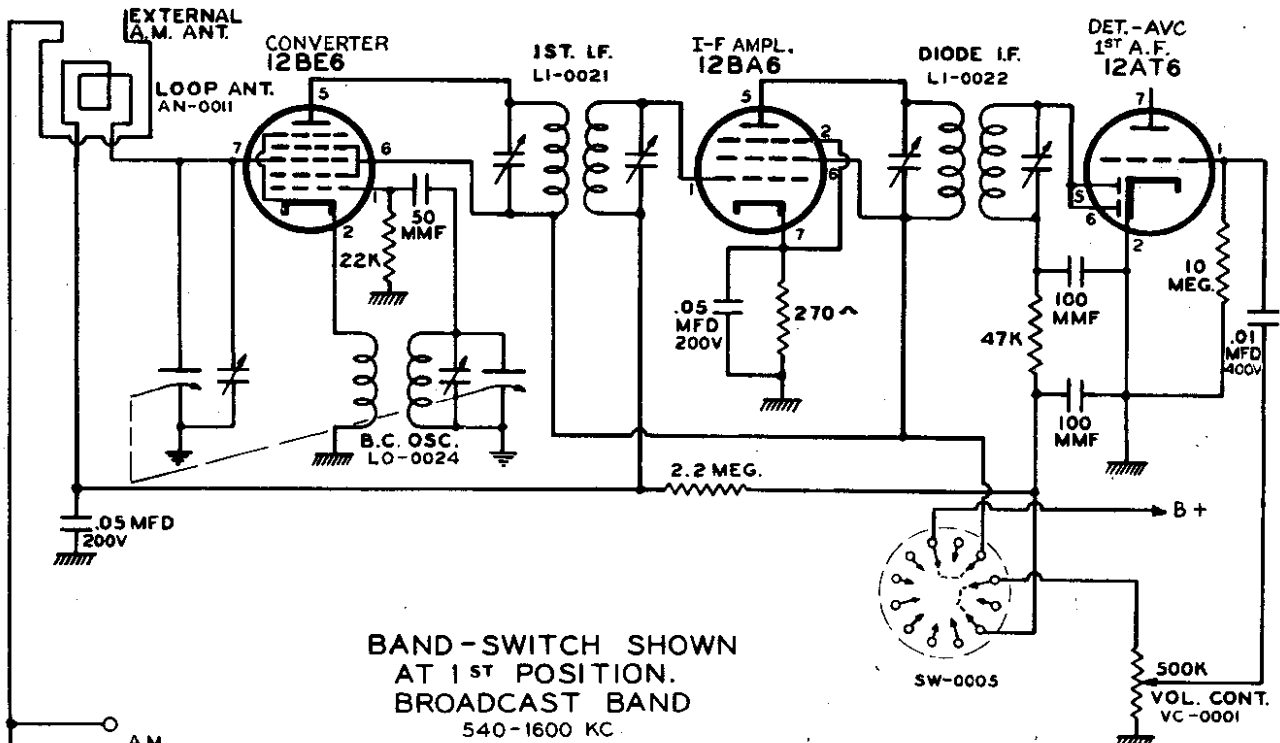


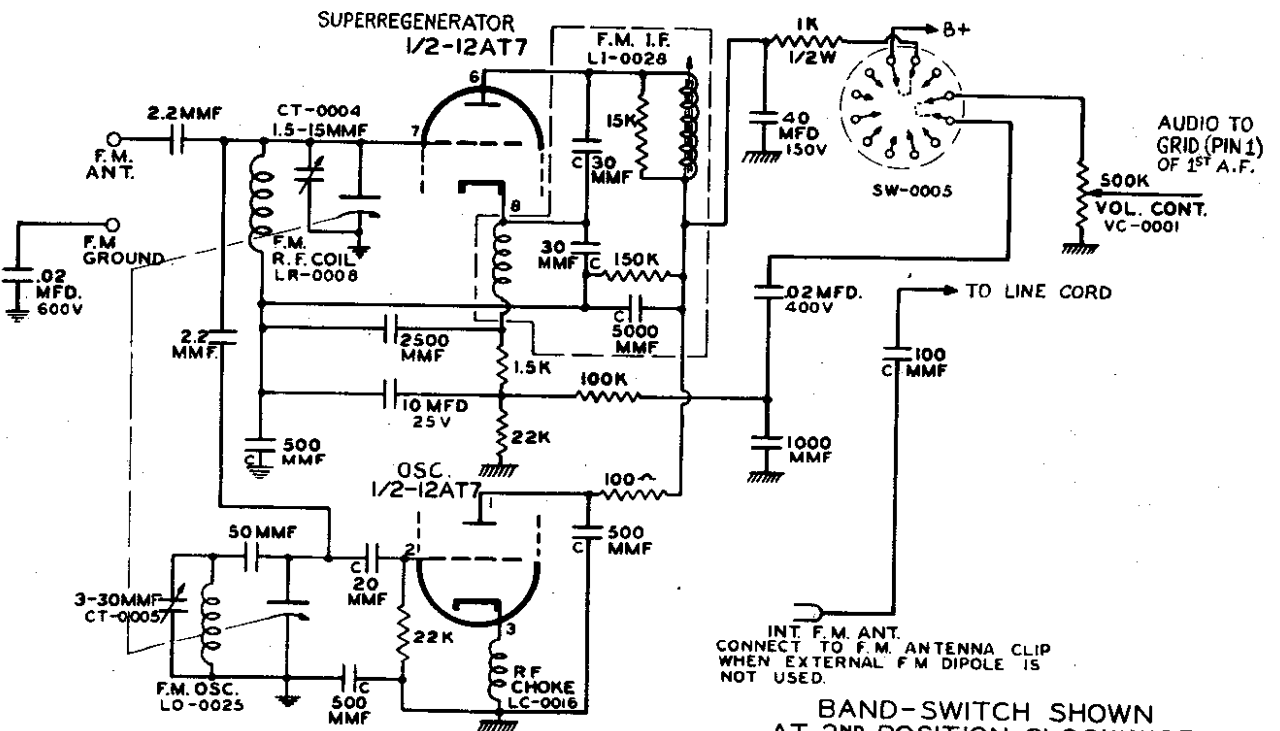
"clarified schematics"

MODEL 474

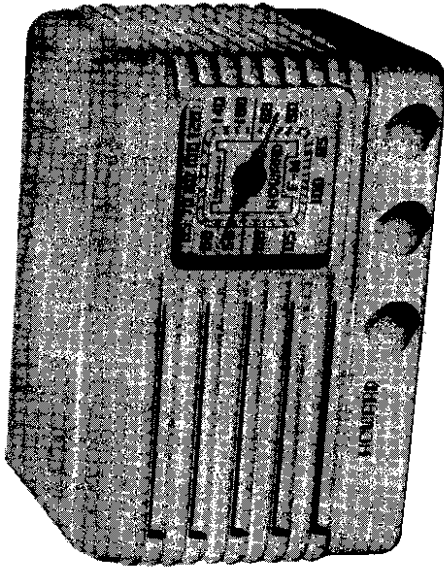
HOWARD RADIO CO



BAND-SWITCH SHOWN AT 1ST POSITION. BROADCAST BAND 540-1600 KC.



BAND-SWITCH SHOWN AT 2ND POSITION CLOCKWISE. F-M BAND 88-108 MC

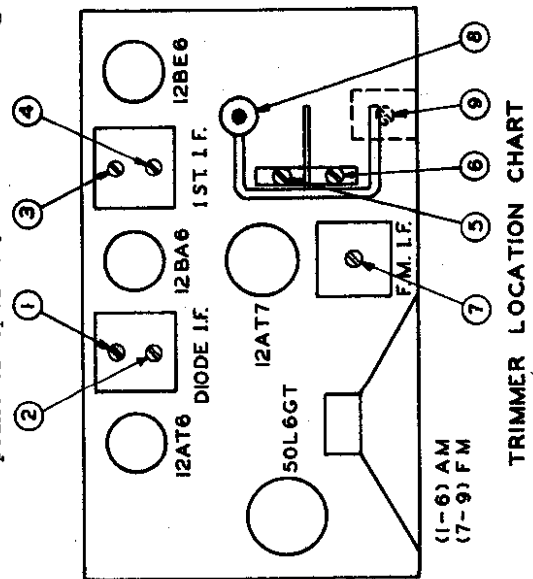


See Dummy Antenna Chart	Sig. Gen. Connection To	Gen. Freq.	Band Position	Dial Setting	Order of Trimmer Adj.	FUNCTION	See Note
2	Grid of 12BE6	455 K.C.	B.C.	Off Station	① ② ③ ④	I.F. Peak to Max. Output	
1	A.M. Ant. Clip	1400 K.C.	B.C.	1400 K.C.	⑤ ⑥	B.C. Osc. and R.F.	A
2	F.M. Ant. Clip	21.35 M.C.	F.M.	Off Station	⑦	F.M.-I.F.	B
3	F.M. Ant. Clip	105 M.C.	F.M.	105 M.C.	⑧ ⑨	F.M. Osc. Peak to Max. Output	C

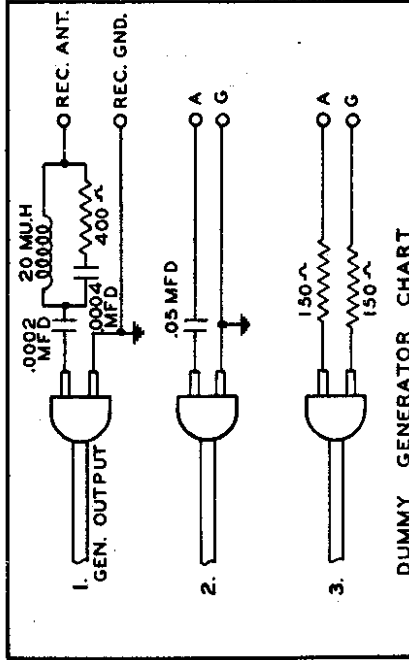
Note A. Set pointer in horizontal position with condenser gang closed.

Note B. Adjust for minimum noise with modulation off.

Note C. Adjust ⑧ to 105 M.C.- Oscillator section. While adjusting ⑨, rock condenser gang slowly back and forth for point of optimum. Check tracking of R.F. at 90 to 100 M.C.



No. 9 adjustment up beneath chassis.



POWER SUPPLY: (Standard Models) 105 to 125 V. AC-DC. 25 to 60 cycle. (Write our Export Sales Manager relative to special voltages). Consumption 30 watts. See label on back of chassis.

ANTENNA SYSTEM: Built in loop on back of cabinet for AM reception. Provision is also made for use of outside antenna on AM distant reception. Built in FM antenna, but provision is also made for exterior FM aerial, either dipole or single wire. (See antenna instructions on rear of cabinet.) If distortion occurs on strong FM local stations, remove antenna from clip marked "FM. ANT" on rear of cabinet and leave disconnected.

TUNING RANGE: FM 88 to 108 M.C.
AM 540 to 1600 K.C.

MODEL 474

HOWARD RADIO CO

TUBE COMPLIMENT

TU-12AT6
TU-12BA6
TU-12BE6
TU-12AT7
TU-50L6

SWITCH
Band Switch

CABINET
Plastic Cabinet - Ivory
Plastic Cabinet - Mottled Walnut

LINE CORD
Line Cord with plastic plug (6 feet)

MISCELLANEOUS
Selenium Rectifier
Base Clip for Tube Shield
Gang Cover
Miniature Tube Shield
Negative Temp. Coefficient Resistor
791 Ohms cold - 100 Ohms hot
(takes surge off pilot light voltage)

SOCKET VOLTAGE READINGS

Tube	Function	Cath.	Screen Grid	Plate
12BE6	Mixer	0	100	98
12BA6	I.F. Amp.	1	100	98
12AT7	FM Tube	Pin 8 14 V.	-	120
12AT6	Det.	0	0	65
50L6	Output	6.8	100	130

All voltages taken from the buss bar (B-) to the socket contacts, with a 20,000 Ohm per volt D.C. meter and the line voltage fixed at 117 Volts A.C.

PARTS LIST
474-FM

CONTROL
Volume Control & On-off Switch

CONDENSERS

Tuning Gang with Mounting Assy.
Capacitor Electrolytic 40 Mfd. 150 volts
Capacitor Electrolytic 10 Mfd. 150 volts
Capacitor Electrolytic 50-30-30 Mfd. 150 volts
Capacitor Electrolytic 25 Mfd. 25 volts

COILS

Loop Antenna
Broadcast Oscillator Coil
1st I.F. Transformer
2nd I.F. Transformer
F.M. - R.F. Choke Coil
F.M. Osc. Coil
F.M. - R.F. Coil
F.M. - I.F. Transformer

DIAL AND CONTROL ACCESSORIES

Dial Drive Shaft
Dial Pointer Hand
Dial Light Socket
Dial Lamp Type #47, Min. Bayonet
Calibrated Dial Plate
Dial Cord Spring - 8 Oz. load
Rubber Grommet
Dial Window

KNOBES

Knob - White
Knob - White Stamped "AM-FM"
Knob - Brown
Knob - Brown Stamped "AM-FM"

SOCKETS

Socket - 8 Prong
Tube Socket - 9 Pin - Low Loss Bakelite
Tube Socket - 7 Pin

SPEAKER

Speaker 5" P.M.

TRANSFORMER

Speaker output Transformer
Power Choke (150 Ohms D.C.)
A.C. Input Choke

VC-0001

AC-0009
CE-0016
CE-0019
CE-0007
CE-0005

AN-0011
LO-0024
LI-0021
LI-0022
LC-0016
LO-0025
LR-0008
LI-0028

SM-0074
HD-0002
SL-0004
LS-0001
AR-0064
SP-0010
GR-0001
WG-0001

KB-0003
KB-0003-1
KB-0005
KB-0005-1

SO-0009
SO-0022
SO-0013

SK-0009

TC-0001
LC-0011
LC-0015