

# **EICO** 752/DC Power Supply

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## **OPERATING MANUAL**

### **GENERAL DESCRIPTION**

The EICO Model 752 provides all necessary operating voltages for the EICO Model 753 SSB/AM/CW Tri-Band Transceiver (200 watts SSB PEP and CW, 100 watts AM). It may also be used to operate other EICO equipment for which this supply shall be specified, or compatible equipment of different manufacture with appropriate alterations in the manner of connection.

The Model 752 is to be operated from a nominal 12-volt DC power source. This power source may be negative or positive ground, but the polarity switch on the chassis (accessible when cover is removed) must be set accordingly, before the supply is connected either to the power source or the transceiver. Set the source polarity switch toward the rear heat sink for a negative ground source, or toward the front connection panel for a positive ground source. If it is attempted to operate the transceiver with the polarity switch incorrectly set, the power source will be shorted through the supply and cause the 40 amp fuse in the supply to blow. However, the supply will not be damaged.

An octal power plug and cable is the means of connecting all the specified output voltages to the transceiver. The cable wiring permits the power supply to be turned on and off at the transceiver.

The Model 752 is designed integrally with the EICO Model 753 and other EICO equipment for which this supply shall be specified. Importantly, the supply regulation is tailored to the requirements of EICO transceivers. Furthermore, a great deal more filtering is incorporated that is not found in other supplies. This additional filtering is absolutely required for proper operation of the EICO transceiver. For these reasons there is no acceptable substitute, to our knowledge, for the EICO 752 supply in mobile operation of EICO transceivers, and EICO can accept no responsibility for sub-standard performance quality resulting from the use of other supplies.

### **SPECIFICATIONS**

#### **OUTPUT VOLTAGES**

HV (High Voltage): 750 volts DC at 300ma (50% duty cycle), 200ma continuous

LV (Low Voltage): 280 volts DC at 170ma

BIAS: -100 volts DC at 5ma

FILAMENT: Same as input voltage

INPUT VOLTAGE: 11-14 volts DC, negative or positive ground

SIZE (HWD): 3-5/8" x 7-3/8" x 7-7/8"

WEIGHT: 10 lbs.

This equipment has been thoroughly tested and inspected before packing. If you find visible damage upon unpacking, notify the dealer at once. If the unit was shipped to you from the dealer, you must file a claim with the carrier, since only you can recover for shipping damages. Your dealer and EICO will cooperate.

# **K4XL's** **BAMA**

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## INSTALLATION OF THE SUPPLY

The supply may be located wherever is most convenient. However, the drop in the leads from the battery to the supply input must be kept to a minimum, and No. 8 AWG wire or heavier is recommended for these connections.

An 8-wire cable is required to connect the supply outputs to the transceiver, of length determined by the location of the supply. Use No. 18 AWG wire for all supply-to-transceiver connections. An octal male plug with hood is required for connecting one end of the cable to the supply, and an octal female plug with hood for connecting the other end of the cable to the transceiver.

The supply is provided with rubber feet, which will help to prevent the unit from sliding around in a trunk installation. Two sheet metal L-brackets are supplied also, for mounting the unit under the hood or under the dash. These brackets are fastened to the supply by two #6 self-tapping screws through either the upper or lower pair of holes on each side. Where space limitations require it, remove the feet and mount the brackets in the upper pair of holes on each side. When there is space available, the feet remain and the brackets are mounted in the lower pair of holes on each side.

## VENTILATION

Avoid placing the unit in a very warm location or in a hot air stream. The vent holes at the rear of the cabinet must not be obstructed.

## TRANSMITTER BIAS ADJUSTMENT

After connection of the Model 752 power supply both to a proper power source and to the transceiver being operated, the transmitter bias must be set properly to obtain optimum transceiver performance. The procedure for transmitter bias adjustment is given in the transceiver operating manual. The transmitter bias should be checked regularly and whenever driver or final amplifier tubes in the transmitter are replaced.

## CABINET REMOVAL

To remove the power supply from the cabinet, first disconnect it from the power source and from the transceiver. Then remove the two #6 sheet metal screws at the bottom.

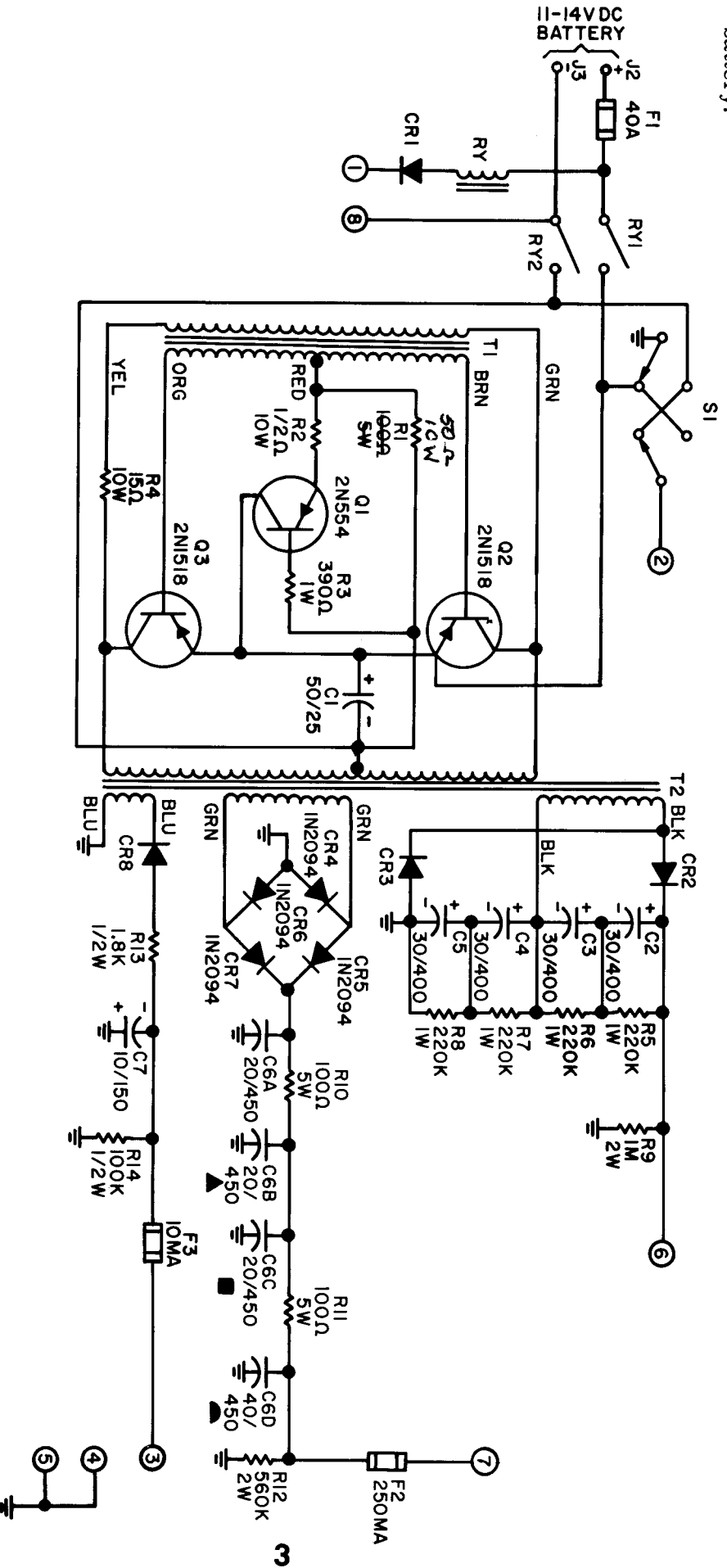
## WARNING

LETHAL HIGH VOLTAGES ARE PRESENT WITHIN THIS EQUIPMENT. BE VERY CAREFUL TO AVOID CONTACT WITH THESE HIGH VOLTAGES IF FOR ANY REASON THE EQUIPMENT IS OPERATED OUTSIDE OF ITS CABINET.

## NOTE ON MOBILE MOUNTING OF THE TRANSCEIVER

The transceiver is normally mounted to the underside of the dash, directly over the transmission hump. With the vibrations and jolts normally encountered in mobile use, there is a tendency for the transceiver to go into a mechanical oscillatory vibration around its mounting axis, with additional motion imparted due to some degree of flexibility in the dashboard metal. Naturally, this sort of vibratory motion will degrade the frequency stability of the transceiver. To eliminate any significant vibratory motion, insert a bracing device between one or both rear feet of the transceiver and the transmission hump in the vehicle.

Use #8AWG or larger wire for connections to battery.



Circled numbers ① through ⑧ are pin numbers on the 8-pin female socket J1 on the panel. Each is to be connected with #18AWG wire to the same-numbered pin on the male 8-pin socket at the rear of the EICO 753 Transceiver (or other EICO transceiver for which this supply shall be specified).

EICO 752 — SCHEMATIC DIAGRAM

# PARTS LIST

PRICE EACH	SYM. #	STOCK#	DESCRIPTION
<b>CAPACITORS</b>			
.60	C1	23007	elec., 50uF/25V
1.43	C2, 3, 4, 5	23041	elec., 30uF/400V
3.35	C6	24012	elec., 40-20-20-20uf/450V
.80	C7	23010	elec., 10uF/150V

<b>DIODES/RECTIFIERS</b>			
1.00	CR1, 8	93005	rectifier
3.76	CR2, 3	93024	rectifier, 1.2KV/750mma
1.28	CR4, 5, 6, 7	93025	rectifier, IN2094

<b>FUSES</b>			
.13	F1	91019	fuse, type 3AG, 40 amp
.28	F2	91020	fuse, type 3AG, 250ma
1.06	F3	91021	fuse, type 3AG, 10ma

<b>JACKS/CONNECTORS</b>			
.28	J1	97041	socket, 8 pin

<b>TRANSISTORS</b>			
4.02	Q1	94046	transistor, Type 2N554
18.00	Q2, 3	94045	transistor, Type 2N1518

<b>RESISTORS</b>			
.31	<del>R1</del> R1, 10	14519	100Ω, 5W, 10%
	I1		
.35	R2	14319	0.5Ω, 10W, 10%
.18	R3	10886	390Ω, 1W, 10%
.35	R4	14320	15Ω, 10W, 10%
.18	R5, 6, 7, 8	10845	220KΩ, 1W, 10%
.31	R9	10979	1MΩ, 2W, 10%
.31	R12	10980	560KΩ, 2W, 10%
.08	R13	10414	1.8KΩ, 1/2W, 10%
.08	R14	10410	100KΩ, 1/2W, 10%
	<del>R1</del> R1	4306	50Ω 10W 10%

<b>RELAYS</b>			
14.16	RY	39009	relay

<b>SWITCHES</b>			
.35	S1	62000	switch, slide, DPDT

<b>TERMINAL BOARDS</b>			
.10	TB1, 9	54003	2 post
.10	TB2, 4, 10	54018	4 post w/ground
.10	TB3, 5, 7	54008	4 post
.10	TB6	54006	3 post, 2 right
.10	TB8	54004	2 post w/ground

<b>TRANSFORMERS</b>			
19.40	T1	35083	transformer, toroid
23.00	T2	30083	transformer, power

<b>SOCKETS &amp; HOLDERS</b>			
.99	XF1, 2, 3	97085	fuseholder
.42	XQ1	97082	socket, transistor

PRICE EACH	SYM. #	STOCK#	DESCRIPTION
<b>MISCELLANEOUS COMPONENTS &amp; HARDWARE</b>			
.01	40000		nut, #6-32 hex (25)
.01	40007		nut, #4-40 hex (4)
.04	40011		nut, wing, #10-32 (2)
.01	40012		nut, #10-32 hex (4)
.07	40016		nut, 1/2-24 (3)
.04	40034		nut, Tinnerman #4 (2)
.01	41000		screw, #6-32 x 1/4, B. H. (22)
.01	41002		screw, #6 x 3/8, P. K. (10)
.01	41008		screw, #6-32 x 1/2 (2)
.02	41013		screw, #10-32 x 1 (2)
.01	41014		screw, #6-32 x 3/8, B. H. (2)
.01	41016		screw, #4-40 x 1/4, B. H. (6)
.02	41101		screw, #6-32 x 1, B. H. (1)
.01	42002		washer, lock #6 (25)
.01	42003		washer, fibre #6 (4)
.01	42004		washer, lock, #10 (2)
.01	42005		washer, flat, #6 (5)
.01	42007		washer, lock, #4 (4)
.61	<del>42008</del>		<del>washer, lock, #8 (4)</del>
.01	42011		washer, flat, #10 (6)
.02	42013		washer, fibre shoulder, #10 (2)
.01	42014		washer, black fibre, #10 (1)
.01	42015		washer, red fibre, #10 (1)
.03	42029		washer, rubber, 1/2" ID (3)
.11	42048		washer, mica, insulator (1)
.05	42073		washer, toroid (2)
.03	42074		washer, mica (TO-36) (2)
.03	42075		washer, round mica (TO-36) (2)
.06	42076		washer, fibre (TO-36) (2)
.02	43000		lug, ground, #6 (1)
.02	43006		lug, ground, #4 (1)
.02	43021		lug, ground, #10 (4)
.05	46019		feet, rubber (4)
.02/ft.	58002		wire, #22 stranded, black (4 ft.)
.02/ft.	58039		wire, #22 stranded, brown (1-1/2 ft.)
.02/ft.	58040		wire, #22 stranded, red (3-1/2 ft.)
.02/ft.	58041		wire, #22 stranded, orange (3 ft.)
.02/ft.	58042		wire, #22 stranded, yellow (2-1/2 ft.)
.02/ft.	58059		wire, #22 stranded, green (2 ft.)
.04/ft.	58064		wire, #12 stranded (3 ft.)
.09/ft.	58300		spaghetti (1/2 ft.)
2.85	80190		panel (1)
.25	81215		bracket, "L", mounting (2)
2.20	81454		heat sink (1)
3.85	81470		chassis (1)
11.00	81471		cover (1)
.40	81473		bracket, right (1)
.40	81474		bracket, left (1)
1.15	81475		shield (1)
.10	89749		silicone grease (3)
.75	66168		Operating Manual (1)
.75	66403		Assembly Manual (1)
	40057		NUT 8-32 KEP (4)
	41086		SCREW 6-32 x 5-16 B. H. (4)

To order replacement parts, specify description and part number. Remittance must be made with order, and include \$1.00 for mailing and handling with each order (\$1.50 for each transformer if order includes 1 or more output or power transformers). Prices subject to change without notice.