

# Audio Distribution Network



MediaCtrl Protocol

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## Glossary

Keyword	Description
AM	Antenna Module ADN-W AM
BusPos	The BusPos (Bus Position) results from the topology of the SU cabling (SDC CBL RJ45 system cabling to CU PORT I/II – see System instruction manual for details).
CM	Software ADN Conference Manager
CU	Central Unit ADN CU1
RF	Radio Frequency of the wireless Speaking Units and Antenna Module
SN	Serial Number of Speaking Unit (SU or SUw) or Antenna Module (AM)
SU	Speaking Unit (President ADN C1 or Delegate ADN D1).
SUw	Speaking Unit wireless (Chairperson ADN-W C1 or Delegate ADN-W D1).
XLR	Connector for external audio input/output.

# Protocol Basics

This section gives a brief description of the protocol. For details concerning the Sennheiser ADN CU1 please see the System instruction manual.

## Connection

The ADN CU1 is a socket server that accepts connections at port 53252. The IP address, subnet mask and the standard gateway of the CU can be set individually at the CU display.

After starting the CU it will take about 45 seconds until a connection is possible.

After a connection is established, data can be exchanged between the CU and the connected MediaCtrl device (called 'MediaCtrl' below).

The frequency of messages (commands) sent to the CU should not exceed an average of about 100 ms to give the CU enough time for processing. However some hundred messages will be buffered by the system.

## Data Sent to CU by MediaCtrl

The data are ASCII string based. A command starts with a command keyword followed by a variable number of parameters and is closed by a ';' (semicolon). Termination of a command (by semicolon) is required, since TCP data are coming in as a stream. A non-terminated command will reside in the buffer until a termination is received.

**Set commands:** The MediaCtrl sends commands to set attributes of the CU (e.g. '*FloorVolume 7;*'). Most commands have exactly one parameter. In case a speak unit (SU) must be addressed the command has two parameters and the first parameter is the given serial number of the SU (for wired cabling also the bus position of the SU is possible).

**Get requests:** The MediaCtrl can request values of the CU attributes at any time. Most requests do not have a parameter. In case a speak unit (SU) must be addressed the request has the given serial number of the SU as a parameter (for wired cabling also the bus position of the SU as parameter is possible).

## Data Sent to MediaCtrl by the CU

The data are ASCII string based. A command starts with a command keyword followed by a variable number of parameters and is closed by a ';' (semicolon).

**Updates:** The MediaCtrl is an observer of the CU, which means that whenever attributes of the CU change, an according message is sent to the MediaCtrl. For example if the user changes the floor volume to 8 (this may be done directly at the CU display), the CU sends '*FloorVolume 8;*'.

**Responses to set commands:** The update mechanism also applies to set commands. For example if the MediaCtrl changes the volume of the CU to 8 by sending '*FloorVolume 8;*' the CU sends '*FloorVolume 8;*' (in case the volume could be changed accordingly). In case the CU attribute already has the value that shall be set, this value is echoed. For example if the FloorVolume attribute of the CU is 8 and the MediaCtrl sends '*FloorVolume 8;*' the CU sends back ('echoes') '*FloorVolume 8;*'.

**Responses to get requests:** The response to a get request has the same format as the update message described above. For example if the FloorVolume attribute of the CU is 8 and the MediaCtrl sends the get request '*FloorVolume;*' the CU sends back '*FloorVolume 8;*'.

## Parameters

- Most parameters are signed integers.
- An integer parameter with preceding '#' is a relative change.
- Command keywords and parameters are separated by a variable number of white spaces.

## String Parameters (Serial Numbers)

String parameters are used to enter/display serial numbers of speaking units and antenna modules. The format is an identification code followed by the 6 digit serial number.

Identification Codes:

Code	Unit
AM	Antenna Module
C1	Wired Chairman Unit
D1	Wired Delegate Unit
C1W	Wireless Chairman Unit
D1W	Wireless Delegate Unit

Examples:

- Wireless delegate unit with serial number 100017: *D1W100017*
- Wired delegate unit with serial number 100004: *D1100004*
- Wireless president unit with serial number 100001: *C1W100001*
- Antenna Module with serial number 100001: *AM100001*

## Error Codes

Invalid MediaCtrl commands are responded by an error code: *error [error code]: [error text];*

See chapter 'Error codes' on page 26 for details.

## Examples

The following list contains some examples. The 'Response' is just an example how the CU might react.

- **Command:** *FloorVolume 7;*  
The FloorVolume shall be set to 7.  
**Response:** *FloorVolume 7;*  
The FloorVolume has been set to 7.
- **Command:** *FloorVolume #1;*  
The current FloorVolume shall be increased by 1.  
**Response:** *FloorVolume 8;*  
The FloorVolume has been increased from 7 to 8.
- **Command:** *FloorVolume #-1;*  
The current FloorVolume shall be decreased by 1.  
**Response:** *FloorVolume 7;*  
The FloorVolume has been decreased from 8 to 7.
- **Request:** *FloorVolume;*  
Get request for the current FloorVolume.  
**Response:** *FloorVolume 7;*  
The current FloorVolume is 7.
- **Request:** *MicButton 1;*  
Virtually press the microphone button of wired DU on EtherCat position 1.  
**Response:** *MicStatus 1 1;*  
The microphone at position 1 is ON.
- **Request:** *MicStatus 1;*  
Get the status of the microphone at position 1.  
**Response:** *MicStatus 1 1;*  
The microphone at position 1 is ON.
- **Request:** *MicButtonSN D1100023;*  
Virtually press the microphone button of wired DU with serial number D1100023.

**Response:** *MicStatus 1 1;*

The microphone at position 1 is ON.

**Hint:** For wired slave units the response will always be given with the EtherCat position.

- **Request:** *MicButtonSN D1W100017;*  
Virtually press the microphone button of the wireless delegate speaking unit with serial number D1W100017.  
**Response:** *MicStatusSN D1W100017 1;*  
The microphone of the wireless delegate speaking unit with given serial number D1W100017 is ON.
- **Request:** *MicStatusSN D1W100017;*  
Get the status of the wireless delegate speaking unit with given serial number 100017.  
**Response:** *MicStatusSN D1W100017 1;*  
The microphone of the wireless delegate speaking unit with given serial number 100017 is ON.
- **Request:** *AmRfOutputPower AM100001;*  
Get the RF output power of the antenna module with the given serial number 100001.  
**Response:** *AmRfOutputPower AM100001 4;*  
The RF output power of the antenna module with the given serial number 100001 is at level 4 = 60%.
- **Command:** *MicStatus 1 1;*  
The microphone at position 1 shall be set to ON directly, but 'MicStatus' is only a 'Get' (see page 15).  
**Response:** *error 1060: set request not allowed;*
- **Command:** *BlinkOnReq 2;*  
Try to set the attribute 'BlinkOnReq' to 2.  
**Response:** *error 1020: value out of range;*
- **Command:** *FloorVolume 12;LimitOfTalkTime 21;*  
Concatenate two commands.  
**Response:** *FloorVolume 12;LimitOfTalkTime 21;*

## Overview of Commands

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## Detailed List of Commands

For each command a detailed description is given.

- The name of the command.
- The information whether this command can be used to get an attribute (Get), to receive update information automatically (Update) or to set an attribute (Set).
- A textual explanation.
- Table of parameters.

### Table of Parameters

*Name:* Name of parameter.

*Value range:* Value range of parameter.

*Required for get, Sent as update, Required for set:* Depending on whether the Command is for "Get" and/or "Update" and/or "Set", for each parameter the columns "Required for get", "Sent as update", "Required for set" give the information whether this parameter is needed accordingly.

*Relative change:* In case "Set" is possible for the command, the column "Relative change" indicates whether a relative change is allowed for this parameter.

### AllMicsOff (Set)

Switch all microphones to off.

#### Parameters

Name	Value range	Required for set	Relative change
execute	min = 1 max = 1	yes	not allowed



**AmRfChannel (Get, Update, Set)**

RF channel of the antenna module with the given serial number.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	serialNumber	string value	yes	yes	yes	not allowed
	rfChannel	1 (RfChannel_01) 2 (RfChannel_02) 3 (RfChannel_03) 4 (RfChannel_04) 5 (RfChannel_05) 6 (RfChannel_06) 7 (RfChannel_07) 8 (RfChannel_08) 9 (RfChannel_09) 10 (RfChannel_10) 11 (RfChannel_11) 12 (RfChannel_12) 13 (RfChannel_13) 14 (RfChannel_14) 15 (RfChannel_15) 16 (RfChannel_16) 17 (RfChannel_17) 18 (RfChannel_18) 19 (RfChannel_19) 20 (RfChannel_20) 21 (RfChannel_21) 22 (RfChannel_22) 23 (RfChannel_23) 24 (RfChannel_24) 25 (RfChannel_25) 26 (RfChannel_26) 27 (RfChannel_27) 28 (RfChannel_28) 29 (RfChannel_29) 30 (RfChannel_30) 31 (RfChannel_searching)	no	yes	yes	not allowed

**AmRfOutputPower (Get, Update, Set)**

RF output power of the antenna module with the given serial number.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	serialNumber	string value	yes	yes	yes	not allowed
	rfOutputPower	1 (RfOutputPower_00) 2 (RfOutputPower_20) 3 (RfOutputPower_40) 4 (RfOutputPower_60) 5 (RfOutputPower_80) 6 (RfOutputPower_100)	no	yes	yes	not allowed

**AutoFreqSelection (Get, Update, Set)**

If set to '1' all antenna modules select their frequency automatically.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	min = 0 max = 1	no	yes	yes	not allowed

**BlinkOnReq (Get, Update, Set)**

If set to '1' the light ring blinks if the microphone is in request mode.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	min = 0 max = 1	no	yes	yes	not allowed

**ClearDoesCleanRequestList (Get, Update, Set)**

Clear speaker request list on cancel on/off.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	min = 0 max = 1	no	yes	yes	not allowed

**ConferenceMode (Get, Update, Set)**

The mode of the conference.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	confMode	1 (ConfModeAutomatic) 2 (ConfModeOverrun) 3 (ConfModeRequest) 4 (ConfModePushToTalk)	no	yes	yes	not allowed

**EnableSUwShutdown (Get, Update, Set)**

If set to '1' users can shutdown the wireless speaking units.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	min = 0 max = 1	no	yes	yes	not allowed

**FloorEqualizerHigh (Get, Update, Set)**

Sets the dB (high range) of the floor equalizer (SU speakers).

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	eqValue	1 (EqRange_plus12dB) 2 (EqRange_plus11dB) 3 (EqRange_plus10dB) 4 (EqRange_plus09dB) 5 (EqRange_plus08dB) 6 (EqRange_plus07dB) 7 (EqRange_plus06dB) 8 (EqRange_plus05dB) 9 (EqRange_plus04dB) 10 (EqRange_plus03dB) 11 (EqRange_plus02dB) 12 (EqRange_plus01dB) 13 (EqRange_plus00dB) 14 (EqRange_minus01dB) 15 (EqRange_minus02dB) 16 (EqRange_minus03dB) 17 (EqRange_minus04dB) 18 (EqRange_minus05dB) 19 (EqRange_minus06dB) 20 (EqRange_minus07dB) 21 (EqRange_minus08dB) 22 (EqRange_minus09dB) 23 (EqRange_minus10dB) 24 (EqRange_minus11dB) 25 (EqRange_minus12dB)	no	yes	yes	allowed

**FloorEqualizerMid (Get, Update, Set)**

Sets the dB (mid range) of the floor equalizer (SU speakers).

Parameters

Name	Value range	Required for get	Sent as update	Required for set	Relative change
eqValue	1 (EqRange_plus12dB) 2 (EqRange_plus11dB) 3 (EqRange_plus10dB) 4 (EqRange_plus09dB) 5 (EqRange_plus08dB) 6 (EqRange_plus07dB) 7 (EqRange_plus06dB) 8 (EqRange_plus05dB) 9 (EqRange_plus04dB) 10 (EqRange_plus03dB) 11 (EqRange_plus02dB) 12 (EqRange_plus01dB) 13 (EqRange_plus00dB) 14 (EqRange_minus01dB) 15 (EqRange_minus02dB) 16 (EqRange_minus03dB) 17 (EqRange_minus04dB) 18 (EqRange_minus05dB) 19 (EqRange_minus06dB) 20 (EqRange_minus07dB) 21 (EqRange_minus08dB) 22 (EqRange_minus09dB) 23 (EqRange_minus10dB) 24 (EqRange_minus11dB) 25 (EqRange_minus12dB)	no	yes	yes	allowed

**FloorEqualizerLow (Get, Update, Set)**

Sets the dB (low range) of the floor equalizer (SU speakers).

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	eqValue	1 (EqRange_plus12dB) 2 (EqRange_plus11dB) 3 (EqRange_plus10dB) 4 (EqRange_plus09dB) 5 (EqRange_plus08dB) 6 (EqRange_plus07dB) 7 (EqRange_plus06dB) 8 (EqRange_plus05dB) 9 (EqRange_plus04dB) 10 (EqRange_plus03dB) 11 (EqRange_plus02dB) 12 (EqRange_plus01dB) 13 (EqRange_plus00dB) 14 (EqRange_minus01dB) 15 (EqRange_minus02dB) 16 (EqRange_minus03dB) 17 (EqRange_minus04dB) 18 (EqRange_minus05dB) 19 (EqRange_minus06dB) 20 (EqRange_minus07dB) 21 (EqRange_minus08dB) 22 (EqRange_minus09dB) 23 (EqRange_minus10dB) 24 (EqRange_minus11dB) 25 (EqRange_minus12dB)	no	yes	yes	allowed

**FloorMix (Get, Update, Set)**

Sets the dB for Audio Gain Reduction.

'FloorMix\_DivByNumOfChanel's' is shown as 'Linear Division' in the ADN CU1 display.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	floorMix	1 (FloorMix_0_0dB) 2 (FloorMix_0_5dB) 3 (FloorMix_1_0dB) 4 (FloorMix_1_5dB) 5 (FloorMix_2_0dB) 6 (FloorMix_2_5dB) 7 (FloorMix_3_0dB) 8 (FloorMix_LinearDivision)	no	yes	yes	allowed

**FloorVolume (Get, Update, Set)**

Sets the floor volume (SU Speakers).

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	volume	min = 0 max = 32	no	yes	yes	allowed

**HdRecordsActive (Get, Update, Set)**

(De)activate hard disc recording.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	min = 0 max = 1	no	yes	yes	not allowed

**HdRecordError (Get, Update)**

The error parameter is 1, if HD recording is active but there is some hard disk error. In case HD recording is not active the error parameter is always 0.

Parameters	Name	Value range	Required for get	Sent as update
	error	min = 0 max = 1	no	yes

**LapsedTalkTime (Get, Update)**

Lapsed talk time in seconds of microphone at bus position [BusPos].

Parameters	Name	Value range	Required for get	Sent as update
	BusPos	min = 0	yes	yes
	LapsedTT	min = 0	no	yes

**LapsedTalkTimeSN (Get, Update)**

Lapsed talk time in seconds of microphone with the given serial number.

Example (get): *LapsedTalkTimeSN D1100023;*

Parameters	Name	Value range	Required for get	Sent as update
	serialNumber	string value	yes	yes
	LapsedTT	min = 0	no	yes

**LimitOfTalkTime (Get, Update, Set)**

Limit of talk time.

If value is greater than '0', it defines the limit in minutes.

If value is set to '0', the talk time is unlimited.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	limitTT	min = 0 max = 60	no	yes	yes	allowed

**MaxOpenMic (Get, Update, Set)**

The maximum number of microphones that can be open at the same time.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	maxNum	min = 1 max = 10	no	yes	yes	allowed

### MaxSpeakReqListLength (Get, Update, Set)

The maximal number of microphones being in request status.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	maxNum	min = 1 max = 10	no	yes	yes	allowed

### MicBatteryStatus (Get, Update)

Remaining battery power of the microphone with the given serial number.

Parameters	Name	Value range	Required for get	Sent as update
	serialNumber	string value	yes	yes
	micBatteryStatus	min = 0 max = 100	no	yes

### MicButton (Set)

Toggle activation/deactivation of microphone at bus position [BusPos] (request MicOn in case mic is off and vice versa).

Parameters	Name	Value range	Required for get	Relative change
	BusPos	min = 1	yes	not allowed

### MicButtonSN (Set)

Toggle activation/deactivation of microphone with the given serial number (request MicOn in case mic is off and vice versa). Example: *MicButtonSN D1100023*; (Virtually press the microphone button of wired DU with serial number D1100023.) See string parameters on p. 4 for details.

Parameters	Name	Value range	Required for get	Relative change
	serialNumber	string value	yes	not allowed

### MicExtPowerSupply (Get, Update)

If '1' the wireless speaking unit has an external power supply.

Parameters	Name	Value range	Required for get	Sent as update
	serialNumber	string value	yes	yes
	extPowerSupply	min = 0 max = 1	no	yes

### MicRfStatus (Get, Update)

The Rf status of the wireless speaking unit (percent).

Parameters	Name	Value range	Required for get	Sent as update
	serialNumber	string value	yes	yes
	rfStatus	min = 0 max = 100	no	yes

### MicStatus (Get, Update)

Status of microphone with bus position [BusPos].

Parameters	Name	Value range	Required for get	Sent as update
	BusPos	min = 1	yes	yes
	micStatus	1 (SU_MicOn) 2 (SU_MicOnMuted) 3 (SU_MicOnPremonition) 4 (SU_MicOnPremonitionMuted) 5 (SU_MicOnOverrun) 6 (SU_MicOnOverrunMuted) 7 (SU_MicOff) 8 (SU_MicOffRequest) 9 (SU_MappingMode) 10 (SU_ServiceCalibrateMic) 11 (SU_MappingModeRequest)	no	yes

### MicStatusSN (Get, Update)

Status of microphone with the given serial number. Example (get): *MicStatusSN D1100023;*

Parameters	Name	Value range	Required for get	Sent as update
	serialNumber	string value	yes	yes
	micStatus	1 (SU_MicOn) 2 (SU_MicOnMuted) 3 (SU_MicOnPremonition) 4 (SU_MicOnPremonitionMuted) 5 (SU_MicOnOverrun) 6 (SU_MicOnOverrunMuted) 7 (SU_MicOff) 8 (SU_MicOffRequest) 9 (SU_MappingMode) 10 (SU_ServiceCalibrateMic) 11 (SU_MappingModeRequest)	no	yes

### OpenAccessMode (Get, Update, Set)

If set to '1' the open access mode is activated.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	min = 0 max = 1	no	yes	yes	not allowed



### PremonitionTime (Get, Update, Set)

Premonition time (in seconds) before talk time ends.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	premSec	1 (PremonitionTime_0sec) 2 (PremonitionTime_10sec) 3 (PremonitionTime_20sec) 4 (PremonitionTime_30sec) 5 (PremonitionTime_40sec) 6 (PremonitionTime_50sec) 7 (PremonitionTime_60sec) 8 (PremonitionTime_70sec) 9 (PremonitionTime_80sec) 10 (PremonitionTime_90sec) 11 (PremonitionTime_100sec) 12 (PremonitionTime_110sec) 13 (PremonitionTime_120sec)	no	yes	yes	allowed

### ReinitSystem (Set)

Re-initialize the system.

Parameters	Name	Value range	Required for set	Relative change
	execute	min = 1 max = 1	yes	not allowed

### SetCUDateTime (Set)

Set CU date/time.

Example: *SetCUDateTime 2015 2 17 12 0 0*. This sets the date/time of the CU to February 17th of the year 2015. The time is set to high noon.

In case of invalid setting like '2015 2 30 12 0 0' (the day '30' does not exist in February) this setting has no effect.

Parameters	Name	Value range	Required for set	Relative change
	year	min = 1900 max = 3000	yes	not allowed
	month	min = 1 max = 12	yes	not allowed
	day	min = 1 max = 31	yes	not allowed
	hour	min = 0 max = 23	yes	not allowed
	minute	min = 0 max = 59	yes	not allowed
	second	min = 0 max = 59	yes	not allowed

**SpeakerFeedbackSuppression (Get, Update, Set)**

(De)activate FeedbackSuppression.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	1 (FeedbSuppr_Off) 2 (FeedbSuppr_LowIntensity) 3 (FeedbSuppr_HighIntensity)	no	yes	yes	not allowed

**SwitchableMicVolumelsActive (Get, Update, Set)**

(De)activate SwitchableMicVolume.

This command is known as 'Mic Loudspeaker Mute' in CM and in CU display.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	min = 0 max = 1	no	yes	yes	not allowed

**TalkTimeExpirationHardCutOff (Get, Update, Set)**

If set to '1', the microphone will switch off immediately after talk time expired.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	min = 0 max = 1	no	yes	yes	not allowed

**TalkTimeLimitsActive (Get, Update, Set)**

If set to '1', the talk time is limited by the given talk time limit.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	min = 0 max = 1	no	yes	yes	not allowed

**XLRMixMinusIsActive (Get, Update, Set)**

(De)activate XLRMixMinus mode.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	min = 0 max = 1	no	yes	yes	not allowed

**XLRInStatus (Get, Update, Set)**

If set to '1', the XLR-in is enabled.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	min = 0 max = 1	no	yes	yes	not allowed

**XLRinSensitivity (Get, Update, Set)**

Set dBU for XLR-in sensitivity.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	inSens	1 (XlrInValueRange_minus18_0dBu) 2 (XlrInValueRange_minus16_5dBu) 3 (XlrInValueRange_minus15_0dBu) 4 (XlrInValueRange_minus13_5dBu) 5 (XlrInValueRange_minus12_0dBu) 6 (XlrInValueRange_minus10_5dBu) 7 (XlrInValueRange_minus09_0dBu) 8 (XlrInValueRange_minus07_5dBu) 9 (XlrInValueRange_minus06_0dBu) 10 (XlrInValueRange_minus04_5dBu) 11 (XlrInValueRange_minus03_0dBu) 12 (XlrInValueRange_minus01_5dBu) 13 (XlrInValueRange_plus00_0dBu) 14 (XlrInValueRange_plus01_5dBu) 15 (XlrInValueRange_plus03_0dBu) 16 (XlrInValueRange_plus04_5dBu) 17 (XlrInValueRange_plus06_0dBu) 18 (XlrInValueRange_plus07_5dBu) 19 (XlrInValueRange_plus09_0dBu) 20 (XlrInValueRange_plus10_5dBu) 21 (XlrInValueRange_plus12_0dBu) 22 (XlrInValueRange_plus13_5dBu) 23 (XlrInValueRange_plus15_0dBu) 24 (XlrInValueRange_plus16_5dBu) 25 (XlrInValueRange_plus18_0dBu)	no	yes	yes	allowed

**XLRIeqHigh (Get, Update, Set)**

Set dB for equalizer high range.

Parameters

Name	Value range	Required for get	Sent as update	Required for set	Relative change
eqHigh	1 (EqRange_plus12dB) 2 (EqRange_plus11dB) 3 (EqRange_plus10dB) 4 (EqRange_plus09dB) 5 (EqRange_plus08dB) 6 (EqRange_plus07dB) 7 (EqRange_plus06dB) 8 (EqRange_plus05dB) 9 (EqRange_plus04dB) 10 (EqRange_plus03dB) 11 (EqRange_plus02dB) 12 (EqRange_plus01dB) 13 (EqRange_plus00dB) 14 (EqRange_minus01dB) 15 (EqRange_minus02dB) 16 (EqRange_minus03dB) 17 (EqRange_minus04dB) 18 (EqRange_minus05dB) 19 (EqRange_minus06dB) 20 (EqRange_minus07dB) 21 (EqRange_minus08dB) 22 (EqRange_minus09dB) 23 (EqRange_minus10dB) 24 (EqRange_minus11dB) 25 (EqRange_minus12dB)	no	yes	yes	allowed

**XLrinEqMid (Get, Update, Set)**

Set dB for equalizer mid range.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	eqMid	1 (EqRange_plus12dB) 2 (EqRange_plus11dB) 3 (EqRange_plus10dB) 4 (EqRange_plus09dB) 5 (EqRange_plus08dB) 6 (EqRange_plus07dB) 7 (EqRange_plus06dB) 8 (EqRange_plus05dB) 9 (EqRange_plus04dB) 10 (EqRange_plus03dB) 11 (EqRange_plus02dB) 12 (EqRange_plus01dB) 13 (EqRange_plus00dB) 14 (EqRange_minus01dB) 15 (EqRange_minus02dB) 16 (EqRange_minus03dB) 17 (EqRange_minus04dB) 18 (EqRange_minus05dB) 19 (EqRange_minus06dB) 20 (EqRange_minus07dB) 21 (EqRange_minus08dB) 22 (EqRange_minus09dB) 23 (EqRange_minus10dB) 24 (EqRange_minus11dB) 25 (EqRange_minus12dB)	no	yes	yes	allowed

**XLREqLow (Get, Update, Set)**

Set dB for equalizer low range.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	eqLow	1 (EqRange_plus12dB) 2 (EqRange_plus11dB) 3 (EqRange_plus10dB) 4 (EqRange_plus09dB) 5 (EqRange_plus08dB) 6 (EqRange_plus07dB) 7 (EqRange_plus06dB) 8 (EqRange_plus05dB) 9 (EqRange_plus04dB) 10 (EqRange_plus03dB) 11 (EqRange_plus02dB) 12 (EqRange_plus01dB) 13 (EqRange_plus00dB) 14 (EqRange_minus01dB) 15 (EqRange_minus02dB) 16 (EqRange_minus03dB) 17 (EqRange_minus04dB) 18 (EqRange_minus05dB) 19 (EqRange_minus06dB) 20 (EqRange_minus07dB) 21 (EqRange_minus08dB) 22 (EqRange_minus09dB) 23 (EqRange_minus10dB) 24 (EqRange_minus11dB) 25 (EqRange_minus12dB)	no	yes	yes	allowed

**XLROUTStatus (Get, Update, Set)**

If set to '1', the XLR-out is enabled.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	min = 0 max = 1	no	yes	yes	not allowed

## XLROUTVolume (Get, Update, Set)

Set dBU for XLR-out volume.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	outVol	1 (XlrOutValueRange_minus20dB) 2 (XlrOutValueRange_minus19dB) 3 (XlrOutValueRange_minus18dB) 4 (XlrOutValueRange_minus17dB) 5 (XlrOutValueRange_minus16dB) 6 (XlrOutValueRange_minus15dB) 7 (XlrOutValueRange_minus14dB) 8 (XlrOutValueRange_minus13dB) 9 (XlrOutValueRange_minus12dB) 10 (XlrOutValueRange_minus11dB) 11 (XlrOutValueRange_minus10dB) 12 (XlrOutValueRange_minus09dB) 13 (XlrOutValueRange_minus08dB) 14 (XlrOutValueRange_minus07dB) 15 (XlrOutValueRange_minus06dB) 16 (XlrOutValueRange_minus05dB) 17 (XlrOutValueRange_minus04dB) 18 (XlrOutValueRange_minus03dB) 19 (XlrOutValueRange_minus02dB) 20 (XlrOutValueRange_minus01dB) 21 (XlrOutValueRange_plus00dB) 22 (XlrOutValueRange_plus01dB) 23 (XlrOutValueRange_plus02dB) 24 (XlrOutValueRange_plus03dB) 25 (XlrOutValueRange_plus04dB) 26 (XlrOutValueRange_plus05dB) 27 (XlrOutValueRange_plus06dB) 28 (XlrOutValueRange_plus07dB) 29 (XlrOutValueRange_plus08dB) 30 (XlrOutValueRange_plus09dB) 31 (XlrOutValueRange_plus10dB) 32 (XlrOutValueRange_plus11dB)	no	yes	yes	allowed

**XLRouteqHigh (Get, Update, Set)**

Set dB for equalizer high range.

Parameters

Name	Value range	Required for get	Sent as update	Required for set	Relative change
eqHigh	1 (EqRange_plus12dB) 2 (EqRange_plus11dB) 3 (EqRange_plus10dB) 4 (EqRange_plus09dB) 5 (EqRange_plus08dB) 6 (EqRange_plus07dB) 7 (EqRange_plus06dB) 8 (EqRange_plus05dB) 9 (EqRange_plus04dB) 10 (EqRange_plus03dB) 11 (EqRange_plus02dB) 12 (EqRange_plus01dB) 13 (EqRange_plus00dB) 14 (EqRange_minus01dB) 15 (EqRange_minus02dB) 16 (EqRange_minus03dB) 17 (EqRange_minus04dB) 18 (EqRange_minus05dB) 19 (EqRange_minus06dB) 20 (EqRange_minus07dB) 21 (EqRange_minus08dB) 22 (EqRange_minus09dB) 23 (EqRange_minus10dB) 24 (EqRange_minus11dB) 25 (EqRange_minus12dB)	no	yes	yes	allowed



**XLRouteEqMid (Get, Update, Set)**

Set dB for equalizer mid range.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	eqMid	1 (EqRange_plus12dB) 2 (EqRange_plus11dB) 3 (EqRange_plus10dB) 4 (EqRange_plus09dB) 5 (EqRange_plus08dB) 6 (EqRange_plus07dB) 7 (EqRange_plus06dB) 8 (EqRange_plus05dB) 9 (EqRange_plus04dB) 10 (EqRange_plus03dB) 11 (EqRange_plus02dB) 12 (EqRange_plus01dB) 13 (EqRange_plus00dB) 14 (EqRange_minus01dB) 15 (EqRange_minus02dB) 16 (EqRange_minus03dB) 17 (EqRange_minus04dB) 18 (EqRange_minus05dB) 19 (EqRange_minus06dB) 20 (EqRange_minus07dB) 21 (EqRange_minus08dB) 22 (EqRange_minus09dB) 23 (EqRange_minus10dB) 24 (EqRange_minus11dB) 25 (EqRange_minus12dB)	no	yes	yes	allowed

**XLROUTEqLow (Get, Update, Set)**

Set dB for equalizer low range.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	eqLow	1 (EqRange_plus12dB) 2 (EqRange_plus11dB) 3 (EqRange_plus10dB) 4 (EqRange_plus09dB) 5 (EqRange_plus08dB) 6 (EqRange_plus07dB) 7 (EqRange_plus06dB) 8 (EqRange_plus05dB) 9 (EqRange_plus04dB) 10 (EqRange_plus03dB) 11 (EqRange_plus02dB) 12 (EqRange_plus01dB) 13 (EqRange_plus00dB) 14 (EqRange_minus01dB) 15 (EqRange_minus02dB) 16 (EqRange_minus03dB) 17 (EqRange_minus04dB) 18 (EqRange_minus05dB) 19 (EqRange_minus06dB) 20 (EqRange_minus07dB) 21 (EqRange_minus08dB) 22 (EqRange_minus09dB) 23 (EqRange_minus10dB) 24 (EqRange_minus11dB) 25 (EqRange_minus12dB)	no	yes	yes	allowed

**XLROUTFeedbackSuppression (Get, Update, Set)**

(De)activate FeedbackSuppression.

Parameters	Name	Value range	Required for get	Sent as update	Required for set	Relative change
	enable	1 (FeedbSuppr_Off) 2 (FeedbSuppr_LowIntensity) 3 (FeedbSuppr_HighIntensity)	no	yes	yes	not allowed

## Error Codes

Invalid MediaCtrl commands are responded by an error code: *'error [error code]: [error text];'*

Example: *error 1020: value out of range;*

Error Code	Error Text	Error Description
1000	invalid command	The given command is not known by the Sennheiser device.
1010	invalid parameter	At least one parameter is invalid for this command.
1020	value out of range	At least one parameter is out of range for this command.
1030	relative parameter is not supported	At least one parameter tried an unsupported relative change.
1040	invalid number of parameters	Invalid number of parameters for this command.
1050	get request not allowed	A 'get' request is not allowed for this command.
1060	set request not allowed	A 'set' request is not allowed for this command.
1070	processing of request currently not possible	Currently, the command cannot be processed.



**Sennheiser electronic GmbH & Co. KG**

Am Labor 1, 30900 Wedemark, Germany  
[www.sennheiser.com](http://www.sennheiser.com)

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