

FMM 42 Master Module

General Description

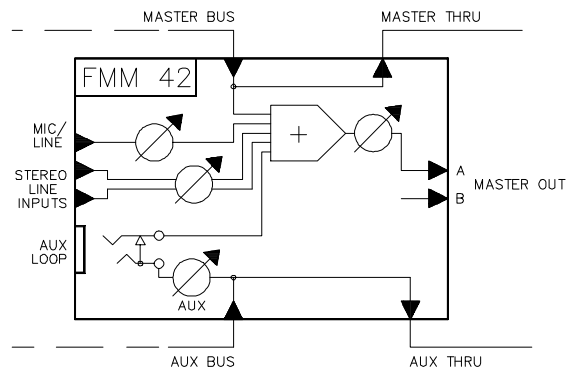
The FMM 42 Master Module satisfies two differing application needs. The first uses the FMM 42 to terminate the Flex Bus system. Here it functions like a master output module in a mixing console. Primary functions include MASTER BUS A/B Level with balanced output line drivers, as well as AUX BUS A/B Level controls with insert looping capability. The Aux Bus inputs are assignable to the Master A & B Outputs in one of two ways. In the DUAL mode (analogous to stereo) Aux A & Aux B are fed independently to Master A & Master B Outputs respectively. In the MIX mode (analogous to mono) Aux A & Aux B are summed together before being added equally into the Master A & B Outputs.

Two additional Inputs are provided. INPUT 1 may be used for either mic or line level signals. PHANTOM POWER and an OverLoad indicator are included. An ASSIGN switch allows mixing this input into either the A or B Output or both. In addition, a very powerful DUCKER circuit allows this Input to take

priority over all other Inputs. This is especially useful for paging applications. Ducker SENSITIVITY and DEPTH are screwdriver set on the front panel. The LINE 2 Input allows either mono or stereo line level signals to be summed with the Master Bus and Input 1.

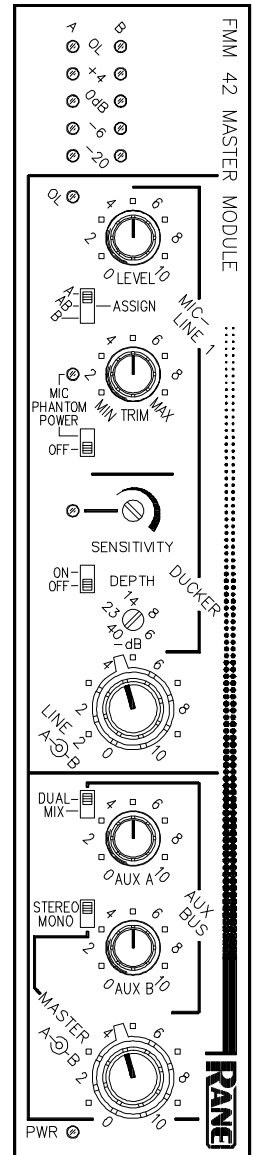
The second popular application for the FMM 42 uses it as a stand-alone paging module with input provisions for mixing one or two line level signals to be ducked by the paging microphone.

Both applications find the output meters useful in establishing and maintaining proper output levels.



Features

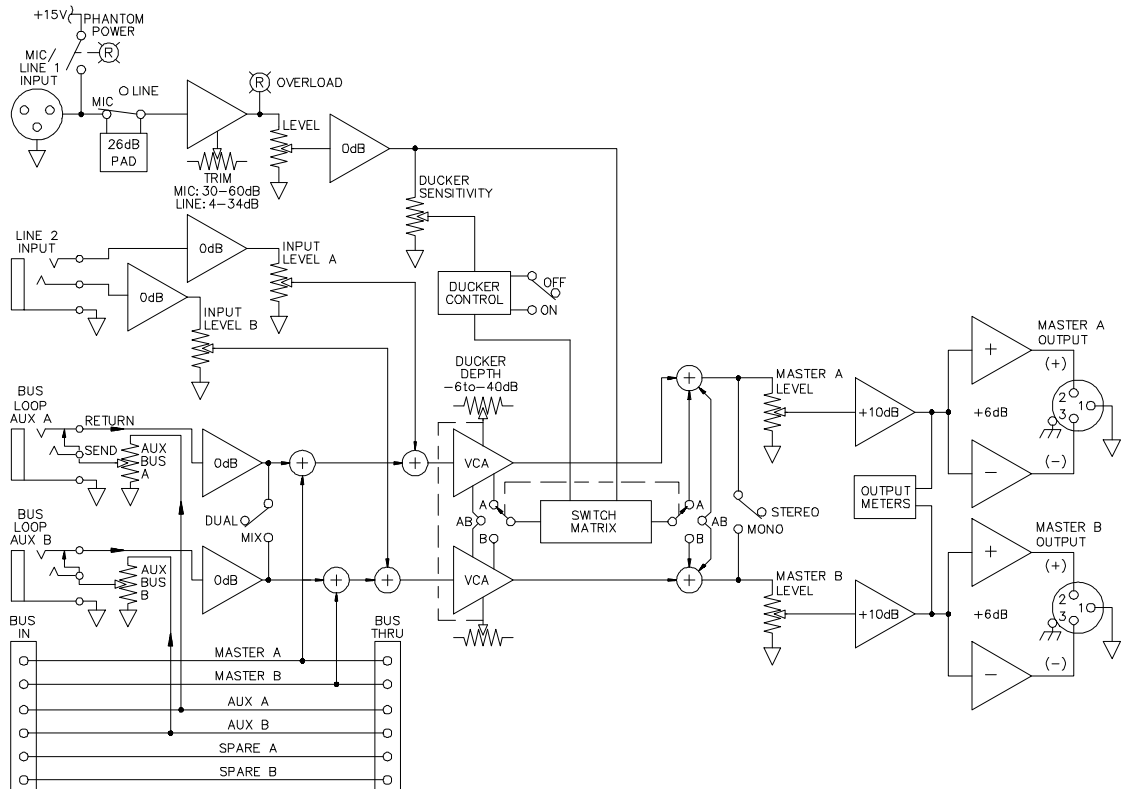
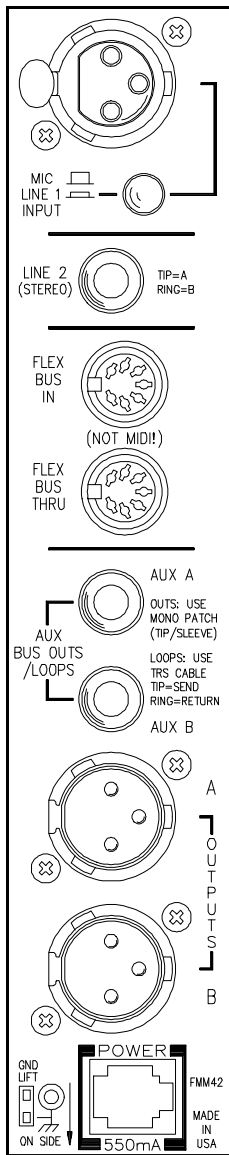
- **FLEX MASTER OUTPUT MODULE**
- **TERMINATES FLEX BUS SYSTEM**
- **MASTER A/B OUTPUTS**
- **MASTER & AUX BUS-THRU**
- **ASSIGNABLE MIC/LINE INPUT**
- **WITH ADJUSTABLE DUCKER**
- **DUCKER SENSITIVITY AND DEPTH**
- **DUCKER ON/OFF SWITCH**
- **SWITCHABLE PHANTOM POWER**
- **STEREO/MONO LINE LEVEL INPUT**
- **AUX A/B BUS INSERT LOOPS**
- **MASTER OUTPUT LED METERS**



| Parameter | Specification | Limit | Units | Conditions/Comments |
|------------------------------|-------------------------|-------|-------|----------------------------------|
| Input 1 TRIM Range | | | | |
|Mic | 30-60 | 2 | dB | Mic/Line Switch Out |
|Line 1 | 4-34 | 2 | dB | Mic/Line Switch In |
| Phantom Power | +15 | 4% | VDC | |
| Equivalent Input Noise (EIN) | -124 | 2 | dBu | 20kHz BW, 60dB gain, Rs=150 ohms |
| Low Frequency Response | 1Hz(65Hz) | -3dB | Hz | MIC Gain: 20dB (60dB) |
| Ducker Sensitivity Range | Depends on TRIM setting | | | Screwdriver Adjust |
| Ducker Depth Range | -40 to -6 | 3 | dB | Screwdriver Adjust |
| Line 2 Input Connector | ¼" TRS Unbalanced | | | Tip=A; Ring=B |
| Line 2 Gain Range | Off to +6 | 1 | dB | |
| Aux A/B Bus Return Gain | Off to 0 | 1 | dB | |
| Aux Insert Loops | ¼" TRS Unbalanced | | | Tip=Send; Ring=Return |
| Master A/B Output Gain | Off to +10 | 1 | dB | |
| Meter Range | -20 to +16 | 1 | dB | "0"dB LED = +4dBu Balanced Out |
| Meter Ballistics | Peak Reading | | | Full-Wave Detection |
| Maximum Current | 550 | | mA | RMS Current From Remote Supply |

Rear Panel

Block Diagram



Application Information

When using the FMM42 to terminate the Flex bus system all that is required is to connect the DIN cable to the last Flex module using the bus. The MASTER A/B level controls now determine the amount of total mix present at the balanced OUTPUTS A and B. The FLEX BUS THRU jack allows parallel output modules when needed. Simply connect the BUS THRU output to the BUS IN connector on the next FMM 42 (or other bus-equipped modules). Now four outputs are available, and so on.

The AUX BUS LOOPS A & B use the tip/send, ring/return convention. This is the normal insert point for reverb or other signal processing units. In addition, the AUX A/B bus inputs may be assigned in the following manner: With the ASSIGN switch in the DUAL (think stereo) position, each Aux input mixes independently to its natural output, i.e., Aux A mixes with Master A, and Aux B mixes with Master B. Moving the

assign switch to the MIX (think mono) position causes the sum of Aux A + Aux B to be mixed equally into Master Outputs A & B. This assigning function is analogous to a stereo/mono switch.

The adjustable Ducker (an inverse form of noise gate) operates as a function of the MIC/ LINE 1 LEVEL and reduces (ducks) the level of all other inputs. Normally, this is used for paging applications, where the paging mic is brought into the Mic/ Line 1 Input. The SENSITIVITY adjustment sets the level at which Ducking begins. The DEPTH adjustment sets the amount of Ducking desired (from 6dB to 40dB).

The Ducker is automatically slaved to the input ASSIGN switch. Only the Output assigned to Output B, then B will be ducked. Output A will remain unaffected.