JERROLD®

a GENERAL INSTRUMENT company

INSTRUCTION SHEET

435-578-03

DE-SNOWER® SINGLE-CHANNEL VHF PREAMPLIFIERS

MODELS DSS-*, SERIES 2

DESCRIPTION

Models DSS-*, Series 2 consist of preamplifiers Model 802, factory-tuned to specific VHF-TV channels or the FM band, and power supply Model 105.

Models 802 are designed with three basic circuit arrangements: for low-band channels, for high-band channels, and for the FM band (see Specifications). The preamplifiers exhibit high gain, low noise, and high overload capability. In adjacent channel areas, traps installed between the antennas and the preamplifiers will maintain the necessary selectivity.

Models 802 are enclosed in a cast-aluminum housing designed for mounting on an antenna mast with the accessories supplied. Power supply Model 105 is designed for indoor installation near a 115V a.c. outlet and delivers a nominal 16V a.c. to the preamplifier's d.c. supply circuit through the down lead. Input and output connections to the equipment are made through 75-ohm F fittings.

Fig. 1 Preamplifier, Model 802

Fig. 2 Power Supply, Model 105

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 6-32x⅜" Self-Tapping Screw
2 6x½" Woodscrews
4 F-659 Connectors with Ferrules and Expansion Tool
2 WB-659 Weatherboots

PROCEDURE

1. Start the supplied self-tapping screw 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 an F-659 connector.
7. Connect the cable end with the weatherboot to the preamplifier PWR SUPPLY terminal as in step 6, and run the down-lead to the power supply location.
8. Mount the power supply near a 115V a.c. outlet with the two woodscrews supplied.
9. Install an F-659 connector on the power supply end of the down-lead and connect it to the power supply TO AMPLIFIER terminal.
10. 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.
11. Plug the line cord of Model 105 into the 115V outlet. The equipment is now ready for use.

MAINTENANCE

This equipment will not require maintenance beyond checks on signal levels and intactness of cable connections. In case of equipment failure, the schematic circuit diagrams and replacement parts lists given here will permit trouble-shooting and repair of the equipment by personnel familiar with solid-state circuitry and equipped with the proper instruments.

SPECIFICATIONS

PREAMPLIFIER	MODEL 802 LOW BAND UNITS	MODEL 802 HIGH BAND UNITS	MODEL 802 FM UNIT
BANDWIDTH	6 MHz	6 MHz	20 MHz
GAIN (min.)	30 dB	30 dB	30 dB
FLATNESS (p/v)	1.5 dB	1 dB	6 dB (88-92 MHz) 2 dB (92-108 MHz)
MAX. OUTPUT CAPABILITY for 0.5 dB sync clipping	54 dBmV	54 dBmV	N.A.
for 920 kHz beat down 50 dB	50 dBmV	50 dBmV	N.A.
for 3rd order beats down 40 dB	N.A.	N.A.	45 dBmV
NOISE FIGURE (max.)	5 dB	5 dB	6 dB
TERMINALS Impedance	75 Ω	75 Ω	75 Ω
Match	13 dB min. return loss	12 dB min. return loss	14 dB min. return loss

POWER SUPPLY	MODEL 105
INPUT	115V a.c., 60 Hz, 40 mA, 5 W
OUTPUT TERMINALS	16V a.c.
Impedance	75 Ω
Match	14 dB min. return loss

REPLACEMENT PARTS LISTS

MODEL 802 (LOW-BAND UNITS) — **REF. DWG. NO.: 863-259**

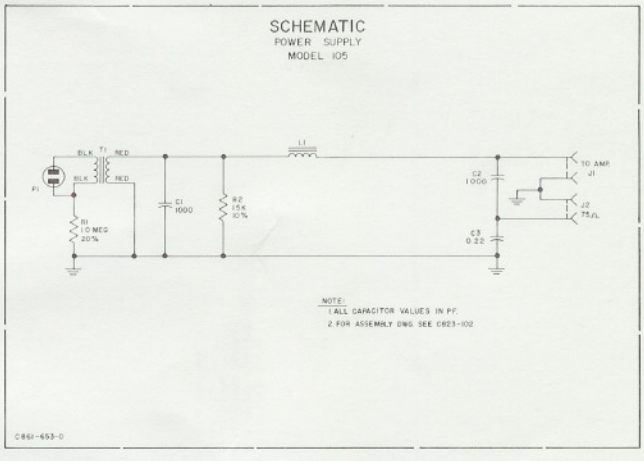
ITEM	SCHEMATIC DESIGNATION	QTY.	DESCRIPTION	JERROLD PART NO.
			CAPACITORS	
1	C1, 5, 6, 7, 10, 11, 17	7	1000 pF, disc	123-115
2	C2, 4, 13, 16	4	5-60 pF, trimmer	128-563
3	C3, 14	2	1.5-8.5 pF, trimmer	128-572
4	C8, 9, 15	3	0.02 μF, 200 V	124-154
5	C12	1	470 μF, 25 V, electrolytic	S127-157
			DIODES	
6	CR1, 2	2	1N4148	137-824
7	CR3	1	1N4003	137-788

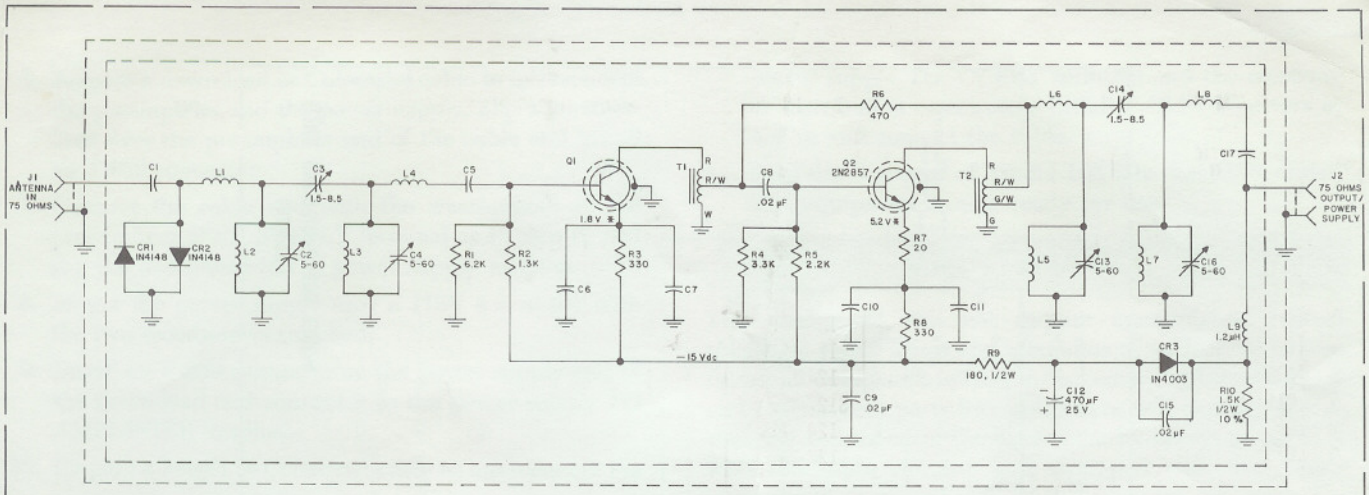
			RESISTORS	
8	R1	1	6.2 kΩ, 5%, ¼ W	112-981
9	R2	1	1.3 kΩ, 5%, ¼ W	112-064
10	R3, 8	2	330 Ω, 5%, ¼ W	112-097
11	R4	1	3.3 kΩ, 5%, ¼ W	112-936
12	R5	1	2.2 kΩ, 5%, ¼ W	112-932
13	R6	1	470 Ω, 5%, ¼ W	112-101
14	R7	1	20 Ω, 5%, ¼ W	112-083
15	R9	1	180 Ω, 5%, ½ W	112-266
16	R10	1	1.5 kΩ, 10%, ½ W	112-383
			TRANSISTORS	
17	Q1	1	Selected	S130-601
18	Q2	1	Selected	S130-152-02

MODEL 802 (FM UNIT)				REF. DWG. NO.: 863-260
ITEM	SCHEMATIC DESIGNATION	QTY.	DESCRIPTION	JERROLD PART NO.
			CAPACITORS	
1	C1, 6, 7, 10, 11	5	1000 pF, disc	123-115
2	C2, 13	2	24 pF, disc	124-176
3	C3, 14	2	1.5-8.5 pF, trimmer	128-572
4	C4	1	6.2 pF, disc	124-139
5	C5	1	18 pF, disc	124-123
6	C8, 9, 15	3	0.02 μF, 200 V	124-154
7	C12	1	470 μF, 25 V, electrolytic	S127-157
8	C16	1	6.8 pF, disc	124-112
9	C17	1	10 pF, disc	124-137
			DIODES	
10	CR1, 2	2	1N4148	137-824
11	CR3	1	1N4003	137-788
			RESISTORS	
12	R1	1	6.2 kΩ, 5%, ¼ W	112-981
13	R2	1	1.3 kΩ, 5%, ¼ W	112-064
14	R3, 8	2	330 Ω, 5%, ¼ W	112-097
15	R4	1	3.3 kΩ, 5%, ¼ W	112-936
16	R5	1	2.2 kΩ, 5%, ¼ W	112-932
17	R6	1	470 Ω, 5%, ¼ W	112-101
18	R7	1	20 Ω, 5%, ¼ W	112-083
19	R9	1	180 Ω, 5%, ½ W	112-266
20	R10	1	1.5 kΩ, 10%, ½ W	112-383
			TRANSISTORS	
21	Q1	1	Selected	S130-601
22	Q2	1	Selected	S130-152-02

MODEL 802 (HIGH-BAND UNITS)				REF. DWG. NO.: 863-261
ITEM	SCHEMATIC DESIGNATION	QTY.	DESCRIPTION	JERROLD PART NO.
			CAPACITORS	
1	C1, 5, 6, 7, 9, 10, 13, 14, 20	9	1000 pF, disc	123-115
2	C2, 4, 16, 19	4	5-60 pF, trimmer	128-563
3	C3, 17	2	1.4-4.5 pF, trimmer	128-574
4	C8, 11, 12, 18	4	0.02 μF, 200 V	124-154
5	C15	1	470 μF, 25 V, electrolytic	S127-157
6	C21	1	50 μF, 25 V, electrolytic	127-054
			DIODES	
7	CR1, 2	2	1N4148	137-824
8	CR3	1	1N4003	137-788
			RESISTORS	
9	R1	1	7.5 kΩ, 5%, ¼ W	112-986
10	R2, 10	2	2.2 kΩ, 5%, ¼ W	112-932
11	R3	1	560 Ω, 5%, ¼ W	112-104
12	R4	1	3.9 kΩ, 5%, ¼ W	112-979
13	R5	1	910 Ω, 5%, ¼ W	112-920
14	R6, 11	2	390 Ω, 5%, ¼ W	112-099
15	R7, 12	2	18 Ω, 5%, ¼ W	112-082
16	R8	1	270 Ω, 5%, ¼ W	112-993
17	R9	1	3.3 kΩ, 5%, ¼ W	112-936
18	R13	1	300 Ω, 5%, ¼ W	112-096
19	R14	1	75 Ω, 5%, ½ W	112-221
20	R15	1	1.5 kΩ, 10%, ½ W	112-383
			TRANSISTORS	
21	Q1, 2	2	Selected	S130-601
22	Q3	1	Selected	S130-152-02

POWER SUPPLY, MODEL 105				REF. DWG. NO.: 861-653
ITEM	SCHEMATIC DESIGNATION	QTY.	DESCRIPTION	JERROLD PART NO.
			CAPACITORS	
1	C1, 2	2	1000 pF, GMV, disc	123-115
2	C3	1	0.22 pF, 10%, 500 V	122-042
			CONNECTORS	
3	J1, 2	2	F-61A	C821-155
			RESISTORS	
4	R1	1	1 MΩ, 20%, ½ W	112-743
5	R2	1	1.5 kΩ, 10%, ½ W	112-383
			TRANSFORMER	
6	T1	1	Line transformer	B141-203

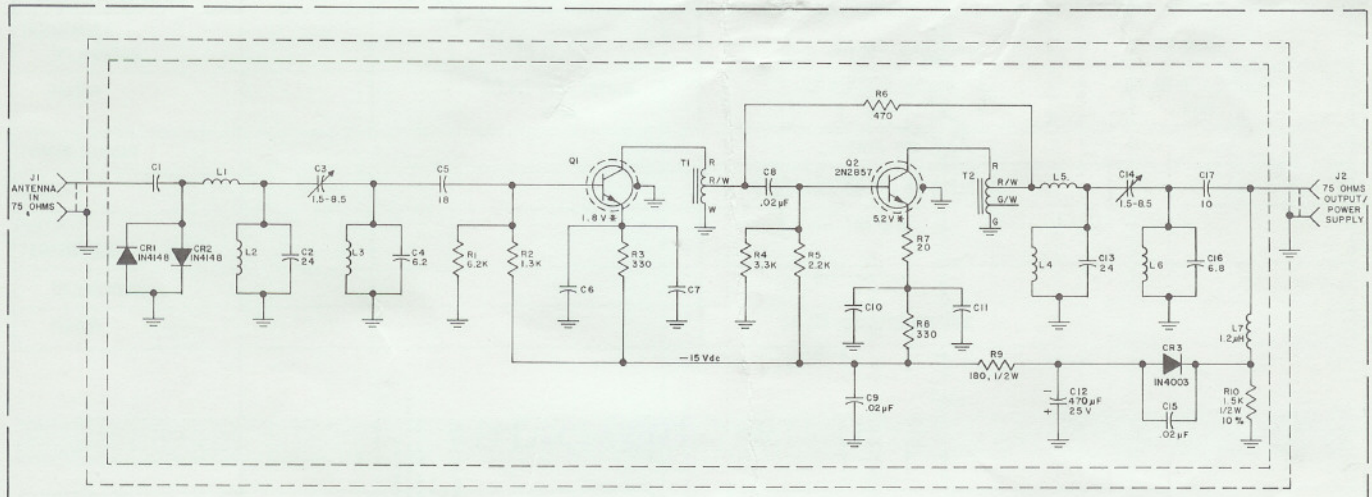




TRANSISTOR NORMAL QUIESCENT POINT		
	Q1	Q2
Vce	13.2	9.8
Ic (mA)	5.5	15
Pd (mW)	72.5	147
BASING (BOTTOM VIEW)	C, B, GRD, E	

NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. ALL RESISTOR VALUES ARE IN OHMS, 1/4W, 5%.
   B. ALL CAPACITOR VALUES ARE IN pF.
   C. 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 ARE MEASURED WITH A 20 KΩ/VOLT METER.

MODEL 802 (LOW-BAND UNITS)
D863-259



TRANSISTOR NORMAL QUIESCENT POINT		
	Q1	Q2
Vce	13.2	9.8
Ic (mA)	5.5	15
Pd (mW)	72.5	147
BASING (BOTTOM VIEW)	C, B, GRD, E	

NOTES:
1. UNLESS OTHERWISE SPECIFIED:
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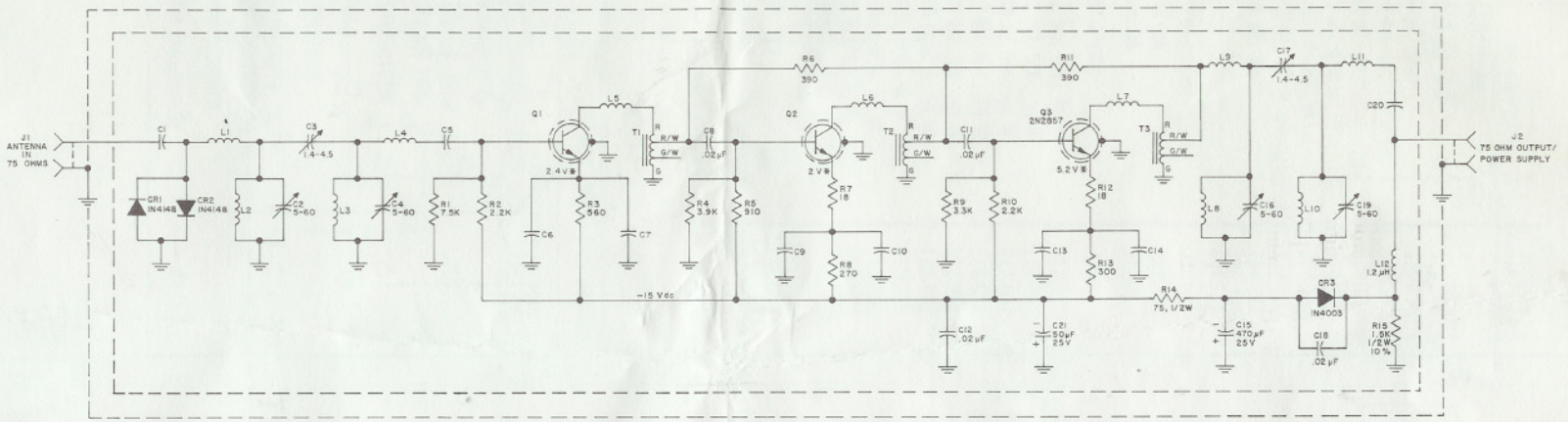
MODEL 802 (FM UNIT)
D863-260



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1. UNLESS OTHERWISE SPECIFIED:
   - A. ALL RESISTOR VALUES ARE IN OHMS, 1/4 W, 5%.
   - B. ALL CAPACITOR VALUES ARE IN pF.
   - C. 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 20K Ω/VOLT METER.

TRANSISTOR NORMAL QUIESCENT POINT			
	Q1	Q2	Q3
Vce	12.6	13	9.8
Ic (mA)	4.3	6.9	14.2
Pd (mW)	54	90	140
BASING (BOTTOM VIEW)			

MODEL 802 (HIGH-BAND UNIT)
E863-261

WARRANTY

Each unit of Jerrold Equipment is warranted for 90 days against original factory imperfections in material and workmanship.

In the event any unit of equipment should fail in service during this period, pack the complete defective unit carefully, attach a letter stating the reasons the unit was believed to be defective, and return it to our Service Department, Jerrold Electronics Corp., 15th Street and Lehigh Avenue, Phila., Pa. 19132, prepaying transportation charges. It shall be repaired or replaced at no charge.

Such service or repairs as may be necessary as the result of abuse or accident are not included in the warranty. In the event of any service breakdowns after the warranty period, this unit may be returned for repairs at a nominal charge.

All data subject to change without notice.

JERROLD ELECTRONICS CORPORATION
DISTRIBUTOR SALES DIVISION
Philadelphia, Pa. 19105

Published by the Jerrold Electronics Corp., Eng. Lab. Publications Dept.
Printed in U.S.A. BM, 11/70 435-578-03 4455