

CONFIDENTIAL

INSTRUCTION BOOK
FOR
UPI-10 RADIO POWER INVERTER

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UPI-10 INVERTER POWER SUPPLY

GENERAL DESCRIPTION

The UPI-10 is a low power inverter employing a standard commercial vibrator of the interrupter type. It is designed to operate from a 220 volt D.C. source. A center tapped auto-transformer is used and the A.C. voltage (220 volts A.C. RMS) is taken from the auto-transformer winding. The D.C. and A.C. leads are filtered to eliminate the conduction and radiation of R.F. hash.

The UPI-10 is built into a small steel chassis with a close fitting cover. The dimensions of this unit are 7-5/8 high x 4-7/8 wide x 2-5/8 deep. On the recessed face of the UPI-10 is an OFF-ON switch, a two pole universal receptacle and a fuseholder for a 2 amp fuse. A ground lead and a cable terminated in a molded European type plug are provided for connecting to the RS-6 and RS-1 units. There are no other controls or adjustments.

A Schematic of the UPI-10 is provided with each unit cemented to the inside of the cover. Operating Instructions are engraved on the side of the unit below the recessed face.

OPERATION

Put the UPI-10 into operation by performing the following steps in the order given.

- a. See that the switches of the RS-6, RS-1 and the UPI-10 are in the OFF position.
- b. Connect the ground lead of the UPI-10 to a grounded point on the RS-6 or RS-1 equipment.
- c. Plug the 220 volt D.C. line cord of the UPI-10 into the 220 volt D.C. source.
- d. Plug the RS-6 or RS-1 line cord into the A.C. receptacle on the face of the UPI-10.
- e. Turn the OFF-ON switch on the UPI-10 to ON.
- f. Turn the RS-6 or RS-1 A.C. switch to 230-220 volts.

UPI-10

MAINTENANCE

Maintenance in the field will consist primarily of replacement of fuse or vibrator. If no output is available from the UPI-10, check for a blown fuse. If fuse is blown, replace with a new fuse (3AG, 2 AMP) and check to see if the unit operates. If the fuse again blows, do not continue to replace it. Remove the cover of the UPI-10 and replace the vibrator. If this does not eliminate blowing of the fuse, a component or internal wiring failure is indicated, and the unit should be returned to a repair station.

If after about 200 hours of operation the hash in the receiver has increased noticeably, replace the vibrator.

LIST OF CONTENTS AND SPARES

EQUIPMENT & EQUIPMENT SPARES

<u>Quantity</u>	<u>Unit</u>
1	1 UPI-10
1	Instruction Book
1	Vibrator Type 22064 (ATR)
5	Fuse 3 AG 2 AMP
1	Plug Adaptor Ward Electric Co. #2104

MAINTENANCE SPARES

The following listing of Maintenance Spares are for each ten UPI-10 equipments

<u>Quantity</u>	<u>Unit</u>
10	Vibrator Type 22064 (ATR)
1	Transformer BX 753
2	Chokes 1.78 MH NEMS Dwg. #A11692
2	Chokes 0.84 MH NEMS Dwg. #A11691
4	Capacitor, Fixed, paper 0.1 mfd 600 V.D.C.
4	Capacitor, Fixed, paper 0.25 mfd 600 V.D.C.
4	Capacitor, Fixed ceramic .01 mfd 600 V.D.C.

UPI-10 INVERTER PARTS LIST

<u>Circuit Symbol</u>	<u>Item Name</u>	<u>Description</u>
C1, C2, C10, C11	Capacitor, Fixed	Ceramic .01 Mfd. 600 VDC Centralab DD-103
C3, C4	Capacitor, Fixed	Paper 0.5 Mfd. 400 VDC Aerovox #P123ZG Insulated
C5	Capacitor, Fixed	Paper 0.1 Mfd. 600 VDC Gudeman XF-1992
C6, C7	Capacitor, Fixed	Paper 0.25 Mfd. 600 VDC Gudeman XF-1837
C8, C9	Capacitor, Fixed	Paper 0.1 Mfd. 400 VDC Aerovox P123ZG Insulated
R1	Resistor, Comp.	3900 ohms 2 watt 5% Allen Bradley
R2	Resistor, Wirewound	2000 ohms 10 watt 10% Sprague NIT
R3, R4	Resistor, Comp.	10K 1 watt 5% Allen Bradley
V1B	Vibrator, 220V	American Television & Radio ATR 22064
T1	Transformer	Baltimore Transformer BX-753
L1, L2	Choke	1.78 mh NEMS Dwg. #A11692
L3, L4	Choke	0.84 mh NEMS Dwg. #A11691
S1	Switch	Toggle SPST 220V Cutler Hammer 8280 K14
XF1	Fuseholder	3A6 Screwdriver Slot, Littlefuse 10755
F1	Fuse	3AG 2 AMP Littlefuse 312002
PL1	D.C. Plug	Molded European Plug & Line Cord NEMS AC 9107-3
J1	Receptacle	2 Pole Universal Amphenol 61-MIP-61F

UPI-10 Inverter Parts List (Cont.)

<u>Circuit Symbol</u>	<u>Item Name</u>	<u>Description</u>
SO-1	Socket	Wafer 5 prong Cinch Jones 5WY
PA-2	Plug, Adaptor	American to European Ward Electric Co. #2104
	Clamp, Vibrator	United Carr #48798
	Strain Relief	Heyman Manufacturing Co. Heyco #SR5P
	1 Clip	Alligator Type Mueller #85

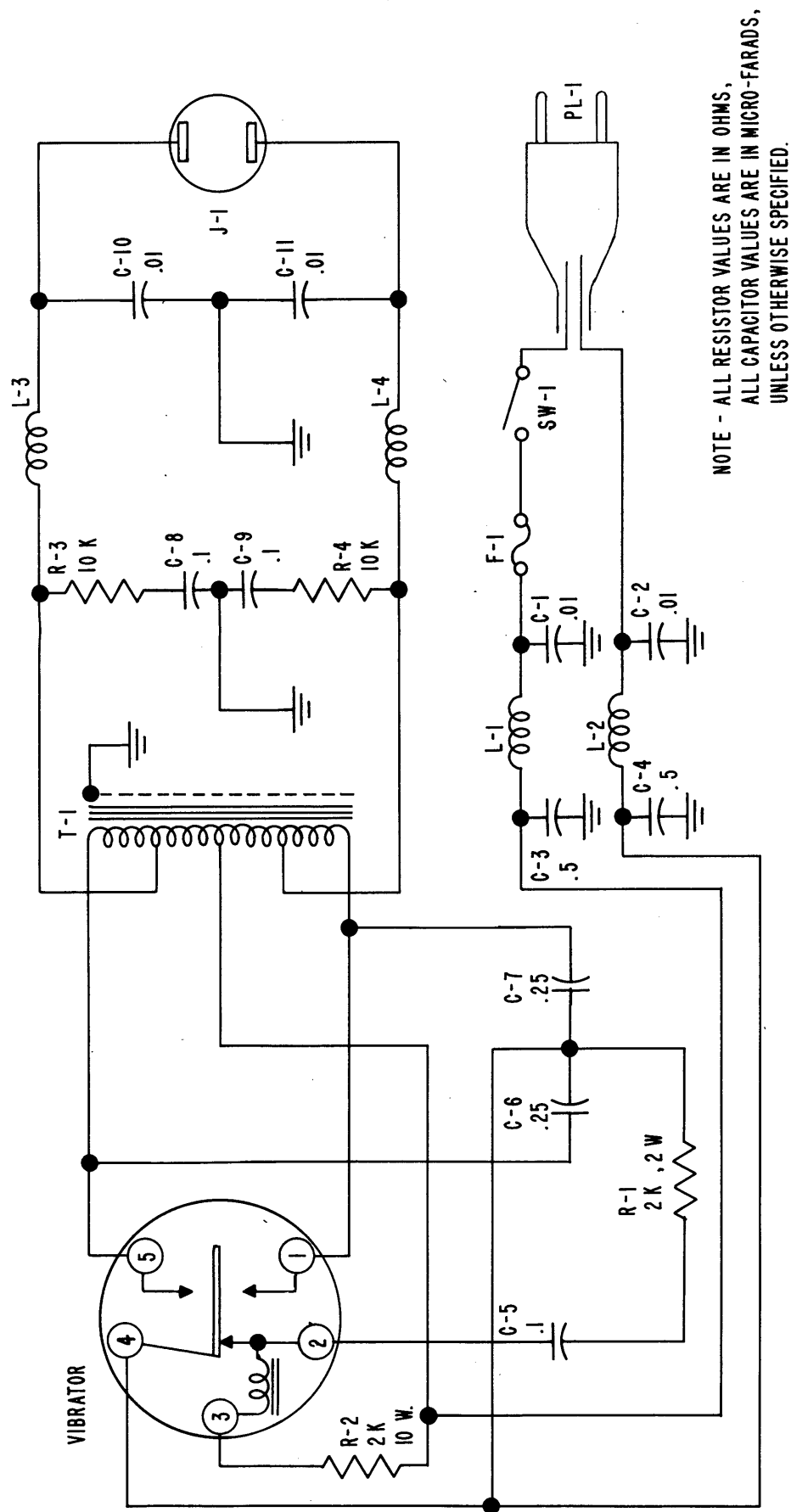


FIGURE 1
UPI - 10 SCHEMATIC

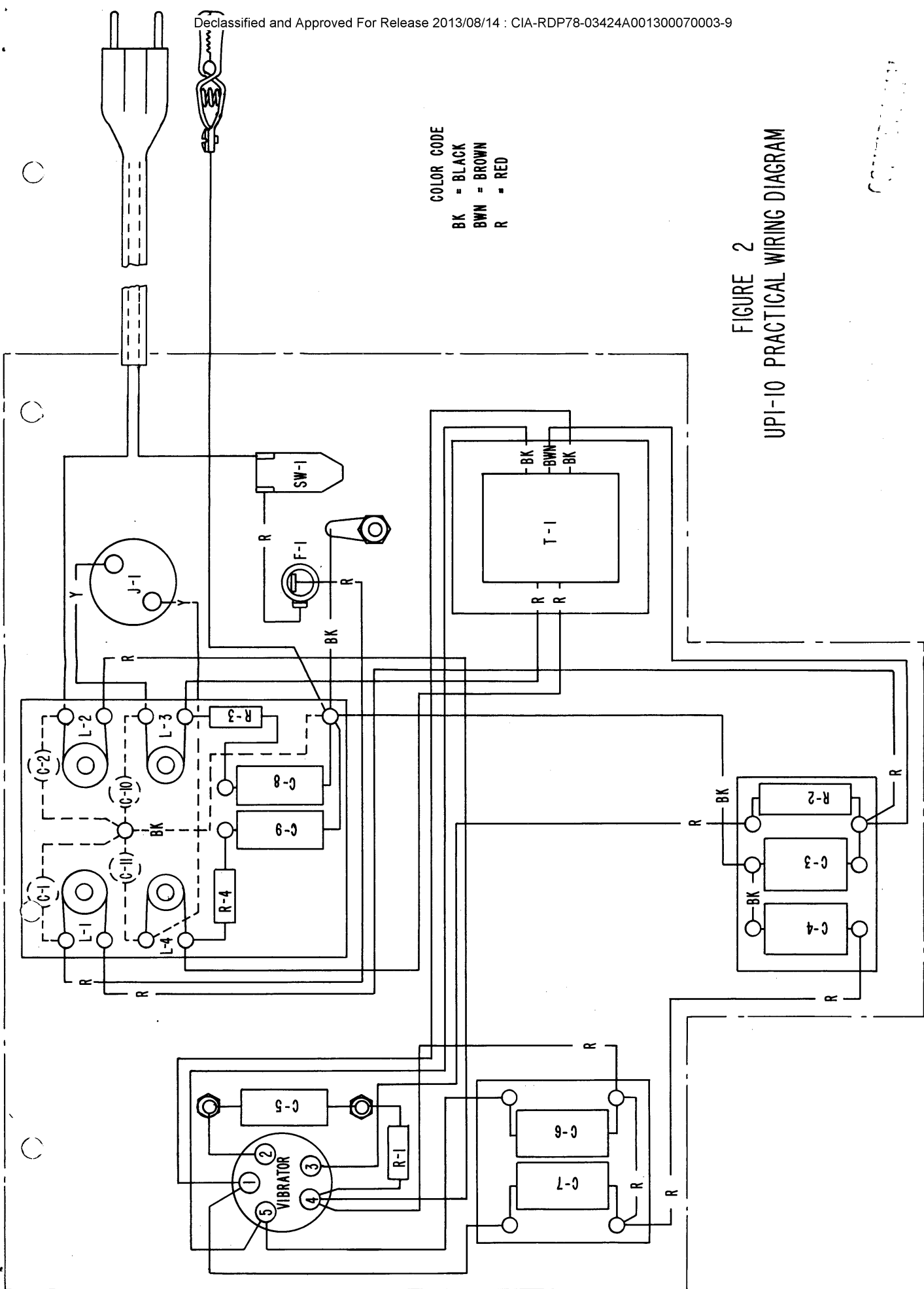


FIGURE 2
UPI-10 PRACTICAL WIRING DIAGRAM