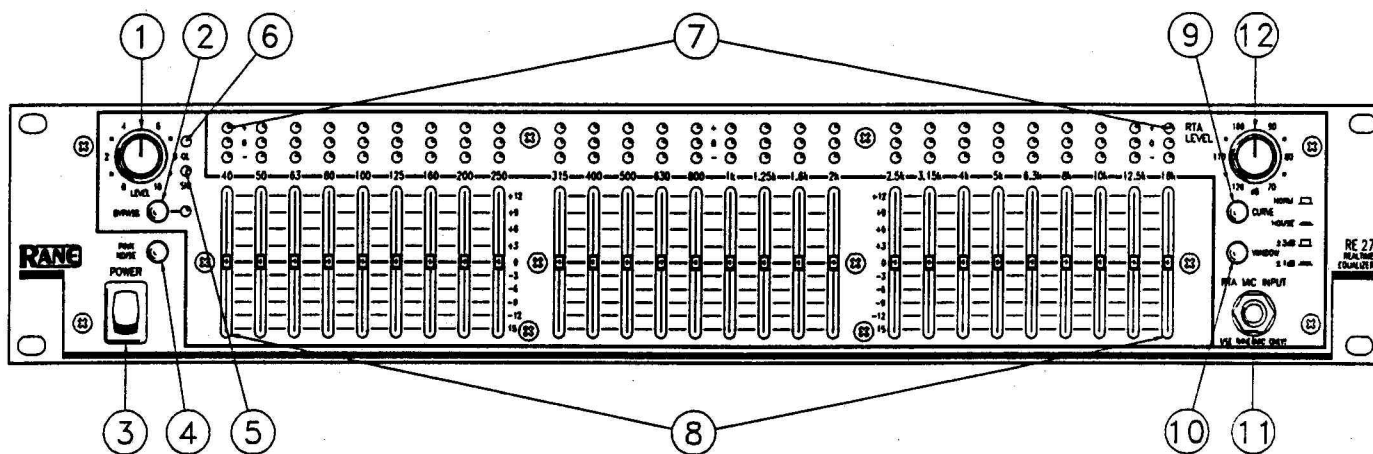




## FRONT PANEL DESCRIPTION



1. EQ LEVEL CONTROL: This controls level through the equalizer section and provides up to 6 dB overall gain. Turn this control down if the overload LED lights up.

2. BYPASS SWITCH: Engage to BYPASS all equalizer sections. The Bypass LED lights whenever the BYPASS switch is engaged.

3. POWER SWITCH: You've probably figured this one out by now...

4. PINK NOISE SWITCH: Engage to activate the built-in pink noise generator. *NOTE: Switch the pink noise generator OFF when not in use. This prevents possible noise bleed-through into the program material.*

5. SIGNAL PRESENT INDICATOR: This green LED lights with any input above -20 dBu (.078 volts), even in the Bypass mode.

6. OVERLOAD INDICATOR: This red LED lights whenever the equalizer signal level reaches 4 dB below clipping.

7. ANALYZER DISPLAY LEDs: Each red LED lights up when response is too high in that band; green LEDs light when response is within +3 dB or +1 dB of the selected curve; yellow LEDs come on when response is too low.

8. EQUALIZER SLIDERS: Calibrated in 3 dB increments, these sliders provide +12 dB of boost and -15 dB of cut at each of the ISO frequency centers.

9. CURVE SELECT SWITCH: The NORMAL position yields a flat response when all LEDs are green. The HOUSE CURVE changes the response of the display such that the EQ sliders between 400 Hz and 1.6 kHz must be attenuated 3 dB to obtain green LED response. This reduction in midrange results in a warmer more desirable sound at lower sound pressure levels.

10. WINDOW SELECT SWITCH: In the  $\pm 3$  dB position, the green LED in each band lights when signals of that frequency are within 3 dB above or below the Normal or House curve, whichever is selected. In the  $\pm 1$  dB mode, system response must be within 1 dB above or below the selected curve to light the green LEDs.

11. MICROPHONE INPUT JACK: *Plug only the Rane Microphone into this jack — the DC voltage supplied by this jack could be damaging to any other microphone.* When the mic is plugged in, the display responds to whatever the mic picks up; when the mic is unplugged, *the jack automatically switches the display to monitor the output of the equalizer section.*

12. RTA LEVEL CONTROL: Use this knob to adjust the microphone level (or line level when the microphone is unplugged) to properly drive the display. This control is accurately calibrated in dB-SPL; any display band whose LED is green has the sound pressure level indicated by this knob (only with the mic plugged in).









# STAGE MONITOR EQUALIZATION

## IMPORTANT NOTES:

1. This set-up, using the Rane microphone, provides the most expedient method to optimize stage monitor sound quality and reduce feedback problems. Feedback induced by specific stage mic/monitor speaker coupling can also be attenuated by leaving the stage mic turned up and running up the pink noise level through the monitor speaker until feedback occurs. Attenuate each feedback frequency, as indicated by the analyzer display, until the mic/monitor combination feeds back at two or more frequencies simultaneously. Usually the final EQ setting will be a compromise between a good monitor sound that doesn't get as loud, or a not-so-good monitor sound that gets louder before feedback,
2. The run between the RE 27 and the monitor amp should be balanced whenever possible.
3. Place the Rane microphone at eye level of the performer and about six inches off to one side of the stage microphone, in line of sight to the monitor speaker. If the stage microphone is directly between the Rane mic and monitor speaker (blocking line of sight), some high frequencies will be blocked giving a false reading on the analyzer display.
4. If you are running more than one monitor from a single equalizer, test each monitor location by running up pink noise until feedback occurs. The monitor which feeds back soonest should be used for the overall EQ adjustments using pink noise.
5. If maximum SPL before feedback is most important, use the stage mic only. If your mixer has a send/receive loop for each input, temporarily patch the send from the stage mic mixer input to the RE 27 EQ INPUT, and patch the PINK NOISE OUTPUT from the RE 27 to the receive. This arrangement allows the analyzer to look at the specific relationship between each stage microphone/speaker combination. Since both the microphone and stage monitor speaker exhibit their own individual feedback tendencies, the interaction between the two can cause pronounced feedback problems. This configuration allows you to flatten or "normalize" this interaction without actually getting to feedback levels. It should be noted that this testing procedure favors maximum SPL before feedback and not necessarily optimum monitor sound quality. After the equalizer curve is set, reconnect the system as shown above (without the Pink Noise connection). This configuration can also be used for main speaker equalization to optimize system response for a specific microphone used throughout the system, such as for choir, orchestral or big band situations where all program material is picked up through microphones of the same make and model. After setting the equalizer curve, make the final output connection for the equalizer to the main amp(s) and speakers instead of the monitor system as shown
6. Do not attempt to plug a regular microphone directly into the RTA MIC INPUT. See RaneNote 104 regarding use of other microphones with the RE 27.

# IMPORTANT SAFETY INSTRUCTIONS



1. Read these instructions.
  2. Keep these instructions.
  3. Heed all warnings.
  4. Follow all instructions.
  5. Do not use this apparatus near water.
  6. Clean only with a dry cloth.
  7. Do not block any ventilation openings. Install in accordance with manufacturer's instructions.
  8. Do not install near any heat sources such as radiators, registers, stoves, or other apparatus (including amplifiers) that produce heat.
  9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
  10. Protect the power cord and plug from being walked on or pinched particularly at plugs, convenience receptacles, and the point where it exits from the apparatus.
  11. Only use attachments and accessories specified by Rane.
  12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
  13. Unplug this apparatus during lightning storms or when unused for long periods of time.
  14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
  15. The plug on the power cord is the AC mains disconnect device and must remain readily operable. To completely disconnect this apparatus from the AC mains, disconnect the power supply cord plug from the AC receptacle.
  16. This apparatus shall be connected to a mains socket outlet with a protective earthing connection.
  17. When permanently connected, an all-pole mains switch with a contact separation of at least 3 mm in each pole shall be incorporated in the electrical installation of the building.
  18. If rackmounting, provide adequate ventilation. Equipment may be located above or below this apparatus, but some equipment (like large power amplifiers) may cause an unacceptable amount of hum or may generate too much heat and degrade the performance of this apparatus.
  19. This apparatus may be installed in an industry standard equipment rack. Use screws through all mounting holes to provide the best support.
- WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

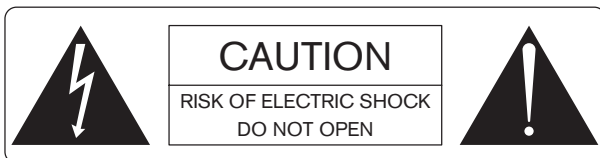
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**CAUTION:** Changes or modifications not expressly approved by Rane Corporation could void the user's authority to operate the equipment.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

## WARNING



To reduce the risk of electrical shock, do not open the unit. No user serviceable parts inside. Refer servicing to qualified service personnel.

The symbols shown below are internationally accepted symbols that warn of potential hazards with electrical products.



This symbol indicates that a dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.