



# True Diamonds

NEW MEMBERS OF THE SOLUTION-D FAMILY





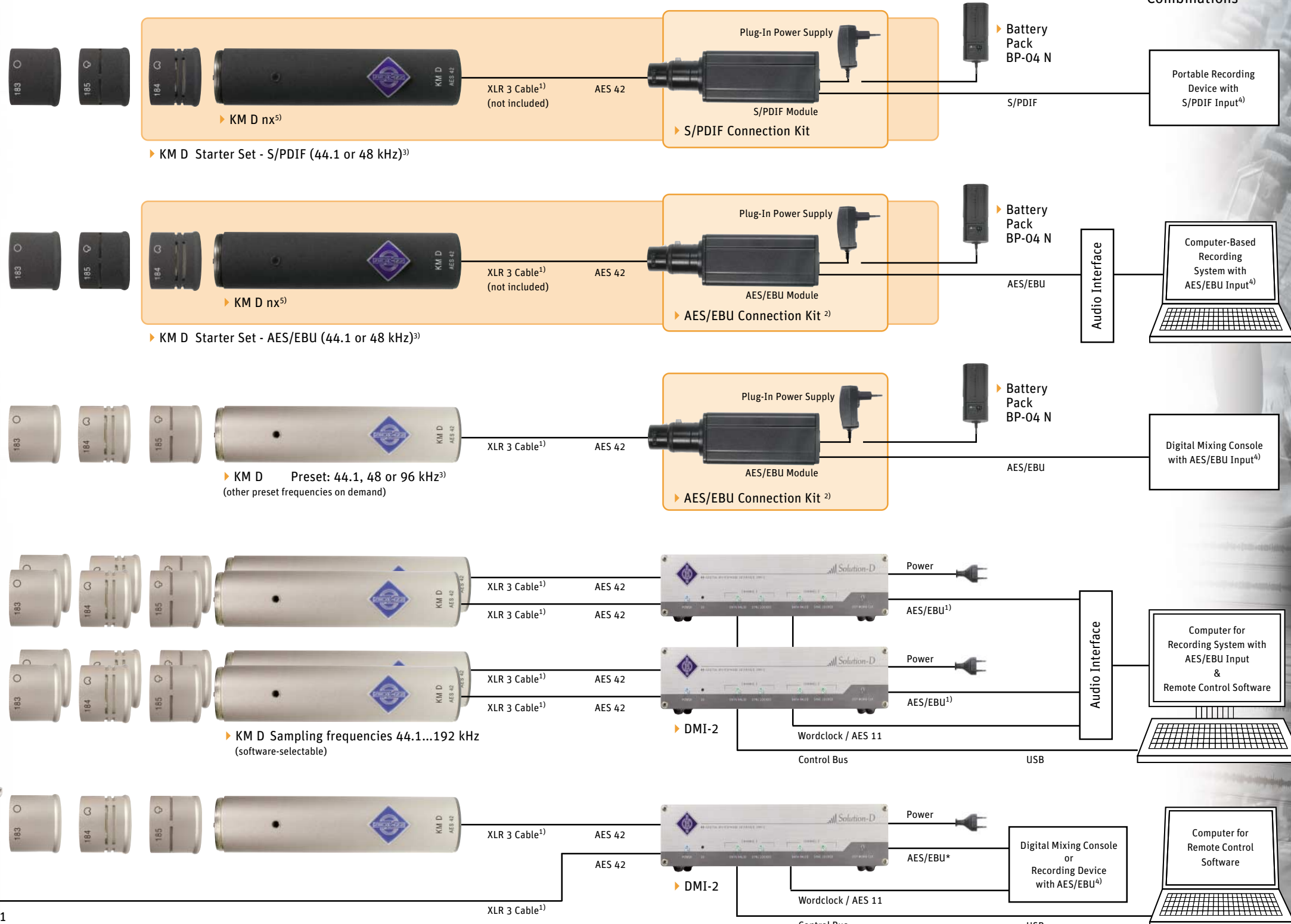
NEUMANN.BERLIN

THE MICROPHONE COMPANY

Solution-D

# The Family

Combinations



<sup>1)</sup> special cable recommended for digital use

<sup>2)</sup> not necessary when using DMI-2

<sup>3)</sup> with the DMI-2 the frequency can be set to 44.1, 48, 88.2, 96, 176.4 or 192 kHz

<sup>4)</sup> these are only examples

<sup>5)</sup> nx = Nextel black

**TRUE NEUMANN SOUND:**  
The legendary Neumann sound in the digital realm. Pure Neumann capsule sound.



**TRUE TO THE ORIGINAL:**  
The satisfaction of recording the uncolored original, with no "bottlenecks" between the capsule and the recording system.



**TRUE CONVERSION:**  
The guarantee of having one of the best A/D converters available.



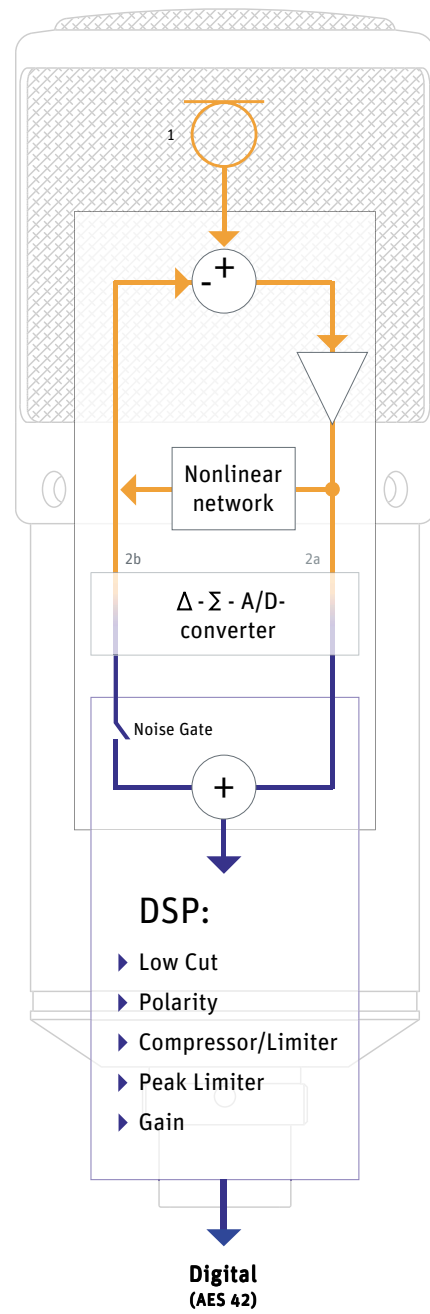
**TRUE HANDLING SAFETY:**  
Anti-clipping processing ensures handling safety, and reduces stress.







### The Principle



Analog capsule

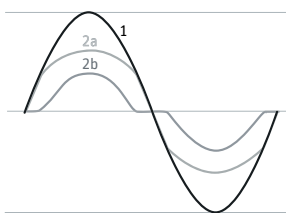
Ideal matching of Neumann A/D-converter with microphone capsule

Neumann A/D converter:

Patented process

Dynamic range  $\geq 140$  dB

The capsule signal is transferred to the digital domain without any loss of quality.



Entire range of functionality remote controlled

Synchronization with studio word clock

Clipping protection



### Toolbox

Components & Sets



▶ BP-04 N Battery Pack (batteries not included)

▶ Recording with no "bottlenecks"

**TRUE TIME SAVINGS:**  
Reduced time requirements and personnel costs, particularly due to faster post production processing.



**TRUE ECONOMY:**  
Lower investment costs, since separate A/D converters and preamps are no longer needed. This also means space and weight savings (e.g. in the OB van).

#### APPLICATIONS KM 183 D

- For close miking of instruments when there is no need to attenuate extraneous noise, and in a balanced acoustic environment to record acoustic guitar, wind instruments, strings, percussion and drums

- Ideal as AB stereo pair because of the flat frequency response in the diffuse sound field
- Main mic, especially for capturing room acoustics
- For stereo recordings with a baffle plate
- Spot mic for piano, wind instruments, organ and choir





## Toolbox

Components & Sets

### Large Diaphragm Microphone



► D-01 microphone in wooden box



► D-01 Mono Set: D-01, elastic suspension, DMI-2, RCS software, interface converter and all cables, in aluminum case)



► D-01 Stereo Set: 2 x D-01, elastic suspensions, DMI-2, RCS software, interface converter and all cables, in aluminum case)

### DMI-2



► DMI-2 (incl. RCS software and cables)

### Miniature Microphones



► KK 183



► KK 184



► KK 185



► KK 183 nx<sup>1)</sup>



► KK 184 nx<sup>1)</sup>



► KK 185 nx<sup>1)</sup>



► KM D, Preset: 44.1, 48, or 96 kHz <sup>2)</sup>



► KM D nx, Preset: 44.1, 48 or 96 kHz <sup>2)</sup>



► KM 183 D



► KM 184 D



► KM 185 D



► KM 183 D nx<sup>1)</sup>



► KM 184 D nx<sup>1)</sup>

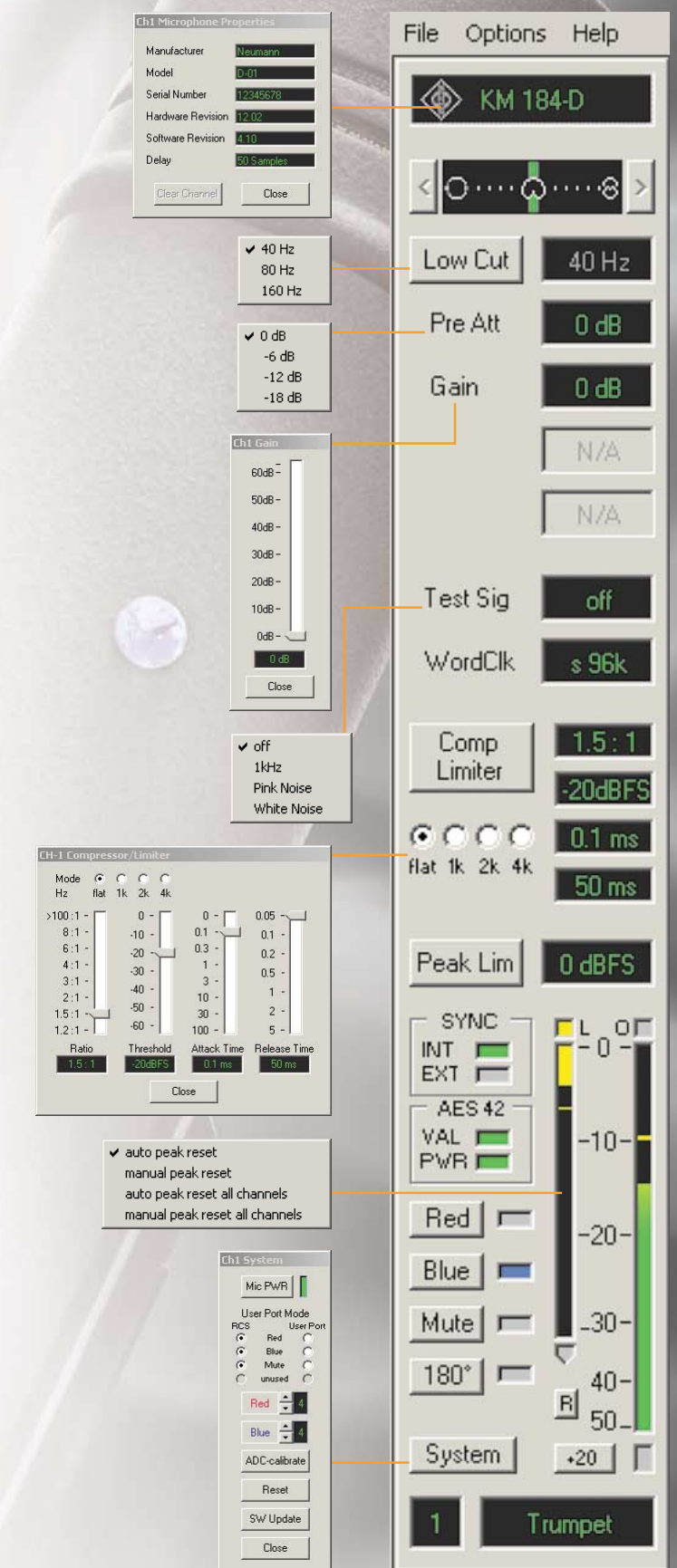


► KM 185 D nx<sup>1)</sup>

KM 183/184/185 D (nx) are delivered with windscreen and clamp and are also available as stereo sets.

<sup>1)</sup> nx = Nextel black

<sup>2)</sup> With the DMI-2 the frequency can be set to 44.1, 48, 88.2, 96, 176.4 or 192 kHz



#### APPLICATIONS KM 184 D

- For universal use, especially for recording situations when it is necessary to attenuate off-axis sound (mainly from the rear) from other nearby instruments.
- As XY and ORTF stereo pair

#### • Broadcasting mic for announcers

- Spot mic and overhead
- Close miking of strings, wind instruments, percussion, piano, Leslie speakers and guitar amps

#### APPLICATIONS KM 185 D

- Especially for recording situations when it is necessary to attenuate off-axis (lateral and rear) sound from other nearby instruments.
- As XY stereo pair
- Overhead, toms

#### • In situations that are susceptible to acoustic feedback

- To attenuate unwanted sound of nearby instruments
- Recording of speech, as in TV, movie and video productions, PA systems
- Produces especially warm and bass supporting sound for artists who perform in the proximity effect range







### ▶ General Specifications of the Solution-D microphones

Interface: AES 42  
Internal resolution: 28 bit

Remote controlled<sup>1)</sup> functions:

- Polar pattern<sup>2)</sup>
- Low-cut: flat, 40, 80, 160 Hz
- Pre-attenuation: 0, -6, -12, -18 dB
- Gain: 0...63 dB in 1 dB steps, clickless
- Testsignal: 1kHz, pink noise, white noise
- Parametric compressor/limiter (incl. de-esser function)
- Independent peak limiter avoiding any clipping
- Switch functions: soft muting, phase reverse, signal lights
- Signal lights: red<sup>2)</sup> and blue LEDs (switchable via control software or User Port)

Synchronization: AES 42-Mode 2, Mode 1 (asynchronous),  
output: XLR3M, AES 42

<sup>1)</sup> Remote control with DMI-2 only    <sup>2)</sup> D-01 only

### ▶ Features of the RCS Remote Control Software

Communication via USB port (Win 2000/98SE/ME/XP,  
MAC OS version 8.6...10 on PowerPC)

Up to 8 channels displayed simultaneously on the screen

Controllable functions: polar pattern, low-cut, pre-attenuation,  
gain, test signals, limiter/compressor/de-esser, peak limiter,  
phase reverse, mute, sampling rate, synchronization mode,  
signal lights,...

Display: peak level meter, gain reduction meter for compressor/  
limiter/de-esser and peak limiter, microphone properties  
(manufacturer, model, serial number, hardware and software  
revision, internal latency time), DMI properties, status signals  
(overload, limiter active, data valid, sync locked, power on)

Saving/Loading of configurations  
Individual channel labelling

Firmware update of Neumann microphones and DMI devices

### ▶ D-01 Specifications

Acoustic transducer: K 07 large double-diaphragm capsule,  
diameter 30 mm with protected internal electrodes  
15 remote controllable polar patterns,  
from omni to cardioid to figure-8

Sensitivity at 1 kHz, 0 dB gain: 12 mV/Pa = -43 dBFS

Equivalent SPL CCIR 468-3: 18 dB

Equivalent SPL DIN/IEC 651: 7 dB-A

S/N ratio CCIR 468-3: 76 dB

S/N ratio DIN/IEC 651: 87 dB

Dynamic range: >130 dB(A) (complete system incl. capsule),  
140 dB(A) (ADC input shorted)

Sampling rates: 44.1, 48, 88.2, 96 kHz

Weight: approx. 700 g

Diameter: 63.5 mm

Length: 185 mm

### ▶ KM 183 / 184 / 185 D Specifications

Acoustic transducer: K 30, K 40, K 50 (known from Series 180)

Sensitivity at 1 kHz, 0 dB gain:

12/15/10 mV/Pa = -41.4/-39.4/-43.4 dBFS

Equivalent SPL CCIR 468-3: 24/22/24 dB

Equivalent SPL DIN/IEC 651: 13/13/15 dB-A

S/N ratio CCIR 468-3: 70/72/70 dB

S/N ratio DIN/IEC 651: 81/81/79 dB

Dynamic range: >122 dB(A) (complete system incl. capsule),  
134 dB(A) (ADC input shorted)

Sampling rates:

- with DMI-2: 44.1/48/88.2/96/176.4/192 kHz

- with Connection Kit: Preset 44.1, 48 or 96 kHz

Preset Gain: 10 dB (can be changed with DMI-2)

Weight: approx. 80/84/88 g, Diameter: 22 mm, Length: 108 mm

### ▶ DMI-2 Digital Microphone Interface Specifications

2-channels, Inputs: XLR3F, AES 42,

Outputs: XLR3M, AES/EBU, 24 bit.

Control bus: RS485 via RJ 45 jack. Second RJ 45 jack for  
cascading purposes (up to 4 DMI devices today, 16 devices in  
future). Connection to the computer's USB port via Neumann  
USB485 interface converter (included).

User Port: 9-pin sub-D, 3 functions per channel

Synchronization: AES 42 - Mode 2 (PLL system using an  
external Word Clock and remote controlling the VCXO in the  
microphone, default mode), AES 42 - Mode 1, (asynchronous,  
needs a sample rate converter (SRC) at the receiver side),

Word clock input: BNC, 75 ohms.

Word clock output: BNC, 75 ohms, automatically set to the  
internal word clock master when no external word clock  
received. Selectable internal sampling rates:

44.1, 48, 88.2, 96, 176.4, 192 kHz

External Word clock: 44.1, 48, 88.2, 96, 176.4, 192 kHz  
or AES 11 format

Indicators: Data Valid (AES 42) and Sync Locked (Mode 2) for  
each channel, Power On and Ext. Word Clock.

Power supply: 90-240 V, 50/60 Hz.

Storage of the last microphone settings and reloading to the  
microphones after power on automatically without the need of  
the computer/RCS.

### ▶ Battery Pack BP 04 N Specifications

4 AA (rechargeable) batteries (not included)

Weight: approx. 84 g (without batteries)

Diameter: 43 mm, Length: 105 mm

### ▶ Connection Kit S/PDIF (AES/EBU) Specifications

Connector: input XLR3F, output Cinch (XLR3M)

Weight: approx. 96 g

Width: 32 mm, Height: 26 mm, Length: 105 mm

Power supply: 90-240 V, 50/60 Hz

For remote controlling functions you have to use the DMI-2

