

# **HELIX BOARD 24 SERIES**

Compact Mixers with USB and/or FireWire Interfaces

Helix Board 24 FireWire MKII I Helix Board 24 Universal

## Helix Board 24 FireWire MKII

16-Mic/Line 4-Stereo 4-Group Mixer with DFX and FireWire Interface

### Helix Board 24 Universal

16-Mic/Line 4-Stereo 4-Group Mixer with DFX and USB 2.0/FireWire Interface



#### Features

- Pre/post setting for swapping streaming input channels to computer from pre low cut, EQ to post EQ, post fader
- 96kHz interface for streaming 18 independent channels of audio to computer with near-zero latency
- ▶ 2 channels of monitoring from computer via interface, can be assigned to control room monitors, main mix and AUX 1
- Channel 17/18 routed to computer can be selected from main mix, group 1/2 and AUX 3/4
- ▶ 16 Mic/Line channels with inserts
- ▶ 3-band EQ with swept mid-range
- ▶ 75 Hz low-cut filter on each channel
- AUX 1 & 2 with Pre/Post switch
- Six AUX send mixing bus
- ▶ Four stereo AUX returns, three with effect to monitor

- +48V phantom power on Mic channels
- ▶ Four true subgroups with main L and R routing switches
- ▶ DFX, our 32/40-bit high definition algorithm digital multi-effect processor with 100 programs plus tap delay and foot switch jacks
- Direct outputs for multi-track recording
- Control Room and Phones outputs with multi-input source matrix
- Mono out with variable low pass filter from 60 Hz to 160 Hz for subwoofer
- Dual-position I/O pod
- Rack-mounting kit included
- S/PDIF digital audio output
- ▶ Built-in switching power supply with universal connector, 100-240 VAC, 50/60 Hz
- Compatible with Mac OSX and Windows XP, Vista & 7
- Steinberg Cubase LE digital audio workstation software included

### Description

The Helix Board 24 FireWire MKIIs and Universals are part of the new generation of USB / FireWire mixers from Phonic. Each model features a 96 KHz USB and/or FireWire interface that lets you individually stream up to 18 independent channels of audio to the computer and return two channels to the mixer for monitoring – all with near-zero latency. Pre/post switches, located underneath the console, allow each channel's EQ and fader (among other controls) to affect the channel's outgoing signal. The 3-band EQ with swept mids, insert points for connection to external processors, 6 AUX sends (2 with pre/post buttons), and direct outputs for multi-track recording allow users incredible flexibility with mix control and signal routing. The mixer features a dual-position input/output (I/O) pod that lets you use it as a desktop mixer or convert for rack mounting. The I/O pod rotates out of the way to save space in your rack. Top it off with subwoofer output, four true subgroups and phantom power for mic inputs, and you've got a perfect medium-sized rack-mountable mixer for live events or studio recording.

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# **HELIX BOARD 24 SERIES**

Specifications

Compact Mixers with USB and/or FireWire Interfaces

	Helix Board 24 FireWire MKII	Helix Board 24 Universal
Inputs	46	
Total Channels Balanced Mic / Line Channels	16	16
	-	16
Balanced Stereo Mic / Stereo Line Channel		
alanced Stereo Line Channels	- 4 stereo	
ux Returns		4 stereo
T Inputs	Stereo RCA	Stereo RCA
Dutputs		
Aain L/R Stereo	2 x 1/4" TRS Bal. & 2 x XLR	2 x 1/4" TRS Bal. & 2 x XLR
Aain Out with Inserts	Yes	Yes
Aain Mono	1 x 1/4" TRS, Bal. & 1 x XLR	1 x 1/4" TRS, Bal. & 1 x XLR
Iain Mono Out with Inserts	Yes	Yes
ubgroup Outputs	4 x 1/4" TRS, Bal.	4 x 1/4" TRS, Bal.
ux Sends	6 x 1/4" TRS, Bal.	6 x 1/4" TRS, Bal.
LT 3-4	-	-
SP Effect Outputs	2 x 1/4" TS	2 x 1/4" TS
TRL RM L/R	2 x 1/4" TS	2 x 1/4" TS
ecord Outputs	Stereo RCA	Stereo RCA
hones	1	1
PDIF Digital Output	44.1 kHz	44.1 kHz
reWire and USB Interface	18-in, 2-out, 24-bit/96 kHz, 2 FireWire ports	18-in, 2-out, 24-bit/96 kHz, 2 FireWire ports and 1 USB po
nannel Strips	16	16
sert Points	16	16
ux Sends	6 with 4 volume controls	6 with 4 volume controls
in/Balance Control	Yes	Yes
nannel On/Mute	Yes	Yes
namel Solo with Metering	Yes	Yes
D Indicators	On, Signal, Peak/Solo	
	Un, Signal, Peak/Solo 1/2, 3/4, L/R	On, Signal, Peak/Solo 1/2, 3/4, L/R
us Assign Switches		
olume Controls	60 mm fader	60 mm fader
laster Section		
reWire/USB Channel Routing Switch	Source from main mix, group 1/2, and aux 3/4	Source from main mix, group 1/2, and aux 3/4
ux Send Masters	4	4
aster Aux Send Solo	4	4
ereo Aux Returns	4	4
ux Return Assign to Subgroup	1	1
fect Return to Monitor	3	3
lobal Pre/Post Solo Mode	Yes	Yes
aders	4 subgroups, Main L/R	4 subgroups, Main L/R
letering		
lumber of Channels	2	2
egments	12	12
hantom Power Supply	+48V DC	+48V DC
witches	Master Switch	Master Switch
ffect Processor (32/40-bit DSP)		ay and test tones; foot switch jacks (effect on/off, tap)
	High definition algorithm. 100 programs plus tap del	ay and test tones, not switch jacks (ellect on/on, tap)
requency Response (Mic input to any output)	A / - 1-	
0 Hz - 60 kHz	+0/-1 dB	+0/-1 dB
) Hz - 100 kHz	+0/-3 dB	+0/-3 dB
osstalk (1 kHz @ 0dBu, 20 Hz to 20 kHz bandwidth, channel in to main L/R outputs)		
nannel fader down, other channels at unity	<-90 dB	<-90 dB
oise (20 Hz - 20 kHz; measured at main output, Channels 1-4 unit gain; EQ flat; all ch	nannels on main mix; channels 1/3 as far left as possible' channe	els 2/4 as far right as possible. Reference=+6 dBu)
laster @ unity, channel fader down	-86.5 dBu	-86.5 dBu
laster @ unity, channel fader at unity		
······································	-84 dBu	-84 dBu
	-84 dBu >90 dB	
N ratio, ref to +4		
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain)	>90 dB	>90 dB
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs)	>90 dB <-129.5 dBm	>90 dB <-129.5 dBm
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) VRR (1 kHz @ -60dBu, gain at maximum)	>90 dB <-129.5 dBm <0.005%	>90 dB <-129.5 dBm <0.005%
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) iD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) vIRR (1 kHz @ -60dBu, gain at maximum) aximum Level	>90 dB <-129.5 dBm <0.005% 80 dB	>90 dB <-129.5 dBm <0.005% 80 dB
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) VRR (1 kHz @ -60dBu, gain at maximum) aximum Level ic Preamp Input	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) iD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) /IRR (1 kHz @ -60dBu, gain at maximum) aximum Level ic Preamp Input I Other Inputs	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) VRR (1 kHz @ -60dBu, gain at maximum) aximum Level ic Preamp Input I Other Inputs Ilanced Output	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +28 dBu	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +28 dBu
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) MRR (1 kHz @ -60dBu, gain at maximum) iaximum Level ic Preamp Input I Other Inputs alanced Output I Other Outputs	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) ID (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) MRR (1 kHz @ -60dBu, gain at maximum) aximum Level ic Preamp Input I Other Inputs I other Outputs I other Outputs I other Outputs I other Outputs I other Outputs	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +28 dBu +22 dBu +22 dBu	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +28 dBu +22 dBu +22 dBu
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) MRR (1 kHz @ -60dBu, gain at maximum) aximum Level ic Preamp Input I Other Inputs I Other Outputs I Other Outputs ippedence ic Preamp Input	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +22 dBu 2 k ohms	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +28 dBu +22 dBu 2 k ohms
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) MRR (1 kHz @ -60dBu, gain at maximum) aximum Level ic Preamp Input I Other Inputs I Other Outputs I Other Outputs ippedence ic Preamp Input I Other Inputs (except insert)	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +22 dBu +22 dBu 2 k ohms 10 k ohms	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +22 dBu +22 dBu 2 k ohms 10 k ohms
Date: g unky, channer hole: A clanky   [N ratio, ref to +4 [icrophone Preamp E.I.N. (150 ohms terminated, max gain)   HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs)   MRR (1 kHz @ -60dBu, gain at maximum)   laximum Level   lic Preamp Input   II Other Inputs   alanced Output   II Other Outputs   npedence   lic Preamp Input   II Other Inputs   IO ther Inputs   I Other Inputs   I Other Inputs	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +22 dBu 2 k ohms	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +28 dBu +22 dBu 2 k ohms
N ratio, ref to +4 licrophone Preamp E.I.N. (150 ohms terminated, max gain) HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) MRR (1 kHz @ -60dBu, gain at maximum) laximum Level lic Preamp Input II Other Inputs alanced Output II Other Outputs npedence lic Preamp Input II Other Inputs (except insert)	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +22 dBu +22 dBu 2 k ohms 10 k ohms	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +28 dBu +22 dBu +22 dBu 2 k ohms 10 k ohms
In ratio, ref to +4 licrophone Preamp E.I.N. (150 ohms terminated, max gain) HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) MRR (1 kHz @ -60dBu, gain at maximum) laximum Level lic Preamp Input II Other Inputs alanced Output II Other Outputs npedence Iic Preamp Input II Other Inputs (except insert) CA 2T Outputs II Other Outputs	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +22 dBu 2 k ohms 10 k ohms 1.1 k ohms	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +28 dBu +22 dBu +22 dBu 2 k ohms 10 k ohms 1.1 k ohms
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) 4D (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) WRR (1 kHz @ -60dBu, gain at maximum) aximum Level ic Preamp Input I Other Inputs alanced Output I Other Outputs spedence ic Preamp Input I Other Inputs (except insert) I Other Outputs I Other Outputs	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +22 dBu 2 k ohms 10 k ohms 1.1 k ohms 100 ohms	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +28 dBu +22 dBu 2 k ohms 10 k ohms 1.1 k ohms 100 ohms
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) 4D (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) WRR (1 kHz @ -60dBu, gain at maximum) iaximum Level ic Preamp Input I Other Inputs alanced Output I Other Outputs npedence ic Preamp Input I Other Inputs (except insert) CA 2T Outputs I Other Outputs	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +28 dBu +22 dBu 2 k ohms 10 k ohms 1.1 k ohms 100 ohms 3-band, +/-15 dB 80 Hz	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +28 dBu +22 dBu 2 k ohms 10 k ohms 1.1 k ohms 1.0 k ohms 3-band, +/-15 dB 80 Hz
N ratio, ref to +4 icrophone Preamp E.I.N. (150 ohms terminated, max gain) ID (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) MRR (1 kHz @ -60dBu, gain at maximum) aximum Level ic Preamp Input I Other Inputs I Other Outputs I Other Outputs I Other Outputs I Other Inputs (except insert) CA 2T Outputs I Other Outputs I Other Outputs I Other Outputs W EQ id EQ	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +28 dBu +22 dBu +22 dBu 2 k ohms 10 k ohms 1.1 k ohms 1.1 k ohms 3-band, +/-15 dB 80 Hz 100 Hz to 8 kHz	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +28 dBu +28 dBu +22 dBu 2 k ohms 10 k ohms 1.1 k ohms 1.1 k ohms 3-band, +/-15 dB 80 Hz 100 Hz to 8 kHz
N ratio, ref to +4   licrophone Preamp E.I.N. (150 ohms terminated, max gain)   HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs)   VRR (1 kHz @ -60dBu, gain at maximum)   laximum Level   licr Preamp Input   I Other Inputs   alanced Output   I Other Outputs   I Other Inputs   I Other Inputs (except insert)   CCA 2T Outputs   I Other Outputs   I Other Output   I Other Inputs (except insert)   CCA 2T Outputs   I Other Outputs   I Other Output   I Other Inputs (except insert)   CA 2T Outputs   I Other Outputs   I Other Except insert)   CA 2T Outputs   I Other Outputs   I Other Inputs (except insert)   CA 2T Outputs   I Other Outputs   I Other Outputs   I Other Inputs (except insert)   CA 2T Outputs   I Other Outputs   I I Other Inputs (except insert)   CA 2T Outputs   I I Other Inputs (except insert)   CA 2T Outputs   I I Other Inputs (except insert)	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +22 dBu 2 k ohms 10 k ohms 1.1 k ohms 1.1 k ohms 3band, +/-15 dB 80 Hz 100 Hz to 8 kHz 12 kHz	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +22 dBu +22 dBu 2 k ohms 1.0 k ohms 1.1 k ohms 1.00 ohms 3-band, +/-15 dB 80 Hz 100 Hz to 8 kHz 12 kHz
N ratio, ref to +4   licrophone Preamp E.I.N. (150 ohms terminated, max gain)   HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs)   MRR (1 kHz @ -60dBu, gain at maximum)   laximum Level   licr Preamp Input   II Other Inputs   alanced Output   II Other Outputs   II Other Outputs   II Other Inputs   II Other Outputs   II Other Outputs   II Other Inputs (except insert)   CCA 2T Outputs   II Other Outputs   II Other Outputs   II Other Outputs   II Other Inputs (except insert)   CCA 2T Outputs   II Other Outputs   Qualization   we EQ   Iid EQ   I+EQ   we Cut Filter	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +22 dBu 2 k ohms 10 k ohms 1.1 k ohms 1.0 k ohms 3-band, +/-15 dB 80 Hz 100 Hz to 8 kHz 12 kHz 12 kHz 12 kHz 15 Hz (-18 dB/oct)	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +28 dBu +22 dBu 2 k ohms 10 k ohms 1.1 k ohms 100 ohms 3-band, +/-15 dB 80 Hz 100 Hz to 8 KHz 12 kHz 12 kHz 75 Hz (-18 dB/oct)
In ratio, ref to +4 licrophone Preamp E.I.N. (150 ohms terminated, max gain) HD (Any output, 1 kHz @ +14 dBu, 20 Hz to 20 kHz, channel inputs) WRR (1 kHz @ -60dBu, gain at maximum) laximum Level lic Preamp Input II Other Inputs alanced Output II Other Outputs spedence lic Preamp Input II Other Inputs (except insert) CA 2T Outputs	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +22 dBu 2 k ohms 10 k ohms 1.1 k ohms 1.1 k ohms 3band, +/-15 dB 80 Hz 100 Hz to 8 kHz 12 kHz	>90 dB <-129.5 dBm <0.005% 80 dB +10 dBu +22 dBu +22 dBu +22 dBu +22 dBu 2 k ohms 1.0 k ohms 1.1 k ohms 1.00 ohms 3-band, +/-15 dB 80 Hz 100 Hz to 8 kHz 12 kHz

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