41096

ORDER WIRE CONTROL

AND SPEAKER MONITOR
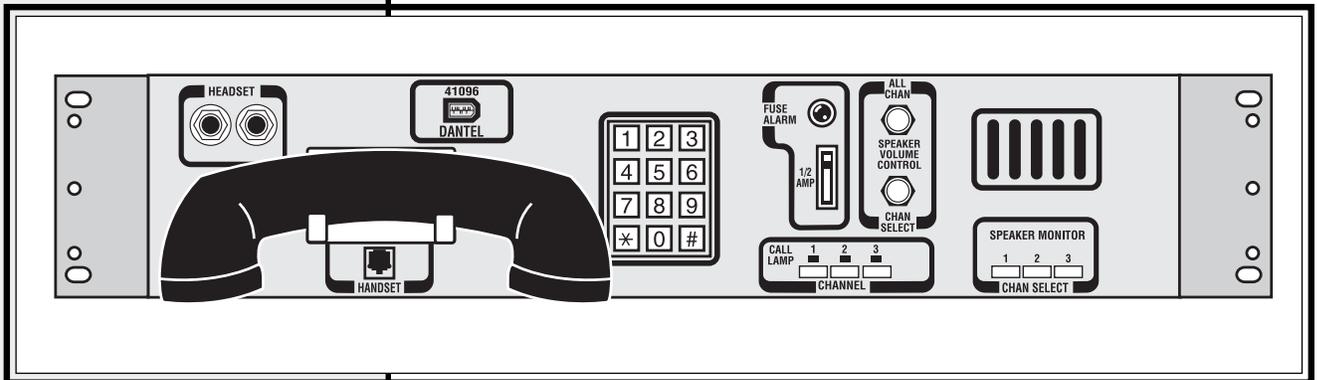
PANEL

Table of Contents

About this Practice:
This document has been reissued to:
- Update Figs. 1-5.

Reissued Practices: Updated and new content can be identified by a banner in the right margin.

Issue date: May 1997

UPDATED

CAUTION

- Install or remove modules from the shelf only when the power is off. If you install a module in the shelf with the power on, the internal circuitry may suffer damage and the product warranty will be void.

- Remove and install circuit boards only in a static-safe environment (use antistatic wrist straps, smocks, footwear, etc.).

- Keep circuit boards in their antistatic bags when they are not in use.

- Do not ship or store circuit boards near strong electrostatic, electromagnetic, magnetic, or radioactive fields.

- For more complete information on electrostatic discharge safety precautions, refer to Bellcore™ Technical Reference # TR-NWT-000870.

ORDERING INFORMATION

NOTE: This section lists the different options available for this product. To order any of the available options, contact Dantel Inside Sales through our toll-free number, **1-800-432-6835.**

OPTION NUMBER	FEATURES
C13-41096-00	**Speaker Monitor Panel only**
C13-41096-01	**Speaker Monitor Panel with 1 DTSS3A Terminal (3-digit dialing)**
C13-41096-02	**Speaker Monitor Panel with 2 DTSS3A Terminals (3-digit dialing)**
C13-41096-03	**Speaker Monitor Panel with 3 DTSS3A Terminals (3-digit dialing)**
A13-41096-05	**Speaker Monitor Panel with 1 DTSS3A Terminal (6-digit dialing)**
A13-41096-06	**Speaker Monitor Panel with 2 DTSS3A Terminals (6-digit dialing)**
A13-41096-07	**Speaker Monitor Panel with 3 DTSS3A Terminals (6-digit dialing)**
C13-41096-31	**Speaker Monitor Panel with 1 DTSS3A Terminal (3-digit dialing) and 49921 Multi-Line Pick-up Key Subassembly**
C13-41096-32	**Speaker Monitor Panel with 2 DTSS3A Terminals (3-digit dialing) and 49921 Multi-Line Pick-up Key Subassembly**
C13-41096-71	**Speaker Monitor Panel with 1 DTSS3A Terminal (3-digit dialing) and 49924 Auxiliary Port Subassembly**

GENERAL DESCRIPTION

The Dantel 41096 Order Wire Control and Speaker Monitor Panel (41096 Panel) provides centralized monitoring facilities for up to three selective signaling order-wire terminals. The panel can also be used to originate a call or answer an incoming call on an individual order wire channel.

The 41096 is mounted on a hinged bracket, allowing it to be mounted in front of two Dantel DTSS3A Order Wire Terminals, which saves space. The 41096 Panel occupies 3½" (2 rack units) in a 19" or 23" rack and operates on -21 to -56 VDC.

The 41096 Panel consists of a monitor section and a control section. The monitor section includes:

♦ A push-button channel selector

♦ A speaker with amplifier

♦ Two volume controls

♦ A fuse

♦ A fuse alarm LED

The control section includes:

♦ A push-button channel selector

♦ DTMF dial

♦ Handset

♦ Handset cradle

♦ Headset jacks

Table A shows standard 41096 Panel configurations. The 49921 Multi-Line Pick-Up Key and the 49924 Auxiliary Port are subassemblies that can be installed on the DTSS3A. The 49921 is used to adapt up to four key system (multi-line push-button) phones to an order wire circuit. The 49924 is used when an active rather than a passive bridge is required. The DTSS3A has two options:

♦ One-, two- or three-digit dialing

♦ Three-, four-, five- or six-digit dialing

TABLE A - STANDARD 41096 CONFIGURATIONS

MODEL	PANEL	DTSS3A	3-DIGIT	6-DIGIT	49921	49924
C13-41096-00	X					
C13-41096-01	X	1	X			
C13-41096-02	X	2	X			
C13-41096-03	X	3	X			
A13-41096-05	X	1		X		
A13-41096-06	X	2		X		
A13-41096-07	X	3		X		
C13-41096-31	X	1	X		X	
C13-41096-32	X	2	X		X	
C13-41096-71	X	1	X			X

CIRCUIT DESCRIPTION

Fig. 1 shows the 41096 Order Wire and Speaker Monitor Panel functional schematic.

The 41096 Panel monitoring section monitors all associated order wire channels over the speaker. Incoming calls couple to the speaker through transformers, operational amplifiers, and a volume control potentiometer.
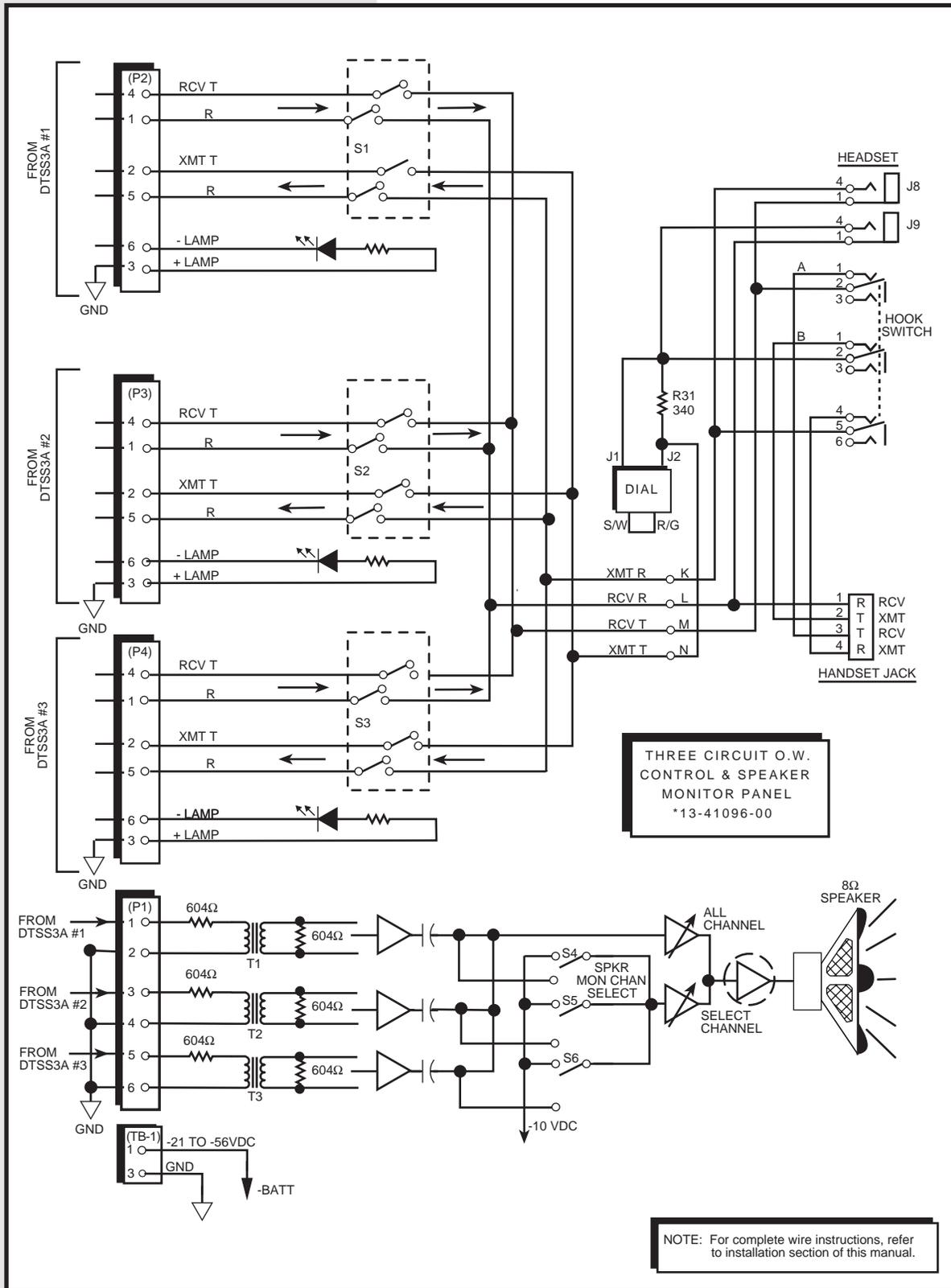
The push-button speaker monitor channel selector monitors any one or two channels through an additional volume control potentiometer. This option allows the selected channel(s) to be monitored at a louder level. The unselected channels are still available for monitoring at a quieter level.

A fuse and fuse alarm indicator LED are located on the front panel. When the fuse blows, the alarm indicator LED lights up.

The control section is used to originate a call or answer an incoming call on an individual order wire channel. A flashing LED above the channel button indicates an incoming call. (The order wire terminal also provides an audible indication.) Pressing the channel button connects the handset to the respective order wire channel. A headset may be used instead of the handset.

FIG. 1 - 41096 FUNCTIONAL SCHEMATIC

THREE CIRCUIT O.W.
CONTROL & SPEAKER
MONITOR PANEL
*13-41096-00

NOTE: For complete wire instructions, refer to installation section of this manual.

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INSTALLATION

The 41096 Order Wire Control and Speaker Monitor can be purchased with or without DTSS3A Order Wire terminals already installed. The 41096 Panel can be installed with existing DTSS3A Order Wire terminals.
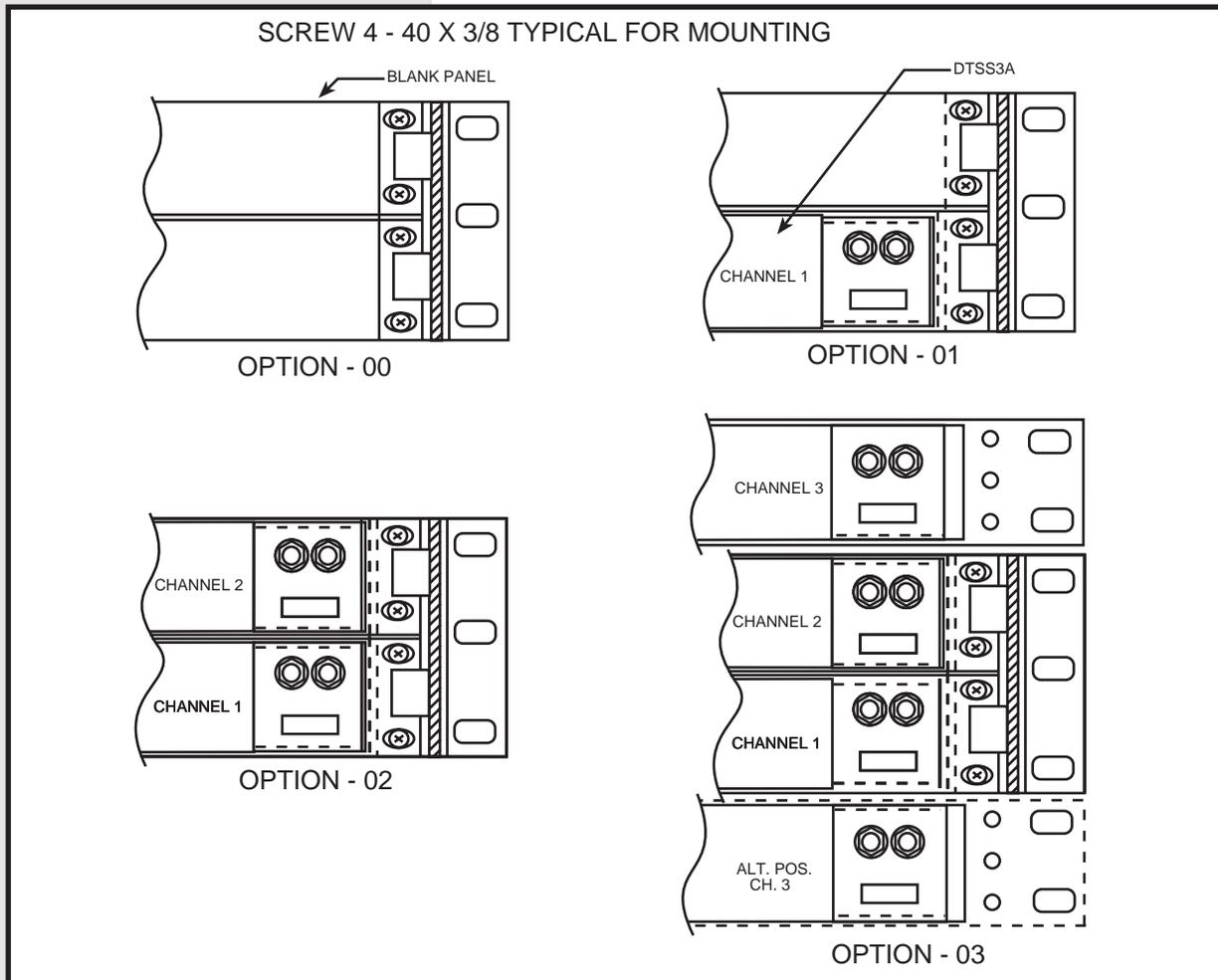
INSTALLING WITH DTSS3A ORDER-WIRE TERMINALS

When the 41096 Panel is purchased with DTSS3A Order Wire terminals, the 41096 Panel comes with the terminals mounted and wired to the panel.

1. Mount the assembly in the rack.

Mount the assembly in the rack and connect the appropriate input and/or output ports on each order wire (see the 00330 DTSS3A and subassembly documentation). Order wire terminals are wired to the 41096 Panel with channel one at the bottom, channel two above channel one, and channel three outside the panel (either above or below it). Refer to Fig. 2.

FIG. 2 - ORDER WIRE TERMINAL MOUNTING POSITIONS

SCREW 4 - 40 X 3/8 TYPICAL FOR MOUNTING

BLANK PANEL

DTSS3A

CHANNEL 1

OPTION - 00

OPTION - 01

CHANNEL 2

CHANNEL 1

OPTION - 02

CHANNEL 3

CHANNEL 2

CHANNEL 1

ALT. POS. CH. 3

OPTION - 03

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2. Set the straps.

Refer to Table B and Fig. 4.

TABLE B - STRAP OPTIONS

STRAP	POSITION
CONTROL LIMIT BYPASS	
ALL CHAN	
Control Limit In	CTL LMT A IN
Control Limit Bypassed	CTL LMT A OUT
CHAN SELECT	
Control Limit In	CTRL LMT B IN
Control Limit Bypassed	CTRL LMT B OUT

INSTALLATION ONTO EXISTING DTSS3A ORDER-WIRE TERMINALS

When a 41096 Panel (option -00) is being installed with existing DTSS3A order wire terminal(s), the terminal(s) may be mounted behind the panel or near it. To mount the terminal(s) behind the panel, mount them to the panel before completing the rack mounting and wiring.
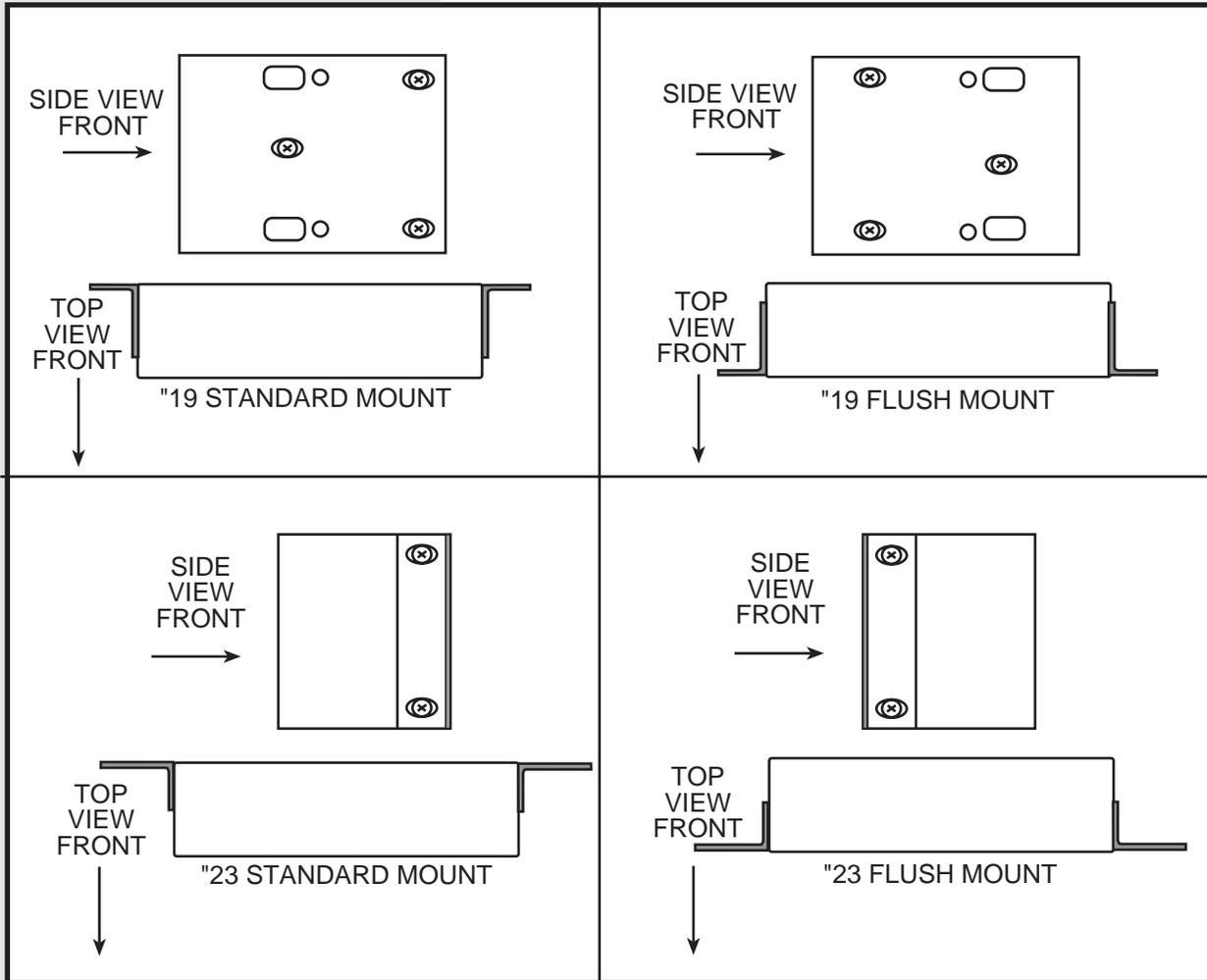
1. Remove mounting brackets.

Remove the mounting brackets from the order wire terminal(s) and replace them with the mounting brackets supplied with the 41096 panel. Install the brackets in the flush-mount position on the front of the order wire terminal(s).

2. Position 41096 Panel mounting brackets.

Position 41096 Panel mounting brackets for the desired mounting (5" projection or flush, for 19" or 23" width). Refer to Fig. 3.
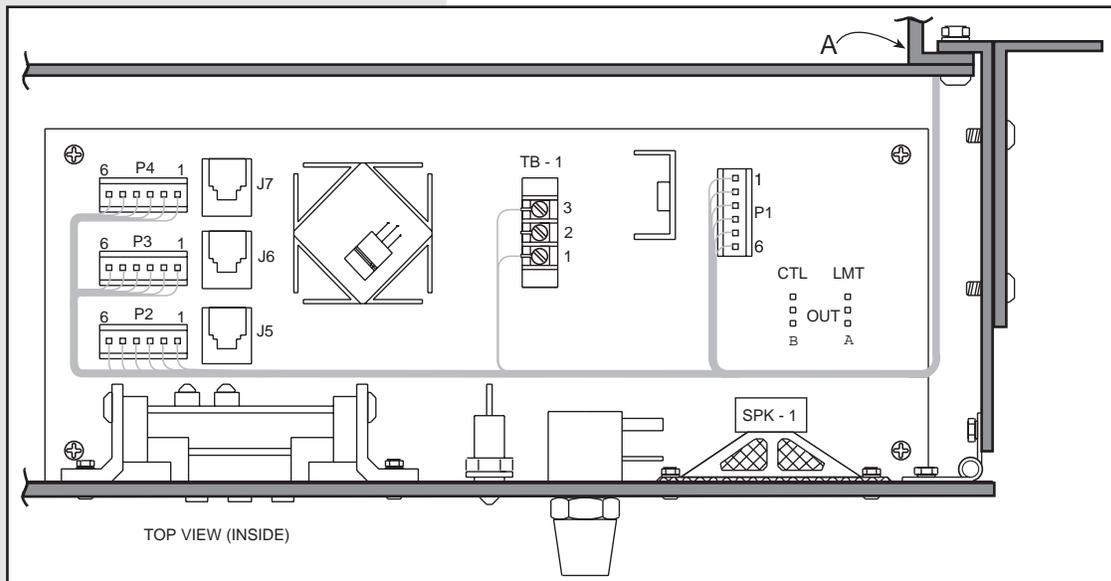
FIG. 3 - MOUNTING BRACKET (ATTACH ANGLE) POSITIONS

SIDE VIEW FRONT →

TOP VIEW FRONT

"19 STANDARD MOUNT

SIDE VIEW FRONT →

TOP VIEW FRONT

"19 FLUSH MOUNT

SIDE VIEW FRONT →

TOP VIEW FRONT

"23 STANDARD MOUNT

SIDE VIEW FRONT →

TOP VIEW FRONT

"23 FLUSH MOUNT

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FIG. 4 - FRONT PANEL AND STRAP OPTION LOCATIONS

TOP VIEW (INSIDE)

3. Mount order wire terminal(s) 1 and 2.

Remove the blank panel(s) from the rear of the 41096 Panel and mount the order wire terminal(s) in their place(s). Fig. 4, location A illustrates the connection of the 41096 and DTSS3A modules.

4. Mount the third order wire terminal.

If a third order wire terminal is used, it mounts outside of the 41096 Panel (either above or below it).

5. Install the inter-panel wiring for each channel.

Refer to Table C, Fig. 4 and Fig. 5. Use wire-wrap terminals and leave the modular-type telephone jacks available for connecting extensions. Dress the wiring across the rear of the 41096 Panel and through the wire-passage notches in the mounting brackets. Leave enough slack for the panel to open freely.
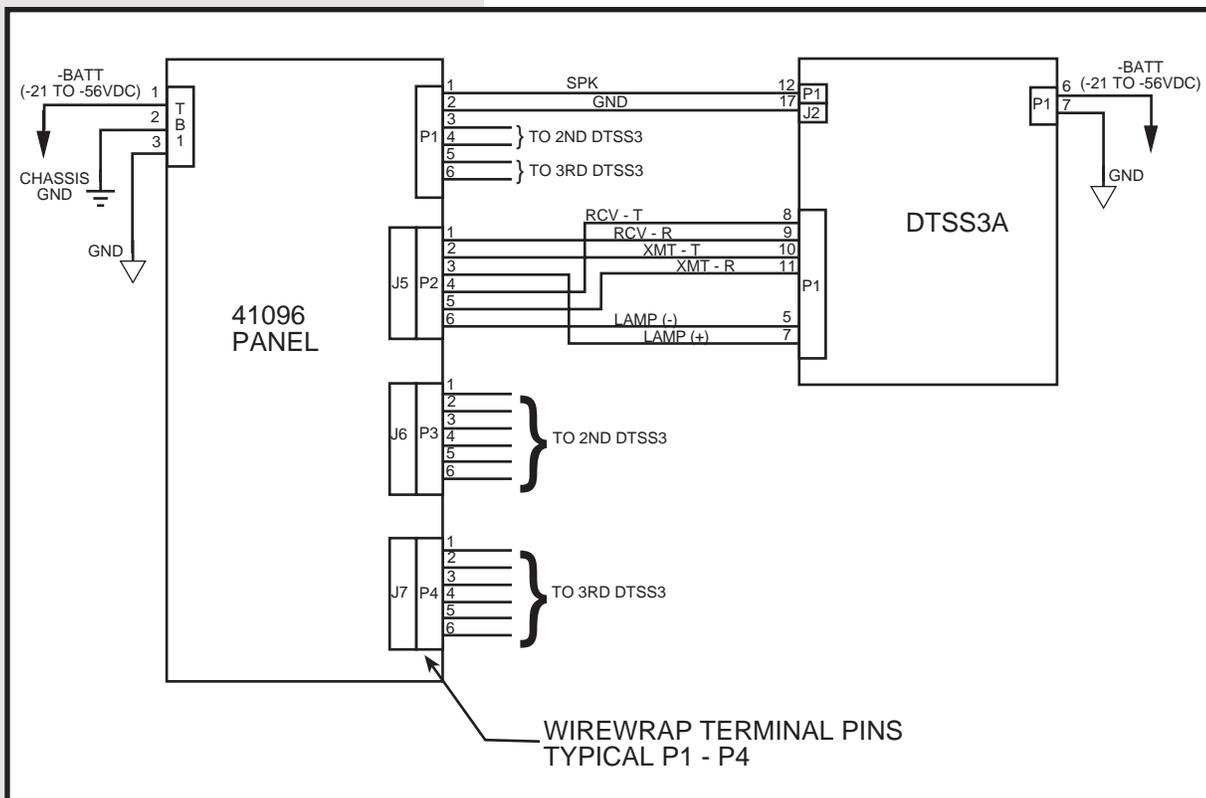
NOTE: *If the telephone jacks J5, J6, and / or J7 are used to connect the 41096 to the Order Wire(s), two jumpers must be placed at the rear of each DTSS3A Order Wire to enable the monitor panel lamps to work. Install a jumper between pins P1-5 and P3-2 and another jumper between pins P1-7 and P3-1 on the back of the DTSS3A Order Wire.*

INSTALLATION

TABLE C - INTER-PANEL WIRING

POWER			
–Battery	TB1-1		
Ground	TB1-3		
Chassis Ground	TB1-2		
SIGNAL AND LAMP CONNECTIONS (TO CONNECTION ON DTSS3A)	**CHANNEL 1**	**CHANNEL 2**	**CHANNEL 3**
RCV Ring (to P1-9)	P2-1	P3-1	P4-1
XMT Tip (to P1-10)	P2-2	P3-2	P4-2
+Lamp (to P1-7)	P2-3	P3-3	P4-3
RCV Tip (to P1-8)	P2-4	P3-4	P4-4
XMT Ring (to P1-11)	P2-5	P3-5	P4-5
–Lamp (to P1-5)	P2-6	P3-6	P4-6
External Speaker (to P1-12)	P1-1	P1-3	P1-5
Speaker Ground (to J2-17)	P1-2	P1-4	P1-6

FIG 5 - WIRING DIAGRAM

INSTALLATION

6. Install the assembled unit into the rack.

7. Connect supply leads.

8. Connect input and/or output ports.

Connect the appropriate input and/or output ports on each order wire (see the 00330 DTSS3A and subassembly documentation.)

9. Set the straps.

Refer to Table B and Fig. 4.

OPERATION

Initiate a call by pressing the desired channel push-button, lifting the handset (or plugging in a headset) and dialing the desired station code. Answer an incoming call by pressing the channel push-button below the flashing CALL LAMP LED and lifting the handset (or plugging in a headset).

Monitor all three order wire channels by turning the ALL CHAN SPEAKER VOLUME CONTROL clockwise until a sufficient level is heard.

Monitor a single channel by pressing the desired SPEAKER MONITOR CHAN SELECT push-button and turning the CHAN SELECT SPEAKER VOLUME CONTROL clockwise until a sufficient level is heard.
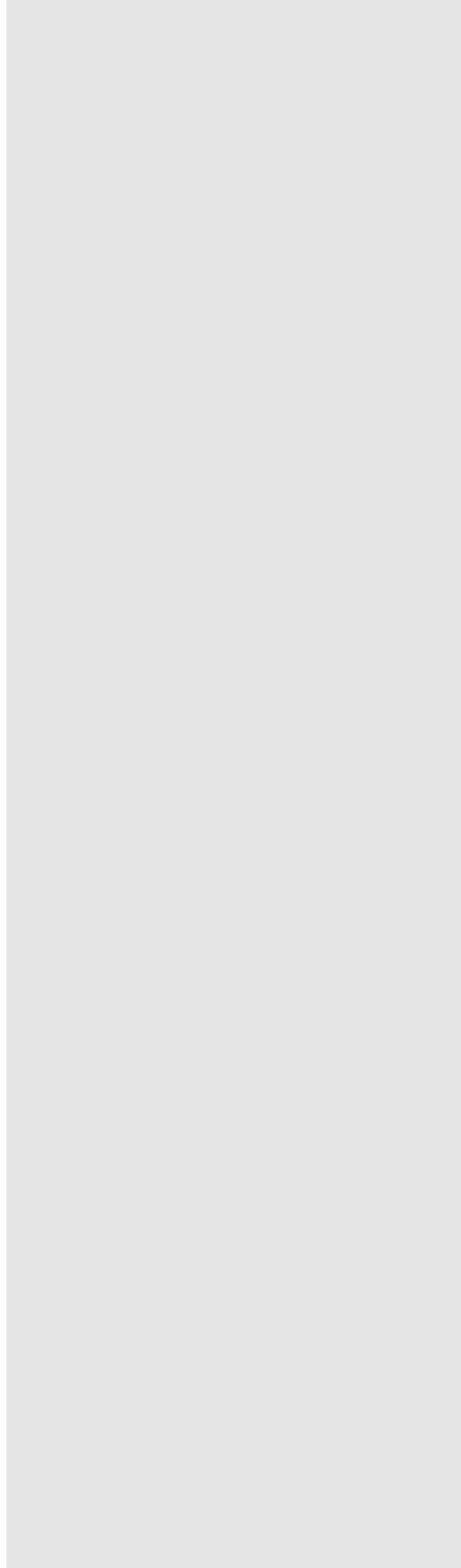
Reduce the level of other channel traffic by turning down the ALL CHAN SPEAKER VOLUME CONTROL. A limit resistor prevents other channel traffic from being completely turned off. This limit resistor can be bypassed with a bypass strap.

Monitor two channels at once by pressing two SPEAKER MONITOR CHANNEL SELECT push-buttons. When channel monitoring is no longer desired, return to all-channel monitoring by pressing and releasing the SPEAKER MONITOR CHANNEL SELECT push-button(s).

TECHNICAL SPECIFICATIONS

DESCRIPTION	VALUE
Input Voltage Range	–21 to –56 VDC

Input Current
   Idle
   Maximum
	
	75 mA @ –56 VDC
	250 mA @ –56 VDC

Heat Dissapation
   Idle
   Maximum
	
	14.3 BTU/Hr. @ –56 VDC
	47.7 BTU/Hr. @ –56 VDC

Weight
   Option -00
   Option -01
   Option -02
   Option -03
	
	4 lb., 2 oz.
	8 lb., 10 oz.
	13 lb., 2 oz.
	17 lb., 10 oz.

Physical Dimensions	17 1/4"W (plus mounting hardware) x 3 1/2"H x 12"D (including order wire terminal mounting behind panel). Handset projects 2 1/2" in front of panel. Add 1 3/4" to height if equipped with three order wire terminals
Mounting Projection	5" or flush for 19" or 23" rack
Operation Temperature Range	0° to 55° C.
Output Power	1 Watt
Maximum Input Level	–10 dBm
Frequency Response	300 hz. to 3.6 Khz $\pm$ 1 dB @ 1 Watt (measured w/ 8 ohm resistor)
Input Impedance	Low Impendance

NOTES

WARRANTY

LIMITED WARRANTY

The Seller warrants that the standard hardware products sold will be free from defects in material and workmanship and perform to the Seller's applicable published specifications for a period of 18 months for hardware, and 3 months for software, from the date of the original invoice. The liability of the Seller hereunder shall be limited to replacing or repairing, at its option, any defective products which are returned F.O.B. to the Seller's plant, (or, at the Seller's option, refunding the purchase price of such products). In no case are products to be returned without first obtaining permission and a customer return authorization number from the Seller. In no event shall the Seller be liable for any consequential or incidental damages.

Equipment or parts which have been subject to abuse, misuse, accident, alteration, neglect, unauthorized repair or installation are not covered by warranty. The Seller shall make the final determination as to the existence and cause of any alleged defect. No warranty is made with respect to custom equipment or products produced to the Buyer's specifications except as specifically stated in writing by the Seller in the contract for such custom equipment.

This warranty is the only warranty made by the Seller with respect to the goods delivered hereunder, and may be modified or amended only by a written instrument signed by a duly authorized officer of the Seller and accepted by the Buyer.

Warranty and remedies on products not manufactured by the Seller are in accordance with warranty of the respective manufacturer. THE SELLER MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED; AND ALL IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEEDS THE AFORESAID OBLIGATIONS IS HEREBY DISCLAIMED BY THE SELLER.

IN CASE OF DIFFICULTY

If you experience difficulty with this equipment, check the following, as appropriate:

1. **Switch settings**
2. **Signal levels**
3. **Software configuration**
4. **Connections between Dantel's equipment and your equipment.**

If there is still a problem, substitute equipment that is known to be good. For additional assistance, call Dantel's Technical Field Service Department weekdays, 6 A.M. to 5 P.M. pacific time:

1-800-4DANTEL (1-800-432-6835).

If a thorough checkout shows a piece of equipment has malfunctioned, you may return it to the factory. For repairs and emergency replacements, obtain a Return Material Authorization (RMA) number from the Customer Service Representative at **1-800-4DANTEL** (1-800-432-6835).

To ensure expedient processing of your order, provide a purchase order number and shipping and billing information when requesting an RMA number. Also, when the units are returned to Dantel, include a description of the failure symptoms for each unit returned. Send defective equipment to:

Dantel, Inc.   •   2991 North Argyle Avenue   •   Fresno, California 93727-1388

Dantel

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