

INSTRUCTION MANUAL

SMA
50
500
1000
SMA-500
9174



RAMKO RESEARCH

11355 "A" Folsom Blvd.
Rancho Cordova, Calif. 95670
(916) 635-3600

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RAMKO RESEARCH, INC.

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FREIGHT CLAIMS AND DAMAGES

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All claims for shortages or damaged merchandise must be made directly with the carrier within 5 days of receipt. Notify Ramko within the same period of time. Freight companies and carriers are quite strict with reference to claims and if not notified within the 5 days, claims will be disallowed.

2 YEAR GUARANTEE AND 2 WEEK TRIAL PERIOD

Ramko guarantees to replace, free of charge any electronic components which should fail within the first 2 years of "original" ownership (motors, lamps and moving mechanisms excepted). All excepted components carry a standard 6 month guarantee. Ramko will not be responsible for customer negligence. All equipment sold by Ramko (with the exception of custom designs) is on an unconditional 2 week free trial basis.

Any extended use (over the 2 week trial period) of the item returned will be subject to a minimum of 15% restocking charge. No equipment will be accepted after 21 days without prior permission from Ramko Research.

WARRANTY REPLACEMENTS/RETURN FOR REPAIR

If the need for a replacement unit or repair should arise RETURN AUTHORIZATION NUMBERS MUST BE OBTAINED FROM RAMKO'S CUSTOMER SERVICE DEPARTMENT PRIOR TO RETURNING MERCHANDISE. A serial number of your equipment must be supplied before we can issue an R.M.A. number.

Upon receipt of authorization the following procedure should be followed:

1. Package carefully
2. Insure for full value
3. Mark authorization number on outside of shipping container
4. Ship to: Ramko Research Inc., 11355-A Folsom Blvd., Rancho Cordova, Calif. 95670
5. Prepay shipping. Collect shipments will NOT be accepted. We suggest you use United Parcel Service wherever available.

REPLACEMENT OR WARRANTY PARTS

These parts will be billed to the customer and credit will be issued upon receipt of defective parts.

WHEN ORDERING PARTS/COMPONENTS, ETC., WE MUST HAVE THE SERIAL NUMBER(S) OF THE UNIT(S) IN QUESTION ALONG WITH THE DATE OF PURCHASE DUE TO DESIGN CHANGES.

Minimum billing is \$5.00



11355-A FOLSOM BOULEVARD • RANCHO CORDOVA, CALIFORNIA 95670

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SPECIFICATIONS: SMA-50/E, SMA-500/E SMA-1000/E

GAIN: $A_{pw} = 70\text{db}$, $A_v = 29\text{db}$

INPUT(S): High impedance balanced bridging. 200k nominal but may be made any value by adding the appropriate resistor across the input.

OUTPUT: 25 watts RMS into 8 ohms (mono) 25 watts per channel (stereo) Outputs will work into any load from 4 ohms to infinity.

CONTROLS: Input level adjust (rear panel). Output level adjust (front panel). Bass contour adjust - $\pm 12\text{db}$ @ 30Hz. Adjustable from flat.

RESPONSE: 15Hz to 90kHz, $\pm 1\text{db}$ @ 25 W. 15Hz to 100kHz, $\pm 1\text{db}$ @ 0.1W.

NOISE & HUM: 70db below rated out with 0.5V in.

DISTORTION: 0.6% @ 25 W, 0.3% @ 0.1 W.

MUTING: Internal before power stage. Silent! Requires only an external contact closure.

CROSSTALK RATING : (SMA-1000/E) 65db @ 1kHz.

POWER: 117 VAC, 50/60Hz (220 VAC optional)

COLOR: Charcoal Brown and Sand

SIZE: SMA-50/E (table top = $3\frac{1}{2}"$ H X $8\frac{5}{8}"$ W X $7\frac{1}{2}"$ D.
SMA-500/E, SMA-1000/E = $3\frac{1}{2}"$ H X 19" W X 8" D.

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HOOK UP INSTRUCTIONS

SMA-50	(Table top/bracket mount)
SMA-500	(Rack Mount)
SMA-1000	(Stereo/dual mono rack mount)

CONNECTIONS

Rear Panel Barrier strip terminals

Speaker - #5 and #6 (ground)

Muting - Short #3 to #4 (ground)

Balanced input - #1 (+) and #2 (-)

Unbalanced input - Connect #2 to ground (#3) and feed the audio to #1

CONTROLS

Level - Speaker volume control

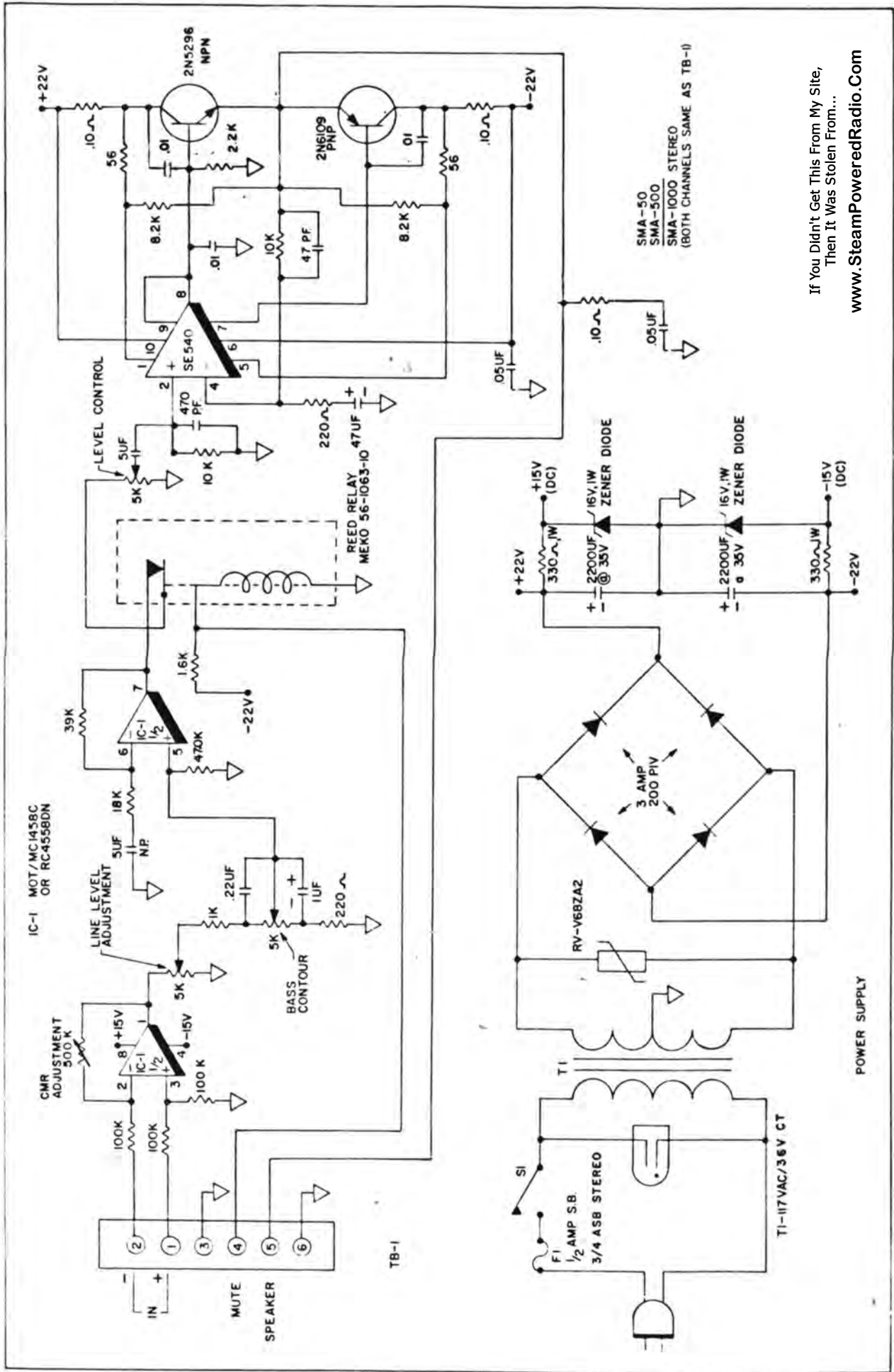
Bass Contour - This control has been designed to allow the operator to vary the amount of bass reproduced to match the various surroundings & levels being reproduced. A setting of mid range will produce flat response to 100KHz.

INPUT ADJUST

The input level adjust (rear panel) has been factory adjusted for +0dbm in. With this input level the monitor amplifier will deliver it's full power to the speaker. The SMA may be made either less sensitive or more sensitive by this adjustment without affecting either the front panel level setting or the input impedance.

MUTING

Internal muting provisions have been designed into the SMA and is accomplished by simply shorting terminals #3 and #4 to the rear panel barrier strip. Any switch may be used for this function as the current flow is only a few millamps DC and low voltage. Since the muting circuit is transient free and completely isolated from the audio circuitry the remote switch may be mounted or connected wherever desired. Even on the console mic switch if the extra contacts are available.



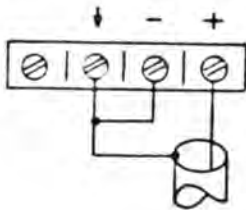
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BALANCED AND UNBALANCED METHODS OF CONNECTING INPUTS AND OUTPUTS

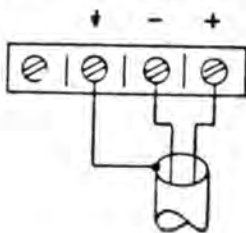
Both the inputs and outputs, when shown with both + and - , may be used in either the balanced or unbalanced configuration. **CAUTION:** It is important that the following procedures be followed to prevent possible damage to the consoles integrated circuitry and for proper signal processing.

INPUTS (unbalanced)



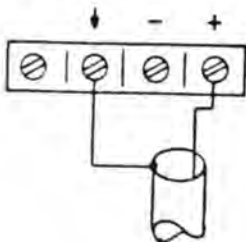
Jumper minus terminals to ground. Feed signal to plus terminal with shield tied to ground.

INPUTS (Balanced)



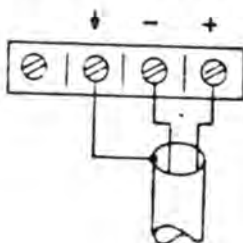
Feed signal to plus and minus terminals with shield tied to ground. The source feeding the console input must have balanced output for this mode.

OUTPUTS (Unbalanced)



Audio output is taken from the plus terminal with shield (or lower side) tied to ground. THE MINUS TERMINAL IS LEFT FLOATING FREE. DO NOT CONNECT THIS TERMINAL TO GROUND.

OUTPUTS (Balanced)



Audio output is taken from the plus & minus terminals with the shield tied to ground. FEED ONLY EQUIPMENT WITH BALANCED INPUTS IN THIS MODE.