

## Galvin Mfg. Co.

**Model: 65X13A**

**Chassis:**

**Year: Pre 1948**

**Power:**

**Circuit:**

**IF:**

**Tubes:**

**Bands:**

### Resources

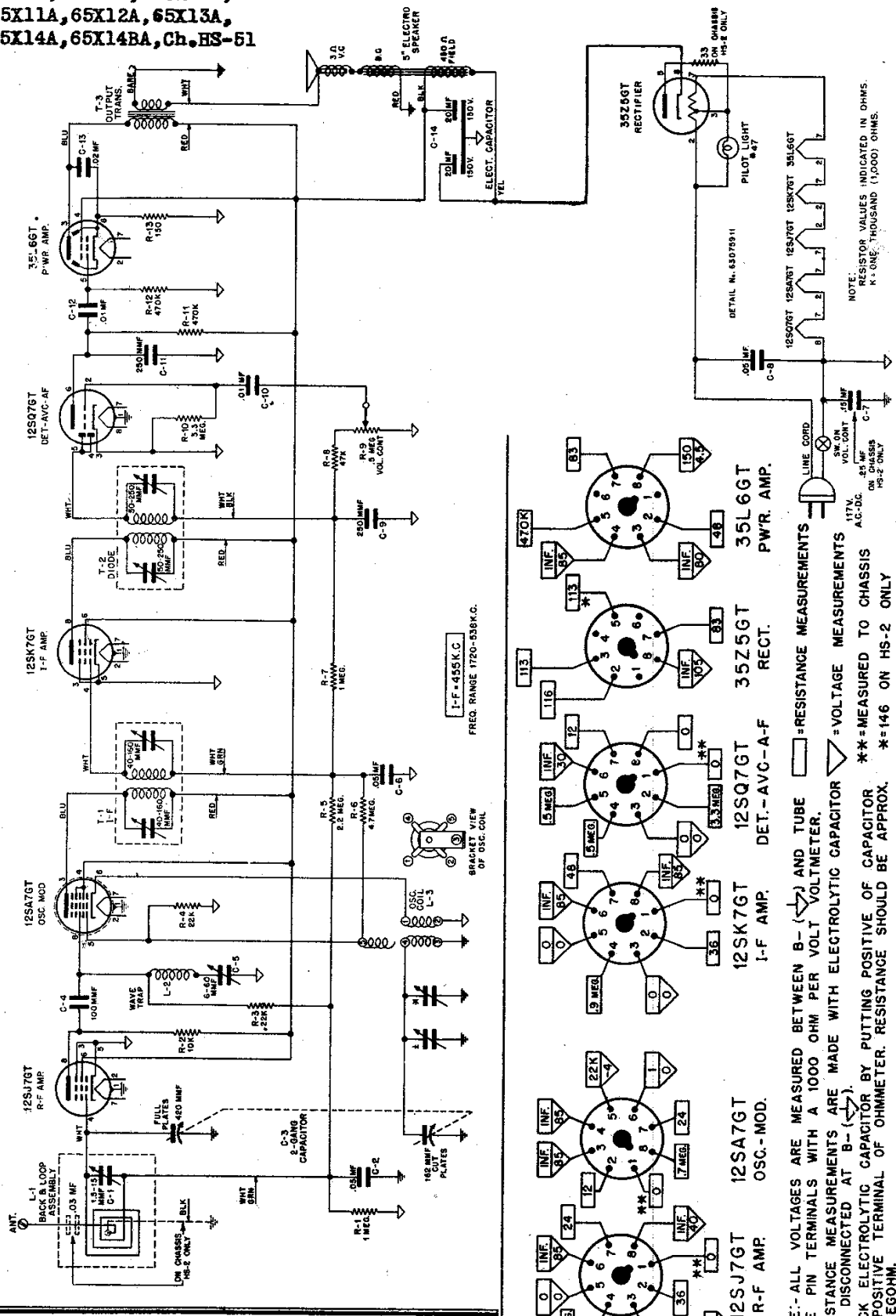
[Riders Volume 15 - MOTOROLA 15-66](#)

[Riders Volume 15 - MOTOROLA 15-67](#)

[Riders Volume 15 - MOTOROLA 15-68](#)

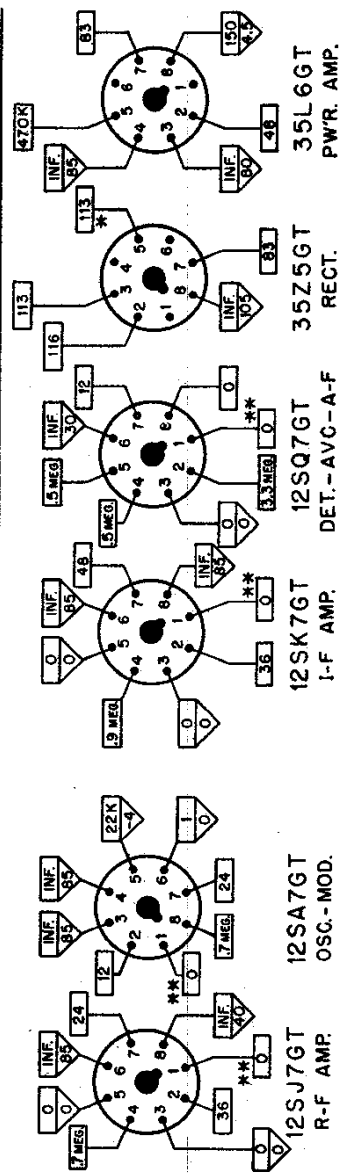
[Riders Volume 15 - MOTOROLA 15-69](#)

MODELS 65X11, 65X12, 65X13, GALVIN MFG. CORP.  
 65X14, 65X14B, Ch. HS-2;  
 65X11A, 65X12A, 65X13A,  
 65X14A, 65X14BA, Ch. HS-51



I.F. = 455 K.C.  
 FREQ. RANGE 1720-538 K.C.

BRACKET VIEW OF OSC. COIL



BOTTOM VIEW OF CHASSIS

NOTE: - ALL VOLTAGES ARE MEASURED BETWEEN B- (↙) AND TUBE BASE PIN TERMINALS WITH A 1000 OHM PER VOLT VOLTMETER.  
 RESISTANCE MEASUREMENTS ARE MADE WITH ELECTROLYTIC CAPACITOR \*\* = VOLTAGE MEASUREMENTS  
 C-14 DISCONNECTED AT B- (↙).  
 CHECK ELECTROLYTIC CAPACITOR BY PUTTING POSITIVE OF CAPACITOR TO POSITIVE TERMINAL OF OHMMETER. RESISTANCE SHOULD BE APPROX. .5 MEGOHM.  
 \* = 146 ON HS-2 ONLY

NOTE: RESISTOR VALUES INDICATED IN OHMS.  
 K = ONE THOUSAND (1,000) OHMS.

GALVIN MFG. CORP.

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65X14, 65X14B, Ch. HS-2;  
65X11A, 65X12A, 65X13A,  
65X14A, 65X14BA, Ch. HS-51

ALIGNMENT PROCEDURE

Connect output meter across speaker voice coil (.38V = .05 watt)  
Volume control set at maximum for all operations.  
The adjusting screwdriver or alignment tool should be of the  
insulated type, such as Motorola Part No. 66A71008

OPERATION IN ORDER	GANG CAPACITOR SET AT	DUMMY ANTENNA	GENERATOR CONNECTED TO	ADJUST TRIMMER NO.	GENERATOR SET AT (400 $\sim$ 30% VOLT INPUT FOR MODULATED)	AVERAGE MICRO-VOLTS INPUT FOR .38V OUTPUT
1. Align I.F.'s for maximum	Minimum	.1 mf	Osc.-Mod. grid	T-1 & T-2 (2 trimmers on each)	455 Kc	4000 Microvolts to I. F. Grid
2. Adj. wave-trap for minimum response	Minimum	.1 mf	R.F. Grid	C-5	455 Kc	-----
3. Set Oscillator to dial scale	Minimum	None	Radiation Loop*	C-3	1720 Kc	-----
4. Align R.F. for maximum	1400 Kc	None	Radiation Loop*	C-1 (on loop) Should be adjusted with set in cabinet	1400 Kc	60 microvolts to Osc.-Mod. grid through .1 mf. dummy. 5.5 microvolts to R.F. grid through .1 mf dummy

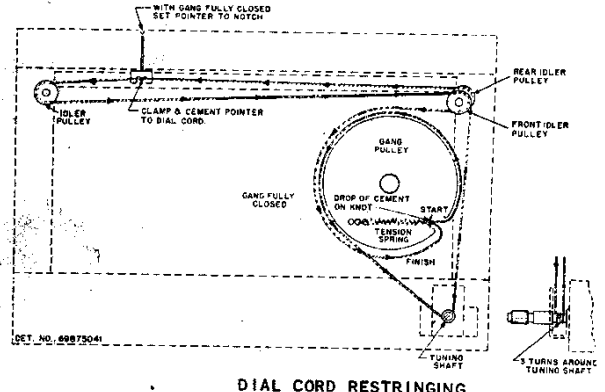
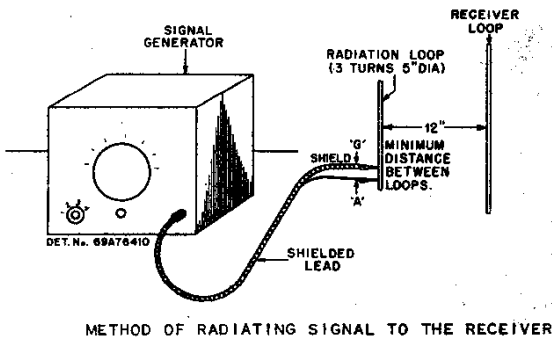
5. Repeat above steps for maximum accuracy.

.31 volt at 400  $\sim$   
to 1st A.F. grid.

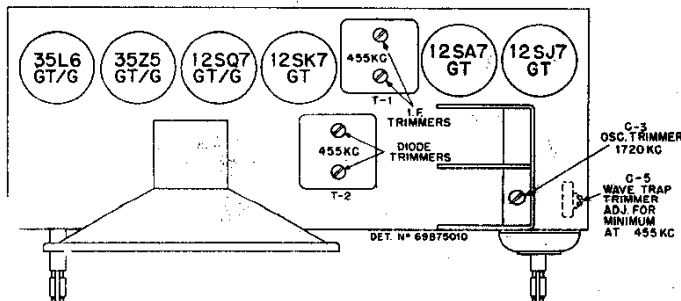
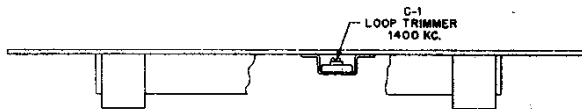
\* Connect output of signal generator to a 5" diameter 3 turn loop. See Fig. 2. With volume control on full, bring loop close enough to receiver loop until an output of 50 milliwatts is obtained (.38V on output meter). The distance between loops should never be less than 12" Vary distance between generator and receiver loops or adjust generator output to maintain .38V output during alignment.

TO REPLACE DIAL CORD:

1. Remove loop from cabinet (see instruction on loop back).
2. Remove chassis from cabinet by pulling the knobs off and unscrewing the three chassis retaining screws from the bottom.
3. Remove the old dial cord and replace with a new piece of 18 lb. cord. See Figure 1 for procedure.
4. With the gang fully closed, set pointer to left hand notch of dial background and clamp to cord. In clamping, be careful not to cut the cord.
5. Secure the pointer to cord and dial cord knot with a drop of cement.
6. Reassemble by working in reverse order.



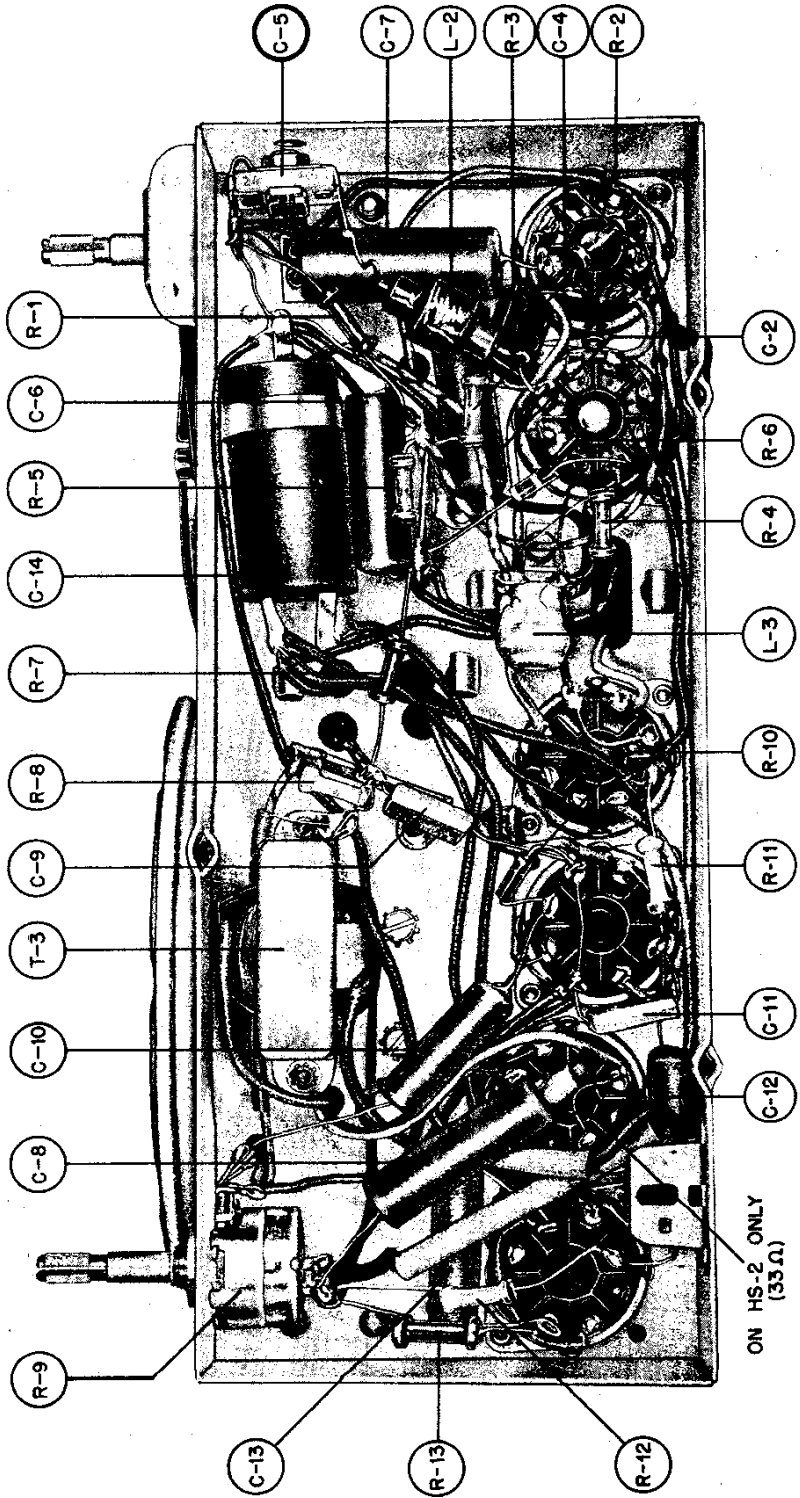
DIAL CORD RESTRINGING



TUBE AND TRIMMER LOCATION

MODELS 65X11, 65X12, 65X13,  
 65X14, 65X14B, Ch. HS-2;  
 65X11A, 65X12A, 65X13A,  
 65X14A, 65X14BA, Ch. HS-51

GALVIN MFG. CORP.



BOTTOM VIEW OF CHASSIS

This receiver is a 6 tube AC-DC superheterodyne, with a self contained loop antenna and a stage of R.F. amplification. The frequency range is 538 to 1720 kc and the I.F. frequency is 455 kc.  
 POWER INPUT: 117 V. AC-DC, 30 WATTS.

GALVIN MFG. CORP.

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65X11A, 65X12A, 65X13A,  
65X14A, 65X14BA, Ch. HS-51

REF. NO.	PART NO.	DESCRIPTION	LIST	REF. NO.	PART NO.	DESCRIPTION	LIST
C-1	20A18740	Capacitor, trimmer: 1.5-15 mmf; includes *U* mounting bracket	.30	L-1	1X70002	Cabinet back & Loop assembly (65X11)	2.40
C-2	899805	Capacitor, fixed; paper: .05 mf 20% 100 vdc	.20		1X70005	Cabinet back & Loop assembly (65X12)	2.75
C-3	1X28949	Capacitor, variable: 2 gang, cut oscillator plates: includes pulley	3.55		1X70014	Cabinet back & Loop assembly (65X13)	2.65
C-4	21R8641	Capacitor, fixed; mica: 100 mf 20% 500 vdc	.25		1X71739	Cabinet back & Loop assembly (65X14)	2.85
C-5	20A26941	Capacitor, trimmer: 6-80 mmf; includes *U* mounting bracket	.30		1X71776	Cabinet back & Loop assembly (65X14B)	2.85
C-6	899805	Capacitor, fixed; paper: .05 mf 20% 100 vdc	.20		1X74456	Cabinet back & Loop assembly (65X11-A)	2.50
C-7	8A72886	Capacitor, fixed; paper: .15 mf 20% 200 vdc (HS-51)	.25		1X74459	Cabinet back & Loop assembly (65X12-A)	2.50
	or 8A75508	Capacitor, fixed; paper: .15 mf 20% 400 vdc (HS-51)			1X74461	Cabinet back & Loop assembly (65X13-A)	2.45
	or 899810	Capacitor, fixed; paper: .25 mf 20% 100 vdc (HS-2)	.25		1X74464	Cabinet back & Loop assembly (65X14-A)	2.35
C-8	899816	Capacitor, fixed; paper: .05 mf 20% 400 vdc	.20		1X74467	Cabinet back & Loop assembly (65X14-BA)	2.45
C-9	21R8648	Capacitor, fixed; mica: 250 mf 20% 500 vdc	.20	L-2	24A21858	Coll. wave trap	.40
C-10	899801	Capacitor, fixed; paper: .01 mf 20% 100 vdc	.15	L-3	24A22842	Coll. oscillator	.40
C-11	21R8648	Capacitor, fixed; mica: 250 mmf 20% 500 vdc	.20	R-1	6R6071	Resistor, fixed; carbon: 1 meg. 20% 1/3W N.I.	doz. .60
C-12	899825	Capacitor, fixed; paper: .01 mf 20% 200 vdc	.15	R-2	6R6113	Resistor, fixed; carbon: 10,000 20% 1/3W N.I.	doz. .80
C-13	899802	Capacitor, fixed; paper: .02 mf 20% 400 vdc	.20	R-3	6R6050	Resistor, fixed; carbon: 22,000 20% 1/3W N.I.	doz. .60
C-14	23A70008	Capacitor, electrolytic: 20-20 mf 150 WV; with mounting strap	1.40	R-4	6R6050	Resistor, fixed; carbon: 23,000 20% 1/3W N.I.	doz. .60
	20A14618	Capacitor, dual trimmer: 40-160 mmf each section (In IF can)	.35	R-5	6R6049	Resistor, fixed; carbon: 2.2 meg 20% 1/3W N.I.	doz. .60
	or 20A72759	Capacitor, dual trimmer: 40-160 mmf each section (In IF can)	.35	R-6	6R6448	Resistor, fixed; carbon: 4.7 meg 10% 1/2W Ins.	doz. .60
	20X20649	Capacitor, dual trimmer: 50-250 mmf each section (In diode can)	.40	R-7	6R6071	Resistor, fixed; carbon: 1 meg 20% 1/3W N.I.	doz. .60
	or 20A72756	Capacitor, dual trimmer: 50-250 mmf each section (In diode can)	.40	R-8	6R6020	Resistor, fixed; carbon: 47,000 20% 1/3W N.I.	doz. .60
587707	Rivet, steel: 5/32 x .122, Pol. Nkl. (tube socket mtg.)	per/c	.45	R-9	18A14829	Resistor, variable; carbon: .5 meg. with SPST switch	1.00
587716	Rivet, steel: 5/32 x .122, antique cop. (loop mtg. clip and trimmer mtg.)	per/c	.45		or 18A72889	Resistor, variable; carbon: .5 meg. with SPST switch	1.00
587701	Rivet, steel: 3/16 x .122, Pol. Nkl. (tuning shaft brkt. mtg.)	per/c	.45	R-10	6R6118	Resistor, fixed; carbon: 3.3 meg. 20% 1/2W Ins.	doz. .60
5K74560	Rivet, shoulder: .312 shoulder; Pol. Nkl. (cord pulley mtg.)		.30	R-11	6R6011	Resistor, fixed; carbon: 470,000 20% 1/3W N.I.	doz. .60
34B25759	Scale, dial: glass (65X11, 65X11-A, 65X12, 65X12-A, 65X14, 65X14-A, 65X14-B and 65X14-BA)		.45	R-12	6R6011	Resistor, fixed; carbon: 470,000 20% 1/3W N.I.	doz. .60
34B29469	Scale, dial: glass (65X13 & 65X13-A)		.25	R-13	6R6392	Resistor, fixed; carbon: 150 10% 1/2W N.I.	doz. .60
387431	Screw, steel: #2 x 1/4 Ph RH MS; Cop. Ox. (dial scale mtg.) (65X14, 65X14-A, 65X14B & 65X14-BA)	doz.	.20	T-1	1X28948	Transformer, I.F.: 455 Kc; complete with shield and trimmers	1.80
387628	Screw, steel: #8 x 1-1/8 PKZ S1 RH; plain (set mtg. - wood models)	doz.	.30		387628	Screw, steel: #8 x 1-1/8 PKZ S1 RH; plain (set mtg. - wood models)	
47A14856	Shaft, tuning control		.15		47A14856	Shaft, tuning control	.15
26A28283	Shield, tube		.05		26A28283	Shield, tube	.05
60A25758	Socket, dial light: with mtg. clip and leads.		.20		60A25758	Socket, dial light: with mtg. clip and leads.	.20
9A6738	Socket, tube: octal, saddle type		.15		9A6738	Socket, tube: octal, saddle type	.15
50B23173	Speaker, electro: 5 inch	5.20			50B23173	Speaker, electro: 5 inch	5.20
or 50B20653	Speaker, electro: 5 inch	5.20			or 50B20653	Speaker, electro: 5 inch	5.20
287098	Speednut: for .180 round stud (mounts dial scale to escutcheon in 65X13 & 65X13-A)	doz.	.20		287098	Speednut: for .180 round stud (mounts dial scale to escutcheon in 65X13 & 65X13-A)	doz. .20
41A14111	Spring, tension coil (dial cord)	doz.	.25		41A14111	Spring, tension coil (dial cord)	doz. .25
42A70423	Strap, ground (used behind loop screw terminal)	doz.	.25		42A70423	Strap, ground (used behind loop screw terminal)	doz. .25
31A12847	Strip, terminal: .2 ins. lugs, #3 mtg.		.10		31A12847	Strip, terminal: .2 ins. lugs, #3 mtg.	.10
31K15028	Strip, terminal: 2 ins. lugs, #2 mtg.		.05		31K15028	Strip, terminal: 2 ins. lugs, #2 mtg.	.05
29A70422	Terminal, screw (external antenna term. on loop assen.) (Use with ground strap)	doz.	.35		29A70422	Terminal, screw (external antenna term. on loop assen.) (Use with ground strap)	doz. .35
4A70015	Washer, *C* (tuning shaft retain-er)	per/c	.70		4A70015	Washer, *C* (tuning shaft retain-er)	per/c .70
35K19943	Washer, paper: brown (used between knobs and cabinet on dark models)	per/c	.60		35K19943	Washer, paper: brown (used between knobs and cabinet on dark models)	per/c .60
		per/c	.60				

Prices Subject To Change Without Notice