RANE **OPERATORS MANUAL** **ME 15B**
microGRAPHIC EQUALIZER

QUICK START

If this is your first equalizer, please do yourself and your speakers a favor and read the complete manual. "An ounce of prevention..." and all that.

You may use either the XLR or ¼" TRS connectors for Inputs or Outputs. Hook-up is intuitive. Just follow the silk-screened instructions on the rear of the unit. Polarity convention is per IEC/ANSI/AES standards of pin 2 positive, pin 3 negative and pin 1 shield. The ME 15B does not invert the signal. Only connect one **INPUT** type per channel. The XLR and ¼" TRS Inputs do not sum, *don't use both*, pick one or the other. You may, however, use both types of **OUTPUTS** simultaneously if desired.

Anyone familiar with other graphic equalizers finds the ME 15B just as familiar. Setting curves is as easy as it is on all Rane graphics thanks to our innovative constant-Q circuitry. If you feel you want more information on setting up your curves, please read on.

If you are familiar with equalizers, then hook-up, plug-in, turn-on and go!

WEAR PARTS: This product contains no wear parts.

Manual abstract:

6k 2.5k 4k 6.3k 10k 16k + 12 6 0 6 12 · · · · CHANNEL 2 4 2 0 10 6 8 25 + 6 · · · · 40 63 100 160 250 400 630 1k 1.6k 2.5k 4k 6.3k 10k 16k + 12 6 0 6 12 · · · · ±12 ±6 3 0 3 6 ±12 ±6 3 0 ME 15B 3 6 MICROGRAPHIC EQUALIZER OL LEVEL BYPASS RANGE OL LEVEL BYPASS RANGE POWER QUICK START If this is your first equalizer, please do yourself and your speakers a favor and read the complete manual. "An ounce of prevention...," and all that.

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If you feel you want more information on setting up your curves, please read on. If you are familiar with equalizers, then hook-up, plug-in, turn-on and go! WEAR PARTS: This product contains no wear parts. Manual-1 FRONT PANEL DESCRIPTION CHANNEL 1 4 2 0 10 6 8 25 + 6 · · · · 40 63 100 160 250 400 630 1k 1.6k 2.5k 4k 6.3k 10k 16k + 12 6 0 6 12 · · · · CHANNEL 2 4 2 0 10 6 8 25 + 6 · · · · 40 63 100 160 250 400 630 1k 1.6k 2.5k 4k 6.3k 10k 16k + 12 6 0 6 12 · · · · ±12 ±6 3 0 3 6 ±12 ±6 3 0 ME 15B MICROGRAPHIC EQUALIZER 3 6 OL LEVEL BYPASS RANGE OL LEVEL BYPASS RANGE POWER 432 1 432 1 5 Filter level slide controls: Each of these sliders controls the output level of each of the bandpass filters. Center position is detented and grounded for guaranteed flat response.

@@@@@@@@Turn this control down if it's OL (OverLoad) lights up steadily (meaning too strong an Input signal). Since actual unity gain depends on varying slider settings (which is why we have not marked a unity gain position on the front panel), use the BYPASS switch to determine the exact unity gain position of this LEVEL control by comparing EQ and BYPASS volumes. The OL indicator lights up if any section of the ME 15B is within 3 dB of clipping. Occasional blinking of these LEDs are acceptable, but if they remains on more than intermittently, turn down either the equalizer's LEVEL control(s) or reduce the output level of the preceding component to avoid audible distortion. POWER switch: As you have astutely surmised by now, this switch powers up the ME15B (as long as the power cord is plugged in correctly). REAR PANEL DESCRIPTION FOR CONTINUED GROUNDING PROTECTION DO NOT REMOVE SCREW TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE. DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL. WARNING OUTPUT INPUT ME 15B MADE IN U.

S.A. RANE CORP. TIP / PIN 2 = POSITIVE RING / PIN 3 = NEGATIVE SLEEVE = SIGNAL GROUND PIN 1 = CHASSIS GROUND WIRING OUTPUT INPUT 120 V 50/60 Hz 12 WATTS N108 CHANNEL 2 CHANNEL 1 4 3 2 1 4 3 2 1 XLR INPUT jacks: These accommodates balanced signals. Rane adheres to the international and U.

S. standard for balanced pin configurations: Pin 1 is chassis ground (neutral), pin 2 is hot (positive), and pin 3 is signal return (negative). Choose between this and the ¼" TRS Input jack--use only one--they do not sum. ¼" TRS INPUT jacks: These are TRS (tip-ring-sleeve) ¼" jacks accommodating either balanced or unbalanced signals. For unbalanced signals use a mono ¼" TS plug (single conductor with shield), and keep its length under 10 feet (3 meters) to avoid hum and noise.

For balanced signals use microphone cable (two conductor with shield) with TRS ¼" plugs. Choose between this and the XLR Input jack--use only one--they do not sum. Refer to the included RaneNote, "Sound System Interconnection" for unbalanced wiring. XLR OUTPUT jacks: These balanced outputs are wired per AES standards of pin 2 "hot", as described above in . ¼" TRS OUTPUT jacks: These are TRS (tip-ring-sleeve) ¼" balanced jacks compatible with either balanced or unbalanced systems. For balanced systems, use a microphone cable wired with pin 1 is chassis ground (neutral), pin 2 is hot (positive), and pin 3 is signal return (negative). Refer to the RaneNote, "Sound System Interconnection" for unbalanced wiring. Manual-2 ME 15B CONNECTION When first connecting the ME 15B to other components, leave the POWER switch off until the very last. This gives you a chance to make mistakes and correct them without damaging your fragile speakers, ears and nerves. @@Each works equally well.

@@@@@@@Use pin 1, or the shell, for shield ground. OUTPUTS The Outputs mimic the Inputs. @@It does not require pin 1 or shield. @@For hum-free systems ground is used only for shielding. @@@@@Do not directly connect microphones into the ME 15B. @@@@Here are some things to try: 1. @@2. @@3. @@@@@@@@@@@@@@@@@@@@The gain of the ME 15B is optimized when there is no sound level difference between the bypassed and the active positions. The overall gain range of the level control for the ME 15B is off to +6 dB for unbalanced operation, or off to +12 dB for balanced operation. The level difference between the equalizer in bypass or active can be significant. Adjust the LEVEL control so the signal level is the same between the bypassed and active positions of the BYPASS switch. GETTING STARTED Here is one method of setting your equalizer that works well. Begin with the following settings: 1. Engage the BYPASS switch.

(switch depressed, BYPASS LED on.) 2. Put all sliders in their center position (0 dB). The center position has a grounded detent. 3. Position the LEVEL controls about "6" for unbalanced operation and "7" for balanced operation. 4. Apply a signal to the system. 5. Verify the OL LED is not on--occasionally blinking during extreme peaks indicates an optimal setting. But if it lights up a lot or lights steadily, lower the output level of the previous device in the signal chain. 6. Release the BYPASS switch and begin adjusting the equalizer filters. 7. During filter band adjustments, if the OL LED lights more than occasionally, turn down the output of the previous device in the signal chain.

8. Once all filter bands are adjusted to your liking, compare the signal loudness with the equalizer bypassed and active. Adjust the LEVEL controls on the ME 15B so there is no difference between the levels of bypassed versus active. 9. The last step is to reconfirm that the OL LED lights only when there are large signal spikes in the program material, as in step 5 above. For insight into how to use an equalizer, to alleviate acoustic problems or to adjust the overall tone of the program material, please read the following two sections. ACOUSTIC COMPENSATION A graphic equalizer may be used to correct many acoustic problems. However, one should fully understand the ramifications of doing so. Acoustic problems are generally not consistent across the entire area of sound coverage. This is much more of a problem when setting up a sound system for large venues.

In a typical large room or hall, there will be areas that have acoustic reinforcement problems and other areas where certain frequencies are almost entirely canceled out. Try to seek an acoustic remedy for acoustic problems whenever possible. @@@@@@@The best way to "see" what the acoustic signature of the room is doing to sound is to use a real time analyzer or any of the many computerized measurement systems. Using these devices to analyze the response of the room and the sound system is the only accurate means available for setting an equalizer properly. Equalization can be like spice in the hands of a master chef.

A little goes a long way in improving sound quality, too much and the mix is spoiled. If modest amounts of equalization (6-8 dB) do not solve the problem, it is best remedied by other means. Avoid adding large amounts of boost below 63 Hz, especially when using vented bass cabinets. Boosting frequencies below the vente.