RM1d / RM1ds Typical Specifications

Frequency Response	All Outputs	+0.5/-0.5dB, 20Hz – 20kHz
A-D & D-A Conversion	Sampling Rates	44.1kHz, 48kHz
	All Inputs	24-bit, 128x oversampling
	All Outputs	24-bit, 128x oversampling
	Signal Delay (Channel In to Mix Out)	< 1.4ms @ 48kHz
	External Word Clock	AES 11/BNC
SRC	Sample Rate Conversion Range	40kHz – 50kHz
Dynamic Range	Internal DSP	24-bit (56-bit bussing)
	Mic/Line Input to Mix Output	106dB
	Stereo Input to Mix Output	106dB
T.H.D.	Mic/Line Input 1kHz@30dB gain to Mix Output@+14dBu	< 0.01%
	Stereo Input 1kHz@0dB gain to Mix Output@+14dBu	< 0.005%
Noise	Mic E.I.N.	< -127dBu (150Ω source)
	Mix Output (Mix fader down)	< -90dBu
	Mix Output (Mix fader @ unity, no channels routed)	< -90dBu
	Mix Output (Mix fader @ unity, one channel routed)	< -88dBu
	Mix Output (Mix fader @ unity, two channels routed)	< -86dBu
Crosstalk	Adjacent Channels	> 90dB
	Fader Attenuation	> 100dB
	Channel Mute Attenuation	> 100dB
Filter	HP	Frequency programmable, 12dB/octave
EQ	HF	10kHz, +/-12dB
	MF	500Hz - 8kHz, +/-12dB
	LF	100Hz, +/-12dB
Metering	Two VU or PPM meters with source from STE1/PROG, STE2/AUD or follow control room selection. Extra pair of meters provided on 12-fader consoles.	
Power Consumption	100W	
Operating Conditions	Temperature Range	-10°C to +30°C
	Humidity	0% to 80%
Power Supply Unit	Type (RM1d / RM1ds)	DPS-1 / DPS-2

INPUT & OUTPUT SPECIFICATIONS

Input & Output Levels	Mic/Line Inputs	-60dBu to 0dBu
	Stereo Input	-18dBu to 0dBu
	Max. Output	+18dBu into 1kΩ
Input & Output Impedances	Mic Input	Selected: XLR 2k4, Jack 3kΩ Deselected: XLR 5kΩ, Jack 8k3
	Line Input	Selected: XLR 5kΩ, Jack 8k2 Deselected: XLR 5kΩ, Jack 8k3
	Insert Returns	> 10kΩ
	All Outputs	< 75Ω
Nominal Level	Analogue Inputs & Outputs	0dBu = -18dBFS

Soundcraft

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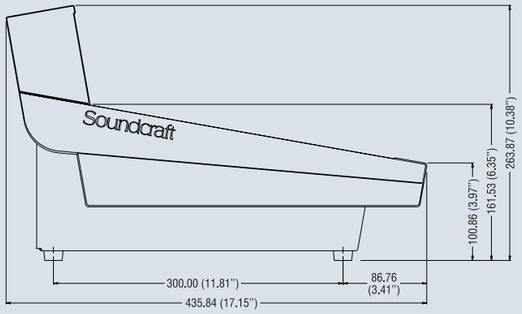
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This equipment complies with the EMC Directive 89/336/EEC

Part No. ZL0610

H A Harman International Company

CE

RM1d / RM1ds Dimensions & Plan Views



Console	Overall Width	Weight*
6-fader	431.40mm (16.98")	15kg (33 lbs)*
12-fader with script tray	851.40mm (33.51")	25kg (55 lbs)*
12-fader without script tray	624.40mm (24.59")	20kg (44 lbs)*

*Not including power supply unit & cables

PLAN VIEW: 6 FADER CONSOLE



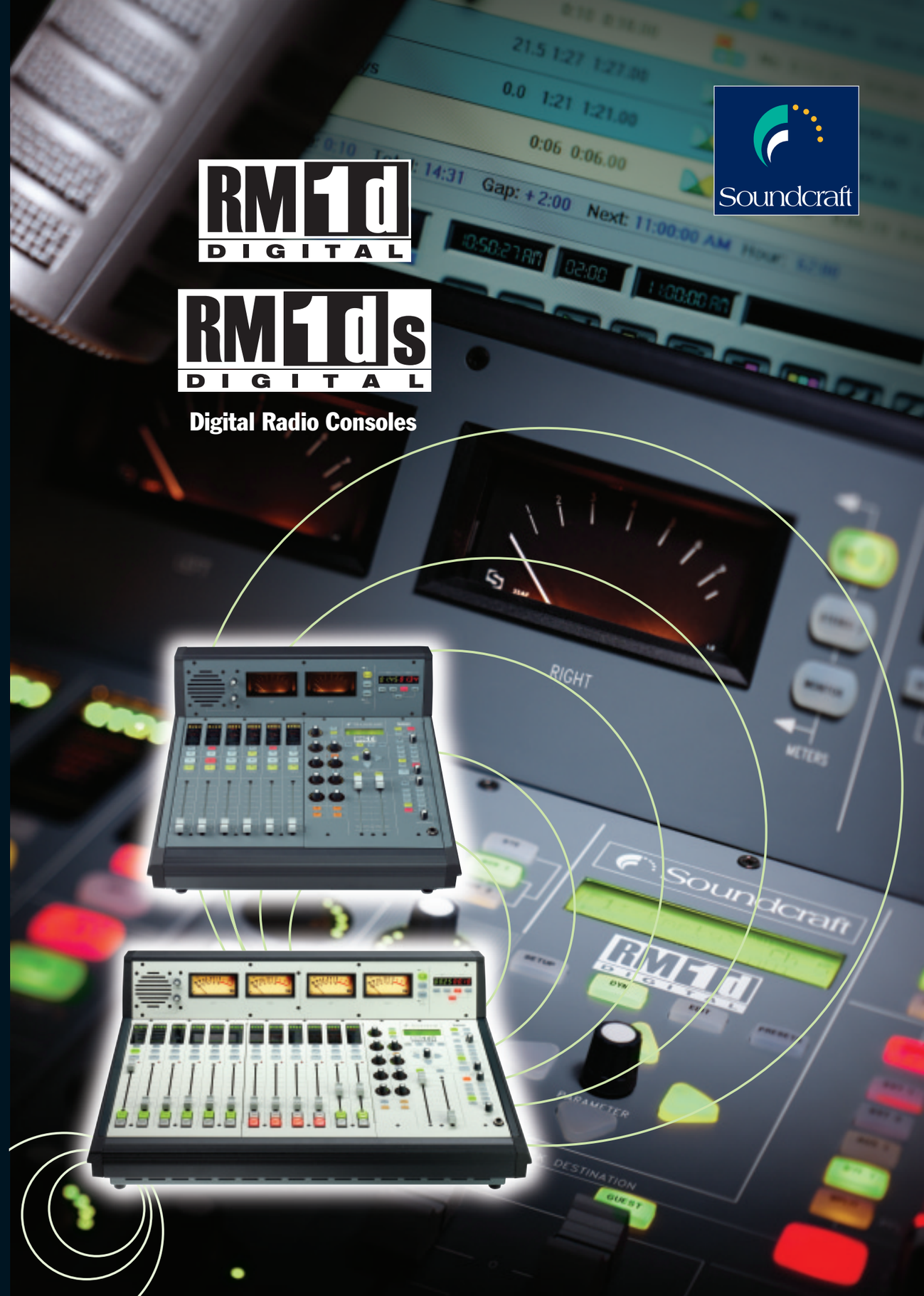
PLAN VIEW: 12 FADER CONSOLE



PLAN VIEW: 12 FADER CONSOLE WITH SCRIPT TRAY



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A comprehensive, affordable, digital radio console from Soundcraft

The advantages of mixing in the digital domain are well known by all involved in radio on-air and production. The facility to re-configure the console with a single button push is essential in the modern, self-operator broadcast studio and significantly increases efficiency during production. Equally important is the improvement in sound quality derived from an all-digital signal path. Stations also reasonably expect more sophisticated mixing facilities for their money through the application of digital technology and, with Soundcraft's RM1d Digital Radio Console, you won't find yourself paying for each and every element of the console as an optional extra. The RM1d has an ergonomic and intuitive control surface which means that, as well as being instantly familiar to all users of existing Soundcraft broadcast consoles, it is also the perfect desk for preparing students for a broadcasting career. And if a North American style surface is preferred, we offer the RM1ds variation. These consoles are flexible, sophisticated and stylish digital mixing solutions that are ready to plug straight into any existing set-up, with everything included in an already very competitive price.

RM1d in operation at the production studio of Unique Facilities West End Studio, London. **www.unique.com**

RM1d DIGITAL | RM1ds DIGITAL | DAB digital radio hearing is believing

A choice of consoles

The RM1d / RM1ds is available in three frame sizes: 6-fader, 12-fader with script tray and 12-fader without script tray. The 6-fader RM1d (pictured left) features 6 input channels on the left of the console and a master section on the right. The meterbridge offers two assignable meters, a cue speaker and dual timer. The 12-fader RM1d with script tray (pictured below) incorporates 12 input channels, a centrally mounted script tray and master section. The meterbridge houses four meters, as well as a cue speaker and dual timer.



RM1d





RM1ds

A SELECTION OF RM1d USERS

- **BBC Wales, BBC Belfast, BBC Cardiff**
- **RTE Dublin**
- **Entertainment Network, Ahmedabad, India**
- **Radio Mix FM, Kaliningrad, Russia**
- **Radio Classica, Moscow, Russia**
- **Radio MW, Moscow, Russia**
- **Radio Mirchi, Vejalpur, India**
- **Ryerson University, Toronto, Canada**
- **Yleisradio, Jyväskylä, Finland**
- **DJ Oskita, Dordrecht, Netherlands**
- **WHA-TV, Madison, WI, USA**
- **Radio Mayday, Croydon, UK**
- **United Nations, New York, USA**
- **T.D.E.G., TG-JIU, Romania**
- **Swedish Television, Stockholm, Sweden**

(No endorsements implied)

RCS INTEGRATION



The RCS Master Control automation system, fully supported by RM1d software, provides advanced track warnings and play/stop control of tracks from the desk ON/OFF switches. Connection to the RCS system is via standard analogue or AES/EBU, SPDIF or TDIF digital formats, and RS-232 interfaces.

- **Digital broadcast console with digital and analogue inputs**
- **Available in 6-fader or 12-fader frame sizes**
- **Familiar analogue style control surface**
- **Fully assignable inputs***
- **Flexible input and output routing**
- **128 console-wide presets provide instant recall of all settings**
- **Built-in dynamics processing and Lexicon effects**
- **Meterbridge with integral cue speaker and dual timers**
- **Operating software provides RCS integration, password lock-out facilities, easy-to-navigate set-up, dynamics and effects menus, and advanced cue'ing functions**

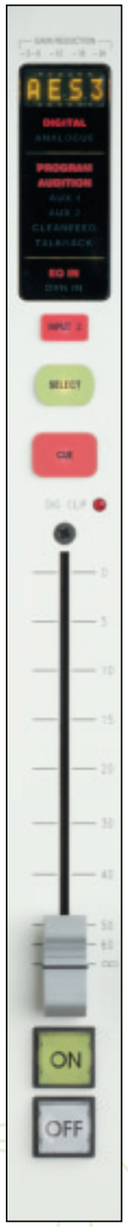
*On the 12-fader versions of the RM1d / RM1ds, the SPDIF 1 and 2 inputs have limited assignability.

Sophisticated, flexible & easy to operate

The RM1d dual-input channel strip



The RM1ds dual-input channel strip



Input Channel

Every bit as logical and intuitive to use as it is to understand, the RM1d / RM1ds input section offers control over two fully-assignable inputs per channel. (For a complete breakdown of all physical input and output connections, please refer to the system block diagram on the next spread.) Each input can be derived from either a digital or analogue source and can be mono or stereo. Switching between the two inputs is achieved via the INPUT 2 button, which lights when the second input is selected. The 4-digit dot-matrix display shows the name of the selected signal source, and custom names can be stored, for example, if AES/EBU input 3 is always connected to a CD player, it could be given the name CD1.

The channel Status Window gives instant indication of which facilities are active on the channel - Digital/Analogue Input, Stereo 1/2 (labelled Program/Audition on the RM1ds) routing, Aux 1/2 active, Cleanfeed active, Talkback active, EQ IN and DYN IN.

A large illuminated PFL (RM1ds = "CUE") button switches the pre-fade signal to the built-in CUE speaker and to the monitor outputs.

Output level is controlled by a high-quality 100mm Alps K fader (P&G faders are also available for RM1d only), with the top of travel calibrated to 0dB.

The RM1d has a single ON button which illuminates green when the channel is enabled and turns off when pressed to disable the channel. The RM1ds provides both ON and OFF buttons beneath the fader. In both cases, the ON button is bi-illuminated when the channel is enable for fader start (via the 12 assignable contacts). It lights in amber with the fader fully down and in green when the fader is moved up, thereby activating the channel, resulting in contact closure.

The Edit Strip automatically displays settings for the channel currently being edited



Edit Strip

Pressing the EDIT** button on any channel provides instant access to the central Edit Strip, which offers the following facilities:

- 3 bands of equalisation (fixed 10kHz HF and 100Hz LF controls with swept MF) with EQ IN button and a variable high-pass filter (HPF).
- 2 pre/post switchable Auxiliaries which can be operated in mono or stereo modes. In stereo mode, the AUX 1 pot controls the level and the AUX 2 pot becomes redundant. An AUX MASTER control is also provided with selection buttons for AUX 1 and AUX 2.
- Trim control offering 12dB of cut or boost.
- A Pan/Balance control, the operation of which depends on the signal source. If the source is mono, then the control acts as a standard Pan within the range +3dB to -∞. If the source is stereo, then it becomes a Balance control.
- STE 1 and STE 2* routing buttons.

As soon as the EDIT** button (below the LCD screen on the master section) is pressed, the LCD screen indicates which channel is being altered. When a rotary control on the Edit Strip section is then turned, the identity and current value of this control are also displayed on the screen.

**Referred to as PROG and AUD on RM1ds*
***Referred to as SELECT on RM1ds*

The Master Section including master faders, LCD display, Lexicon effects processor and monitoring controls



Note: RM1d is pictured. RM1ds layout is identical with the exception that STE 1 and STE 2 are labelled PROG and AUD everywhere they occur.



Meterbridge with integral dual timer. 6-fader shown; 12-fader has 4 meters

Master Section

Dynamics and Lexicon Effects
Each channel has a dedicated dynamics processor accessed using the channel EDIT button. Compression, Limiting and Gating algorithms are provided, with 64 memory locations for storing custom dynamics settings.

A Lexicon digital effects processor is also built in to the RM1d, offering a wide range of effects including Reverb, Chorus, Flanger and Multi-Tap Delay. The input to the Lexicon processor is derived from either the Auxiliary 1 or 2 busses or both when stereo operation is selected. The output of the effects section can be routed to the main STE 1 or STE 2* output busses. There are 32 factory preset effects included and a further 96 user memory locations for storing custom effects settings.

Monitoring and Output
Two high-quality 100mm Alps K faders (P&G faders are also available for RM1d only) control the master levels of outputs STE 1 and STE 2*. These faders can be disabled in software allowing the console to be used for both on air and production applications. Two completely independent sets of monitor source selectors are provided – one for the control room and one for the studio. Each has a corresponding headphone output, and the STUDIO PHONES output also has a GUEST counterpart to which talkback can be routed independently. The monitoring source for each location is selected between EXT 1, EXT 2, EXT 3, EXT 4 (the four stereo external inputs), AUX 1, AUX 2, STE 1 and STE 2*. The button corresponding to the selected source will illuminate; selecting another source will automatically override the previous setting. Settings for PFL are independent for control room and studio, and each can be configured as SPLIT or AUTO. Selecting AUTO causes a PFL selection to override the monitor source. When SPLIT is selected, the monitor source is summed and fed to the left channel of the headphones, while the PFL signal is summed and fed to the headphones' right channel. A presenter's headphone output is provided on the console's control surface, while an additional presenter's headphone output, together with studio headphone and guest headphone outputs, is provided on the console's back panel.

Talkback
Any mic connected to the RM1d can be configured, via the SETUP page, as the presenter's talkback microphone source – the chosen mic is shown on that channel's illuminated legend. The pre-fade, post-EQ talkback mic signal can be routed to the analogue line outputs for use as a dedicated talkback output, as well as to the studio and/or guest headphones.

Metering
The 6-fader RM1d has two meters, either VUs or PPMs, with the source selectable between STE 1, STE 2* or to follow the control room selection. On the 12-fader console, an extra pair of meters is provided which can be preset to read STE 1, STE 2* or control room source. Also included on both consoles' meterbridge is a PFL/CUE loudspeaker with rotary controls for PFL/CUE level and Reverse Talkback. A dual timer is also provided – the two displays are inter-selected via the TIMER 2 button. Each timer can be started by the START button, or can be started, stopped and reset, by fader movement from an input channel.

Power Supply
The RM1d is powered by an external 2U rack-mounting power supply, the DPS1. The RM1ds uses the DPS2. Both PSU's use high-efficiency switched-mode technology and have auto-ranging mains inputs.

**Referred to as PROG and AUD on RM1ds*



Total flexibility in signal output & routing

The flexible operating system of the RM1d / RM1ds allows any physical input, analogue or digital*, to be assigned to any console input fader.



The diagram opposite shows the full potential of this system. A pool of inputs is passed through a digital input router which can distribute that signal, via the Input 1/2 selector switch on the physical input channel strips, to the input faders. Once processed, the signal is passed through the digital output router, at which point it can be assigned to one of a range of physical output connectors on the back of the console. Digital signal input, output and all internal processing throughout takes place at 24-bit resolution and, if 16 or 20-bit output is required, dither is applied. On-board sample rate conversion (SRC), combined with Word Clock I/O, ensures that syncing is never a problem. And with over 100 console-wide presets providing instant configurability for every conceivable mixing task, global setup can be achieved in a matter of seconds.

Full connectivity for instant studio integration

A full complement of mic and line analogue I/O, AES/EBU and SPDIF digital I/O and insert points means the RM1d / RM1ds can be quickly connected to any broadcast equipment.

Monitoring is available via studio or control room outputs, while headphones can be connected to any of the studio, guest or presenter's phones sockets. For easy synchronisation, the RM1d / RM1ds features Word Clock and AES 11 interfaces.



6-fader console



12-fader console with script tray

*On the 12-fader versions of the RM1d / RM1ds, the SPDIF 1 and 2 inputs have limited assignability.

System block diagram

