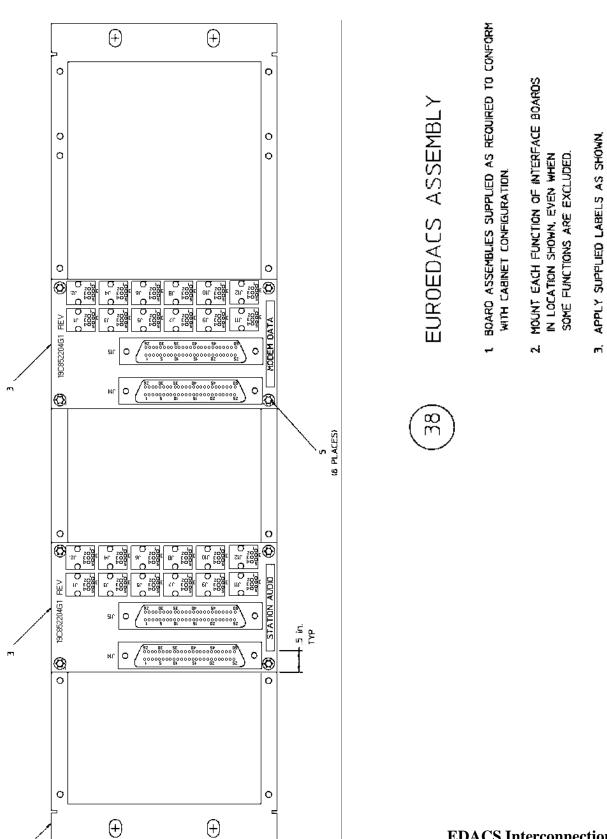


EDACS Interconnection Panel Auxiliary Receiver

(19D904009, Sheet 7, Rev. 0)

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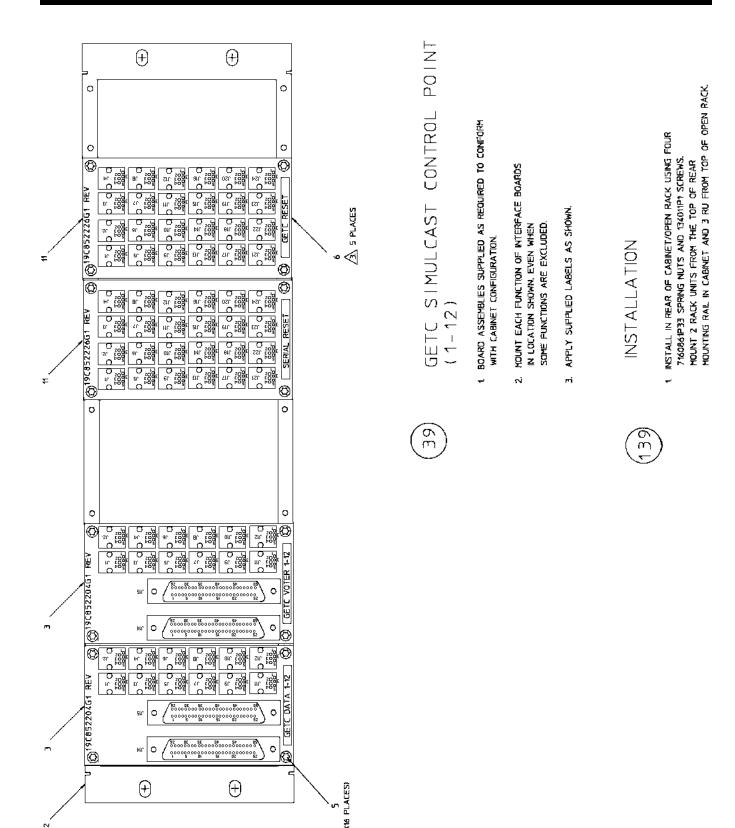
ASSEMBLY DIAGRAM



EDACS Interconnection Panel EURODACS Assembly

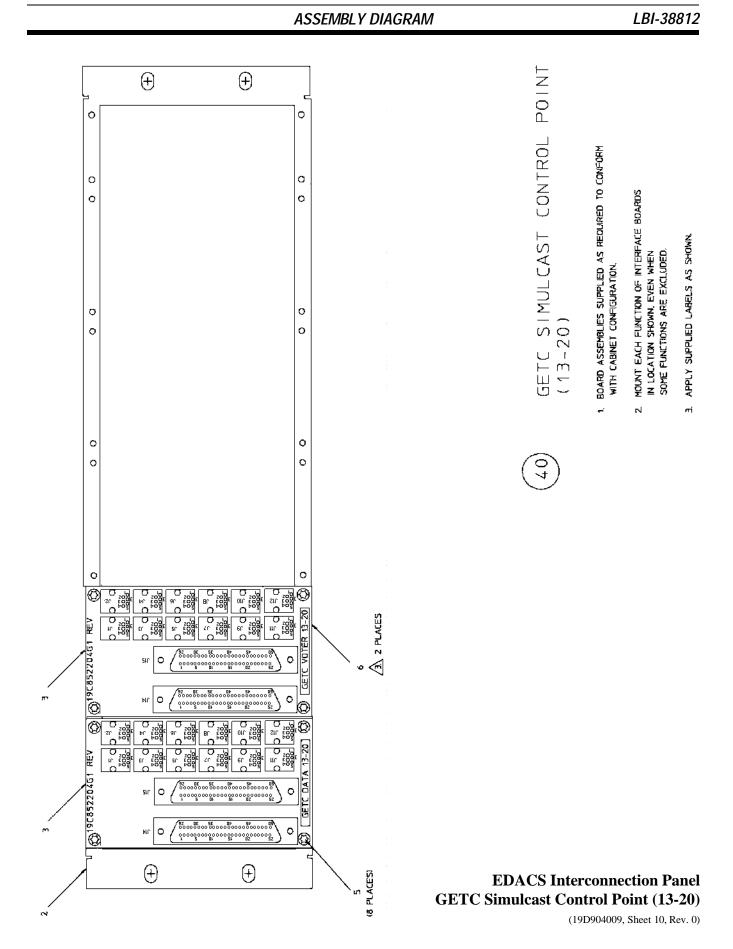
(19D904009, Sheet 8, Rev. 1)

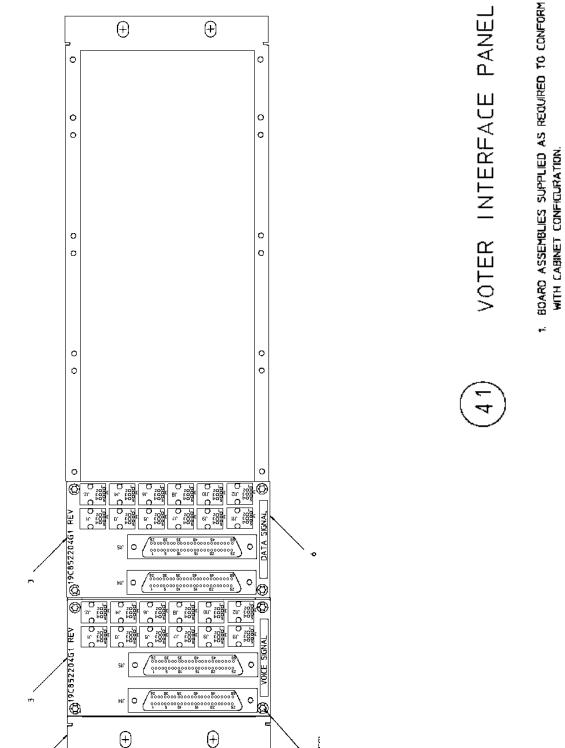
ASSEMBLY DIAGRAM



EDACS Interconnection Panel GETC Simulcast Control Point (1-12)

(19D904009, Sheet 9, Rev. 3)





EDACS Interconnection Panel Voter Interface Panel

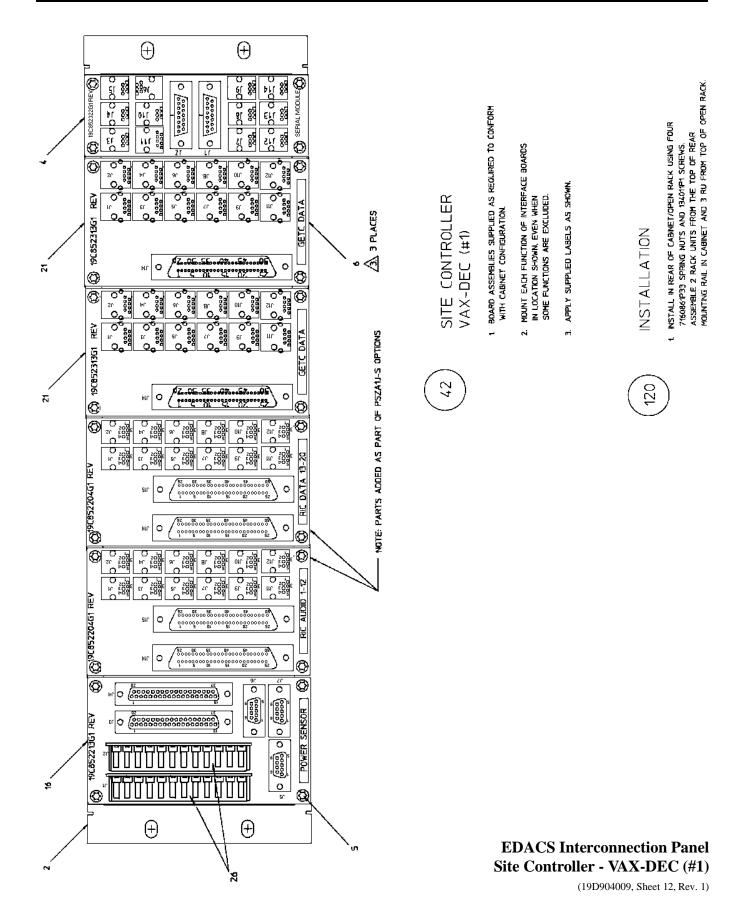
(19D904009, Sheet 11, Rev. 0)

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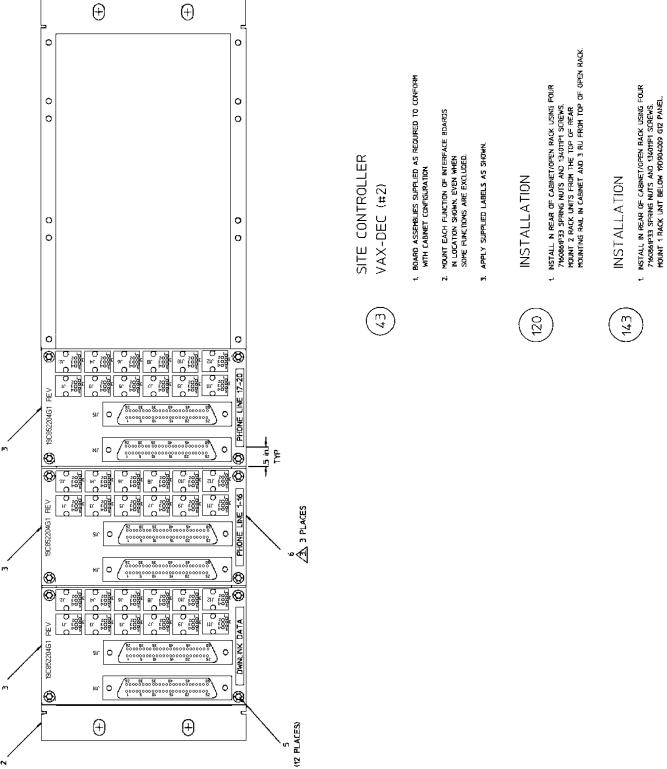
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MOUNT EACH FUNCTION OF INTERFACE BOARDS IN LOCATION SHOWN, EVEN WHEN SOME FUNCTIONS ARE EXCLUDED. APPLY SUPPLIED LABELS AS SHOWN. N m

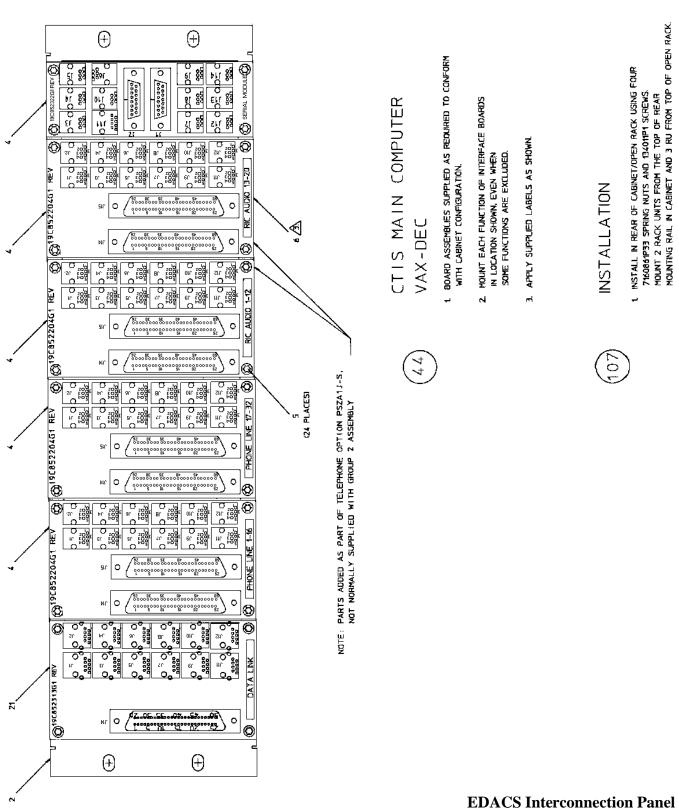


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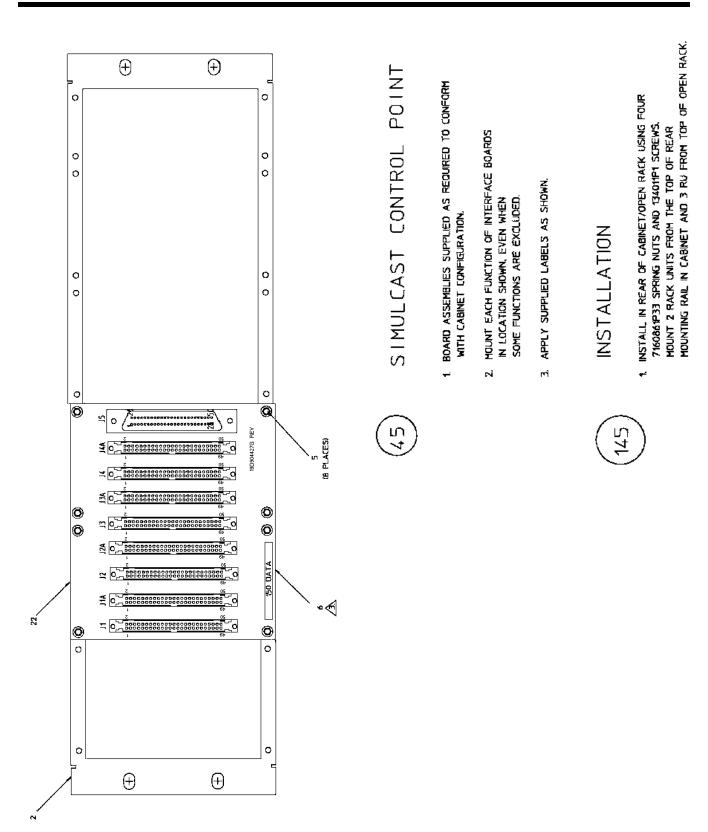
EDACS Interconnection Panel Site Controller - VAX-DEC (#2)

(19D904009, Sheet 13, Rev. 1)



CTIS Main Computer - VAX-DEC

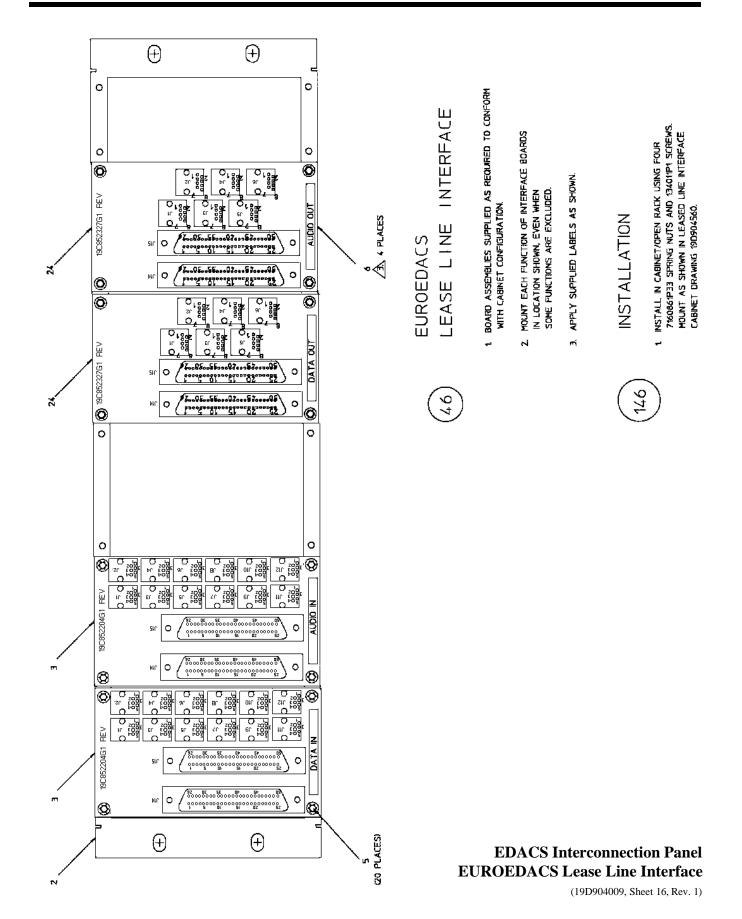
(19D904009, Sheet 14, Rev. 0)



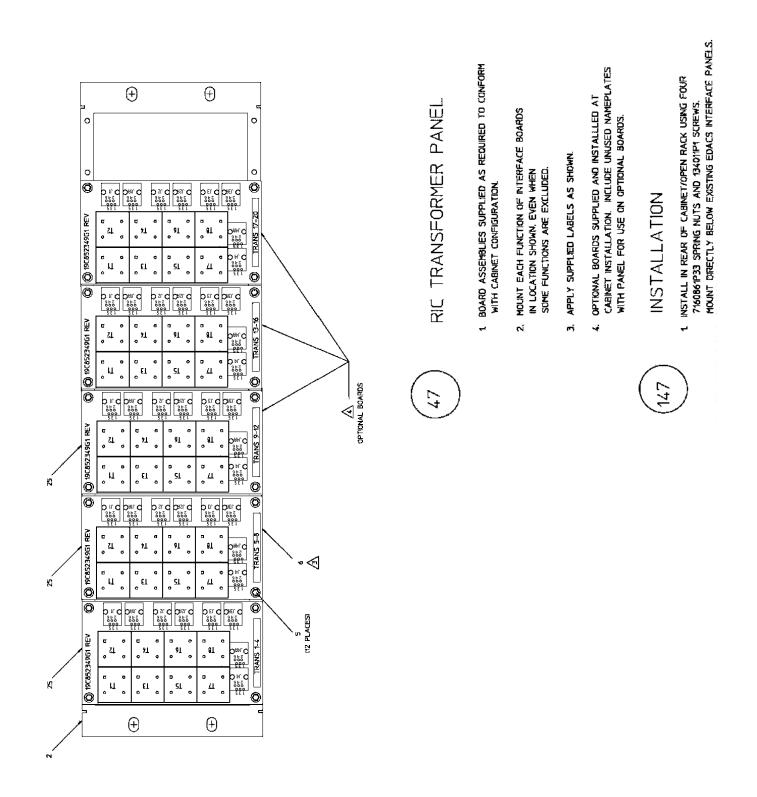
LBI-38812

Simulcast Control Point (19D904009, Sheet 15, Rev. 0)

EDACS Interconnection Panel

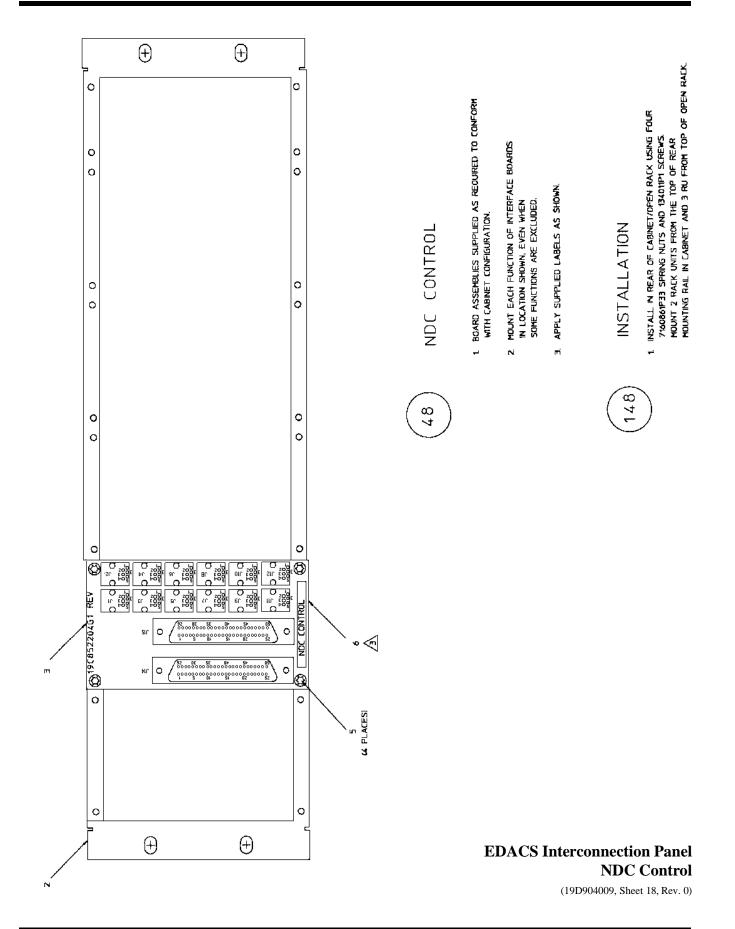


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EDACS Interconnection Panel RIC Transformer Panel

(19D904009, Sheet 17, Rev. 1)



LBI-38812

PARTS LIST

EDACSTM INTERCONNECTION PANEL 19D904009G1 - G18

SYMBOL	PART NUMBER	DESCRIPTION
2	19D903881P1	FRAME (Used in G1 through G11
3	19C852204G1	Interface Module (Used in G1-G11, G13, G14, G16, G18).
4	19C852323G1	Serial Module (Used in G1, G2, G4, G5 and G6, G12, and G14).
5	19A702381P506	Screw, thread forming: TORX, No. M3.56 x 6. (Used in G1 through G18).
6	344A4111P1	Nameplate (Used in G1 through G18).
11	19C852226G1	CTIS Module (Used in G3, G9 and G11).
16	19C852213G1	Power Monitor Module (Used in G6 and G12).
17	19C852215G1	PTT Module (Used in G5).
18	19C852339G1	TUAI Module (Used in G5).
19	19C852218G1	Power Monitor Module for SIMULCAST (Used in G5).
20	19C852213G1	Power Monitor Module (Used in G6 and G12).
21	19C852313G1	Site Controller - VAX-DEC (Used in G12).
22	19C852379G1	Power Monitor Channel Select (Used in G12).
23	19D904427G1	Simulcast 150 baud Interface Module (Used in G15).
24	19C852327G1	EDACSTM Interface Module 2 (Used in G16).
25	19C852349G1	RIC Transformer Signal In/Out Isolation (Used in G17).
		ASSOCIATED PARTS
	19D903880P120/ 19D903880P121	Telco Connector 25 twisted pair Shielded AMP #5-555012-1 or #5-555012-2 (Right angle case, with bail lock mating cable to exit on Pin 1/26 end) P01 and P02 male connector straight through connection 1-1, 2-2, etc. \$hie
ends. Ca	ble marked with	Ericsson GE number 19D903880P120 for a 5 foot cable and 19D903880P121 for a 15 foot cable.
case bot	19D903880P130/ 19D903880P131 h ends. Cable marke	Serial link cabinet to cabinet P01 and P02 DB-15 male connector straight through connection 1-1, 2-2, etc. Shield cor d with Ericsson GE number 19D903880P130 for a 5 foot cable and 19D903880P131 for a 15 foot cable.