



**hear**  
TECHNOLOGIES®

The Mix Back is a flexible and affordable 16 x 12 x 2 x 2 monitor mixer. With two stereo and twelve mono outputs, it's a perfect companion to our Hear Back personal monitor system. The mixer is equally at home as a stand alone monitor mixer.

A talk back mic preamp permits talking to any or all master outputs and the intercom output.

The optional 16 button remote connects using a standard CAT5e cable.

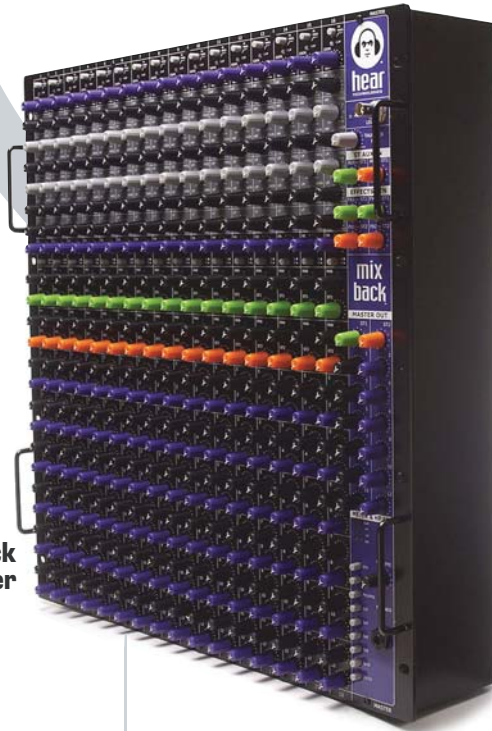
#### Input Channel Features:

- 16 quality Mic/Line inputs with passive XLR split
- Pin 1 lift and Mic phantom power switches
- Channel inserts
- Signal/Clip LED indicator
- 100 Hz high-pass filter
- Gain control
- 4-band EQ with separate controls for sweep and cut/boost on mid bands
- Two stereo level and pan controls (ST1 and ST2)
- Twelve mono level controls (1-12)
- Switch selectable effects 1-2 sends



**mix back remote**

**mix back mixer**



#### Master Features:

- 2 stereo and 12 mono TRS outputs
- Switch selectable meter/headphone monitoring
- 2 stereo TRS balanced effect returns
- Switch assignable FX1/FX2 returns to the 12 mono masters
- Stereo Aux return with level controls to both stereo busses – great for FOH mix or the studio “two mix”
- Buss inputs permit stacking of multiple mixers
- Talk back mic preamp assignable to stereo masters 1 and 2, mono outputs 1-12, and the balanced Intercom/slate output
- Relay contact when the talk back intercom switch is pressed
- 16 button talkback remote connects using standard CAT5e cable
- 16 channels of ADAT and HearBus output

#### Other Features:

- Universal internationally approved internal power supply
- 11 RU chassis
- All analog inputs and outputs are balanced

#### Outputs:

- ST1 L/R
- ST2 L/R
- Mono 1-12
- FX1 Send
- FX2 Send
- Talkback output
- Talkback Relay
- ADAT – 16 Channels
- HearBus – 16 Channels

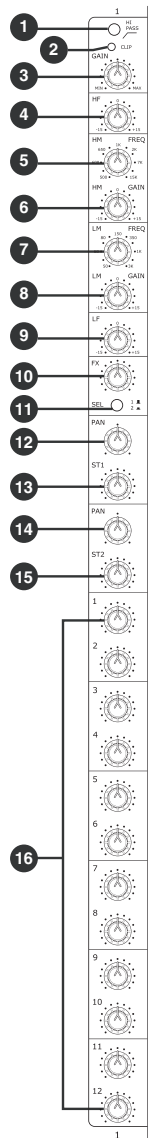
#### Inputs:

- ST1 L/R
- ST2 L/R
- Mono 1-12
- FX1 L/R
- FX2 L/R
- Stereo Aux inputs
- Talkback Mic
- Talkback Remote control

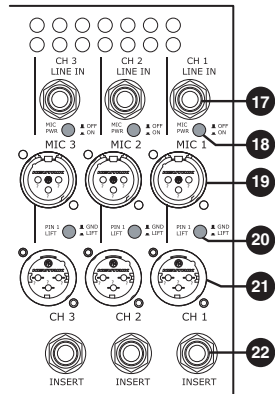
**mix back**  
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## mix back | input channel

FRONT PANEL



REAR PANEL

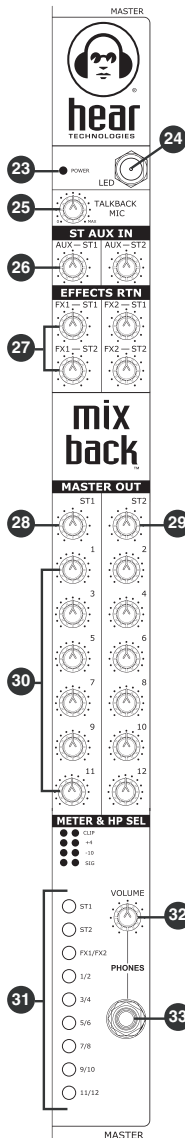


### INPUT CHANNEL

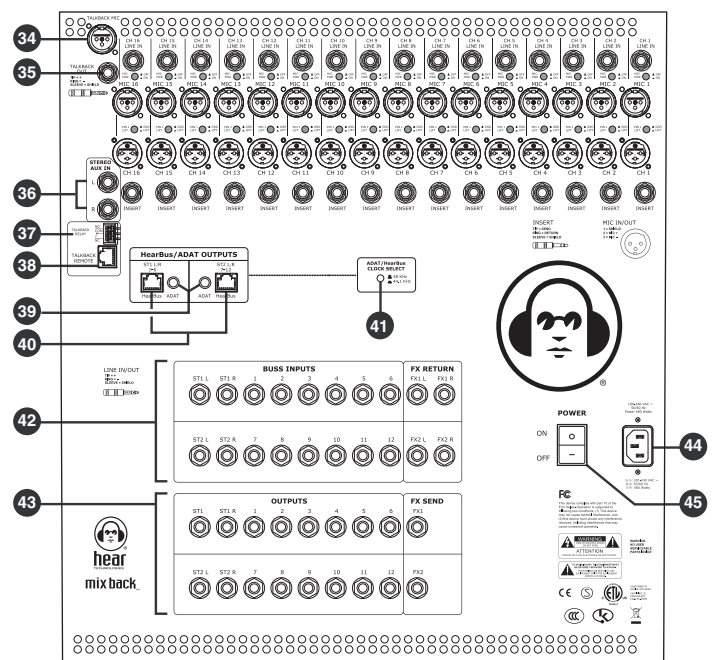
- 1 - Hi-Pass Filter
- 2 - Signal/Clip LED
- 3 - Preamp Gain control
- 4 - HF (Hi Frequency)
- 5 - HM (Hi Mid) Frequency
- 6 - HM Gain control
- 7 - LM (Lo Mid) Frequency
- 8 - LM Gain control
- 9 - LF (Lo Frequency)
- 10 - FX Level
- 11 - FX 1/2 Select
- 12 - ST1 (Stereo 1) Pan
- 13 - ST1 (Stereo 1) Level
- 14 - ST2 (Stereo 2) Pan
- 15 - ST2 (Stereo 2) Level
- 16 - Mono Level 1-12
- 17 - Line Input
- 18 - Phantom Mic Power Switch
- 19 - Mic Input
- 20 - Pin 1 Ground Lift
- 21 - Passive Split XLR Output
- 22 - Channel Insert

## mix back | master section

FRONT PANEL



REAR PANEL



### MASTER SECTION

- 23 - Power LED Indicator
- 24 - UV LED Lamp BNC Connector
- 25 - Talkback Level Control
- 26 - Stereo Auxiliary input level controls
- 27 - Effects 1 to ST1/ST2 and Effects 2 to ST1/ST2 level controls
- 28 - Stereo 1 L/R Master level control
- 29 - Stereo 2 L/R Master level control
- 30 - Mono 1-12 Master level controls
- 31 - Meter/Headphone switches
- 32 - Headphone level control
- 33 - Headphone Output
- 34 - Talkback Mic Input
- 35 - Talkback Output
- 36 - Stereo Aux Inputs
- 37 - Talkback Relay
- 38 - Talkback Remote Control Input
- 39 - ADAT Optical Outputs (2)
- 40 - HearBus Outputs (2)
- 41 - ADAT/HearBus Clock Frequency Selector
- 42 - Buss Inputs (20)
- 43 - Analog Outputs (18)
- 44 - Universal AC Power Supply
- 45 - AC Power Switch

## MIX BACK SPECIFICATIONS

| Passive Microphone Split (Each Channel)                          |  |
|--|--|
| Mic In to Mic Out:   | Passive  |
| Mic Power:   | +18 VDC  |
| Pin 1 Lift:  | Output XLR   |
| Mic Input to Insert Output                                       |  |
| <i>Conditions: +14 dBu input, Gain full CCW, 150 Ω, Balanced</i> |  |
| Frequency Response:  | 20 Hz to 20 KHz, +/- 0.05 dBu<br>10 Hz to 120 KHz, +/- 0.3 dBu |
| THD+N:   | 0.002%, 22 Hz to 22 KHz, unweighted                            |
| IMD:   | 0.003%   |
| EIN:   | -121 dBu, 150 Ω Source, -40 dBu input                          |
| Mic Pre to Master Output   |  |
| <i>Conditions: 0 dBu input, Gain full CCW, 150 Ω, Balanced</i>   |  |
| Frequency Response:  | 20 Hz to 20 KHz, +/- 0.5 dBu                                   |
| THD+N:   | 0.004%, 22 Hz to 22 KHz, unweighted                            |
| IMD:   | 0.004%   |
| Maximum Gain:  | 60 dBu, EQ Flat  |
| Line Inputs to Insert Outputs                                    |  |
| <i>Conditions: +18 dBu input, Gain full CCW, 150 Ω, Balanced</i> |  |
| Frequency Response:  | 20 Hz to 20 KHz, +/- 0.3 dBu                                   |
| THD+N:   | 0.005%, 22 Hz to 22 KHz, unweighted                            |
| IMD:   | 0.005%   |
| Input Impedance:   | 10K Ω, balanced  |
| Attenuation:   | 18 dB  |
| Channel Equalization   |  |
| Hi Frequency:  | 10 KHz shelving, +/- 15 dB                                     |
| Hi Mid Frequency:  | 500 Hz to 15 KHz, +/- 15 dB                                    |
| Lo Mid Frequency:  | 50 Hz to 3 KHz, +/- 15 dB                                      |
| Lo Frequency:  | 100 Hz shelving, +/- 15 dB                                     |
| Hi-Pass Filter:  | 100 Hz, 3 pole, 18 dB/Octave                                   |

Note: 1) 0 dBu = 0.775 V rms  
2) Talkback relay = 1 amp maximum

| Buss Inputs to Master Outputs                       |                                      |
|---|--------------------------------------|
| <i>Conditions: +4 dBu input, 150 Ohms, Balanced</i> |                                      |
| Frequency Response:                                 | 20 Hz to 20 KHz, +/- 0.2 dBu         |
| THD+N:  | 0.005%                               |
| IMD:  | 0.005%                               |
| Input Impedance:                                    | 10K Ω, balanced                      |
| Digital Output                                      |                                      |
| ADAT Output:  | 24 Bit, 44.1 KHz / 48 KHz Selectable |
| HearBus Output:                                     | 24 Bit, 44.1 KHz / 48 KHz Selectable |
| ADAT/HearBus 1:                                     | Master 1 L/R, Channels 1-6           |
| ADAT/HearBus 2:                                     | Master 2 L/R, Channels 7-12          |
| Analog Line Outputs                                 |                                      |
| Maximum Output Level:                               | +24 dBu, TRS Balanced                |
| Output Impedance:                                   | 121 Ω, balanced                      |
| Talkback Mic Pre Amplifier                          |                                      |
| <i>Conditions: -40 dBu input, 150 Ω, Balanced</i>   |                                      |
| Frequency Response:                                 | 20 Hz to 20 KHz, +/- 1.5 dBu         |
| Gain:   | Off to 50 dBu, variable              |
| Line Output:  | 121 Ω, TRS Balanced                  |
| Input Impedance:                                    | 1K Ω, balanced                       |
| THD:  | 0.05%                                |
| IMD:  | 0.09%                                |
| Remote Control:                                     | 1-12, ST1, ST2, COM, ALL             |
| Remote Cable:                                       | CAT5e, 500 ft. max, wired pin-to-pin |
| Effects (FX) Return                                 |                                      |
| <i>Conditions: +4 dBu input, 150 Ω, Balanced</i>    |                                      |
| Frequency Response:                                 | 20 Hz to 20 KHz, +/- 0.5 dBu         |
| Gain, FX return to Master:                          | 1 dB, Master at center               |
| THD+N:  | 0.0025%, 20 Hz to 20 KHz             |
| IMD:  | 0.0027%, 20 Hz to 20 KHz             |
| Input Impedance:                                    | 10K Ω, balanced                      |
| Maximum Input Level:                                | +10 dBu, control centered            |

| Stereo Aux Input                                 |  |
|--|--|
| <i>Conditions: +4 dBu input, 150 Ω, Balanced</i> |  |
| Frequency Response:                              | 20 Hz to 20 KHz, +/- 0.5 dBu   |
| Gain:  | Off to +6 dBu, Aux to Stereo Masters   |
| THD+N:   | 0.0033%, 20 Hz to 20 KHz   |
| IMD:   | 0.004%, 20 Hz to 20 KHz  |
| Input Impedance:                                 | 10K Ω, balanced  |
| Maximum Input Level:                             | +8 dBu   |
| Power Supply (Universal)                         |  |
| Input Voltage:                                   | 100 to 240 VAC~, 50-60 Hz  |
| Input Current:                                   | 2 Amps   |
| Maximum Continuous Input Power:                  | 240 Watts  |
| Fuse (Internal):                                 | 3.15 Amp   |
| Inrush:  | 60 Amps, 2 mSec  |
| Short Circuit Protection:                        | Yes  |
| AC Input Connector:                              | IEC 320-C14, International   |
| Agency Listing:                                  | FCC class B, CISPR 22 class B,<br>IEC 60950-1 safety, EN 61000-4-2, 4-4, 4-5 |
| Physical   |  |
| Construction:                                    | Steel Chassis / Steel Front Panel  |
| Size (with 1" handles):                          | 19.23" H x 19" W x 5.35" D<br>(488mm H x 482.6mm W x 135mm D)                |
| Unit Weight:                                     | 30.8 lbs (14 kg)   |
| Mounting:  | Standard rack mount, 11RU  |
| Shipping Size:                                   | 10.55" H x 25.0" W x 24.53" D<br>(268mm H x 635mm W x 623mm D)               |
| Shipping Weight:                                 | 42.9 lb. (19.5 kg)   |

\*Specifications and features subject to change without notice.

Part No. LIT002720CS  
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