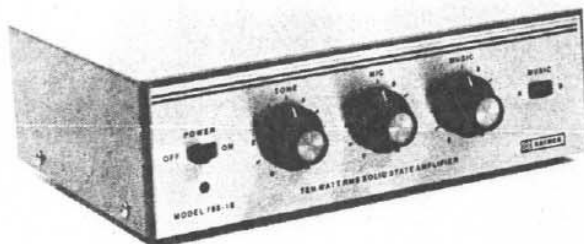


**RAYMER**

OPERATING INSTRUCTIONS



MODEL 798-10 AMPLIFIER

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

DESCRIPTION:

The Raymer Model 798-10 is a multipurpose monaural 10 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 mixing two inputs: one microphone and one music. A selector switch is provided to match the microphone input for either high or low impedance. The music input is high impedance and will match a ceramic or crystal phono cartridge, a tuner or other auxiliary equipment. Additional provision is made for a choice of one or two separate sources to be connected to the music input.

The amplifier also features an electronic Music Mute (Precedence) circuit in place of a relay to quickly fade out the music while paging; after the page, the music is smoothly restored.

The speaker output of the amplifier is for 4 or 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 798-10 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.

The amplifier may be mounted in a 3½" vertical panel space in a rack, using a Raymer RPK-4 rack mounting kit.

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.

CONNECTIONS

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

INPUT CONNECTIONS

All patch cords and input leads other than Music Mute must be shielded cables. The Music Mute leads do not have to be shielded. When output leads are run near an unshielded microphone input plug, or when run together with the microphone precedence leads, a supersonic oscillation may occur. When this does occur, it will appear as a distortion in the amplifier output.

CAUTION

To avoid possible supersonic oscillation which might result in damage to the unit, it is mandatory that a shielded (metal cover) microphone plug be used.

The MICROPHONE input jack is for an unbalanced line only. The switch above the microphone input selects the proper input impedance. The HI-Z position will match either crystal or high impedance dynamic microphones; the Lo-Z position will match microphones in the 150 to 500 ohm range.

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.

If it is desirable to fade out the music while paging, a "dispatcher" type of microphone with an auxiliary switch having a pair of normally open contacts should be used. The microphone is to be connected as shown in Figure 1.

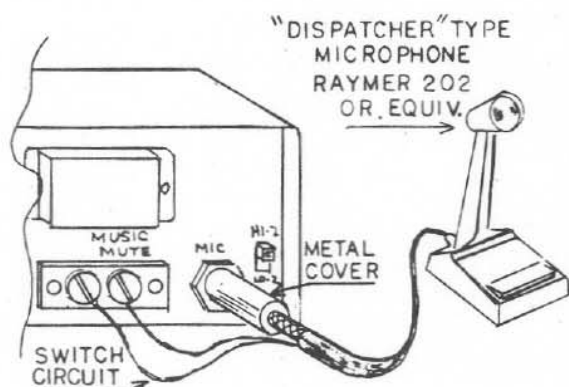


FIGURE 1.

TYPICAL CONNECTION FOR A SINGLE MICROPHONE.

The MUSIC 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 MUSIC input is from leased telephone lines, a Raymer TM-2 telephone adaptor is required to match the telephone lines to the input.

The music channel has two input jacks for the selection of a desired signal source. This selection is controlled by a slide switch to the right of the music control.

PREAMP INPUT/OUTPUT

The preamp in/out jack may be used as an input for signaling, or as an output for an external amplifier.

If it is desirable to add a signaling annunciator or alarm to the music and page system, a Raymer Model TGSP-4 Tone Generator may be connected to the amplifier. The output of the TGSP-4 should be connected to the preamp in/out jack. By connecting in this fashion the tone or alarm is unaffected by any of the front panel controls.

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 to 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 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.

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.

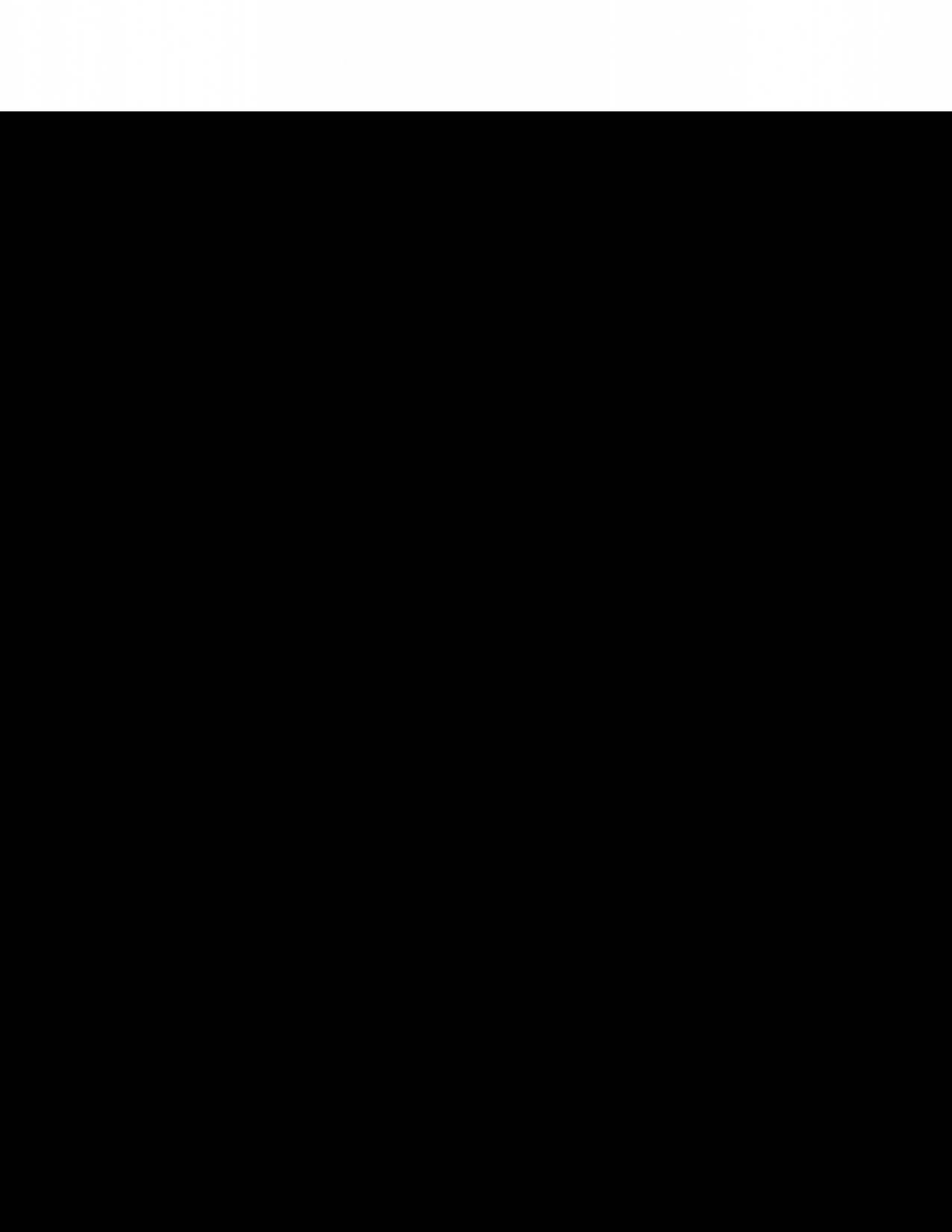
THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON OUR PART. WE NEITHER ASSUME NOR AUTHORIZE ANY OTHER PERSON TO ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH THE PRODUCTS MANUFACTURED BY CETEC RAYMER.

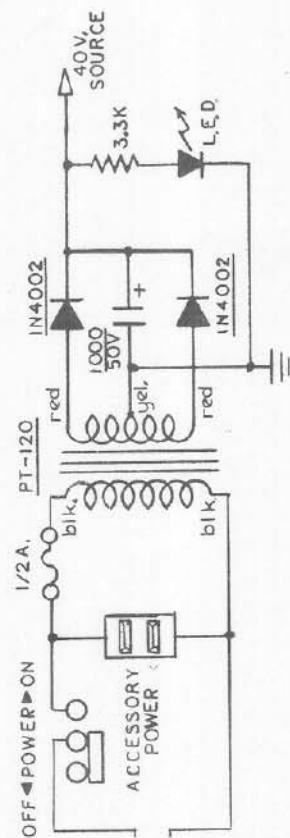
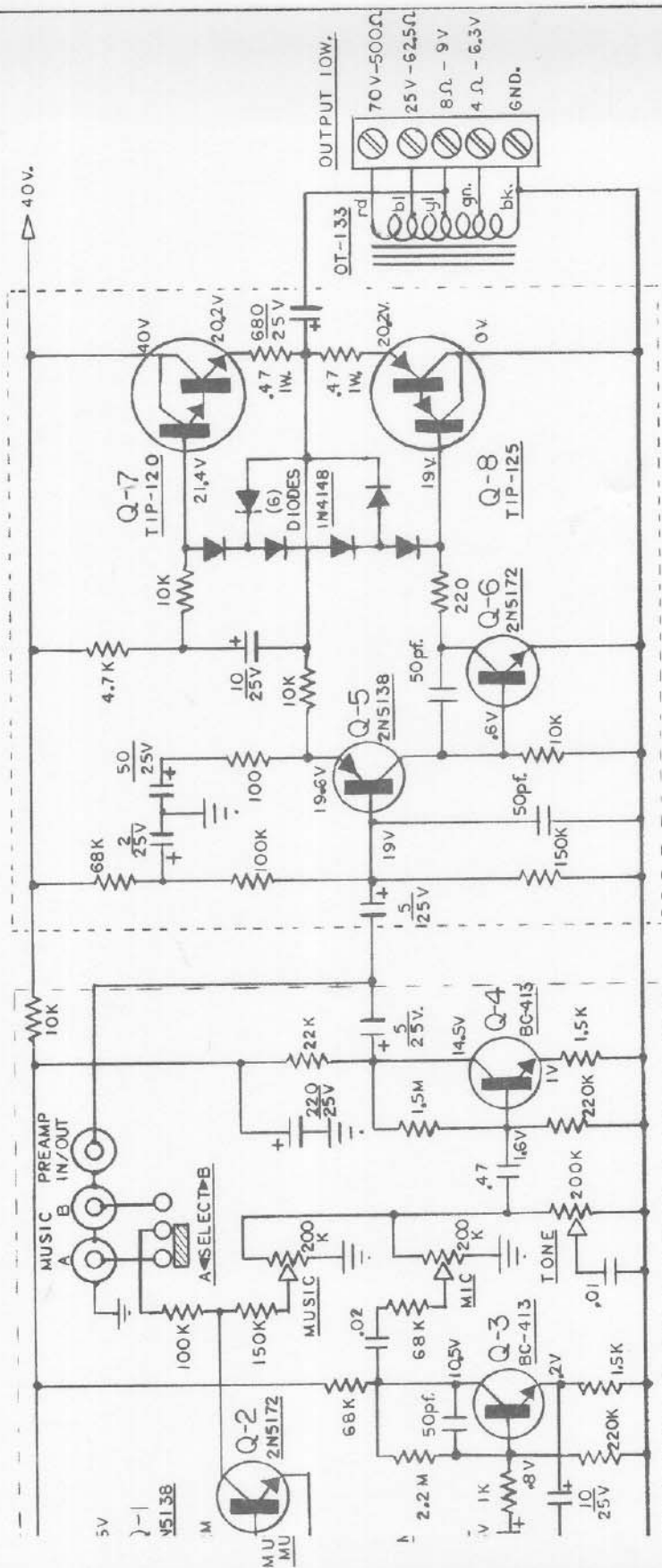
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SCHEMATIC:

RAYMER MODEL 798-10

10 WATT AMPLIFIER

ENGINEER: C. KOGGE DATE: 11/8/82