

Hallicrafters, Inc.

Model: DD-1

Chassis:

Year: Pre August 1939

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

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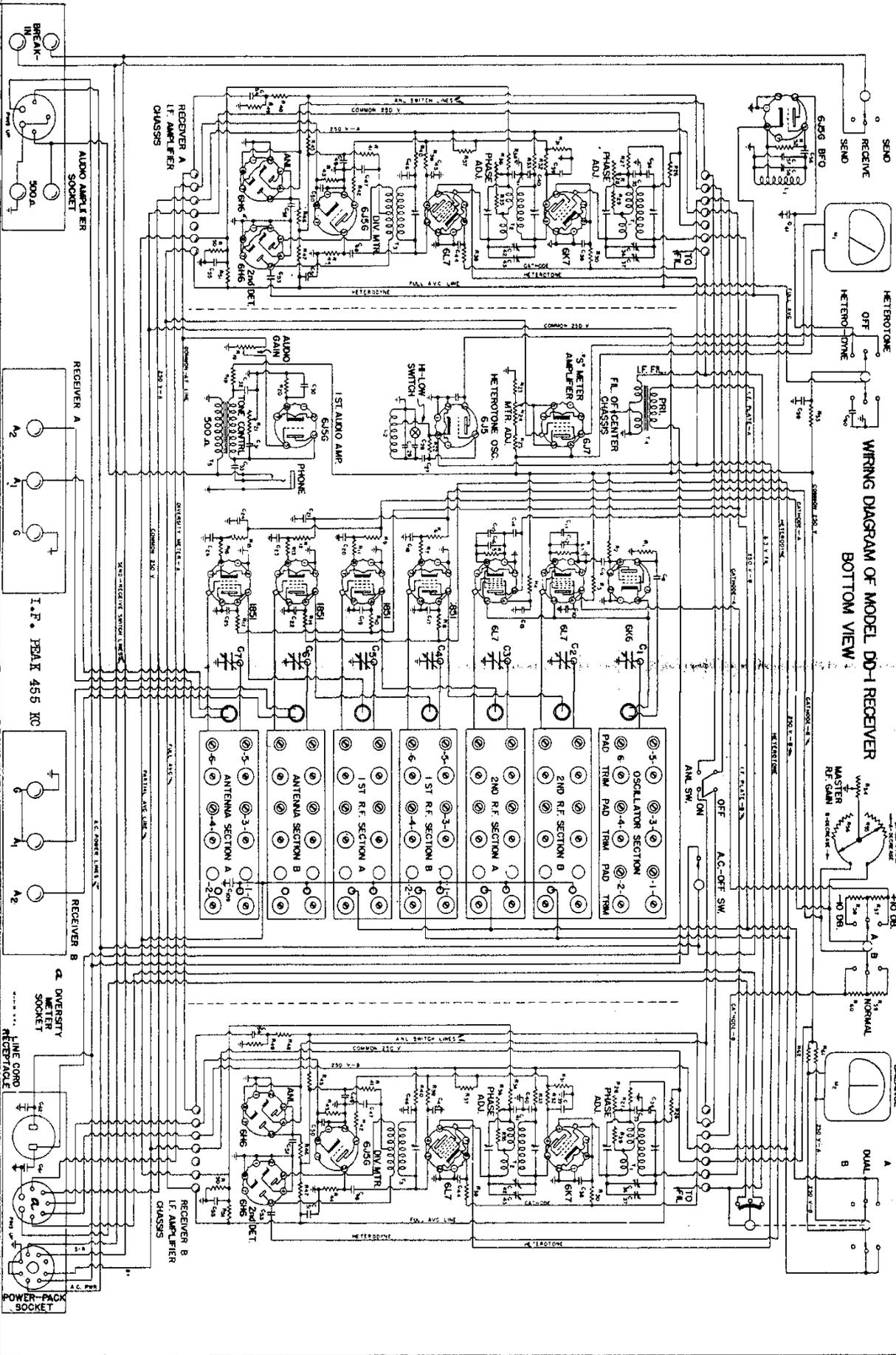
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[Riders Volume 10 - HALLICRAFTERS 10-6](#)

WIRING DIAGRAM OF MODEL DD-1 RECEIVER
BOTTOM VIEW

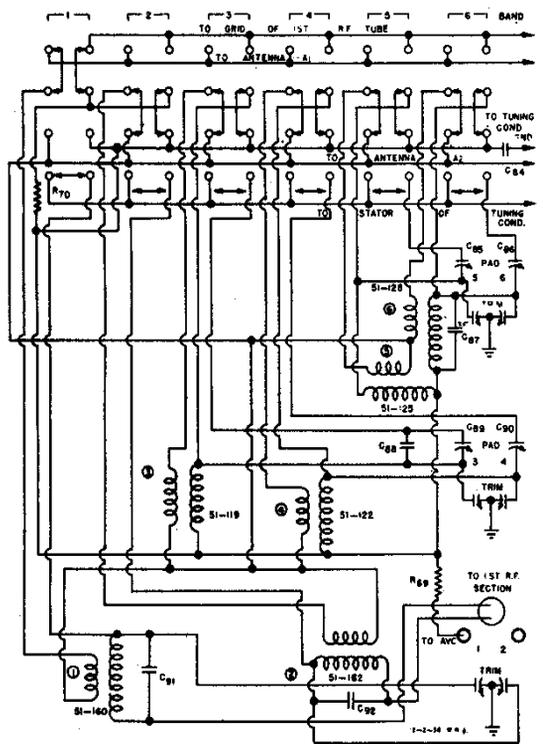


John F. Rider, Publisher

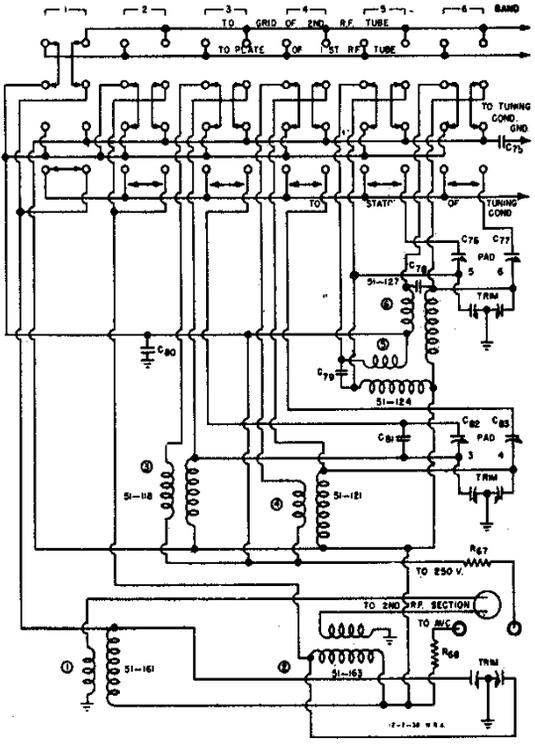
THE HALLICRAFTERS INC.

MODEL DD-1
Dual Diversity
Detailed Schematics

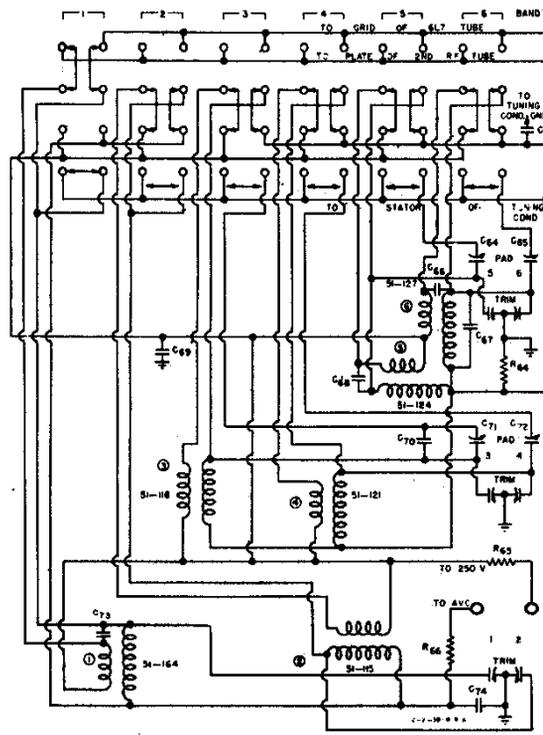
ANTENNA SECTION



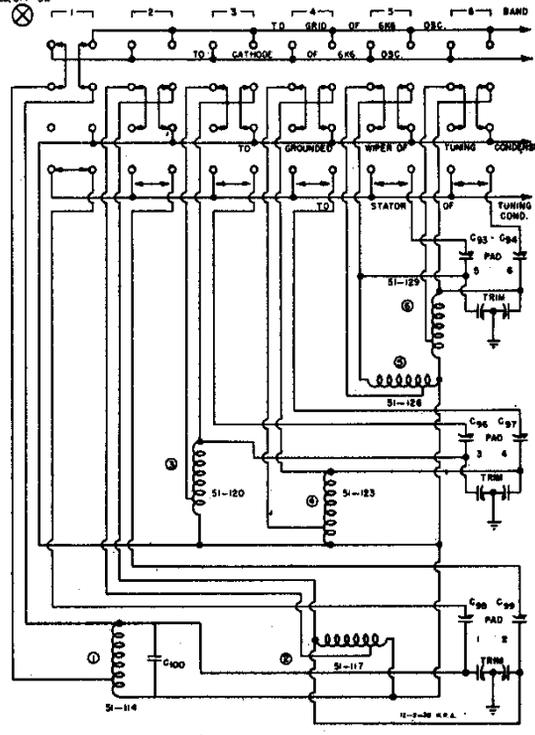
1ST R.F. SECTION



2ND R.F. SECTION



OSCILLATOR SECTION

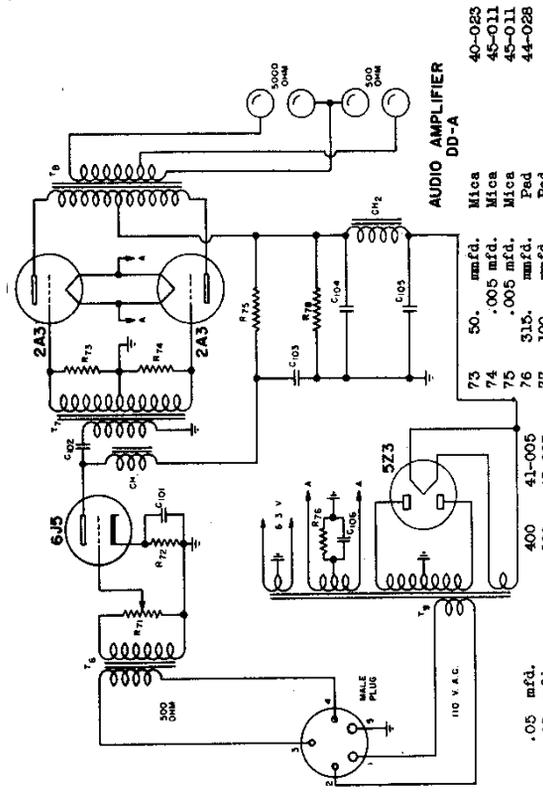


MODEL DD-1, Dual Diversity

A-F Schematic

THE HALLICRAFTERS INC.

Parts List



NO.	RESISTOR PARTS LIST MODEL DD-1	VALUE OHMS	WATTAGE	PARTS NO.
1	50,000	1/5	22-125	
2	3,800	1	22-014	
3	30,000	1/5	22-125	
4	30,000	1	20-093	
5	30,000	1	20-033	
6	600	1/5	20-033	
7	120	1/5	20-093	
8	35	1/5	20-093	
9	60,000	1/5	20-093	
10	180	1/5	25-038	
11	35	1/5	22-030	
12	120	1/5	22-091	
13	35	1/5	24-042	
14	60,000	1/5	26-000	
15	120	1/5	26-002	
16	35	1/5	26-001	
17	60,000	1/5	26-001	
18	5,000	1	22-051	
19	500,000	1/5	22-038	
20	4,000	1/5	22-050	
21	100,000	1/5	25-037	
22	50,000	1/5	20-084	
23	400	1/5	22-025	
24	500	1/5	22-026	
25	50,000	1	22-051	
26	1,000	1/5	20-033	
27	1,000	1/5	20-033	
28	15,000	1/5	22-068	
29	30,000	1/5	22-077	
30	300	1/5	22-020	
31	20,000	1/5	20-072	
32	1,000	1/5	20-072	
33	1,000	1/5	20-033	
34	1,000	1/5	20-033	
35	25,000	1/5	22-074	
36	15,000	1/5	22-065	
37	15,000	1/5	22-129	
38	300	1/5	22-020	
39	1,000	1/5	20-033	
40	1,000	1/5	20-033	
41	20,000	1/5	20-072	
42	5,000	1/5	22-053	
43	10,000	1/5	20-053	
44	1,000,000	1/5	20-106	
45	1,000,000	1/5	20-106	
46	1,500,000	1/5	20-098	
47	500,000	1/5	20-098	
48	100,000	1/5	20-093	
49	250,000	1/5	20-093	
50	750,000	1/5	22-104	
51	50,000	1/5	22-098	
52	50,000	1/5	20-094	
53	20,000	1	20-070	
54	2,500	Mes. R.F. Gain	22-122	
55	1,000	Bal. Control	25-035	
56	1,000	Bal. Control	25-035	
57	600	1/5	22-125	
58	600	1/5	22-125	

NO.	CAPACITY	TYPE	VOLT-AGE	PART NO.
1	440	mmfd.	Main	46-023
2	per section	Tunive		
3	"	"		
4	"	"		
5	"	"		
6	"	"		
7	"	"		
8	100	mmfd.	Mica	40-011
9	.01	mf.		46-024
10	.05	mf.		40-011
11	.01	mf.		40-011
12	.05	mf.		40-011
13	.05	mf.		40-011
14	15	mmfd.	Mica	40-011
15	.01	mf.		40-011
16	.05	mf.		40-011
17	.05	mf.		40-011
18	.01	mf.		40-011
19	.05	mf.		40-011
20	.05	mf.		40-011
21	.01	mf.		40-011
22	.05	mf.		40-011
23	.01	mf.		40-011
24	1	mf.		40-011
25	.01	mf.		40-011
26	.05	mf.		40-011
27	.01	mf.		40-011
28	.01	mf.		40-011
29	.01	mf.		40-011
30	.01	mf.		40-011
31	.01	mf.		40-011
32	.05	mf.		40-011
33	.01	mf.		40-011
34	.01	mf.		40-011
35	.01	mf.		40-011
36	1	mf.		40-011
37	.05	mf.		40-011
38	.01	mf.		40-011
39	.01	mf.		40-011
40	.05	mf.		40-011
41	.05	mf.		40-011
42	.05	mf.		40-011
43	.05	mf.		40-011
44	.05	mf.		40-011
45	.05	mf.		40-011
46	.05	mf.		40-011
47	.05	mf.		40-011
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61	.01	mf.		40-011
62	.01	mf.		40-011
63	.005	mf.		40-011
64	.005	mf.		40-011
65	.005	mf.		40-011
66	.005	mf.		40-011
67	.005	mf.		40-011
68	.005	mf.		40-011
69	.005	mf.		40-011
70	.005	mf.		40-011
71	.005	mf.		40-011
72	.005	mf.		40-011
73	.005	mf.		40-011
74	.005	mf.		40-011
75	.005	mf.		40-011
76	.005	mf.		40-011
77	.005	mf.		40-011
78	.005	mf.		40-011
79	.002	mf.		40-011
80	.002	mf.		40-011
81	.002	mf.		40-011
82	.002	mf.		40-011
83	.002	mf.		40-011
84	.005	mf.		40-011
85	.005	mf.		40-011
86	.005	mf.		40-011
87	.005	mf.		40-011
88	.005	mf.		40-011
89	.005	mf.		40-011
90	.005	mf.		40-011
91	.005	mf.		40-011
92	.005	mf.		40-011
93	.005	mf.		40-011
94	.005	mf.		40-011
95	.005	mf.		40-011
96	.005	mf.		40-011
97	.005	mf.		40-011
98	.005	mf.		40-011
99	.005	mf.		40-011
100	.005	mf.		40-011
101	.005	mf.		40-011
102	.005	mf.		40-011
103	.005	mf.		40-011
104	.005	mf.		40-011
105	.005	mf.		40-011
106	.005	mf.		40-011
107	.005	mf.		40-011
108	.005	mf.		40-011
109	.005	mf.		40-011

THE HALLICRAFTERS INC.

MODEL DD-1, Dual Diversity

Alignment
S.P.U. Schematic

Begin with receiver B. Set signal generator to 455 KC output. Adjust the 2nd Re-jector Control (shown in the top chassis view) for minimum response. There should be two points of minimum output. If there is only one minimum point, rotate the adjusting nut on this control approximately 1/4 turn from the minimum, and very carefully adjust the 1st rejector control until a minimum occurs. After this has been accomplished, adjust the 2nd rejector control for minimum response. Now adjust the first phasing control (screw driver shaft nearest front panel), for minimum response. Readjust the 2nd rejector control carefully for minimum response. Repeat with "A" side without changing setting of the signal generator, connecting the signal generator to the "A" side 6L7 and switching the receiver to the "A" side. Readjust signal generator to 452 KC. Make similar adjustments on Rejector Controls 3 and 4 and the rear phasing control. Switch over to the "B" receiver and repeat these adjustments on the "B" side.

Now return signal generator to 455 KC (still connected to "B" side). Carefully repeat each of the I. F. transformer trimming condensers. Switch signal generator output to 6L7 in "A" side and repeat the above operation.

NOTE: The gain of each receiver should be approximately the same, variation between receiver sections should not exceed 25% as shown on output meter readings. If gain-balance is far off, interchanging the 6L7 I. F. amplifier tubes sometimes improves it.

R. F. ALIGNMENT

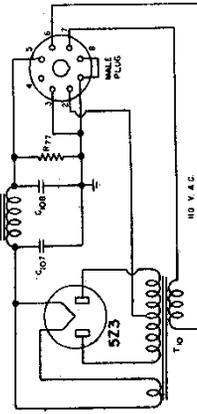
Adjust receiver to Band 1, set "A". Have all gain controls at maximum, balance control in center position.

Now connect signal generator to antenna post of "A" receiver section through a 400 ohm resistor. Be sure shorting strap from A2 to G remains connected. During all adjustments the grounded side of the generator should be connected to the ground post on the receiver.

Set band spread dial to "W" and leave it there during entire alignment. Adjust generator to 1400 KC. Set dial on receiver to that frequency. Align oscillator, 2nd R. F., 1st R. F. and antenna trimmers in the order named for maximum gain. Switch over to Receiver "B" and repeat the above operations with the exception of the oscillator section which does not require readjustment this time. Set generator and receiver to 600 KC. Adjust oscillator paddler for maximum response. Retrim oscillator at 1400 KC. Repeat the above procedure on the remaining bands, except that on bands 3-4-5-6 the R. F. paddlers should also be adjusted for maximum response at the low frequency ends of each band.

Care should be exercised in avoiding alignment on the image frequency. In every case, the image will be heard approximately 1 megacycle lower in frequency when adjusting the main tuning dial.

The greatest caution should be taken when adjusting the No. 6 band oscillator pad-der because only a slight change causes a large variation in frequency and may throw the oscillator frequency completely out of the band. The relative sensitivi-ties of receivers "A" and "B" should not vary more than 50%. A frequent cause of unbalance between receivers is defective 1A51 tubes or R. F. coils.



POWER PACK
DD-P

ALIGNMENT & SERVICING INSTRUCTIONS
FOR
SKYRIDER DIVERSITY RECEIVER
MODEL DD1

SWITCHING ARRANGEMENT

For speed, ease and accuracy in aligning the Dual Diversity receiver, it is recom-mended that the output of the signal generator be terminated in a switching box in which you have installed a double throw single pole switch. From this switching box enclosed in a shielded cable which will serve as ground, run two leads one of which is connected appropriately to section "A" and the other to Section "B". Operation of the switch will readily allow you to switch the signal generator to either receiver section being aligned for a quick comparative check.

INTERMEDIATE FREQUENCY ALIGNMENT

Have controls set as follows:-
Have I. F. gain switch in NORMAL position.
Receiver switch to "A" side.
Set rejector control to 3 KC marking.
Balance control in center position.
All other gain controls adjusted for maximum gain.

IN ALIGNING "A" SECTION:-

Connect signal generator to the grid of the "A" section 6L7 converter (see diagram for location.) Adjust the signal generator for 455 KC output. Adjust I. F. trans-formers in the "A" receiver until they are peaked for maximum gain.

In Aligning "B" Section:-

Connect the signal generator as indicated above to the 6L7 converter tube in the "B" receiver and duplicate the adjustments done to the I. F. transformers of section "A". The receiver switch will necessarily be switched to the "B" side.

REJECTOR ADJUSTMENT

Before aligning the I. F. Rejector Circuit, the variable rejector condensers found below the chassis and driven by the long flexible copper cable, should be set as follows: With the rejector pointer set at 3 KC, check the first rejector con-denser (closest to front panel in each I. F. section). It should have its rotor plates about 80% in mesh. The second rejector condenser (farthest from front panel) should have its plates about 20% in mesh. The same relationship should also exist between the condensers in the other I. F. section. When turning the rejector con-trol from 3 KC toward 1.5 KC, the plates on the first rejector condenser should unmesh at the same time the plates on the second rejector condenser are meshing.

To correctly adjust the rejector circuit it is necessary to have two signals avail-able which are accurately removed from the 455 KC fundamental by 3 KC on each side. The most satisfactory way to accomplish this is to use two crystals, one for 452 KC output and the other for 458 KC output. In the event, however, that crystals of those frequencies are not available, a satisfactory substitute can be used which consists of the following procedure: Put the BFO switch in the heterodyne position. Feed 455 KC from the signal generator into either 6L7 converter. Remove modulation from the signal being delivered by the generator. Obtain zero beat on the B. F. O. by operating the pitch control knob. Tune the generator slowly away from the 455 KC setting until a beat note of 3000 cycles (+ or - of 455 KC) is heard. Remember the pitch of that note. It will be necessary in adjusting the signal generator to a frequency 3000 cycles on the other side of 455 KC. A little practice will enable you to reset to each side of 455 KC by the 3 KC difference quite accurately and when signals of 452 and 458 KC are then available by this method, these signals should be used to properly peak the rejection circuit. This method is recommended only when a closely calibrated signal generator or a crystal controlled signal generator are not available.

MODEL DD-1, Dual Diversity
 Socket, Trimmers
 Alignment, Part 2

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BEAT FREQUENCY OSCILLATOR ADJUSTMENTS

Place the B.F.O. Key in the Heterodyne position.

With 455 KC signal from generator feeding into the "A" 6L7 converter and receiver "A" functioning, and the chassis standing on its left end (looking at set from the front) adjust the padding condenser inside the B.F.O. Shield can until zero beat is reached. The B.F.O. shield can is located directly behind the pitch control. Prior to making this adjustment assure yourself that the PITCH CONTROL condenser is at 50% capacity pointer on control positioned vertically). When properly adjusted, rotation of the pitch control condenser will show two beat note signals 180 degrees apart.

S METER ADJUSTMENT

Push in No. 6 Band Button. With gain controls at maximum, adjust the zero reset control on all meters for zero.

NOTES:

If overload occurs on the broadcast band it might be advisable to shorten the length of the receiving antennas. If this recommendation is of little help check for a short to ground in the A.V.C. circuit.

Should the occasion of examining the coil units arise, exercise extreme care in moving the heavy leads attached to the switch terminals. Excessive movement of one of these leads may cause the contacting portion of the switch to be thrown out of alignment and provide improper contact.

If it becomes difficult to properly heterodyne a strong signal when listening to C. W. reception, reduce the overall gain with the master gain control 'till a satisfactory note is obtained.

