JERROLD®

INSTRUCTION SHEET

DS-PIS-038 435-363

Mast Mounted UHF Preamplifiers

MODELS UAP-7083 OR UAP-7083-75*

WITH REMOTE POWER SUPPLY MODEL 409P

*Model UAP-7083-75 replaces Model UAP-7276

MODEL UAP-7083 or UAP-7083-75

MODEL 409P

Fig. 1—Mast-Mounted Preamplifier with Remote Power Supply

DESCRIPTION

Jerrold mast-mounted UHF preamplifiers Models UAP-7083 and UAP-7083-75 cover UHF channels 70-83 (806-890 mc). Each is shipped complete with a remote power supply Model 409P. Model UAP-7083 is equipped with 300-ohm twin-lead (antenna wire) terminals throughout and provides a single output to a UHF/VHF converter. Model UAP-7083-75 is a 75-ohm version of Model UAP-7083 and provides an additional output which enables this unit to feed two UHF/VHF converters from a single antenna. This model is particularly useful in the MPATI area or wherever all-coax installations are desired.

CONTENTS OF PACKAGE

- 1 Unit Model UAP-7083 or UAP-7083-75
- 1 Unit Model 409P
- 3 Male Conectors Model F-59A (with UAP-7083-75 only)
- 2 Wood Screws
- 1 Mast Strap, Clamp and Hardware
- 1 Warranty Card 435-258
- 1 Instruction Sheet 435-363

INSTALLATION

LOCATION AND MOUNTING

Models UAP-7083 or UAP-7083-75

1. Choose location on mast as near as possible to the antenna output terminals. Clean all rust and/or oxides from chosen area to provide a good ground for the preamplifier.
2. Mount unit in chosen location with mast strap and clamp provided. Tighten thumbscrew securely.

Model 409P

1. Choose a location as near as possible to a non-switchable (24-hour-a-day) 117-v, 60-cycle power source and (if used with Models UAP-7083 and UVC-7083) as near as possible to the UHF/VHF converter.
2. Mount 409P in chosen location with screws provided.

SPECIFICATIONS			
	UAP-7083	UAP-7083-75	409P
GAIN	15 db min.	10 db min. (each output)	N.A.*
INPUT IMPEDANCE	300 ohms	75 ohms	N.A.
OUTPUT IMPEDANCE	300 ohms	75 ohms (each output)	N.A.
MIN. INPUT FOR 30 DB S/N RATIO	350 microvolts across 300 ohms	160 microvolts across 75 ohms	N.A.
MAX. OUTPUT PER CHANNEL FOR TWO CHS. AT 0.5% INTERMOD.	140,000 microvolts	45,000 microvolts	N.A.
FREQUENCY RANGE	806-890 mc		N.A.
RESPONSE FLATNESS	2 db p/v		N.A.
TUBE COMPLEMENT	(2) 6DL4/EC-88		N.A.
POWER INPUT	20 v ac, 60 cps		117 v ac, 60 cps
POWER OUTPUT	N.A.		22, 23.5, 25.2 or 27 volts
POWER CONSUMPTION	12 watts at 0.6 amp.		25 watts

*Not applicable.

ANTENNA CONNECTIONS

Either preamplifier may be used with any commercially available UHF antenna.

Model UAP-7083-75 to 75-ohm antenna

1. Connect a length of RG-59/U coaxial cable to the antenna output and run cable to UAP-7083-75 location.
2. Prepare cable end. See Fig. 2.
   Cut cable flush. Remove 7/16″ of outer jacket without nicking shield. Fan back shield over outer jacket and trim off shield close to outer jacket. Remove ¼″ of dielectric without nicking center conductor. Without bending center conductor, scrape off any fuzz and inspect end for burrs. If present, trim with cutters.

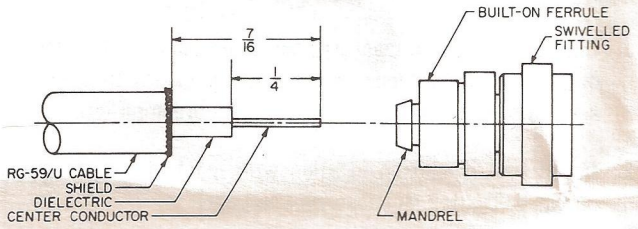


Fig. 2—RG-59/U Prepared for F-59A Male Connector

3. Attach F-59A connector to cable.
   Push F-59A mandrel between cable dielectric and shield until built-on ferrule is complete over cable outer jacket. Crimp ferrule with Jerrold crimping tool Model PL-601 or PL-602.
4. Connect prepared cable end to 75-ohm input fitting on UAP-7083-75. See Fig. 3. Hand-tighten F-59A firmly and then wrench-tighten no more than 1/6 turn.

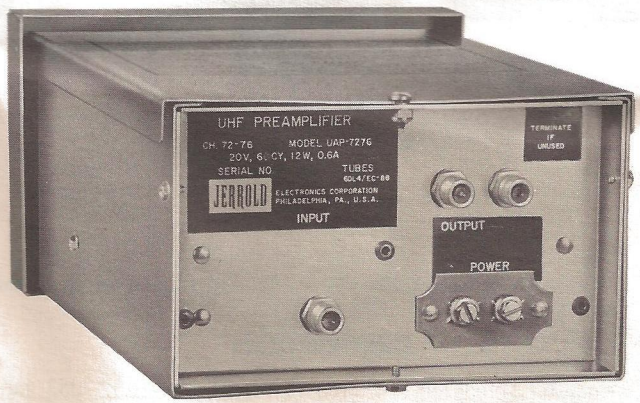


Fig. 3—Connections to Model UAP-7083-75
(Identical with illustration except for nameplate)

Model UAP-7083 to 75-ohm antenna

1. Mount a 300 to 75 ohm matching transformer Jerrold Model MTUO-374 on the mast between the antenna output and the preamplifier.
2. Perform steps 1, 2, and 3 of procedure for Model UAP-7083-75 to 75-ohm antenna.
3. Connect a length of twin-lead to crown washer screw terminals on MTUO-374. See Fig. 4.

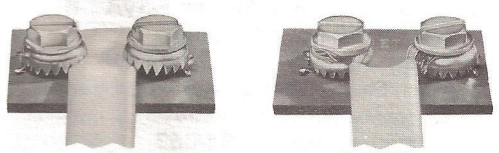


Fig. 4—Connecting Twin-Lead to Crown Washer Screw Terminals

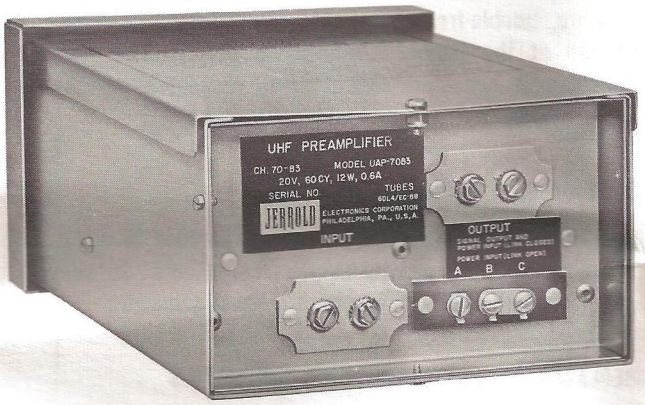


Fig. 5—Connections to Model UAP-7083

a. Unstripped method: Loosen screws enough to place twin-lead beneath serrated washers as shown. Tighten screws sufficiently to force serrated teeth through twin-lead insulation to make good contact with wire.

b. Stripped method: Strip insulation from about one inch of twin-lead. Loosen screw terminals and wrap each bared wire around a terminal between the screw head and the crown washer. Tighten screws firmly.

Model UAP-7083-75 to 300-ohm antenna

1. Connect MTUO-374 transformer between antenna output and input of UAP-7083-75. Interconnect antenna output and transformer via twin-lead and transformer and UAP-7083-75 with RG-59/U coax.

Model UAP-7083 to 300-ohm antenna

1. Connect antenna output to UAP-7083 input via twin-lead. See Fig. 5.

CONNECTIONS TO REMOTE POWER SUPPLY MODEL 409P

Models UAP-7083-75 or UAP-7083 to 409P

1. Connect twin-lead to POWER screw terminals on UAP-7083-75 or to A and B terminals on UAP-7083 and run twin-lead to 409P location. Connect twin-lead to TO AMP terminals of 409P.

OUTPUT CONNECTIONS

Model UAP-7083-75. See Fig. 6.

1. Interconnect OUTPUT fitting on UAP-7083-75 with UHF input of a mast-mounted UHF/VHF converter via RG-59/U cable, keeping cable run as short as possible. Interconnect the other OUTPUT fitting on UAP-7083-75 with UHF input of another mast-mounted UHF/VHF converter in the same manner. If only one output is used, terminate the unused output with a Jerrold terminating resistor Model TR-72F.

Model UAP-7083

1. Model UAP-7083 used to feed TV set via UVC-7083. See Fig. 7.
   a. Open link between terminals B and C. Signal output from UVC-7083 will now go to Model 409P on same line which brings power up.
2. Model UAP-7083 used to feed a mast-mounted UHF/VHF converter.
   a. Leave link as shown in Fig. 5. Connect a length of twin-lead to OUTPUT screw terminals of UAP-7083 and run twin-lead to UHF input terminals on mast-mounted UHF/VHF converter. Keep run as short as possible.

CONNECTION OF 409P TO UVC-7083

1. Interconnect TV set terminals on 409P with UHF input terminals on UVC-7083. (Text follows on page 6.)

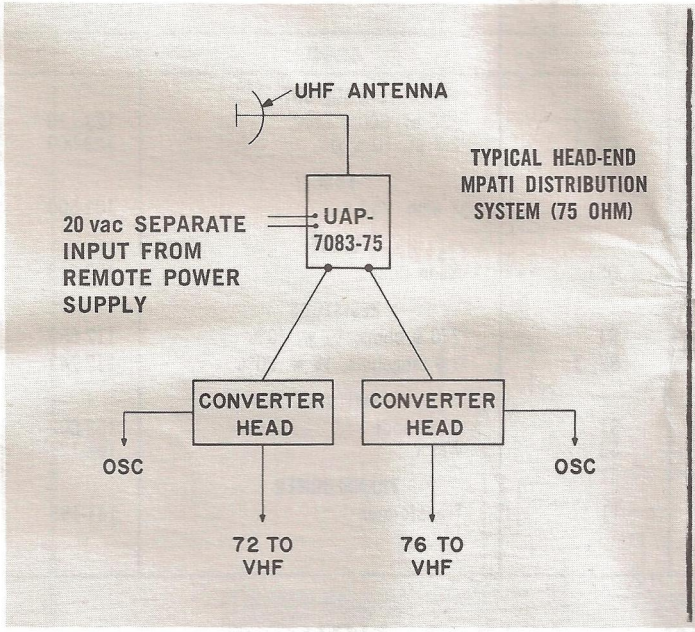


Fig. 6—Typical Head-End MPATI Distribution System (75 Ohm)

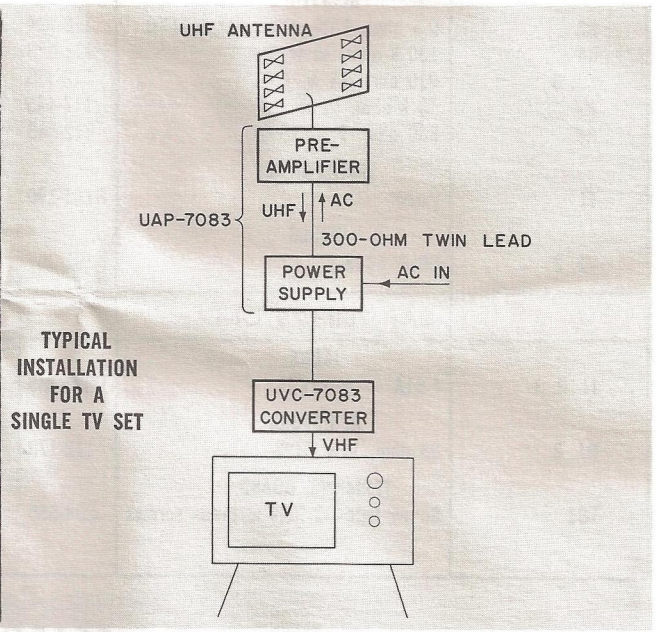
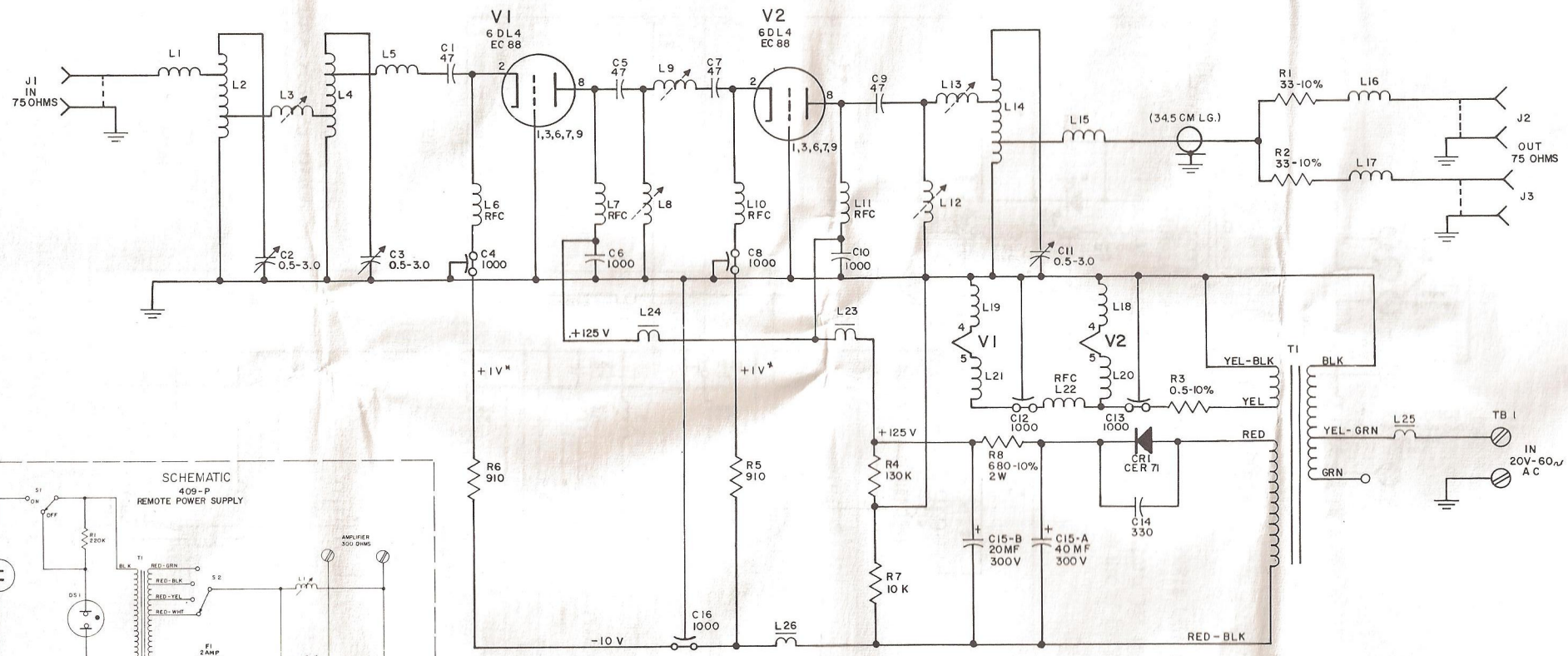


Fig. 7—Typical Installation for a Single TV Set

SCHEMATIC

UHF BROAD BAND AMPLIFIER
MODEL UAP 7083-75



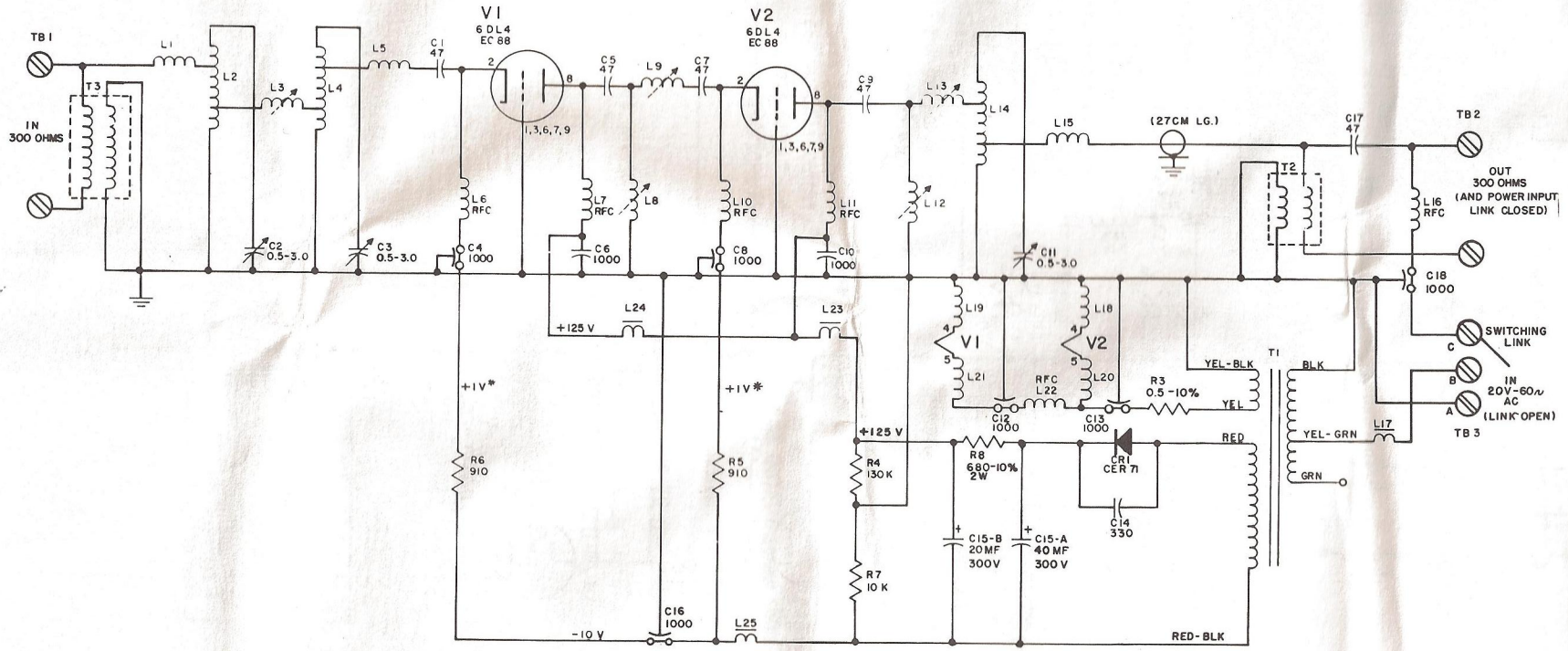
NOTE: This remote power supply is used with either Model UAP-7083 or UAP-7083-75.

NOTES:

1. ALL CAPACITOR VALUES GIVEN IN PF UNLESS OTHERWISE SPECIFIED.
2. ALL RESISTOR VALUES GIVEN IN OHMS, 5%, 1/2 WATT UNLESS OTHERWISE SPECIFIED.
3. * INDICATES APPROX. VOLTAGE. FOR ACCURATE WORK, MEASURE +11V ACROSS R5 OR R6.

SCHEMATIC

UHF BROAD BAND AMPLIFIER
MODEL UAP-7083



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D 861-488

Length of Run Between Preamplifiers and Remote Power Supply

DISTANCE CHART IN FEET

TYPE OF WIRE OR CABLE/TRANSFORMERS	CABLE LENGTH SWITCH POSITION			
	#1	#2	#3	#4
TWIN-LEAD	90 min.*-150	150-210	210-280	280-350
RG-59/U w/2 MTUO-374**	40 min.*-50	50-80	80-110	110-140

*If a run shorter than the minimum length given in the chart is used, we recommend that the primary connection to the UAP-7083 or UAP-7083-75 transformer (see schematics) be moved from its present position on the yellow-green tap (20.0 volts) to the green tap (24.0 volts). The CABLE LENGTH switch on Model 409P should then be placed in position #2.

**Transformers not needed with UAP-7083-75.

OPERATION

1. Plug power cord on 409P into 117-v, 60-cycle source.
2. Place ON-OFF switch on 409P in ON position. Neon bulb should glow.

MAINTENANCE

Models UAP-7083 and UAP-7083-75 have been designed for long-life, trouble-free operation. The units have been carefully aligned at the factory for optimum performance. The only maintenance necessary should be an occasional tube or fuse replacement.

TUBE OR FUSE REPLACEMENT

Replace tubes in the preamplifiers or the fuse in the remote power supply with exactly similar components. Be sure that power supply is OFF when units are being serviced.

REPLACEMENT PARTS LIST AND SCHEMATICS

A replacement parts list and schematic diagrams have been included for the use of the experienced technician.

REPLACEMENT PARTS LIST

MODELS UAP-7083, UAP-7083-75, 409P

PARTS COMMON TO UAP-7083 AND UAP-7083-75

SCHEMATIC DESIGNATION	DESCRIPTION	JERROLD PART NO.
	CAPACITORS	
C1, 5, 7, 9	Ceramic pill	B120-103
C2, 3, 11	0.5-3.0 pf	B128-523
C4, 8, 12, 13, 16	1 k pf feed-thru	129-200
C6, 10	1 k pf stand-off	129-199
C14	330 pf ceramic disc	124-036
C15AB	40/20 mf, 300 v, electrolytic	127-250
	RECTIFIER	
CR1	Solitron # Cer-71	137-714
	RESISTORS	
R3	0.5 ohm, 10%, Clarostat ½ FXG	110-024
R4	130 k ohm, ½ w, 5%	112-629
R5, 6	910 ohm, ½ w, 10%	112-356
R7	10 k ohm, ½ w, 5%	112-485
R8	680 ohm, 2 w, 10%	112-343
	TRANSFORMER	
T1	Power	B141-190
	TUBES	
V1, 2	6DL4/EC88	131-357
	UAP 7083-75 ONLY	
	JACKS	
J1, 2, 3	F-61A	C821-155
	RESISTORS	
R1, 2	33 ohm, ½w, 10%	112-173
	TERMINAL BOARD	
TB1	Screw type—2 lugs w/brass screws	234-535

SCHEMATIC DESIGNATION	DESCRIPTION	JERROLD PART NO.
	UAP-7083 ONLY	
	CAPACITORS	
C17	Ceramic pill	B120-103
C18	1 k pf feed-thru	129-200
	TERMINAL BOARDS	
TB1, 2	Terminal strip assembly	A234-148
TB3	Screw type—3 lugs w/brass screws and shorting link	B234-537
	TRANSFORMERS	
T2, 3	UHF balun	B141-191
	409P	
	CAPACITORS	
C1, 2	330 pf, 600 v GMV	123-110
C3, 4	2.7 pf, 10% QC	122-009
	FUSE	
F1	2 amp, 250 v	101-500
	LIGHT	
DS1	Neon bulb	102-003
	RESISTORS	
R1	220 k ohms, ½ w, 20%	112-659
R2, 3	1.0 megohms, ½ w, 20%	112-743
	SWITCHES	
S1	Slide spdt	162-002
S2	Wafer	161-123
	TRANSFORMER	
T1	Transformer	141-163

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