innovason

PUSH THE LIMITS.

ECLIPSE
DIGITAL LIVE CONSOLE

Eclipse sets new Standards.

MAXIMUM FLEXIBILITY.   ## MAXIMUM RELIABILITY.   ## MAXIMUM EFFICIENCY.

Innovason's claim: We offer each individual customer the best possible solution for every situation. We also create innovative tools that set new standards. This is the case with Eclipse – the worldwide first digital live console with fully integrated multitrack recording.

In addition to groundbreaking innovations, Eclipse will impress you with its comprehensive capabilities, as well as its extremely compact dimensions. Our aim – practicality. A practicality that will convince you, especially during everyday operations, and which we are pleased to share with you on the following pages.

So please join us on this exciting tour and discover the infinite number of possibilities offered by Eclipse for your daily production routines.
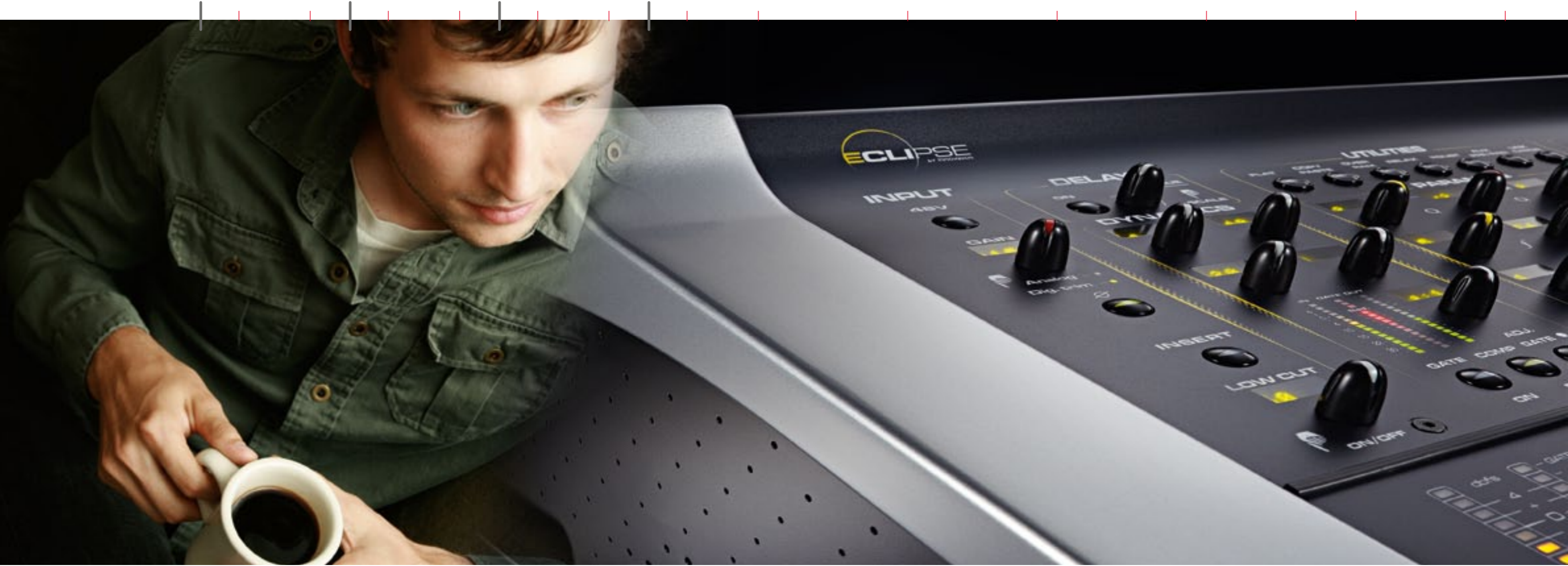
We hope you enjoy the read!

06:00 – 11:00 – 22:0

WELCOME TO A TOUR
THAT WILL INSPIRE YOU.

_maximum flexibility

_unlimited applications

_excellent sound quality

_state-of-the-art production reliability

_superb price / performance ratio

GETTING UP IS HARD.
SETTING-UP IS SO MUCH EASIER.

06:00

Innovason is the pioneer in the development of digital mixing consoles. Therefore, we did not just build a new console, we created a tool that meets the requirements of tomorrow today. We re-defined all our original successful elements, based on the market requirements for a new mixing console: technology, flexibility, audio quality, production reliability and an excellent price/performance ratio. We then translated this performance profile into real technology. The result: a live console that increases your fields of application significantly. Not only that, but the console also handles all aspects of everyday work with ease – including set-ups, soundchecks, and the realization of your production.

LIGHTWEIGHT COMPACT CONSTRUCTION

Compact dimensions, combined with a low weight: Eclipse represents an easy and simple set-up. Thus an Eclipse can be installed in an instant, which allows you to start work without delay. The benefits: microphone inputs and line outs – as well as tools such as a touchscreen, keyboard and trackball – are integrated in the control surface, creating an efficient console that does not require any further external units (ie. a router or DSP unit). For you, the result is less time spent on the set-up and more time spent on your production.

STAGE BOX

Thanks to five stage boxes, you can connect up to 320 microphones over long distances. Each stage box can be individually fitted with analogue or digital input and output channels. As an option, a redundant Cat5 or fibre connection on the console allows a secure connection to the rest of your system.

HIGH-PERFORMANCE DSP ENGINE

Eclipse excels with an impressive mix capacity: up to 104 inputs can be mixed to 48 mix buses + 2 monitor buses. Each bus mix can be used as an aux bus, a sub-group, a master or matrix. Moreover, each input features EQ, dynamics, delay, gain trim, and phase reverse; up to 16 floating processings are available for the mix buses. An additional advantage: each output is provided with DSP resources for graphic EQ or other devices. The DSP capacity therefore grows dynamically according to the number of outputs. With its efficiently designed summation, Eclipse has constant audio latency in the DSP – regardless of the amount of summation used. This allows a single microphone to be added to a completed mix via the matrix, without creating any irritating phasing effects.

THE TOUR BUS REVS UP.
IT'S TIME TO LEND A HAND.

09:00

Frequently changing assignments, constantly increasing demands, operations on a tight schedule and mounting pressure to keep costs as low as possible – the live sector sets the highest standards,

and not only in technology. The people involved are exposed to just the same pressures. It's good to know that you have a live console you can rely on 100% – as thoroughly prepared for the job as you are.

PERSONAL CONSOLE BUILDER
The Personal Console Builder can be used to best adapt Eclipse to every imaginable situation: to suit changing requirements and the preferences of different sound engineers at a festival, for example. Or simply to satisfy your individual preferences.

NETWORKING: NATIVE ETHERSOUND
Eclipse can be fully networked digitally. Ethersound can be used to connect the console to four audio stage boxes, third-party devices and up to 4000 other facilities that use Ethersound. Of course, several Eclipses can be connected with each other. This is not only a smart solution, but also extremely useful.

48 + 48 FADER
With Eclipse, you have direct access to all parameters. Moreover, inputs, groups, VCAs and output channels can be assigned to any fader, to your ergonomic advantage. Using the faders, a wide variety of functions can be controlled – everything from aux sends to EQ parameters. A further bonus: all the settings are saved in a file. Your FOH desk becomes a true monitor console.

SMARTFADE
Opening layers via logical grouping with Smart-VCA – this is only possible with Eclipse. The Smartfader area temporarily browses the slave channels, and an arbitrary number of Smartfaders can be freely positioned. What if you prefer to work without layers? Just disable the Smartfaders and use the console just like a classic analogue desk.

THE SET-UP IS COMPLETED.
THE FIRST SOUNDCHECK HAS BEGUN.

14:00

The first soundcheck starts – and Eclipse immediately demonstrates all its advantages. It is not only fast, but also allows for maximum control. You can: access all parameters and directly make your audio adjustments, remote-control the stage boxes and operate the plug-in parameters from the Smart-Panel. At the same time, both EQ and dynamics are always directly available, and Smartfaders guarantee perfect control of all the mix channels. The result of your soundcheck: drums, strings, bass and vocals can be handled considerably faster. And you find yourself working even more efficiently.

HIGH QUALITY PRE-AMPS AND PROCESSING

When it comes to the quality of the complete audio chain, compromise is out of the question. The proof: We have developed an impressive array of innovations concerned with phase, latency and digital technology. The result? Eclipse sparkles with absolutely excellent audio quality – on all levels.

SMART-PANEL

With its sophisticated Smart-Panel, Eclipse offers additional reassurance and unmatched flexibility: optionally, any 48 channels can be accessed with 12 short faders on four levels, and the internal effects can be set directly from the control surface. In addition, Eclipse offers a classic analogue aux panel.

INTEGRATED PLUG-INS

Eclipse guarantees state-of-the-art audio design: every channel is fully equipped. And a number of special audio effects are available: such as Tap Delay, Phase EQ or the legendary Aphro Reverb. And since you can save a wide variety of parameters individually, nothing stands in the way of innovative sound design.

USABILITY

Technology must serve its users, not the other way round. For this reason, Eclipse is not only easily understandable. It also impresses with terrific flexibility. With Eclipse, you can work in whichever way is best for you. Faders can be adjusted according to your ergonomic requirements; all audio parameters are directly accessible, and individual operations, such as audio copying, scene loading, as well as changing to Offline mode, can be effected even faster. But here is the real benefit: You can focus on what is most important – the perfect sound.

THE VIRTUAL SOUNDCHECK STARTS.
M.A.R.S. IS PUT TO USE.

18:00

The musicians have left the stage, but you are still not completely happy with the soundcheck. You have certain standards. And an innovative console. A console that enables you to rewind the track and restart the rehearsal anew. Using a virtual sound- check and exactly the same audio conditions, with- out any involvement of the musicians. With this, you can achieve a brilliant sound that pleases not only you but also the audience out in the hall.

VIRTUAL SOUNDCHECK

The Eclipse allows a virtual soundcheck, which can be activated with the simple press of a button. How does it work? All live signals are disconnected from the stage and track playback is fed to the input channels. In this way, these signals are not only available on the FOH console, but also on all systems linked to the network (eg. the monitor area). Now Eclipse recreates exactly the same conditions as for the concert: perfect for the fine-tuning of your mix.

MULTI-TRACK RECORDING

Innovason's M.A.R.S. (Multitrack Audio Recording System) makes Eclipse the only digital live console in the world that features a fully integrated 64-track recorder/player: easily controlled via a separate panel and intuitive touchscreen menu navigation. Plus, you also benefit from unconditional failure safety: the M.A.R.S. computer acts as a redundant control computer, and can take over all control and display functions.

BROADWAY MODE

The music plays even though the musicians are not playing – the benefit of the Cue function. With the Cue button, you can switch anytime between the live microphones and a pre-recorded track – quickly and without any delay. So, if the singer has a problem, you can insert the vocals into the FOH band mix, while the band still performs live. Broadway mode can be used in the same way in rehearsal: the drummer can practice to the sound of the whole band.

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PUSH THE LIMITS.

YOUR HARD WORK IS OVER.
THE PERFORMANCE CAN BEGIN.

20:00

The lights go out, the artists appear on stage – and a true performance is required. A performance the Eclipse can deliver at any time: with sophisticated solutions, maximum power and precise detail. For music and theatre. For fixed installations, for Houses of Worship, used as a monitor console or even in OB vans. And with a price that guarantees intense applause, even from the accounts department.

OVERVIEW
Thanks to Colour Coding, you can immediately see which input, VCA, or other channel is assigned to a fader. In addition, the clearly designed central control panel tremendously simplifies the setting of parameters, without bothering the user with complicated sub-menus and paging assignments.

USABILITY
A perfect overview of almost all the mix channels – that is usability, especially useful in practice. With the Smartfader, Innovason has set a milestone. Fast access to 104 channels is an innovation that ensures tremendous ease-of-use, particularly during daily operations.

SAFETY
Should the control computer fail, M.A.R.S. ensures perfect redundancy. And what if the musician fails? Again, M.A.R.S. guarantees a seamless continuation of the concert. Broadway mode and the virtual soundcheck have a common benefit: you can insert a soundtrack, even if the musicians are not present.
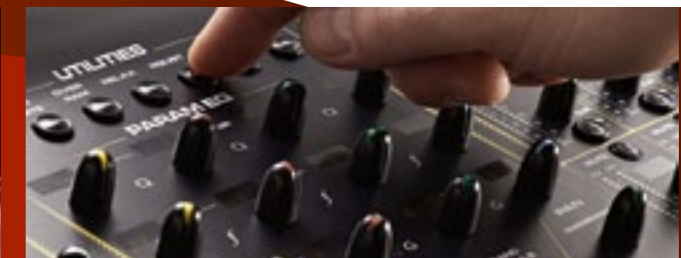
AFTER THE SHOW
IS BEFORE THE SHOW.

22:00

Good products are one thing; competent advice and comprehensive service are the other. For this reason, Innovason offers you support in all areas related to audio technology: including planning, creation of a network, and the development of powerful templates. True to 'push the limits' – for us this is not merely a catchphrase, but a very specific practice.

SUPPORT & AFTER-SALES

The individual construction of your personal console, the creation of an extensive network, and various upgrade possibilities – many decisions have to be made before choosing a mixing console. In this we are also your dependable partner. We have the depth of knowledge to offer competent advice: to help you create your own individual Eclipse. And, innovative solutions for future-oriented audio technology.
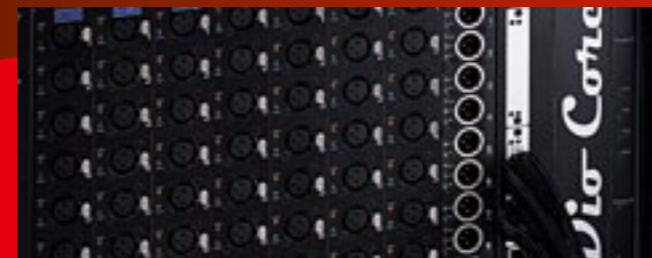
ECLIPSE FEATURES AND OPTIONS

Integrated Local Audio Rack

Integrated flexibility right from the factory – Eclipse can offer even that. The rear of the console is also a local audio rack, and offers up to 64 inputs and outputs, FX-modules, as well as 64 additional inputs and outputs via Ethersound. Moreover, Innovason plug-in modules can be used in six slots.

Stage Box

Each stage box features up to 64 inputs and outputs. The output ports are freely configurable – both analogue and digital. Furthermore, every microphone is connected to the network and can be used by all systems. LED displays on the stage box show if a signal is available, if the phantom power settings are correct, or if the input is overloaded.

Additional features:

Offline: Eclipse can be switched to Offline mode with the push of a single button. Now, each Snapshot (Page) can be prepared or modified without any effect on the current mix. This feature is a technical must for use during rehearsals in theatre work and musicals. The Eclipse shows precisely all the settings (including all faders and encoders) that were defined in Online mode. Changes made to snapshots for the current scene automation can also be recorded during runtime.

Relax: With the Relax function, any channel can be removed from the automation. That way, for example, the show host mic can be mixed without interference, while the next band snapshot is loading.

Overram: Individual parameter changes can be quickly written into already existing Snapshots (Pages). An instrument that was mixed too low can therefore be provided with a higher level during the production. This newly defined level can be subsequently entered as an offset in all snapshots.

Libraries: You can save the perfect bass drum setting in a preset. This can then be conveniently put into the library with all sound settings, and accessed in other shows.

Monitoring: A stereo bus is used for the monitoring. This can be assigned to three different outputs. Listen delays can be specified at anytime. Eclipse offers talkback on three different circuits that can be flexibly configured to all output buses.

Effects/Plug-Ins

Up to 32 effects can be used on one plug-in card:

Modulated delay and phasing
This plug-in allows different variations of Chorus, Flanger and Modulation

C-Limiter
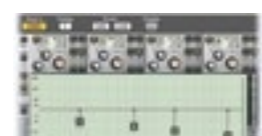A Brick Wall Limiter, generating a pleasing distortion for those high levels

Compressor
A very efficient Compressor, with Hard or Soft curves

DeEsser / Ducker
A DeEsser with a BP and HPF filter; will be switchable to a Ducker in a forthcoming release

EQ-Pro-G8
8-band fully parametric EQ with Parametric, Shelf, Notch, HPF or LPF filter on each band

Expander
An Expander with Hard- and Soft-knee modes

GEQ-31
A complete Graphic EQ offering several dB scales

Just-Verb²
Uses the famous algorithms of the VB-Audio Aphro reverb

Stereo Phase EQ
This unique plug-in enables adjustment of phase (+/-180°) at four different frequencies

MultiTap Delay
A multitap delay allowing all variations of Echo, Ping-Pong, etc. A tap Tempo is integrated. Each tap has Level and Pan controls

DioMadiES: Ethersound to Madi Converter

Easily handles conversion from Ethersound to Madi and Madi to Ethersound. Either Madi56 or Madi64 can be used coaxially or optically, which can then be fed back into the Ethersound network.

Dio8Out: Ethersound 8 Channel Analogue Converter

A simple 8-channel digital-analogue converter that can be integrated conveniently into the Ethersound network. Even a system that cannot be linked with Ethersound directly can now be connected. Several Dio8Outs can be used in a network.

DioAv: Connecting Eclipse to the A-NET 16

Two 16-channel Aviom buses can be fed to an Eclipse via the DSP card. For example: connected via Cat5, an Aviom Personal Mixer System can be interfaced directly to an Eclipse, providing every musician with his or her individual mix.

INNOVASON HISTORY

Innovason was founded in 1993. In the following years, the company established itself as a driving force in innovation, and developed a series of groundbreaking features for professional mixing consoles. Innovason's consoles were prominent mainly in three fields of operation: tours, fixed installations and OB trucks. Predominantly active in the live market, the company counts today among the top providers of high-quality audio technology for live production. All of Innovason's systems are based on digital technology, and, due to their modular structure, are entirely compatible.

Today, Innovason focuses especially in the areas of live sound systems, theatre and musicals.

As in the past, the company's name is still our mission, as the most important innovations to date prove:

1993
Invention of the Muxipaire, the first system for digital audio transmission between stage and console using coaxial cable

1996
Introduction of the first digital mixing console for live applications

2003
Introduction of the SY series featuring the SY48 and SY80

2008
Lawo AG becomes a majority shareholder
Presentation of the Eclipse at PLASA in London

2009
Presentation of M.A.R.S. at Prolight+Sound in Frankfurt

ECLIPSE TECHNICAL DATA

396 mm / 15,6"
238,3 mm / 9,38"
892 mm / 35,12"
772,5 mm / 30,41"
414 mm / 16,3"
1162,7 mm / 45,78"
151 mm / 5,94"

Product Dimensions	Dimensions (H × W × D)	Weight
Console only	15,6" × 45,78" × 30,41" / 396 × 1162,7 × 772,5 mm	99 lb / 45 kg
Console with flight case	15,15" × 49,6" × 48" / 385 × 1260 × 1220 mm	132 lb / 59,8 kg

Power supply   90 to 250 Vac, 47/63, 440 Hz (automatic switching)
Redundancy   Automatic (2 PSU)
Consumption   270 VA maximum per power supply
Temperature range   +10°C to +35°C

Audio characteristics DSP Eclipse

Internal sampling frequency	48 kHz
External sampling frequency	44 to 49 kHz / Word Clock TTL and AES
Clock jittering	5ns RMS
Calculations and internal processing	40 bits floating decimal point
Audio-digital signal path	24 bits fixed decimal point, 144 dB dynamic range
Analog signal delay	1.3 ms - Path of nominal signal: Mic Input – DSP - Analog Output
Analog bandwidth	15 Hz to 20 kHz - Microphone Input Gain @ -3 dB
Range of mic/line input	-63 to 27 dB / Gain: 64 steps of 1.5 dB
Input dynamic range	105 dB / Input Gain @ +6 dB, output @ +22 dBu
THD (+N)	- 90 dB / Input Gain @ 6 dB, output @ +22 dBu
Equivalent input noise	-127 dB (Gain 60 dB)
Noise level	-95 dBu (residual output noise)
	-95 dBu (one output fader @ 0 dB)
	-79 dBu (one output fader and one input fader @ 0 dB, gain 60 dB)

Mixing capacity DSP Eclipse

Inputs mixed simultaneously	104
Mix buses	48 + one stereo monitoring circuit
Input processing	104 / Delay – Low Cut – Phase – Gate – Compressor – PEQ
Mix buses processing	16 (assignable) / Delay – Low Cut – Phase – Gate – Compressor – PEQ
Max adjustable delay	222 ms (for inputs and inserted processing on mix buses)
Talk Back	One dedicated Mic Input
Digital interfaces	Two: Ethersound 64 I/O thru Cat5 link, MUXI 64 I/O thru coax cable
Patching	Patch grids allowing 144 inputs and 144 outputs patch connections (saved with the snapshots)

Audio characteristics analog Inputs and Outputs	Mic Inp. SI-8D3	UM-8PO	Sub-D 16 Line Inputs	Sub-D 16 Outputs
Converters	24 ΔΣ 128	24 ΔΣ 128	24 ΔΣ 128	24 ΔΣ 128
Bandwidth (Hz)	15-20 k	5-22 k	5-20 k	5-20 k
Dynamic	110 dB	113 dB	105 dB	105 dB
THD (-1 dBfs)	- 95 dB	- 93 dB	- 98 dB	- 92 dB
Z in/out (Ω)	> 1,7 k	< 200	> 10 k	< 200
Connectors	XLR3	XLR3	DB25 F.	DB25 M.
LEDs	Sig., Pk, 48 V	Sig., OL, AES	-	-
Delay (@ 48 kHz)	0,827 ms	0,687 ms	0,499 ms	0,499 ms
Full Scale	12 dBu (@ 0dB)	11 to 22 dBu	22 dBu	22 dBu

Audio characteristics digital Inputs and Outputs	DI-8S	DI-8Src	UM-8PO
Bits	24	24	24
Bandwidth (Hz)	0-22 k	0-22 k	0-22 k
Dynamic	144 dB	144 dB	144 dB
Range (dBfs)	-6 /+6 dB	-6/+6 dB	-12/0 dB
Distortion	-138 dB	-122 dB	-138 dB
Z in/out (Ω)	110	110	110
Connectors	XLR3	XLR3	XLR3 / Toslink (ADAT)
LEDs	-	-	Sig., OL, AES
Delay (@ 48 kHz)	0,062 ms	0,8 ms	0,146 ms

Output processing UM-8PO (each output benefits of a complete DSP treatment)

Delay (up to 1360 ms) – Phase – PEQ – 31 band GEQ – Compressor – Gate – Output Gain

As of March 2010. Subject to change without prior notice, no responsibility is taken for the correctness of the details provided.

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