

DE-SNOWER UHF PREAMPLIFIER MODEL DSU-105

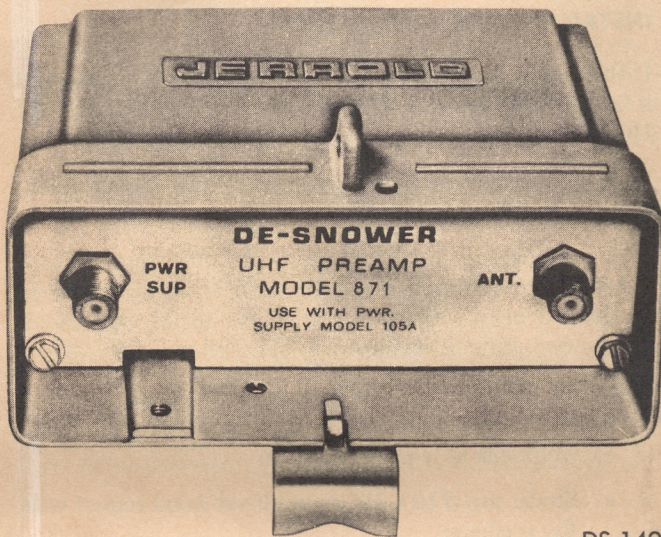


Fig. 1—Model 871

DS-149

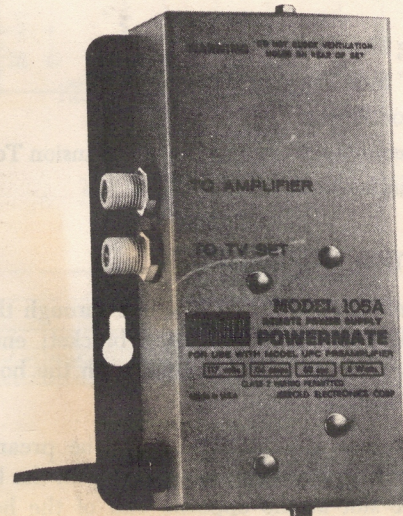


Fig. 2—Model 105A

DS-119

DESCRIPTION

Model DSU-105 is an antenna-signal amplifier system designed for improving reception of UHF-TV channels 14 thru 83. The high gain and low noise figure of the DSU-105 make it suited for use where long cable runs are encountered between the antenna and the receiving or distribution equipment. The system consists of a Model 871 preamplifier and a Model 105A remote a.c. power supply.

The preamplifier incorporates a three-stage transformer-coupled amplifier and a d.c. power supply. Input and out-

put connections are made through 75-ohm F fittings. The preamplifier is enclosed in a cast-aluminum housing designed for mounting on an antenna mast with the accessories supplied.

The a.c. power supply is housed in a metal case designed for indoor installation on any flat surface near a 115 V a.c. outlet. A step-down transformer in the unit furnishes a.c. power to the d.c. supply circuit in the preamplifier through the down-lead.

SPECIFICATIONS

PASSBANDS, in MHz		470-800	800-890
GAIN, in dB		26	23
FLATNESS, in dB		2.5 p-v	
NOISE FIGURE, in dB	at 470 MHz	6.5	
	at 800 MHz	7.0	
	at 890 MHz	7.5	
OUTPUT CAPABILITY, for 3 channels, in dBmV		+40	
MAX. RECOMMENDED INPUT, for 3 channels, in dBmV		14	
DISTORTION (Cross Mod.), at max. input		0.5% (−46 dB)	
TERMINAL MATCH at 75 Ω input and output IMPEDANCE		6 dB minimum return loss	
POWER REQUIREMENTS, at 115 V, 60 Hz		5 W, 40 mA	

INSTALLATION

GENERAL

For maximum benefit from the signal strength available at the antenna and for minimum pickup of undesired signals, mount the preamplifier as near the antenna terminal as practicable.

ACCESSORIES SUPPLIED

- 1 Mounting Bracket
- 1 U-Bolt
- 2 Self-Locking Hex Nuts
- 1 6-32 x 7/16" Self-Tapping Screw
- 2 #6 x 1/2" Wood Screws
- 4 F-659 Connectors with Ferrules and Expansion Tool
- 2 WB-659 Weatherboots

INSTALLING THE PREAMPLIFIER

1. Start the self-tapping screw supplied through the hole in the wide end of the mounting bracket; enter the screw from the side of the bracket with the hook (on the narrow end).
2. Slip the keyhole slot in the tab on the preamplifier housing over the screw so that the hook on the bracket engages the slot at the opposite end of the housing; tighten the screw.
3. Mount the unit on the antenna mast using the U-bolt and self-locking hex nuts supplied; the preamplifier terminals should face down.
4. Prepare a length of Jerrold Coloraxial cable sufficient to interconnect the antenna and the preamplifier. Slip a weatherboot over each end of the cable and install F-659 connectors on the ends as described in Instruction Sheet 435-650, included in the accessory package.
5. Connect the cable between the antenna and the ANT terminal on the preamplifier. Apply a coating of silicone weatherproofing compound to the connections and slide the weatherboots over the connections.

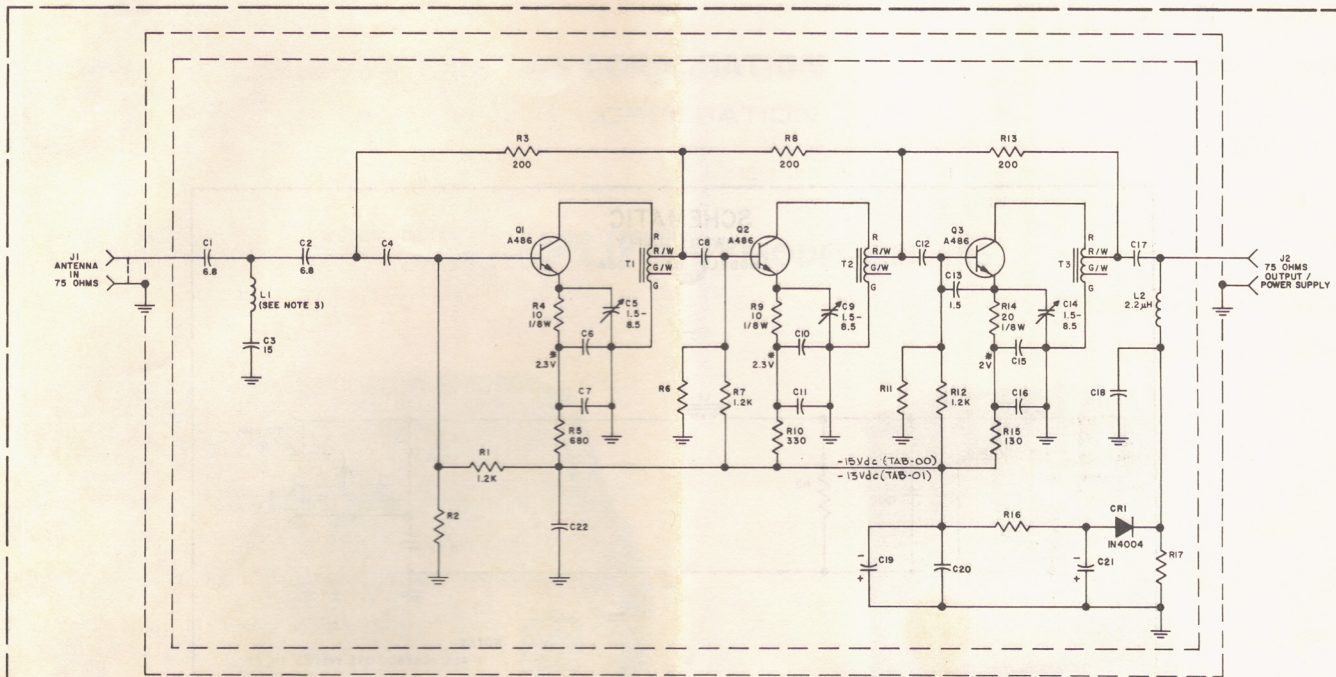
6. Prepare a down-lead of Coloraxial cable to interconnect the preamplifier and the power supply. Slip a weatherboot over the preamplifier end of the cable and install F-659 connectors on both cable ends.
7. Connect the cable end with the weatherboot to the preamplifier PWR SUP terminal as in step 6, and run the down-lead to the power supply location.

INSTALLING THE POWER SUPPLY

If the unit is mounted on the rear of a receiver, make sure it **DOES NOT BLOCK THE RECEIVER VENTILATION HOLES.**

1. For mounting on wood surfaces at least 1/2 inch thick, use the two #6 x 1/2" screws supplied with the unit.
2. For mounting on other surfaces, including plasterboard, attach a wood panel to the surface as described in para. 3 below, then mount the unit to the panel with the two #6 x 1/2" screws supplied with the unit.
3. Wood panel to be 1/2 inch thick plywood or equal, at least 4 1/2" x 18", attached to the surface at a minimum of two points at least 8" apart to:
 - a. Studs: use #10 x 1 1/2" round head wood screws with flat washers;
 - b. Hollow Cement Blocks: use 1/4" x 3 1/2" butterfly bolts with flat washers;
 - c. Other Masonry: use 1/4" x 1 1/2" expansion bolts with flat washers.
4. Connect the down-lead to the power supply TO AMPLIFIER terminal.
5. Prepare a length of Coloraxial cable to interconnect the power supply TO TV SET terminal and the receiving or distribution equipment. Install F-659 connectors as before and connect the cable.
6. Plug the line cord into the 115 V outlet. The DSU-105 equipment is now ready for use.

REMOTE POWER SUPPLY MODEL 105A
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT
EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



NOTES:

1. UNLESS OTHERWISE SPECIFIED:
 - A. ALL RESISTOR VALUES ARE IN OHMS, 1/4W, 5%.
 - B. ALL CAPACITOR VALUES ARE IN pF.
 - C. ALL UNMARKED CAPACITORS ARE 1000 pF.
2. VOLTAGES MARKED WITH AN ASTERISK ARE MEASURED WITH REFERENCE TO THE NEGATIVE BUS; OTHER VOLTAGES ARE REFERRED TO GROUND, ALL MEASURED WITH A 20 KΩ/VOLT METER.
3. L1 IS ETCHED INTO BOARD CIRCUIT.

TRANSISTOR NORMAL QUIESCENT POINT							
TAB	Q1	Q2	Q3	TAB	Q1	Q2	Q3
-00	12	12	12	-01	11	11	11
	V _{ce} (mA)				V _{ce} (mA)		
	3.3	7	15.5		3.3	7	15.5
	P _d (mW)				P _d (mW)		
	40	84	84		36	77	70

BASING
(TOP VIEW)

TAB	MODEL NO.	C19	C21	R2	R6	R11	R16	R17
-00	DSU	250 μF, 16V	470 μF, 25V	4.7K, 10%	4.7K, 10%	4.7K, 10%	120, 1/2W	1.5K, 10%, 1/2W
-01	871	680 μF, 16V	680 μF, 16V	3.3K, 10%	3.3K, 10%	3.3K, 10%	27, 1/2W	

UHF PREAMPLIFIER
MODEL 871
D863-258-REV. B

REPLACEMENT PARTS LIST

MODEL 871 DRAWING No. 863-258			
SCHEMATIC DESIGNATIONS OR PART DESCRIPTIONS	JERROLD PART No.	SCHEMATIC DESIGNATIONS OR PART DESCRIPTIONS	JERROLD PART No.
CAPACITORS		RESISTORS	
C1, C2	124-112	R1, R7, R12	112-921
C3	124-143	R2, R6, R11	111-027
C4, C6, C7, C8, C10, C11, C12, C15, C16, C17, C22	124-077	R3, R8, R13	112-984
C5, C9, C14	128-572	R4, R9	111-076
C13	122-006	R5	112-105
C18, C20	123-115	R10	112-097
C19	127-059	R14	111-071
C21	S127-157	R15	112-997
DIODE		R16	112-161
CR1	137-719	TRANSISTORS	
		Q1, Q2, Q3	S130-251

