OVER THE SOLDERING IRON

RCA VICTOR

PREPARED FOR THE INFORMATION OF RCA VICTOR DISTRIBUTORS' SERVICE MANAGERS

SERVICE DIVISION -RCA MANUFACTURING COMPANY, INC. - CAMDEN, N. J. - DECEMBER 28, 1937.

LACK OF SENSITIVITY - Model 85T1

Resistor R-13, which forms part of the divider system supplying residual bias to the first detector and I-F stages, must be of the correct value. In receivers where sensitivity is poor, variation of value of this part should be checked as a likely cause. If measurement apparatus available does not extend to 6.8 megohms, the resistor should be replaced with a standard stock #14661 unit. Removing R-13 from the circuit entirely will be permissible where a slight excess of sensitivity can be tolerated.

PHONOGRAPH TURNTABLE - Models U-107 and U-109

Replacement turntables Stock #14759 have heretofore been shipped less the flexible damper part. This part will be packed with the turntable in the future, and will also be available separately as stock #14762.

REPLACEMENT GOVERNOR - Model 7U2 Motor

Where it is necessary to repair the motor on Model 7U2 due to a faulty governor mechanism, part #11703 - Governor, may be used for replacement.

DIAL DRIVE SLIPPAGE - Model ACR-111

Slipping of the dial drive mechanisms, on any instruments so affected, may be centered either in the friction drive disc assembly or in the idler of the belt system. The recommended methods of repair are:-

(1) Install new stock #14453 friction drive disc tension spring. The later springs of this type have a fewer number of turns and are of different hardness. Excessive grease on the friction disc will accentuate slippage, hence it should be carefully cleaned with carbon tetrachloride or equivalent.

(2) The idler gear spring should be replaced, using stock #14450. This spring has been modified to have 30 turns instead of the original 43. Reduction of the number of turns, as indicated, will of course be satisfactory where replacements are not readily available. The idler should be carefully examined to certify that it is not binding on its bushing.

SPECIAL ADVANTAGES OF STOCK #9312 MAGIC WAVE ANTENNA

The characteristic band-pass action of the Magic Wave Antenna between 500 kc and 23,000 kc, and its ability to isolate coupling between the receiver power supply and antenna, render the system particularly useful in localities where certain unusual interference problems may exist. Types of interference in this category that may be reduced through use of the Magic Wave Antenna are as follows:-

(1) Cross Modulation - Abnormal r-f signals from local stations may often times be present on the power circuits to which the receiver is attached, and will be introduced by mutual coupling through the antenna capacitance to the receiver input, causing stray modulation effects. Since the Magic Wave Antenna is designed so as to efficiently eliminate capacity coupling between the receiver and transmission line, and between the transmission circuit and the antenna transformer primary, the unwanted signal from the power circuit is eliminated. The ground lead of the antenna coupling transformer must be kept to a minimum length, in severe cases of this interference. The addition of a power circuit filter, with a separate and short return to a good ground will provide additional improvement where needed.

(2) Long Wave Code - Coastal communication stations operating at frequencies near to the I-F of the particular receiver involved will be definitely attenuated by the Magic Wave Antenna. The amount of reduction on signals in the i-f range, 450 - 470 kc amounting to approximately 6 to 1. Where the antenna is used as a means of minimizing this type of interference, the standard 60 foot section supplied, should not be lengthened. Further improvement, in extreme cases, is of course obtainable with standard RCA Wave Traps.

(3) Image Response - Signal frequencies above 23,000 kc can not readily cause image response on "C" band where the Magic Wave Antenna is used, due to the high frequency cut-off of the system and resultant attenuation in that range.

(4) General - Installations of broadcast receivers on shipboard can be benefited by use of the Magic Wave Antenna, in that cross-modulation and shock excitation effects of the ship's transmitters operating at 500 kc and below, will be suppressed.

Due to an intermediate band-elimination range of the Magic Wave System between approximately 2000 kc and 4000 kc; image and cross modulation interference from stations within this range can, in many cases, be corrected by employing this antenna alone.

STOCK #11218 DRIVER TRANSFORMER

Replacement units of stock #11218 driver transformer have been recently modified in construction, so that the primary d-c resistance now equals 1350 ohms, and the total secondary resistance equals 2000 ohms. These same units also have an extra lead, which is color coded RED - GREEN. This lead has a definite purpose in reversing any electrolysis that may occur in high humidity regions, so that the life of the transformer is prolonged. The extra lead is internally connected to the core of the transformer, and should be connected externally, during installation of the unit, to the GREEN primary lead or to a point of plus "B" potential.

TRIP PAWL ASSEMBLY - Models U-107 and U-109

The stock #6503 trip pawl assembly is incorrectly specified for the record changing mechanism of Models U-107 and U-109. The correct assembly is stocked as #30624.

ESCUTCHEON ASSEMBLIES - Models 811-K and 812-K

Stock #14750 complete escutcheon assembly has been discontinued as a replacement and is superseded by the following components of same:

Stock #30569 Escutcheon - Station selector escutcheon, tuning tube escutcheon and crystal complete with "Speech-Music" and "Electric-Manual" screens; less right and left side sections for tuning buttons.

Stock #30570 Escutcheon - Right and left side panels for Electric Tuning Buttons; less buttons, call letters, retainers, transparent shields, and metal front plates.

Stock #30670 Screws - Screws for attaching metal retainer plate on escutcheon side panels.

Stock #30675 Retainer - Metal retainer plate for Electric Tuning Buttons on escutcheon side panels.

REPLACEMENT TRANSFORMER - Stock #30607

An error existed in the descriptive sheet included with some transformers stock #30607 in that the GREEN secondary leads were identified as the amplifier supply and the BLUE leads as the rectifier filament supply. The attached instruction sheet on this transformer shows the correct connections.

STATION CALL LETTER CARDS

Stock numbers applying to station call letter cards are as follows:-

Model 87K1 ---- Stock #30695 Card - Station Call Letter Card.

Models 811K, 812K, and U-109 ---- Stock #14747 - Card - Station Call Letter Card

Models 813K and 816K ---- Stock #30361 Card - Station Call Letter Card.

CLUTCH PIN ON ELECTRIC TUNING MOTORS

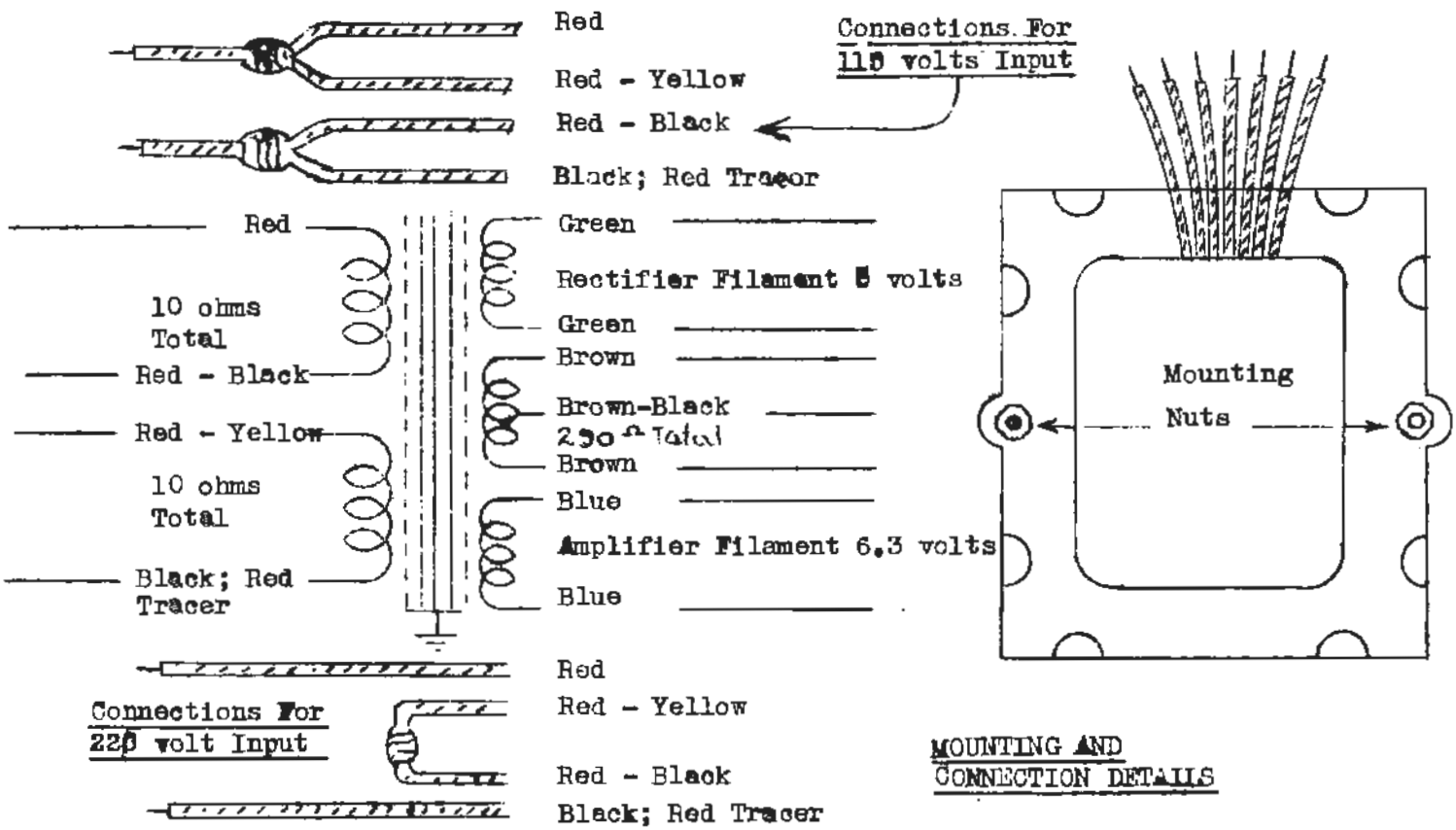
The small clutch pin, which is fitted to the end of electric tuning motor shaft, and engages with the gear mechanism may be obtained separately as a replacement by ordering stock #30252. Five pins are supplied in each package.

RCA REPLACEMENT POWER TRANSFORMER - STOCK #30607
Rating:- 100/130 and 200/260 Volts, 40 - 60 Cycles

IB-25257-1

Stock #30607 is an extra-duty transformer, designed to give good service under adverse conditions of high line voltage, low frequency limits, and high ambient temperature. This transformer is supplied for Service Replacement purposes on various five and six tube instruments, superseding the following types:-

Stock No.	Used In Models	Stock No.	Used In Models
13392	5U, 5T5, 5T4, 85T5	14655	85T1, U-101, U-103
13393	" " " "	14657	" " "
12644	5T, 5T6, 5T7, 5T8, 5T1, 6T5	14666	85T
13869	6T5	14668	"



MOUNTING - Two types of mounting are provided; the type to be used depending on the particular chassis base arrangement. The mounting lugs are to be employed in most applications. When screw mounting is necessary, break off the mounting lugs by bending; remove the two nuts shown above; place the transformer in position and replace the nuts on the underside of the chassis base so as to secure the transformer.

CONNECTIONS - For use on 100-130 volts power supply; splice RED to RED YELLOW and RED BLACK to BLACK with RED TRACER.

For use on 200-260 volts power supply; splice RED BLACK to RED Yellow

All leads are approximately 15 inches long and must be cut to the proper length.