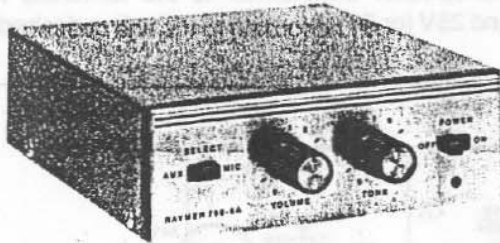


**University  
Sound Inc.**  
a MARK IV company  
**COMMERCIAL  
SOUND  
PRODUCTS**

## OPERATING INSTRUCTIONS



### MODEL 790-6A AMPLIFIER

**WARNING – TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS AMPLIFIER TO RAIN OR MOISTURE.**

#### DESCRIPTION:

The Raymer Model 790-6A is a multipurpose monaural 6 watt RMS, all silicon solid state amplifier. It is designed for dependable continuous operation in background music, public address, paging and sound reinforcement systems. The amplifier has provisions for either one of two inputs: a high impedance microphone or high impedance auxiliary. A front panel switch is provided for selection of the desired signal source.

The speaker output of the amplifier is for 8 ohms; or 25 or 70 volt lines. The amplifier has a variable tone control and incorporates a design which eliminates the use of a circuit breaker.

#### 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

The Raymer Model 790-6A has ample vents for normal ventilation; however, it should be placed so as to permit free air flow around the unit. If installed in a cabinet, ample ventilation must be allowed around the unit. **DO NOT STORE OR OPERATE THE AMPLIFIER** in areas where the ambient temperature exceeds 140 °F.

Plug the AC line cord in any outlet furnishing 105 to 120 volts, 60 cycles AC.

An AC receptacle is located on the back of the chassis to supply power to other components such as phonograph motor, etc. The auxiliary equipment is connected to the AC receptacle by the POWER on-off switch so that turning off the unit turns off all equipment.

#### INPUT CONNECTIONS

All patch cords and input leads must be shielded cables. Input connection to the AUX jack is made by means of a standard phono plug. Input connection to the MICROPHONE jack is made by means of a standard size shielded phone plug.

Due to the high gain involved, a plug with metal cover, and *not* a plastic cover, must be used to prevent supersonic oscillation from occurring.

The MICROPHONE input jack is for an unbalanced line only and will match either crystal or high impedance dynamic microphones.

If it is necessary to use a balanced input, an outboard matching transformer such as Raymer Model LMT-150 must be used. If the signal source is a telephone line or a 500 ohm input, the connection can be made to the amplifier by means of a Raymer Telephone Matching Adaptor model TM-2.

The AUX input is high impedance with a 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 AUX input is from leased telephone lines, a Raymer TM-2 telephone adaptor is required to match the telephone lines to the input.

The AUX input may be used in place of the MICROPHONE input by means of a selector switch located on the front panel of the unit.

## OUTPUT CONNECTIONS

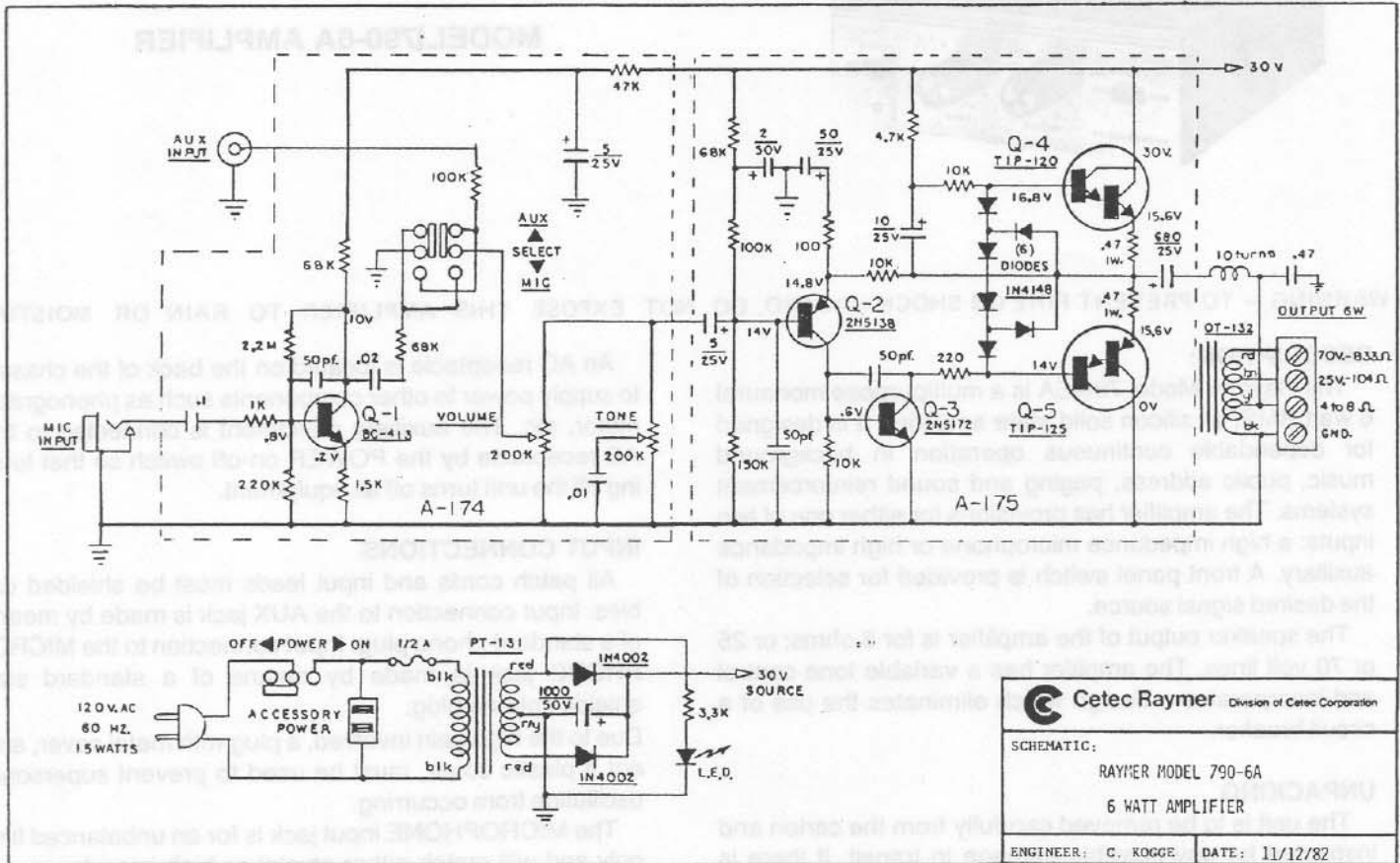
The speaker(s) or line matching transformers are connected to the screw terminal board located on the rear panel. For short distances any ordinary insulated wire, such as parallel lamp cord, may be used.

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.

The 8 OHM output is used when connecting directly to the speaker voice coil. When a speaker with an impedance of 8 ohms is connected to the amplifier, use the terminals on the amplifier marked GND and 8Ω.

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 for 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.



<b>Cetec Raymer</b> <small>Division of Cetec Corporation</small>	
SCHEMATIC:	
RAYMER MODEL 790-6A 6 WATT AMPLIFIER	
ENGINEER: C. KOGGE	DATE: 11/12/82

**Warranty:** These units have been very carefully inspected and are warranted to be free from defects in material and workmanship under normal use and service for a period of one year from sale to original purchaser. This warranty does not extend to any unit that has been subject to abuse, misuse, neglect, accident, improper installation, or alterations. The obligation of University Sound 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 transportation paid within one year. It is recommended that any unit on which service is required be processed through your local 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 for us any other liability in connection with the products manufactured by University Sound.

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