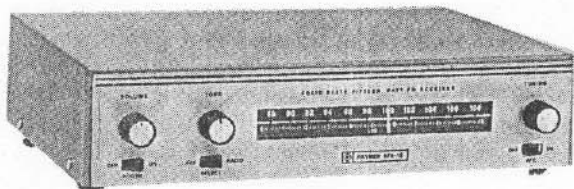




OPERATING INSTRUCTIONS

UNIVERSITY SOUND, INC.
13278 Ralston Ave.
Sylmar, CA 91342
(818) 362-9516



MODEL 829-15 FM RECEIVER

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS RECEIVER TO RAIN OR MOISTURE.

DESCRIPTION:

The Raymer Model 829-15 is an all solid state monaural FM background music receiver. The receiver consists of a tuner for the 88-108 MHz FM band and a 15 watt RMS audio amplifier. Provisions for paging may be added to the receiver by the use of a Raymer Model MPA-1 Microphone Preamplifier Accessory. A variable tone control affects the sound from all the inputs.

The receiver has a music output jack for connection to an external amplifier or tape recorder. An aux jack is provided to allow the unit to amplify program material from a source other than the self-contained radio tuner. The speaker outputs of the receiver are for 4 or 8 ohms; or 25 or 70 volt balanced or unbalanced lines. The receiver is equipped with a circuit breaker to protect the unit against possible damage caused by overload or accidental shorts.

UNPACKING

The unit is to be removed carefully from the carton and inspected for any possible damage in transit. If there is any evidence of any damage which might have occurred in shipment, immediately notify your supplier, or the transportation company which delivered it. Claims for damage sustained in transit must be made upon the carrier. Save all packing material for inspection by the claim agent who will furnish you with the proper forms and will also give you the necessary instructions for filing a claim.

INSTALLATION:

Because of its attractive appearance this unit may be placed on a table or a shelf. Although the unit has ample vents for normal ventilation, sufficient space should be allowed around to permit free air flow. **DO NOT PLACE** it on top of vacuum tube equipment. **DO NOT STORE OR OPERATE** it in areas where the ambient temperature exceeds 140 degrees Fahrenheit. If installed in a cabinet, ample ventilation must be allowed around the unit.

The receiver may be mounted in a 3 1/2" vertical panel space in a rack, using a Raymer RPK-6 rack mounting kit.

This unit has an AC line cord with a 3 prong plug. The line cord should be plugged into a 3 wire grounded 105 to 120 volt 60Hz AC outlet. This will also ground the receiver.

The AC receptacle on the rear panel is a 3 wire grounded outlet which can supply power to accessory or auxiliary equipment. Any auxiliary equipment connected to this AC receptacle is controlled by the POWER on-off switch so that turning off the power on the unit turns off all equipment.

CONNECTIONS

All connections are made on the rear panel of the unit.

ANTENNA INPUT

For normal FM reception, the short antenna lead supplied with the unit is sufficient for most locations. In the event that the tuner is located in a remote area, an external Dipole antenna will increase the number of distant stations that can be received. This external antenna is to be connected across the terminals marked FM ANT.

AUX/PHONO INPUT

The PHONO input jack enables the unit to amplify program material from a source other than the self-contained radio tuner. This input is high impedance with a maximum sensitivity of one-half volt and will accommodate the output of a ceramic phono cartridge or the output from any preamplifier such as tape, phono, etc. If the source into the PHONO input is from leased telephone lines, a Raymer TM-2 telephone adaptor is required to match the telephone lines to the input.

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OUTPUT CONNECTIONS

The speaker(s) or line matching transformers are connected to the screw terminal board located on the rear panel. For short distances any ordinary insulated wire, such as parallel lamp cord, may be used.

The 4 OHM or 8 OHM output is used when connecting directly to the speaker voice coils. When a speaker with an impedance of 8 ohms is connected to the amplifier, use the terminals on the amplifier marked GND and 8Ω. For a 4 ohm speaker or two 8 ohm speakers in parallel, use GND and 4Ω.

The 25 VOLT or 70 VOLT output is used when connecting to speakers which have line matching transformers. Connecting to the 25 volt or 70 volt tap on the unit permits the use of a number of speakers each with its own corresponding line matching transformer, thereby eliminating the necessity of calculating impedances. The tap on the line matching transformer is selected to give the power desired for each speaker. The total of all the power settings should be no greater than the amplifier output rating. If the speaker uses a 25 or 70 volt line transformer, connect the speaker transformer to the terminals marked GND and 25V (or 70V) according to the line desired.

Long lines have an appreciable resistance with resultant power loss. The use of parallel matching transformers on either 25 volt or 70 volt lines is recommended for long distances. In all cases, it is advisable to run as heavy a wire as possible consistent with the requirements. To avoid inducing hum in the system, do not parallel speaker cables with any AC line power cables.

70 volt distribution systems often require the speaker lines to be run in conduit. To determine whether they should be run in conduit check with local city codes for 70 volt system requirements.

OPERATION:

The front panel has three knobs and three slide switches. The functions of the knobs are as indicated. The Volume Control knob is used to adjust the level of the sound of the radio or auxiliary. The Tone Control knob may be turned to the position that is most pleasing to the listener as it affects both the high and low frequency response. The Tuning knob is to select the desired FM station. The Select switch is used to select radio or auxiliary. The Power switch at the lower left is to turn the unit on or off. The slide switch at the lower right is used for AFC defeat.

AFC refers to Automatic Frequency Control and is an electronic means of keeping the receiver properly tuned to an FM broadcast station even when the tuning dial is not precisely set. However when tuning to a weak station which is adjacent to a stronger one the AFC function may tend to lock the receiver on the stronger station. In such a case the AFC switch should be placed in the OFF position. For very precise tuning or selection of a weak station the AFC switch should be placed in the OFF position while tuning. When the station is properly tuned the switch may then be returned to the AFC position to lock the receiver to the desired frequency.

The LOG scale marking on the dial glass is for easy recording of the position of the pointer for any specific station.

WARRANTY

This unit has been very carefully inspected and is warranted to be free from defects in material and workmanship under normal use and service for a period of one year from date of sale to the original purchaser. This Warranty does not extend to any unit which has been subject to abuse, misuse, neglect, accident, improper installation, or alterations. The obligation of Cetec Trutone under this Warranty is limited to the repair of any defect in material or workmanship and/or the replacement of any defective part, provided the unit is returned to Cetec Trutone transportation paid within the year.

It is recommended that any unit on which service is required be processed through your distributor or installation company wherever possible.

This Warranty is expressly in lieu of all other Warranties, expressed or implied, and of all other obligations or liabilities on our part. We neither assume nor authorize any other person to assume for us any other liability in connection with the products manufactured by Cetec Trutone.

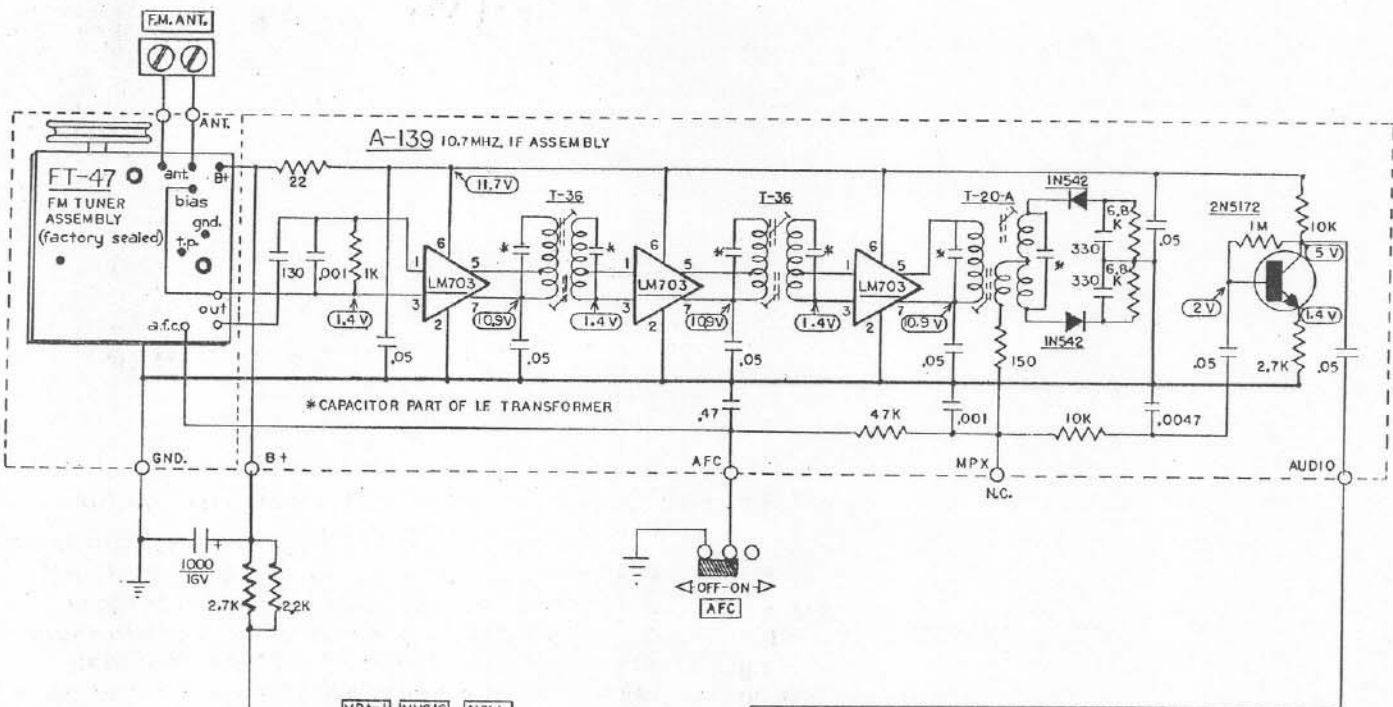
Made in U.S.A. by



Cetec Trutone

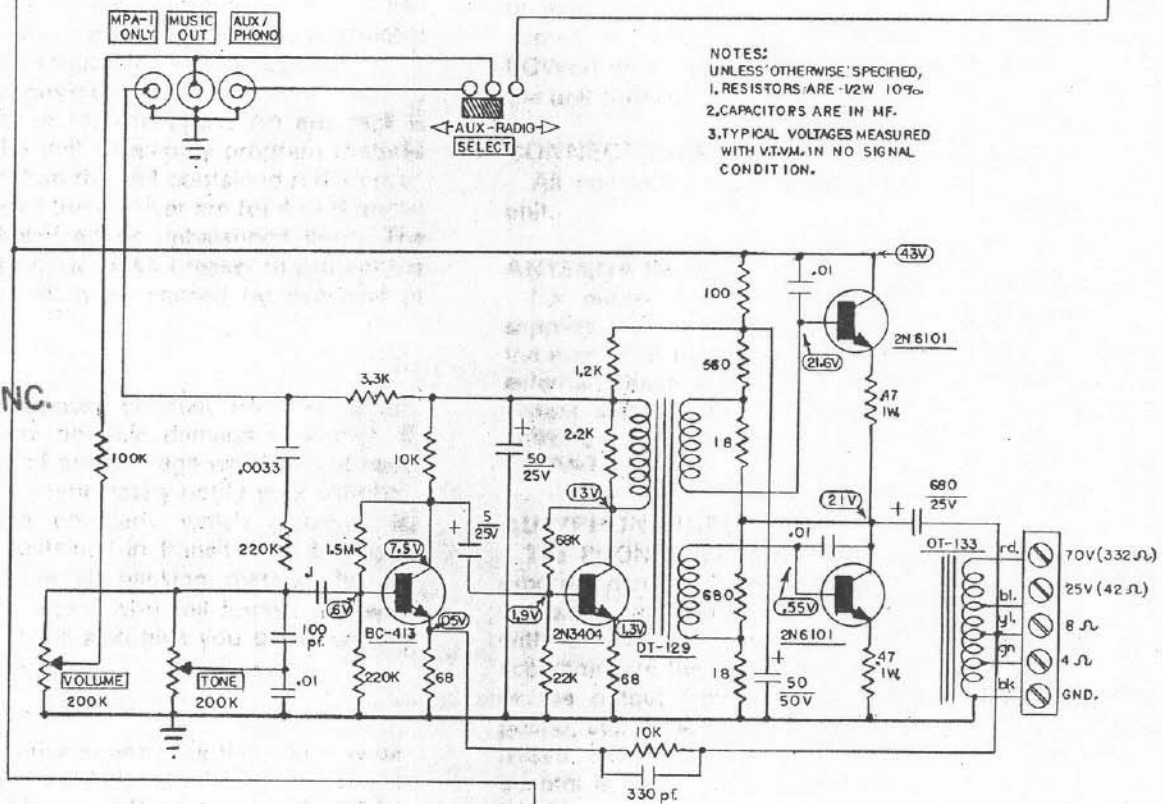
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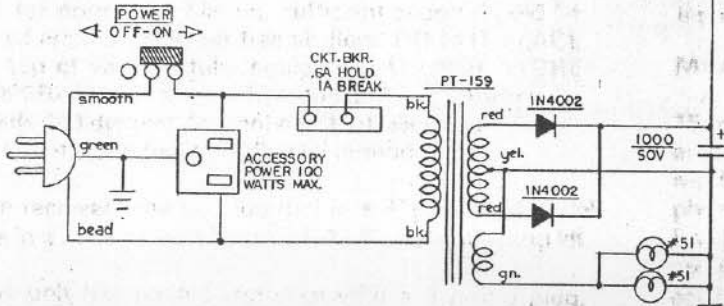


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NOTES:
 UNLESS OTHERWISE SPECIFIED,
 1. RESISTORS ARE $\frac{1}{2}W$ 10%
 2. CAPACITORS ARE IN MF.
 3. TYPICAL VOLTAGES MEASURED
 WITH VTVM IN NO SIGNAL
 CONDITION.



120V. AC
 60 HZ.
 25W.



TRUTONE ELECTRONICS INC.
 NO. HOLLYWOOD, CA.

SCHEMATIC:

RAYMER MODEL 829-15
15 W. RECEIVER