



FAQs about the M16 Remote Controlled Mic Amp

What is the Cadac M16?

The M16 is a premium quality 16 channel remote controllable microphone amplifier, with integral 3-way active splits and an optical MADI digital audio interface.

What is special about the Cadac M16?

Since Cadac's formation by Clive Green back in 1967, the main ethos behind any development project has been to strive for optimum performance and audio fidelity. The new M16 implicitly follows this tradition and the audio integrity of the product is paramount.

- Generous headroom throughout the whole system
- Extended bandwidth
- Flat frequency response
- Both distortion and phase shift are very low, even when operating at high gain.

All input and output circuits are carefully hand-tuned by Cadac's skilled engineers for maximum performance, providing optimal Common Mode Rejection Ratio, whilst the output drivers are hand tuned to provide optimum balanced performance enabling the M16 to drive over long cable runs - in excess of 500 metres.

The complete M16 system is designed to exceed current international EMC directives - with immunity from receiving or transmitting radio frequency or conducted interference.

How do I control each channel?

All control functions for each of the 16 microphone channels are easily accessed from the front panel, or via the dedicated RM16 Remote Microphone Amp. Controller.

Each of the 16 microphone amplifiers provides the following adjustments:

- Input Gain from 10dB to 60dB in 5dB steps
- 20dB Pad
- 48v Phantom Power with an output resistance of 6k8 per leg allowing up to 14mA load current per microphone
- Signal Reverse
- High Pass Filter, 60Hz @ 12dB/octave
- Signal Level Indication

Additional remote control options include:

- The Cadac D16 Digital Mix Matrix
- Cadac's Sound Automation Manager (SAM)

Using Cadac's SAM automation software allows seamless cue based integration with any automated Cadac console and the new D16 Digital Mix Matrix. SAM can be downloaded free of charge from the Cadac website: www.cadac-sound.com

Can the analogue splits drive long lines?

Yes, all three analogue splits are fully balanced and designed to drive over long cable lengths in excess of 500m with little degradation in audio performance. All three sends are also level compensated, whereby if one leg is shorted to ground, the other leg doubles its amplitude to compensate. One output is presented on XLR-3, with an additional two complete sets of Channels 1-16 on two 37-way "D" type connectors.

What format is the MADi digital interface?

An optical MADi output is provided as standard providing selectable 48kHz and 96kHz sample rates, allowing interoperability with both digital consoles and workstations. The M16 also conforms to both 56ch MADi and 64ch Extended MADi protocols. (AES10 - 2003)

Many Live, Broadcast and Recording consoles and digital audio workstations are now fitted with MADi connectivity, therefore allowing the M16 to connect directly in the digital domain. Using optical fibre to transmit the MADi data stream instead of co-axial cable allows a greater transmission distance (up to 1000m without buffers) to be achieved, while also eliminating the negative effects of RF and grounding issues that can easily occur over an unbalanced co-axial cable. In addition, using optical cable snakes also minimises cable drum size and weight.

The MADi functionality does not interfere with the M16's analogue sends in any way, and these can still be used in parallel to provide a total of four sends per channel.

Is it possible to configure a multiple M16 system when requiring more than 16 channels?

Yes. The M16 has been designed to be used in a multi-channel configuration and as such up to 32 x M16 units can easily be controlled within any one system using an RS-485 communications backbone. This provides full control of up to 512 microphone channel functions. Provision is also made to bus link the PFL Bus through all of the M16s in the system, enabling SOLO of all available microphone channels from a single M16's PFL headphone socket.

Unlike many other remote controlled systems, a total of 4 x RM16 optional Remote Controllers can also be integrated into a single networked system providing M16 control from multiple locations. This configuration additionally offers the ability to simultaneously view up to 64 channels of metering if all the Controllers are co-located.

What applications suit the M16?

Where audio quality matters!

The M16's have been designed to be placed as close to the microphones as practically possible and are ideal for live concert sound, amplified recitals, theatre, recording studios and broadcast studio floors/outside broadcast use.

Some Cadac Background

Cadac has an enviable track record in professional audio design, dating back 38 impressive years. Very few professional audio manufactures in the world today can attest to such a track record. Initially, designs consisted of large format studio mixing consoles for the recording industry. Throughout the 1970's the Cadac name represented

a pioneering force in the recording industry with consoles accounting for a major share of consoles in the UK and European recording market. Many influential bands were mixed on a Cadac, including The Sex Pistols, The Police, Queen, The Who, Def Leppard and Duran Duran. There are, in fact, many early Cadac recording consoles still in use today. These consoles continue to command high resale values, as do the various EQ modules that occasionally get rebuilt in to stand-alone units and find their way onto the market.

During the mid-1980's Cadac diversified into producing high quality live production consoles for the theatrical musical industry, bringing recording console quality to the stage. Such musicals now include CATS, Phantom of the Opera, The Producers, We Will Rock You, Mamma Mia!, The Jerry Springer Opera and Chitty Chitty Bang Bang. Over 80 percent of West End and Broadway shows rely on Cadac. In addition to this, Cadac has installed hundreds consoles into many of the world's leading theatres as well as for many of the world's most prestigious tours and events. Classic recordings on Cadacs include Queen's Bohemian Rhapsody and Rod Stewart's Maggie May. Bands recorded on Cadacs included Alice Cooper, Black Sabbath, The Kinks, Paul McCartney and Pink Floyd. Tours and festivals that have used Cadac consoles include 'Aida', Barry Manilow, Bryan Adams, Brian McKnight, 'Carmen', Luciano Pavarotti, 'Tosca', The Rolling Stones, Three Tenors, and The Verve.

To find out more about Cadac and our products visit www.cadac-sound.com.

White papers concerning grounding techniques and best practice for system wiring, as well as other reference materials, are also available. Simply enter the Sound Check Zone within the Cadac website.