

## RADIO MIXER - LYRA NUMÉRIQUE



### INTRODUCTION

- ✓ Remote controllable audio work places via Internet/Ethernet/CobraNet
- ✓ Reporter desk for standalone and/or network applications
- ✓ Two fader remotes available (4 or 8 faders)
- ✓ Small edit suites
- ✓ Digital Desktop mixer
- ✓ Mobile applications
- ✓ Ideal for Production, Voice tracking and On-AIR
- ✓ CRM, Announcer and Phone outputs
- ✓ Bi directional Cue communication buss
- ✓ One knob Compressor per channel
- ✓ Cleanfeed outputs for external Hybrids
- ✓ Separate I/O unit

## YOUR PERSONAL RADIO CONTROL CENTER

The Lyra is a fully digital desktop mixer using the latest, state of the art, digital technology housed in an 'easy to use' and 'versatile' mixing console surface.

The Lyra is based on two sophisticated systems:

1) a large matrix/router and, 2) a very powerful DSP engine. This combination makes the Lyra an extremely flexible and powerful audio tool.

A value added feature to this clever digital machine is the capability to control and administrate it from any location on this globe.

An Internet connection and your own internet browser is all that is needed for remote service/control.

Audio-networking is (by way of an optional CobraNet® card) the solution to even further enlarge your audio matrix. This option makes you compatible with many other audio manufacturers to receive, transmit and share audio from different locations in your LAN.

All these functions are packaged in a very compact 2HE rack unit. These extensive possibilities can be controlled from an easy to understand 4 fader desktop control surface.

A second 4 fader control surface can be connected to give 8 stereo modules.

You can also opt for an 8 fader control surface.

### ROUTING & MIXING

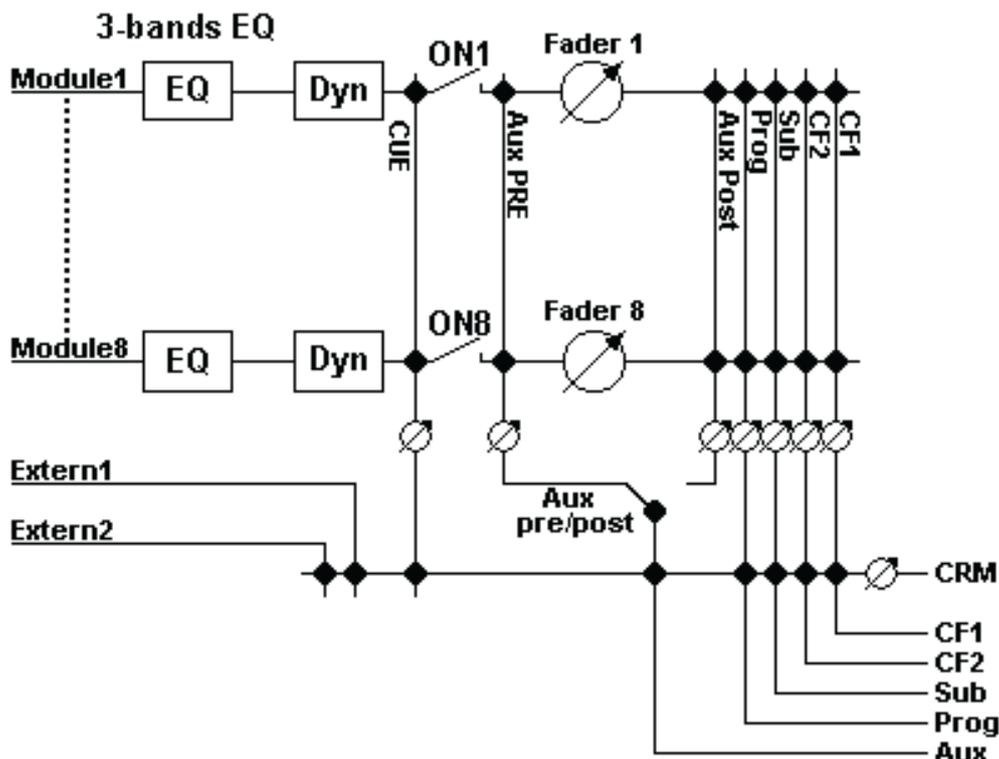
The DSP/Mixer contains 8 stereo modules.

Each module features gain, three bands of clean/clear EQ, one smart knob compressor and routing to Program, Sub, Aux, and Clean feed 1 & 2 busses. Each bus has a fixed analogue output. This channel functionality results in a complete 8 module mixer with very compact size.

The Lyra has a large matrix onboard, 34 (6x mono and 28x stereo) Inputs addressable to 25 Outputs (25x stereo). You can configure the matrix anyway you want via the web server.

The matrix allows you to create inserts on input and output signals.

## SIMPLIFIED SIGNAL FLOW





## AUDIO NETWORKING

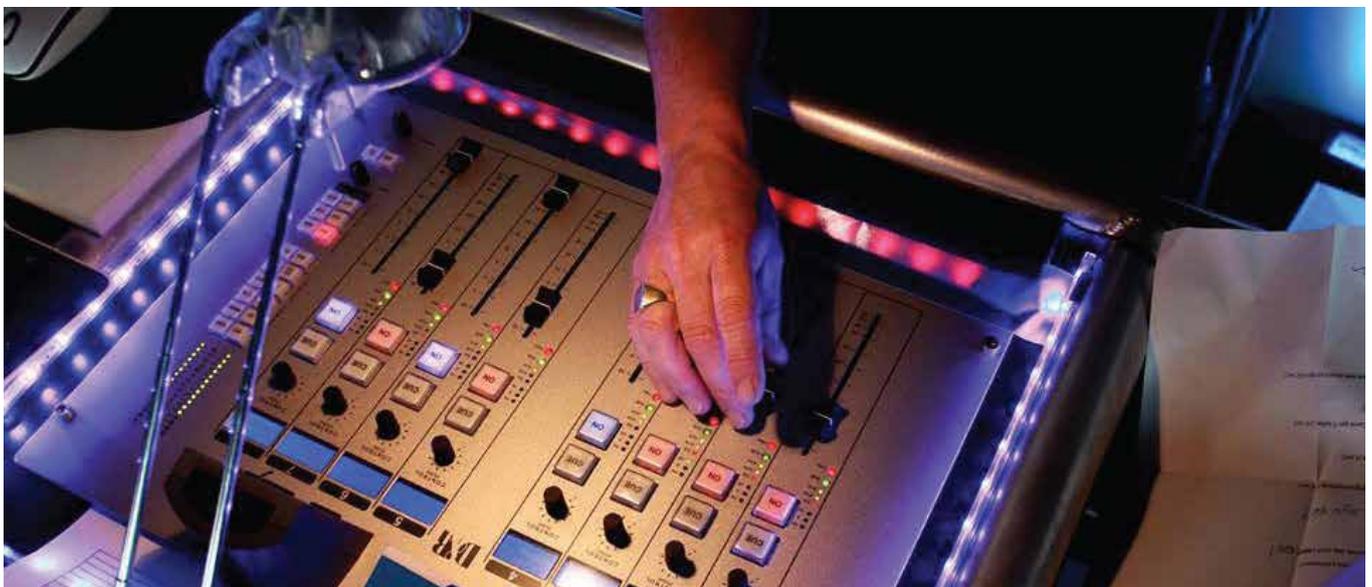
The Lyra has an option for CobraNet®. This gives the Lyra the possibility to be part of an audio network so you can share and get your audio in real time from different locations. At the same time your network administrator can track all devices by using remote control over Ethernet (TCP/IP).the same time your network administrator can track all devices by using remote control over Ethernet (TCP/IP).

## ROUTING & MIXING

The Lyra has a matrix on board, 34 Inputs to 25 Outputs (& 5 fixed buss outputs). It consists out of: 7 digital inputs, 7 stereo line inputs, 4 Mic inputs, 7 digital outputs, plus Program, SUB, Cue and Aux outputs.

You can configure the matrix the way you want by the web server.

Added to the matrix are 8 outputs to the DSP/mixer and 10 outputs from de DSP/Mixer.



## REMOTE CONTROL

A long awaited wish comes true, it is now possible to service and/or control the Lyra from a remote location. You can log on to Lyra's web-server, check settings and its log data and simply access the FTP server to transfer presets and or update firmware. It could not be easier.

You can even control your audio from remote locations by using a TCP/IP connection. The ActiveX control, (which is part of the package), makes it possible to write your own programs, like; scheduling, or make scripts (macro's) to control the Lyra.

## INPUTS & OUTPUTS

- 6x stereo Dig inputs (AES3)
- 1x stereo dig input (s/p-dif opt or coax)
- 6x stereo balanced line inputs
- 1x stereo unbalanced line input
- 4x balanced mic inputs + Inserts

## EASY TO USE

You will be surprised how intuitive the Lyra is to use. Although the Lyra is a high tech digital device, it is extremely easy to understand! All user interfaces are designed to be clear in layout and functionality and within minutes you can have total control.

## ON AIR

With its' versatile design, you can use the Lyra as an 8 channel On-Air console as well as for desktop production work.

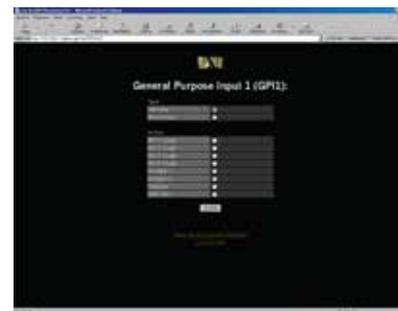
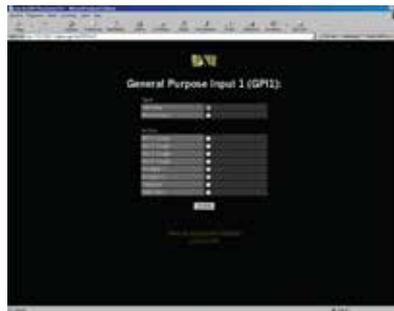
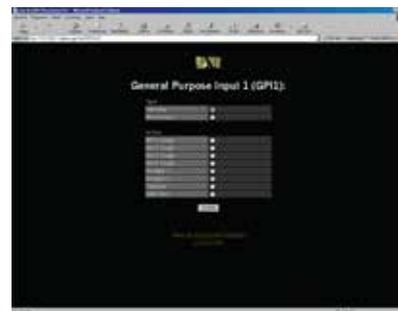
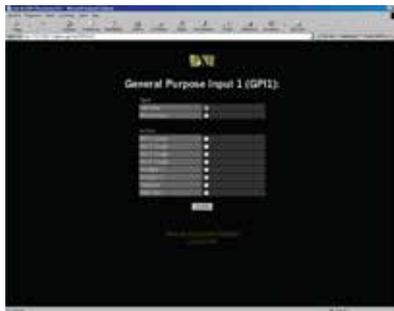
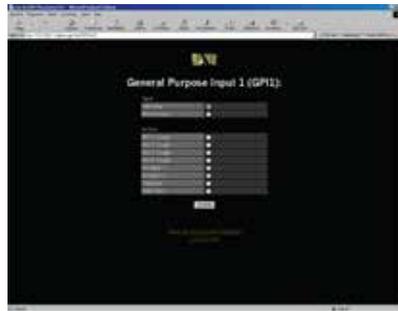
Lyra's settings and surface layout are very familiar to broadcast engineers and the amount of GPIOs allow for extensive control of internal and external devices.

## OUTPUTS

- 6x stereo digital outputs AES3
- 1x stereo digital output s/p-dif opt+coax
- 1x stereo Program analog
- 1x stereo SUB analog
- 1x stereo CUE analog
- 1x stereo AUX analog
- 1x stereo CRM analog
- 2x stereo PHONES analog



## THE SOFTWARE



### MIC INPUTS

- : Electronically balanced
- : Input impedance 2k Ohm
- : Noise -128dB (60db gain range)
- : Input sensitivity -70dBu up to +20dBu (PAD) (INA 163UA)
- : Total harmonic Distortion+Noise 0,002% at 1kHz G=100
- : CMRR MIC inputs: 85dB @ 1kHz, maximum gain
- : Frequency response 20Hz - 20kHz  $\pm$  0.1dB (sr 48kHz)
- : Crosstalk 1kHz < -115dB
- : Phantom is switchable +48 Volts

### LINE INPUTS

- : Electronically balanced
- : Input impedance 10k Ohm
- : Input sensitivity +6dBu, max input +26dBu
- : Dynamic Range 118dB (AD converter PCM 1804)
- : Total harmonic Distortion+Noise 0,004% at 1kHz G=100
- : CMRR Line inputs: 30dB @ 1 kHz
- : Frequency response 20Hz - 20kHz  $\pm$  0.1dB (s r 48kHz)
- : Crosstalk 1kHz < -120dB

### LINE OUTPUTS

- : Electronically balanced
- : Output impedance 50 Ohm.
- : Nominal output level +4dBu / -10dBv, balanced
- : Dynamic Range 118dB (AD converter PCM4104)
- : Total Harmonic Distortion plus Noise 0,001%
- : Frequency response 20Hz - 20kHz  $\pm$  0.1dB (s r 48kHz)

### PHONES OUTPUT

- : Stereo unbalanced
- : Output impedance 5R Ohm.
- : Nominal output level +6dBu, maximum output +26dBu
- : Max. Output power, 1W into 32R Ohm, 80mW in 600E
- : Dynamic Range 114dB (AD converter CS4385)
- : Frequency response 20Hz - 20kHz  $\pm$  0.1dB (s.r. 48kHz)

### DIGITAL INPUTS

- : AES/EBU (AES3) or S/P-DIF Transformer balanced
- : Input Impedance: 110R Ohm / 75R Ohm (jumper setting)
- : Differential input sensitivity 200mV
- : Dynamic Range 112dB (AD converter PCM 1804)
- : Total Harmc Dist + Noise (s.r.) -105dBfs (0.001%)
- : Sampling rate up to 192kHz

### DIGITAL OUTPUTS

- : AES/EBU (AES3) or S/P-DIF
- : 112db Dynamic range (DAC CS8420)
- : Output Impedance: 110 Ohm
- : Output level: AES3 2-5 Vpp
- : Clock output 75 Ohm TTL
- : 24 bit, 32kHz, 44.1kHz or 48kHz
- : Total Harmonic Distortion plus Noise -102dB

## DESCRIPTION

The Lyra is a fully digital desktop production mixer. Its concept originates from heavy investigations among end users and distributors looking for a versatile compact small universal desktop mixer. The core of the Lyra is a sophisticated DSP engine. This processing engine involves the latest developments in DSP technology by Texas Instruments. An intense cooperation between T.I. and D&R has resulted in a digital audio mixer offering tremendous DSP power and a superb sonic quality. Although the Lyra is a digital console, it is operated with the same comfort as a conventional analog production mixer. No fundamental concessions have been made towards reliability, high speed controller-response and system stability. Apart from that there is the unique capability to control Lyra's functions over the Internet.

**POWER SUPPLY AND MORE**

The LYRA is powered by an internal switched mode power supply that accepts AC voltages between 90 and 240 volts, 1.5 Amp max.

The control surface can be easily mounted inside furniture as a drop through unit. All in and output connections are made on standard Jack / Cinch and XLR connectors as well as compact Sub-D9 connectors.

## SOFTWARE

The LYRA is completely programmable for nearly every aspect of the in and output behaviour. Above are some examples of settings that can be made to suit your requirements.

## SUMMARY

The Lyra is a fully digital desktop mixer based on two system parts: a matrix/router and a powerful DSP power. Added values are the possibility to control and administrate the device from any location. Simply use your internet browser for remote control. The Lyra has an option to add Cobranet networking to enlarge your audio matrix up to 16 extra mono input channels. The Core and I/O unit are housed in a very compact 2HE rack unit. Control of all functions is by way of an easy to understand 4 fader desktop control surface + 4 fader extender or an 8 fader control surface.

## GPIOs

: A max of 50V at 200mA or 5V TTL 560R (8mA) out  
: All GPI's have a 5V TTL 100kOhm circuitry.  
: GPIO-MIC has a 5V/560Ohm LED driver circuit

## EQ

is 3 band, any band can perform one of the following functions/specifications with Q: 0.1 to 10 variable.

Low : +/- 18 dB (120Hz center shelving

MID : +/- 18 dB (1200Hz center bell

High : +/- 18 dB (12000Hz shelving

## DYNAMICS

: Interactive one knob control of threshold, compression ratio, expander ratio as well as attack and release times.

## PROCESSING

: 32 bit floating point Channels

: 8 stereo channels per DSP card.

## OVERALL

Level : 0dBu=0.775Vrms, : 0dB internal = -20 dBFs.

Clock : Sample rate: 32kHz, 44.1kHz, 48kHz,

+/- 20ppm (internally synchronized)

: External sync: 32kHz, 44.1kHz, 48kHz +/- 50ppm

: Jitter max 150pSec

## POWER SUPPLY

: Internally switched power supply.

: 100-240 Volt, 50/60Hz (1.5 A Max)

