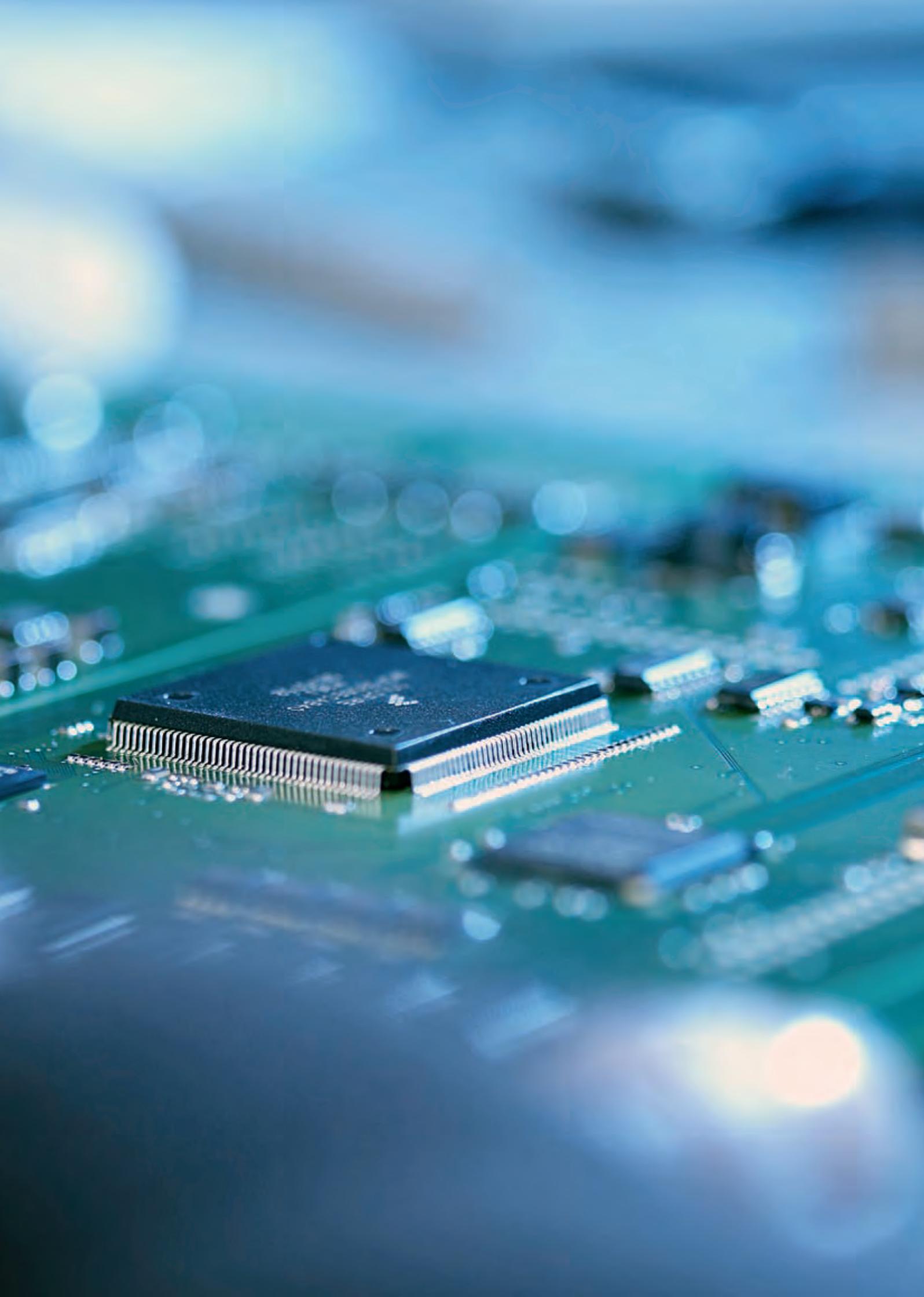


Products 2008/2009

For broadcast, production,
radio and live applications







Dear Customers,

Lawo products are gaining constantly growing acceptance and increasing international distribution within the professional audio industry.

We owe this success, on the one hand, to the well thought-out and future-proof designs that our products are based on and, on the other hand, to our constant objective of responding to customer-specific requests by providing individual tailor-made solutions. And, of course, we owe this success particularly to you, our customers!

The fact that 'Made in Rastatt/Germany' has become a seal of approval in the audio industry is also founded on our high standards: we consider ourselves a customer-orientated company that always seeks to offer you the best quality. With the excellent and wide-ranging manufacturing capability within our company, equipped with the most up-to-date production lines and automated precision machinery, as well as the in-depth knowledge of all our staff, we can contribute our collective experience to every stage of the production process, at the same time guaranteeing a consistently high standard of quality.

It is clear that this approach meets with your approval, as evidenced by the numerous national and international projects we were able to fulfil during 2007. Now, as 2008 unfolds, we are looking forward to a number of exciting projects and new highlights – for example, the Summer Games in Beijing, to name just one, where Lawo's presence will be evident, with over 40 mc² series mixing consoles in operation.

As well as forthcoming projects, our focus has always also been on the development of new and future-orientated products. As the first example of this in 2008, I'd like to draw your attention to our launch of the mc²56, the latest innovative mixing console in the mc² series. Now that the mc²90 has established itself in HD production studios, and the mc²66 has achieved a leading role in HD OB vans, this new console expands the mc² series with another exciting member. One of its major benefits: signal processing quality typical of the mc² family, but with an operating surface reduced to the essentials.

The good reputation that Lawo has acquired in the audio industry over the past years gives us both a sense of appreciation and an incentive: appreciation for the response to our achievements, and an incentive to justify your faith in us by providing innovative products and convincing solutions.

Thank you for your confidence in Lawo products – I look forward to our continued working relationship.

I wish you pleasure in reading this Lawo product catalogue.

Yours,
Philipp Lawo

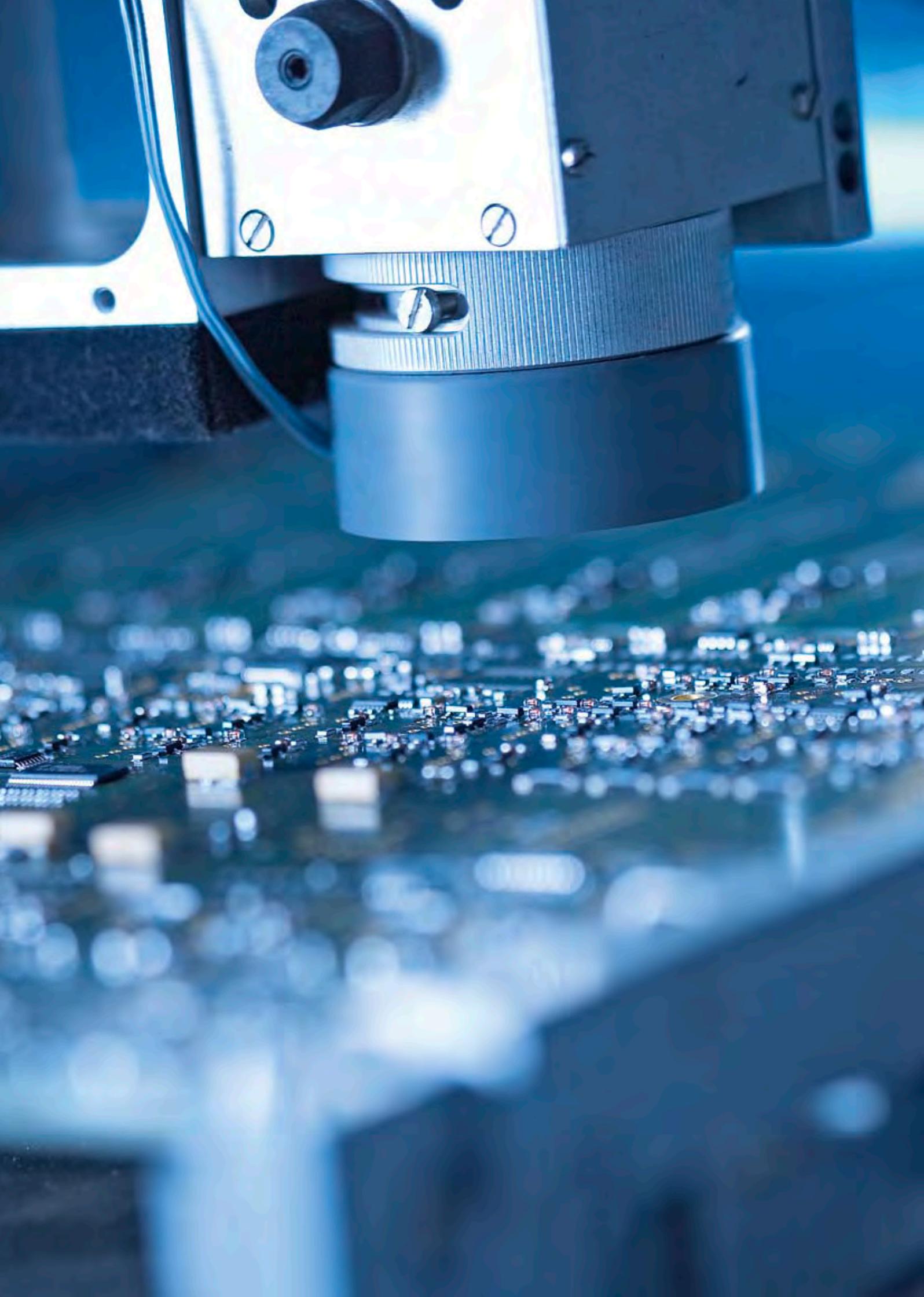
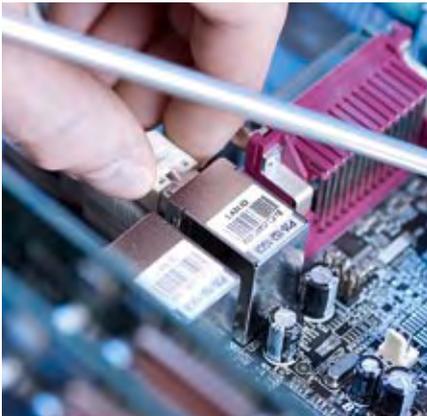
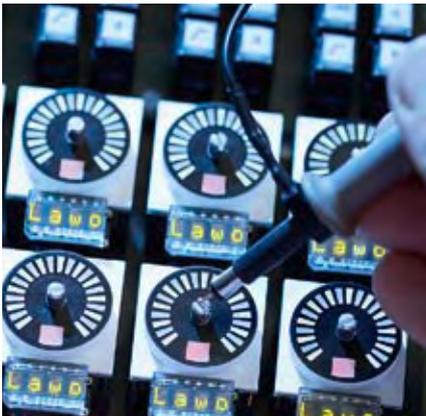
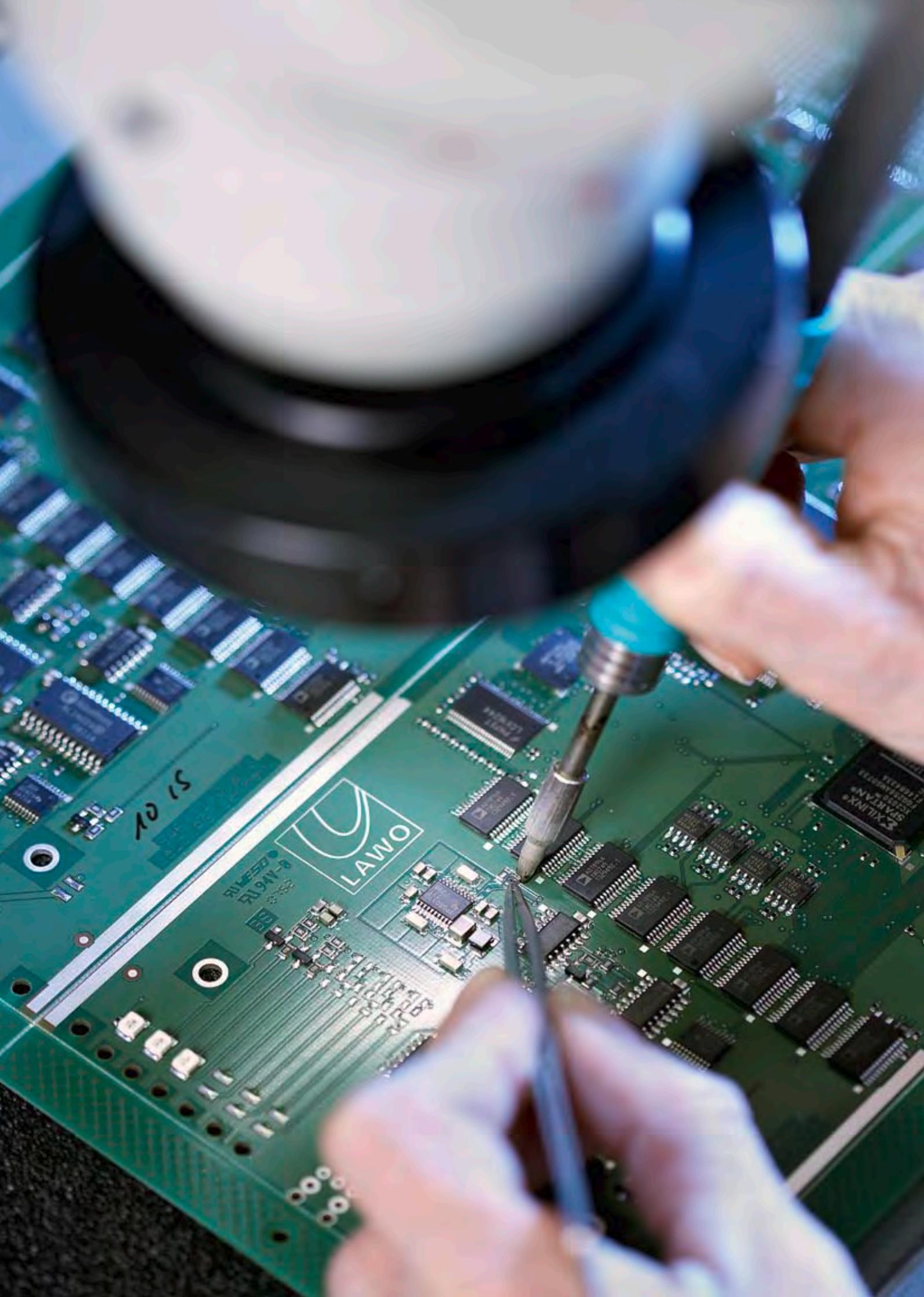


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Lawo specialises in developing, designing and manufacturing mixing consoles and matrix systems for radio and TV broadcasters, as well as for use in live events. Standards of high quality and innovative technology are supported by over thirty-eight years of experience in the field of professional audio technology.

Lawo's product range covers digital audio mixing consoles for use in radio, broadcast, production and live applications. In addition to the provision of matrix systems and audio networks, Lawo also carries out project engineering tasks and acts as a main contractor for radio OB vans; these services include user training and maintenance. The company's high level of expertise provides a comprehensive support service for all its customers.

For best results, we listen carefully.

At Lawo, we are a company that listens carefully to our clients, so we can better achieve their needs. We find solutions by using our technical know-how and experience to build systems that are adapted perfectly to the required application. Our constantly increasing product range can be combined to create any customised system – be it a mixing console, a routing matrix, an OB truck or a complete broadcast facility.

Innovation is our passion.

Right from the start, Lawo has been an innovative company with a strong R&D department – a department that keeps improving the products as well as designing new components for an ever-increasing product range. Our finger is always on the pulse of the industry, so we can use this knowledge to continue the development of our innovative products and solutions.

Quality is the basis of our success.

Lawo relies on the highest quality in all areas. Our perception of quality is not just confined to the manufacture of outstanding products. It also includes reliable project management, optimum customer orientation, efficient cost management and a responsible attitude to society and to the environment.

Vertical integration guaranteed.

A key aspect of the Lawo organisation is the particularly high level of vertical integration. By this, we are able to apply our experience at each production stage and ensure the implementation of our extremely high standards. Thanks to this fundamental production philosophy, we can ensure the professional maintenance of all Lawo products, even after many years of operation.



Made in Rastatt/Germany.

Lawo sees itself as a modern company that is obliged to confirm the quality requirements associated with the concept 'Made in Germany'. This is why innovations that offer genuine added value, and meticulous standards of manufacturing, are particularly important to us. It is only in this way that we can fulfil our self-imposed objective: we want to be the reliable and trusted partner that provides customers with universal solutions to their challenges.



Throughout its history, Lawo has always kept learning and looking ahead, making it a pioneer partner in the development of digital radio and TV. Constantly communicating with our clients, we continue to optimise the ergonomics, functionality and design of our products.

The beginnings.

Before founding an electronic equipment company in 1970, Peter Lawo was an R & D manager for radio and navigation systems. With the development of special devices for electronic sound processing (Ring-modulator, Vocoder, Halaphon), Lawo entered the field of audio engineering. In the 1970s, analogue modules and completely modular mixing consoles were developed and built for broadcasters in the German-speaking countries.

Hybrid technology.

At the beginning of the 1980s, the young company was working on digital electronics. Supported by a group of sound engineers from the local broadcaster, a programmable audio mixing console (PTR), with analogue signal processing and digital control, was designed. The console met the strict technical requirements of the German Institute for Broadcast Technology and, because of its integral software control, it was possible to adapt the console to a customer's individual specifications.

Digital mixing consoles.

Based on its experience with a hybrid audio mixing console, Lawo developed the fully digital and modular mc series in the early 1990s. This series included the mc50 for ambitious on-air and small studio productions, and the mc80/82 for broadcasting applications including music and drama recording, post production and outside broadcasts.

mc² technology.

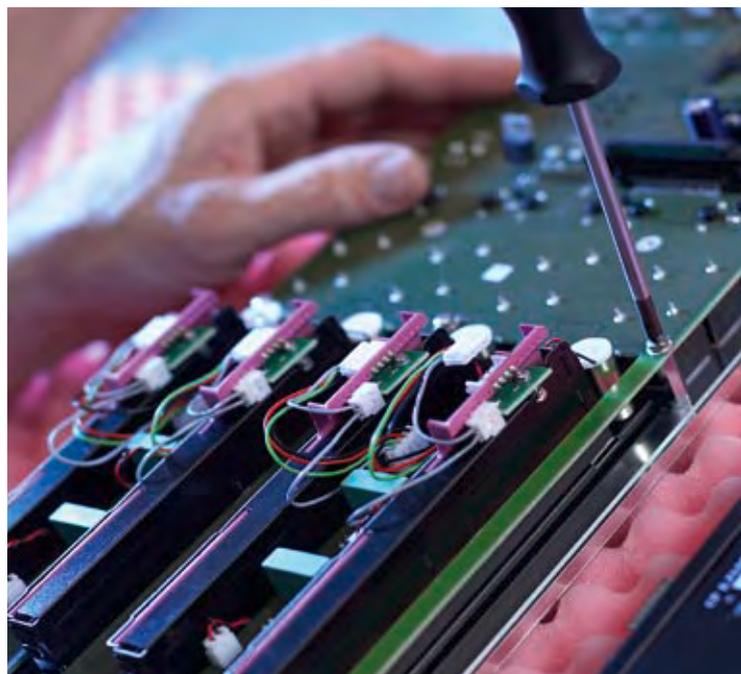
In 1998, Lawo achieved a technological breakthrough via systematic development. The new mc² series made it possible to interlink and route, using linear audio signals, practically all audio components in a system.

It runs in the family.

In 1999, Philipp Lawo, Peter Lawo's son, became CEO of the Lawo AG. Peter Lawo joined the supervisory board.

Completing the product range – Networking Audio Systems.

Continuing the philosophy of listening to our customers, new digital mixing consoles and matrices have been created that merge our accumulated experience and the knowledge of our customers' requirements with our know-how and innovative spirit. Lawo has developed a product range that covers any application in a radio station or production studio. With our competence in establishing audio networks, we can offer our clients innovative solutions for the future, today. We will continue to listen to our customers, and carry on developing products and solutions accordingly.







A new reference for high-end mixing consoles: the mc²90. Size and power, flexibility and dependability, an intuitive control surface and ergonomic design – the mc²90 sets new standards in all these areas. And it offers you today the technology you might be expecting tomorrow from a top class mixing console. With the mc²90 we have developed an innovative audio tool that meets the highest demands and individual requirements in any type of production – and all this with 24-hour, 365 days-a-year reliability.



Guido Amann, Technical Director,
at the mc²90 in the nobeo HD studio control room.



Optimum control with maximum flexibility.

Whether it is live broadcast, recording, post-production or live sound reinforcement, with the mc²90 everything is under control – all of the time. The mc²90 offers a modular central control section that enables you to position the most important modules exactly where you want them, so they can be accessed more easily. In addition, external control devices can be incorporated smoothly into the mc²90's control surface – from panels up to 5U in the clever 19" rack integration, to Danner modules that can be fitted in the meterbridge as well as on the control surface.

Iso bay access.

The mc²90 excels with its innovative operating philosophy that meets the highest demands of functionality and user-friendliness. A core item in this philosophy is a completely new decentralised operational control function, providing maximum control in any situation, by allowing you to transfer control of central functions to anywhere on the console. With this groundbreaking feature, the mc²90 facilitates optimal multi-user operation, and separate monitoring options can also be provided, thanks to the inclusion of additional AFL and PFL buses.

Furthermore, in spite of the comprehensive range of functions provided, enhanced user feedback and a clearly laid out control surface constantly guarantee the best possible overview of the current console status.



Be on the safe side.

With the mc²90, we have reached a new level of redundancy structure: the Lawo-developed 'Dual Star Technology' has now found its way into mixing console design. As a result, not only are all front panels connected to the control processor using star topology but, in addition, the mc²90 has a second redundant control processor that is also connected in star-mode to every panel. In incorporating this dual star technology within the control surface, Lawo has established a further milestone in reliability and redundancy, and new standards have been set for the design of mixing consoles and HD cores.

Innovative design for greatest operational convenience.

You will be drawn to the mc²90 by its pleasing shape and refined construction, which makes this console the visual focus in any studio. The modern design is supplemented by logical detailing that, thanks to optimal ergonomics and intuitive user feedback, will make your day-to-day production work significantly easier.

For example: in order to keep an overview of up to 200 faders, the mc²90 offers the colour coding of fader strips, similar to that commonly used in analogue days. However, with the mc²90 you don't need to manually change the fader caps, because the fader strips can be identified using modern LED technology according to channel type or your individual requirements. This allows you to easily keep track of any fader at any stage in the production.

Technical Details

Control Panel

- Frames from 16 + 8 faders to 96 + 8 faders; with doubled fader bay up to 192 + 8 faders
- 6 banks per 2 layers, 2 layers with direct access; Bay-Iso function for isolated bank/layer switching
- 100 mm faders + 10 rotary controls; channel display for every fader with sense-triggered change of module display in the Channel Display
- Up to 5U 19" integration
- Danner module integration

Signal Processing

- 512 channels and 144 summing buses, 40-bit floating point
- Surround formats: DTS/Dolby Digital 5.1, Dolby Pro-logic 4.0, DTS ES / Dolby EX 6.1, SDDS 7.1, Lawo 7.1; various panning characteristics
- 2* AFL: 1* surround 8-channel, 1* stereo
- 2* stereo PFL
- 32 aux sends
- Audio-follow-Video with 128 events, control either via Remote MNOPL protocol or via GPIO; adjustable envelope up to 10 s fade time
- Solo In Place
- Permanent input metering on the fader; selectable metering of INPUT, PF, AF, DIROUT, on the channel display
- Modules: INMIX, Digital Amp, 2-band fully parametric Filter, 4-band fully parametric EQ, 2-band fully parametric Sidechain Filter, Insert, Delay up to 1800 ms (units in metres, milliseconds, frames), Expander, Gate, Compressor, Limiter, Image, Meter, Direct Out
- In line configuration with send/return switching – channel or global
- 128 VCA masters with metering of up to 8 slaves
- Fully-equipped surround channel with linking of all channel parameters and Hyper Panning (from June 2008)

Routing Matrix

- Up to 8192 crosspoints
- 96 kHz, 24 bit
- Fully redundant signal path
- Full networking of up to 16 HD Cores, share and import of sources and destinations, studio arbitration function

Plugin Server

- Full VST plugin integration with storage of plugin parameters in snapshots and production data

Interfaces

- Mic/Line, Line Out, AES, SDI, MADI, ATM, GPIO, Serial, MIDI (for details see DALLIS product information)
- Monitoring systems in stereo and surround

Synchronisation

- Two redundant inputs with automatic detection of Blackburst, Wordclock, AES3, MADI

Redundancy

- PSUs, DSP card, router card
- Fully redundant signal path
- PSU for control system and control panel

Control

- Bay-Iso with separate layer and bank switching, plus second PFL/AFL bus
- Global A/B input switching
- Mix-minus control with two conference systems
- Various tally and fader start modes
- Programme switch
- Machine control
- Audio-follow-Video
- Manifold T/B integration
- Remote control of camera microphone

External Control Systems

- Remote control via network
- Online configuration via AdminHD; graphic configuration of HD Core components
- External matrix control for BFE, VSM, Jupiter

Remote Maintenance

- Connection via ISDN or VPN
- Software updates, error diagnostics

The mc²90 key benefits at a glance:

- Freely configurable control surface (up to 200 faders) with optimum adaptability to individual workflows
- Intuitive operation and perfect ergonomics (two-operator layouts available)
- Highest security with a redundant control processor
- Complete integration of VST plugins

World premiere for the mc²90.

Since March 2007, nobeo uses the top-of-the-range Lawo console.



„The first HD television studio in Germany also needed to fulfil the highest demands in audio technology. For this reason, we decided to purchase the mc²90 – a mixing console that we had found consistently impressive, with a guaranteed future in terms of its feature set.”

Guido Amann, Technical Director, nobeo

Who wants to be a millionaire? People, imagery and emotion! Stern TV produces the German version of this top-rating programme; a lesser-known name is that of the production company involved. Nobeo is one of the most well-known full service providers for TV production in Europe. Founded in 1993 as NOB Studios, and based near Cologne, the company has a total of nine studios covering an area of 6,600 square metres.

First fixed HD production facility in Germany.

In order to provide the best facilities for the future, Control Room 6 was completely redesigned in 2007. The intention of this project was to create one of the most modern and efficient television studios in Europe, with the first fixed HD production facility in Germany. This ambitious goal obviously applied also to the audio equipment, and the new Lawo flagship console – the mc²90 – was therefore chosen. This made nobeo the first customer in the world to decide on this new high performance console from Rastatt. Since then, several HD studios worldwide have been equipped with a mc²90.

Power and security.

The most important performance features of nobeo's new mixing console are an HD core with 240 DSP channels, a routing capacity of over 2,000 inputs and outputs, and a fully redundant signal path. In addition, each stage box connects to the main routing matrix with Star² technology. The control surface features 16+24 faders, and can be fitted with an additional 8-fader bay.

Thus equipped, the mc²90 went live for the first time in March 2007, with a Stern TV production, presented by Günther Jauch, and a viewing audience of millions.







More Power. More Speed. More Flexibility. When you're looking for power, speed and flexibility, Lawo's mc²66 console is the convincing answer. This latest generation of Lawo consoles excels, not only by having the largest audio matrix and most powerful DSP core, but also by virtue of an ergonomic philosophy that provides clear and consistent operation, while guaranteeing maximum functionality and efficiency, whatever the job. Your facility will benefit from an extremely professional tool that is tailored to your specific requirements; a tool that allows you the freedom to concentrate on what matters most: getting the best sound.



Networked mc²66 console at the „Staatstheater am Gärtnerplatz“
in Munich, Germany

More Power:

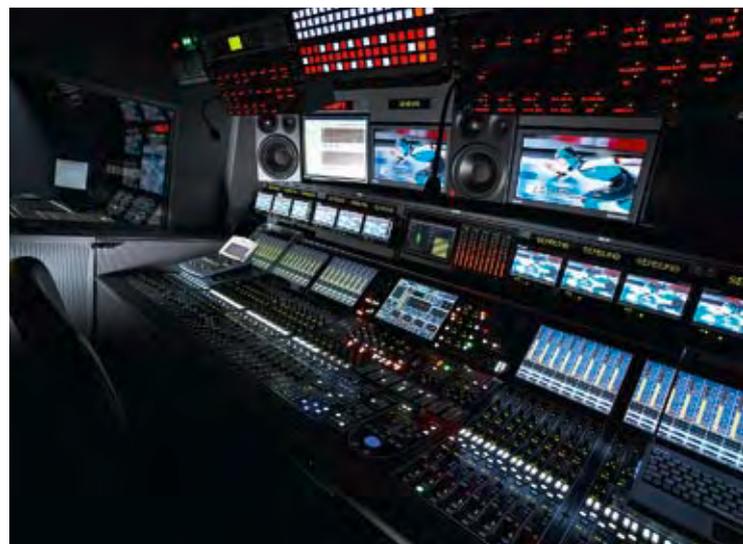
512 DSP channels, 144 summing buses and 8192 x 8192 crosspoints broadcast a clear message on their own, yet the impressive powerhouse that is the mc²66 goes even further than these basic specifications. In particular, highest-quality signal processing gives the mc²66 the power and precision that you'd expect from a professional tool, and there are many other outstanding features. For example, on every channel, all the audio sections deliver the highest standards, from the superb limiter to noiseless delay changes – every one available, all of the time.

More Speed:

The mc²66 guarantees to always be that little bit faster. Our recently developed operating philosophy: 'Assign at Destination', allows you to set the controls the way you want them – with speed and confidence – even at critical moments. This ability is a hallmark of the mc²66: total control, all the time, in any situation.

More Flexibility:

With the mc²66 you are always in command of all of your console's resources. You can change the channel section parameters during runtime without losing production data; you can adapt the DSP power at any time, so it is optimised for the current production; it is even possible to achieve fast switching of the main bus outputs between mono, stereo or surround, as well as the on-air integration of a mic card in your stage box – whenever you need to.



mc²66 in WIGE HD1 OB van

More Precision:

Complex productions require absolute concentration and precision. For this reason the mc²66 is designed to provide support in critical situations, and so reliably releases you from many tasks. Thanks to innovative functionality – such as Audio-follow-Video, external control of camera mic preamp levels, convenient console partitioning, and the ability to simultaneously create multichannel and stereo mixes – you can make the mc²66 a dependable partner.

More Security:

In the professional broadcast and live sound domains, maximum system availability and resilience are paramount. To this end, the mc²66 offers the highest possible redundancy and reliability from mic input, through the entire system to the programme output. Because of this superb availability, the mc²66 has established itself as the de-facto reference console in Europe.

More Know-how:

High quality production methods and the use of innovative materials (as used in the aerospace industry) combine to guarantee the greatest stability and lowest weight. The proof: a mc²66 with 56 faders weighs just 125 kg and is only 2.35 metres wide. Consequently, the mc²66 is your first choice where weight, size and power consumption are an issue: in the OB van, the studio, the theatre and conference centre.



Technical Details

Control Panel

- Frames from 16 + 8 faders to 96 + 8 faders; with doubled fader bay up to 192 + 8 faders
- 6 banks per 2 layers, 2 layers with direct access; Bay-Iso function for isolated bank/layer switching
- 100 mm faders + 10 rotary controls; channel display for every fader with sense-triggered change of module display
- Up to 5U 19" integration
- Danner module integration

Signal Processing

- 512 channels and 144 summing buses, 40-bit floating point
- Surround formats: DTS/Dolby Digital 5.1, Dolby Pro-logic 4.0, DTS ES / Dolby EX 6.1, SDDS 7.1, Lawo 7.1; various panning characteristics
- 2* AFL: 1* surround 8-channel, 1* stereo
- 2* stereo PFL
- 32 aux sends
- Audio-follow-Video with 128 events, control either via Remote MNOPL protocol or via GPIO; adjustable envelope up to 10 s fade time
- Solo In Place
- Permanent input metering on the fader; selectable metering of INPUT, PF, AF, DIROUT, on the channel display
- Modules: INMIX, Digital Amp, 2-band fully parametric Filter, 4-band fully parametric EQ, 2-band fully parametric Sidechain Filter, Insert, Delay up to 1800 ms (units in metres, milliseconds, frames), Expander, Gate, Compressor, Limiter, Image, Meter, Direct Out
- In line configuration with send/return switching – channel or global
- 128 VCA masters with metering of up to 8 slaves
- Fully-equipped surround channel with linking of all channel parameters and Hyper Panning (from June 2008)

Routing Matrix

- Up to 8192 crosspoints
- 96 kHz, 24 bit
- Fully redundant signal path
- Full networking of up to 16 HD Cores, share and import of sources and destinations, studio arbitration function

Plugin Server

- Full VST plugin integration with storage of plugin parameters in snapshots and production data

Interfaces

- Mic/Line, Line Out, AES, SDI, MADI, ATM, GPIO, Serial, MIDI (for details see DALLIS product information)
- Monitoring systems in stereo and surround

Synchronisation

- Two redundant inputs with automatic detection of Blackburst, Wordclock, AES3, MADI

Redundancy

- PSUs, DSP card, router card
- Fully redundant signal path
- PSU for control system and control panel

Control

- Bay-Iso with separate layer and bank switching, plus second PFL/AFL bus
- Global A/B input switching
- Mix-minus control with two conference systems
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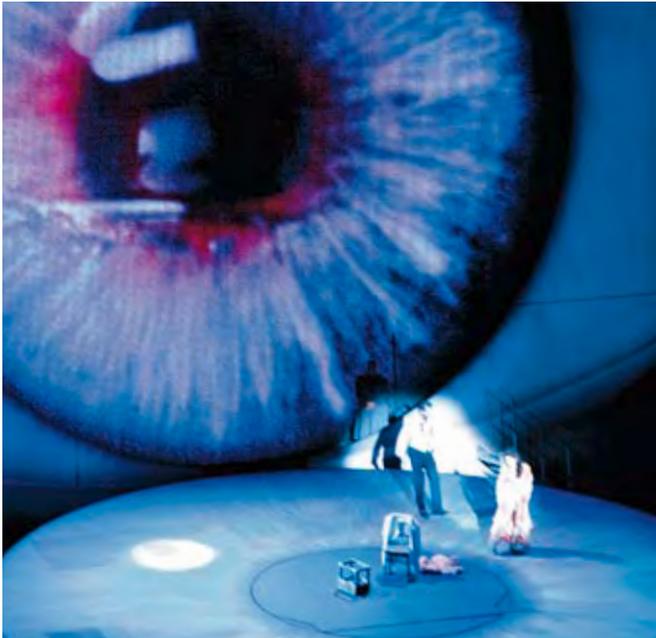
- Connection via ISDN or VPN
- Software updates, error diagnostics

The mc²66 key benefits at a glance:

- Excellent flexibility – changes can be made during runtime without losing production data
- Superb networking – handles the largest of broadcasting complexes, with several mixing consoles and routing matrices, thus saving time and costs
- Comprehensive features – eg. Audio-follow-Video, camera microphone control, flexible dynamic automation, sequence snapshot automation
- Complete integration of VST plugins

Puccini meets Lawo.

How Rastatt technology provides a new sound experience in Bregenz.



Enthusiastic critics.

The fact that it was a result worth hearing was confirmed by opera critics from the Münchner Merkur newspaper: “BOA, the abbreviation for ‘Bregenz Open Acoustics’, is something that makes Dolby Surround or the THX systems in our cinemas sound like grandfather’s old Telefunken set! For the first time, the sound from the lakeside stage was just as spectacular as the scenes.”

Tosca: all about inner love, burning jealousy and legendary betrayal. Tosca is pure passion, and a passion that an audience can now experience intensively, thanks to a specially developed audio technology known as ‘BOA’ (Bregenz Open Acoustics).

A new listening experience.

It is the objective of the BOA project to transport the audience into every imaginable acoustic environment. Managed by the Fraunhofer Institute, a sound production concept was devised that would involve a new type of signal processing as well as sound effects. Lawo technology was chosen for the implementation of this concept based on wave field synthesis: two mc²66 mixing consoles and an HD DSP core, two Nova73 HDs provided wave field synthesis DSP, and another Nova73 HD was used for the directional mixer DSP.







The latest console in the mc² series.

The highest quality can now be so compact. The largest is not always the best, and less can often mean more. This is why there is a new mixing console from Lawo that offers superb performance in daily operation, with well thought-out design and intuitive user guidance; a console that features reduced control density and, in particular, a compact frame construction. Yet, with plenty of concentration on the ‘down to basics’, the new mc²56 console conforms fully to the proven mc² series in terms of quality and performance. The mc²56 is based on current Lawo HD core technology, and guarantees maximum reliability, functionality and DSP power. You can count on the fact that all products with a name featuring the well-known ‘mc²’ naturally incorporate that legendary mc² quality that only Lawo can offer.



[Where performance, rather than size, is important.](#)

The mc²56 is consistently designed for the very best performance. For this reason, you have the same processing power in this console that already distinguishes the mc²66 and mc²90. What makes the mc²56 different to its siblings is its compact construction. In a width of only 1.2 metres, we provide 32 faders (when installed in the width of an OB van, 64 faders are possible). The secret of these space-saving dimensions is that each fader bay contains 16 faders, and there are virtually no gaps between bays. The mc²56 will certainly impress you with its superior suitability, even at the installation stage.

[Where functionality, rather than luxury, is required.](#)

A mixing console must particularly impress during daily operation. This is why, with the mc²56, you benefit from many proven features of the mc² range – starting with the design principle of ‘form follows function’, through dynamic automation, and on to speedy access to the most important control parameters (‘assign at destination’). An intrinsic feature of the mc²56, however, is the specially designed control layout. Here, the most important functions are within easy reach, while lesser-used features are accessed exclusively via the touch screen. The result is an ease of operation that really can be described as user-friendly, and a suitability in use that is best summed up as: Performance, pure and simple!

[Don't think solo, look at the networked solution.](#)

Complete compatibility and uncomplicated data transfer – this is what characterises mc² consoles. The networkability of Lawo mixing consoles does not just provide for the flexible expansion of existing mc² installations, but in day-to-day operation, the 100% compatibility of user data, and its inherent benefits, will also be appreciated. A typical example: a production starts in stereo, using an mc²66 in the OB van, and is subsequently continued in a portable control room before the automated mix, supported with snapshots, can be completed in an mc²90 studio in 5.1 – and all this completely independent of the physical number of faders, the size of routing matrix, and the DSP capacity. Thanks to the transferability of all user data, extended configuration times can be avoided, thus leading to even further efficiency in day-to-day production.





Individual configurations:

Making the console your own.

Individuality as a standard feature – this defines intelligent technology today, and is certainly the case with the mc²56. Using an online connection, you have direct access to the hardware, and can configure the function of each user button on the mc²56 console to suit your own requirements. In this way, you can freely, and specifically, decide which console functions you want to have immediate access to. Whether it be GPI controls in an OB truck, sequence automation on a theatre console, or machine control in post-production, the mc²56 provides the most appropriate solutions customised to your needs.

Modularity:

Because there are different solutions for different needs.

What is an essential characteristic of the mc² series? Outstanding adaptability to individual requirements, and the series' modularity, which is, of course, also available in the mc²56. For example, not only can you select from five different frame sizes, housing up to 80 faders, there are many options in terms of expansion and types of interconnection. With the mc²56, you will always be geared up for the future.

Snapshots with trimmed parameters:

Because efficiency comes from intelligence.

A comprehensive snapshot system make it possible to save and recall control surface assignments, DSP settings, routing matrix connects and I/O parameters. And that's not all: snapshots can now be loaded with trimmed parameters; the settings of individual channel audio sections can be given an offset or written absolutely into a sequence. The trimmed settings can also be stored in so-called Oversnaps. This makes it possible to save and recall different Oversnaps as and when you need them – a feature that will make your work much simpler, particularly in the case of productions that feature a number of different soloists.

Technical Details

Control Panel

- Frames from 16 + 16 faders to 64+ 16 faders
- Remote Frames 16 and 32 Faders
- 6 banks per 2 layers each
- 100 mm faders + 2 rotary controls free assignable + Input Gain Controller, channel display for every fader with sense-triggered change of module display in the Channel Display
- TFT metering mono, stereo or 7.1 including bus assignment, gain reduction for dynamics, AfV status, VCA assignment
- External display of GUI Pages e.g. metering

Signal Processing

- 512 channels and 144 summing buses, 40 bit floating point
- Up to 376 inputs with A/B input, 48 sub groups, 32 aux sends, 96 track busses, 48 main sums, change on the fly from mono to stereo to surround channel and bus
- Up to 64 surround channels, 128 VCA groups with metering, 256 GPC channels
- Surround formats: DTS/Dolby Digital 5.1, Dolby Pro-logic 4.0, DTS ES / Dolby EX 6.1, SDDS 7.1, Lawo 7.1, diverse panning characteristics, surround aux bus
- 2* AFL: 1*surround 8-channel, 1*stereo
- 2* AFL stereo
- Audio-follow-Video with 128 events, control either via Remote MNOPL, GPI or Matrix Connect, adjustable envelope up to 10 s fade time
- Solo In Place
- Permanent input measuring point in the fader, adjustable measuring points INPUT, PF, AF, DIROUT in the Channel Display
- Modules: Inmix with MS-Decoder, Digital Amp, 2-band fully parametric Filter, 4-band fully parametric EQ, 2-band fully parametric Sidechain Filter, Insert, Delay up to 1800 ms, units in frm, ms and m, Independent 4 Dynamics: Expander, Gate, Compressor, Limiter, Image, Meter, Direct Out
- Inline configuration with send/return switching - at the channel or global
- Fully equipped surround channel with coupling of all channel parameters and Hyper Panning (from June 2008)

Routing Matrix

- Up to 8192 crosspoints
- 96 kHz, 24 bit
- Fully redundant signal path
- Downsizing up to 7.1 to Stereo
- Full networking of up to 16 HD Cores, share and import of sources and destinations, studio arbitration

Plugin Server

- Full VST plugin integration with storing of plugin parameters in snapshots and productions

Interfaces

- Mic/Line, Line Out, AES, SDI, MADI, ATM, GPIO, Serial, MIDI (for details see DALLIS product information)
- Monitoring systems stereo and surround

Synchronisation

- 2 redundant inputs with automatic detection of Blackburst, Wordclock, AES3, MADI

Redundancies

- PSUs, DSP boards, router board
- Fully redundant signal path
- PSU for control system and control panel

Control

- Bay-Iso with separate layer and bank switching as well as 2nd PFL/AFL bus
- Global A/B input switching
- Enhanced mix-minus (N-M) control with independent off-air conference
- Diverse tally- and faderstart modes
- Programme switch
- Machine control
- Manifold T/B integration
- Camera microphone remote via GPI or voltage control

External Control Systems

- Remote control via network of all routing parameters
- Online configuration with AdminHD, graphical configuration of HD Core components
- External matrix controller: VSM, Jupiter, ProBel and others

Remote Maintenance

- Connection via Internet Remote Software
- Software updates, error diagnostics, remote

The mc²56 key benefits at a glance:

- Proven and high-performance HD core technology from the mc² series
- Reduced control density with excellent usability
- Intelligent mix of hardware controls and touch screen operation
- Compact size that facilitates flexible installations

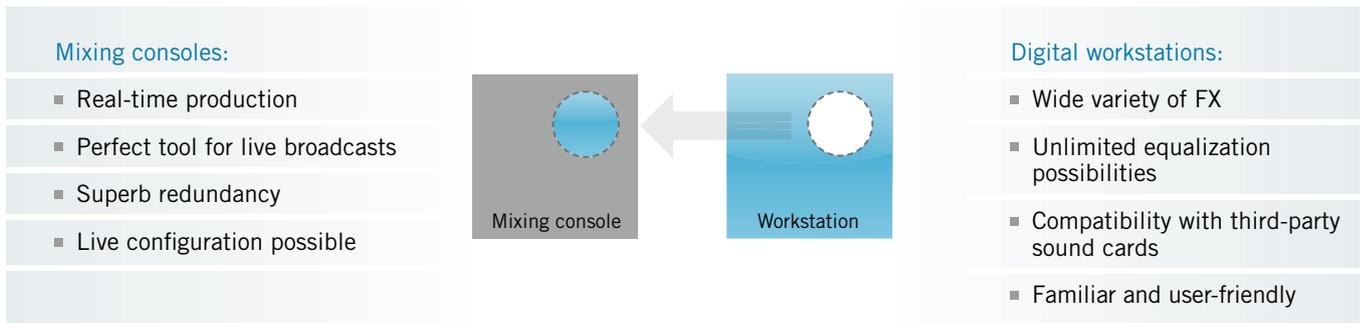


World's first from Lawo: complete plugin integration for mixing consoles. With the Lawo Plugin Server you can gain from the benefits of two completely different worlds. Thanks to comprehensive plugin integration, it is now possible to use the live mixing facilities of the mc² series, while easily accessing the widest range of 'outboard' FX. With this exciting new application, Lawo provides demanding audio engineers with a genuine innovation that opens up completely new possibilities in audio production, offering undreamed-of flexibility for live and studio sessions.

Plugin Integration for Mixing Consoles.

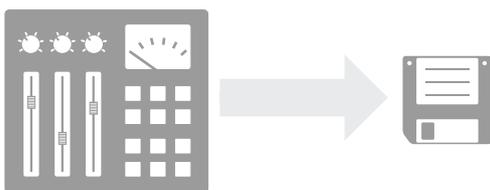
For Live Shows and Studio Productions:

Now you can access the widest variety of audio FX with your mixing console.



Maximum efficiency: Plugin settings can be saved in snapshot and production data.

With the Lawo Plugin Server, you don't just benefit from a complete range of various FX, but this exciting tool also wins in terms of usability, with well thought-out functionality and operational efficiency. The plugin parameters can, for example, be directly loaded onto the console and can be saved as snapshots or as production data. The decisive benefit: the details of a complete production can be saved, along with all its associated plugin parameters and personal configuration, enabling you to switch between various projects with ease.



Stunning ease of use: Accessing a virtual FX rack via the GUI.

The Lawo Plugin Server is conceived as a virtual effects rack, and can be operated as simply as a digital workstation. A most important tool here is the graphical user interface (GUI), which automatically displays the plugins in use. In this way, you cannot only generate various effects directly from the mixing console, you can also manipulate all the plugin settings via the control surface. Additionally, each plugin function can be used on multiple channels in the mixing console.

The Plugin key benefits at a glance:

- Complete integration of plugins into the mixing console environment
- Saving of all settings in snapshot and production data
- Superb suitability for live situations, thanks to minimal latency
- Plugin DSP core cards can be used (for example, TC Power Core or Universal-Audio)
- Installation of all plugins is possible without Lawo support
- Complete compatibility with all VST plugins, VST 2.4 hardware platforms and plugins





Powerful performance and easy to operate: zirkon is the perfect mixing console for radio broadcasting: for highly demanding radio productions, daily broadcast operation, and for today's radio professionals. zirkon inspires not only with its superb functionality and its intuitive, clearly laid out, control surface; it also delivers reliable engineering, a wide range of extras and an extensive feature list that ensure custom solutions for every requirement.



zirkon in the Danmarks Radio Master Control Room

The optimum solution for radio hosts:

Maximum results with minimum expense.

Radio hosts, DJs and editors need equipment that, above all, can be operated intuitively, is easy to understand but can still handle the multiple requirements of day-to-day radio work. In other words, the sort of features provided by zirkon – the functional mixing console that significantly facilitates daily radio work by virtue of its sophisticated features. A reduced-scale control surface require less training, motorised faders enable flawless interface with radio automation systems, and

the VisTool touch screen software provides a superb operational overview and an enhanced user interface. Moreover, zirkon is extremely flexible and can be perfectly adapted to suit individual requirements or personal workflows. And, last but not least, when the outstanding mix minus/conference logic contributes to a smooth and secure broadcast operation, it becomes just plain sailing to create superb programmes.



The optimum solution for sound mixers:

Flexible configuration for complex requirements.

Although zirkon was consciously designed to be easy to use by radio hosts, it provides sound mixers with all the options they need – thanks to its modular design and a wide range of configuration options. This begins with the multi-layer feature that enables access to up to 40 channels. When it comes to console configuration, you benefit from maximum flexibility; using software provided with the console, it is possible to set up individual audio and control interfaces, sources and sums, and to individually assign button functions and relay switching. In addition, monitor systems and remote controls can be designed to your requirements, using a Windows®-based application.

What about networking? The console also excels in this area by providing innovative solutions.

Apart from the option for inexpensive audio connection via MAD1 interfaces, zirkon also allows the cost-effective realisation of comprehensive on-air setups – with, of course, resource sharing, backup consoles and multi-studio operation.



One principle, three interpretations:
zirkon's different module variants.

zirkon

All you need for a powerful, broadcast-capable mixing console is a central module, a channel module and a couple of interfaces. Ideally suited for medium-sized productions and self-op studios, zirkon surpasses with its proven user-friendliness and extensive flexibility. Thanks to a minimal control surface, and guidance from the on-board menu system, the central module allows complete access to all functions.



zirkon XL

Superbly user-friendly, and a compact design with its focus on the essential, the XL central module is completely consistent with proven zirkon philosophy. However, this larger central module is especially designed to meet the requirements of bigger productions. Its control surface, specifically designed for audio operators, allows direct access to all audio parameters, and thus enables active sound design when editorial times are especially short.



zirkon 2s

In self-op situations, program content and broadcast integrity are necessarily in the operational foreground; by contrast, audio design frequently plays second fiddle. So the radio professional behind the microphone has special expectations: he wants functional technology that gives him the clearest operational overview and the greatest security. These are the needs that the 2s module was developed to meet, while consciously foregoing a classic central module with a direct access to signal processing.





Radio on-air studio
at Radio Argovia, Switzerland

As individual as your needs:

zirkon's different system components.

Different requirements need specific solutions – this is why you can adapt the zirkon control surface to your individual needs. You also benefit from the make-up of the different system components.



High-performance core.

Based on the proven DALLIS interface, the zirkon core handles routing, control and signal processing (DSP). In addition, it is the interface for console modules and panels, for VisTool software and radio automation systems. But there is more to it than that: the core can also be connected via MADI to other matrices – or as in the Nova17, even be used as an independent matrix.



More operating satisfaction with VisTool.

An improved overview and extended functionality – the VisTool touch screen software makes it all possible. On a graphically attractive screen layout you can keep an eye on signal level and DSP parameters at all times. You will benefit from access to additional tools such as trigger circuits or central snapshot databases, and can freely arrange the console's control panels to meet your own needs.

With the optional VisTool software you can add a modern screen-based user interface to zirkon. Now your operators have a control surface with extended functionality and even greater user-friendliness.



Modular extension with custom panels.

However you want it: zirkon and Nova17 systems can be extended to include as many as 15 pushbutton panels for the individual requirements of, for example, commentator or edit rooms. All devices are completely integrated into the system configuration, and can be assigned to any function.

Technical Details

Panel

- Modular design with up to 40 faders
- 4-fader module with motorised 100 mm fader
- Optional multiple layer operation
- Two central panel variants with CF card reader/writer for saving snapshots
- Modules for building into desk, freely placeable (CAN bus wiring)
- Panel extendible with additional control panels and VisTool touch screen software

System core

- Modular plug-in card system based on DALLIS I/O system
- Central masterboard with integral control system and signal processing (redundantly designed as an option)
- Integral matrix with up to 384 inputs and outputs (non-blocking)
- PC-independent and fan-free operation
- Optional redundant power supply

Signal processing

- 40 channels (mono or stereo, surround, depending on the available resources) with Input Gain
- Pan/Balance, Direct Out and Insert
- 48 equalizers: 3 fully parametric bands and 2 filters (mono*)
- 14 dynamic units: gate, expander, compressor (mono or stereo use)
- 14 limiters (mono or stereo)
- 24 delays: up to 340 ms with switchable units: metres, milliseconds, frames (mono*)
- 48 summing buses (mono*, incl. main 1, 2 and PFL, optional second PFL)
- 30 mini-mixers (2 x 2 mixers for monitoring, stereo to mono, etc.)
- Optional 40 full stereo channels with EQ, DYN, and LIM via additional masterboard

(*Optional stereo coupling)

Interfaces

- Analogue Mic/Line (transformer or electronically balanced)
- Headset (incl. VCA interface)
- AES/EBU (AES3) with and without sampling rate converter (SRC)
- ADAT® *

- HD/SD SDI (embedded audio)
- Serial data transfer (RS232, RS422, MIDI)
- GPIO (opto-couplers, relays, VCA)
- Optional MADI ports (up to four) on the masterboard

Synchronisation

- Wordclock input and internal generator
- Optional via MADI
- Supported sample rates: 48 kHz and 44.1 kHz (depending on masterboard)

Control

- Two PFL buses (option)
- Surround sources and buses in 5.1 or 5.1+2 formats (with stereo feed)
- Integral mix-minus/conference logic
- Freely programmable logic core (red light, fader start, programme switch, T/B integration, etc.)
- Serial interface for integration with radio automation systems (zirkon operation mode)
- Serial interface for matrix control (Nova17 operation mode)
- Optional MIDI interface for integration with audio workstations (HUI protocol, eg. for ProTools®)
- Optional remote control of external Lawo matrices (eg. source selection)
- Optional control via touch screen (VisTool)
- Optional graphic matrix control (NovaConnect)
- Configuration and maintenance
- Software for system configuration and logic programming
- Integral web server for system diagnosis
- Dedicated SW tool for performing software updates
- Remote maintenance via VPN/ISDN

The zirkon key benefits at a glance:

- IP-based networks integrate complete radio stations
- Workflow-adaptive control surface with freely configurable functionality and VisTool software
- Extended applications with multi-layer operation and motorised faders
- 5.1 and 5.1+2 surround for on-air operation

* ADAT® is a registered trademark of Alesis, LLC and is used here under license.

How 'Made in Rastatt' is now generating enthusiasm in Kuala Lumpur.

AMP Radio Malaysia equips with zirkon and Nova73 HD.



„Lawo gave us considerable support in reaching an excellent integrated solution. We are of the opinion that we now own one of the most refined, but so simply integrated, radio installations available.“

Bala Murali, Systems Manager, AMP Malaysia

Over recent years, the Tiger and Panther States of Asia have all made dynamic progress in their technological development. Particularly in the case of innovative products, you will often find that well-known seal of quality: 'Made in Germany' – a promise of quality that has now established itself in Asia.

AMP Radio in Kuala Lumpur, Malaysia's leading broadcaster, decided to purchase their technology from Southern Germany. The specific requirements for this project were not just that the latest generation of digital studio technology should be installed, but intelligent solutions were also required by AMP in order to guarantee optimum workflow and the best possible efficiency in configuration. For this reason, AMP chose the zirkon 2s and Nova73 HD by Lawo.

Flexibility and efficient workflow.

A particular highlight of this installation was that the zirkons have been networked with the Nova73 HD router, which, in turn, is linked to other studios and the broadcast uplinks in the zirkon frames. In this way, every device can access all the various components on the Lawo network. Furthermore, one console serves as a central controller for another eight integrated studio systems.

High usability thanks to zirkon 2s.

AMP ultimately decided to install eight zirkons with the new 2s surface modules. The benefits were obvious: because of the reduced control surface that is adapted to on-air operation, and its undoubted ergonomics, the consoles were the perfect solution for everyday radio broadcasting. Apart from that, the consoles can be configured so that complicated and oft-repeated control processes can be selected at the push of a button. This virtually allows presenters to configure the mixers themselves. But it's also in terms of efficiency that Lawo technology wins out. For example, the VisTool touch screen software guarantees a perfect operational overview, since it permits direct access to functions such as metering, timer, EQ, dynamics, network control and alarm displays.







A new start into digital broadcasting.

Clever technology – ready to use.

With crystal it's now so much easier to get into digital broadcasting techniques. This latest mixing console from Lawo is not just an obvious choice because of its intuitive operation and many intelligent features, but there are also the well-conceived user templates that guarantee an ideal workflow. For you, this means that the crystal is a mixing console that ensures maximum efficiency for on-air operation and in the edit suite, during setup time as well as throughout your everyday work.



12-fader crystal
in on-air radio application

Ready, Steady, Go:

User templates ensure a rapid start.

Prolonged programming and complex preparation have become a thing of the past; now you can benefit from the crystal user templates with their carefully designed standard configurations. This means that your console is ready for operation after just a few minor adjustments, so that, from minute one, you can concentrate fully on the programme content.

**Highest usability for radio hosts:
crystal in everyday broadcasting.**

A well laid-out control surface, short user training times and ergonomic design make the crystal an ideal console for a demanding presenter's daily routine. It's not just the universal operating concept and VisTool touchscreen software that make everyday work easier. The easy connection to radio automation systems, and ingenious n-1 conference logic also provide the highest degree of usability, with which the crystal sets a new standard for compact mixing consoles.

**Flexible operation for editors:
crystal at the editor's workstation.**

Intuitive operation, logical workflow, and refined functionality – the crystal also excels with its perfect operational suitability for edit suites. What will impress you, particularly in this application, are the many well-designed features that simplify production even in a hectic situation. A variety of feeds can be connected at any time; all-important functions (such as listen selections or GPIO control) are readily at hand, and integration with video environments and larger systems via SDI (embedded audio) and MADI is perfectly possible.



Everyday work can be a breeze:
crystal operating philosophy.



High-quality control surface, modern displays and compact construction – the crystal is a genuine eye-catcher in any studio. Naturally, it is not just the design of this new Lawo mixing console that is impressive. The build quality and integral attributes of the crystal will meet the highest demands – from the superb all-metal aluminium case to its 100 mm fader with integral dust shield, plus its excellent signal processing capability.

Ergonomic design for optimal workflow.

Apart from its modern appearance and the renowned Lawo build quality, the crystal will also impress you with its outstanding ergonomics. Two high-visibility OLED displays per channel provide an ideal overview, even in critical situations. Multi-colour LEDs, that can be labelled by function, assure the highest reliability in everyday operation. Various functions can also be assigned to the multi-purpose buttons (eg. PFL, conference, talkback), whereby button labelling is partially provided directly by the display, with visual feedback indicated by the LEDs.

crystal control surface versions.

The crystal is available in five different versions featuring up to 16 faders. Particularly of interest will be the 12-fader model, which is also available as a split version.

crystal
4-fader model



crystal
8-fader model



crystal
12-fader model



crystal
12-fader split model



crystal
16-fader model





Different components for different needs:
crystal highlights.



Compact system core.

Just 1 RU high, 19 inches wide – with the crystal, highest quality now comes in a compact package. The system core does not only stand out with its neat dimensions, but also with a speed that is ready for immediate action; this PC-free unit guarantees a short boot time. A further advantage of the crystal is the comprehensive feature set available in even the basic version, which enables you to make a quick start on your everyday work. What if you want to expand the boundaries? Additional options are available to meet the widest range of requirements – from connection to radio automation systems, through audio interface card expansion, to glass fibre links to a main control room.



VisTool touchscreen software.

Additional functionality and an even better overview: VisTool touchscreen software is a perfect complement to the crystal's control surface. Not only signal processing but also various other functions can be graphically displayed. Additional features such as access to your snapshot database, routing matrix control or timers all add to the ease-of-use and confidence in everyday operation. You have the choice of various VisTool versions: from the standard operation version ready for immediate use, to one that provides freely user-configurable control surfaces.



Modular panels.

Do you need additional buttons, want to modify your workspace layout, or require more control facilities for additional devices? Then the KSC series panels are the perfect solution for you. Whether it be playback, pre-listen, talkback or red light control – additional switch control panels will make sure you are best equipped for the most diverse tasks. Additionally, the panels can be integrated cost-effectively into the system using the CAN interface, or may be connected, depending on type, via Ethernet (TCP/IP).

Technical Details

Control surface

- Control surface variants with up to 16 faders
- Compact design with case height only 3 cm
- Long-life 100 mm faders with dust protection
- OLED displays (160° visible angle)
- Buttons with multi-colour backlight (RGB)
- Ambient light sensor for automatic brightness control
- Fully stand alone operable, opt. touchscreen software

System core

- Base Unit 19" / 1 RU with control system, signal processing and audio interfaces
- Integrated routing matrix (non-blocking) with up to 288 inputs and 292 outputs
- Active cross ventilation, system-controlled
- Integral wide-ranging power supply 100...240 V AC or alternatively 12 V DC connection

Signal processing

- Up to 16 fader channels with input gain and pan/balance
- Up to 128 definitions for sources and summing buses
- 16 Equalisers: 3 fully parametric bands and 2 filters (mono*)
- 8 Dynamics units: gate, expander, compressor (mono or stereo)
- 8 Limiters (mono or stereo)
- 4 Delays: up to 240 ms
- 24 Summing buses (mono* including PFL)
- 16 Minimixers (2 x 2 mixers for monitoring, stereo-to-mono, etc.)

(*Stereo coupling possible)

Interfaces

- 4 Analogue mic inputs (usable as line inputs)
- 4 Analogue line inputs
- 8 Analogue line outputs
- 2 Headphone outputs (stereo)
- 4 AES3 inputs (stereo) with sample rate converter (SRC)
- 4 AES3 outputs (stereo)
- GPIO (8 optocouplers, 8 relays)
- Optional MADI extension with 4 ports
- 2 slots for I/O extension with:
 - 8 Analogue line in/out
 - 4 AES3 in/out (stereo) with input SRC
 - HD/SD SDI embedder/de-embedder (4 x stereo)

Synchronisation

- Wordclock input and internal generator
- Optional sync via MADI
- 48 kHz and 44.1 kHz sampling rates

Control

- Programmable logic core (red light, fader start, broadcast button, talkback integration etc.)
- Integrated n-1/conference logic
- 2 PFL buses possible
- Serial interface for integration with radio automation systems
- Networking via TCP/IP

Configuration and maintenance

- Software for system configuration and logic programming
- Integral web server for system diagnosis
- Dedicated SW tool for software updates
- Remote maintenance using VPN

VisTool (option)

- Software for the enhancement of the control surface, support of touchscreens
- Visualisation of DSP parameters, signal levels and states
- Additional functions and controls (e.g. timer, snapshots)
- Min. PC requirements: PentiumIII-800 MHz with 512 MB RAM, OS Windows® XP Professional, Ethernet interface
- Supported resolutions: SVGA, XGA, SXGA, SXGA+, WSXGA, WXGA, UXGA

Panels (option)

- Several panel variants (19"/1 RU) with illuminated buttons, LCD-keys, potentiometers and GPIO
- Control of logic functions and level adjustment for e.g. conferences, talkback and monitoring
- Connection of up to 15 panels via CAN-Bus (opt. TCP/IP)

Please note that certain system components and functions may require individual configuration, which may incur additional costs, depending on the respective service provided.

As of September 2008. Subject to alterations.

The crystal key benefits at a glance:

- Professional and economical entry to digital broadcasting
- Standardised user templates for fast start-ups
- Ergonomic design and intuitive operation for unparalleled confidence in use
- Individual layouts are possible due to a comprehensive option list, as are customer-specific configurations

z4 – The small mixing console with a big performance.



Practical, compact and reliable – if ease of operation and everyday suitability are the prime criteria, then the z4 is the best solution. Whether required for small productions in an editorial environment or in the editor's workspace, our smallest console does a big job when it comes to studio interviews, telephone interviews or small features. Here, it's not just because of its compact size and flexibility, but also its functionality and high-value technology, that make the z4 a professional tool, suited to the most diverse requirements.

z4 – The small mixing console with a big performance.

z4:

Compact console for small productions.

Optimum technology, diverse applications.

The z4 is a digital 4-fader broadcast mixer that combines integral high-quality signal processing with freely configurable interfaces. The z4 is equipped with two fixed mic/line inputs and configurable analogue and AES3 inputs. Depending on the combination, the z4 offers up to 14 local analogue or digital inputs. Sampling rate converters on the input and adjustable clock frequencies of 44.1 and 48 kHz allow for optimal integration.

Analogue or digital signal processing.

All output signals can be analogue as well as digital. A multitude of special functions is directly aimed at the demands of the broadcast studio environment. Optionally, the z4 can be further equipped with MADI and SDI connections. The possibility of a login to the studio network via Ethernet opens up new ways when it comes to control. With this option, the user can access up to 256 further sources for use on the mixer, from an external routing matrix.

Gets the work done.

Small productions within an editorial environment, with telephone interviews and in-studio discussions, dubbing and feature mixes, are some of the most important and popular applications for the z4. In these situations, you need to produce a professional result in very little time. The excellent sound of the z4 is provided by, amongst other features, the integral high-quality voice processor and the full signal processing bandwidth from the high pass filter, gain, phase, expander, de-esser, and compressor, to the three fully parametric equalisers. Adjustable limiters in the four summing buses reliably prevent any overload.

Perfect as a soloist or a team player.

The z4 is also compatible with ENG vehicle and mobile on-air studio applications. Versatile monitoring possibilities, easy handling and flexible access to the signal processing are indispensable features in such situations. The operating philosophy of the z4 largely follows that of its 'big brother' zirkon; the z4 therefore blends seamlessly into a complex studio environment with large and small mixing consoles.

Comprising a remote operational unit and a 19" 1U base device, the z4 offers not only a compact space-saving solution but, with the constantly increasing number of input interfaces options, it is well prepared for changing requirements.



z4 – The small mixing console with a big performance.

Hi-tech Down Under.

z4, zirkon and Nova73 HD on air in Australia.

A massive continent with a great radio broadcaster: Australia and the Macquarie Southern Cross Media Company. This network, with approximately 85 radio stations, includes the Albury Radio Centre, which provides satellite-based programming for around 35 radio stations.

Most modern consoles, complete systems.

The Albury Radio Centre has been producing programmes for some time by means of an older digital routing system. Following years of reliable work, it was decided to replace this completely, together with their older mixing consoles. The most modern consoles and a scalable routing system were the requirements when these radio professionals contacted our Australian representatives in August 2007.

Ultimately, the Radio Centre chose the following products: three zirkon consoles, five z4 Mini Mixers, plus a Nova73 HD as the central, high-performance, router. While the zirkon consoles, fitted with 2s control surfaces, 12 faders and VisTool software, are intended for more substantial productions, the five compact z4s are used for less complicated programmes. Ease of handling and reliability in broadcasting operation mean that the z4s are predominantly used for newscasts, where the VisTool touch screen software also provides for greater ease of operation.

Solid solutions, uncomplicated operation.

Proven solutions were also chosen for the networking. All the mixing consoles are connected via the Nova73 HD – with a switching capacity of 3,000 crosspoints for the master control room. In deciding upon Lawo technology, it was not just a high degree of security, but key influences were also the superb ease of service and uncomplicated operation of the big Rastatt router.

Andrew Meachen, Sound Engineer at the Albury Radio Centre, comments on the project:

„We went for Lawo because of the reliability, flexibility and free configurability of their products; the transfer from old to new equipment ran without problems. Since installation, the entire system is running excellently and the commissioning process proved to be surprisingly rapid and simple.”



Editor's workplace with z4 at Albury Radio Centre, Australia



z4 at Bayerischer Rundfunk,
Munich, Germany

Technical Details

- Remote control surface
- 19" 1U frame with all inputs and outputs
- Different input interfaces (analogue mic, analogue line, digital, SDI, MADI)
- Channel modes: stereo, mono, left or right signal
- Integral signal processing
- 4 stereo summing buses with limiter
- Synchronisation via Wordclock, internal generator or external AES3; video sync optional
- 4 freely configurable buttons
- Intercom function to remote presenter suite
- 6 GPI and 8 tally outputs (galvanically-isolated)
- 10 Mbit/s Ethernet for control of external matrices
- RS232 for configuration and system monitoring
- Configuration software runs under Windows 2000® and Windows XP®

The z4 key benefits at a glance:

- Professional tool with superb functionality and high-quality technology
- Voice processor and limiters in the summing buses guarantee outstanding audio results
- High-quality and robust manufacturing assure sturdiness and longevity in operation
- Optional linking to external routing matrix controllers and Ethernet-based configuration

Routing – Profit from reliability.



To diminish the role of the routing matrix, especially in a broadcast environment, is to deny oneself significant opportunities; the importance we place on innovation and quality means that we greatly value comprehensive matrix performance. The starting point is operational reliability but the solutions cover sophisticated operational interfaces and complex routing structures. Considerable effort has been put into getting the design of our routing matrices right, and the consequent benefits are definitely worth your consideration.

Routing:

Optimum Control thanks to Maximum flexibility.

One for all.

The Lawo interface card is used in almost every Lawo product. From digital patchbay or on-air matrix through to extended audio networks, the interface card from our DALLIS I/O system handles it all. It allows a wide range of potential combinations and interconnectivity between products, and smaller installations can benefit from the high quality of top of the range systems.

State of the art.

Lawo products demonstrate the highest availability and flexibility. The STAR² architecture used in our router frames is becoming a de-facto audio industry standard, as it has been for some time in telecommunications.

Put your mind at rest.

Our products excel by virtue of their comprehensive redundancy, which is an essential attribute of any component at the nerve centre of your audio infrastructure. Our application of this philosophy extends from PSUs to the processor, and includes redundant failsafe structures such as double wiring, to eliminate single points-of-failure. Our strict attention to detail in this area ensures customer satisfaction and peace of mind.

Breaking new ground.

As one of the original manufacturers of digital audio technology, Lawo pioneered the use of ATM for audio transfers, and this has been an influential step in the field of audio networking. SDH/ATM is available as a standard interface across our product range, and is in ever-increasing demand.

Keep in touch.

We use TCP/IP over Ethernet as our control interface, since this provides maximum reliability, flexibility and capacity. TCP/IP was chosen as the basis for our control protocols and service interfaces as it has the added benefits of easy setup and distribution, as well as allowing remote operation and service diagnostics, which have been built into our products for some time. For example, a service technician can retrieve information from the integral web-server of a remote system matrix, simply through the use of a standard web browser.

Taking a back seat.

A primary characteristic of a reliable, high quality routing matrix is that it should sit seamlessly in the user's workflow. Lawo has an extensive range of software and hardware options for matrix design, thus allowing the appropriate ergonomic system to be created. Workflows can be automated – using our software for time-based connection it's possible to schedule lines, automate fades and manage scheduling conflicts. To achieve this, we use DSP resources integrated as standard into the routing matrices. Combined with our hardware, which allows the creation of control surfaces such as monitor selectors or audio sweetening devices, we can provide complete control of the broadcast environment.

Unlimited potential.

Our products incorporate general-purpose hardware and are distinguished by extreme flexibility. Based on an established technical and engineering knowledge, plus over 35 years of experience, we can meet the specific requirements of almost every project. There is practically no limit to the solutions that can be implemented using our wide product range.

Nova73 HD – Just what a router must be.



If a house is only as strong as its foundation, a network is only as good as its infrastructure – this is why with the Nova73 HD you won't only benefit from ease of system management and reliable operation, but also from innovative state-of-the-art technology that is more than capable when facing up to any competition. With the Nova73 HD, all its features are consciously designed for highest availability and simple handling – a terrific benefit, not just in everyday operation, but also in installation and maintenance.

Nova73 HD.

Highest availability and simple handling.

Reliability as a concept.

Plug and play! This was the starting-point for the design of our Nova73 HD router. Conceived for transfer-critical applications, the expression 24/7 is not just a vacuous tag in the case of this routing matrix, but rather a very firm reality. It's not just a case of exemplary operational reliability around the clock, but also about seamlessly handling processes that are not necessarily the order of the day.

Usability at its best.

Complex and flexible systems require configuration – a fact that one has to accept, but which can be approached in different ways. You can upgrade and re-configure the Nova73 HD while the system is running; hot plugging is no longer restricted to the replacement of similar components, but also allows system extensions, even when you are on-air. This, along with a synchronised audio-matrix, offers far more benefits than just a trouble-free installation.

High-Tech for High-Performance.

Our HD technology offers everything you'd expect from a modern routing system: 96 kHz operation, Dolby-E compatibility, signal switching clock-synchronised to video frames, integral signal processing, and direct connection of SDI signals for audio embedding and de-embedding. With its modular structure and high-performance architecture, you are more than prepared for tomorrow's needs. In addition, the Lawo STAR² technology guarantees reliability at its best.

Open architecture – for maximum flexibility.

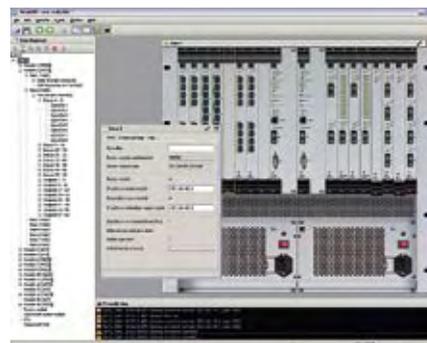
Nova73 HD is designed as a central router for audio and additional data. Its modular construction allows for flexible adaptation to real requirements and, in a single frame, a scalable routing capacity of up to 8192 mono channels. MADI, SDH/ATM and AES3 ports are available directly on the system core. Further interfacing possibilities may be supplied by Lawo's proven DALLIS interface. Homogeneously integrated into the system, a DALLIS enables the integration of further formats as well as the creation of a decentralised structure. Individual connections, as well as the complete system, can be designed with inbuilt redundancy – right up to our unique Dual Star architecture with self-healing topology.

Future modules with new formats and functions can be integrated without any problems. The open architecture makes the system an extremely flexible platform – and therefore a future-proof investment.

Guaranteed versatility.

Nova73 HD taps into the full potential of a digital and synchronous matrix system. For example, Nova73 HD carries out signal distribution accurately and to the point – clock-synchronised switching means the crosspoints are referenced to video frames and, if required, this can be applied to all destinations simultaneously.

The transparent transfer of audio data allows the distribution of additional information, and even compressed audio streams (eg. Dolby E). As crosspoints are, as standard, mono, signals can use any number of channels and be summed where, for example, stereo signals are routed to an individual mono destination.



Nova73 HD – Just what a router must be.

Comprehensive features.

Furthermore, the integral processing ranges from modulation control to gain setting – standard on every single input and output. Enhanced DSP features such as Automatic Gain Control, Equalizer, Dynamics and Delay are available – optionally provided on a dedicated DSP card with floating point processing and the very high quality of our mixing console algorithms. The synchronous crosspoint structure results in a defined latency of just a few samples; with a 96 kHz sampling rate, production and post-production requirements are easily met.

Ready to go.

Configuring the Nova73 HD matrix is child's play. All settings are easily implemented with the help of the software provided. This can either be done online or prepared unhurriedly off-line. With transfer to the system via Ethernet, the settings will instantly take effect without the necessity of a restart.

The Nova73 HD can be similarly upgraded during operation; additional components may be plugged in and configured without the worry of audio dropouts.

Easy to maintain.

Be it installation, system expansion or maintenance: the simplicity of the system will amaze you. The replacement of active modules can be carried out during operation without affecting any other components. When replacing I/O modules, the new modules automatically adopt the configuration of the old ones. In case of a fault, redundant components are activated automatically. Coupled with the maintenance software provided, you can keep a clear overall view of the system in any operational situation.

Nova73 HD Router Module



DALLIS I/O System



Nova73 HD System Core





Technical Details

- 19" 10U frame
- 16 slots for I/O modules (MADI, ATM/SDH, AES/EBU)
- DALLIS breakout boxes for decentralised structures and further interfaces (analogue mic/line, AES3, SDI, etc)
- Available interfaces:
 - Analogue Mic/Line
 - Headphones
 - AES/EBU (AES3), optional sample rate converter (SRC)
 - MADI (AES10)
 - SDH/ATM
 - HD/SD SDI (embedded audio) with SRC
 - ADAT® * with SRC
 - Data transfer (RS422, RS232, MIDI)
 - GPIO (Opto, Relay, VCA)
 - Transparent transfer (Dolby-E compatible)
 - Integral signal processing (DSP) with gain/phase, balance, mono mixing and silence detect. Optionally also with:
 - EQ (parametric or graphic)
 - Dynamics (Gate, AGC, Compressor, Limiter)
 - Delays (up to 10s)
 - Mixing matrix (64 x 64 channels)
 - Timed fader
 - Signal condition monitoring
- Sampling rates: 48/44.1 kHz and 96/88.2 kHz
- Synchronisation via Wordclock, AES3, Video, MADI, SDH/ATM or internal generator
- Control via Ethernet TCP/IP
- Basic operation and configuration software included (requirements: IBM compatible PC with Windows 2000/XP®, Ethernet connection)
- Optional redundant master module
- Optional redundant PSU
- Operating voltage 85 V to 265 V AC, 47 Hz to 63 Hz

The Nova73 HD key benefits at a glance:

- 8192 x 8192 I/O high performance core with STAR² technology (fully redundant design)
- Optical fibre network for decentralised structures supporting SDH/ATM for wide area applications
- Flexibility during operation – online configuration without service interruption
- Unique Dual Self-Healing Star topology for greatest availability

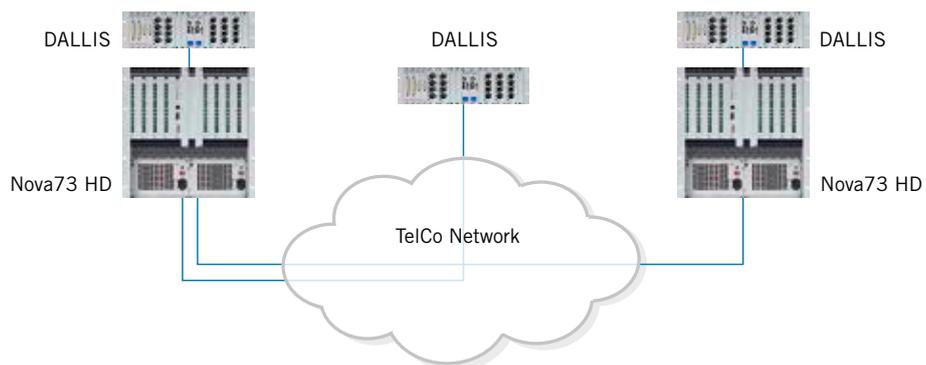
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Nova73 HD – Just what a router must be.

Application example:

Direct networking via telecommunication circuits.

Whether it is Beijing 2008 or a European soccer highlight – our cross-location networks can be used for many projects. The benefit is that routing matrix systems of various broadcasters can be connected with each other on a network that uses telecommunication circuits. This is where the Nova73 HD shines – as a high-performance and scalable routing system for real time audio that can be operated on an application-specific basis.



Perfect Redundancy.

For highest system availability.

I/O System

All modules in the I/O frame are linked to the mastercard by point-to-point connections. With an additional second mastercard, your system has a second, parallel, point-to-point connection, thus offering perfect security. Furthermore, point-to-point connections are inherently friendly to hot swapping (card insertion and/or removal on an active system).

Cabling

A further level of redundancy is provided by doubling-up the fibre links. In this configuration, the fibres are connected to double ports at both ends of the link so that, should a connection fail, there is always a backup connection.



System core

The HD core also uses point-to-point connections; unlike bus-based systems, faults can be reliably pinned down to their respective end points. The advantage of this is that, in the case of a fault, the entire system does not hang up, and components can even be changed during runtime.

Routing systems

For complete redundancy, a dual-core system can be deployed, whereby the second core can be set-up at a different location. A particular highlight of Lawo routing systems is the Dual Self-Healing Star architecture of the Nova73 DSHS. This architecture permits faults to be remedied independently by the system, without user intervention; a benefit that above all guarantees the highest efficiency in day-to-day operation.

Southern German technology for Northern Europe.

Danish Broadcasting Corporation broadcasts with Lawo equipment.



DR's Project Manager, Lars Sorner, summarises:

“Operational security is of outstanding significance with this installation. The ‘Dual Self-Healing Star’ concept is ideal for us, and together with the highest level of redundancy, we were able to actually implement our vision of the greatest possible security. In addition, the Lawo solution guarantees ideal scalability and interface variability.”

Founded in 1925, the Danish Broadcasting Corporation (DR) is the oldest and largest media organisation in the Nordic kingdom. With a market share of 71%, this public service broadcasting institution is clearly one of the public's favourites on the Danish radio airwaves, and its two TV channels – since recently, broadcasting in DTT (Digital Terrestrial Television) format – achieve notable ratings.

New Multimedia Center with Lawo technology.

In order to better handle its capacity, and also to be able to face future requirements, DR opened its Multimedia-Center in September 2006. The imposing new building, which can house up to 3,000 employees, is named DR Byen. Broadcasting from the centre commenced last year, and part of the package was Lawo's leading technology.

High fault tolerance thanks to innovative solutions.

In planning the project, those responsible had clear expectations. Apart from a high degree of practicality, the requirements were, above all, optimum reliability and fault tolerance. The system, devised by Lawo and its Danish partner Interstage A/S, was designed around the Nova73 HD router with two fully redundant stars. The installation, based on the DSHS (Dual Self-Healing Star) principle has four Nova73 HD cores, so that additional redundancy is available. To guarantee the best security, the cores were also installed in various underground levels of the building. A particular highlight of the system is that all system components are exchangeable during normal operation, so that maintenance and the setting up of new configurations can be performed during runtime. In addition, the network has superb integration capability because of its open control protocol, which permits the operation of other manufacturers' components.



Nova17 – The highest quality can now be compact.



Small in size but large in performance – with the Nova17 you benefit from the highest quality that you expect from Lawo routing matrices. This audio router shines with many features that guarantee absolutely professional work even with the smallest of systems. Whether in broadcasting, production or theatre sound, the flexible technology of the Nova17 can be used for signal distribution, as well as a format converter or MADI breakout.

Nova17:

Compact size – high performance.

As diverse as your requirements.

Nova17 is designed as a universal audio router that can be employed in a very flexible way, whatever your requirements. As many as 128 inputs and 128 outputs (mono) are possible with this modular and extremely compact router.

The external interfaces are designed as plug-in cards that can be inserted directly into the system rack, according to your needs. Optionally, MADI interfaces provide up to 256 additional channels for use, for example, in connections to mixing consoles, other matrices or breakout boxes, etc.

One central mastercard performs the routing and the signal processing, and includes interfaces for control and servicing. Software for basic control of the matrix, as well as the creation and management of configuration data, is included.

Proven system core and interfaces.

- Nova17 is based on the proven DALLIS interface system, and utilises its constantly growing range of interface cards:
- Analogue Mic/Line
- Headphones
- AES/EBU (AES3); optional sample rate converter (SRC)
- HD/SD SDI (embedded audio) with SRC
- ADAT® * with SRC
- Data transfer (RS232, RS422, MIDI)
- GPIO (Opto, Relays and VCA)

All interfaces are available in different variants. The central mastercard can be equipped with up to four optional MADI interfaces if required. All components are compatible with Lawo's range of professional mixing consoles and matrices for broadcast and production.

Power for performance.

The powerful routing matrix on the mastercard allows the control of all channels individually and severally. This also allows mono routing for AES/EBU interfaces. In addition, gain setting and time-related switching are only some of the features that distinguish the Nova17's performance from an ordinary routing matrix.

The router can be controlled via Ethernet, serial interface, or CAN bus. External devices such as keyboards or rotary controls can be connected directly to the central unit. Furthermore, VisTool software can be provided, for use as a touch screen operating surface; a remote protocol is provided for the integration of third-party controllers. Nova17 can also be integrated with a radio automation system. The central unit can be designed with full redundancy.

Perfect Synchronisation.

Nova17 works with sampling rates of 48 kHz or 44.1 kHz (depending on the mastercard type). The system can be synchronised either by using the word clock input (BNC) or via MADI; if no external synchronisation is supplied, the internal generator takes over. In addition, the clock output allows connected devices to be synchronised via word clock.

Simple servicing for efficient operation.

A software configuration system allows the unit to adapt and be extremely flexible in its environment; the general logic functions, opto-couplers, relays and VCAs are all defined and managed here. The networking ability of the software allows the central administration of several systems.

An integral web server, requiring only a conventional browser, enables convenient platform-independent monitoring of the system's technology via the network; an alarm contact in the system rack provides an additional safeguard.

Grab your stake in the future.

Nova17 is adaptable. Interface upgrades, talkback integration, the use of the system as a MADI breakout or the incorporation of the system into a larger structure are just a few examples of how users may easily expand or adapt a Nova17 in the future.

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Nova17 – The highest quality can now be compact.

Modular extension with custom panels.

With the remote control panels of the series TB and KSC you can easily extend the zirkon and the Nova17 systems. At a low cost it facilitates the equipping of workplaces like announcer, producer, guest and editor's stations. Common to all of these separate 19"/1RU devices is that they are fully integrated into the system configuration and that they can be conveniently connected via the system-CAN bus. Up to 15 of such control panels can be operated simultaneously by one system. As an option, the KS series with Ethernet connection is available.



TB-12

19"/1U panel with 12 illuminated buttons, talkback microphone and loudspeaker



KSC.T20

1"/1U panel with 20 illuminated buttons



KSC.LCD16

19"/1U panel with 16 LCD buttons



KSC.LCD15P1

19"/1U panel with 15 LCD buttons and one rotary control for use as level control



KSC.LCD14P2

19"/1U panel with 14 LCD buttons and two rotary controls for use as level controls



KSC.GPIO32

19"/1U panel with 32 GPIO contacts and eight VCA inputs

More operating satisfaction with VisTool.

An improved overview and extended functionality – the VisTool touch screen software makes it all possible. On a graphically attractive screen layout you can keep an eye on signal level and DSP parameters at all times. You will profit from additional tools such as trigger circuits or central snapshot databases, and can freely arrange the console's control panels to meet your own needs.



Technical Details

- 19" 3U or 6U frame
- Mastercard with controller and router, optionally including:
 - 1 MADI interface (optical MMF 62,5/125µm)
 - 4 MADI interfaces (optical MMF 62,5/125µm)
- 18 slots for I/O cards (16 for use as audio I/Os)
- Wide range of plug-in cards: analogue Mic/Line, headphones, AES/EBU (AES3), optionally with sampling rate converter (SRC), HD/SD SDI (embedded audio) with SRC, ADAT® * with SRC, data transfer (RS232, RS422, MIDI), GPIO (Opto, Relays and VCA)
- Transparent transfer (Dolby-E compatible)
- Integral signal processing (eg. Gain, EQ, Dynamics, Delay)
- Sampling rate of 48 kHz or 44.1 kHz (depending on mastercard type)
- Synchronisation via Wordclock, MADI or internal generator
- Control via Ethernet TCP/IP, RS422 and CAN bus
- Software for operation and configuration included (system requirements: IBM compatible PC with Windows 2000/XP®, Ethernet connection)
- Optional redundant mastercard
- Optional redundant PSU
- Operating voltage 100 V to 240 V AC, 48 Hz to 62 Hz

The Nova17 key benefits at a glance:

- STAR² technology provides fully redundant controller and routing matrix
- Easy integration with optical MADI interfaces
- 384 x 384 I/O, integral DSP and programmable logic
- Adaptable and cost-efficient by modular design

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Networking – Wherever integrated design and highest efficiency are required.



As a sound engineer, you are constantly confronted with ever more complex requirements. All the more reason to count on a partner whom many rely on today for solutions that meet the challenges of tomorrow. A partner such as Lawo; a company that, early on, recognised the growing significance of networked systems, integrated designs and intelligent solutions.

Networking:

Intelligent solutions for integrated design.

System solutions:

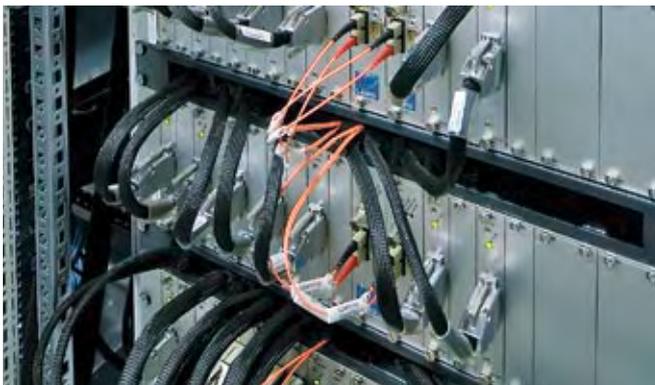
Because the whole is greater than the sum of its parts.

While individual devices used to be the norm, in today's environment, unified designs are the order of the day. For this reason, Lawo relies upon a product philosophy that guarantees maximum coherency in all areas. So, as with a jigsaw puzzle, all the various components fit perfectly together, and can be linked into an ideal system. In real terms this means, for example, that since all mc² mixing consoles rely on the same basic technology, they can be linked together within a large broadcasting complex. The benefits of this HD core based system are clearly apparent: from the control of various mixing consoles through to connection with several OB units, you can rely upon maximum flexibility and efficiency with Lawo.

Audio networks:

Where it is a question of availability and reliability.

Irrespective of whether it's a temporary routing system required for the football World Cup or permanent networking within a radio station, with Lawo networking you will be opting for solutions whose performance has been tried and tested. The most important reasons that Lawo proves itself, particularly with demanding projects, are the high availability and reliability, scalability and flexibility that are the essential features of a Lawo routing matrix.



Advantage 1:

Unlimited scalability.

Because of the networking capability of Lawo routing matrices, a virtually unlimited scalability can be achieved. In this way, your routing system can be adapted to suit growing requirements without problems, and is ideally suited to cope with demands of the future; a key point in terms of maintaining value and return on investment.

Advantage 2:

Maximum flexibility.

Apart from audio streams and serial data streams, integrated system data can also be transferred. And another advantage: a comprehensive range of complementary products is available, from custom panels through to high performance mixing consoles, thus assuring an optimum upgrade path for your systems.

Advantage 3:

Highest reliability.

Fault tolerance and high reliability are the key requirements for any audio network. For this reason, we do not just attach great importance to the quality of our components, but also offer many possible options in terms of redundancy, from doubling-up all fibre links through to Star² architecture.

Advantage 4:

Convincing efficiency.

The efficiency of our audio networks is apparent in many areas. Unified solutions lead to a high level of everyday suitability, pioneering concepts guarantee absolute technical sustainability, and our customer-specific approach ensures that you are provided with a network that is exactly customised to your requirements. Last but not least: with Lawo networking, you will achieve a level of cost and time efficiency that will pay dividends for years.

RTL Media Corner in Brussels, Belgium,
with a network of Lawo equipment

Networking – Wherever integrated design and highest efficiency are required.

RTL in Belgium demonstrate its confidence in Lawo network solutions.

RTL-TVI and Bel RTL use Rastatt technology.

RTL TVI in Brussels was the first private broadcaster to become established in Belgium, and today reaches the majority of French-speaking viewers in that country. In order to further expand this leading position, a new RTL building had to be created. But the shining facades alone were not enough by far for the new RTL Media Corner, which came online in 2006; its technology was also required to fulfil the highest demands.



“What was required in particular was a consolidated system, and it was here that Lawo was most convincing. Because of the networkability of the individual components, we were able to set up an integrated broadcasting complex that gave us plenty of flexibility in operation.”

Thierry Peters, Head of TV Technical Service, RTL Belgium

Customised infrastructure.

Those responsible for the project were looking for unified solutions that would be characterised by high compatibility and the best networking possibilities. It was here that Lawo was able to provide a coherent product philosophy and its extensive know-how. In concrete terms, the installation was based on a Nova73 HD routing system, which serves as a central audio routing matrix for the TVI complex. The Nova73 HD has a switching capacity of up to 4,000 inputs and outputs, and all studios are fully redundantly interconnected via MADI links.

Mixing consoles and the network.

For mixing consoles, RTL-TVI decided on two mc²66, one zirkonXL and one zirkon. The identically configured mc²66 consoles are equipped with 16+8+16 faders, and have 96 fully fitted DSP channels, as well as their own local I/Os in the studios. By networking the mc²66 with the Nova73 HD, router signals can be selected and used in all studios. Both zirkon consoles also have local I/Os, and can also pick up signals from the Nova73; selections can be made directly at the mixing console.

New radio studios also equipped by Lawo.

In addition to the TV studios, the Bel RTL radio station was also fitted out with Lawo technology. Here, a Nova73 HD with 4,000 mono channels and full redundancy is used to handle the central audio distribution. In the master control room, all audio connections are made digitally, while in each of the five studios there is a DALLIS interface system, each with AES and analogue I/O. Apart from one redundant router card, all the MADI connections to the various cards are doubled up. So now Rastatt hi-tech has made its mark in Brussels and is serving Belgium reliably – around the clock and with something new every day.



OB Vans – Mobile solutions for complex requirements.



Maximum ease of operation and reliable technology characterise Lawo OB vans. For over 20 years, we have been fitting medium and large sized OB vans with mixing consoles, and work as the main contractor to ensure the smooth handling of every aspect. But it is not just in the case of chassis building, fitting internal equipment and furnishing that you can rely on Lawo know-how. Our well thought out designs demonstrate their advantages when it comes to demanding live broadcasts; a benefit that you will particularly appreciate during hectic productions.

OB Vans:

Complete solutions for mobile productions.

Full range of OB van construction.

Lawo offers a complete range of OB van and mobile system solutions. This includes radio ENG vans (with or without RF link) as well as mid-sized and larger radio OB vans. As the main contractor, we can supply mobile system solutions to suit your needs and applications, whether they are related to broadcasting, end-to-end applications or music production. Specialised custom systems are also available. Lawo can also act as a sub-contractor, equipping radio and TV OB vans with digital mixing consoles and routing matrix systems.

Innovative technology and wide product range.

Our success in the OB field has been founded on our ability to offer a variety of mobile solutions, ranging from our z4 digital minimixer, used as a portable unit, to larger systems such as the mc²66 or mc²90. We offer rack-mounted components such as stage boxes, and MADI or ATM-based fibre optic lines with different format I/O's, or even complete large-scale digital mixing consoles with integrated routing matrices.

Experience that you can rely on.

Since the mid-80's, a large number of radio OB vans have been produced under the management of Lawo, and fitted with the latest Lawo mixing console technology. We started with analogue consoles in the 70's and 80's, followed by the programmable analogue consoles (PTR family). These were later replaced by the fully digital mc series consoles and their successors, the mc² series. We also specify z4, zirkon and zirkonXL, as these systems are fully networkable and are perfectly suited for use in OB vans. Since mid-2004, the mc²66 has been available for OB van projects. By the end of 2007, more than 60 mc² series consoles had been installed in radio and TV OB vans.

Quality on wheels.

An experienced team of project managers, project engineers and technicians guarantees the continuity of projects in this field; for chassis construction, we work closely together with experienced and well known companies.



mc²66 inside radio OB vans

ENG van on the road for Südwestrundfunk, Germany



One of the largest OB vans in Europe – now with Lawo technology on board.

Prisma OB equips HDTV OB van with mc²66.



“For our HDTV OB van we did not want to be content with less than the optimal equipment. This is why we have decided for the best surround mixing console on the market: the mc²66 from Lawo.”

Mikael Krantz, Technical IT Manager,
Prisma Outside Broadcast

The Swedish production company Prisma OB is a premium league player in the field of mobile broadcasting. It is not just the fact that the company was at almost every mega-event over recent years, but forthcoming TV highlights will also see these Scandinavian experts ready for the action to begin. Thus the Beijing Olympics will also – amongst others – be broadcast by Prisma OB, thanks to Lawo audio technology.

A new reference for OB vans.

In order to be best equipped for the forthcoming challenges, this Swedish company decided to build a top-level HDTV OB van. The basic figures alone hint at the capacity that will be available: at 16 metres long and 4 metres wide, the mobile studio will have work space for 32 vision mixers and two sound engineers, making the HD-1 one of the largest OB vans in Europe.

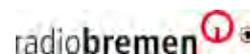
The high-performance Lawo mixing console.

It is not just the sheer size of the HD-1 that is impressive, but also its innovative technology. This is why a 5.1 surround-capable mixing console, that has become the new standard in OB van construction, was installed – the Lawo mc²66. The features of this console are also impressive: 2,100 inputs and outputs for the central router, console control surface with 48+8 faders and over 300 DSP channels, as well as I/O with 80 HD SDI embedders and de-embedders. In addition to that, the mobile stage boxes are connected redundantly to the OB van, providing 32 remotely located mic inputs, 16 digital I/Os and 16 GPIs. With this first-class technology, Prisma OB will also be able to deliver a top-level performance in the future – what with world-class sport in Beijing, as well as with other planned TV highlights.



The Lawo reference list.

These are only some of our customers. For a full reference list, please contact our headquarters in Germany or our subsidiaries in Australia, China, North America or Switzerland.



Lawo is Supplier of the mixing console for Formula One host production in the season 2008.



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