REPLACING PAGE ADDENDUM
Filing Instructions:

1. REMOVE FROM THE SECTION THE PAGES NUMBERED THE SAME AS THOSE ATTACHED TO THIS PINK SHEET.
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V4 TELEPHONE REPEATER

24V4C REPEATER MOUNTING SHELF

DESCRIPTION

1. GENERAL

1.001 This addendum supplements Section 332-105-103, Issue 2. The attached page must be inserted in this section in accordance with the filing instructions above.

1.002 This addendum is issued to correct lead designations on TS1 of Fig. 3, 24V4C Repeater Connecting Circuits—Block Schematic.

Attached:

Page 5 dated February 1973, revised

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V4 TELEPHONE REPEATER
24V4C REPEATER MOUNTING SHELF
DESCRIPTION

CONTENTS PAGE

1. GENERAL

1.01 This section describes the J98615BJ mounting shelf (SD-97047-01) for the 24V4C repeater. ▶This repeater is a 2-wire to 4-wire circuit when using a 1-type terminating set, and a 4-wire to 4-wire extension circuit when using a 4182-type network.◀

1.02 This section is reissued to include the 4182-type network.

1.03 The J98615BJ shelf differs from the J98615AJ shelf for the 24V4A repeater by providing mountings for two additional plug-in units. Also, wiring access has been provided to the 4-wire ports of the 1-type terminating set ▶and the 4182-type network◀ so that connection to external equipment can be made when required.

1.04 The 24V4C mounting shelf includes a test jack field and a designation card holder, and it provides mounting space for the following V4 plug-in apparatus units:

Basic 24V4 Equipment:

(a) One 1-Type Terminating Set ▶or 4182-Type Network◀

(b) Two 227-Type Amplifiers or 849-Type Networks

(c) One 359-Type Equalizer.

Auxiliary Equipment:

(a) 4066-Type Network

(b) 648A Low-Pass Filter

(c) 434A Plug.

The 4066-type network and 648A filter are used as required to prevent singing when a 4-wire section of a circuit is operated at a gain to compensate for part of the loss in an adjacent 2-wire portion of the circuit. The 434A plug is required to maintain circuit continuity for certain combinations of plug-in apparatus.

2. EQUIPMENT DESCRIPTION

2.01 Figure 1 shows the J98615BJ, 24V4C repeater mounting shelf equipped with typical V4 plug-in apparatus. Front and rear views of the unequipped shelf are shown in Fig. 2. The mounting shelf consists of seven connector sockets, a test jack field, a designation card holder, a terminal strip, and connecting circuit wiring assembled in a shelf which measures 1-3/4 inches high by 23 inches long. The 24V4C mounting shelf is arranged to mount in bays drilled for 1-3/4 inch mounting plates.

2.02 The plug-in apparatus mounting positions are designated on the front edge of the mounting shelf. From left to right, the mounting positions, associated connector sockets, and plug-in apparatus are shown in Table A.

2.03 A 434A plug is furnished with each 24V4C repeater mounting shelf. It provides circuit continuity for plug-in positions FLT/NET. or NET. when circuit conditions require it (see Table A).

2.04 The test jack field, located to the right of the plug-in sockets, is an integral part of the mounting shelf. The test jack field consists of five 518AM (twin) jacks. These test jacks are permanently wired into the repeater mounting shelf

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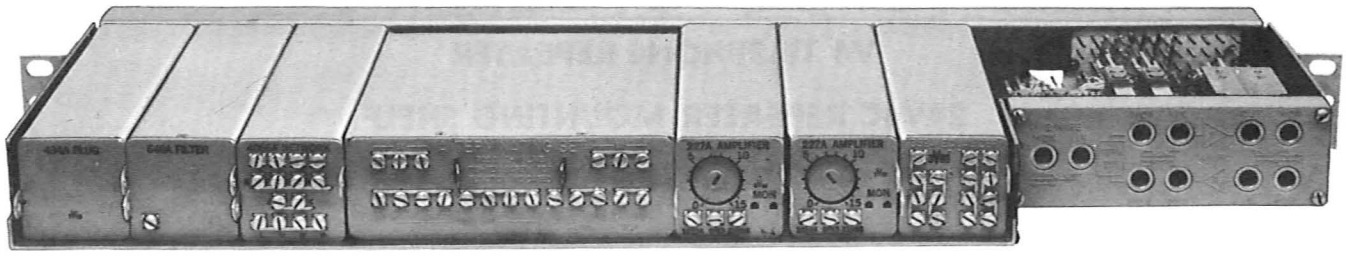

Fig. 1—24V4C Repeater Mounting Shelf—Typically Equipped

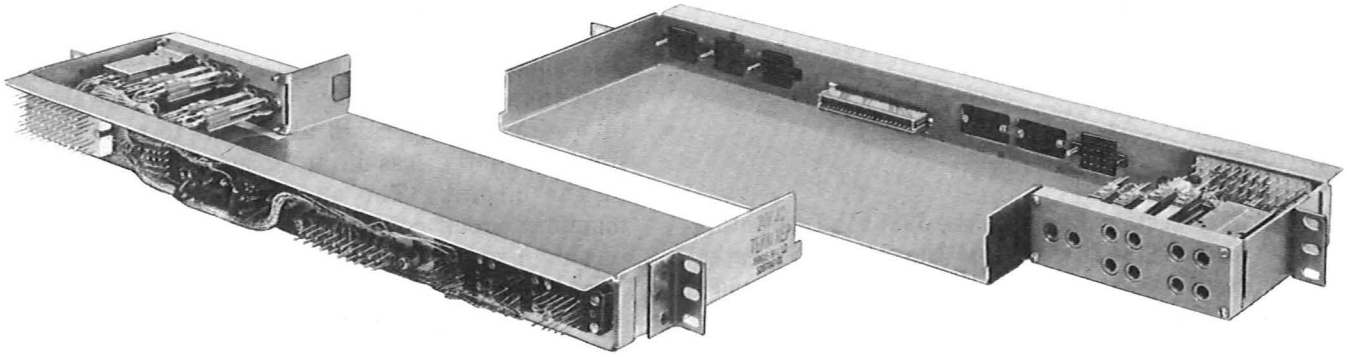

Fig. 2—24V4C Repeater Mounting Shelf—Unequipped—Front and Rear Views

TABLE A

24V4C REPEATER MOUNTING SHELF – PLUG-IN APPARATUS MOUNTING POSITIONS

MOUNTING POSITION	CONNECTOR SOCKET	V4 PLUG-IN APPARATUS			
		COMBINATION, DEPENDING ON CIRCUIT REQUIREMENTS			
PLUG FLT/NET. NET.	Spare (20-Pin) J1 (20-Pin) J2 (20-Pin)	Empty Empty 434A Plug*	Empty 434A Plug* 4066 Net.	434A Plug 648A Flt 4066 Net.	434A Plug 4066 Net. 4066 Net.
TERM. SET/ ◗NETWORK◖	J3 (20-Pin)	1-Type Terminating Set or ◗4182-Type Network◖			
T AMPL	J4 (15-Pin)	227-Type Amplifier or 849-Type Network (Transmitting)			
R AMPL	J5 (15-Pin)	227-Type Amplifier or 849-Type Network (Receiving)			
EQL	J6 (20-Pin)	359-Type Equalizer			

◗***Caution: Verify that chosen networks give circuit continuity.***◖

* Required for circuit continuity.

circuit to provide access to the amplifier inputs and outputs, 2- and 4-wire lines, and 2- and 4-wire sides of the terminating set. These test jacks provide convenient points for testing and alignment of the repeater and permit high-impedance monitoring at each of these points. The test jack designations and their locations in the repeater circuit are permanently marked on the faceplate of the test jack field to promote correct usage when testing and adjusting the repeater.

2.05 A wire-wrap terminal strip (TS1) is provided on the rear of the mounting shelf. Points in the 24V4C repeater circuit which may require external connections are brought out to this terminal strip. This makes possible the installation of a 24V4C repeater shelf by wire-wrap connections at a single terminal strip and eliminates the necessity of making connections to the individual connector sockets.

3. CIRCUIT DESCRIPTION

3.01 Figure 3 is a block schematic of the 24V4C repeater illustrating connector sockets, test jacks, and terminal strip connecting circuit wiring. These circuits are factory wired as part of the repeater mounting shelf. Optional wiring arrangements allow access to the 4-wire ports of the 1-type terminating set or 4182-type network. These arrangements allow the use of external equipment, such as SF signaling equipment or echo suppressors, as required.

4. POWER ARRANGEMENTS

4.01 For normal operation, the 227-type amplifier requires 18 milliamperes at −24 volts dc. The J98615BJ, List 1 mounting shelf is arranged for 24-volt operation, and the List 2 mounting shelf is arranged for 48-volt operation. The List 1 and List 2 shelves are the same except the List 2 shelf is equipped with a 1400-ohm voltage-dropping resistor in each of the amplifier power supply circuits and requires a different code of J4 and J5 connector. When the amplifiers are operated from a 24-volt regulated battery supply, an external battery noise filter is required. When the amplifiers are operated from a 48-volt regulated battery supply, a 1400-ohm voltage-dropping resistor is connected in series with each amplifier power supply lead. This resistor and a capacitor in the amplifier act to provide satisfactory battery noise filtering.

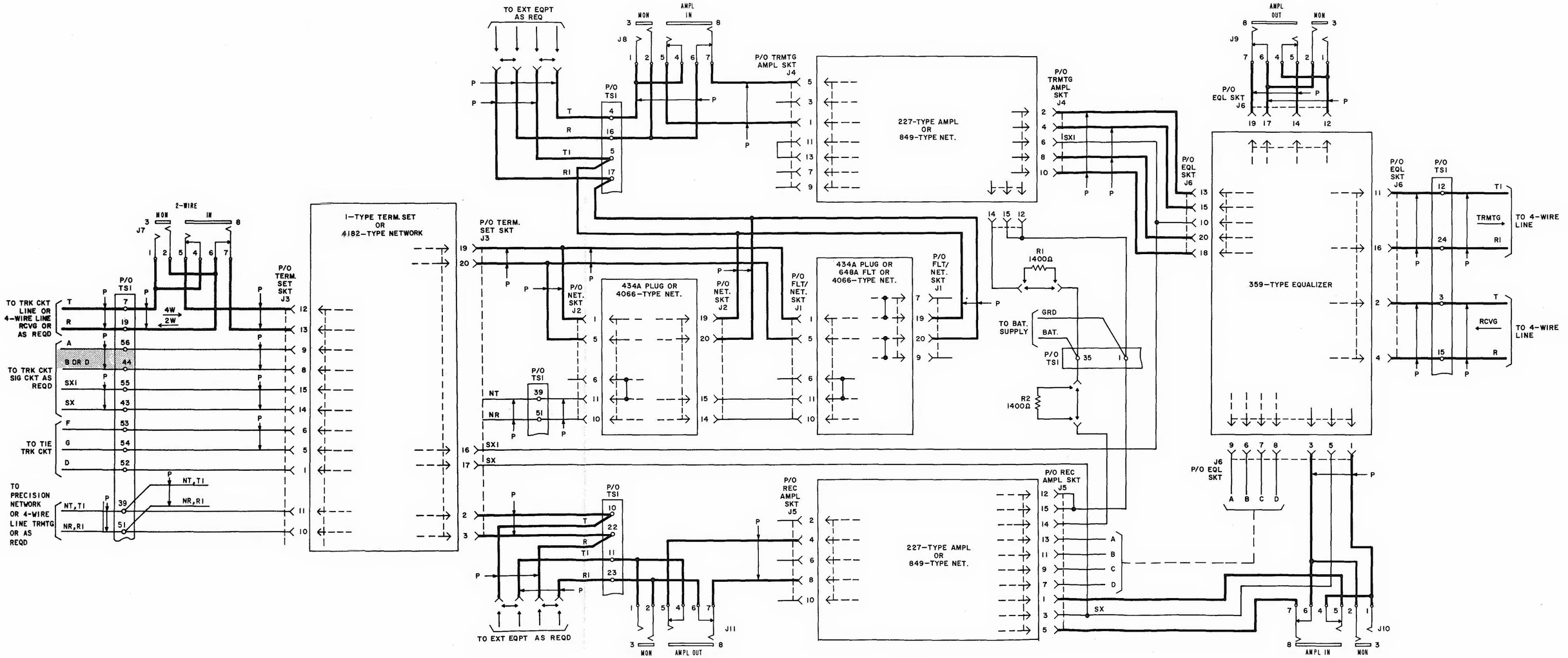

Fig. 3—24V4C Repeater Connecting Circuits—Block Diagram