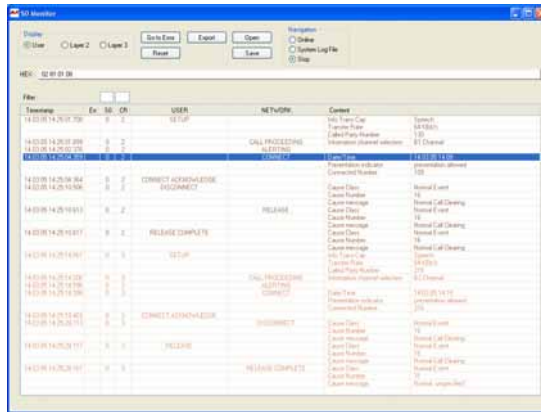


ISDN Monitoring & Remote Control

For **MAGIC AC1** an optional **ISDN Monitoring & Remote Control** plug-in software as an extension of the standard software is available.



Time	Ex	Nr	CH	USER	NETID	Content
14:02:01	14	20	17	17	17	SETUP
14:02:02	14	20	17	17	17	CALL PROCEEDING
14:02:03	14	20	17	17	17	CONNECT
14:02:04	14	20	17	17	17	RELEASE
14:02:05	14	20	17	17	17	RELEASE COMPLETE

With this extension, the system can be controlled locally over RS232 and also remotely over an ISDN connection (single B channel). This is also possible during a single B channel Audio connection using the second B channel for remote control. Remote control needs a PC with an ISDN interface card.

Functionality

The **ISDN Monitoring & Remote Control** plug-in provides two functions:

- **ISDN Monitoring:** the D channel protocol between the **MAGIC AC1** system and an ISDN switch can be stored in the system as a log file and can later be evaluated by a PC or can be analysed online. The data can be displayed in the User mode as an overview list and in the Expert mode as a detailed list. The ISDN Monitoring function can be used locally and remotely.
- **Remote Control:** the Remote Control function allows complete control and configuration of the remote system in the same way as a local connection via RS232.

Licensing

The licence key is stored in a USB dongle, therefore a free USB port on the PC must be available.

Technical Data

Network interfaces:	1 x ISDN S ₀ (2 B channels) analogue POTS interface
ISDN protocol:	DSS-1 (Euro ISDN dialling protocol) ISDN Leased Lines
Codiervverfahren:	ITU G.711 (3.1-kHz) ITU G.722 (7-kHz) ISO/MPEG 1/2 Layer II & III
Signalling ISDN:	ITU-T J.52 SRT (Statistical Recovered Timing) Various company procedures
ISDN operating modes:	3.1-kHz at 64-kbit/s 7-kHz at 48/56-kbit/s (J.52) 7-kHz at 64-kbit/s (SRT) Mixed Modes 3.1/7/15-kHz 15-kHz Mono at 48, 56, 64-kbit/s 15-kHz Stereo at 96, 112, 124.8-kbit/s LSF is available
POTS operating mode:	3.1-kHz analogue POTS
Control interfaces/ Data interfaces:	2 x RS232/RS485 data interface RS232 PC control interface User I/O (3 x TTL, 2 x Relays)
Audio interfaces:	Headset with microphone Analogue Audio (balanced) Digital AES3 Audio with sample rate converter
Audio level:	Software adjustable
Supply voltage:	+12 V via external mains unit
Consumption:	max. 15 W without fan
Dimensions (WxHxD):	220 x 45 x 220 mm (1/2 x 19", 1U)
Weight:	1.8 kg
Miscellaneous:	CE, UL, FCC approvals



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**PORTABLE
AUDIO CODEC
MAGIC AC1**

- ISDN Stereo Audio Codec
- POTS Interface for Phone Calls
- G.711, G.722, ISO /MPEG Layer II & III
- J.52 and other proprietary Modes
- Analogue In/Outputs
- Digital In/Outputs
- Headset Interface
- Integrated Audio Mixer
- RS232/RS485 Data Channels
- Intuitive User Interface



General

The compact *MAGIC AC1* ISDN Audio Codec is a powerful product for mobile use.



The system incorporates an analogue POTS telephone interface and an ISDN S₀ interface. The coding algorithms for normal telephony G.711 (3.1-kHz), G.722 (7-kHz) and also ISO/MPEG 2 Layer II & III (15-kHz) are implemented. For the transmission of the high quality signals, the ISDN interface is used. If there is no ISDN available a normal telephone connection can be established over the analogue POTS telephone interface. Important features of the *MAGIC AC1* are its compact design (½ x 19", 1 U), the intuitive user interface and low power consumption - no cooling fan is necessary. The signal processor based *MAGIC AC1* Audio Codec with flash memory technology guarantees via software download, an upgrade ability for future coding algorithms which may be required in the broadcast area.

Functionality

After an ISDN connection is established, the *MAGIC AC1* Audio Codec automatically determines via the ITU-T J.52 inband signalling, whether or not the called party can operate in 7-kHz or ISO/MPEG 2 Layer II/III mode. If this is possible, the 7-kHz or ISO/MPEG mode is set on both units, otherwise the unit automatically operates in the conventional 3.1-kHz mode. *MAGIC AC1* can use up to 2 ISDN B channels with a maximum data rate of 128-kbit/s for the transmission of a high quality Audio signal. The required inverse multiplexing procedure is also defined in the ITU-T J.52 standard. The inverse multiplexing procedure guarantees a minimum transmission delay. If a B channel drops or if the routing of the B channels in the transmission network is changed, the unit can still operate without interruption using the remaining B channel. A remarkable feature is the transmission of a command signal with 3.1-kHz or 7-kHz bandwidth in parallel to the transmission of the high quality Audio signal. Additionally, two independent data channels can be used.

Operation & Control

The system can be controlled via its integrated keypad and display. An intuitive user interface permits simple operation of the system. In addition to the calling number, system settings can be stored in the integrated telephone book. Furthermore, the *MAGIC AC1* Audio Codec can be configured and controlled with a Windows PC Software or via an external keypad over its RS232 control interface. The available GPIO contacts for control consist of three TTL in/outputs and two relay outputs. The system can also be configured and controlled remotely over ISDN. This includes a complete software download.

Compatibility with Audio Codecs

If other manufacturers' codecs also incorporate the ITU-T J.52 Audio transmission standard, the units can interwork based on the implemented Audio encoding algorithms. In the case that other codecs do not support the J.52 standard the *MAGIC AC1* incorporates company versions for the intercommunication with other suppliers' codecs. The following systems are supported:

- All systems with J.52 implementation such as MAYAH Centauri for up to 2 B channels (128-kbit/s)
- ORBAN MusicTaxi for up to 2 B channels (128-kbit/s)
- All other Audio codecs with 1 B channel (64-kbit/s).

Audio Transmission

MAGIC AC1 supports the G.711 (3.1-kHz), G.722 (7-kHz, H.221/H.242 & SRT) Audio coding algorithms as well as the ISO/MPEG 2 Layer II & III high quality coding standard (Fraunhofer Gesellschaft implementation).



Analogue & Digital Audio Interfaces

MAGIC AC1 has analogue and digital (AES3) Audio interfaces (switchable) on the rear side of the unit. The digital AES3 interface supports separate sample rate converters for the adaptation of the Audio clock to the ISDN clock for both input and output. The analogue input and output levels can be configured by software.

Headset Interface

The headset interface of the *MAGIC AC1* incorporates a pre-amplifier and limiter for the microphone signal with auto ducking. For live reports a headset can be connected.

Data Interfaces

The *MAGIC AC1* has two serial Data interfaces in addition to the RS232 control interface. These two interfaces can be configured as RS232 or as RS485 interfaces. In 1 B channel mode the maximum transmission data rate is 14.4-kbit/s. Due to the MPEG Audio coding data rates, J.52 data channels with low transmission delay at data rates of 12.8-kbit/s and 28.8-kbit/s can be configured. Also, the PAD channel can be used.

Options

Mixing functionality



The optional mixing function provides a flexible mixing of all Audio input signals to the headset signals, the Audio output signals and the transmit signals. A

monitoring function for all Audio signals is also available. The optional plug-in *MAGIC AC1 Mixing Tool* extends the *MAGIC AC1* into a flexible software mixing console and allows the system to be used as a compact speech reporting product. The Mixer can be controlled via the integrated keypad/display as well as the PC software and the *MAGIC AC1 Keypad*.

MAGIC AC1 Keypad

The *MAGIC AC1 Keypad* supports all functions for complete operation without a PC.

19" Dual Mounting Kit

A 1U 19" mounting kit for two *MAGIC DC7* systems is available.