

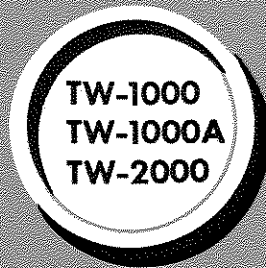


hallicrafters

World-Wide

8-BAND PORTABLE

SERVICE INSTRUCTIONS



TW-1000
TW-1000A
TW-2000

the hallicrafters co.

MANUFACTURERS OF RADIO, TELEVISION AND ELECTRONIC EQUIPMENT, CHICAGO 24, U. S. A.

TECHNICAL SPECIFICATIONS

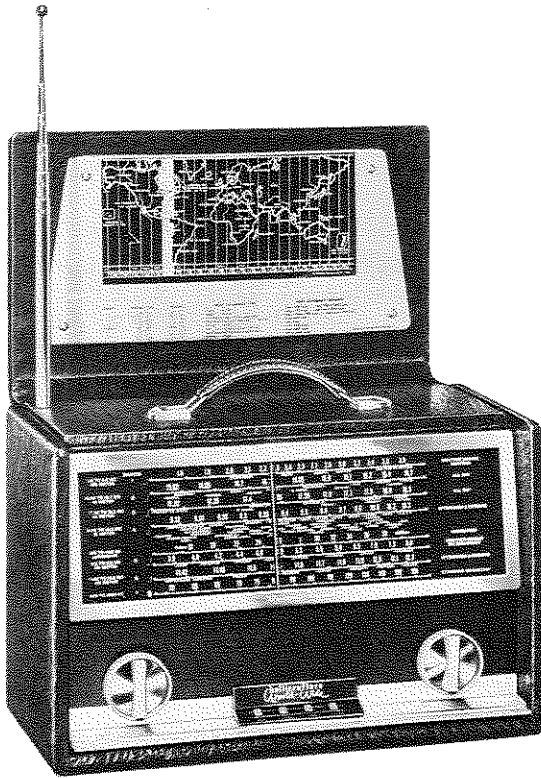


Fig. 1. Models TW-1000 and TW-1000A—Run 1

TUBES AND RECTIFIERS 5 tubes plus 1 selenium rectifier

POWER SUPPLY . . . 105-120 volt DC or 50/60 cycle AC; 90V "B" / 9V "A" battery pack; 220 volt AC/DC with Ballast Adapter 1X1438.

POWER CONSUMPTION 20 watts

SPEAKER 5 X 7 inch oval; 3.2-ohm voice coil

HEADPHONE OUTPUT IMPEDANCE 3.2 ohms

INTERMEDIATE FREQUENCY 455 KC

ANTENNA Stick-loop and *Skyrider for BC and LW bands, whip for SW bands, and terminals for long wire for use on all bands. Note: Front cover loop antenna is used on TW-1000 in place of stick-loop.

* The removable Skyrider antenna provides reception in automobiles, trains, steel constructed buildings, etc. where satisfactory reception is normally impossible. The Skyrider is located on the back cover and has an extension cable and suction cups for window mounting.

FREQUENCY COVERAGE

Band	Frequency Range
1	1.8 - 3.9 MC
2	14.62 - 15.7 MC
3	17.32 - 18.2 MC
4	9.22 - 10.3 MC
5	3.9 - 8.0 MC
6	11.42 - 12.3 MC
7	540 - 1600 KC
LW	180 - 400 KC

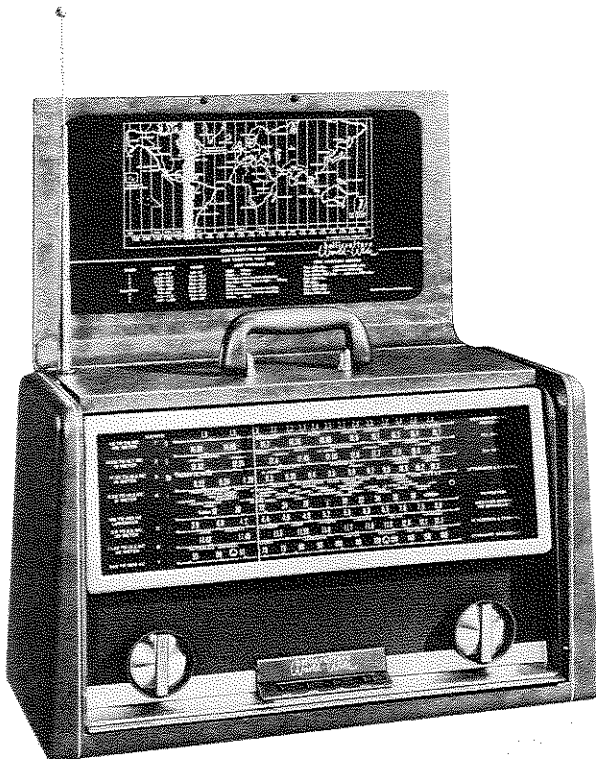


Fig. 2. Models TW-1000A—Runs 3, 3A and 3B (Blue) and TW-2000 (Ginger Brown)

TUNER COMPARISON

Two different tuners were used in the "World-Wide" series portables. The 1D1382 tuner was employed in early sets and the 1D2175 tuner in later sets. These two tuners are identical except for the following:

1. R-104, mixer grid resistor for V-102, is returned to the AVC bus (white lead) in the 1D1382 tuner. In the 1D2175 tuner, R-104 is returned to pin 1 of V-102.
2. R-103, the bias resistor for V-102, and the yellow bias lead in the 1D1382 tuner are deleted in the 1D2175 tuner.

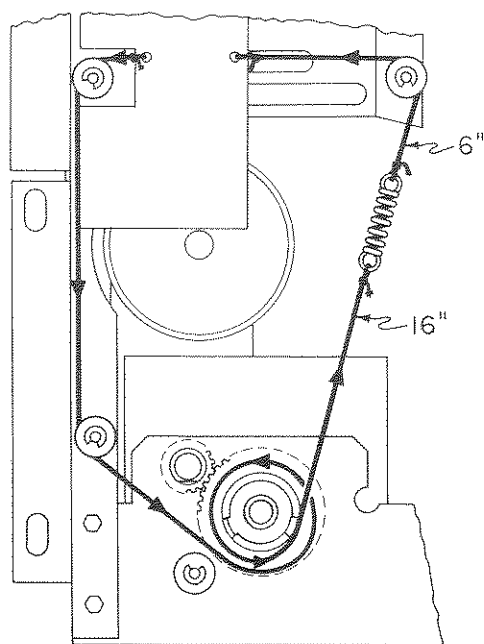
NOTE: Some 1D1382 tuners were reworked to conform to the 1D2175 tuner. These tuners can be identified by the letter "A" stamped on the rear top of the tuner chassis.

TUNING DIAL

To tune bands 1 thru 7, set the Band Selector knob so that the red band indicator at the left side of the dial is opposite the desired band. To tune the longwave band, rotate the Band Selector knob fully clockwise so that the yellow band indicators become visible at the left side of the dial.

92X2071

NOTE: BAND SELECTOR CONTROL
SET FULLY CLOCKWISE.



92B1819-A

Fig. 3. Band Indicator Plate Stringing Diagram

REMOVING CHASSIS AND FRONT PANEL ASSEMBLY FROM CABINET

The chassis and front panel assembly are removable from the cabinet as a unit:

1. Remove the three screws at the bottom of the cabinet.
2. Remove the two hex nuts at the rear of the front panel assembly (one on each side).
3. Unplug the whip antenna lead. On model TW-1000, also unplug the loop antenna cable.
4. Slide the chassis and front panel assembly out through the front of the cabinet.

TUNER SERVICE

GENERAL

The Dynamic Turret Tuner employed in the "World-Wide" portable consists of a 1U4 RF amplifier stage and a 1L6 mixer-oscillator stage.

Band selection is accomplished by rotation of the tuner turret assembly, which has a separate set of two snap-in coil strips for each band. One strip contains the antenna coil and the other contains the RF and oscillator coils. (See Fig. 7). Coils can be identified as to band by the number stamped on the outside of the coil strip. Refer to the chart at the top of the schematic diagram for cross reference of coil marking, band, and frequency range.

Extreme care must be exercised in handling or servicing the tuner. Location and lead dress of components and wiring are usually very critical. Parts location and ground connections should be as originally made. The tuner was carefully aligned at the factory and should normally not require complete realignment under normal operating conditions.

Replacement of tubes (especially 1L6 mixer-oscillator) may cause some slight detuning of the tuner circuits. When replacing the 1L6, it may be necessary to touch up the oscillator slug adjustments. Replacement of the tuning gang may require complete realignment of the receiver.

Be sure that the coils are properly paired for the indicated band and that the coils follow proper sequence. Refer to chart at top of schematic diagram.

REMOVING TUNER FROM CHASSIS

- a. Remove front control knobs by pulling in a forward direction.
- b. Remove dial escutcheon by removing the screws at sides and bottom. (Bottom screws were not used on late production sets.)
- c. Remove dial scale by removing (4) screws at front of dial and (1) screw at rear.
- d. Disconnect the speaker leads on sets using speaker 85C130 (see number on rear of speaker). On sets using speaker 85A153, leave leads connected.
- e. Remove baffle board assembly by removing the (2) long and (2) short machine screws.
- f. Remove large gear and pulley assembly by removing (2) Allen Head set screws.
- g. Disconnect the tuner leads.
- h. Remove (2) screws at front of chassis and (2) studs at rear of chassis holding tuner in place.
- i. Lift out tuner at rear and remove.

REMOVING TUNER TURRET ASSEMBLY

- a. Remove tuner from chassis as outlined above.
- b. Remove the front and rear turret retainer springs by depressing straight end of spring from tab on tuner chassis end plate.
- c. Grasp turret shaft at front and rear and remove turret from tuner assembly.
- d. For reassembly, position turret so that the stop at the rear end of turret is facing outward from the tuner assembly. Then press turret into position and replace front and rear turret retaining springs.

REMOVING SNAP-IN COIL STRIPS

Insert a screwdriver blade between the coil retainer spring and the turret end plate. Twist the blade away from the turret and lift the end of the coil upward and remove.

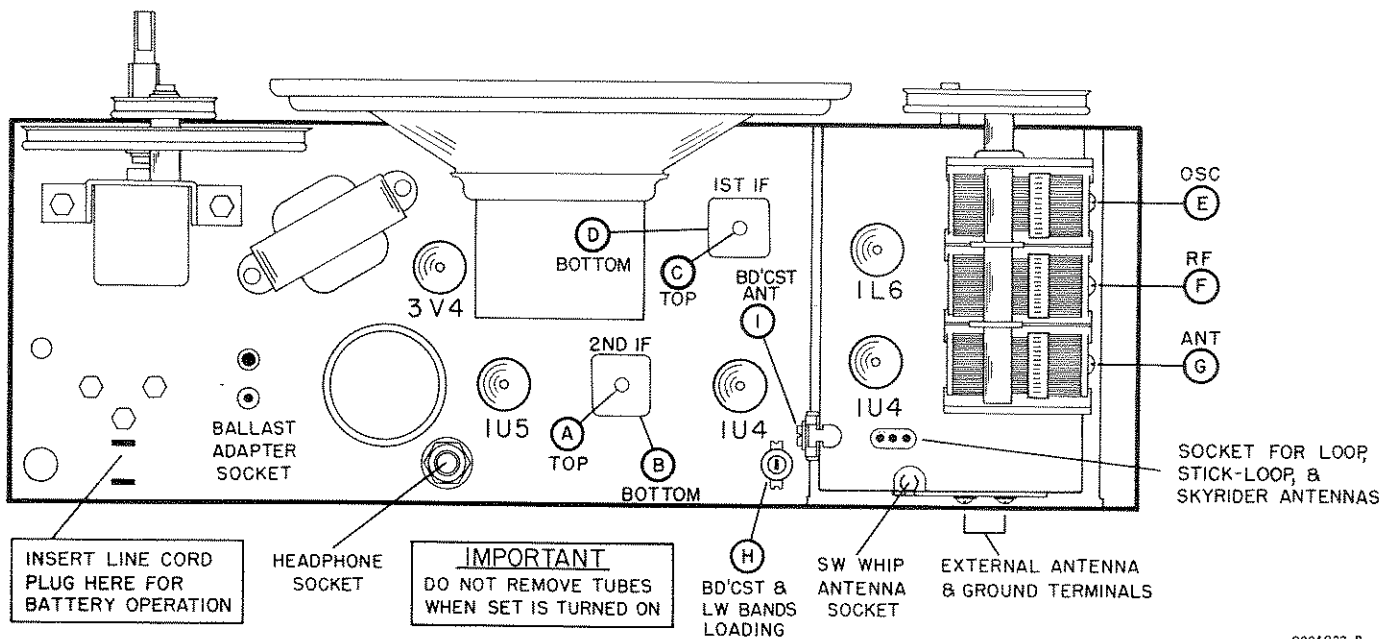


Fig. 4. Top View of Chassis Showing Location of Alignment Adjustments and Tubes

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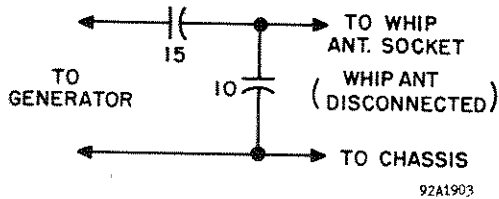


Fig. 5. Dummy Antenna for Bands 1 and 5

92A1903

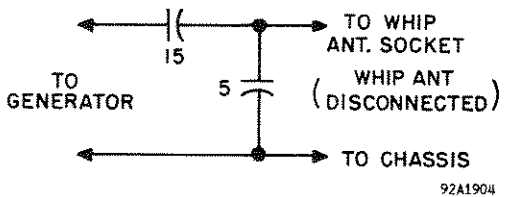


Fig. 6. Dummy Antenna for Bands 2, 3, 4 and 6

92A1904

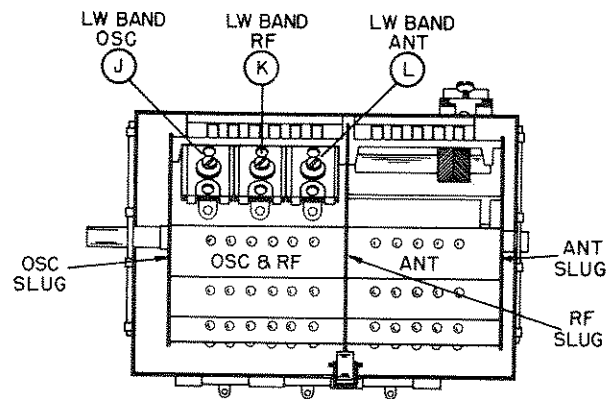


Fig. 7. Bottom View of Tuner Showing Location of Alignment Adjustments

92B1897-A

ALIGNMENT INSTRUCTIONS

- Be sure both the set and the signal generator are thoroughly warmed up before starting alignment.
- Use an accurate signal generator which has a modulated output and covers 455 KC to 17.55 MC.
- Set the volume control at maximum and disconnect the SW whip antenna. On model TW-1000, raise the front cover to place the loop antenna in its operating position.
- Connect the output meter across the speaker voice coil.
- To avoid AVC action, use lowest output setting of signal generator which gives satisfactory reading on meter (approx. 50 milliwatts).
- The local oscillator frequency is higher than the signal frequency on bands 1, 7, & LW (8). The local oscillator is lower than the signal frequency on all other bands.
- To adjust the oscillator slugs, it will be necessary to first remove the baffle board and dial assemblies by following Steps (a) thru (e) under "Removing Tuner from Chassis" on page 3. The oscillator slugs are accessible thru the opening at the front of the tuner (see Fig. 11).
Note: Some sets have a removable button plug to the right of the Band Selector knob which provides access to the oscillator slugs without removing the baffle board and dial assemblies.
- The RF and antenna slugs are accessible thru the opening at the rear of the tuner. (See Figs. 7 and 8.) Note that it is necessary to unclip and remove the antenna coil strip of the band being aligned to gain access to the RF slug.
- Refer to Figs. 4 and 7 for location of alignment adjustments. The alignment adjustments are also shown on the schematic diagram.

ALIGNMENT PROCEDURE

Step	Signal Generator Connections	Generator Frequency	Band Selector Setting	Receiver Dial Setting	Adjust for Maximum Output
1	High side thru .1 mfd capacitor to stator plates of center section of tuning gang. Low side to chassis.	455 KC	7	1000 KC	A and B (2nd IF) C and D (1st IF)
2	Radiate gen. signal into stick-loop or loop antenna.	1500 KC	7	1500 KC	E (oscillator trimmer on gang)
3	Same as Step 2.	1400 KC	7	1400 KC	F (RF trimmer on gang)
4	Same as Step 2.	600 KC	7	600 KC	Oscillator and RF slugs.
5	Connect dummy antenna as shown in Fig. 5.	2.0 MC	1	2.0 MC	Oscillator, RF, and antenna slugs.
6	Same as Step 5.	3.5 MC	1	3.5 MC	G (antenna trimmer on gang)
7	Same as Step 2.	600 KC	7	600 KC	H (loading coil on main chassis)
8	Same as Step 2.	1400 KC	7	1400 KC	I (antenna trimmer on side of tuner)
9	Connect dummy antenna as shown in Fig. 6.	15.0 MC	2	15.0 MC	Oscillator slug
10	Same as Step 9.	14.8 MC	2	14.8 MC	RF and antenna slugs
11	Same as Step 9.	18.0 MC	3	18.0 MC	Oscillator slug
12	Same as Step 9.	17.55 MC	3	17.55 MC	RF and antenna slugs
13	Same as Step 9.	10.0 MC	4	10.0 MC	Oscillator slug
14	Same as Step 9.	9.5 MC	4	9.5 MC	RF and antenna slugs
15	Same as Step 5.	4.0 MC	5	4.0 MC	Oscillator slug
16	Same as Step 5.	5.2 MC	5	5.2 MC	RF and antenna slugs
17	Same as Step 9.	12.0 MC	6	12.0 MC	Oscillator slug
18	Same as Step 9.	11.6 MC	6	11.6 MC	RF and antenna slugs
19	Same as Step 2.	400 KC	Long Wave	400 KC	J (oscillator trimmer)
20	Same as Step 2.	360 KC	Long Wave	360 KC	K (RF trimmer) and L (antenna trimmer)
21	Same as Step 2.	200 KC	Long Wave	200 KC	Oscillator, RF, and antenna slugs
22	Unplug stick-loop or loop antenna and plug "Skyrider" antenna in its place. Radiate gen. signal into "Skyrider".	1400 KC	7	1400 KC	Trimmer screw on end of "Skyrider" antenna.

REPLACEMENT BATTERY PACKS

Hallcrafters	Willard	Eveready	RCA	Bright Star	Ray O-Vac	Olin Bond	Sears	General	Usalite
P999	WZ-3	752	VSO47	66-03	AB995	0616	6401	343	AB677

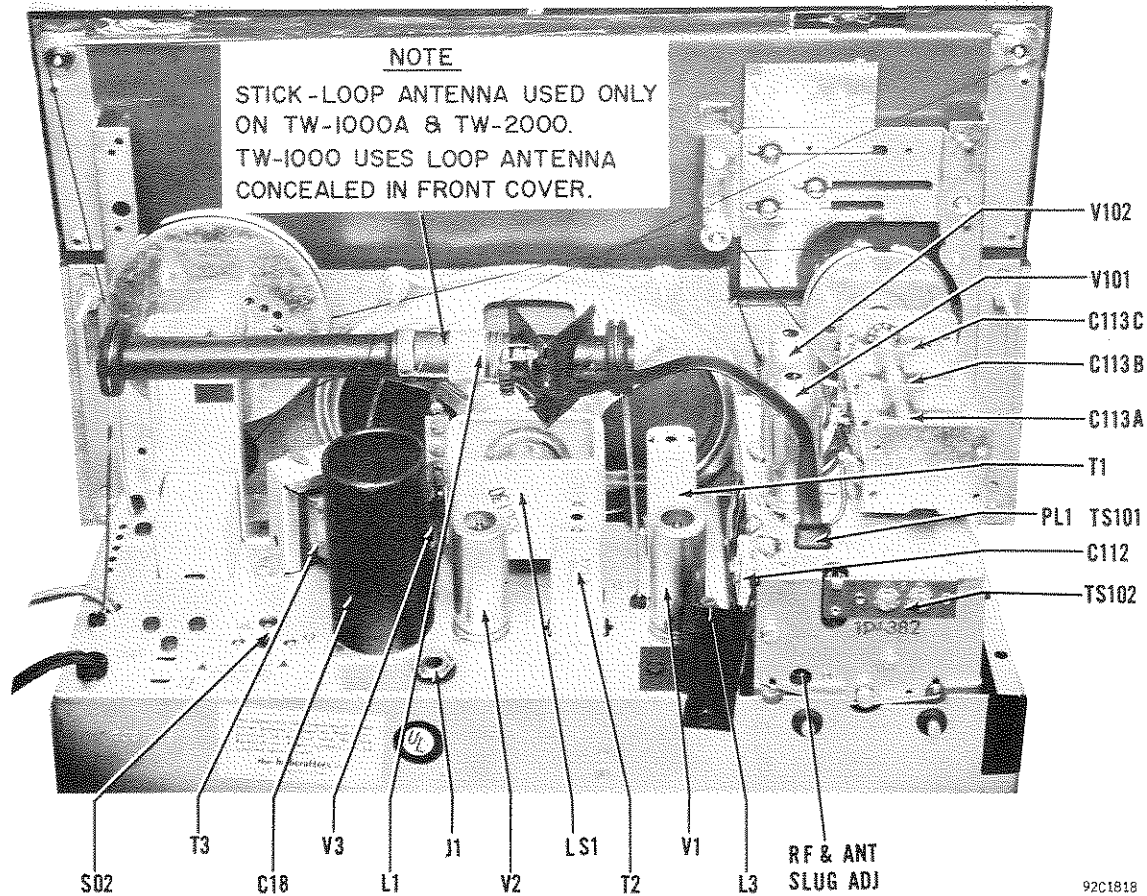


Fig. 8. Top View of Chassis Showing Component Location

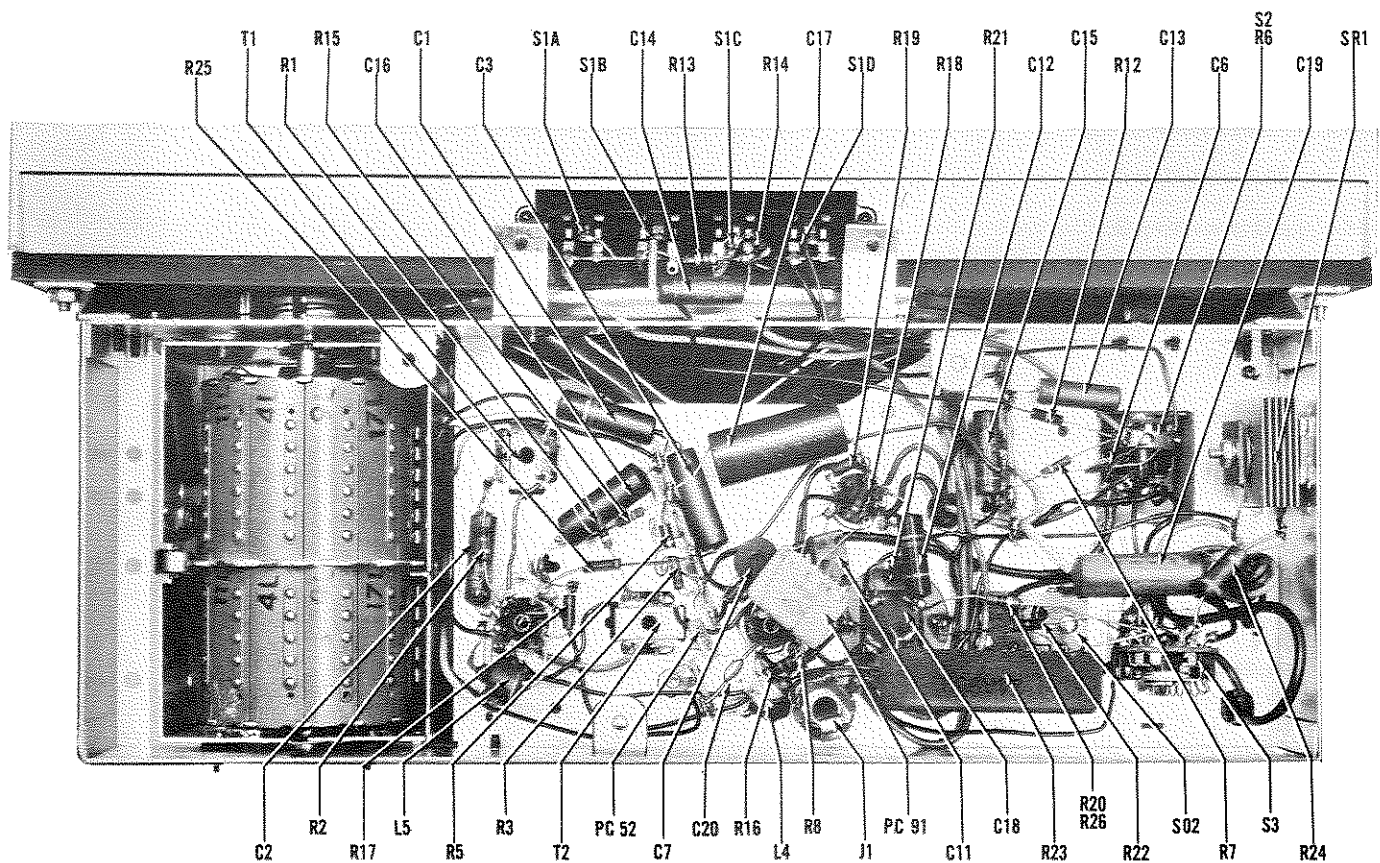


Fig. 9. Bottom View of Chassis Showing Component Location

92X2088-A

MAIN CHASSIS PARTS LIST

Schematic Symbol	Description	Hallicrafters Part Number	Schematic Symbol	Description	Hallicrafters Part Number
CAPACITORS			COILS AND TRANSFORMERS (Cont.)		
C-1,3	0.047 mfd. 200V., molded tubular paper	46BR473L2	L-2	Antenna, "Skyrider"; complete	57C170
C-2	0.01 mfd. 400V., molded tubular paper	46BR103L4	L-3	Coil, antenna loading	51B1586
C-4,5	50 mmf. (part of diode filter plate PC-52)	-----	L-4,5	Choke, RF	53A265
C-6,7	0.01 mfd. 450V., ceramic disc	47A224	L-6	Antenna, loop (less cable and plug)	57C169
C-8,10	0.005 mfd. (part of pentode couplate PC-91)	-----	T-1,2	Transformer, IF	50C242
C-9	100 mmf. (part of pentode couplate PC-91)	-----	T-3	Transformer, audio output	55C198
C-11	270 mmf. 500 V., mica	47X20B271K	PLUGS AND SOCKETS		
C-12	0.0047 mfd. 600V., molded tubular paper	46BR472L6	J-1	Jack, phone	36A002
C-13,14	0.022 mfd. 200V., molded tubular paper	46BR223L2	PL-1,2,4	Plug, antenna; 3-prong	10A659
C-15	0.001 mfd. 600V., molded tubular paper	46BR102L6	PL-3	Line cord and plug	87A3592
C-16	0.047 mfd. 400V., molded tubular paper	46BR473L4	SO-1	Socket, battery cable (less shell). Shell for socket SO-1	10A296 10A294
C-17	100 mfd. 25V., electrolytic	45B214	SO-2	Socket, ballast adapter Socket, tube; 7-pin miniature	10A507 6B297
C-18	Dual 40 mfd. 150V., 80 mfd. 150V., 80 mfd. 25V.; electrolytic	45B215	TUBES AND RECTIFIERS		
C-19	0.047 mfd. 600V., molded tubular paper	46BR473L6	V-1	1U4: IF amplifier	90X1U4
C-20	0.001 mfd. 500 V., ceramic disc	47B230	V-2	1U5: detector and audio amplifier	90X1U5
RESISTORS			V-3	3V4: audio output	90X3V4
R-1,20,21	1000 ohms 10%, 1/2 watt, carbon	23X20X102K	SR-1	Rectifier, selenium; 100 ma.	27A161
R-2	2.7 megohms 10%, 1/2 watt, carbon	23X20X275K	SWITCHES		
R-3	2.2 megohms 10%, 1/2 watt, carbon	23X20X225K	S-1	Switch assembly, tone for TW-1000 and TW-1000A (Runs 3 and 3A)	60A503 60A570
R-4	47,000 ohms (part of diode filter plate PC-52)	-----	S-2	Switch, on-off (part of R-6)	-----
R-5	1 megohm 10%, 1/2 watt, carbon	23X20X105K	S-3	Switch, power changeover	60B504
R-6	Volume control, 1 megohm (includes on-off switch S-2)	25B1009	MISCELLANEOUS		
R-7	1500 ohms 10%, 1/2 watt, carbon	23X20X152K	PC-52	Diode filter plate (includes R-4, C-4, and C-5)	49A023
R-8,25	10 megohms 10%, 1/2 watt, carbon	23X20X106K		Grommet, rubber; tuner rear mtg	16A299
R-9	4.7 megohms (part of pentode couplate PC-91)	-----		Lock, line cord	76A974
R-10	1 megohm (part of pentode couplate PC-91)	-----		Mounting plate, bakelite (for C-18)	8A749
R-11	2.2 megohms (part of pentode couplate PC-91)	-----	PC-91	Pentode couplate (includes R-9, R-10, R-11, C-8, C-9, and C-10)	49A024
R-12	100,000 ohms 10%, 1/2 watt, carbon	23X20X104K		Pointer, dial	82B223
R-13	18,000 ohms 10%, 1/2 watt, carbon	23X20X183K		Pulley	
R-14	27,000 ohms 10%, 1/2 watt, carbon	23X20X273K		1-1/4" string dia.	28A067
R-15	330,000 ohms 10%, 1/2 watt, carbon	23X20X334K		3/4" string dia.	28A137
R-16	68 ohms 5%, 1/2 watt, carbon	23X20X680J		3-1/2" string dia.	28A128
R-17	100 ohms 5%, 1/2 watt, carbon	23X20X101J	LS-1	Speaker, PM; 5" x 7" oval (3.2 ohm voice coil)	85C130
R-18	220 ohms 5%, 1/2 watt, carbon	23X20X221J		Spring, dial cord tension	
R-19	1500 ohms 5%, 1/2 watt, carbon	23X20X152J		7/8" overall	75A012
R-22	3300 ohms 5%, 1/2 watt, carbon	23X20X332J		11/16" overall	75A163
R-23	2000 ohms 5%, 10 watts, wirewound	24A959		Spring, band indicator plate; 9/64" overall	75A266
R-24	82 ohms 5%, 2 watts, carbon	23X40X820J		Tube shield	69A306
R-26	2200 ohms 10%, 1 watt; carbon	23X30X222K		Tube shield base	69A308
COILS AND TRANSFORMERS					
L-1	Antenna, stick-loop (includes cable, plug, grommets, and capacitor)	57D197			

CABINET & FRONT PANEL ASSEMBLY PARTS LIST

Description	Hallicrafters Part Number For Model			
	TW-1000	TW-1000A Run 1	TW-1000A Runs 3 and 3A	TW-2000
Antenna, whip	57B173	57B173	57B173	57B196
Button plug, front panel	17B148	17B148	17B148	17B149
Cabinet	78F1031	78F1031	78F1141	78F1053
Includes the following:				
Catch, bullet type; front door	76A1306	76A1306	76A1306	76A1315
Catch, rear door	76A1307	76A1307	76A1307	76A1307
Strike, rear door	76A1308	76A1308	76A1308	76A1308
Clip, mtg.; for "Skyrider" antenna	76A1309	76A1309	76A1309	76A1309
Foot, mtg.; rubber	16A347	16A347	16A347	16A347
Handle, carrying	30A327	30A327	30A328	30A330
Handle, front door	30B289	30B289	30B289	30B302
Hinge, front door				
Right-hand (viewed from front)	30B297	30B297	30B319	30B304
Left-hand (viewed from front)	30B296	30B296	30B320	30B303
Hinge, rear door	30A329	30A329	30A329	30A331
Plug and cable assembly, loop antenna	10B517	-----	-----	-----
Map	-----	-----	14A391	14D373
Nameplate, Hallicrafters Precision Built	-----	-----	13A1044	13B1046
Speed clip (for mounting nameplate)	-----	-----	76A415	76A415
Spring, contact (for front door hinge)	75A276	75A276	-----	-----
Channel, rubber				
1" long	16A300	16A300	16A300	16A300
5" long	16A301	16A301	16A301	16A301
Clip, mtg. (for mtg. tone control escutcheon)	76A989	76A989	76A989	76A989
Dial scale	83D425	83D425	83D425	83D449
Dial glass	22B369	22B369	22B369	22B369
Escutcheon, dial	7D386	7D386	7D386	7D488
Escutcheon, tone control	7C389	7C389	7C389	7C497
Eyelet, whip antenna; fiber	5A446	5A446	5A446	5A449
Grille and baffle board assembly	7D393	7D393	7D393	7E489
Grommet, rubber; whip antenna shock mount	16A299	16A299	16A299	16A299
Knob, volume (includes spring)				
With metal trim	15C598	15C598	15C598	15C661
Without metal trim	15C532	-----	-----	-----
Knob, band selector (includes spring)				
With metal trim	15C599	15C599	15C599	15C659
Without metal trim	15C533	-----	-----	-----
Knob, tuning (includes spring)				
With color molded in	15C600	15C600	15C600	15C660
With color sprayed on	15C534	-----	-----	-----
Map	8D1829	8D1829	14A391	14D373
Nameplate, Hallicrafters Precision Built	13A1124	13A1124	13A1044	13B1046
Operating instruction booklet	94X917	94X1341	94X1341	94X1341
Trim strip, control marking	8C1888	8C1888	8C1888	8C2219

PARTS LIST for DYNAMIC TURRET TUNER

Schematic Symbol	Ref. No. on Fig. 10	Description	Cross Reference	Hallicrafters Part Number
		Dynamic Turret Tuner Assembly; complete with tubes	31L-301	1D1382 or 1D2175 (See part number stamped on rear of tuner. Also see "Tuner Comparison" on page 2.)

CAPACITORS

For part numbers of capacitors C-101 thru C-107 and C-111, see "Coil Strips".

C-108	1	Trimmer, 4-80 mmfd.	13F-216	121-431
C-109	2	Trimmer, 2.2-40 mmfd.	13F-232	121-432
C-110	3	Trimmer, 9-180 mmfd.	13F-234	121-430
C-112	4	Trimmer, 2-20 mmfd.	13F-225	121-397
C-113	5	Tuning gang, 3 section.	13G-009	48C297
C-114		22 mmfd. GP, ceramic.	CD8GP220J	121-405
C-115		6.8 mmfd. 10%, 1/4" ceramic disc	CD8C6R8K	121-401
C-116, 119, 120, 121		270 mmfd. 10%, 3/8" ceramic disc	CD12D271K	121-404
C-117		0.005 mfd. GMV, 9/16" ceramic disc	CD17X502Z	121-402
C-118, 122, 125, 127		0.047 mfd. 20%, 200V.; molded tubular paper	13A-029	121-398
C-123		0.02 mfd. GMV, 5/8" ceramic disc	CD20X203Z	121-403
C-124		0.1 mfd. 20%, 200V.; molded tubular paper	13A-030	121-399
C-126		0.001 mfd. GMV, 1/4" ceramic disc	CD8X102Z	121-400

GMV - Guaranteed Minimum Value

GP - General Purpose

PARTS LIST for DYNAMIC TURRET TUNER (Cont.)

Schematic Symbol	Ref. No. on Fig. 10	Description	Cross Reference	Hallicrafters Part Number
RESISTORS				
R-101,104		1 megohm 10%, $\frac{1}{2}$ W	12TAE105K	23X20X105K
R-102		15,000 ohm 10%, $\frac{1}{2}$ W	12TAE153K	23X20X153K
R-103		3.9 megohm 10%, $\frac{1}{2}$ W	12TAE395K	23X20X395K
R-105		180,000 ohm 10%, $\frac{1}{2}$ W	12TAE184K	23X20X184K
R-106		18,000 ohm 10%, $\frac{1}{2}$ W	12TAE183K	23X20X183K
R-107		68,000 ohm 10%, $\frac{1}{2}$ W	12TAE683K	23X20X683K
R-108		1000 ohm 10%, $\frac{1}{2}$ W	12TAE102K	23X20X102K
R-109		10,000 ohm 10%, $\frac{1}{2}$ W	12TAE103K	23X20X103K
R-110		82 ohm 10%, $\frac{1}{2}$ W	12TAE820K	23X20X820K
R-111		120 ohm 10%, $\frac{1}{2}$ W	12TAE121K	23X20X121K

TUBES

V-101	1U4: RF amplifier	1U4	90X1U4
V-102	1L6: mixer/oscillator	1L6	90X1L6

MISCELLANEOUS

TS-101	6	Antenna input terminal board assembly	27C-006	121-394
	7	Contact bracket assembly	31B-278	121-386
	8	Detent roller	31B-016	121-388
	9	Detent spring	31B-005	121-389
	10	Drum and shaft assembly; less coil strips	31B-631	121-395
	11	Grommet, rubber; for mtg. gang	21A-028	121-392
	12	Shaft retaining spring	31B-030	121-387
SO-101	13	Socket, 3-prong; antenna	27B-011	121-393
	14	Socket, tube	27A-020	121-391
	15	Tube shield	16S-006	121-390

COIL STRIPS

NOTE: The coil strips are supplied complete with capacitors and cores. The capacitors and cores may also be ordered separately.

1L	16	Antenna coil strip, band 7	31L-201	88-920
2L	17	Antenna coil strip, band 1	31L-202	88-908
		Core	20E-035	121-406
		550 mmfd. 3%, 300 V.; silver mica	13B-088	121-407
4L	18	Antenna coil strip, band 5	31L-203	88-916
		Core	20E-035	121-406
		330 mmfd. 3%, 300V.; silver mica	13B-091	121-408
		4.25 mmfd. \pm .5 mmfd., NPO; ceramic disc	13D-226	121-409
9L	19	Antenna coil strip, band 4	31L-204	88-914
		Core	20E-035	121-406
		22 mmfd. 5%, N330; $\frac{1}{4}$ " ceramic disc	13L-8S220J	121-410
11L	20	Antenna coil strip, band 6	31L-205	88-918
		Core	20E-035	121-406
		15 mmfd. 5%, N80; $\frac{1}{4}$ " ceramic disc	13L-8L150J	121-411
14L	21	Antenna coil strip, band 2	31L-206	88-910
		Core	20E-035	121-406
		13 mmfd. 5%, N80; $\frac{1}{2}$ " ceramic disc	13L-8L130J	121-412
17L	22	Antenna coil strip, band 3	31L-207	88-912
		Core	20E-035	121-406
		10 mmfd. 5%, NPO; $\frac{1}{4}$ " ceramic disc	13L-8C100J	121-413
3L	23	Antenna coil strip, LW band	31L-208	88-922
		Core	20E-042	121-414
1L	24	RF/osc. coil strip, band 7	31L-251	88-919
		Core	20E-035	121-406
		470 mmfd. 3%, 300V.; silver mica	13B-085	121-415
		18 mmfd. 5%, N330; $\frac{1}{4}$ " ceramic disc	13L-8S180J	121-416
2L	25	RF/osc. coil strip, band 1	31L-252	88-907
		Core	20E-035	121-406
		360 mmfd. 3%, 300V.; silver mica	13B-086	121-417
		560 mmfd. 3%, 300V.; silver mica	13B-087	121-418
		6.8 mmfd. \pm .5 mmfd., NPO; ceramic	13D-215	121-419
4L	26	RF/osc. coil strip, band 5	31L-253	88-915
		Core, 3/8" long	20E-035	121-406
		Core, 5/8" long	20E-038	121-420
		380 mmfd. 3%, 300V.; silver mica	13B-089	121-421
		340 mmfd. 3%, 300V.; silver mica	13B-090	121-422
		5 mmfd. \pm .5 mmfd., NPO; ceramic	13L-8C050K	121-423

N - neg. temp. coef. NPO - zero temp coef.

PARTS LIST for DYNAMIC TURRET TUNER (Cont.)

COIL STRIPS (Cont.)

Coil Strip Marking	Ref. No. on Fig. 10	Description	Cross Reference	Hallicrafters Part Number
9L	27	RF/osc. coil strip, band 4	31L-254	88-913
		Core, 3/8" long	20E-035	121-406
		Core, 1/2" long	20E-036	121-424
		18 mmfd. 5%, N330; 1/4" ceramic disc	13L-8S180J	121-416
		24 mmfd. 5%, N750; 1/4" ceramic disc	13L-8U240J	121-425
11L	28	RF/osc. coil strip, band 6	31L-255	88-917
		Core	20E-035	121-406
		18 mmfd. 5%, N330; 1/4" ceramic disc	13L-8S180J	121-416
		13 mmfd. 5%, N80; 1/4" ceramic disc	13L-8L130J	121-412
14L	29	RF/osc. coil strip, band 2	31L-256	88-909
		Core	20E-035	121-406
		17 mmfd. 5%, N330; 1/4" ceramic disc	13L-8S170J	121-426
		12 mmfd. 5%, NPO; 1/4" ceramic disc	13L-8C120J	121-427
17L	30	RF/osc. coil strip, band 3	31L-257	88-911
		Core, 1/2" long	20E-036	121-424
		Core, 3/8" long	20E-035	121-406
		12 mmfd. 5%, NPO; 1/4" ceramic disc	13L-8C120J	121-427
		14 mmfd. 5%, N80; 1/4" ceramic disc	13L-8L140J	121-428
3L	31	RF/osc. coil strip, LW band	31L-258	88-921
		Core, 3/8" long	20E-035	121-406
		Core, 1/2" long	20E-042	121-414
		300 mmfd. 5%, 300V.; silver mica	13B-093	121-429

N - neg. temp. coef.

NPO - zero temp. coef.

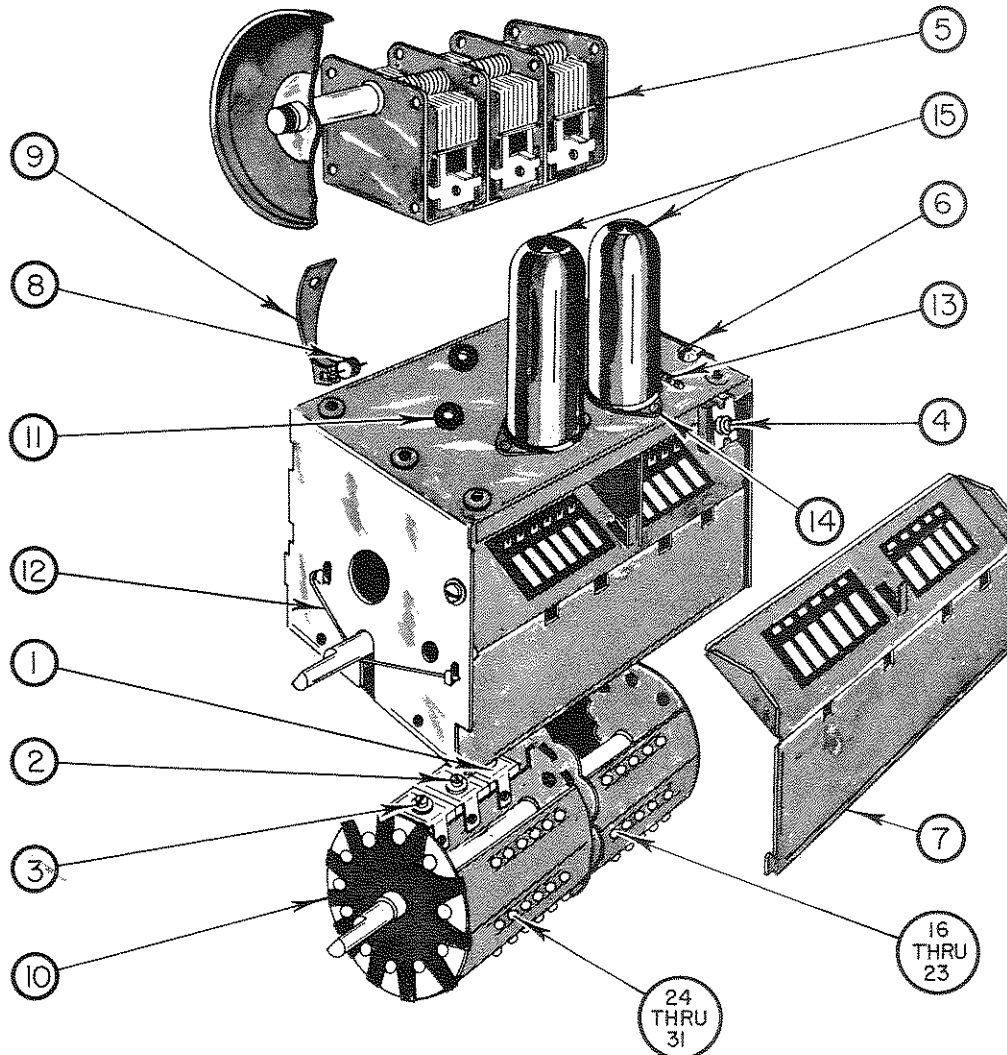


Fig. 10. Exploded View of Dynamic Turret Tuner 1D1382

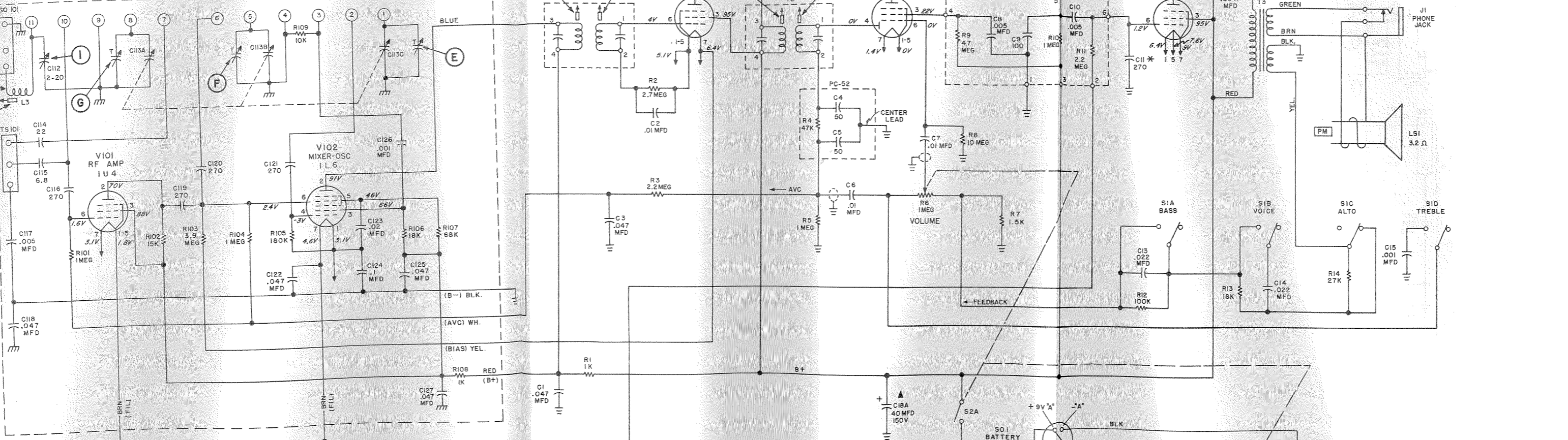
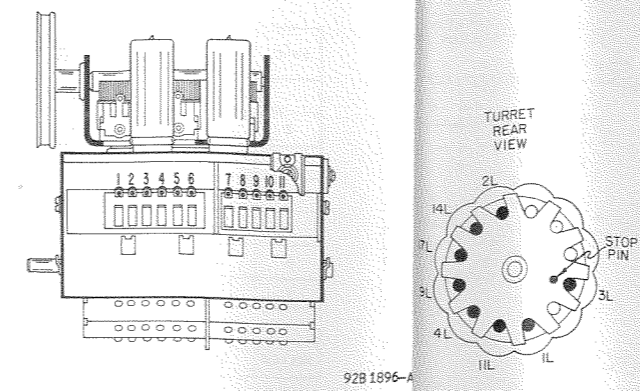
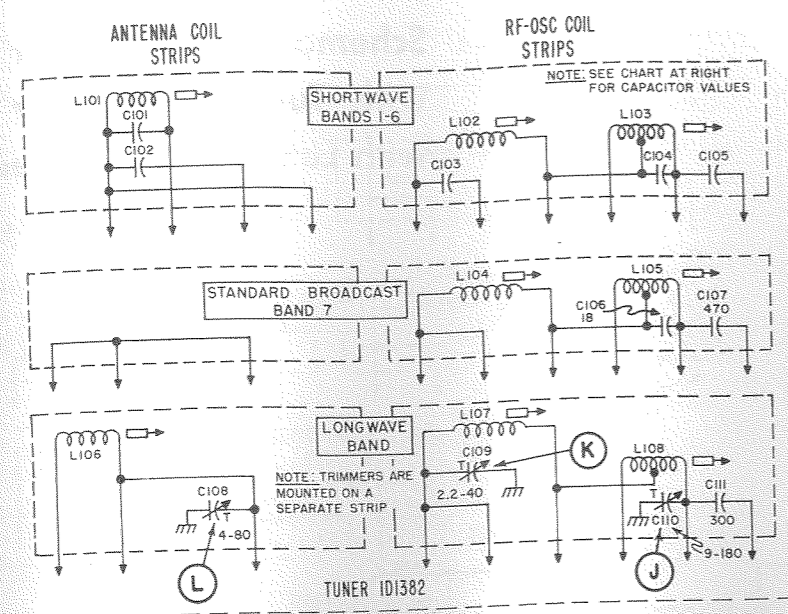
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Schematic Diagram for Sets Equipped with Tuner ID1382

Tuner part number is stamped on rear of tuner.

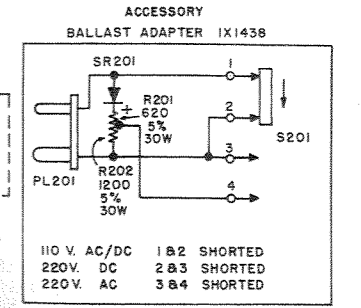
Some sets are equipped with a ID1382 tuner that was specially reworked to conform to the ID2175 tuner. These sets can be identified by the letter "A" stamped on the rear top of the tuner chassis. The schematic diagram for these sets and for sets using the ID2175 tuner is on the reverse side.

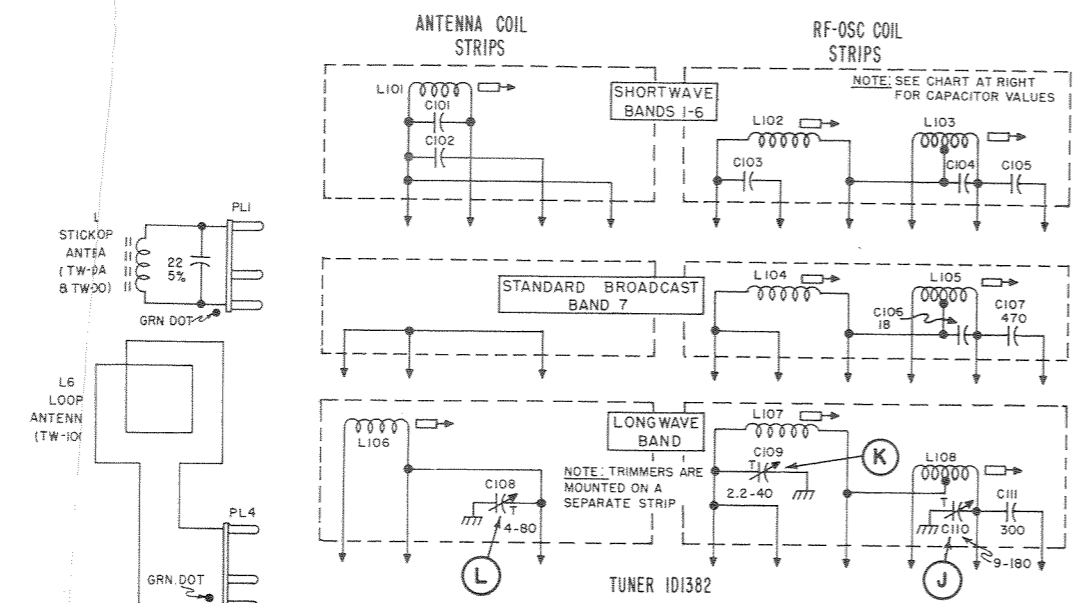
BAND	COIL STRIP MARKING	HALLICRAFTERS PART NO. RF-OSC STRIP	HALLICRAFTERS PART NO. ANT STRIP	FREQUENCY RANGE	C101	C102	C103	C104	C105
1	2L	88-907	88-908	1.8 — 3.9 MC	NONE	550	560	6.8	360
2	14L	88-909	88-910	14.62 — 15.7 MC	NONE	13	17	NONE	12
3	17L	88-911	88-912	17.32 — 18.2 MC	NONE	10	14	NONE	12
4	9L	88-913	88-914	9.22 — 10.3 MC	NONE	22	24	NONE	18
5	4L	88-915	88-916	3.9 — 8.0 MC	4.25	330	340	5	380
6	11L	88-917	88-918	11.42 — 12.3 MC	NONE	15	18	NONE	13
7	1L	88-919	88-920	540 — 1600 KC					
BLANK POSITION									
YELLOW	3L	88-921	88-922	180 — 400 KC					



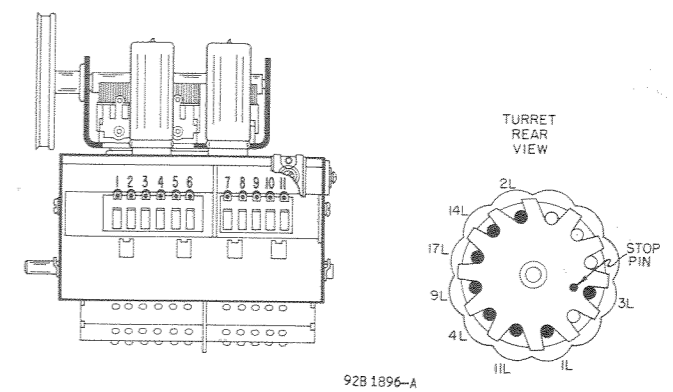
- NOTES**
- RESISTANCE IN OHMS AND CAPACITANCE IN MMF UNLESS OTHERWISE SPECIFIED. K=1000
 - RESISTORS ARE 1/2 WATT AND 10% UNLESS OTHERWISE SPECIFIED.
 - INTERMEDIATE FREQUENCY=455 KC
 - TONE SWITCH S-1 SHOWN IN RIGHT HAND POSITION (AS VIEWED FROM FRONT OF SET).
 - POWER CHANGEOVER SWITCH S-3 SHOWN IN AC/DC POSITION. FOR BATTERY OPERATION, INSERT LINE CORD PLUG INTO CHASSIS RECEPTACLE (SEE FIG.3).
 - LINE VOLTAGE: AC/DC OPERATION - 117 VOLTS
BATTERY OPERATION - 90V "B" AND 9V "A"
 - ALL VOLTAGES MEASURED WITH VTVM BETWEEN TUBE SOCKET TERMINALS AND B- (GND). VOLTAGES ARE DC AND POSITIVE UNLESS OTHERWISE SPECIFIED.
 - ALL VOLTAGES ARE MEASURED IN BROADCAST POSITION (BAND 7) WITH STICK-LOOP OR LOOP ANTENNA DISCONNECTED AND GANG FULLY CLOSED.
 - ON SOME SETS, C11 IS 220MMF. WHEN MAKING REPLACEMENT, USE 270 MMF CAPACITOR.

VALUES AND TOLERANCES SHOWN ARE NOMINAL AND VARIATIONS MAY BE FOUND. IT IS RECOMMENDED THAT THE VALUE OF ANY REPLACEMENT CORRESPOND TO THE NOMINAL VALUE OF THE PART BEING REPLACED.

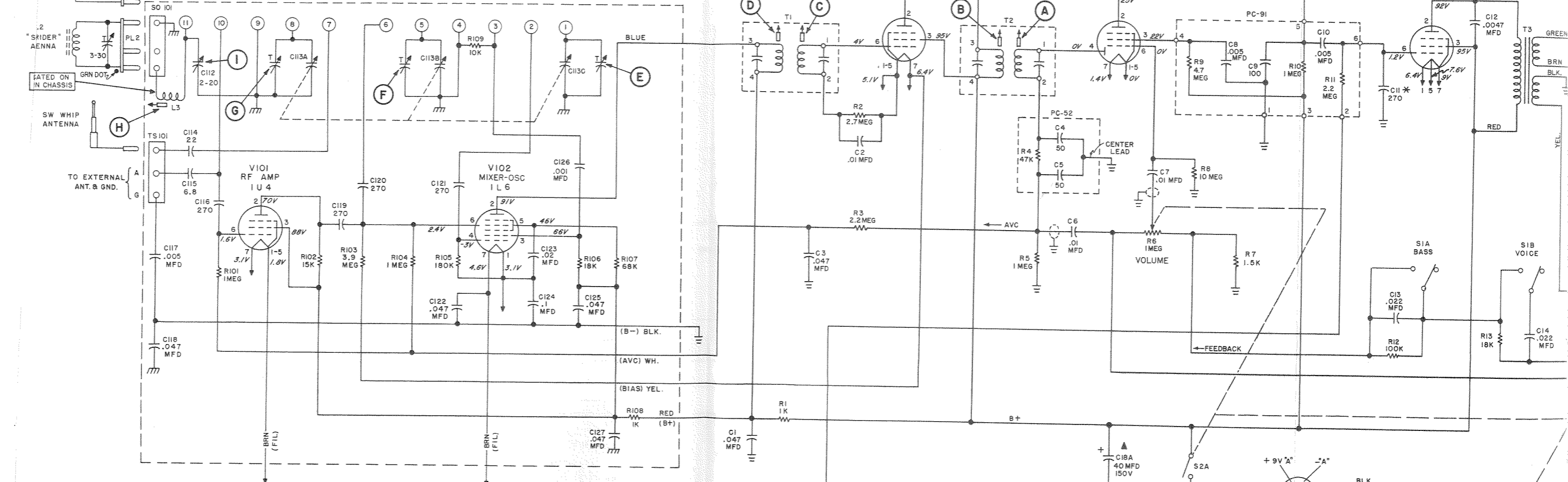




BAND	COIL STRIP MARKING	HALLCRAFTERS PART NO. RF OSC STRIP	HALLCRAFTERS PART NO. ANT STRIP	FREQUENCY RANGE	C101	C102	C103	C104	C105
1	2L	88-907	88-908	1.8 — 3.9 MC	NONE	550	560	6.8	360
2	14L	88-909	88-910	14.62 — 15.7 MC	NONE	13	17	NONE	12
3	17L	88-911	88-912	17.32 — 18.2 MC	NONE	10	14	NONE	12
4	9L	88-913	88-914	9.22 — 10.3 MC	NONE	22	24	NONE	18
5	4L	88-915	88-916	3.9 — 8.0 MC	4.25	330	340	5	380
6	11L	88-917	88-918	11.42 — 12.3 MC	NONE	15	18	NONE	13
7	1L	88-919	88-920	540 — 1600 KC					
BLANK POSITION									
YELLOW	3L	88-921	88-922	180 — 400 KC					



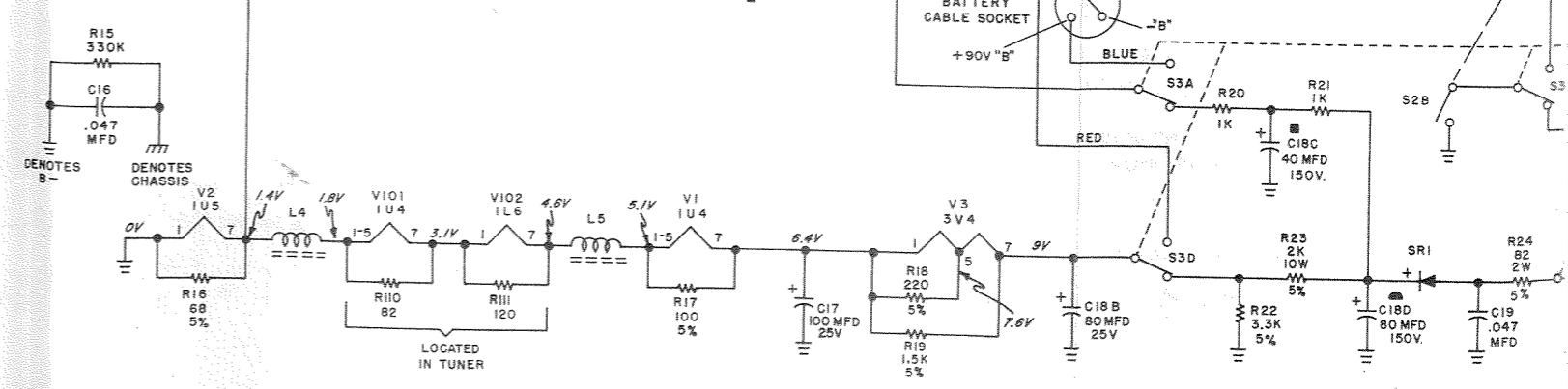
Tuner part number
 • Some sets are eq to conform to letter "A" stamp diagram for their reverse side.



NOTES

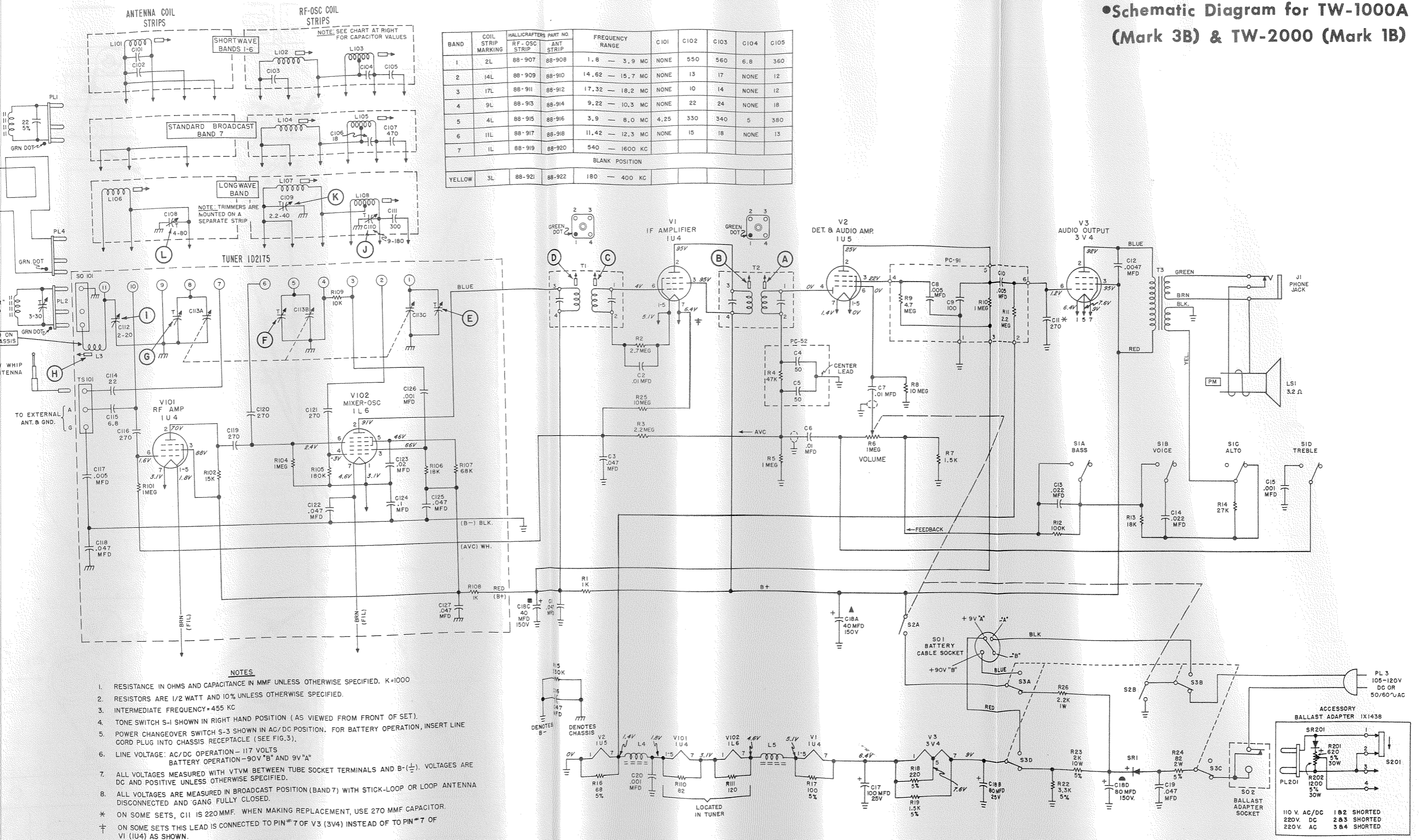
1. RESISTANCE IN OHMS AND CAPACITANCE IN MMF UNLESS OTHERWISE SPECIFIED. K=1000
 2. RESISTORS ARE 1/2 WATT AND 10% UNLESS OTHERWISE SPECIFIED.
 3. INTERMEDIATE FREQUENCY=455 KC
 4. TONE SWITCH S-1 SHOWN IN RIGHT HAND POSITION (AS VIEWED FROM FRONT OF SET).
 5. POWER CHANGEDOVER SWITCH S-3 SHOWN IN AC/DC POSITION. FOR BATTERY OPERATION, INSERT LINE GORD PLUG INTO CHASSIS RECEPTACLE (SEE FIG.3).
 6. LINE VOLTAGE: AC/DC OPERATION - 117 VOLTS
BATTERY OPERATION - 90V "B" AND 9V "A"
 7. ALL VOLTAGES MEASURED WITH VTVM BETWEEN TUBE SOCKET TERMINALS AND B-($\frac{1}{-}$). VOLTAGES ARE DC AND POSITIVE UNLESS OTHERWISE SPECIFIED.
 8. ALL VOLTAGES ARE MEASURED IN BROADCAST POSITION (BAND 7) WITH STICK-LOOP OR LOOP ANTENNA DISCONNECTED AND GANG FULLY CLOSED.
- * ON SOME SETS, C11 IS 220MMF. WHEN MAKING REPLACEMENT, USE 270 MMF CAPACITOR.

VALUES AND TOLERANCES SHOWN ARE NOMINAL AND VARIATIONS MAY BE FOUND. IT IS RECOMMENDED THAT THE VALUE OF ANY REPLACEMENT CORRESPOND TO THE NOMINAL VALUE OF THE PART BEING REPLACED.

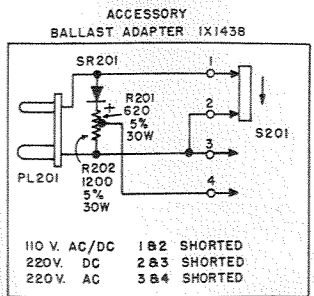


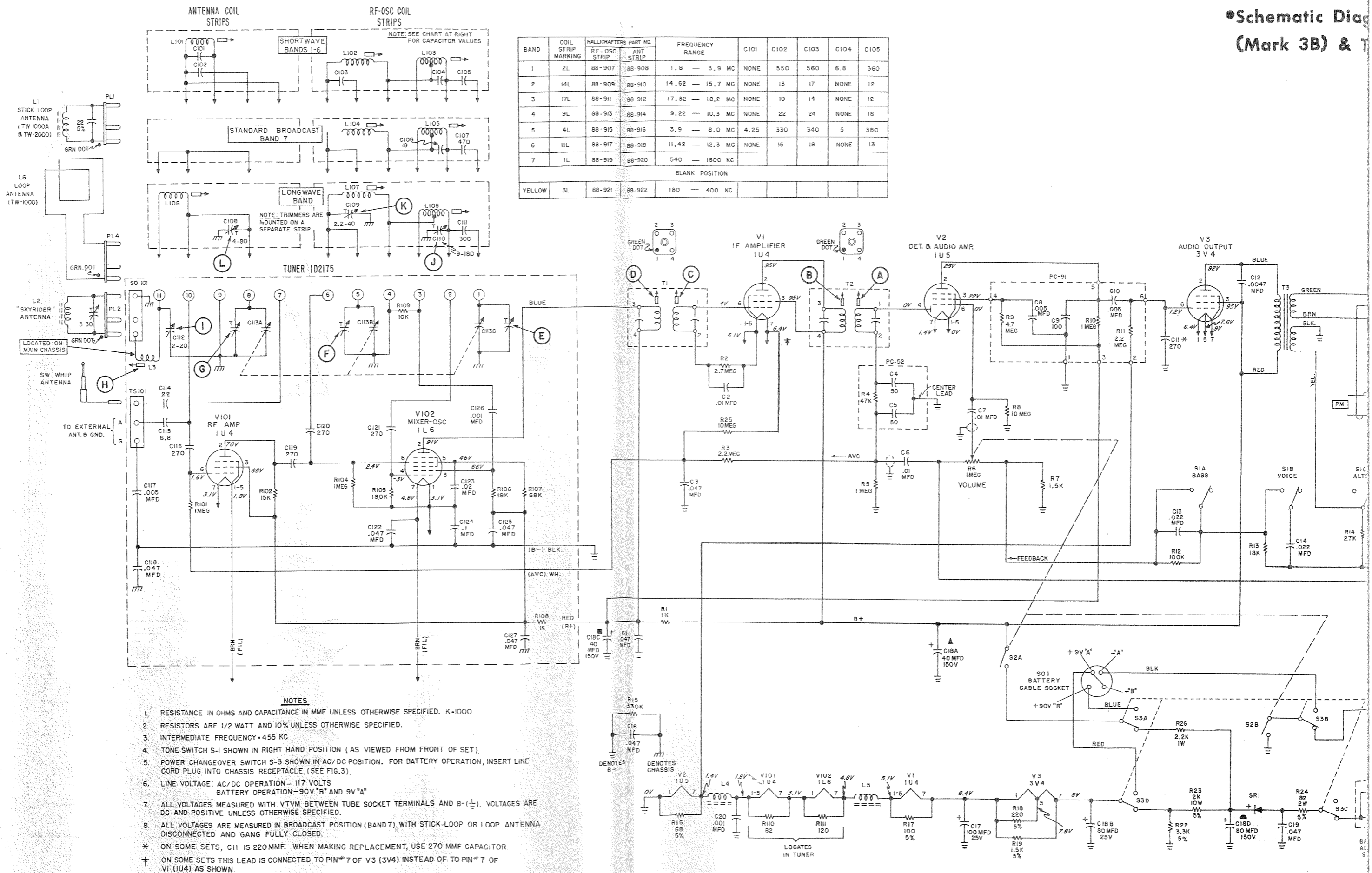
Schematic Diagram for TW-1000A (Mark 3B) & TW-2000 (Mark 1B)

BAND	COIL STRIP MARKING	HALLICRAFTERS RF-OSC STRIP	HALLICRAFTERS ANT STRIP	FREQUENCY RANGE	C101	C102	C103	C104	C105
1	2L	88-907	88-908	1.8 — 3.9 MC	NONE	550	560	6.8	360
2	14L	88-909	88-910	14.62 — 15.7 MC	NONE	13	17	NONE	12
3	17L	88-911	88-912	17.32 — 18.2 MC	NONE	10	14	NONE	12
4	9L	88-913	88-914	9.22 — 10.3 MC	NONE	22	24	NONE	18
5	4L	88-915	88-916	3.9 — 8.0 MC	4.25	330	340	5	380
6	11L	88-917	88-918	11.42 — 12.3 MC	NONE	15	18	NONE	13
7	1L	88-919	88-920	540 — 1600 KC					
BLANK POSITION									
YELLOW	3L	88-921	88-922	180 — 400 KC					



- NOTES**
- RESISTANCE IN OHMS AND CAPACITANCE IN MMF UNLESS OTHERWISE SPECIFIED. K=1000
 - RESISTORS ARE 1/2 WATT AND 10% UNLESS OTHERWISE SPECIFIED.
 - INTERMEDIATE FREQUENCY=455 KC
 - TONE SWITCH S-1 SHOWN IN RIGHT HAND POSITION (AS VIEWED FROM FRONT OF SET).
 - POWER CHANGEOVER SWITCH S-3 SHOWN IN AC/DC POSITION. FOR BATTERY OPERATION, INSERT LINE CORD PLUG INTO CHASSIS RECEPTACLE (SEE FIG.3).
 - LINE VOLTAGE: AC/DC OPERATION—117 VOLTS
BATTERY OPERATION—90V "B" AND 9V "A"
 - ALL VOLTAGES MEASURED WITH VTVM BETWEEN TUBE SOCKET TERMINALS AND B-($\frac{1}{2}$). VOLTAGES ARE DC AND POSITIVE UNLESS OTHERWISE SPECIFIED.
 - ALL VOLTAGES ARE MEASURED IN BROADCAST POSITION (BAND 7) WITH STICK-LOOP OR LOOP ANTENNA DISCONNECTED AND GANG FULLY CLOSED.
- * ON SOME SETS, C11 IS 220MMF. WHEN MAKING REPLACEMENT, USE 270 MMF CAPACITOR.
† ON SOME SETS THIS LEAD IS CONNECTED TO PIN # 7 OF V3 (3V4) INSTEAD OF TO PIN # 7 OF V1 (1U4) AS SHOWN.





BAND	COIL STRIP MARKING	HALLICRAFTERS PART NO.		FREQUENCY RANGE	C101	C102	C103	C104	C105
		RF-OSC STRIP	ANT STRIP						
1	2L	88-907	88-908	1.8 — 3.9 MC	NONE	550	560	6.8	360
2	14L	88-909	88-910	14.62 — 15.7 MC	NONE	15	17	NONE	12
3	17L	88-911	88-912	17.32 — 18.2 MC	NONE	10	14	NONE	12
4	9L	88-913	88-914	9.22 — 10.3 MC	NONE	22	24	NONE	18
5	4L	88-915	88-916	3.9 — 8.0 MC	4.25	330	340	5	380
6	11L	88-917	88-918	11.42 — 12.3 MC	NONE	15	18	NONE	13
7	1L	88-919	88-920	540 — 1600 KC					
BLANK POSITION									
YELLOW	3L	88-921	88-922	180 — 400 KC					

- NOTES**
- RESISTANCE IN OHMS AND CAPACITANCE IN MMF UNLESS OTHERWISE SPECIFIED. K=1000
 - RESISTORS ARE 1/2 WATT AND 10% UNLESS OTHERWISE SPECIFIED.
 - INTERMEDIATE FREQUENCY = 455 KC
 - TO NE SWITCH S-1 SHOWN IN RIGHT HAND POSITION (AS VIEWED FROM FRONT OF SET).
 - POWER CHANGEOVER SWITCH S-3 SHOWN IN AC/DC POSITION. FOR BATTERY OPERATION, INSERT LINE CORD PLUG INTO CHASSIS RECEPTACLE (SEE FIG. 3).
 - LINE VOLTAGE: AC/DC OPERATION - 117 VOLTS
BATTERY OPERATION - 90V "B" AND 9V "A"
 - ALL VOLTAGES MEASURED WITH VTVM BETWEEN TUBE SOCKET TERMINALS AND B-($\frac{1}{2}$). VOLTAGES ARE DC AND POSITIVE UNLESS OTHERWISE SPECIFIED.
 - ALL VOLTAGES ARE MEASURED IN BROADCAST POSITION (BAND 7) WITH STICK-LOOP OR LOOP ANTENNA DISCONNECTED AND GANG FULLY CLOSED.
- * ON SOME SETS, C11 IS 220MMF. WHEN MAKING REPLACEMENT, USE 270 MMF CAPACITOR.
- † ON SOME SETS THIS LEAD IS CONNECTED TO PIN #7 OF V3 (3V4) INSTEAD OF TO PIN #7 OF V1 (1U4) AS SHOWN.

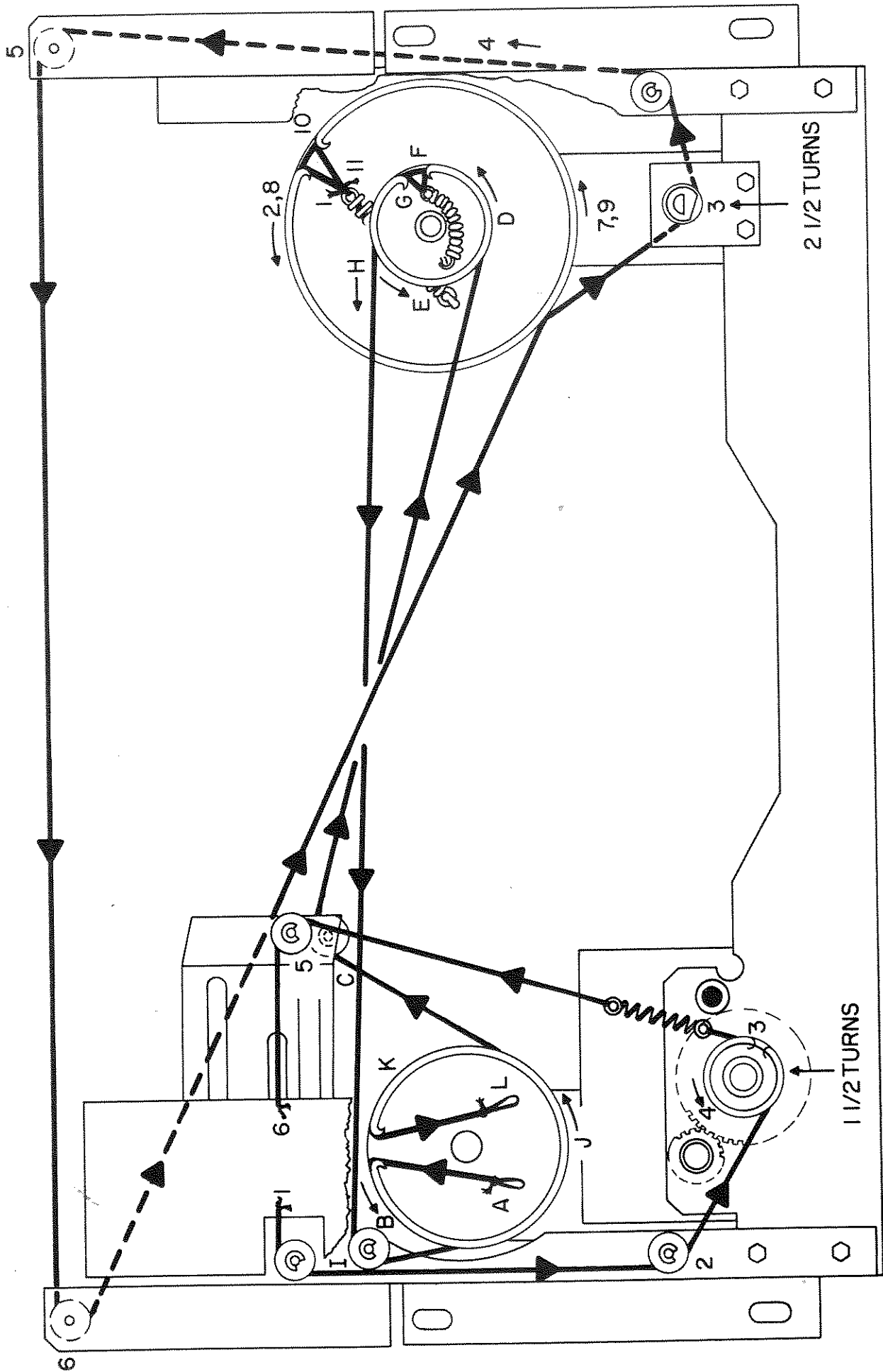
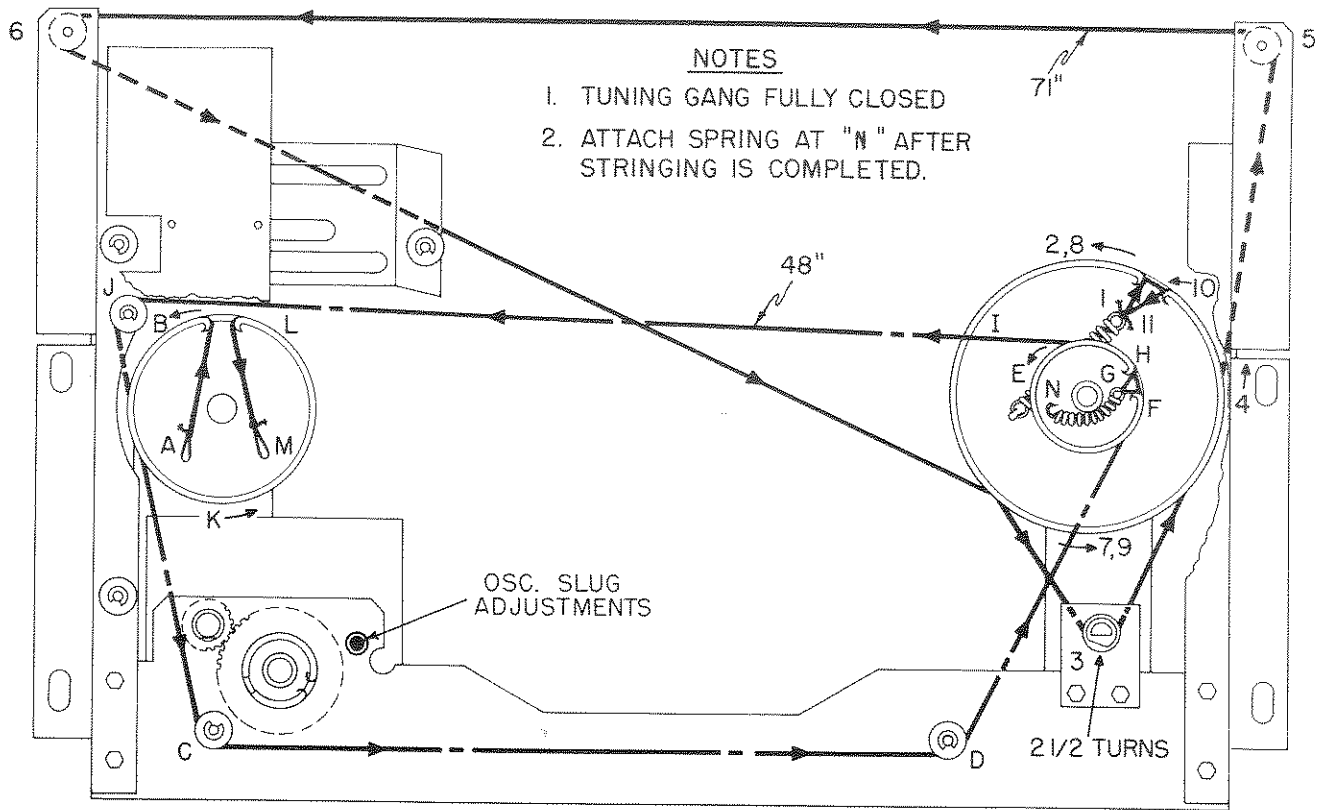
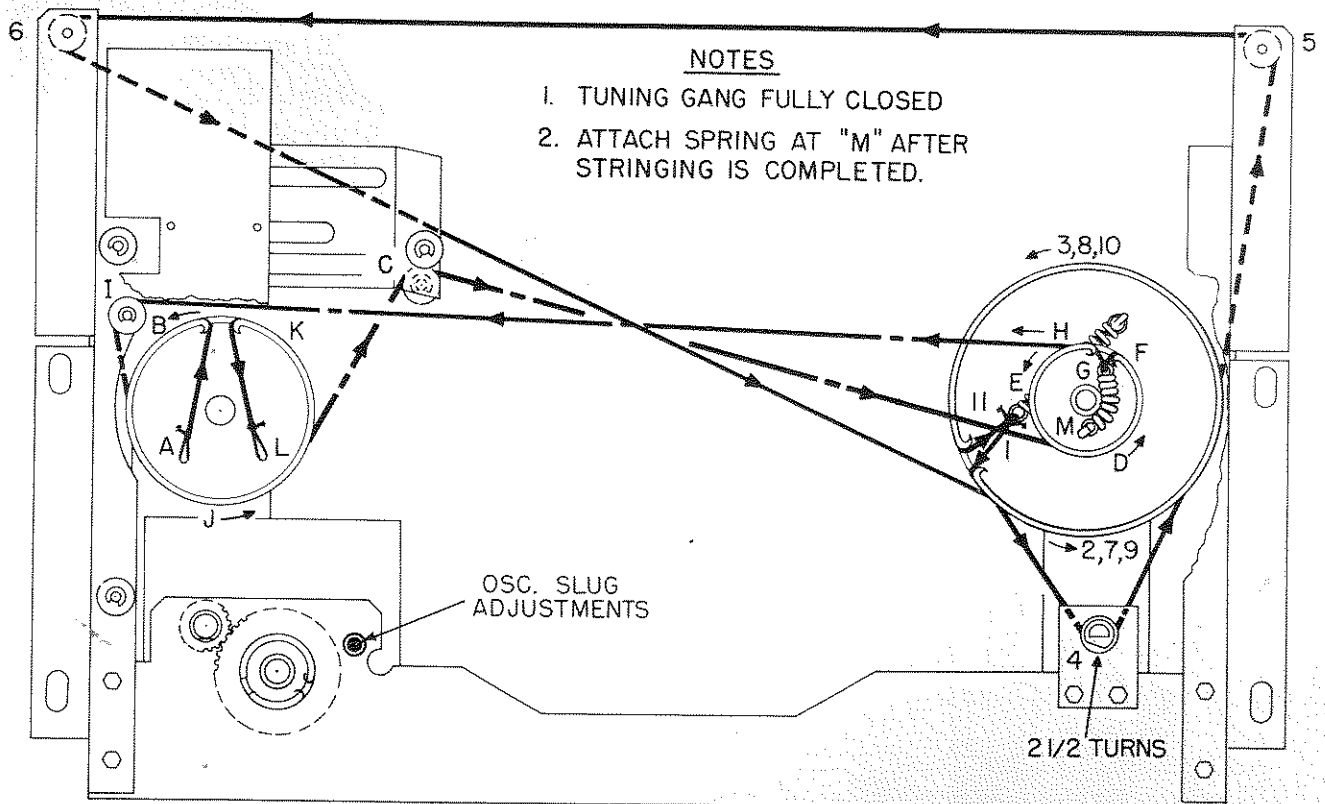


Fig. 13. Stringing Diagram (Latest Production Sets)



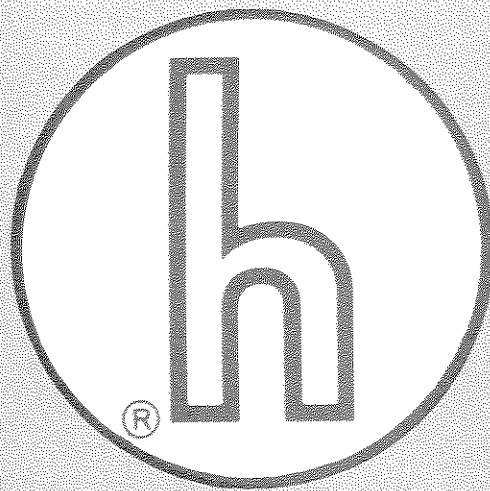
**Fig. 11. Dial Pointer and Tuning Gang Stringing Diagram
(Early Production Sets)**

92C1818-A



**Fig. 12. Dial Pointer and Tuning Gang Stringing Diagram
(Later Production Sets)**

92C2310-A



BOOK NO. 94X1431-A

656

TW-1000 (RUN 1)

TW-1000A (RUNS 1, 3, 3A & 3B)

TW-2000 (RUNS 1, 1A & 1B)