Porto Products, Inc.

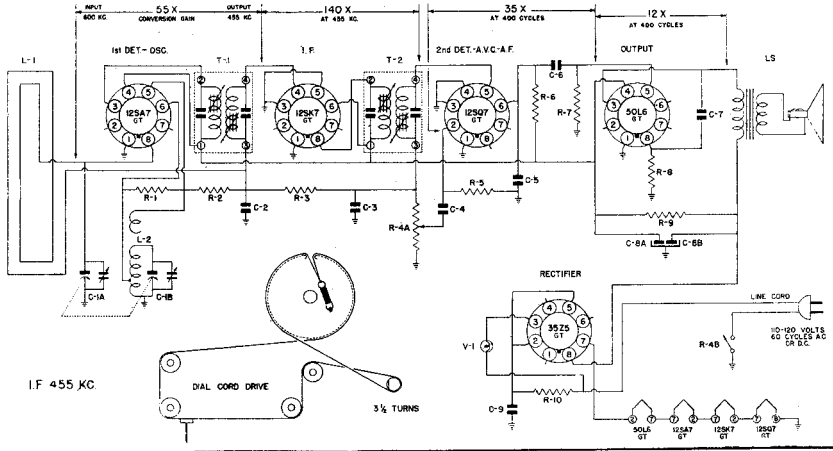
	Model: PB-520	**Chassis:**	**Year:** Pre 1950
	Power:	**Circuit:**	**IF:**
	Tubes:		
	Bands:		

Resources

Riders 18 (XVIII) PORTO-PROD 18-1

Riders 18 (XVIII) PORTO-PROD 18-2

PORTO-PRODUCTS, INC. MODELS PA-510, PB-520



DUMMY ANT. IN SERIES WITH SIGNAL GENERATOR	CONNECT HIGH SIDE OF GENERATOR TO	SIGNAL GENERATOR FREQUENCY	RECEIVER DIAL SETTING	TRIMMER NUMBER	TRIMMER DESCRIPTION	TYPE OF ADJUSTMENT
.1 MFD.	Lug on trimmer No. 6 on rear section of gang (see figure below for location of trimmer.)	455 KC	Any point where it does not affect the signal.	1 - 2	2nd I.F.	Adjust for maximum output. Then repeat adjustment.
				3 - 4	1st I.F.	
LOOP	Radiation to set loop	1400 KC	1400 KC	5	Broadcast Oscillator	Adjust for maximum output
LOOP	Radiation to set loop	1400 KC	Tune to 1400 KC generator signal.	6	Broadcast Antenna	Adjust for maximum output.

APPROXIMATE STAGE GAIN DATA

Be sure R.F. and I.F. stages are accurately aligned before measuring gain. R.F. gains can be measured with a "channel" type instrument containing a tuned and calibrated R.F. amplifier. A vacuum tube voltmeter may be used for audio gain measurements. Observe following precautions:

1. For all gain measurements connect signal generator as shown. Use 600 KC signal with 400 cycles modulation (use nearby frequency if local station interferes.)

2. For R.F. and I.F. measurements connect negative terminal of a 3-volt battery (two 1½ volt cells in series) to A.V.C. lead and positive terminal to chassis. This provides a definite operating point.

3. Be sure radio is carefully tuned to generator signal (use weak signal for sharp tuning.)

4. When using a "channel" type instrument carefully tune it for maximum output at desired frequency before making measurements.

The R.F. and I.F. stage gains shown below are less than under normal operating conditions due to the use of 3 volts fixed bias in order to establish a definite operating point. Therefore, these values are not intended to indicate the full capacity of a stage.

Differences in tube characteristics, tolerance of parts, adjustment of tuned circuits, and variations of line voltage will influence stage gain. Accuracy of measurements is dependent upon careful tuning of receiver to generator signal and experience in using your test equipment. These factors may create considerable variation in gain measurements.

ALIGNMENT PROCEDURE

1. Remove chassis and loop from cabinet.

2. With the gang condenser fully meshed, dial pointer should be in the position indicated by the last division below 55 on the dial. If it is set incorrectly, release pointer clip on dial and reposition pointer.

3. Connect an output meter across the speaker voice coil or from the plate of the 50L6GT tube to chassis through a .1 Mfd. condenser.

4. Connect the ground lead of the signal generator to the receiver chassis through a .25 Mfd. condenser.

5. Set volume control at maximum volume position and use a weak signal from the signal generator.

MODELS PA-510, PB-520 PORTO-PRODUCTS, INC.

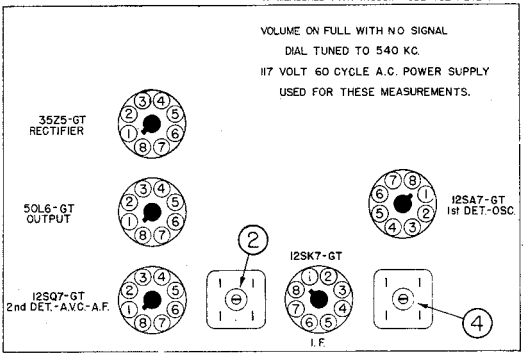
SOCKET VOLTAGES

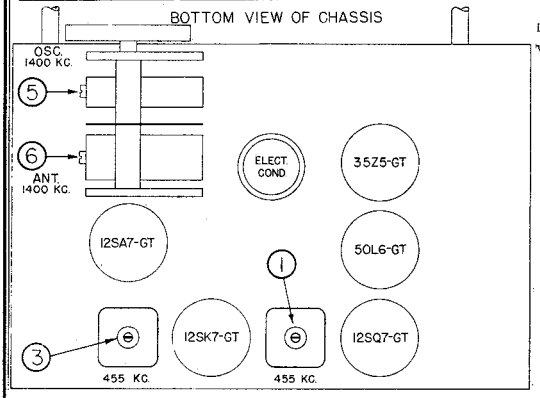
HEATER VOLTAGES MEASURED ACROSS SOCKET TERMINALS.

VOLTAGES MEASURED BETWEEN SOCKET TERMINALS & CHASSIS

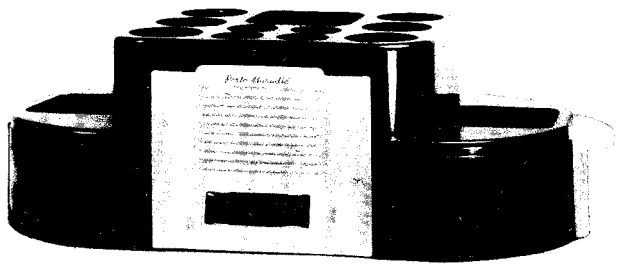
TERM NO.	TO	TERM NO.	A.C. VOLTS	TUBE TYPE	SOCKET TERMINAL NO. 1	2	3	4	5	6	8
2	-	7	12	12SA7-GT	0		75	75	-8.7 *	0	-0.7 *
2	-	7	12	12SK7-GT	0		0	-0.7 *	0	75	75
7	-	8	12	12SQ7-GT	0	-1 *	0	-0.7 *	0	50 *	
2	-	7	50	50L6-GT			115	75	0		45
2	-	7	31	35Z5-GT					115 A.C.		125
2	-	3	5.6								

*- MEASURED WITH VACUUM TUBE VOLTMETER.





TOP VIEW OF CHASSIS



PARTS LIST

Diagram No.	Part No.	Description
		CONDENSERS
C-1A, 1B	6-6	Condenser—variable gang (with drum)
C-2		Condenser—.05 Mfd. 200 volt
C-3		Condenser—mica 250 Mmfd. 500 volt
C-4		Condenser—.01 Mfd. 200 volt
C-5		Condenser—mica 250 Mmfd. 500 volt
C-6		Condenser—.01 Mfd. 200 volt
C-7		Condenser—.02 Mfd. 400 volt
C-8A, 8B	3-3	Condenser-electrolytic A—20 Mfd. 150 volt B—40 Mfd. 150 volt
C-9		Condenser—.1 Mfd. 200 volt
		RESISTORS
R-1		Resistor—carbon 10,000 ohms ½ watt
R-2		Resistor—carbon 10 Meg. ½ watt
R-3		Resistor—carbon 2 Meg. ½ watt
R-4A, 4B		Volume control—with switch; .5 Meg
R-5		Resistor—carbon 10 Meg. ½ watt
R-6		Resistor—carbon 500,000 ohms ½ watt
R-7		Resistor—carbon 500,000 ohms ½ watt
R-8		Resistor—carbon 150 ohms ½ watt
R-9		Resistor—carbon 2000 ohms 1 watt
R-10		Resistor—carbon 10 ohms ½ watt
		COILS AND TRANSFORMERS
L-1	13-3	Loop antenna
L-2	14-4	Coil—Oscillator
T-1	15-3	Transformer—1st I.F.
T-2	15-3	Transformer—2nd I.F.
		OTHER ELECTRICAL PARTS
L-S	8-11	Speaker—P.M. dynamic (4-inch) with output transformer
V-1		Lamp—dial (Mazda 47) 6-8V. 150 Ma.
	18-2	Line cord with plugs
		Cone and voice coil for speaker
	2-18	Base for mtg. electrolytic condenser
		Cabinet—walnut (model PB 520)
		Cabinet—ivory (model PB 510)
		Clip—for mtg. handle
		Clip—for mtg. escutcheon
		Cord—dial drive (10 in. required) per ft
	7-11	Dial scale
		Dial scale backing
		Escutcheon—ivory (model PB 520)
		Escutcheon—gold (model PB 510)
		Handle—ivory (model PB 520)
		Handle—gold (model PB 510)
	36-23	Knob—ivory (model PB 520)
	36-23	Knob—gold (model PB 510)
	2-36	Pointer
		Retaining ring for tuning shaft
		Shaft—tuning control
	22-1	Socket—octal base—specify molded or laminated
	22-12	Socket—for line cord
		Socket—dial lamp
	17-1	Spring—dial cord tension
	2-20	Washer—spring washer for tuning shaft
	7-13	Window—dial