Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for RANE FPM 44. You'll find the answers to all your questions on the RANE FPM 44 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual RANE FPM 44
User guide RANE FPM 44
Operating instructions RANE FPM 44
Instructions for use RANE FPM 44
Instruction manual RANE FPM 44

RANE — OPERATING / SERVICE MANUAL — FPM 44
PROGRAM MIXER

QUICK START

This section provides for those with limited reading patience, and/or a high level of technical expertise. It familiarizes you enough with the FPM 44 to allow operation without wading through the rest of the text. You owe it to yourself to read at least this section to ensure reasonable operation of the unit.

Begin with the **INPUTS.** They are to be connected to the terminal strips on the rear. Follow the indications screened adjacent to the connectors. Balanced sources connect to the respective "**+**" and "**–**" **INPUTS.** Connect all incoming shields to the nearest **GND** terminal. Unbalanced inputs connect between the "**+**" terminal and **GND**.

Connect the **AUX A/B OUTPUTS** as required to the piece of equipment to be driven. Use the unbalanced "**+**" outputs and the nearest **GND** terminal. Set the internal Pre/Post Aux Assign switches as necessary (shipped "PRE"). The **A** and **B MASTER OUTPUTS** may drive balanced or unbalanced sources. Unbalanced output uses only the "**+**" and **GND** terminals.

Connect the Flex bus cables to the appropriate source for the **FLEX BUS IN** and the next unit for **FLEX BUS OUT.**

Set the **GAIN** switches on the front of the module so the desired level is obtainable from your sources without illuminating the red **OL** (overload) LEDs on the channels. Set the **A** and **B LEVEL** controls on each input for the desired level. The single **AUX SEND** level control routes signal from each input channel to *both* **AUX A** and **B OUTPUTS** equally.

The **MASTER A/B** output level controls affect only the signal level at the direct outputs of the unit. They have no affect on the main output added to the **FLEX BUS OUT.**

NEVER CONNECT ANYTHING EXCEPT AN APPROVED RANE POWER SUPPLY TO THE RED THING THAT LOOKS LIKE A TELEPHONE JACK ON THE REAR OF THE UNIT. This is an AC input and requires 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.

SYSTEM CONNECTION

When connecting the FPM 44 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 without damage to your fragile speakers, ears and nerves.
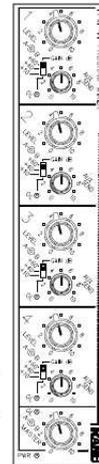
INPUTS. The four channel inputs on the FPM 44 are balanced. They may also be used in an unbalanced configuration. It is a good idea to use crimp-on spade connectors on the ends of the cables connected to the Ins and Outs of the mixer. Using stripped or tinned wire makes an unreliable union. Use only shielded cable for inputs and outputs. This wire should always be two-conductor plus shield, even for unbalanced operation. Balanced inputs should be connected to both the "**+**" and "**–**" for signal hot and return. The shield should be tied to the nearest ground terminal on the strip. A neutral "pin 1" ground is not necessary. For unbalanced use, connect the hot side of the input cable to "**+**" and signal return and shield to a ground terminal. It is never necessary on any Rane Flex module to ground the "**–**" Input in the unbalanced mode. It won't, however, hurt anything if you do. If the input is coming from another piece of equipment in the signal path, connect the shield only at the receiving end to help prevent ground induced hum. If a microphone is being connected to the unit, the shield may be connected to the case of the mic as well as to the ground terminal on the unit.

OUTPUTS. The FPM 44's MASTER A and B OUTPUTS are balanced. Connect a shielded cable to the device(s) being driven. If an unbalanced characteristic is what you desire, use the "**+**" terminal and one of the grounds for return. Do not short the "**–**" terminal to ground.

FLEX BUS IN. The 7-pin DIN bus connectors are used primarily with other Flex modules. These are not MIDI connectors. Use only the supplied DIN cable. If for some reason there is not a cable in the FPM 44 box, please contact Rane for a replacement. If you are in a bind, a 5-pin DIN may be used instead of a 7-pin. The two outside pins (6 & 7) are spares on the FPM 44 and have been included for possible future compatibility reasons. All pins should be wired straight through, i.e., 1 to 1, 2 to 2, etc. This Input is to be used when combining the FPM 44 with the bus outputs of other modules such as another FPM 44, an FMI 14, etc. Bringing in bus signals allows the FPM 44's mix to add to the bus and be routed on to the next unit, and so on.

FLEX BUS OUT. Cable precautions covered in the preceding paragraph apply to the outputs as well. The FLEX BUS OUT of the FPM 44 may be connected to other Flex mixer modules to complete a system. The receiving device may be any Flex module with a FLEX BUS IN. See the **Flex Users Guide** for additional details.

[You're reading an excerpt. Click here to read official RANE FPM 44 user guide](http://yourpdfguides.com/dref/3395299)

Manual abstract:

It familiarizes you enough with the FPM 44 to allow operation without wading through the rest of the text. You owe it to yourself to read at least this section to ensure reasonable operation of the unit. Begin with the INPUTS. They are to be connected to the terminal strips on the rear. Follow the indications screened adjacent to the connectors. Balanced sources connect to the respective "+" and "" INPUTS. Connect all incoming shields to the nearest GND terminal. Unbalanced inputs connect between the "+" terminal and GND. Connect the AUX A/B OUTPUTS as required to the piece of equipment to be driven. Use the unbalanced "+" outputs and the nearest GND terminal.

Set the internal Pre/Post Aux Assign switches as necessary (shipped "PRE"). The A and B MASTER OUTPUTS may drive balanced or unbalanced sources. Unbalanced output uses only the "+" and GND terminals. Connect the Flex bus cables to the appropriate source for the FLEX BUS IN and the next unit for FLEX BUS OUT. Set the GAIN switches on the front of the module so the desired level is obtainable from your sources without illuminating the red OL (overload) LEDs on the channels.

Set the A and B LEVEL controls on each input for the desired level. The single AUX SEND level control routes signal from each input channel to both AUX A and B OUTPUTS equally. @@They have no affect on the main output added to the FLEX BUS OUT. @@@@@@This gives you a chance to make mistakes and correct them without damage to your fragile speakers, ears and nerves. INPUTS.

The four channel inputs on the FPM 44 are balanced. They may also be used in an unbalanced configuration. It is a good idea to use crimp-on spade connectors on the ends of the cables connected to the Ins and Outs of the mixer. Using stripped or tinned wire makes an unreliable union. Use only shielded cable for inputs and outputs. This wire should always be two-conductor plus shield, even for unbalanced operation. Balanced inputs should be connected to both the "+" and "" for signal hot and return. The shield should be tied to the nearest ground terminal on the strip. A neutral "pin 1" ground is not necessary. For unbalanced use, connect the hot side of the input cable to "+" and signal return and shield to a ground terminal.

It is never necessary on any Rane Flex module to ground the "" Input in the unbalanced mode. It won't, however, hurt anything if you do. If the input is coming from another piece of equipment in the signal path, connect the shield only at the receiving end to help prevent ground induced hum. If a microphone is being connected to the unit, the shield may be connected to the case of the mic as well as to the ground terminal on the unit. OUTPUTS. The FPM 44's MASTER A and B OUTPUTS are balanced. Connect a shielded cable to the device(s) being driven. If an unbalanced characteristic is what you desire, use the "+" terminal and one of the grounds for return. Do not short the "" terminal to ground. FLEX BUS IN.

The 7-pin DIN bus connectors are used primarily with other Flex modules. These are not MIDI connectors. Use only the supplied DIN cable. If for some reason there is not a cable in the FPM 44 box, please contact Rane for a replacement. If you are in a bind, a 5-pin DIN may be used instead of a 7-pin. The two outside pins (6 & 7) are spares on the FPM 44 and have been included for possible future compatibility reasons. All pins should be wired straight through, i.e., 1 to 1, 2 to 2, etc. This Input is to be used when combining the FPM 44 with the bus outputs of other modules such as another FPM 44, an FMI 14, etc.

Bringing in bus signals allows the FPM 44's mix to add to the bus and be routed on to the next unit, and so on. FLEX BUS OUT. Cable precautions covered in the preceding paragraph apply to the outputs as well. The FLEX BUS OUT of the FPM 44 may be connected to other Flex mixer modules to complete a system. The receiving device may be any Flex module with a FLEX BUS IN. See the Flex Users Guide for additional details. FRONT PANEL DESCRIPTION 1. INPUT LEVEL CONTROLS. These concentric LEVEL controls set the level of each input to be routed to the MASTER A/B OUTPUTS and Flex Bus. The inner knob controls the level to be sent to A, the outer knob controls the signal applied to B.

Rotating the knobs together creates a "pan centered" effect. Leaving one off and increasing the other emulates a full pan to one side. 2. GAIN SELECT SWITCH. @@The 60dB mode is normally used for most microphones. @@The 10dB mode is suitable for line level inputs. Phantom power is automatically defeated in the 10 dB position. 3. AUX SEND LEVEL CONTROL. There is only one of these for both the AUX A and B sends. @@@@@@@@4. OVERLOAD INDICATOR. @@5. MASTER A & B LEVEL CONTROLS. @@Their range is from off to +10dB. 6. POWER INDICATOR. Indicates power, as indicated. REAR PANEL DESCRIPTION 1. CHANNEL INPUT CONNECTORS. @@@@Unbalanced inputs connect to "+" and GND only. @@2. AUX SEND OUTPUTS. @@@@3. MASTER OUTPUTS. @@If balanced operation is your choice, use both terminals. @@4. AUX PRE/POST ASSIGN SWITCHES. Slide switches located inside the FPM 44. @@See the Assembly Diagram.

NOTE: AUX ASSIGN SWITCHES SHIPPED IN "PRE" POSITION. 5. FLEX BUS IN CONNECTOR. @@This input adds to the program material connected to the FPM 44. @@6. FLEX BUS OUT CONNECTOR. @@@@@@7. POWER INPUT CONNECTOR. @@The FPM 44 is supplied with a remote power supply suitable for connection to this input jack. 8. CHASSIS GROUND POINT. A #6-32 ground screw is used for chassis grounding purposes. See the CHASSIS GROUNDING note on the last page for details. 9. GROUND LIFT SWITCH.

On this unit, the GROUND LIFT switch is located along the bottom edge (vertical mounting), or along the right-hand side (horizontal mounting). Since the switch's location prevents easy use once installed, it is suggested you decide which position is required, and set it before installation. The LIFT position is when the switch is slid toward the rear of the unit.This switch provides the ability to separate chassis ground and signal ground. Normally, this switch should be in the lift (rearmost) position.

In some circumstances it may be necessary to move it to the opposite position to eliminate stubborn hum and buzz problems. If you are tempted to try moving this switch with your power amplifiers turned on or turned up, don't be. Always turn your amplifier levels down before changing your grounds around and then bring them up slowly. Put a speaker re-coner out of work today! 10. MASTER PHANTOM POWER SWITCH & LIGHT. On this unit, the MASTER PHANTOM POWER switch is located along the top edge (vertical mounting), or along the left-hand side (horizontal mounting). Since the switch's location prevents easy use once installed, it is suggested you decide if Phantom Power is required, and set it before installation. The ON position lights the LED when the switch is positioned to the rear of the unit.

Individual internal PHANTOM POWER switches allow Phantom to be defeated on selected channels. See the Assembly Diagram.

For line-level applications, phantom power automatically dis-engages in the GAIN = 10dB position. OPERATING INSTRUCTIONS This unit serves two similar yet different functions. It may be operated as a stand-alone 4-input to 4-output mixer, or it may be used in conjunction with other Flex mixer modules to create a larger system. For instance, via the Flex bus system, the FPM 44 may be connected to other input modules to accommodate an infinite number of inputs, which may be mixed to 4 outputs. It may also be used in conjunction with FMI 14s when the equalization features of that unit are required on one or more inputs. The module may also be used with the FMM 42 Master Module which features Auxiliary Bus Outputs, which also may be mixed with the A and B Main Outputs for effects mixing. The possibilities are staggering and we shall attempt to describe them, so you may fully understand the range of talent provided by the FPM 44. STAND-ALONE. As an independent 4-input to 4-output mixer, the FPM 44 is a reasonably straightforward device. The 4 Inputs are mixed to either, or both, of two Master buses, A and B, as well as to both Auxiliary buses via the AUX SEND control on the front of the unit.

The A and B input LEVEL controls determine the amount of input signal to be applied to each of the main buses. The A and B MASTER level controls at the end of the signal path set the levels for the final output at the A and B MASTER OUTPUT terminals on the rear of the unit. @@@@@@MULTIPLE MODULES. @@This is accomplished through the use of the FLEX BUS IN and OUT jacks on the rear of the unit. Each mixer module in the system places its Master and Aux mixes on the respective buses internally and provides this information to the BUS OUT jack.

When these signals are connected to the BUS IN jack on a succeeding unit, they combine in the next unit with any local program material generated in that unit and the sum of the two will be available at the second unit's BUS OUT jack. Each Flex mixer module sums all bus information in such a way that the Flex BUS OUT is a low impedance line. This differs rather dramatically from the way most mixers operate. Normally this line would be very sensitive to noise and would be impossible to bring out of the mixer, even in a well shielded cable. This is not a problem with the Flex Bus System and thus allows as many modules to be combined on one bus as could e.