JERROLD®

INSTRUCTION SHEET

CS-PIS-015 435-360

SUPER DISTRIBUTION AMPLIFIER

MODEL SDA-4

DESCRIPTION

The Jerrold Super Distribution Amplifier Model SDA-4 is a high-output, multi-band (low TV, FM, and high TV), line-bridging, distribution amplifier specifically designed for use with the Jerrold Super Cascader trunk line amplifier Model SCA-213. Model SDA-4 has an extremely well-matched 75-ohm bridging input with less than 1 db insertion loss and four well-matched 75-ohm outputs. The gain of the amplifier perfectly complements the output capabilities of Model SCA-213 to deliver 42 dbj* for each of 12 channels at each of four outputs or 45 dbj for each of 9 channels at each of four outputs. Individual gain controls are provided for the high and low bands.

Ruggedly-constructed Model SDA-4 incorporates the latest circuitry for long-life, economical, maintenance-free operation.

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1 Unit Model SDA-4
2 Mounting Brackets
8 Mounting Screws
6 Male Connectors Model F-59A
1 Warranty Card 435-258
1 Instruction Sheet 435-360

* 0 dbj = 1,000 microvolts across 75 ohms.

SPECIFICATIONS

GAIN (Four Outlets)	13 db. min.
(Two Outlets)	16 db min.
BANDWIDTH (Low)	54-108 mc.
(Hi)	174-216 mc
RESPONSE	Flat within ±¾ db
TYPICAL OPERATING INPUT LEVELS	
(12 Channels)	31 dbj per channel
(9 Channels)	34 dbj per channel
MAXIMUM OUTPUT**	
(12 Channels, 4 Outlets)	42 dbj per channel
(12 Channels, 2 Outlets)	45 dbj per channel
(9 Channels, 4 Outlets)	45 dbj per channel
(9 Channels, 2 Outlets)	48 dbj per channel
IMPEDANCE (Input and Output)	75 ohms
VSWR (Input)	1.17:1
(Outputs)	1.3:1
INSERTION LOSS	1 db (max)
GAIN CONTROL (Hi and Lo)	4 db range (each)
POWER CONSUMPTION	50 watts
POWER SOURCE	117 v 60 cycle
TUBE COMPLEMENT	(3) 6CY5, (3) 6AN5
DIMENSIONS	5¼″ x 19″ x 5½″
SHIPPING WEIGHT	15 lbs.

INSTALLATION

Three or Four-Output Application

1. Mount Model SDA-4 in weatherproof housing beside the trunk line amplifier.
2. Connect output of trunk line amplifier (SCA-213) to the LINE IN fitting (J1) on the SDA-4 via RG-59/U jumper equipped with F-59A fittings.***

** Overload measured at less than 0.14% intermodulation.

*** See Coaxial Cable Fittings Instruction Book 435-345 for proper cable preparation and connection of fittings.

3. Connect trunk line out to LINE OUT fitting (J2) on SDA-4.

   Note: If SDA-4 is at the end of the main trunk, terminate J2 with a Jerrold Model TR-72F 75-ohm terminating resistor.

4. Connect four feeder lines via F-59A connectors to J7, 8, 9, and 10 fittings of SDA-4.

5. Plug unit into 117 v ac source, allow 30 minutes to warm up, and then adjust gain controls for desired output.

Two-Output Application

1. Loosen screws at sides which secure box on which J7, 8, 9, and 10 are located (splitter assembly) and lift the unit from the chassis. This will reveal J3, 4, 5, and 6. J4 and 5 are cabled together. Simply use J3 and J6 as the two outputs. An additional 3 db of gain and of output capability will be provided at each output.

MAINTENANCE

GENERAL

Model SDA-4 is designed for long life with a minimum of maintenance. Occasional tube replacement and the touch-up of the overall response should be the only maintenance required. For the skilled technician, a schematic diagram and replacement parts list are provided.

TUBE REPLACEMENT

Tube replacements should be made by the direct substitution method while observing the response of the amplifier.

FIELD ALIGNMENT

Equipment Required:

Oscilloscope	5″, 0.25 volts (rms) per inch sensitivity and capable of good 60 cycle square wave response.
Broadband Sweep Generator	Jerrold Model 601
Variable Attenuator	Jerrold Model A-72
Detector	Jerrold Model D-86
Marker Generator	Jerrold Model CM-6
Terminating Resistors (4)	Jerrold Model TR-72F

Frequency Response Check

1. Set up test equipment (see Fig. 1).

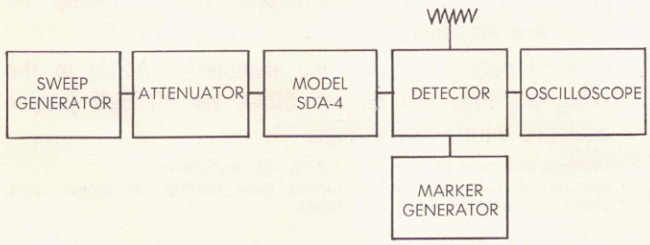


Fig. 1—Test set up for Frequency Response Check

2a. Low Band

(1) Set sweepwidth for approximately 44 to 116 mc. Set marks at 54 and 108 mc. Feed signal from sweep via the attenuator to LINE IN (J1) on the SDA-4. Terminate LINE OUT (J2) with TR-72F. Use any one of SDA-4 output jacks (J7, 8, 9, or 10) to feed SDA-4 output via the detector to the scope. Terminate unused output jacks with TR-72F terminating resistors. The observed response should be as shown in Fig. 2.

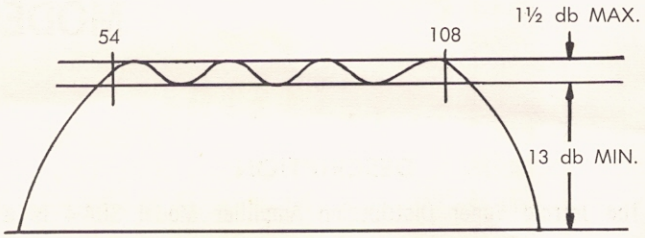


Fig. 2—Typical Low-Band Response

(2) If the observed response needs touching-up, coils L18, 19, 20, 23, 24, 25, 27 and 28 may be adjusted. These coil locations are marked on the chassis.

COIL FUNCTIONS

L18	Tunes V4 plate
L19	Controls bandwidth
L20	Tunes V5 grid
L23	Tunes V5 plate
L24	Controls bandwidth
L25	Tunes V6 grid
L27, 28	Tune V6 plate

2b. Hi Band

(1) Set sweepwidth for approximately 164 to 226 mc. Set marks at 174 and 216 mc. Feed signal as in 2a(1) and the observed response should be as shown in Fig. 3.

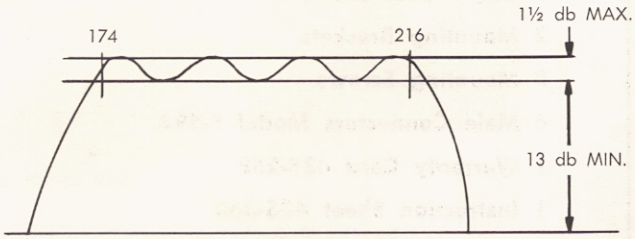


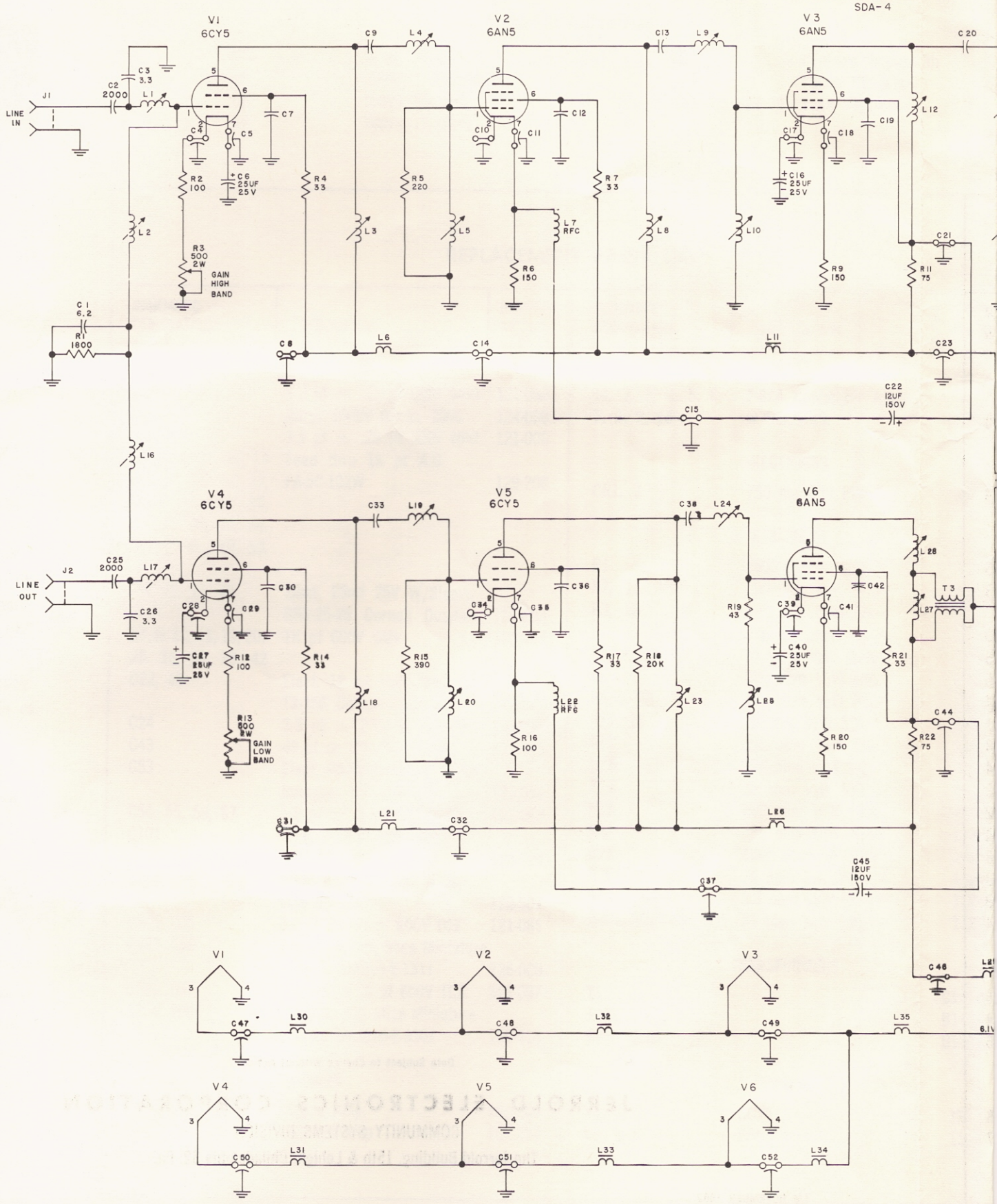
Fig. 3—Typical Hi-Band Response

(2) If the observed response needs touching up, coils L3, 4, 5, 8, 9, 10, 12, 13, and 14 may be adjusted. These coil locations are marked on the chassis.

Continued on page 5

SCHEMATIC

SUPER DISTRIBUTION AMPLIFIER
SDA-4



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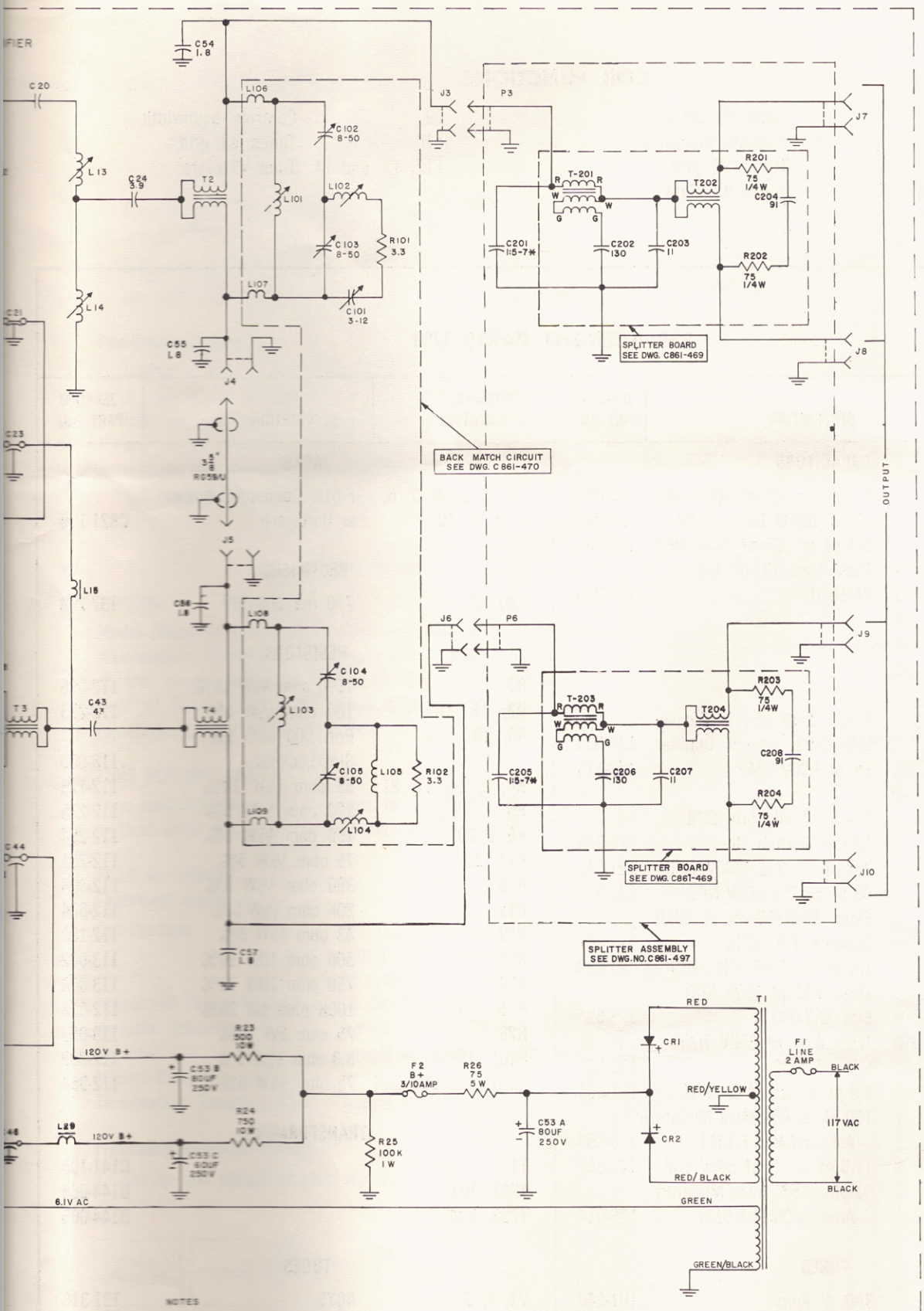

NOTES

1. ALL UNMARKED CAPACITORS ARE 1000 PF
2. ALL CAPACITOR VALUES ARE IN PF UNLESS OTHERWISE SPECIFIED
3. ALL RESISTOR VALUES IN OHMS, 1/2 WATT UNLESS OTHERWISE SPECIFIED

COIL FUNCTIONS

L3	Tunes V1 plate	L9	Controls bandwidth
L4	Controls bandwidth	L10	Tunes V3 grid
L5	Tunes V2 grid	L12, 13, and 14	Tune V3 plate
L8	Tunes V2 plate		

REPLACEMENT PARTS LIST

SCHEMATIC DESIGNATION	DESCRIPTION	JERROLD PART NO.
	CAPACITORS	
C1	6.2 pf ± .25 pf 500V NPO	121-052
C2, 25	2K pf 1000V DC ± 10%	124-050
C3, 26	3.3 pf ± .25 pf 500V NPO	121-006
C4, 5, 8, 10, 11, 14 15, 17, 18, 21, 23, 28, 29, 31, 32, 34, 35, 37, 39, 41, 44, 46, 47, 48, 49, 50, 51, 52,	Feed thru 1K pf A.B. FA-5C-102W	129-200
C6, 16, 27, 40	Elect. 25mf 25V W/Sleeve BBR-25-25 Cornell Dubilier	127-003
C7, 9, 12, 13, 19, 20, 30, 33, 36, 38, 42	1K pf 600V GMV	123-115
C22, 45	Elect. 12 mf 150V BBR 12-150 Cornell Dubilier	127-016
C24	3.9 pf ± 2%, 500V NPO	121-045
C43	43 pf ± 2% 500V NPO	121-023
C53	Elect. 80-80-60 mf @ 250V Sprague TVL 3545	127-901
C54, 55, 56, 57	1.8 pf ± .5 pf 500V NPO	121-089
C101	Trim. 3-12 pf 350V NPO Erie 557-000	128-524
C102, 103, 104, 105	Trim. 8-50 pf 350V N750 Erie 557-000	128-501
C201, 205	3.0 pf ± .25 pf 600V TCZ	121-065
C202, 206	130 pf ± 5% Mica Miniature —Arco #CM15-E-131J	126-009
C203, 207	11.0 pf ± .5 pf 600V TCZ	121-067
C204, 208	91 pf ± 5% Mica Miniature —Arco #CM15-E-910J	126-014
	FUSES	
F1	3AG, 2 Amp	101-240
F2	3AG, 0.3 Amp	101-234

SCHEMATIC DESIGNATION	DESCRIPTION	JERROLD PART NO.
	JACKS	
J1, 2, 3, 4, 5, 6, 7, 8, 9, 10	F-61A Connector Ass'y w/Hardware	C821-155
	RECTIFIERS	
CR1, 2	750 ma 600 PIV	137-708
	RESISTORS	
R1	1800 ohm ½W 10%	112-395
R2, 12, 16	100 ohm ½W 5%	112-233
R3, 13	Pot. 500 ohm 2W Slot/Locknut	118-005
R4, 7, 14, 17, 21	33 ohm ½W 10%	112-173
R5	220 ohm ½W 5%	112-275
R6, 9, 20	150 ohm ½W 5%	112-254
R11, 22	75 ohm ½W 5%	112-221
R15	390 ohm ½W 5%	112-308
R18	20K ohm ½W 5%	112-524
R19	43 ohm ½W 5%	112-188
R23	500 ohm 10W 10%	113-002
R24	750 ohm 10W 10%	113-004
R25	100K ohm 1W 20%	112-618
R26	75 ohm 5W 10%	113-053
R101, 102	3.3 ohm ½W 5%	112-009
R201, 202, 203, 204	75 ohm ¼W 5%	112-954
	TRANSFORMERS	
T1		C141-105
T201, 203		B144-064
T202, 204		B144-065
	TUBES	
V1, 4, 5	6CY5	131-316
V2, 3, 6	6AN5	131-367

Data Subject to Change Without Notice

JERROLD ELECTRONICS CORPORATION

COMMUNITY SYSTEMS DIVISION

The Jerrold Building, 15th & Lehigh, Philadelphia 32, Pa.

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