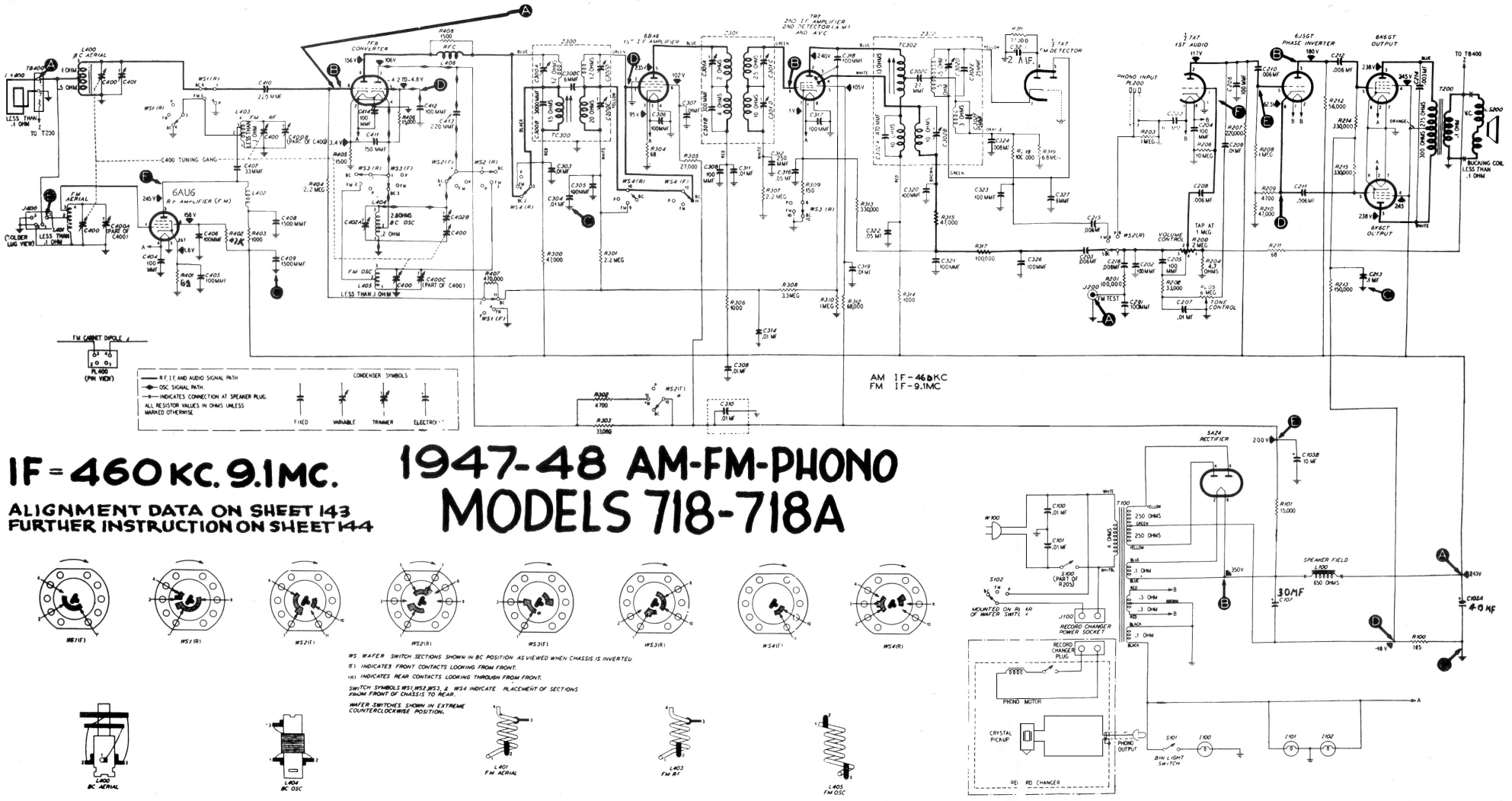


IF = 460 KC. 9.1 MC.

ALIGNMENT DATA ON SHEET 143
FURTHER INSTRUCTION ON SHEET 144

1947-48 AM-FM-PHONO
MODELS 718-718A

WS WAFER SWITCH SECTIONS SHOWN IN BC POSITION AS VIEWED WHEN CHASSIS IS INVERTED
(F) INDICATES FRONT CONTACTS LOOKING FROM FRONT.
(R) INDICATES REAR CONTACTS LOOKING THROUGH FROM FRONT.
SWITCH SYMBOLS WS1, WS2, WS3, & WS4 INDICATE PLACEMENT OF SECTIONS FROM FRONT OF CHASSIS TO REAR.
WAFER SWITCHES SHOWN IN EXTREME COUNTERCLOCKWISE POSITION.

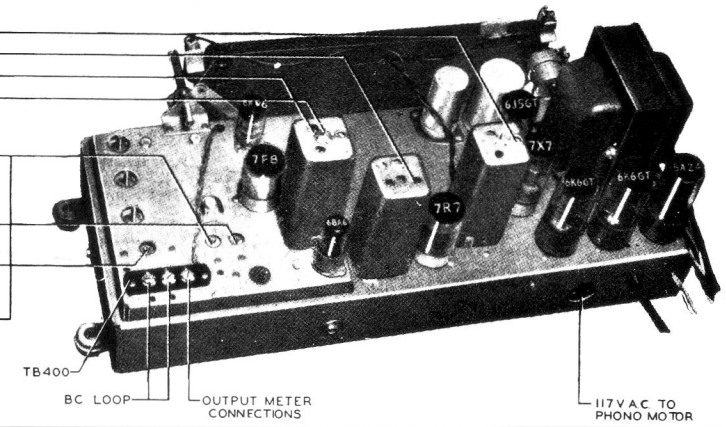
PHILCO

DATA SHEET 142

AM ALIGNMENT CHART

STEP	SIGNAL GENERATOR		RADIO			ADJUST
	CONNECTIONS TO RADIO	DIAL	WAFER SWITCH	DIAL	SPECIAL INSTRUCTIONS	
1	Through .1-mf. condenser to terminal 1 of TB400.	460 kc.	BC	540 kc.	Adjust for maximum, once only, in order.	C302B C301D C300E TC300A
2	Radiating loop (see note below).	580 kc.	BC	580 kc.	Adjust for maximum.	C402B
3	Same as step 2.	1700 kc.	BC	1700 kc.	Adjust for maximum.	C402A
4	Same as step 2.	1500 kc.	BC	1500 kc.	Adjust for maximum.	C401
5	Same as step 2.	580 kc.	BC	580 kc. (approx.)	Rock tuning condenser while adjusting for maximum.	C402B
6	Repeat steps 3, 4, 5, and 4, in order, until no further improvement is obtained.					

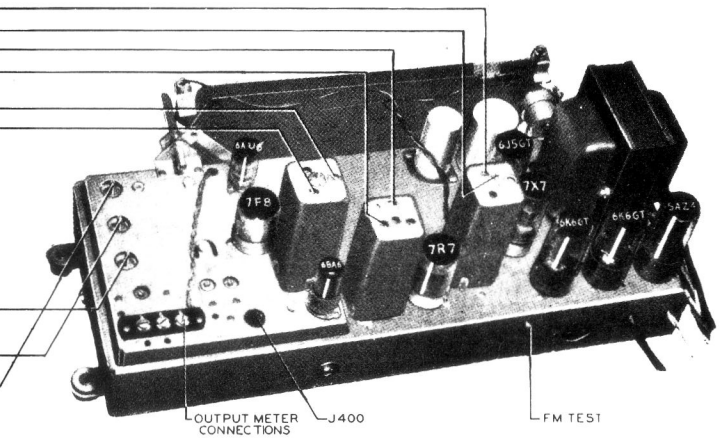
RADIATING LOOP: Make up a coil of insulated wire consisting of 6 to 8 turns, about 6" in diameter. Connect coil ends to signal-generator leads, and suspend coil near radio broadcast loop.



Top View, Showing AM Trimmer Locations

FM ALIGNMENT CHART

STEP	SIGNAL GENERATOR		RADIO			ADJUST
	CONNECTIONS TO RADIO	DIAL	WAFER SWITCH	DIAL	SPECIAL INSTRUCTIONS	
1	Through .1-mf. condenser to pin 1 of 6BA6 (test point D, figure 5).	9.1 mc.	FM	88 mc.	Adjust for maximum. Repeat until no further improvement is noticed. After this step, do not touch any of these trimmers except C302D (step 3).	C302D TC302 C301C C301A
2	Through .1-mf. condenser to pin 8 of 7F8 (test point A, figure 5).	9.1 mc.	FM	88 mc.	Adjust for maximum. Repeat until no further improvement is noticed. After this step, do not touch either of these trimmers.	C300D C300A
3	Same as step 2.	9.1 mc.	FM	88 mc.	Double-check the adjustment of C302D to make sure that minimum audio output is obtained from the speaker. Use output meter. This is a critical adjustment: turn trimmer very slowly.	
4	Connect signal generator to terminal 4 of J400.	105 mc.	FM	105 mc.	Maximum meter reading. This is the oscillator high-frequency padder adjustment.	C400C
5	Same as step 4.	105 mc.	FM	105 mc.	Maximum — Rock tuning control.	C400B
6	Same as step 4.	105 mc.	FM	105 mc.	Maximum.	C400A
7	Same as step 4.	92 mc.	FM	92 mc.	Adjust L405. See notes 1 and 2.	
8	Same as step 4.	92 mc.	FM	92 mc.	Adjust L403. See notes 1 and 3.	
9	Same as step 4.	92 mc.	FM	92 mc.	Adjust L401. See notes 1 and 4.	
10	Repeat steps 4 through 9 until no further increase is obtained.					



Top View, Showing FM Trimmer Locations

IF=460Kc 9.1Mc

CIRCUIT ON SHEET 142
FURTHER DATA ON SHEET 144

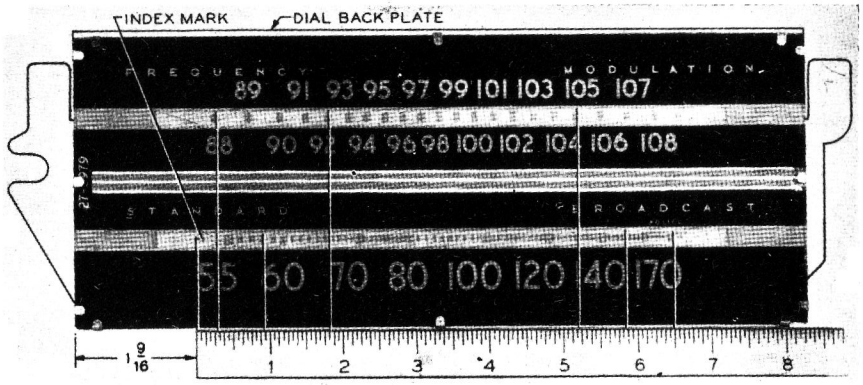
1947-48 AM-FM-PHONO MODELS 718-718A ALIGNMENT DATA

CALIBRATING DIAL BACKPLATE

When the radio chassis has been removed from the cabinet, dial calibration and alignment points may be marked on the dial backplate below the pointer.

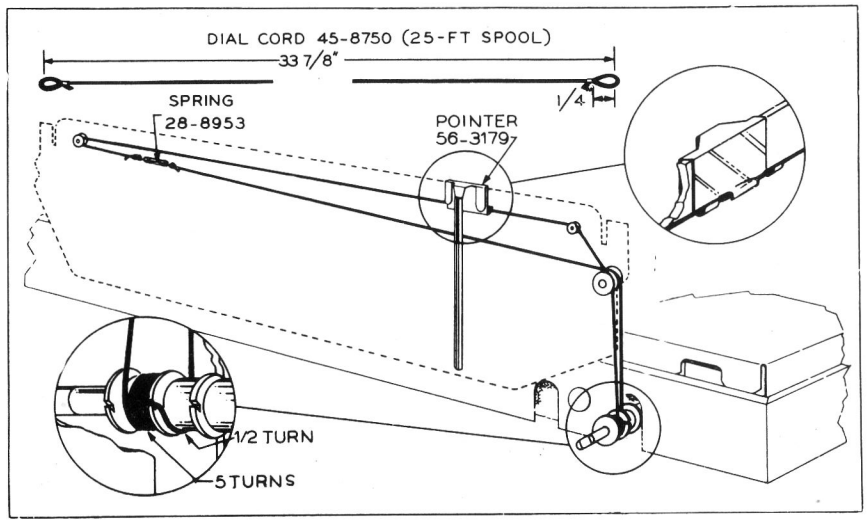
The measurements for these points are shown in figure . Hold a ruler against the scale backplate, with the start of the ruler at the reference line shown, and mark pencil dots at the proper points for the required frequency settings. When the ruler is correctly placed, the index mark is approximately 1-5/16" from the edge of the backplate.

With the tuning gang fully meshed, the pointer should be adjusted on the drive cord to coincide with the index mark.



TP-3882

Dial-Backplate Calibration Measurements



Pointer-Drive-Cord Installation Details

CIRCUIT DATA ON SHEET 142
ALIGNMENT DATA ON SHEET 143

IF = 460 KC. 9.1 MC.

AM ALIGNMENT PROCEDURE

When the complete AM and FM alignments are to be made, the AM alignment should be made first: if FM alignment is not required, the AM alignment alone may be made.

DIAL POINTER: With tuning-condenser plates fully meshed, adjust pointer to coincide with index mark at low-frequency end of scale. See "CALIBRATING DIAL BACKPLATE."

VOLUME CONTROL: Set to maximum.

TONE CONTROL: Set to maximum counterclockwise, near the "off" position.

AM R-F SIGNAL GENERATOR: Connect ground lead to radio chassis, and output lead as indicated in chart. Use modulated output.

OUTPUT METER: Connect between terminal 3 (voice-coil connection) of aerial terminal panel (TB400) and chassis.

OUTPUT LEVEL: During alignment input signal must be attenuated to hold output-meter reading below 1.5 volts.

RADIO WAFER SWITCH, RADIO DIAL, and SIGNAL-GENERATOR DIAL: Set as indicated in chart.

FM ALIGNMENT PROCEDURE

MAKE AM ALIGNMENT FIRST

OUTPUT METER: Connect as for AM alignment (this meter is used only in step 3).

D-C METER: Connect a 20,000-ohms-per-volt meter across the 5-mf. condenser, C325, in the FM detector circuit —the negative lead to pin 6 of the 7X7 tube and the positive lead to the chassis. Use the 10-volt meter range.

AM R-F SIGNAL GENERATOR: Use modulated output for the entire alignment. The generator must have sufficient output to give a reading of approximately 9 volts on the d-c meter, and the signal should be attenuated during the alignment to keep the meter at this value. Connect the generator ground lead to the chassis, and the output lead as indicated in the chart.

RADIO WAFER SWITCH, RADIO DIAL, and SIGNAL-GENERATOR DIAL: Set as indicated in chart. Allow the radio and generator to warm up for 15 minutes before starting the alignment.

NOTE 1: The resonance of the circuits using coils L401, L403, and L405 may be checked with a powdered-iron tuning core, such as Part No. 56-6100. If the signal strength (meter reading) increases when the iron end is inserted in the coil, compress the turns slightly. If the signal increases when the threaded brass end is inserted, spread the turns. Do not compress or spread the turns excessively; only a small change is required at these frequencies.

NOTE 2: Oscillator coil L405—Adjust coil for maximum meter reading.

NOTE 3: R-F coil L403—Adjust coil for maximum meter reading while rocking tuning control.

NOTE 4: Aerial coil L401—Adjust coil for maximum meter reading.

1947-48 AM-FM-PHONO MODELS 718 - 718A

INSTRUCTION DATA

PHILCO DATA SHEET 144