

6. Remote control interfaces

Most of all unit's functions and settings could be controlled remotely using serial connection and open API protocol. The API is simple and useful.

6.1 RS232 interface

The RS232 port allows to access unit's functions using its API. It also ensures possibility to control unit from a third party control system.

Default RS232 port settings

Parameter	Value
Baud Rate	9600
Parity	None
Stop bit	8
Data bit	1
Flow Control	None

NOTE: please be informed that actual unit settings, functions, API command list and controls may differ because of hardware and firmware versions installed in the particular matrix unit.

6.2 API Interface

Advanced Programming Interface ensures possibilities of controlling the unit by an external third party control system using RS232 connection and command line. Available commands and their parameters depend on the API versions which could be different between different versions of firmware. Unit supports HEX protocol. This manual covers only basic function of ASCII protocol V1.1. Standard command always contains ten bytes. It is always starts and ends by special bytes. Please refer to the description below.

Control Command Format

Start	ID	Type	Data 1	Data 2	Data 3	Data 4	Data 5	Data 6	End
1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte
0xFC	...	...	...	...	...	...	...	...	0xEF

Start - each command should be started by the (0xFC)

ID – describes unit ID or may refer to command type

Type – describes the type of the command

Data N - these parameters always belongs to the specific command type

End – each command should be finished by (0xEF)

NOTE: some of commands may trigger the reply messages. Refer to specific command description to get more details.

6.3. Setting the Conference System Mode

ID	Type	Data 1	Data 2	Data 3	Data 4	Data 5	Data 6	Description
0xFE	0xF6	0x00	0x01	0x00	0x00	0x00	0x00	Free Mode
0xFE	0xF6	0x01	0x01	0x00	0x00	0x00	0x00	Chairman Mode
0xFE	0xF6	0x02	0x01	0x00	0x00	0x00	0x00	Auto Mode

Example: switching to the Free Mode

FC FE F6 00 01 00 00 00 00 EF

NOTE: there is no feedback for this command type.

6.4. Setting the Maximum Number of Active Units for Auto Mode

ID	Type	Data 1	Data 2	Data 3	Data 4	Data 5	Data 6	Description
0xFE	0xF6	0x02	0x01	0x00	0x00	0x00	0x00	One Unit
0xFE	0xF6	0x02	0x02	0x00	0x00	0x00	0x00	Two Units
0xFE	0xF6	0x02	0x03	0x00	0x00	0x00	0x00	Three Units
0xFE	0xF6	0x02	0x04	0x00	0x00	0x00	0x00	Four Unit
0xFE	0xF6	0x02	0x05	0x00	0x00	0x00	0x00	Five Units
0xFE	0xF6	0x02	0x06	0x00	0x00	0x00	0x00	Six Units

Example: switching to the Auto Mode and limiting the number of active microphones to 4

FC FE F6 02 04 00 00 00 00 EF

NOTE: there is no feedback for this command type.

6.5. Voice Activation Settings

ID	Type	Data 1	Data 2	Data 3	Data 4	Data 5	Data 6	Description
0xFE	0xF6	0x00	0x01	0x00	0x00	0x00	0x00	Enabled
0xFE	0xF6	0x00	0x01	0x01	0x00	0x00	0x00	Disabled

Example: switching to the Free Mode and turning Voice Activation On

FC FE F6 00 01 00 00 00 00 EF

NOTE: there is no feedback for this command type.

6.6. Controlling the Delegate Unit Mode

ID	Type	Data 1	Data 2	Data 3	Data 4	Data 5	Data 6	Description
0x01	0xFD	0x00	0x00	0x00	0x00	0x00	0x00	ID1 Off
0x01	0xFD	0x01	0x00	0x00	0x00	0x00	0x00	ID1 On

Example: switching the Delegate Unit ID1 On

FC 01 FD 01 00 00 00 00 00 EF

System Reply:

F8 00 01 01 00 E0

Example: switching the Delegate Unit ID2 Off

FC 02 FD 00 00 00 00 00 00 EF

System Reply:

F8 00 02 00 00 E0

6.7. Controlling the Chairman Unit Mode

ID	Type	Data 1	Data 2	Data 3	Data 4	Data 5	Data 6	Description
0x01	0xFD	0x00	0x01	0x00	0x00	0x00	0x00	ID2 Off
0x01	0xFD	0x01	0x01	0x00	0x00	0x00	0x00	ID2 On

Example: switching the Chairman Unit ID1 Off

FC 01 FD 00 01 00 00 00 00 EF

System Reply:

F8 01 01 00 00 E0

Analyzing the Reply Message

Regardless to the way how the unit was turned on or off (by the external command or pressing the button on the unit), the Main Conference will reply to the serial port these changes. This greatly helps to understand what the current status of the system is and build a feedback for a third party control system.

Reply Command Format

Start	Type	ID	Mode	Data 1	End
1 byte	1 byte	1 byte	1 byte	1 byte	1 byte
0xF8	...	...	...	...	0xE0

System Reply Example: Delegate Unit ID2 Switched On

F8 00 02 01 00 E0

System Reply Example: Chairman Unit ID1 Switched On

F8 01 01 01 00 E0

System Reply Example: Chairman Priority Button Pressed

F8 00 FA 00 00 E0