

# HARVEY®

## **HARVEY mx.16**

central control unit for audio,  
lighting and media technology



**audio**

**lighting**

**media**

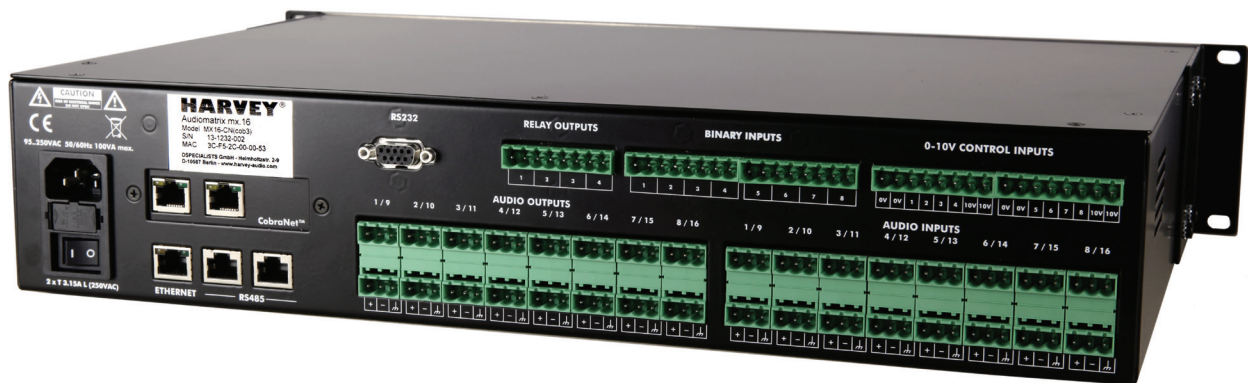


# HARVEY®

HARVEY mx.16 is a flexible audio and media control matrix and a key component for pa systems and conference systems. It is equipped with 16 analog audio inputs and outputs as well as a large number of different control interfaces. The unit has extensive audio processing functions that can be configured in a way that is tailored precisely to the respective application. These settings can also be saved in presets and retrieved at the press of a button so that you can change quickly between different installation options. Due to the varied control interfaces HARVEY mx.16 can connect to very different devices and act as a central control unit for audio, lighting,

and media technology. It converts the data between the interfaces and eliminates the need for additional converters. All established media control systems from Crestron, AMX, and Cue are suitable for controlling HARVEY mx.16 and all the other devices connected to it. Furthermore HARVEY mx.16 features the ability to be controlled by modern web browsers. For that purpose the web interface can be generated with a single click and adjusted by the user without any programming knowledge.

As such, the HARVEY mx.16 is the ideal audio and media control matrix for conference rooms, theatres, museums, home cinemas, educational facilities, and multipurpose rooms.



## HARDWARE

**Ethernet:** Connection to configuration PC as well as other controlling devices or devices to be controlled

**RS232, RS485/DMX:** Interfaces for remote control and exchange of control commands of HARVEY mx.16 and external devices, e.g. lighting installations, pa systems, media technology or operating panels

**Voltage Inputs:** 8 inputs to externally control HARVEY mx.16 parameters, e.g. level by potentiometer

**Input Contacts:** 8 optocoupler inputs for switching and controlling presets and parameters, e.g. muting channels with external buttons or switches

**Output Contacts:** Relay outputs for the control of external devices. Contact 1 is fixed as the mx.16 fault indicator

**Audio Inputs:** 16 line level balanced inputs. The first 8 channels may be assigned as microphone inputs with 48V phantom power.

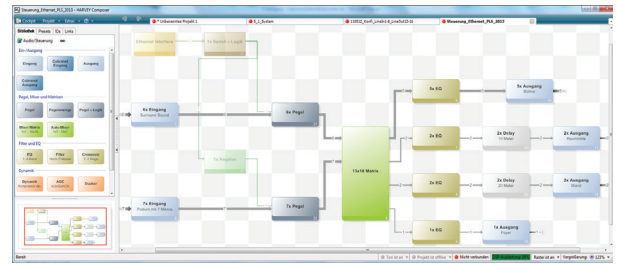
**Audio Outputs:** 16 line level outputs, e.g. for amplifiers

**Dante:** optionally available; for connecting several HARVEY mx.16 units and exchanging audio data among the units and other Dante devices via a network

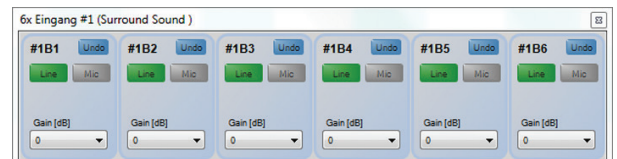
**CobraNet:** optionally available; for connecting several HARVEY mx.16 units and exchanging audio data among the units and other CobraNet devices via a network

## SOFTWARE

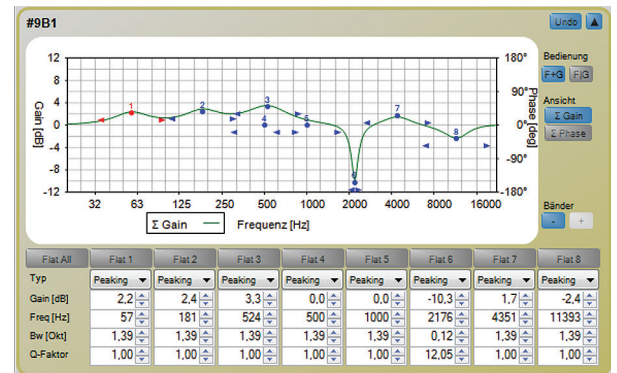
HARVEY Composer, the user interface of the HARVEY mx.16, has a very user-friendly design and allows you to configure complex projects with only a few mouse clicks. Blocks, that represent the audio signal processing and control functions, are positioned on the worksheet using drag & drop. With only one movement of your mouse multiple channels can be connected, while the number of channels is adjusted automatically. Independent of the number of physical connections, individual connections are combined into clear bundles.



Signal processing functions such as EQ, level display or ducker and many others can be added to the installation simply by drag & drop and configured online. Mixing and switching matrices are also available and can be parameterized freely up to a maximum number of 16x16 input/output channels.



In addition to the audio layer, there is also a control layer. Incoming control signals are evaluated here, linked logically and brought to the audio block control inputs. Presets allow you to switch conveniently between very different use cases. The mx.16 fades softly between the presets with configurable fade time per parameter.



### Audio Processing:

- Level, Mixer
  - Mixing matrix
  - Mixing matrix with crosspoint delay
  - Automatic mixer
  - Level control
  - Level meter
  - Mute
  - Ducker
- Equalizer:
  - 8-Band parametric equalizer Filter (highpass, lowpass, hi-shelf, lo-shelf)
- Dynamics:
  - Compressor
  - Limiter
  - Expander
  - Noise Gate
  - Automatic Volume Control (AVC)
  - Automatic Gain Control (AGC)
- Delay:
  - Delay-up to 1000 ms for each delay block

### Control:

- I/O Interfaces:
  - RS485/DMX, RS232
  - TCP/IP, UDP/IP
  - Contacts, Voltage
- Protocols:
  - Proprietary (binary, text based)
  - User defined messages
- Control Events: (triggered by)
  - Presets
  - Thresholds (Level, DMX)
  - Input Contacts, Messages
  - Block states (e.g. Ducker)
  - Flip-flops
- Control Events: (can trigger)
  - Presets
  - User-defined messages
  - Block states (e.g. Level mute)
  - Output Contacts
  - Flip-flops
- Gain control:
  - Input Voltage mapping
  - DMX value mapping

# HARVEY®

**Audio Inputs:**

8 analog Mic/Line inputs  
8 analog Line inputs  
24 bit Sigma-Delta A/D converter  
+48 V phantom power per Mic/Line input

**Audio Outputs:**

16 analog outputs  
24 bit Sigma-Delta D/A converter

**Dante:**

for audio signal network (16 In/16 Out)

**CobraNet:**

for audio signal network (16 In/16 Out)

**Ethernet:**

10/100 BaseT, RJ-45, link activity LED

**RS-485:**

2 RJ-45 (max. 460 kbps)

**RS-232:**

1 Sub-D 9-pin female (max. 460 kbps)

**Contact Inputs:** 8 Opto-Inputs  
(activated by connection to GND)

**Contact Outputs:** 3 User-assignable relays,  
1 Alarm-Relay

**Voltage Inputs:**

8 inputs 0 - 10 V

**Dynamic range AD/DA:**

>110 dBFS (A)

**THD+N AD/DA:**

< 0,005%

**Input level (full scale):**

Line: +21 dBu, +12 dBu, +6 dBu, +3 dBu switchable  
Mic: +8 dBu to -6 dBu

**Output level (full scale):**

+21 dBu, +12 dBu, +6 dBu, +3 dBu switchable

**Mains Power:**

95 to 250 VAC 50/60 Hz, IEC inlet

**Dimensions:**

2 RU / 483 x 88 x 382 mm

**Weight:**

7 kg (15.4 lbs.)

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