Sennheiser SL MCR DW

Version	1.0.0
Simpl+ Module filename	Sennheiser_MCR_1.0.0_SE.usp
Simpl# Library filename	Sennheiser_Modules_CSharp.clz
Tested on processor	CP3
Tested on processor firmware	1.601.0050
Tested on device model	Sennheiser SL Multi-Channel Receiver DW
Tested on device firmware	3.0.1
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Summary:

This module integrates with Sennheiser SpeechLine Multi-Channel Receiver (SL MCR DW), a wireless microphone system.

Release notes:

- 1.0.0
    - Initial release

PARAMETERS	
Device_IP_Param	The IP-address of the device we will connect to. If you want to be able to change this during runtime, instead use serial input **Device_IP**
Device_UDP_Port_Param	The UDP port of the device we will connect to. This should most likely always be 45d Default: 45d
Number_of_Channels	The number of channels that the device has, or that will be used.

INPUTS	
Connect	Opens the connection to the device when signal is high. I you use the parameters to set Device Ip and Port, you may define this signals as '1'.
Debug	Enables debug messages to be printed to the text console while signal is high. Make sure this is not left high when not used.
Enable_Incoming_Commands	When set to high, all received data from the device will be outputed on the serial output **Incoming_Command_FB**.
Enable_Rf_Quality_Feedback Enable_Mixer_Level_Feedback Enable_RX_Input_Level_Feedback	Set this high when you want the analog outputs RF_Quality_FB / Mixer_Level_FB / RX_Input_Level[x] to start outputing values. You may define this signals as '1'. The reason you have to manually enable this is because the device is quite "chatty" so if you don't use this feature all that traffic is unneccesary.
Identify_On Identify_Off Identify_Toggle	Turns on/off/toggles the identify feature of the device.
RX_Identify_On[x] RX_Identify_Off[x] RX_Identify_Toggle[x]	Turns on/off/toggles the identify feature of the corresponding receiver channel.
Low_Cut_On[x] Low_Cut_Off[x] Low_Cut_Toggle[x]	Turns on/off/toggles the Low Cut equalizer feature on the corresponding receiver channel. It removes the bass frequencies in the audio.
Led_Brightness	Sets the brightness of the leds on the device. Range: 0-5 0 = Off … 5 = Full

Dante_Output_Gain	Sets the Dante output gain of the device. Range: 0-6 0 = -24 dB 1 = -18 dB 2 = -12 dB 3 = -6 dB 4 = 0 dB 5 = 6 dB 6 = 12 dB
Set_Name	Sets the name of the device. Max length: 8 characters.
Set_Location	Sets the location of the device. Max length: 8 characters. Allowed chars: 0-9, A-Z, a-z or <space> Must start with a letter May not start or end with a – or _
Set_Position	Sets the position of the device. Intended to be used as the position in the location. Example if location is ”Room_1”, position might be ”Over the table”. Max length: 30 characters. Allowed chars: 0-9, A-Z, a-z or <space>
Send_Custom_Command	Makes it possible to send your own commands to the device. Refer to the Sennheiser Sound Control Protocol (SSC). Example command: {"device":{"reset":true}}
Device_IP	The IP-address of the device we will connect to. Make sure you connect after this is set.
Device_UDP_Port	The UDP port of the device we will connect to. This should most likely always be 45. Make sure you connect after this is set.
RX_Output_Gain[x]	Sets the output gain of the corresponding receiver channel. Range: 0-6 0 = -24 dB 1 = -18 dB 2 = -12 dB 3 = -6 dB 4 = 0 dB 5 = 6 dB 6 = 12 dB
Eq[x]	Selects which EQ to use for the corresponding receiver channel. Range: 0-4

	0 = Off 1 = Female speech 2 = Male speech 3 = Media 4 = Custom

OUTPUTS	
Responding_FB	This is high as long as the device is responding. As the protocol uses UDP there is no connection state, so it might take up to a minute before responding goes low after the device has stopped responding.
Identifying_FB	This is high while the device is in identifying state.
RX_Identifying_FB[x]	This is high while the receiver channel is in identifying state.
Low_Cut_On_FB[x]	This is high if the Low Cut EQ feature on the receiver channel is on.
TX_Active_FB[x]	This is high when a transmitter (such as the handmic or bodypack) is turned on and connected to the corresponding receiver channel.
TX_Charging_FB[x]	This is high when a transmitter is charging while it is on and connected to the corresponding receiver channel. This will not work when charging a handmic or bodypack in the CHG-4N, as it will then disconnect from the device.
Led_Brightness_FB	The currently selected brightness of the leds on the device. Range: 0-5 0 = Off … 5 = Full
Dante_Output_Gain_FB	The current Dante output gain of the device. Range 0-6. 0 = -24 dB 1 = -18 dB 2 = -12 dB 3 = -6 dB 4 = 0 dB 5 = 6 dB 6 = 12 dB

Mixer_Level_FB	If you set the digital input **Enable_Mixer_Level_Feedback** high, this will output the current mixer level. Value is in dB. Range: -60 – 0
Name_FB	The name of the device.
Location_FB	The location of the device.
Position_FB	The position of the device. Intended to be used as the position in the location. Example if location is ”Room_1”, position might be ”Over the table”.
Product_FB	The product name of the device. Example: SLDW4CH
Version_FB	The firmware version of the device. Example: 3.0.1
Serial_FB	The serial number of the device. Example: 1234567890
Mac_Addresses_FB	The mac adresses of the device. Example: 00:1b:66:11:22:33
Dante_Ip_Addresses_FB	The ip addresses of the Dante outputs. This returns both addreses separated with a comma. If there’s no network cable connected or no adresses set, this might return a string only containing a comma. Example: 192.168.10.2,192.168.10.3
Dante_Mac_Addresses_FB	The mac addresses of the Dante outputs. This returns both addresses separated with a comma. Example: 00:1B:66:44:55:66,00:1B:66:77:88:99
Incoming_Command_FB	If you set the digital input **Enable_Incoming_Commands** high, this will output all the received data from the device. The use case for this would be to extend the functionality of the module.
Output_Gain_FB[x]	The current output gain of the corresponding receiver channel. Range 0-6. 0 = -24 dB 1 = -18 dB 2 = -12 dB 3 = -6 dB 4 = 0 dB 5 = 6 dB 6 = 12 dB
Eq_FB[x]	The currently selected EQ of the corresponding receiver channel. Range: 0-4

	0 = Off 1 = Female speech 2 = Male speech 3 = Media 4 = Custom
RF_Quality_FB[x]	If you set the digital input **Enable_Rf_Quality_Feedback** high, this will output the current RF connection quality with the transmitter.
RX_Input_Level_FB[x]	If you set the digital input **Enable_RX_Input_Level_Feedback** high, this will output the current RF connection quality with the transmitter.
TX_Device_Type_FB[x]	The currently connected transmitter type. Range: 0-3 0 = Handheld 1 = Bodypack 2 = Tablestand 3 = Boundary
TX_Battery_Type_FB[x]	The currently connected transmitters battery type. Range: 0-1 0 = Battery 1 = Rechargable
TX_Battery_Gauge_FB[x]	The currently connected transmitters battery level. Range: 0-65535 (0-100%)
TX_Battery_Health_FB[x]	The currently connected transmitters battery health level. Range: 0-65535 (0-100%)
TX_Battery_Lifetime_FB[x]	The currently connected transmitters battery lifetime in minutes. Lifetime means before you have to replace the rechargable battery with a new one, not until the current charge is depleted. This only works if you have a rechargable battery.
RFPI_FB[x]	The RFPI number of the corresponding receiver.
Last_Paired_IPEI_FB[x]	The last paired IPEI number of the corresponding receiver. This can be used to identify which transmitter the device is paired with even when the transmitter is in the charger.
RX_Warnings[x]	The warning message of the corresponding receiver. Example: Bad Link
TX_Warnings[x]	The warning message shown on the frontpanel of the transmitter connected to the corresponding receiver.

	Example: Low Bat