

# Stancor 40-P Transmitter

A THREE STAGE 40 WATT PHONE-CW TRANSMITTER

## SPECIFICATIONS

Type of Emission.....A1 — A3  
Output Circuit.....Low Impedance Two-Wire Line  
Power Input to Final.....40 Watts  
Frequency Range.....1.7 - 30 Megacycles  
Frequency Control.....Quartz Plate  
Power Consumption..275 V.A. @ 115 Volts 60 Cycles  
Dimensions.....Chassis 17" x 10" x 3"  
Weight—For Relay Rack Mounting.....42 Lbs.

The Stancor 40-P is a high performance radiophone-radio telegraph transmitter of 40 watts input, using inexpensive components, entirely self-contained on a single chassis.

A simple straight-forward circuit is used consisting of a 6J5G crystal oscillator, 6L6G buffer-doubler and a TZ20 Class C amplifier. Three tuned circuits employing one hand-wound coil and two manufactured air wound plug-in coils are used, giving a variety of crystal controlled output frequency combinations. Harmonic operation from amateur crystals is available. Rated input is obtained on all bands from 1.7 to 30 megacycles.

The audio section consists of a high gain 6SJ7 input tube, a 6N7 driver and two 6L6's in Class AB1 as modulators. A low level output microphone, such as a crystal type, may be used. The speech amplifier and modulator has sufficient output to fully modulate (100 per cent) the Class C radio frequency amplifier operating at 40 watts input. The clean, crisp quality of the speech increases the performance of this transmitter.

A heavy-duty power supply using a 5Z3 rectifier furnishes the various voltages required. All metering is done in the negative return of the high voltage using a meter switching system. A separate filament transformer permits pre-heating of all filaments for instantaneous operation of the transmitter when standing by.

Break-in CW operation is available on the 40-P as the crystal cathode circuit may be opened by a key plugged into a jack on the rear apron of the chassis.

Putting the 40-P transmitter on the air is an extremely easy matter as the flexibility of its tuned circuits permits the user, regardless of experience, to tune the transmitter with ease. For example, if 20 meter operation is desired, a 40 meter crystal is plugged into the crystal socket. A 40 meter hand wound coil is plugged into the oscillator plate circuit. A 20 meter center-linked coil is plugged into the next stage as it will now be operating as a doubler. The final amplifier stage will also use a 20 meter coil.

The tuning-up process is conventional. The meter switch is turned to the left position to read crystal current. The oscillator tank condenser is tuned to resonance and indication is noted in the meter as a slight increase in current; this reading being about 25 MA. The meter switch is now turned to the center position and the doubler tank condenser rotated until minimum current is noted in meter. This should be about 35 MA. The right-hand position of meter switch reads final plate current. The final tank condenser is turned to resonance which is indicated by a minimum dip in plate current. It should read about 10 MA. with no load. Under load the final plate current should be 80 MA. This is 40 watts input to the final. "Straight through" crystal operation may also be used. In this instance, the 6L6 tube acts as a straight buffer and must be neutralized in the normal manner. A special baffle shield is required to isolate L1, the crystal stage, from L2 the buffer-doubler stage.

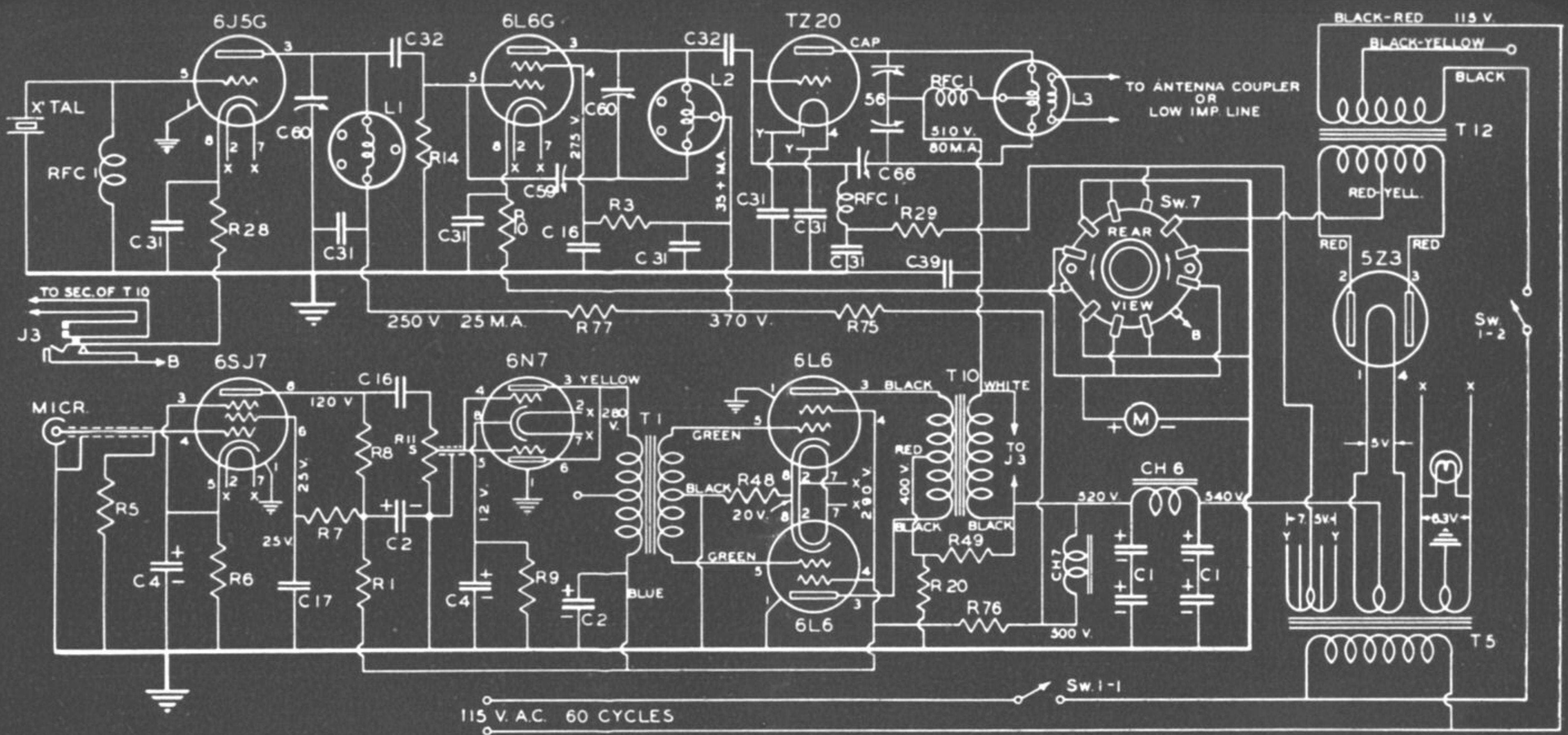
The speech and modulator tube filaments are turned on for phone operation and off for CW operation by means of the switch on the gain control (R11S).

The 40-P will fill many needs of the amateur. It will be useful in congested areas where higher powered transmitters would cause interference to other radio services. It may be installed in place of a high power transmitter to cut construction and operating expense, where high power is not needed to carry on efficient communication.

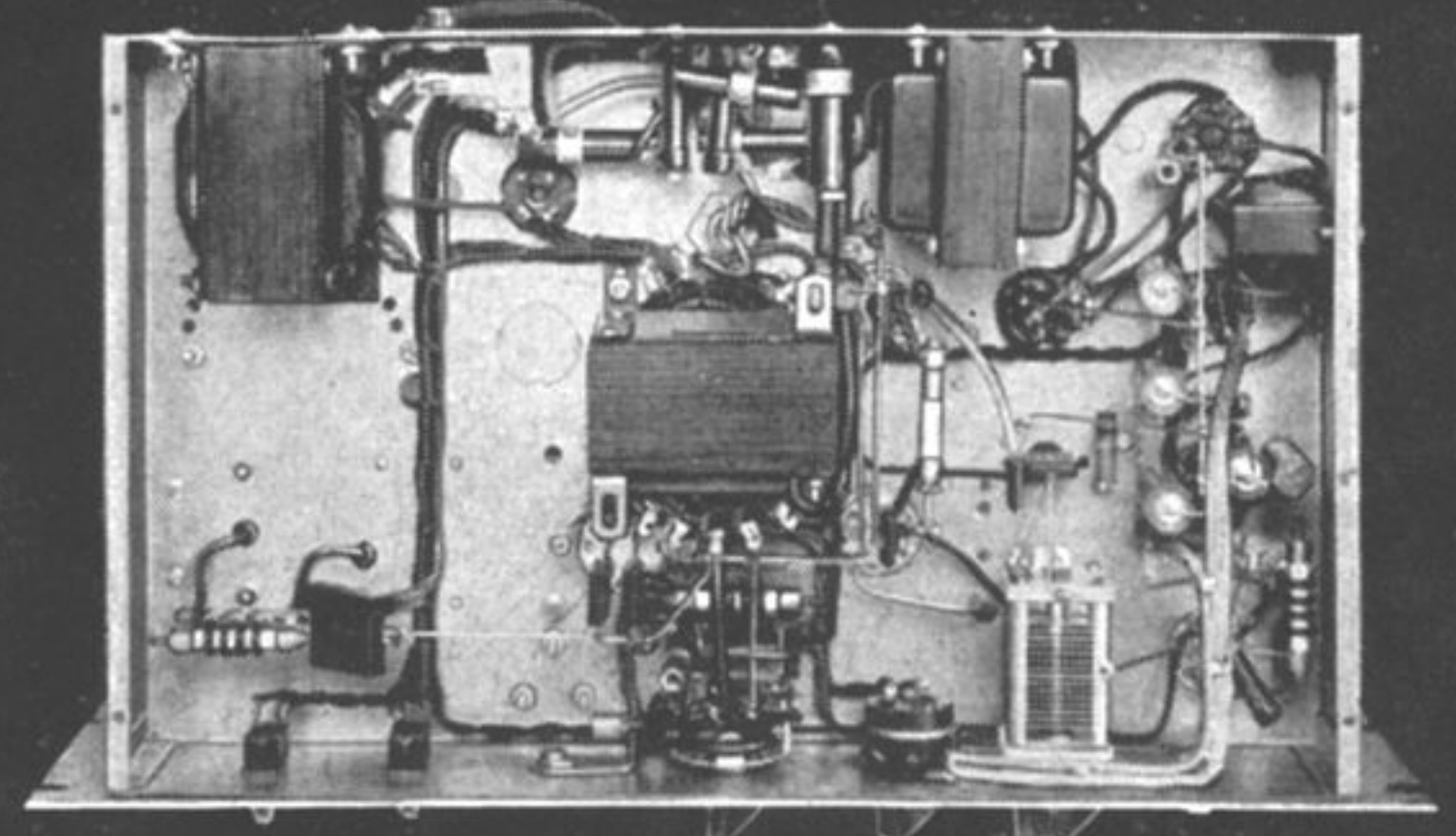
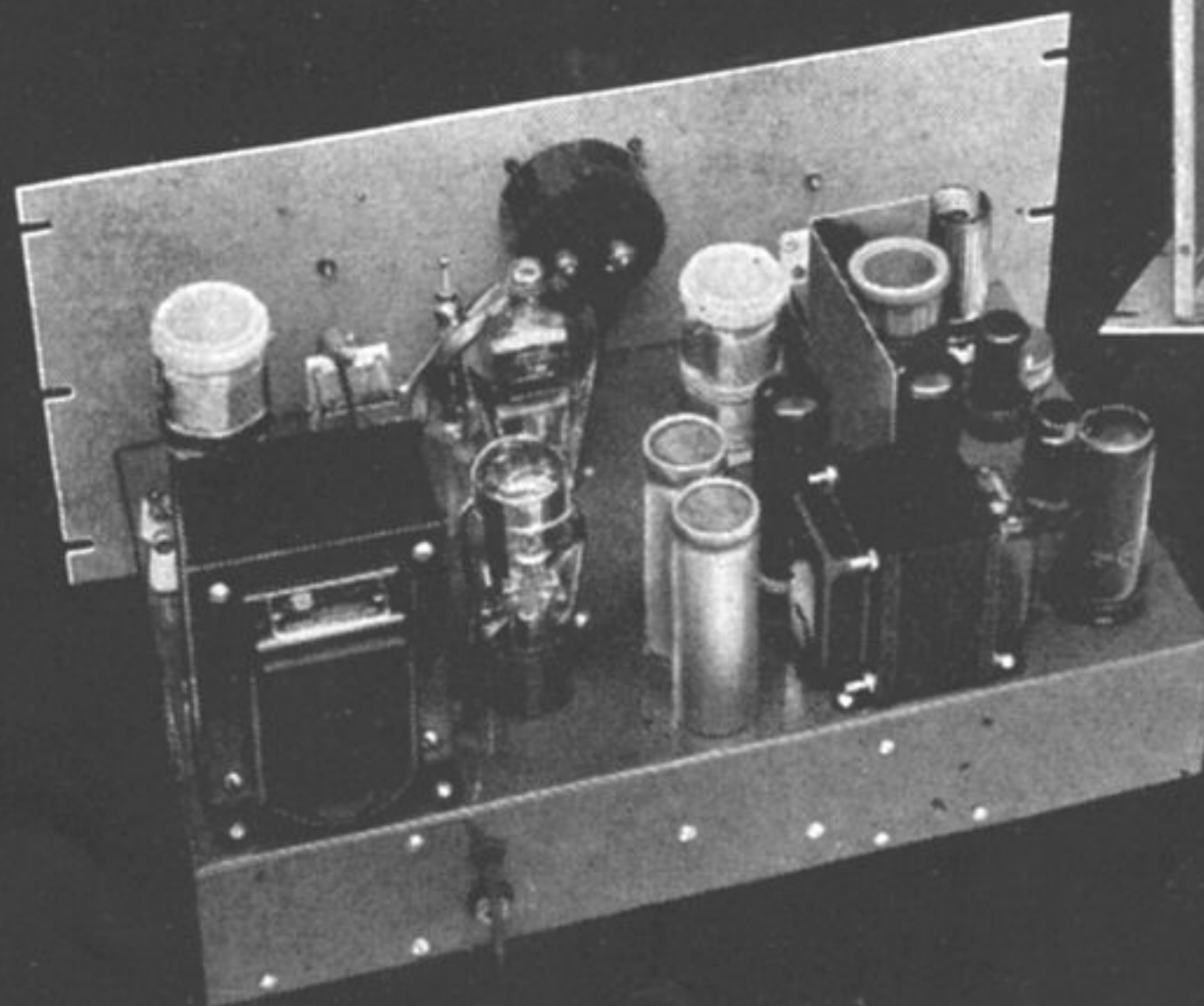
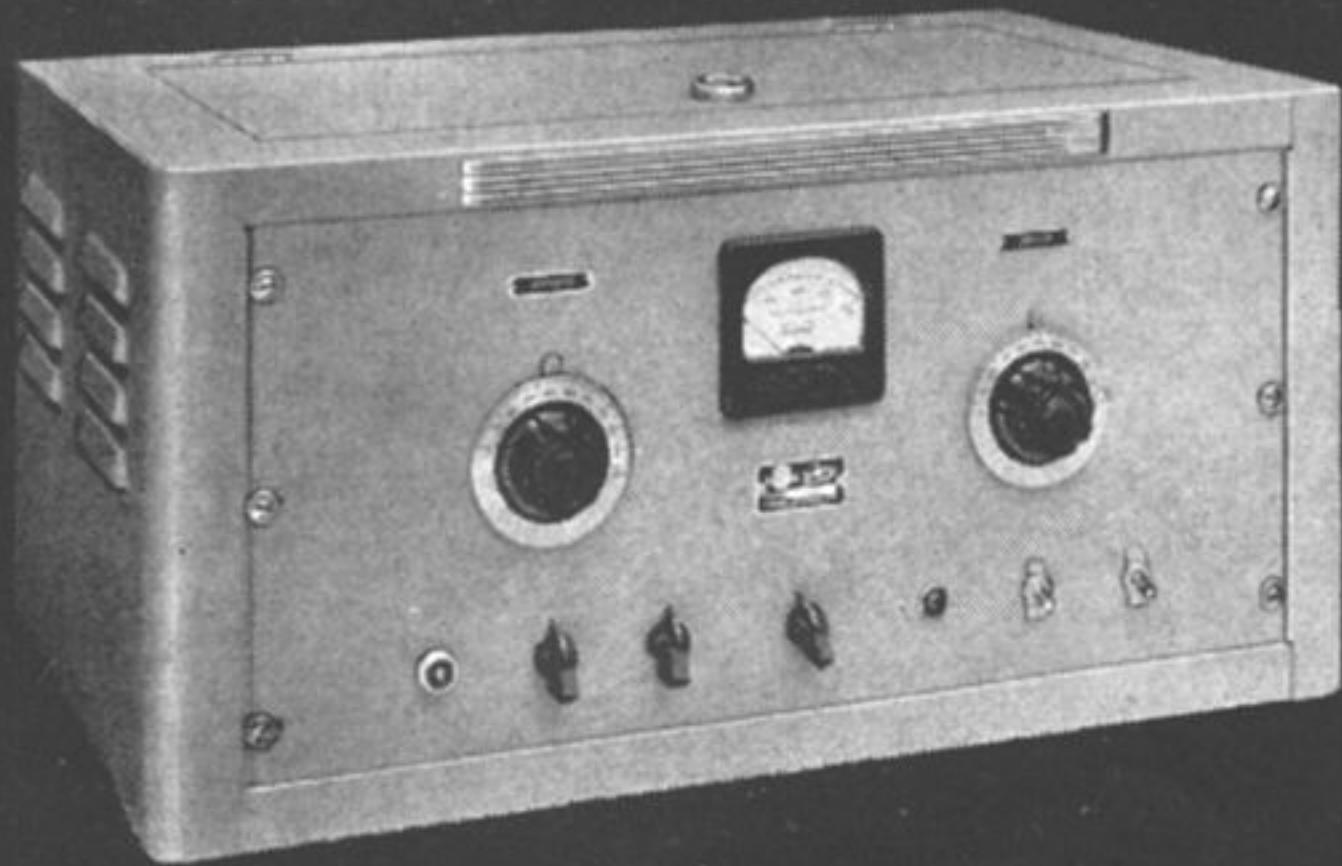
The complete transmitter is assembled on a 17" x 10" x 3" standard chassis, with a 19" x 8<sup>3</sup>/<sub>4</sub>" standard slate gray panel. This assembly allows for relay rack or single section cabinet mounting.

*This transmitter available as a kit from your Stancor Jobber*





ALL VOLTAGES MEASURED TO GROUND, 1000 $\Omega$  PER VOLT METER.



## Components

### CONDENSERS

No.	Quan.	Cap.	Voltage	Description
C 1	2	8-8 mfd.	450	can electrolytic
C 2	2	4 mfd.	450	tub. electrolytic
C 4	2	10 mfd.	25	tub. electrolytic
C 16	2	.01 mfd.	400	tubular paper
C 17	1	.1 mfd.	400	tubular paper
C 31	7	.002 mfd.	500	mica
C 32	2	.0001 mfd.	500	mica
C 39	1	.001 mfd.	1000	mica
C 56	1	100-100 mmfd.	900	dual variable
C 59	1	.5-5 mmfd.		neut. variable
C 60	2	100 mmfd.	1000	midget variable
C 66	1	1.5-8.5 mmfd.		neut. variable

### RESISTORS

No.	Quan.	Resistance	Watts	Description
R 1	1	50,000 ohms	1	carbon
R 3	1	25,000 ohms	10	wirewound
R 5	1	5 megohms	1/2	carbon
R 6	1	3,000 ohms	1/2	carbon
R 7	1	2 megohms	1	carbon
R 8	1	250,000 ohms	1	carbon
R 9	1	1,000 ohms	1/2	carbon
R 10	1	200 ohms	10	wirewound
R 11S	1	500,000 ohms		pot. with switch
R 14	1	100,000 ohms	1	carbon

No.	Quan.	Resistance	Watts	Description
R 20	1	40,000 ohms	10	wirewound
R 28	1	2,500 ohms	10	wirewound
R 29	1	3,000 ohms	1	carbon
R 48	1	250 ohms	10	wirewound
R 49	1	1,000 ohms	20	wirewound
R 75	1	2,000 ohms	20	wirewound
R 76	1	15,000 ohms	10	wirewound
R 77	1	5,000 ohms	10	wirewound

### STANCOR

No.	Stancor	Description	Net Each
T 1	A 4712	Driver transformer	\$0.84
T 5	P 6333	Multiple filament transformer	2.55
T 10	A 3873	Modulation transformer	3.00
T 12	P 4024	Plate transformer	5.40
CH 6	C 1702	Swinging choke	2.25
CH 7	C 1420	Filter choke	1.35
B 2		Standardized chassis	1.95
B 10		Baffle Shield	0.33
F 2		Standardized panel	1.44

### MISCELLANEOUS

No.	Quan.	Description
RFC 1	3	2.5 mh. 125 ma. r.f. choke
J 3	1	two cir. control jack with washers
SW 1	2	s.p.s.t. toggle switch
SW 7	1	3 pos. 3 cir. ceramic switch
	1	crystal socket (midget)
	1	microphone input cable connector
	1	pilot light socket green jewel

No.	Quan.	Description
	3	5 pr. steatite sockets with flange
	1	4 prong steatite socket
	2	octal steatite sockets
	4	octal bakelite sockets
	1	4 prong bakelite socket
	3	1 1/4" black bar knobs
	2	2 3/4" dials with markers
	1	"Buffer" nameplate
	1	"Amplifier" nameplate
	1	6 ft. cord and plug assembly
	2	standoff insulators
	2	thru-point bushings
	1	pilot bulb (Brown Bead No. 40)
	1	roll hook-up wire
	1	kit hardware (see page 47)

Approximate net price (less accessories) **\$42.50**

### ACCESSORIES

Unit	Description	Net
Coils L 1	Plug-in 5 prong coil form	ea. \$0.24
L 2	5 pr. C.T. plug-in coil	ea. \$0.75 to 1.05
L 3	5 pr. C.L. plug-in coil	ea. .75 to 1.05
Meter	0-100 D.C. milliammeter	ea. 3.75
Crystal	Popular Crystals	\$1.50- 4.80
Cabinet	DeLuxe single section rack	ea. 7.50
	Standard single section rack	ea. 4.80
Tubes	1-6J5G, 1-6L6G, 1-TZ20, 1-6SJ7, 1-6N7, 2-6L6, 1-5Z3	set 7.56



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

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