

# Audio Distribution Network



ADN MediaCtrl Protocol

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## Glossary

| Keyword | Description  |
|---------|--|
| 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   |
| SU      | Speaking Unit (Chairperson ADN C1 or Delegate ADN 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 and the subnet mask 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 bus position of the SU.

**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 bus position of the SU as a parameter.

## 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

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

## Error Codes

Invalid MediaCtrl commands are responded by an error code: 'error [error code]: [error text];'(see chapter 'Error codes' on page 21 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: *MicStatus 1*; (Get the status of the microphone at position 1.)  
Response: *MicStatus 1 1*; (The microphone at position 1 is ON.)
- Command: *MicStatus 1 1*; (The microphone at position 1 shall be set to ON directly, but 'MicStatus' is only a 'Get' - see description below.)  
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*;

## List of Commands (overview)

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## List of Commands (detail)

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<br>max = 1 | 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<br>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<br>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)<br>2 (ConfModeOverrun)<br>3 (ConfModeRequest)<br>4 (ConfModePushToTalk) | 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)<br>2 (EqRange_plus11dB)<br>3 (EqRange_plus10dB)<br>4 (EqRange_plus09dB)<br>5 (EqRange_plus08dB)<br>6 (EqRange_plus07dB)<br>7 (EqRange_plus06dB)<br>8 (EqRange_plus05dB)<br>9 (EqRange_plus04dB)<br>10 (EqRange_plus03dB)<br>11 (EqRange_plus02dB)<br>12 (EqRange_plus01dB)<br>13 (EqRange_plus00dB)<br>14 (EqRange_minus01dB)<br>15 (EqRange_minus02dB)<br>16 (EqRange_minus03dB)<br>17 (EqRange_minus04dB)<br>18 (EqRange_minus05dB)<br>19 (EqRange_minus06dB)<br>20 (EqRange_minus07dB)<br>21 (EqRange_minus08dB)<br>22 (EqRange_minus09dB)<br>23 (EqRange_minus10dB)<br>24 (EqRange_minus11dB)<br>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)<br>2 (EqRange_plus11dB)<br>3 (EqRange_plus10dB)<br>4 (EqRange_plus09dB)<br>5 (EqRange_plus08dB)<br>6 (EqRange_plus07dB)<br>7 (EqRange_plus06dB)<br>8 (EqRange_plus05dB)<br>9 (EqRange_plus04dB)<br>10 (EqRange_plus03dB)<br>11 (EqRange_plus02dB)<br>12 (EqRange_plus01dB)<br>13 (EqRange_plus00dB)<br>14 (EqRange_minus01dB)<br>15 (EqRange_minus02dB)<br>16 (EqRange_minus03dB)<br>17 (EqRange_minus04dB)<br>18 (EqRange_minus05dB)<br>19 (EqRange_minus06dB)<br>20 (EqRange_minus07dB)<br>21 (EqRange_minus08dB)<br>22 (EqRange_minus09dB)<br>23 (EqRange_minus10dB)<br>24 (EqRange_minus11dB)<br>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)<br>2 (EqRange_plus11dB)<br>3 (EqRange_plus10dB)<br>4 (EqRange_plus09dB)<br>5 (EqRange_plus08dB)<br>6 (EqRange_plus07dB)<br>7 (EqRange_plus06dB)<br>8 (EqRange_plus05dB)<br>9 (EqRange_plus04dB)<br>10 (EqRange_plus03dB)<br>11 (EqRange_plus02dB)<br>12 (EqRange_plus01dB)<br>13 (EqRange_plus00dB)<br>14 (EqRange_minus01dB)<br>15 (EqRange_minus02dB)<br>16 (EqRange_minus03dB)<br>17 (EqRange_minus04dB)<br>18 (EqRange_minus05dB)<br>19 (EqRange_minus06dB)<br>20 (EqRange_minus07dB)<br>21 (EqRange_minus08dB)<br>22 (EqRange_minus09dB)<br>23 (EqRange_minus10dB)<br>24 (EqRange_minus11dB)<br>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)<br>2 (FloorMix_0_5dB)<br>3 (FloorMix_1_0dB)<br>4 (FloorMix_1_5dB)<br>5 (FloorMix_2_0dB)<br>6 (FloorMix_2_5dB)<br>7 (FloorMix_3_0dB)<br>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<br>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<br>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<br>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            |

**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<br>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<br>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<br>max = 10 | no               | yes            | yes              | allowed         |

**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<br>max = 400 | yes              | not allowed     |

**MicStatus (Get, Update)**

Status of microphone with bus position [BusPos].

## Parameters

| Name      | Value range   | Required for get | Sent as update |
|-----------|---|------------------|----------------|
| BusPos    | min = 1<br>max = 400  | yes              | yes            |
| micStatus | 1 (SU_MicOn)<br>2 (SU_MicOnMuted)<br>3 (SU_MicOnPremonition)<br>4 (SU_MicOnPremonitionMuted)<br>5 (SU_MicOnOverrun)<br>6 (SU_MicOnOverrunMuted)<br>7 (SU_MicOff)<br>8 (SU_MicOffRequest)<br>9 (SU_MappingMode)<br>10 (SU_ServiceCalibrateMic)<br>11 (SU_MappingModeRequest) | no               | yes            |

**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)<br>2 (PremonitionTime_10sec)<br>3 (PremonitionTime_20sec)<br>4 (PremonitionTime_30sec)<br>5 (PremonitionTime_40sec)<br>6 (PremonitionTime_50sec)<br>7 (PremonitionTime_60sec)<br>8 (PremonitionTime_70sec)<br>9 (PremonitionTime_80sec)<br>10 (PremonitionTime_90sec)<br>11 (PremonitionTime_100sec)<br>12 (PremonitionTime_110sec)<br>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<br>max = 1 | 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)<br>2 (FeedbSuppr_LowIntensity)<br>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<br>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<br>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<br>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<br>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<br>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)<br>2 (XlrInValueRange_minus16_5dBu)<br>3 (XlrInValueRange_minus15_0dBu)<br>4 (XlrInValueRange_minus13_5dBu)<br>5 (XlrInValueRange_minus12_0dBu)<br>6 (XlrInValueRange_minus10_5dBu)<br>7 (XlrInValueRange_minus09_0dBu)<br>8 (XlrInValueRange_minus07_5dBu)<br>9 (XlrInValueRange_minus06_0dBu)<br>10 (XlrInValueRange_minus04_5dBu)<br>11 (XlrInValueRange_minus03_0dBu)<br>12 (XlrInValueRange_minus01_5dBu)<br>13 (XlrInValueRange_plus00_0dBu)<br>14 (XlrInValueRange_plus01_5dBu)<br>15 (XlrInValueRange_plus03_0dBu)<br>16 (XlrInValueRange_plus04_5dBu)<br>17 (XlrInValueRange_plus06_0dBu)<br>18 (XlrInValueRange_plus07_5dBu)<br>19 (XlrInValueRange_plus09_0dBu)<br>20 (XlrInValueRange_plus10_5dBu)<br>21 (XlrInValueRange_plus12_0dBu)<br>22 (XlrInValueRange_plus13_5dBu)<br>23 (XlrInValueRange_plus15_0dBu)<br>24 (XlrInValueRange_plus16_5dBu)<br>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)<br>2 (EqRange_plus11dB)<br>3 (EqRange_plus10dB)<br>4 (EqRange_plus09dB)<br>5 (EqRange_plus08dB)<br>6 (EqRange_plus07dB)<br>7 (EqRange_plus06dB)<br>8 (EqRange_plus05dB)<br>9 (EqRange_plus04dB)<br>10 (EqRange_plus03dB)<br>11 (EqRange_plus02dB)<br>12 (EqRange_plus01dB)<br>13 (EqRange_plus00dB)<br>14 (EqRange_minus01dB)<br>15 (EqRange_minus02dB)<br>16 (EqRange_minus03dB)<br>17 (EqRange_minus04dB)<br>18 (EqRange_minus05dB)<br>19 (EqRange_minus06dB)<br>20 (EqRange_minus07dB)<br>21 (EqRange_minus08dB)<br>22 (EqRange_minus09dB)<br>23 (EqRange_minus10dB)<br>24 (EqRange_minus11dB)<br>25 (EqRange_minus12dB) | no               | yes            | yes              | allowed         |

**XLReqEqMid (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)<br>2 (EqRange_plus11dB)<br>3 (EqRange_plus10dB)<br>4 (EqRange_plus09dB)<br>5 (EqRange_plus08dB)<br>6 (EqRange_plus07dB)<br>7 (EqRange_plus06dB)<br>8 (EqRange_plus05dB)<br>9 (EqRange_plus04dB)<br>10 (EqRange_plus03dB)<br>11 (EqRange_plus02dB)<br>12 (EqRange_plus01dB)<br>13 (EqRange_plus00dB)<br>14 (EqRange_minus01dB)<br>15 (EqRange_minus02dB)<br>16 (EqRange_minus03dB)<br>17 (EqRange_minus04dB)<br>18 (EqRange_minus05dB)<br>19 (EqRange_minus06dB)<br>20 (EqRange_minus07dB)<br>21 (EqRange_minus08dB)<br>22 (EqRange_minus09dB)<br>23 (EqRange_minus10dB)<br>24 (EqRange_minus11dB)<br>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)<br>2 (EqRange_plus11dB)<br>3 (EqRange_plus10dB)<br>4 (EqRange_plus09dB)<br>5 (EqRange_plus08dB)<br>6 (EqRange_plus07dB)<br>7 (EqRange_plus06dB)<br>8 (EqRange_plus05dB)<br>9 (EqRange_plus04dB)<br>10 (EqRange_plus03dB)<br>11 (EqRange_plus02dB)<br>12 (EqRange_plus01dB)<br>13 (EqRange_plus00dB)<br>14 (EqRange_minus01dB)<br>15 (EqRange_minus02dB)<br>16 (EqRange_minus03dB)<br>17 (EqRange_minus04dB)<br>18 (EqRange_minus05dB)<br>19 (EqRange_minus06dB)<br>20 (EqRange_minus07dB)<br>21 (EqRange_minus08dB)<br>22 (EqRange_minus09dB)<br>23 (EqRange_minus10dB)<br>24 (EqRange_minus11dB)<br>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<br>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)<br>2 (XlrOutValueRange_minus19dB)<br>3 (XlrOutValueRange_minus18dB)<br>4 (XlrOutValueRange_minus17dB)<br>5 (XlrOutValueRange_minus16dB)<br>6 (XlrOutValueRange_minus15dB)<br>7 (XlrOutValueRange_minus14dB)<br>8 (XlrOutValueRange_minus13dB)<br>9 (XlrOutValueRange_minus12dB)<br>10 (XlrOutValueRange_minus11dB)<br>11 (XlrOutValueRange_minus10dB)<br>12 (XlrOutValueRange_minus09dB)<br>13 (XlrOutValueRange_minus08dB)<br>14 (XlrOutValueRange_minus07dB)<br>15 (XlrOutValueRange_minus06dB)<br>16 (XlrOutValueRange_minus05dB)<br>17 (XlrOutValueRange_minus04dB)<br>18 (XlrOutValueRange_minus03dB)<br>19 (XlrOutValueRange_minus02dB)<br>20 (XlrOutValueRange_minus01dB)<br>21 (XlrOutValueRange_plus00dB)<br>22 (XlrOutValueRange_plus01dB)<br>23 (XlrOutValueRange_plus02dB)<br>24 (XlrOutValueRange_plus03dB)<br>25 (XlrOutValueRange_plus04dB)<br>26 (XlrOutValueRange_plus05dB)<br>27 (XlrOutValueRange_plus06dB)<br>28 (XlrOutValueRange_plus07dB)<br>29 (XlrOutValueRange_plus08dB)<br>30 (XlrOutValueRange_plus09dB)<br>31 (XlrOutValueRange_plus10dB)<br>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)<br>2 (EqRange_plus11dB)<br>3 (EqRange_plus10dB)<br>4 (EqRange_plus09dB)<br>5 (EqRange_plus08dB)<br>6 (EqRange_plus07dB)<br>7 (EqRange_plus06dB)<br>8 (EqRange_plus05dB)<br>9 (EqRange_plus04dB)<br>10 (EqRange_plus03dB)<br>11 (EqRange_plus02dB)<br>12 (EqRange_plus01dB)<br>13 (EqRange_plus00dB)<br>14 (EqRange_minus01dB)<br>15 (EqRange_minus02dB)<br>16 (EqRange_minus03dB)<br>17 (EqRange_minus04dB)<br>18 (EqRange_minus05dB)<br>19 (EqRange_minus06dB)<br>20 (EqRange_minus07dB)<br>21 (EqRange_minus08dB)<br>22 (EqRange_minus09dB)<br>23 (EqRange_minus10dB)<br>24 (EqRange_minus11dB)<br>25 (EqRange_minus12dB) | no               | yes            | yes              | allowed         |

**XLRouteqMid (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)<br>2 (EqRange_plus11dB)<br>3 (EqRange_plus10dB)<br>4 (EqRange_plus09dB)<br>5 (EqRange_plus08dB)<br>6 (EqRange_plus07dB)<br>7 (EqRange_plus06dB)<br>8 (EqRange_plus05dB)<br>9 (EqRange_plus04dB)<br>10 (EqRange_plus03dB)<br>11 (EqRange_plus02dB)<br>12 (EqRange_plus01dB)<br>13 (EqRange_plus00dB)<br>14 (EqRange_minus01dB)<br>15 (EqRange_minus02dB)<br>16 (EqRange_minus03dB)<br>17 (EqRange_minus04dB)<br>18 (EqRange_minus05dB)<br>19 (EqRange_minus06dB)<br>20 (EqRange_minus07dB)<br>21 (EqRange_minus08dB)<br>22 (EqRange_minus09dB)<br>23 (EqRange_minus10dB)<br>24 (EqRange_minus11dB)<br>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)<br>2 (EqRange_plus11dB)<br>3 (EqRange_plus10dB)<br>4 (EqRange_plus09dB)<br>5 (EqRange_plus08dB)<br>6 (EqRange_plus07dB)<br>7 (EqRange_plus06dB)<br>8 (EqRange_plus05dB)<br>9 (EqRange_plus04dB)<br>10 (EqRange_plus03dB)<br>11 (EqRange_plus02dB)<br>12 (EqRange_plus01dB)<br>13 (EqRange_plus00dB)<br>14 (EqRange_minus01dB)<br>15 (EqRange_minus02dB)<br>16 (EqRange_minus03dB)<br>17 (EqRange_minus04dB)<br>18 (EqRange_minus05dB)<br>19 (EqRange_minus06dB)<br>20 (EqRange_minus07dB)<br>21 (EqRange_minus08dB)<br>22 (EqRange_minus09dB)<br>23 (EqRange_minus10dB)<br>24 (EqRange_minus11dB)<br>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)<br>2 (FeedbSuppr_LowIntensity)<br>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.                  |

Printed in Germany  
Publ. 07/11  
543357/A01

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