

'mix' series
audio consoles





multimix 16:2:1, 12:4:2:1 and 16:4:2:1 rack mount

The 'multimix' is a 16 input, semi-modular, 19" rack mount console. With features such as * a unique design that enables designated inputs to be used as subgroups; allowing the 'multimix' to be operated as a 16:2:1, a 12:4:2:1 or a 16:4:2:1 * rack mounting in only 8 rack spaces * 48V phantom power * RIAA equalised inputs to allow turntables to be used without a pre amp * direct outputs on the subgroups * 3 band eq. * 2 auxiliary sends * 16 input channels * 4 groups * 2 masters * a mono output * 100mm faders * 12 segment LED displays * peak LED's * individual PCB's connected with ribbon cable * 5532 op-amps throughout . . . the sonic quality and the features of the 'multimix' make it ideally suited for applications as far ranging as keyboard or drum mixing, video production and digital recording.

OPERATION

The 'multimix' has 16 input channels which are identical in all pre fader facilities (gain – line – pad – eq – phantom power – pre fader aux 2), but differ in their output facilities (channels 1-12 have subgroup routing). Using a unique design feature, the fader output of channels 1-12 can be routed to the output section (pan – mute – pfl – fader – post fader aux 1 – master) of channels 13-16; allowing the operator to use channels 13, 14, 15 and 16 as subgroups if desired.

16:2:1 All 16 channels are used as inputs – the post fader signal is assigned to the master stereo outputs using the 'master' switch on each input.

12:4:2:1 Channels 1-12 are used as inputs and channels 13-16 are used as subgroups – the post fader signal of channels 1 – 12 are assigned to the output sections of channels 13-16 (the input sections of channels 13-16 are not used) using the routing switches. Inputs 13 to 16, which are now subgroups 1 to 4, are assigned to the master stereo outputs using the 'master' switches.

16:4:2:1 All 16 channels are used as inputs AND channels 13-16 are used as subgroups – inputs 13-16 can be used as inputs and subgroups at the same time.

For example:

Kick drum in channel 13

All other drums in channels 1 to 4.

The post fader signals of channels 1 to 4 are routed to channel 13 (subgroup 1), using the routing switch 1/2, pan left, and mixed with the input signal in channel 13.

Channel 13 (subgroup 1) is assigned to the master stereo outputs using the 'master' switch.

INPUT SECTIONS

gain mic and line input level control
0dB to +60dB

line selects the line input
pad 20dB (microphone input only)

equalisation 3 band, fixed bandwidth, low Q type.
10kHz +/- 12dB
1Hz +/- 12dB
100Hz +/- 12dB

defeat bypasses the eq section.

auxiliary sends aux 1 is post fader and eq. aux 2 is pre fader and eq.

pan apportions post fader signal to the routing busses

mute turns the channel off
pfl (pre fader listen) allows the pre fader signal to be monitored in the headphones in mono.

* **routing** post fader signal is sent to:
subgroups 1 and 2 or subgroups 3 and 4.

** -10dB the subgroup output level is reduced by 14dB to interface with -10dB equipment.

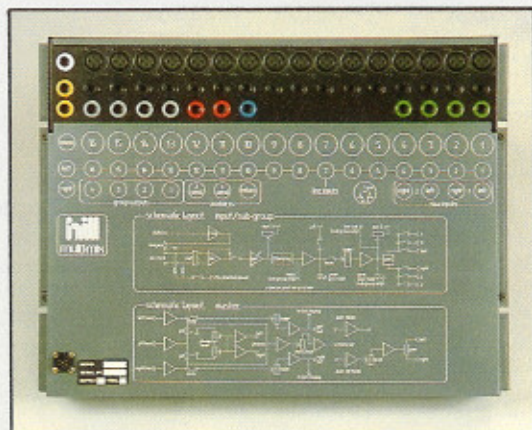
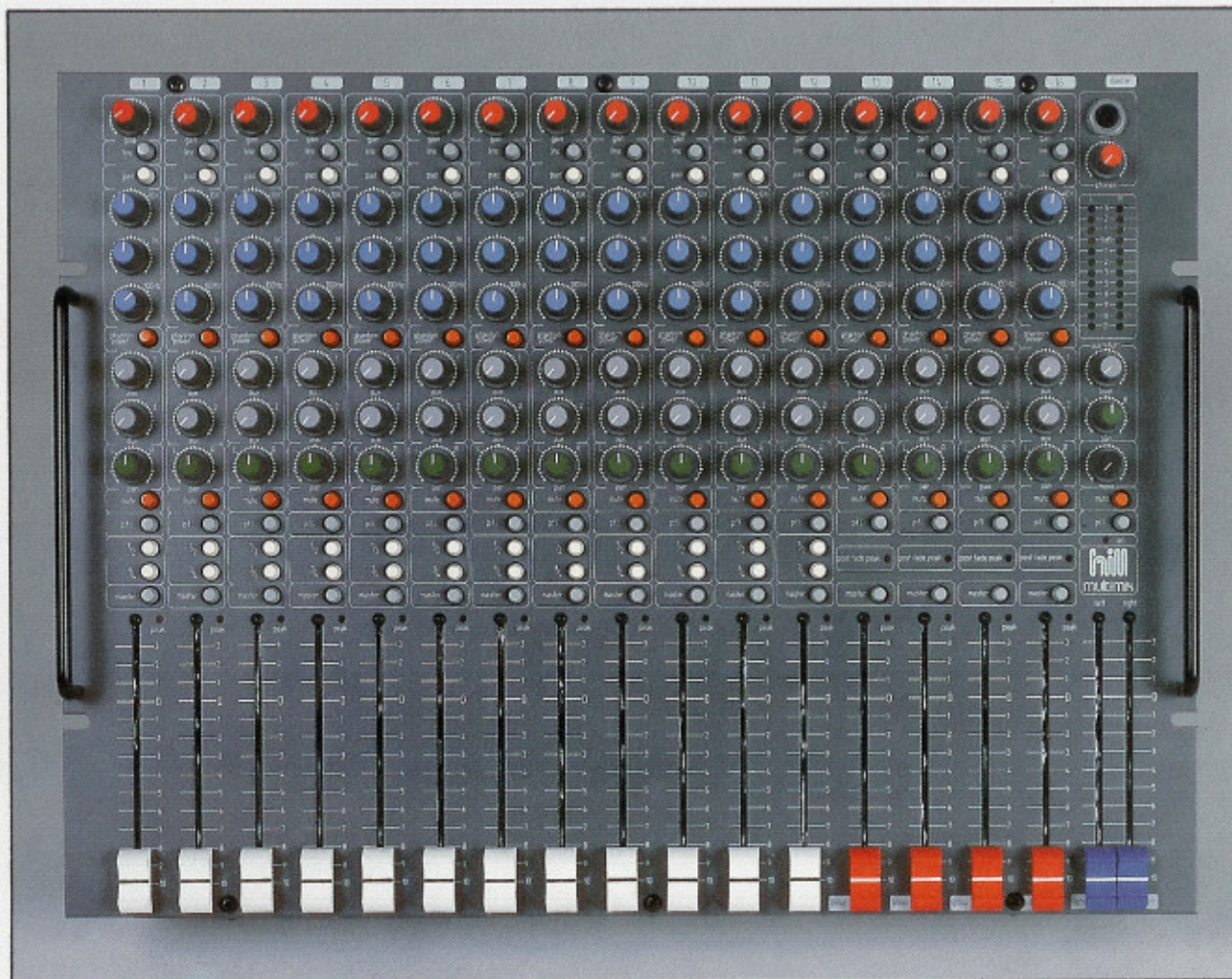
master post fader signal is sent to the master left and right outputs

peak indicates when the post eq., pre fader, input signal level is at +9dBm.

fader 100mm smooth action fader controls the output level of the channel.

* input channels 1-12 only
** groups 1-4 only

Optional: a 1 rack space, rack mount, remote patch bay containing 1 send and 1 return jack for all 16 input channels (32 jacks) is available.



BACK PANEL

- (16) transformerless, balanced, microphone inputs
- (16) unbalanced line inputs
- (16) channel direct outputs
- (4) RIAA equalised inputs (channels 1-4 only)
- (2) auxiliary sends
- (1) auxiliary return
- (1) unbalanced mono output
- (4) unbalanced direct outputs (channels 13-16 only)
- (2) unbalanced master outputs
- (2) direct access jacks to master busses for linking 2 consoles together

MASTER SECTION

phones adjusts the level of the signal in the headphones.
12 segment LED display displays the post fader signal of each master output.

aux return:
level output level control for the aux return signal
pan apportions aux return signal to the master stereo outputs

mono level control for the mono output

mute turns both masters off
pfl (pre fader listen) allows the pre fader master left and right signal to be monitored in the headphones in stereo

display pfl the right LED display will show the pfl buss.

ph.pwr (LED) phantom power ON.
ON (LED) power ON.

faders 100mm smooth action faders control the output level of the master stereo outputs.

PS-1 POWER SUPPLY UNIT

The fully regulated, 19" rack mountable PSU occupies 1 rack space and features:
phantom on-off (slow start) with LED indication
power on-off with LED indication
115VAC-230VAC voltage selector
ground lift.

Internal adjustments

Aux 1 and 2 PRE or POST fader
Mono output PRE or POST master faders
Outputs -10dB or +4dBm



SOUNDMIX 24:4:2:1 and 16:4:2:1 RAKMIX 8:4:2:1 rack mount

The 'soundmix' is a semi-modular, 4 buss, sound reinforcement console available with either 16 or 24 input channels.

The 'rakmix' is the rack mount version of the SOUNDMIX.

Both consoles feature * 4 band, low Q, fixed bandwidth equalisation * 4 auxiliary sends * 4 auxiliary returns * 48V phantom power * send and return patch points throughout * direct outputs on all channels * 100mm smooth action faders * 12 segment LED displays * peak LED's * transformerless balanced and unbalanced outputs * a mono output * +4dBm or -10dBu outputs * pfl metering * bnc connector for a light * individual PCB's connected with ribbon cable * 5532 op amps throughout.

INPUT SECTION

Microphone input
Line input
Send and Return patch points
Direct output

pad 20dB (microphone input only)
gain mic and line input level control
0dB to +60dB
line selects the line input
auxiliary sends aux 1 and aux 2 are pre insert, eq., and fader. aux 3 and aux 4 are post fader.
equalisation 4 band, fixed bandwidth, low Q type.
10kHz +/- 12dB shelf
1.8kHz +/- 12dB
330Hz +/- 12dB
60Hz +/- 12dB shelf
pan apportions post fader signal to the routing busses selected
mute turns the channel off
pfl (pre fader listen) allows the pre fader signal to be monitored in the headphones and on the pfl VU meter (SOUNDMIX ONLY) and the right master LED display (RAKMIX ONLY).
routing post fader signal is sent to: subgroups 1 and 2, subgroups 3 and 4 or the master left and right outputs
peak indicates when the pre fader input signal level is at +9dBm.
fader 100mm smooth action fader controls the output level of the channel.

AUXILIARY and SUBGROUP

Auxiliary send
Auxiliary return
Subgroup send
Subgroup return
Subgroup direct output

Auxiliary Send
send overall output level controls for the auxiliary busses.
pfl (pre fader listen) allows the signal to be monitored in the headphones and on the pfl VU meter (SOUNDMIX ONLY) and the right master LED display (RAKMIX ONLY).



peak indicates when the aux signal level is at +9dBm.

Auxiliary Return

pan apportions the post fader signal to the routing busses
mute turns the aux return off
pfl (pre fader listen) allows the pre fader signal to be monitored in the headphones and on the pfl VU meter (SOUNDMIX ONLY) and the right master LED display (RAKMIX ONLY).

group/master

This switch enables the post fader aux return signal to be sent to either:
the subgroup channels as indicated:
aux 1 to sub 1-2, aux 2 to sub 1-2
aux 3 to sub 3-4, aux 4 to sub 3-4
or the master stereo outputs.
level controls the output level of the aux return signal.
peak indicates when the pre fader aux return signal level is at +9dBm.

Subgroup

12 segment LED display

The pre fader signal of each subgroup input is indicated on a 12 segment LED display.
pan apportions the post fader signal to the routing busses
mute turns the subgroup off
pfl (pre fader listen) allows the pre fader signal to be monitored in the headphones and on the pfl VU meter (SOUNDMIX ONLY) and the right master LED display (RAKMIX ONLY).
master sends the post fader signal to the master stereo outputs
fader 100mm smooth action fader controls the output level of the subgroup.

Internal adjustments

Subgroup and Master output levels from +4dBm to -10dBu
Mono output from PRE master faders to POST master faders
Auxiliary 1 and 2 from PRE fader to POST fader

MASTER SECTION

Balanced outputs
Unbalanced outputs
Master sends
Master returns
Mono output
Talkback mic
Phones
Power ON status LED
Phantom ON status LED

mono level control for the mono output

12 segment LED display

The post fader signal of each master output is indicated on a 12 segment LED display.
mute turns the master off
pfl (pre fader listen) allows the pre fader signal to be monitored in the headphones and on the pfl VU meter (SOUNDMIX ONLY) and the right master LED display (RAKMIX ONLY).

faders 100mm smooth action faders control the output level of the master stereo outputs.

mic adjusts the level of the talkback microphone

talk activates the microphone.

aux 1-2/slate sends the talkback microphone output to either: auxiliary 1 and 2 or all the subgroups and master outputs.

phones adjusts the level of the signal in the headphones.

VU display - SOUNDMIX ONLY for monitoring any signal on the pfl buss.

master/pfl - RAKMIX ONLY allows the Master Right LED display to indicate the pfl buss.

light bnc connector is for a 15VDC desk lamp (light not supplied)

PS-1 POWER SUPPLY UNIT

The fully regulated, 19" rack mountable PSU occupies 1 rack space and features:
phantom on-off (slow start) with LED indication
power on-off with LED indication
115VAC-230VAC voltage selector
ground lift



INPUT SECTIONS

Transformer balanced microphone inputs on transformer isolated, parallel XLR's

gain mic input level control -6dB to +40dB

pad 26dB

equalisation 3 band, fixed bandwidth, low Q type

10kHz +/- 12dB

1kHz +/- 12dB

100Hz +/- 12dB

mute defeats output of channel.

pfl (pre fader listen) allows monitoring of pre fader signal in headphones.

peak input signal level indicator. LED indicates +4dBu.

Group Sends 6 colour coded rotary controls send the desired amount of signal to each of 6 group outputs.

OUTPUT SECTIONS

Transformer balanced on XLR's Patch points on TRS ¼ **equalisation** 4 band, fixed bandwidth, low Q type.

10kHz +/- 12dB

2.5kHz +/- 12dB

250Hz +/- 12dB

60Hz +/- 12dB

12 segment LED display

The pre fader signal of each subgroup is indicated on a 12 segment LED display.

defeat signal by-passes the eq section.

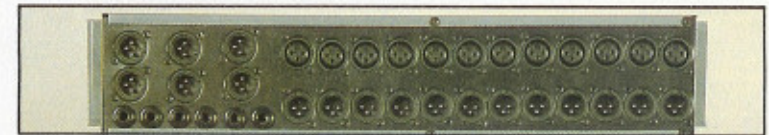
mute turns the subgroup off **pfl** (pre fader listen) allows the pre fader signal to be monitored in the headphones.

afl (after fader listen) allows the post fader signal to be monitored in the headphones.

fader 60mm smooth action faders control the output level of the channels.

phones adjusts the level of the signal in the headphones.

power on an LED indicates that the 'stagemix' is on.



BACK PANEL

Mic in 24 XLR connectors - 1 male and 1 female transformer isolated XLR per input channel allowing the back panel of the 'stagemix' to be used as a microphone splitter. As the XLR's are in parallel, in front of the isolating transformer, any phantom power from the 'house' console will reach the microphone.

Group out 1 transformer balanced male XLR per output group.

Patch 1 stereo (tip/ring/sleeve) ¼ jack patch point per group output.

PS-1 POWER SUPPLY UNIT

The fully regulated, 19" rack mountable PSU occupies 1 rack space and features:

power on-off with LED indication
115VAC-230VAC voltage selector
ground lift

stagemix 12:6 rack mount monitor console

The 'stagemix' is a semi-modular, 12:6, 19" rack mount monitor console featuring

- * a built-in mic splitter using balanced microphone inputs on transformer isolated, zero loss, parallel XLR's
- * transformer balanced group outputs for total isolation
- * patch points and eq. defeat on all groups
- * 3 band eq. on all inputs and 4 band eq. on all outputs at different centre frequencies - giving 6 bands of eq. control
- * 12 segment LED displays
- * peak LED's
- * pfl and afl on all groups
- * colour coded sends for ease of operation
- * individual PCB's connected with ribbon cable
- * 5532 op amps throughout.

SPECIFICATIONS

	multimix	rakmix & soundmix	stagemix
LEVEL			
Maximum	+21dBm	+21dBm (unbalanced out) +24dBm (balanced out)	+21dBm
0dB desk	+4dBm or -10dBu	+4dBm or -10dBu	+4dBm
HEADROOM Input	17dB	17dB	17dB
All others	17dB	17dB	17dB
GAIN Input	0dBm to +60dB	0dB to +60dB	0dB to +56dB
Overall	+70dB	+70dB	+70dB
NOISE	-126dB (A) EIN -80dB (residual)	-126dB (A) EIN -80dB (residual)	-126dB (A) EIN -80dB (residual)
DISTORTION			
THD (20Hz-20kHz)	<0.01%	<0.01%	<0.01%
IMD SMPTE	<0.01%	<0.01%	<0.01%
FREQUENCY RESPONSE (20Hz-20kHz) Eq out	+/- 0.1dB	+/- 0.1dB	+/- 0.1dB
IMPEDANCE input	1.2 mic (balanced) 10k line (unbalanced)	1.2k mic (balanced) 10k line (unbalanced)	1.2k mic (balanced)
output	<50 ohms (unbalanced)	<50 ohms (unbalanced) <100 ohms (balanced) <240 ohms (-10dBu)	<50 ohms (balanced)
SIZE	19" rack mount 8 rack spaces 4" deep	RAKMIX 19" rack mount 14 rack spaces 4" deep SOUNDMIX 41"x24.5"x4"(24) 32"x24.5"x4"(16)	19" rack mount 8 rack spaces 4" deep
WEIGHT	15lbs	RAKMIX-25lbs SOUNDMIX-45lbs (24) 38lbs (16)	20lbs
0dB ref .775V			

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