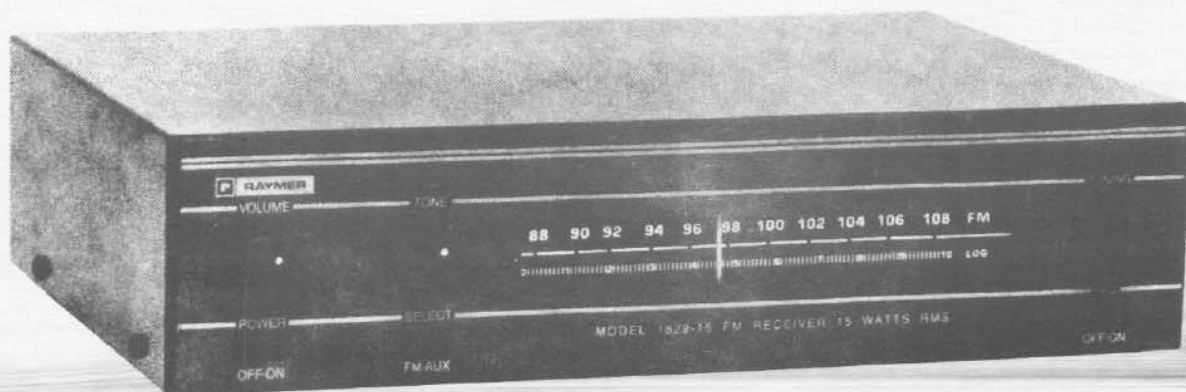




MODEL 1829-15A FM RECEIVER

- **New Contemporary Look**
— Dark Bronze Color Matches Any Decor.
- **Full Frequency Response**
— Total 15 KHz Power Bandwidth Output.
- **Low Distortion**
— Less than 0.75% T.H.D. at Full Power Output.
- **Made In U.S.A.**

DESCRIPTION:

The Raymer Model 1829-15A is a solid state monaural receiver consisting of a tuner for the 88 to 108MHz FM band and a 15 watt RMS audio amplifier.

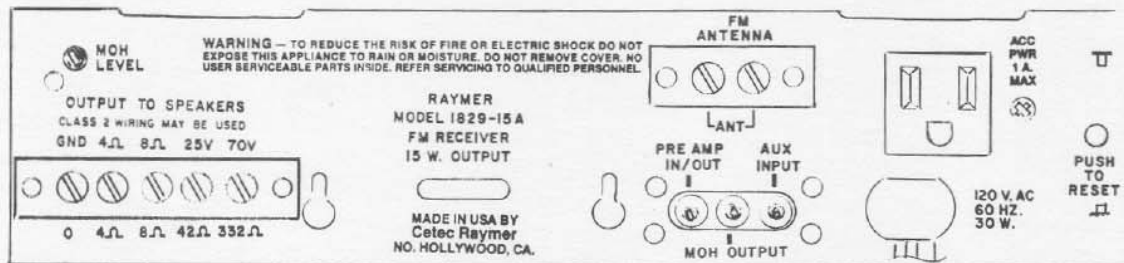
There are six controls on the front panel identified as VOLUME, TONE, TUNING, POWER SELECT and AFC. A VOLUME control adjusts the output level of the unit and a TONE control adjusts the treble response. The TUNING knob selects the station desired as indicated by the pointer on the slide rule dial.

The POWER switch turns the entire unit on and off including any accessory plugged into the outlet socket on the rear of this unit. The SELECT switch permits a choice of either the built-in tuner or an external music source as the program material. The AFC permits defeat of the automatic frequency control circuit to aid in fine tuning.

All input and output connections are made on the rear panel of the unit. Screw terminals are provided for antenna connection as well as power output connections. Power out provisions include both 4 and 8 ohm outputs as well as 25 volt and 70 volt lines.

A 500 ohm MOH output with level adjust is provided. In addition, a pre-amp in/out jack may be used as the source to drive an external amplifier or as the input from a tone signaling device.

The receiver is housed in a sturdy steel cabinet measuring 12-3/8" x 8-1/4" x 3-1/2" which may be rack mounted by use of the Raymer Model RPK-6 rack panel kit. The unit operates from a standard 120 volt AC 60Hz power source and is protected by a push-to-reset circuit breaker.



MANUFACTURED IN THE USA BY

**RAYMER****OPERATING INSTRUCTIONS****MODEL 1829-15A FM RECEIVER**

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

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The Raymer Model 1829-15A is a solid state monaural receiver consisting of a tuner for the 88 to 108MHz FM band and a 15 watt RMS audio amplifier.

There are six controls on the front panel identified as VOLUME, TONE, TUNING, POWER SELECT and AFC. A VOLUME control adjusts the output level of the unit and a TONE control adjusts the treble response. The TUNING knob selects the station desired as indicated by the pointer on the slide rule dial.

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UNPACKING

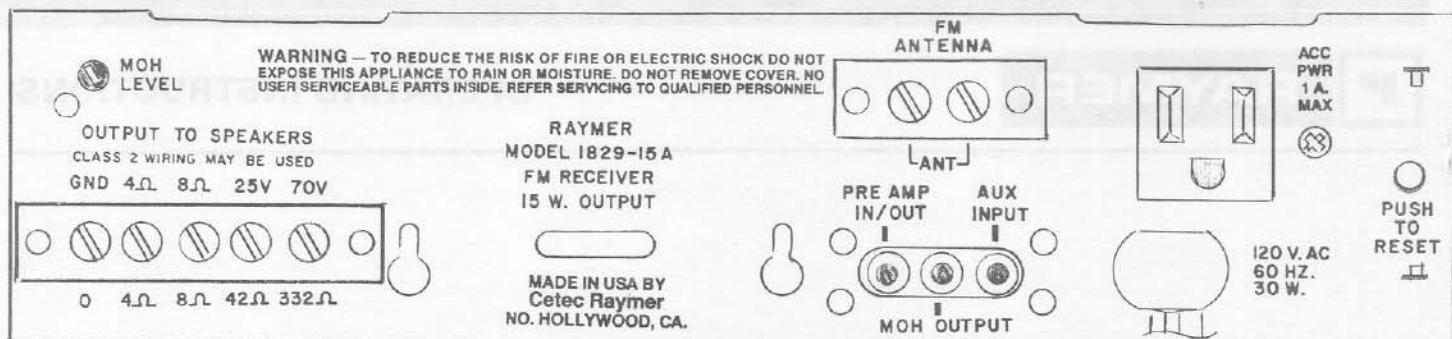
The unit is to be removed carefully from the carton and inspected for any possible damage in transit. If there is any evidence of any damage which might have occurred in shipment, immediately notify your supplier, or the transportation company which delivered it. Claims for damage sustained in transit 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

Each Raymer receiver has ample vents for normal cooling by means of air circulation and should be installed in a manner which permits free air flow around the unit. **DO NOT PLACE ANY OBJECT ON TOP OF THE UNIT WHICH WILL BLOCK THE AIR FLOW OF THESE VENTS. DO NOT STORE OR OPERATE THE UNIT IN A HOT AREA WHERE THE TEMPERATURE EXCEEDS 140°F.**

The unit may be mounted in a standard 19 inch rack by using a Raymer Model RPK6 rack panel kit. These kit requires a vertical height of only 3 $\frac{1}{2}$ ".

The power required to operate these units is 105-120 volts AC 60Hz. The AC power cord on the unit has 3 prongs and must be connected into a matching 3-wire grounded outlet to provide a safety ground for the receiver. An AC receptacle is provided on the rear panel of the receiver to provide power for accessory equipment. This receptacle is controlled by the POWER on-off switch so that the accessory equipment is turned on and off with the receiver.



CONNECTIONS

All connections are made on the rear panel of the unit. Connection to the AUX INPUT, MOH OUTPUT and PREAMP IN/OUT are each made by means of a standard RCA type phone jack. These circuits require the use of a shielded audio patch cord with a phono plug when connecting to auxiliary equipment. All other connections are made by means of screw terminals.

AUX INPUT

This input is high impedance unbalanced and has an input sensitivity of 1/4 volt to match the output from most tape players or other audio equipment with line level output. A Raymer Model TM-2 should be used when converting one of these inputs to a 600 ohm balanced input. To convert either of these inputs to a 10,000 ohm balanced bridging input requires the use of either the Raymer Model MDT or Model DLT. These inputs are alternate music channel sources as chosen by the SELECT switch on the front panel.

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.

PREAMP IN/OUT

This jack provides access to the mixer bus which is the circuit in the receiver that connects the output of the preamplifier to the input of the power amplifier. Anything connected to this circuit must be high impedance to prevent shorting out the page and music. This jack may be used as an output to drive the input of a tape recorder or another amplifier, when used as an input, the source may be from a Raymer Model TGSP-4 to provide a chime annunciator signal or alarm tone. The Raymer Model TRG tone ringing generator may be used for loud telephone ringing requirements such as a night bell. By connecting a signaling or alarm signal in this manner, it is unaffected by the front panel controls.

MOH OUTPUT

A 500 ohm unbalanced output is provided which may be used as the music-on-hold source for most phone systems. The maximum output level available is 1 volt and is adjustable by means of a control located on the back panel.

For MOH systems that require 8 ohms, do not connect directly to the 8 ohm output of the receiver as it will overload the MOH circuit. Instead, connect the 8 ohm winding of a 25 or 70 volt line matching transformer tapped in the area of 1/4 to 1/2 watt.

OUTPUT CONNECTIONS

15 watts RMS power output is provided for 4 or 8 ohm speaker lines or for distribution on 25 volt or 70 volt lines. Output connections are made by means of screw terminals on the back of the unit.

Long speaker lines have an appreciable resistance with resulting power loss. To avoid this power loss, the use of matching transformers on either 25 volt or 70 volt lines is recommended. This arrangement also allows the connection of multiple speakers which have different power requirements. In all cases it is advisable to run as heavy a wire as possible consistent with requirements. To avoid inducing hum into the speaker lines do not run speaker cables parallel to power line cables.

In some areas 70 volt distribution lines must be run in conduit. Check your local city electrical codes before installing a 70 volt speaker system to determine the local code requirements.

The 4 OHM and 8 OHM outputs are used when connecting directly to speaker voice coils. When a speaker or a series-parallel array of speakers with an impedance of 8 ohms is connected to the amplifier output, use the terminals marked 8 OHMS and GND. Use the terminals marked 4 OHMS and GND for a speaker circuit with a 4 ohm impedance. Do not simultaneously load both outputs at their impedance as this will appear as a demand for twice the rated output from the amplifier and represent an overload to the unit. In a similar manner, do not load both the speaker output and the 25 or 70 volt output simultaneously at full power demand. A combination of speaker loads is permissible using the various outputs from the amplifier, however, the sum of these demands should not exceed the rated power output of the amplifier.

The 25 VOLT and 70 VOLT outputs are used with speaker distribution systems in which each speaker has a line matching transformer which is connected for the specific wattage requirement of that speaker. This permits the use of a large number of speakers with various sound level requirements to operate from a common source. By rating these transformers in the wattage which they demand across a 25 volt or 70 volt line, there is no necessity in calculating total impedance. The total wattage demand of such a speaker line may be determined by adding up the sum of all the speaker demands in the system. This total should not exceed the wattage rating of the amplifier used to drive the system. Connection to the 25 volt or 70 volt outputs is made by means of screw terminals on the face of the unit, use the terminals marked COMM and 25V (or 70V) according to the line desired.

Optimum performance of any amplifier depends upon

proper impedance match between the output and the load. Connecting a load of mismatched impedance to an amplifier will deteriorate the overall performance of the system. To accurately measure the impedance of a speaker line, the Raymer Model LWT should be used. This test instrument permits direct reading of the wattage demand or impedance of a speaker line and is a valuable aid in determining opens, shorts or mismatch conditions.

The circuit breaker located on the rear panel protects the unit from drawing excessive AC line current which could cause damage to the internal components.

IN THE EVENT THAT THE CIRCUIT BREAKER CONTINUES TO TRIP, DO NOT ATTEMPT TO DEFEAT THE FUNCTION OF THE CIRCUIT BREAKER. HAVE THE TROUBLE INVESTIGATED BY A QUALIFIED TECHNICIAN OR RETURN THE UNIT TO THE FACTORY.

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 BEEN SUBJECT TO ABUSE, MISUSE, NEGLIGENCE, ACCIDENT, IMPROPER INSTALLATION, OR ALTERATIONS. THE OBLIGATION OF CETEC RAYMER 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 RAYMER TRANSPORTATION PREPAID.

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 RAYMER.

MANUFACTURED IN THE USA BY



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