Merlin

Merlin is D&R's answer to the ever increasing demands placed upon the high-tech studio world of the 90's.

A recording console with superb elecronics, *true* dual input path design, complete recall of all digitally controlled routing and switching functions, and two highly automated signal paths per module, Merlin is about to change the way you view recording consoles - forever.

The D&R design team has broken new ground with Merlin's digital recall "ARM" system and its associated master controlled and automated status switching. Easy to understand, yet incredibly powerful, ARM threatens to revolutionize the way consoles are designed. Add to this D&R's reputation for handcrafting consoles of the highest order, you will begin to understand how Merlin's power has already begun to weave its spell over the recording industry.

THE BEGINNING.

Before we get to the fun stuff, before we try out Merlin's "magic", we have to start where all D&R consoles start - at the beginning. At D&R, every console begins with extreme attention to sonic detail and impeccable specs. And Merlin is no stranger to this tradition - with one possible exception. D&R's design team not only "went the extra mile", but put in a marathon or two to insure that our reputation for "sonic integrity" not only remains intact, but actually excels previous efforts.

When D&R entered Merlin's design phase, we took a long hard look at the strengths and weaknesses inherent in this type of console. We knew that for a console of this type to become a D&R, it would need to meet if not exceed the high sonic standards we are well known for.

The strength of this design - the recall facility, the highly automated signal paths, and the digital routing schemes - were all subjected to D&R's unique brand of clever engineering. We think you will find the results evident in Merlin's unique features.

On the other hand, the weaknesses, the pitfalls encountered by some manufacturers that employ this type of technology - high noise, digital crosstalk, and degraded sonics- were studied, analyzed, and rethought.

It wasn't easy, but each and every negative was met and overcome with a positive. What's the positive you may ask?? D&R's 23 plus years of design and manufacturing experience. Experience that made all the difference. Experience that, after auditioning Merlin, will be audibly evident to your ears.

Though Merlin is highly automated with the latest digital control technology available, the sound of the console remains true to its D&R heritage -Transparant and Silent. An accomplishment that D&R is decidedly proud of.

TRUE DUAL INPUT PATH.

Let's talk first about Merlin's unique input modules. Merlin started its journey with noble aspirations - *the first true dual input module* to hit the audio industry.

Makers of in-line consoles (D&R included) were among the first to lay claim to this territory.

But when it came time to really "double" the amount of usable inputs for a complicated tracking session or mix, one equalizer and a limited number of Aux sends didn't make it. Engineers wanted more. They *needed* more. The next generation of apparent heirs to the throne arrived with a modified in-line design.

They had separate equalizers and faders on each input path, but once again they had to split a limited number of Aux sends between the console's two input paths.

A few even had automation on both signal paths, but in most cases their EQ was sorely lacking by professional standards and their routing flexibility was not all that it could have been.

When Merlin was little more than an idea in our minds, we set out to make a console that would have absolutely no compromises when it came to having a functionally usable dual input design.

Merlin is much more than an in-line or dual EQ console. It is the first serious dual input console that you can buy. Period.

Intended for serious world class mixing and tracking sessions, you can be sure that a studio equipped with a 32 frame Merlin has the equivalent of 64 truly usable automated input modules - with every function duplicated on both input paths! (Contact D&R's Merlin support staff for additional technical information). If Merlin has not yet cast its spell upon you, perhaps you should consider selling timeshares in Fiji.

AUTOMATION.

D&R was one of the first manufacturers to offer consoles that were "automation ready". But in recent years, it became apparent to us that engineers wanted a console whose basic philosophy demanded a higher degree of automated control.

Merlin has two *highly automated* input signal paths per module including: TWO VCA or optional motorized faders, TWO automated mutes, TWO automated insert in/out switches, TWO automated Aux send mutes, and, through the power of Merlin's ARM, automated access to 12 additional functions per input module. The power of Merlin's automation comes standard with every console. (Moving faders optional). This potion sounds incredibly powerful, yet it doesn't take a rocket scientist to operate.

Through the magic of Merlin, anyone with

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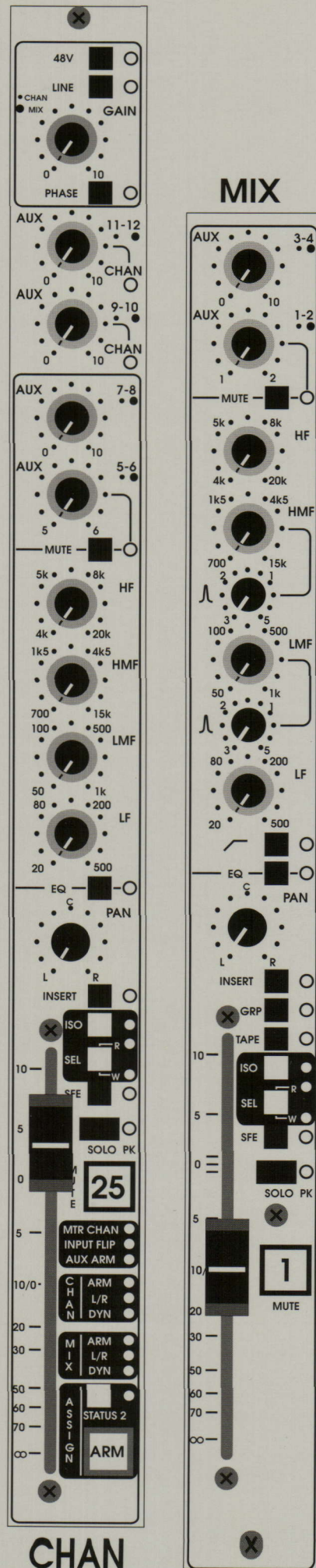
CHAN

just a bit of studio engineering experience can be up and running a session in a matter of minutes.

VCA'S ??!!

Oh, one more thing. Merlin's VCA's can be switched out of the signal path individually in both the channel and mix path.

AND, unlike some consoles, there are no expensive options to make the module faders usable when the VCA's are defeated.

You still have complete control over signal routing and complete non VCA fader control over your signal when the VCA is out of the path. No options, no costly retrofits. (Yes, we were listening.)

Soon we will be adding D&R's optional Dynamics package to this already powerful automation system.

D&R demands cutting-edge technology from all its consoles. Excited yet?

(Automation note: Unlike many consoles that offer motorized faders, when Merlin employs our unique PowerFade (motorfader) automation, the VCA DOES NOT remain in the signal path. We offer motorfader automation for those who demand no VCA's in the signal path. In Merlins' master section, you will find two stereo mix faders to choose between. A VCA master fader which can be automated via VCA's, and a high quality audio taper fader for those who do not want their signal going through an additional VCA. Another D&R first. D&R always puts superb electronics before bells and whistles, and uses only the highest quality VCA's available.

ARM RECALL.

This is one powerful feature that when combined with Merlin's other unique features, make it like no other console in the world - at any price! Merlin features instant snapshot automation of all ARM's master status and individual channel status switching and routing through its powerful Recall / Automation microprocessor.

The status of individual modules or the status of the entire console can be recalled at the touch of a single button (there is also a status 2 switch on every module that can be used to instantly recall a secondary channel setup). Individual module routing status may be copied between modules to quickly set up templates.

Templates can be stored in the Recall computers memory for convenient resetting of all console status routings.

What does it all mean? The engineer can easily reconfigure the consoles routing - instantly. Setup for a new session - instantly. Go back to a previous console status (or individual channel status) - instantly. Automate routings against time code - instantly.

We're sure that by now you must be feeling the mystical power of Merlin's magic. But wait... that's not all that's in store for you.
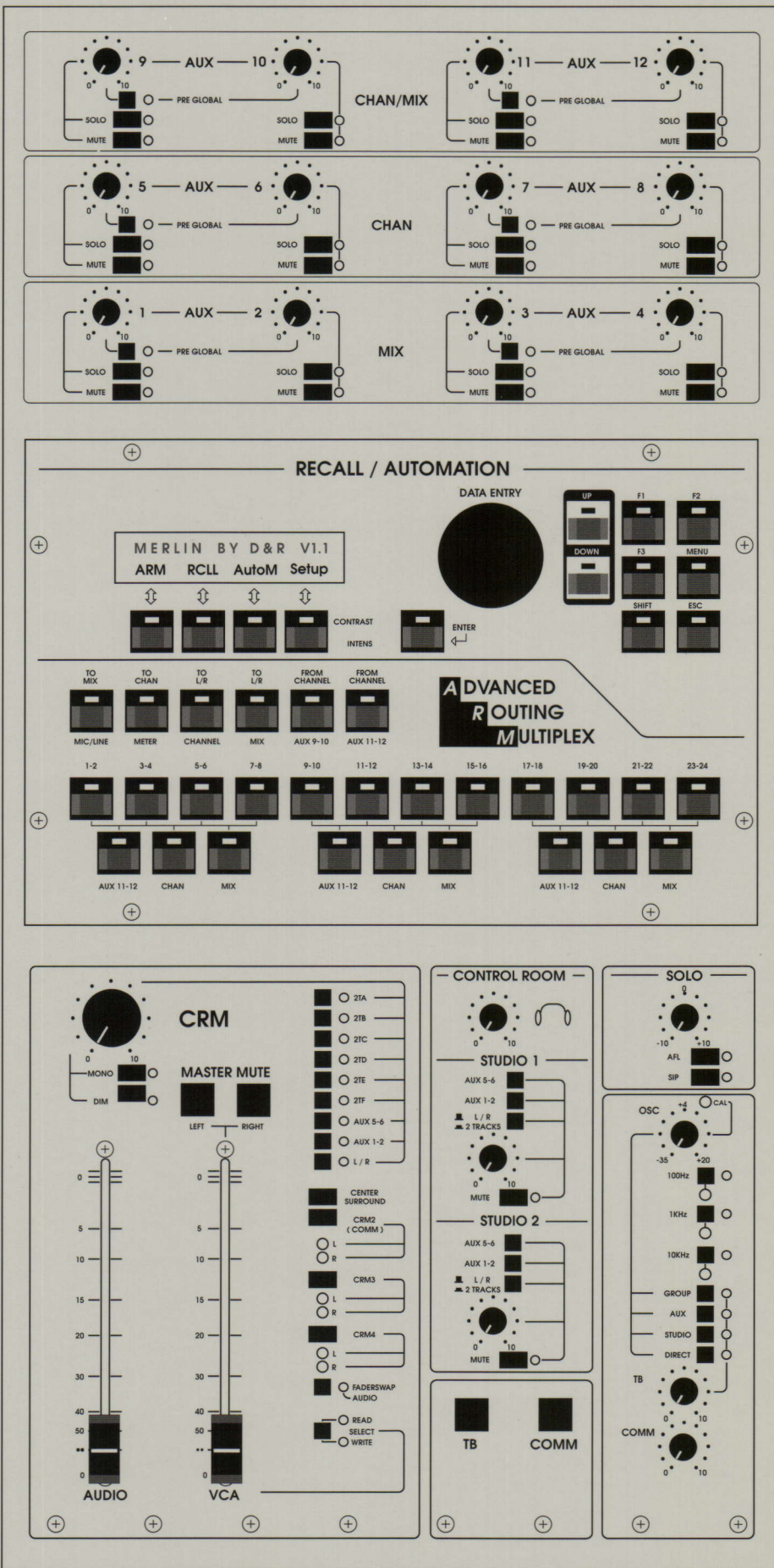
ARM - ADVANCED ROUTING MULTIPLEX.

Much of Merlin's power lies in its ARM - the unique Advanced Routing Multiplex. When D&R was seeking an elegant solution to the complex problem of module layout, we developed the concept of ARM. Not wanting a myriad of switches on every input module that complicate physical layout and confuse visual monitoring, ARM allowed the console operator to clearly and quickly see any signal path's routing at the touch of a button.

Intuitive, incredibly powerful, and easy to use, ARM allows the group busses to be accessed by the Mix, Channel, and Aux 11/12 paths - either individually or simultaneously in three blocks of 8 routing busses.

Channel routing status becomes easy to visualize and quick to change without jumping over the whole console. **The bottom line?** This powerful matrix allows access of up to 36 Aux sends during mixing, access to the 24 group busses from both signal paths simultaneously or individually during tracking, and in advanced applications, allows the engineer access to signal routing possibilities that even we haven't envisioned yet.

ARM's applications for post production and music mixing are staggering, but it's exactly what is called for in an area where recording consoles called upon to "to do it all". Merlin offers routing possibilities that are unlike anything else you can buy.

Merlin's ARM is one humongous bicep that would make the most buff body builder green with envy.

JUST THE FACTS....PLEASE!!!

Merlin was designed to be a world class mixing/recording/post production console that is second to none.

Two Merlin frames are available, the 40 Frame accepting up to 32 dual input modules and 8 dual stereo return modules creating up to 64 mono inputs and 16 stereo returns. The 56 Frame will accept up to 48 dual input modules and 8 dual stereo return modules, creating up to 96 mono inputs and 16 stereo returns. Both frames come standard with a patchbay.

MERLIN'S BASIC FEATURES.

Dual Input Module - high resolution 25 segment LED bargraph meter per channel, ultra linear high performance mic pre, 12 discrete Aux sends - switchable to 36 Aux sends, two (2!) hi-def four band *fully sweepable* EQ's (the Mix path EQ has variable Q in the mid bands), two inserts and insert in/out switches, two solo's, two solo safe's, two mutes, two Aux send mutes, two sets of automation controls, status LEDS on every switch and function, ARM LED array, and two 100mm faders.

Merlin's **Recall Section -** Instant push button snapshot recall of all console routing

setups featuring snapshot recall of all ARM digitally controlled routings and assignments, console reconfigure at the touch of a button, and session templates for easy and accurate setup.

Merlin comes standard with **Power VCA Automation** and is available with an optional motor fader automation package. In addition, an optional **Dynamics** package is available for either system.

Each input strip comes standard with two automated faders and 6 automated switch functions which can be dynamically automated against timecode - two mutes, two insert in/out switches, and two Aux send mutes.

An additional 12 functions can be automated via Merlin's ARM Recall.

Merlin's **ARM** allows access to the group busses by the Mix path, Channel path, Aux 11/12 or any combination of the three, allowing functions and extremely complex routings that are difficult at best on other consoles.

Functions such as 36 Aux sends during mixdown or tracking and mixing complicated LCRS routings have been made easy - and instantly resetable - because any ARM set-up can be recalled at the touch of a button.

A comprehensive master section is fitted to allow the engineer to easily control the most complex sessions.

Merlin comes standard with monitoring facilities ready for interfacing a LCRS Surround Sound Processor. The CRM monitor control is a four channel pot with switching for up to four sets of control room monitor systems and "LCRS" outputs.

Merlin will allow you to source up to six stereo sources (which can all be summed) as well as monitoring of Aux 1-2 and Aux 5-6 (for stereo cue systems).

An extensive communications system, oscillator section, two studio cue systems, Recall / Automation controls, ARM section, and 12 Aux send masters complete the master section.

Patchbay - Merlin comes standard with up to an 816 point balanced TT patchbay which includes 256 Tie-lines and complex master patching.

Metering - Merlin is fitted with master analog VU meters, high resolution peak meters, and a phase meter. Each dual input module comes standard with a 25 segment peak meter fitted in the meterbridge. This gives you a brief overview of the power that Merlin will unleash for those who use him.

SPECIFICATIONS.

INPUTS.
Mic inp: 2kOhm bal. -129 dBu, gain 84dB.
Line inp: 10kOhm bal. +/-20Bu, gain 34dB.
Tape inputs: 10kOhm bal. +4dBu / -10dBV.
Insert returns: 10kOhm bal. 0dBu.

OUTPUTS.
Tape outputs: +4dBu/-10dBv selectable.
All outputs: +4dBu bal. max +26dBu.
Insert sends: 0dBu (gnd. comp.) bal.

OVERALL.
Headroom: no less than 22dB.
Freq. resp: 10-200.000Hz -2dB
Harmonic distortion: 0.007% (VCA out)
Harmonic distortion: 0.016% (VCA in)
Noise: 32 channel routed -89dBr.
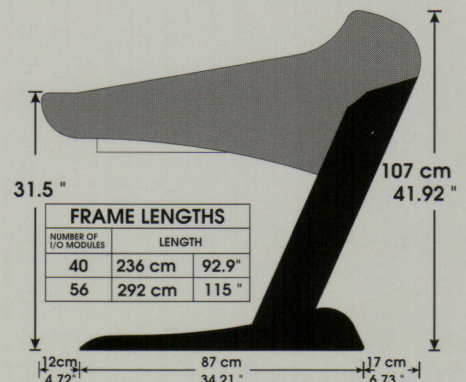Crosstalk no less than 90 dBr

CONFIGURATIONS:

Merlin 40: 24 dual-line modules / 8 stereo-returns / 12 blanks / patchbay.

Merlin 40: 32 dual-line modules / 12 stereo returns / 2 blanks / patchbay.

Merlin 56: 48 dual- line modules / 16 stereo returns / patchbay.

WEIGHTS AND DIMENSIONS

Merlin 40: 280kg / 616Lbs.
Merlin 56: 360kg / 792Lbs.

FRAME LENGTHS		
NUMBER OF I/O MODULES	LENGTH	
40	236 cm	92.9"
56	292 cm	115 "

31.5 "
107 cm
41.92 "

12cm 4.72"   87 cm 34.21 "   17 cm 6.73 "

For more information about Merlin, contact D&R's support staff at one of the following offices.

D&R

MIXING CONSOLES