AGE-BY-STAGE

"Tricks of the Trade" file)

Shorted electrolytic condenser	open voice coil
Filter choke open Open voltage divider Shorted or open power transformer secondary	Secondary of output transformer open voice coil leads open Voice coil leads shorted to pole piece
Shorted or leaky filter condenser Loose contacts on voltage divider Defective line switch Filter choke shorting to ground	Voice coil lugs making poor contact Metal filings grounding voice coil Secondary of output transformer opening Field coil connections making poor contact
Open filter condenser Defective voltage divider Filter choke leaking to ground Leaky bypass from rectifier to ground	Metal filings grounding voice coil Warped cone Voice coil rubbing on pole piece Voice coil winding loose
Open or shorted primary bypass condenser Center tap on filament windings open Open or leaky output filter condenser Grounded pilot light bracket	Field coil open or shorting Hum bucking coil shorted or reversed Voice coil rubbing on pole piece Unfiltered field supply

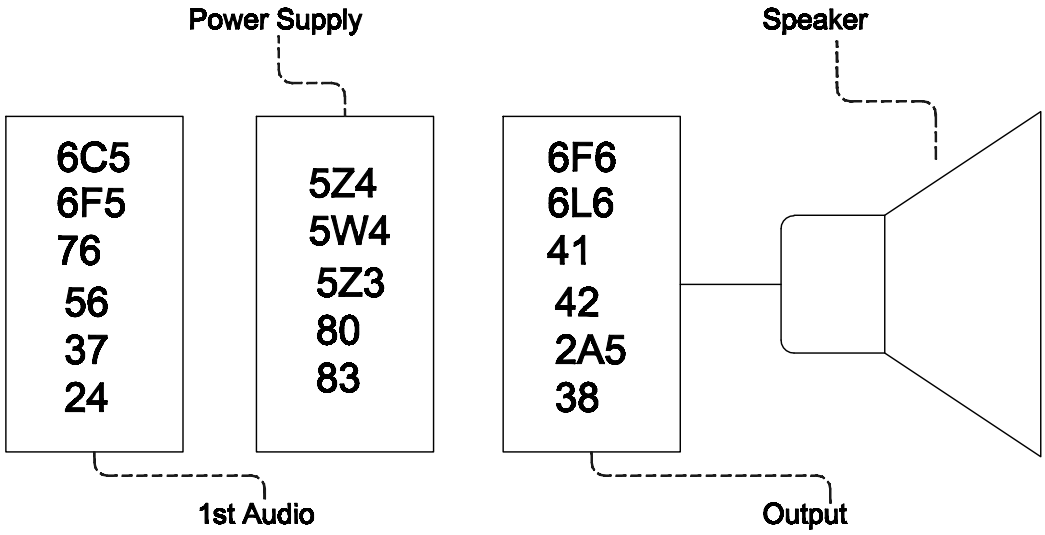
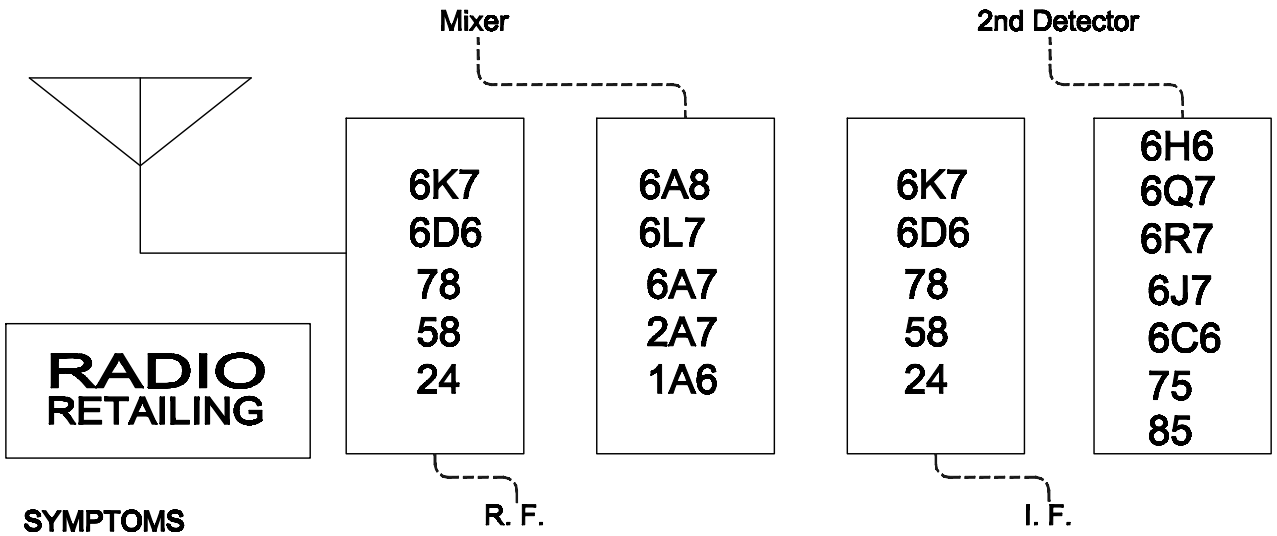


Plate load resistor open Open audio coupling condenser Shorted plate load bypass Open cathode resistor	Primary of output transformer open Open cathode bias resistor Shorted audio coupling condenser Secondary of output transformer shorted or open
Defective audio transformer primary Open volume control Leaky grid or plate coupling condenser Defective plate load resistor	Defective primary on output transformer Open cathode bias resistor Shorting audio coupling condenser Open secondary on input transformer
Shorted cathode bypass Plate decoupling resistor shorted Open plate bypass condenser Primary of coupling transformer opening	Open cathode bypass condenser Defective cathode resistor Leaky audio coupling condenser High resistance from primary to secondary
Shorted grid or plate coupling condenser Cathode bypass shorted Audio transformer open or shorting High resistance from primary to secondary of audio transformer	Shorted cathode bypass Screen grid circuit open Shorted turns on output transformer If pushpull, tubes are unbalanced.

COMMON TROUBLES, STA

(Compiled from Radio Retailing's "Tr

SYMPTOMS		
Inoperative	Oscillator plate resistor open First I. F. transformer primary open Shorting or open oscillator trimmer Open plate choke	Plate load resistor open or shorted Shorted trimmer condenser Control grid lead shorting to shield Open plate filter choke
Intermittent Fading	Poor insulation on oscillator trimmer Open grid return resistor High resistance at lugs of oscillator coil Dirty band switch contacts	Defective volume control Load resistor bypass shorting High resistance in I. F. secondary R. F. bypass condenser shorting
Oscillation Noisy	Open grid coil Cathode bypass open or leaky Shield on grid leads corroded or open Decoupling resistor shorted	Open plate or grid bypass Defective volume control Out of alignment Defective plate load resistor
Distortion Hum	Leaky plate bypass condenser Shorted or leaky cathode bypass Open grid filter condenser Oscillator misaligned	Defective volume control Leaky audio coupling resistor Plate load resistor too high Leaky plate bypass condenser



SYMPTOMS		
Inoperative	Open or shorted R.F. coil Band switch contacts dirty Shorted tuning or trimmer condenser Open plate decoupling resistor or choke	Open I. F. coil Plate decoupling resistor open Shorted trimmer condenser Primary and secondary bypass shorted
Intermittent Fading	Shorting trimmer condenser Loose connecting lugs on R.F. coil Leaky plate or screen bypass Band switch making poor contact	Open or shorting grid bypass Litz wire on lugs corroded Trimmer condenser shorting A.V.C network defective
Oscillation Noisy	Rotor contacts on tuning condenser dirty Open cathode or screen bypass Shorted bias resistor Aligned too sharply	Screen bypass open I.F out of alignment Shorted cathode bias resistor Poor coil contacts at lugs
Distortion Hum	Shorted filament bypass Antenna too long causing overload Shielding making poor contact Shorted antenna coupling condenser	Open cathode bypass Stage out of alignment Too sharply tuned, oscillation High resistance between primary and secondary of I.F transformer