



THE FISHER

HIGH FIDELITY
Radio-Phonograph

SERVICE INSTRUCTIONS



SERIES 202

PRICE: \$ 1 . 0 0

FISHER RADIO CORPORATION • NEW YORK

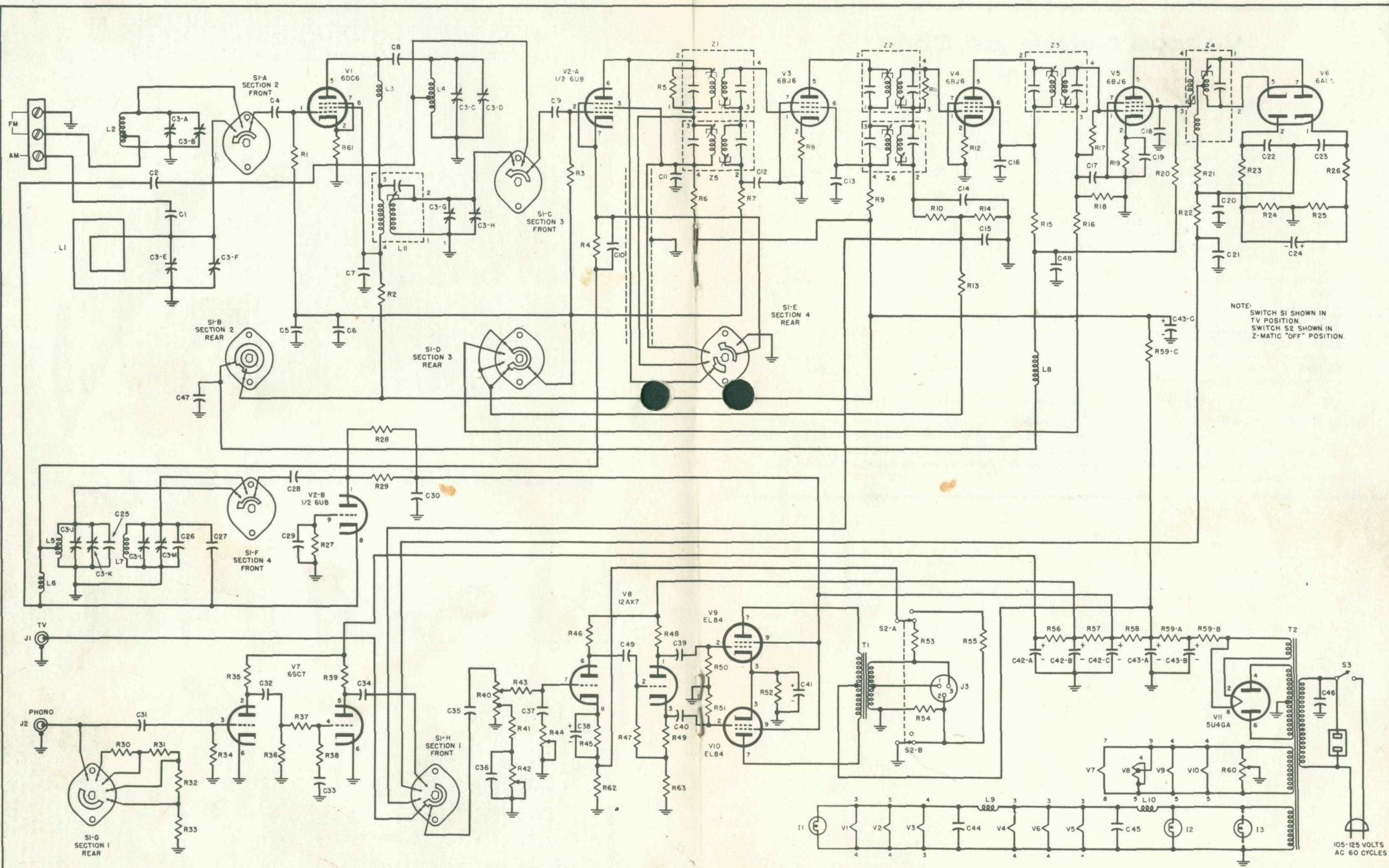
ALIGNMENT INSTRUCTIONS: READ WITH EXTREME CARE BEFORE ATTEMPTING ALIGNMENT. To set pointer, turn the tuning capacitor fully closed and set pointer to last reference mark at low frequency end of dial. Use an insulated screwdriver for alignment adjustment.

STEPS	DUMMY ANTENNA	COUPLING	FREQUENCY	MODULATION	BAND SWITCH SETTING	DIAL POINTER SETTING	INDICATING METER	ADJUST	REMARKS
1	.01 mfd	C-3-G (AM Converter Section of Variable Capacitor)	455 KC	400 CPS AM	AM	1000 KC (approx.)	AC Voltmeter to speaker output terminals and 16-ohm load	Z-5, Z-6 Top & Bottom	Adjust for maximum deflection.
2	"	C-3-E (AM Antenna Section of Variable Capacitor)	1400 KC	"	"	1400 KC	"	C-3H, C-3K	"
3	"	"	600 KC	"	"	600 KC	"	L-5, L-11	"
4	Repeat Steps 2 & 3								
5	Skip directly to Step 13 if FM adjustment is unnecessary. Otherwise proceed to Step 6.								
6	—	To shield of V-2 (6U8) Unground shield	10.7 MC	None	FM	Point of no interference	DC VTVM to negative side of C-24 (8 mfd)	Z-1, Z-2, Z-3, Top & Bottom & Bottom of Z-4	Adjust for maximum deflection (negative voltage reading).
7	—	"	"	"	"	"	DC VTVM to Junction of C-21 and R-22	"	Adjust for zero between positive and negative readings.
8	A 270 ohm carbon resistor	FM Terminals on Antenna-strip	106 MC	400 CPS FM FM (22.5 KC deviation)	"	106 MC	DC VTVM to negative side of C-24 (8 mfd)	C-1	Adjust for maximum deflection (negative voltage reading).
9	"	"	90 MC	"	"	90 MC	"	L-7	Expand or compress for maximum deflection.
10	"	"	106 MC	"	"	"	"	C-1	Adjust for maximum deflection (negative voltage reading).
11	A 270 ohm carbon resistor	"	90 MC	400 CPS FM	"	"	"	L-7	Expand or compress for maximum deflection.
12	Repeat Steps 10 & 11								
13	(Use this Step if AM alignment has been carried out.) Mount chassis in cabinet and connect loop antenna in proper place. Set dial pointer to high end of band and adjust C-3F for maximum output.								

PARTS DESCRIPTION LIST

SYMBOL	DESCRIPTION	PART NUMBER	SYMBOL	DESCRIPTION	PART NUMBER
C-1, C-2	Capacitor, 2.2 mmfd; 500 V	C-3039	R-12	Resistor, Composition: 100 ohms, 10%; 1/2 W	RC20BF101K
C-3	Capacitor, FM-AM Variable	C-556-116	R-13	Resistor, Composition: 2.2 megohms, 10%; 1/2 W	RC20BF225K
C-4	Capacitor, Ceramic: 220 mmfd; 500 V	CC21GP221M5	R-14	Resistor, Composition: 68,000 ohms, 10%; 1/2 W	RC20BF683K
C-5	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502V6		On some models: 100,000 ohms, 10%; 1/2 W	RC20BF104K
C-6	Capacitor, .047 mfd; 200 V	C68P473M2	R-15, R-16	Resistor, Composition: 1000 ohms, 10%; 1/2 W	RC20BF102K
C-7	Capacitor, Ceramic: .02 mfd; 600 V	C-556-122	R-17	Resistor, Composition: 330,000 ohms, 10%; 1/2 W	RC20BF334K
C-8	Capacitor, Ceramic: 24 mmfd, 10%; 500 V	CC21GP240K5	R-18	Resistor, Composition: 100,000 ohms, 10%; 1/2 W	RC20BF101K
C-9	Capacitor, Ceramic: 220 mmfd; 500 V	CC21GP221M5	R-19	Resistor, Composition: 100 ohms, 10%; 1/2 W	RC20BF102K
C-10, C-11, C-12, C-13	Capacitor, Ceramic: .02 mfd; 600 V	C-556-122	R-20	Resistor, Composition: 1000 ohms, 10%; 1/2 W	RC20BF680K
C-14, C-15	Capacitor, Ceramic: 100 mmfd; 500 V	CC21GP101M5	R-21	Resistor, Composition: 68 ohms, 10%; 1/2 W	RC20BF683K
C-16	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502V6	R-22	Resistor, Composition: 68,000 ohms, 10%; 1/2 W	RC20BF152K
C-17	Capacitor, Ceramic: 100 mmfd; 500 V	CC21GP101M5	R-23	Resistor, Composition: 1500 ohms, 10%; 1/2 W	RC20BF682K
C-18, C-19	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502V6	R-24, R-25	Resistor, Composition: 68,000 ohms, 10%; 1/2 W	RC20BF102K
C-20	Capacitor, Ceramic: 300 mmfd, 10%; 500 V	CC21GP301K5	R-26	Resistor, Composition: 1000 ohms, 10%; 1/2 W	RC20BF223K
C-21	Capacitor, Ceramic: 1000 mmfd, 10%; 500 V	CC26GP102K5	R-27	Resistor, Composition: 22,000 ohms, 10%; 1/2 W	RC20BF683K
C-22, C-23	Capacitor, Ceramic: 300 mmfd, 10%; 500 V	CC21GP301K5	R-28	Resistor, Composition: 68,000 ohms, 10%; 1 W	RC40BF333K
C-24	Capacitor, Electrolytic: 8 mfd; 50 V	C-551-118	R-29	Resistor, Composition: 33,000 ohms, 10%; 2 W	RC20BF822K
C-25, C-26	Capacitor, Ceramic: 5 mmfd, N1400; 500 V	CC20VK050G5	R-30, R-31	Resistor, Composition: 2700 ohms, 10%; 1/2 W	RC20BF272K
C-27	Capacitor, Ceramic: 5000 mmfd; 500 V	C-3338	R-32	Resistor, Composition: 3900 ohms, 10%; 1/2 W	RC20BF392K
C-28	Capacitor, Ceramic: 47 mmfd; 500 V	C-3350	R-33	Resistor, Composition: 22 megohms, 10%; 1/2 W	RC20BF226K
C-29	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502V6	R-34	Resistor, Composition: 100,000 ohms, 10%; 1/2 W	RC20BF224K
C-30	Capacitor, Ceramic: .02 mfd; 600 V	C-556-122	R-35	Resistor, Composition: 220,000 ohms, 10%; 1/2 W	RC20BF226K
C-31	Capacitor, Ceramic: .01 mfd; 600 V	CK62GP502V6	R-36	Resistor, Composition: 22 megohms, 10%; 1/2 W	RC20BF105K
C-32	Capacitor, .0047 mfd, 10%; 200 V	CK62GP103V6	R-37	Resistor, Composition: 1 megohm, 10%; 1/2 W	RC20BF473K
C-33	Capacitor, .047 mfd, 10%; 200 V	C68P473M2	R-38	Resistor, Composition: 47,000 ohms, 10%; 1/2 W	RC20BF104K
C-34	Capacitor, .01 mfd, 400 V	C68P473M2	R-39	Resistor, Composition: 100,000 ohms, 10%; 1/2 W	RC20BF104K
C-35	Capacitor, .022 mfd, 10%; 200 V	C68P103M4		On some models: 220,000 ohms, 10%; 1/2 W	RC20BF224K
C-36	Capacitor, Ceramic: 1000 mmfd, 10%; 500 V	C68P223K2	R-40	Potentiometer, Composition: 500,000 ohms	R-5000-16
C-37	Capacitor, Electrolytic: 25 mfd; 6 V	CC26GP102K5	R-41	Resistor, Composition: 10,000 ohms, 10%; 1/2 W	RC20BF103K
C-38	Capacitor, .01 mfd; 400 V	C-556-137	R-42	Potentiometer, Composition: 1 megohm	R-5000-14
C-39, C-40	Capacitor, Electrolytic: 50 mfd; 25 V	C68P103M4	R-43	Resistor, Composition: 220,000 ohms, 10%; 1/2 W	RC20BF224K
C-41	Capacitor, Electrolytic: 40/40/20 mfd; 450 V	C-556-128	R-44	Potentiometer, Composition: 250,000 ohms	R-5000-15
C-42, C-43	Capacitor, Ceramic: .005 mfd; 600 V	C-50028-1	R-45	Resistor, Composition: 4700 ohms, 10%; 1/2 W	RC20BF472K
C-44, C-45	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502V6	R-46	Resistor, Composition: 47,000 ohms, 10%; 1/2 W	RC20BF474K
C-46	Capacitor, Molded Tubular: .01 mfd; 600 V	C-2747	R-47	Resistor, Composition: 1 megohm, 10%; 1/2 W	RC20BF105K
C-47, C-48	Capacitor, Ceramic: .005 mfd; 600 V	CK62GP502V6	R-48	Resistor, Composition: 100,000 ohms, 10%; 1/2 W	RC20BF104K
C-49	Capacitor, Ceramic: .02 mfd; 600 V	C-556-122	R-49	Resistor, Composition: 2200 ohms, 10%; 1/2 W	RC20BF222K
I-1, I-2, I-3	Lamp, Pilot Light #47	I-50009-1	R-50, R-51	Resistor, Composition: 470,000 ohms, 10%; 1/2 W	RC20BF474K
J-1	Jack: 1 Female Contact	J-3143	R-52	Resistor, Wirewound: 125 ohms, 10%; 7 W	R-556-124
J-2	Jack: 1 Female Contact Insulated	J-1030	R-53	Resistor, Composition: 5600 ohms, 10%; 1/2 W	RC20BF153K
J-3	Jack: Speaker	J-1589	R-54	On some models: 15,000 ohms, 10%; 1/2 W	RC20BF153K
L-1	Coil: AM Loop	L-556-121	R-55	Resistor, Wirewound: 2 ohms, 2 W	RC20BF561K
L-2	Coil: FM Antenna	L-556-131		Resistor, Composition: 560 ohms, 10%; 1/2 W	RC20BF152K
L-3	Choke, RF: 2.2 microhenrys	L-3352	R-56	On some models: 1500 ohms, 10%; 1/2 W	RC20BF223K
L-4	Coil: FM RF	L-556-132	R-57	Resistor, Composition: 22,000 ohms, 10%; 1/2 W	RC20BF472K
L-5	Coil: AM Oscillator	L-556-123	R-58	Resistor, Composition: 4700 ohms, 10%; 1/2 W	RC20BF222K
L-6	Choke: RF	L-509-147	R-59	Resistor, Composition: 2200 ohms, 10%; 2 W	R-556-126
L-7	Coil: FM Oscillator	L-556-133	R-60	Resistor, Wirewound: 5650 ohms tapped at 50 ohms and 150 ohms	R-516-128
L-8	Choke, RF: 2.2 microhenrys	L-3352	R-61	Potentiometer, Wirewound: 500 ohms	RC20BF680K
L-9, L-10	Choke, Filament	L-520-156	R-62	Resistor, Composition: 58 ohms, 10%; 1/2 W	RC20BF221K
L-11	Coil: AM RF	L-556-125	R-63	Resistor, Composition: 220 ohms, 10%; 1/2 W	RC20BF104K
R-1	Resistor, Composition: 1 megohm, 10%; 1/2 W	RC20BF105K	S-1	Switch, Band Selector	S-556-119
R-2	Resistor, Composition: 1000 ohms, 10%; 1/2 W	RC20BF102K	S-2	Switch, Slide: DPDT	S-505-117
R-3	Resistor, Composition: 2.2 megohms, 10%; 1/2 W	RC20BF225K	S-3	Switch, Power: Part of R-42	
R-4	Resistor, Composition: 680 ohms, 10%; 1/2 W	RC20BF681K	T-1	Transformer, Output	T-539-117
R-5	Resistor, Composition: 68,000 ohms, 10%; 1/2 W	RC20BF683K	T-2	Transformer, Power	T-556-115
R-6	Resistor, Composition: 1000 ohms, 10%; 1/2 W	RC20BF102K	Z-1	Transformer: FM IF	ZZ-2987
R-7	Resistor, Composition: 470,000 ohms, 10%; 1/2 W	RC20BF474K	Z-2, Z-3	Transformer: FM IF	ZZ-509-130
R-8	Resistor, Composition: 68 ohms, 10%; 1/2 W	RC20BF680K	Z-4	Transformer: FM Detector	ZZ-2989
R-9	Resistor, Composition: 1000 ohms, 10%; 1/2 W	RC20BF683K	Z-5	Transformer: AM IF	ZZ-2985
R-10	Resistor, Composition: 68,000 ohms, 10%; 1/2 W	RC20BF473K	Z-6	Transformer: AM IF	ZZ-2984
R-11	Resistor, Composition: 330,000 ohms, 10%; 1/2 W	RC20BF334K			

R-556-139
R556-147



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SERIES 202 RADIO-PHONOGRAPH

Voltage Reference Chart

SOCKET PINS

TUBE		1	2	3	4	5	6	7	8	9
V1	6DC6	-.7	.5	6.3AC	0	100	100	0	—	—
V2	6U8	125	-2.4	100	0	6.3AC	100	0	0	-4.4
V3	6BJ6	-.65	.75	0	6.3AC	95	95	0	—	—
V4	6BJ6	0	1	6.3AC	0	95	95	0	—	—
V5	6BJ6	-.1	1	6.3AC	0	95	95	0	—	—
V6	6AL5	2.4	-2.15	0	6.3AC	.2	0	.3	—	—
V7	6SC7	0	110	-.9	-1.1	110	0	AC Fil.*	AC Fil.*	—
V8	12AX7	225	25	65	AC Fil.*	AC Fil.*	140	0	1.5	AC Fil.*
V9	EL84	—	0	11	AC Fil.*	AC Fil.*	—	340	—	300
V10	EL84	—	0	11	AC Fil.*	AC Fil.*	—	340	—	300
V11	5U4GA	—	360	—	335 AC	—	335AC	—	360	—

* This voltage will vary with the setting of R-60 from 6.3AC to zero.

Notes: Line voltage set at 117 V., 60 cycles. Voltage readings may vary $\pm 10\%$ under normal operating conditions. All voltages read with a vacuum tube voltmeter under no-signal conditions. Band switch set at FM. Volume control at minimum, bass control at minimum, treble control at maximum, Z-Matic off. All voltages read with respect to chassis. Readings are in positive volts, DC, unless otherwise specified.

NOTES

