

QUICK START

Realizing that in most areas there are laws against reading owners manuals, and that reading them under the blankets at night with a flashlight makes you feel stupid, we therefore provide this brief, yet informative, description of how to use the SM 26B just in case your batteries are low and your mother is about to come in the room.

To achieve a quick understanding of the SM 26B, think of it as a six channel mixer with faders and pans only. Or think of it as a 2-to-6 channel splitter with output level controls and a mix knob (to control how much of which input goes to which output). If you get that, you may stop here as long as you know how to hook up the power supply.

As a six channel mixer, **MONO IN 1** through **6** may be placed on the Right or Left bus or both, in any amount. The respective **LEVEL** knobs on the front of the unit serve as the mixer's faders, the adjacent **PAN** controls place the channel's signal into the stereo field. As an effects mixer or line level expander for a larger mixer, set up the **LEVELS** and adjust the **PANS**. The **MASTER OUTPUT LEVEL** adjusts the overall level of the mix at the Master Outputs.

As a splitter, place one or both input signals into the **LEFT** and/or **RIGHT** Inputs. Select the Input(s) to be placed at each of the six **MONO OUTs** by rotating the **MIX/PAN** control to the proper position. Set the individual **CHANNEL LEVEL** controls for proper output level. The **MASTER INPUT LEVEL** control on the front adjusts both Right and Left Input signal levels together.

Never connect anthing except an RS 1 or other approved Rane AC power supply to the red thing that looks like a telephone jack on the rear of the SM 26B. This is an AC input and requires some special attention if you do not have an operational power supply ***exactly*** like the one that was originally packed with your unit. See the full explanation of the power supply requirements elsewhere in this manual.

SM 26B CONNECTION

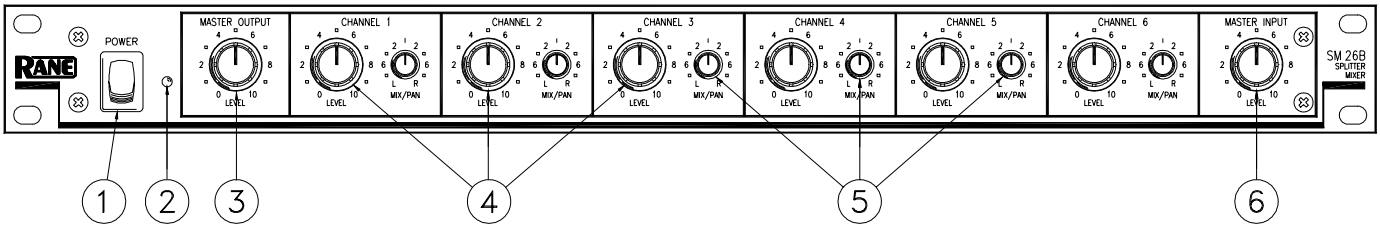
When connecting the SM 26B to other components in your system for the first time, ***leave the power supply for last***. This gives you a chance to make mistakes and correct them before damage is done to anything fragile.

As you have no doubt noticed, all Inputs and Outputs on the SM 26B's rear panel are ¼" connectors. The Inputs and Outputs are active balanced on Tip-Ring-Sleeve (TRS) jacks which allow the flexibility of connecting in either a balanced or unbalanced fashion. If unbalanced operation is your preference, the simplest way to accomplish this is through the use of tip and sleeve ¼" connectors. The ring is not essential unless balanced operation is required. You should be aware that if you are running unbalanced and using TRS connectors with both ring and tip, the ring and sleeve must be shorted together. Failure to do so on the inputs results in a gain loss of 6 dB.

Balanced operation requires that TRS plugs be used. The tip is hot (+), the ring is return (–) and the sleeve is ground. RaneNote 110, "Sound System Interconnection" (included here) contains some great pictures to aid your interconnect ventures.

WEAR PARTS: This product contains no wear parts.

FRONT PANEL DESCRIPTION



① **POWER switch:** Two guesses .....

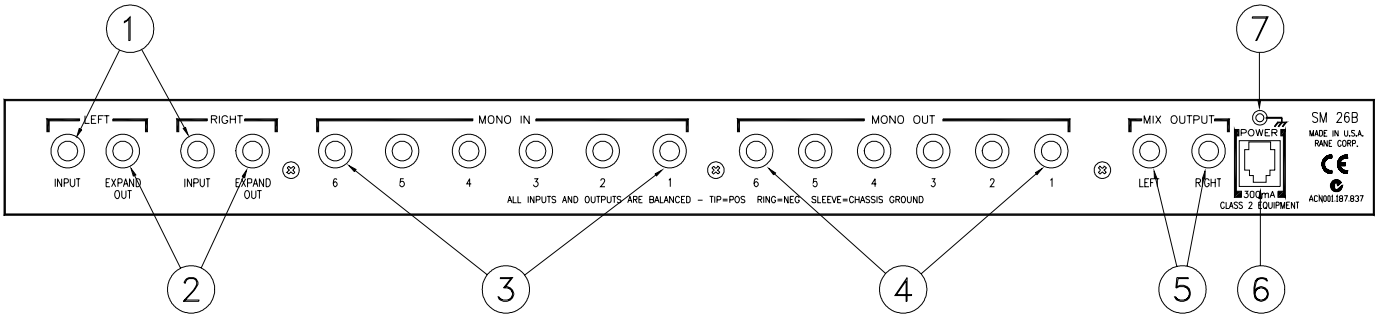
② **POWER indicator:** When this yellow LED is *lit*, the SM 26B is ready to go.

③ **MASTER OUTPUT LEVEL** controls the amount of signal at the **MIX OUTPUT** jacks. It does not affect the level of any of the six **MONO OUTs**. This control changes the gain of the output stages. This allows an increase in headroom to eliminate overloading due to excessive combined signal from one or more Inputs. Range of gain is from Off to 0dB (unity). Refer to the block diagram in the **SM 26B Data Sheet** and/or schematics.

④ **MONO INPUT LEVEL** controls the Level of signal through each particular channel. When fed from the **MONO IN** jack, each stage has a gain range from Off to +12 dB minimum, allowing level matching of -10 dBV equipment to +4 dBu gear. When fed via the **LEFT & RIGHT INPUT**(s), these **CHANNEL LEVEL** controls automatically limit to a maximum of unity gain to accommodate the +12dB available from the Left & Right Input gain stages.

⑤ **MIX/PAN** serves two different functions:
MIX: When used as a SPLITTER, this controls the mix of Left and Right Master Input program to each Channel's **MONO OUTPUT**.
PAN: When used as a MIXER, this control pans the Mono Channel Input between the **LEFT** and **RIGHT MIX OUTPUTS**.

⑥ **MASTER INPUT LEVEL** sets the gain of the Left & Right Master Input stages, with a range of Off to +12 dB. In the splitting mode, this controls the Level of all Mono Channel Outputs at once (i.e., those which do not have a separate input).



① **LEFT & RIGHT MASTER INPUTS** are balanced Tip-Ring-Sleeve (TRS) ¼" Inputs. These Inputs feed all six **MONO OUT**s when all **MONO IN**s are not used. Connecting to individual **MONO IN**s disconnects that channel from these Inputs (refer to the **Block Diagram** found on the **SM 26B Data Sheet**). For unbalanced operation use a standard mono ¼" plug; for balanced operation use a TRS (stereo) ¼" plug wired as follows:

TIP is signal + (connect to Pin 2 on a 3-pin connector).
RING is signal - (pin 3 in a 3-pin connector).
SLEEVE is chassis ground.

② **LEFT & RIGHT EXPAND OUTPUTS**: ¼" TRS jacks that are connected in parallel with the Master **LEFT & RIGHT INPUT** jacks, allowing two or more SM 26Bs to be daisychained for multiple splitting. Simply connect these **EXPAND OUTPUTS** to the **LEFT & RIGHT INPUT**s of another SM 26B; there is no limit to the number of expansions possible with the SM 26B.

NOTE: These Expand Outputs are *not* buffered from the Master Inputs. Therefore it is not possible to mix both balanced and unbalanced lines in the same channel between several units: once the ring and sleeve are shorted anywhere in the chain (by using a mono plug) the entire line becomes unbalanced.

③ **MONO INPUTS** are TRS ¼" jacks which accept either balanced or unbalanced mono signals. These are switching jacks which automatically bypass the Master **LEFT & RIGHT INPUT**s whenever a plug is inserted (see the **Block Diagram**). Follow wiring conventions as in #1.

④ **MONO OUTPUTS:** ¼" TRS jacks deliver either a conventional unbalanced output (use mono cords), or a balanced output (use TRS cords). Follow wiring conventions as in #1.

⑤ **LEFT & RIGHT MIX OUTPUTS:** These balanced TRS ¼" outputs are controlled by the **MASTER OUTPUT LEVEL** control. They are fed either by the Master **LEFT & RIGHT INPUTS** (respectively) or by any of the six **MONO INPUTS**, or a combination of both (Rane Note 108 helps). Follow wiring conventions as in #1.

⑥ **Remote power supply input:** The SM 26B is supplied from the factory with a Model RS 1 Remote Power Supply suitable for connection to this input jack. The power requirements of the SM 26B call for a 18-24 volt AC center-tapped transformer only. *This is not a telephone jack. Never use a power supply with your SM 26B other than the one supplied or a Rane approved replacement.*

⑦ **Chassis ground point.** A #6-32 screw is used for chassis grounding purposes. See the CHASSIS GROUNDING note on the next page for details.

OPERATING INSTRUCTIONS

Since numerous applications exist for the SM 26B, no single set of operational procedures control its use. Rane Note 108 (included) explores the many configurations of the SM 26B in depth, and you should peruse it for applications information.

INTERNAL JUMPER OPTIONS

There exist within the SM 26B some signal routing options, requiring removal of the top cover to move some jumpers.

If an SM 26B needs to have an additional set of independent outputs, as in a 2x4 stereo distribution amplifier (see Rane Note 108, Figure 10), the LEFT and RIGHT MIX OUTPUTS can be used in addition to the 6 MONO OUTS. Normally, the LEFT and RIGHT MIX OUTPUTS produce the sum mix of all 6 LEVEL and PAN controls. To break any Channel away from the Mix Output bus, jumpers have been provided. Jumper 1W2 connects MONO OUT 1 to the mix bus. 2W2 connects MONO OUT 2, 3W2 connects MONO OUT 3, and so on.

POWER SUPPLY

As noted elsewhere in this manual, ***never use a power supply with your SM 26B other than the one supplied with your unit or an exact replacement obtained from Rane Corporation.*** The SM 26B's power supply is an AC supply, which is a 18 - 24 volt center tapped transformer capable of supplying the current demanded by this product. Using any other type of supply may damage the mixer and void the warranty.

IMPORTANT NOTE

CHASSIS GROUNDING

If after hooking up your system it exhibits excessive hum or buzzing, there is an incompatibility in the grounding configuration between units somewhere. Your mission, should you accept it, is to discover how your particular system wants to be grounded. Here are some things to try:

1. Try combinations of lifting grounds on units that are supplied with ground lift switches or links.

2. If your equipment is in a rack, verify that all chassis are tied to a good earth ground, either through the line cord grounding pin or the rack screws to another grounded chassis.

3. Units with outboard power supplies, such as the SM 26, do not ground the chassis through the line cord. Make sure that these units are grounded either to another chassis which is earth grounded, or directly to the grounding screw on an AC outlet cover by means of a wire connected to a screw on the chassis with a star washer to guarantee proper contact.

Please refer to RaneNote 110, "Sound System Interconnection" in this manual for further information on system grounding.