R2 RS232 Command List

Index

AUDAC 1

Introduction

Welcome to the command user manual of the AUDAC R2 . The R2 is a DSP audiomatrix with multiple inputs and outputs (called zones), for more info about the R2 see the R2 manual.

Input list

1	Input 1
2	Input 2
3	Input 3
4	Input 4
5	Input 5
6	Input 6
7	Input 7
8	Input 8
9	Don't use (system input)
10	Don't use (system input)
11	Digital/Optical in (don't use at the same time)
12	Prio 1
13	Prio 2
14	Internal sine generator
15	Internal white noise generator
16	Internal pink noise generator
17	WP1 input (digital interface RS485_1)
18	WP2 input (digital interface RS485_2)
19	WP3 input (digital interface RS485_3)
20	WP4 input (digital interface RS485_4)
21	WP5 input (digital interface RS485_5)
22	WP6 input (digital interface RS485_6)
23	WP7 input (digital interface RS485_7)
24	WP8 input (digital interface RS485_8)
25	FB1 input
26	FB2 input
27	FB3 input
28	FB4 input
29	FB5 input
30	FB6 input
31	FB7 input
32	FB8 input

AUDAC

Output list

1   Zone 1
2   Zone 2
3   Zone 3
4   Zone 4
5   Zone 5
6   Zone 6
7   Zone 7
8   Zone 8
9   Don't use (system output)
10   Don't use (system output)
11   Digital/Optical out
12   WP1 output (digital interface RS485_1)
13   WP2 output (digital interface RS485_2)
14   WP3 output (digital interface RS485_3)
15   WP4 output (digital interface RS485_4)
16   WP5 output (digital interface RS485_5)
17   WP6 output (digital interface RS485_6)
18   WP7 output (digital interface RS485_7)
19   WP8 output (digital interface RS485_8)
20   FB1 output
21   FB2 output
22   FB3 output
23   FB4 output
24   FB5 output
25   FB6 output
26   FB7 output
27   FB8 output

Using the commands

The R2 has many ports which all accept the same commands:

> RS232 port
> All RS485 ports
> TCP/IP

The RS232/RS485 ports must be configured with 19200 baud, 8 data bits, 1 stop bit, no parity

The TCP/IP port accepts command's at port 5001. All TCP/IP answers returned by the R2 are followed with 0x00.

Command overview

> *Startsymbol|destination|source|command|argument's|checksum|stopsymbol*
>
> Example: Set volume R001 zone 1 to −30dB
> ASCII   *#|R001|F001|SV1|30|55b8|return*
> HEX   *237c523030317c463030317c5356317c33307c353562387c0d0a*

Important:
− The checksum is CRC−16 excluding the '#'. You can replace the checksum with 'U',   this is always accepted as checksum.
− return = 0x0d 0x0a

Command flow
1) The client sends a command to the R2
2) The R2 acknowledges the command by returning the same command an a '+' as
   Argument, if 'L' is received then this command can't get executed because the load > 90%
3) The R2 updates all client's with the new information

All zone settings will be lost if the device is switched off. To keep the changes you must save them with the "SAVE" command. All device settings that are configured through the configuration page of the website are saved with every change automatically.

AUDAC

SVXX

Set volume in a zone to a level
        Command: SVXX, where XX is the zone number
        Arguments: Volume in neg db, 0 is maximum volume, 150 is minimum volume

Example
        Set volume in zone 2 to −40dB
        Command   *#|R001|F001|SV2|40|944d|return*
        Answer   *#|F001|R001|SV2|+|f6f5|return*
        Update   *#|ALL|R001|V02|040|f81e|return*

SVUXX

Set volume up with 3dB in a zone
        Command: SVUXX, where XX is the zone number
        Arguments: 0 (none)

Example
        Current volume in zone 5 is −40db, set volume up with 3dB
        Command   *#|R001|F001|SVU5|0|16ee|return*
        Answer   *#|F001|R001|SVU5|+|d29b|return*
        Update   *#|ALL|R001|V05|037|beac|return*

SVDXX

Set volume down with 3dB in a zone
        Command: SVDXX, where XX is the zone number
        Arguments: 0 (none)

Example
        Current volume in zone 5 is −40db, set volume down with 3dB
        Command   *#|R001|F001|SVD5|0|1512|return*
        Answer   *#|F001|R001|SVD5|+|d167|return*
        Update   *#|ALL|R001|V05|043|bf1f|return*

SVALL

Set volume in all zone's to a level (level can be different for all zones)
        Command: SVALL
        Arguments: XX^XX^XX^XX^XX^XX^XX^XX, where XX are the volumes

Example
        Set volume in zone 1 −10dB, in zone 2 −12dB, in zone 3 −20dB, in zone 4 −19dB, in zone 5 −15dB, in zone 6 −7dB, in zone 7 −150dB, in zone 8 −0dB
        Command   *#|R001|F001|SVALL|10^12^20^19^15^7^150^0|c80b|return*
        Answer   *#|F001|R001|SVALL|+|748c|return*
        Update   *#|ALL|R001|VALL|010^012^20^19^15^7^150^000|fba2|return*

GVXX

Get volume in a zone
> Command: GVXX, where XX is the zone number
> Arguments: 0 (none)

Example
> Get volume in zone 3
> Command   *#|R001|F001|GV3|0|11b3|return*
> Answer   *#|F001|R001|V03|025|bc70|return*
> Update   none, nothing changed

GVALL

Get volume in all zone's
> Command: GVALL
> Arguments: 0 (none)

Example
> Get all volume's
> Command   *#|R001|F001|GVALL|0|9bf3|return*
> Answer   *#|F001|R001|10010^012^20^19^15^7^150^000|abe0|return*
> Update   none, nothing changed

SRXX

Set routing in a zone from a input
> Command: SRXX, where XX is the zone number
> Arguments: input

Example
> Set input 3 to zone 2
> Command   *#|R001|F001|SR2|3|c940|return*
> Answer   *#|F001|R001|SR2|+|3604|return*
> Update   *#|ALL|R001|R02|000^002|5fd0|return*

Important: the first argument of the update is not relevant

SRUXX

Set Routing up
> Command: SRUXX, where XX is the zone number.
> This command scrolls true the 8 inputs defined for that zone.
> Arguments: 0 (none)

Example
> Increase routing zone5
> Command   *#|R001|F001|SRU5|0|**chksm**|return*
> Answer   *#|F001|R001|SRU5|+|**chksm**|return*
> Update   *#|ALL|R001|R05|000^002|**chksm**|return*

AUDAC

SRDXX

Set Routing down
>   Command: SRDXX, where XX is the zone number.
>   This command scrolls true the 8 inputs defined for that zone.
>   Arguments: 0 (none)

Example
>   Decrease routing zone5
>   Command   *#|R001|F001|SRD5|0|chksm|return*
>   Answer   *#|F001|R001|SRD5|+|chksm|return*
>   Update   *#|ALL|R001|R05|000^002|chksm|return*

SRALL

Set routing in all zone's from a input (input can be different for all zones)
>   Command: SRALL
>   Arguments: XX^XX^XX^XX^XX^XX^XX^XX, where XX are the inputs

Example
>   Set routing in zone 1 from input 2, in zone 2 from input 2, in zone 3 from input 8, in zone 4 from input 12, in zone 5 from input 1, in zone 6 from input 15, in zone 7 from input 8, in zone 8 from input 16
>   Command   *#|R001|F001|SRALL|2^2^8^12^1^15^8^16|cc24|return*
>   Answer   *#|F001|R001|SRALL|+|b4c9|return*
>   Update   *#|ALL|R001|RALL|002^002^008^012^001^015^008^016|45a7|return*

GRXX

Get routing from a zone
>   Command: GRXX, where XX is the zone number
>   Arguments: 0 (none)

Example
>   Get routing from zone 3
>   Command   *#|R001|F001|GR3|0|d142|return*
>   Answer   *#|F001|R001|R03|005^005|92e8|return*
>   Update   none, nothing changed

Important: the first argument of the update is not relevant

GRALL

Get routing in all zone's
        Command: GRALL
        Arguments: 0 (none)

Example
        Get routings from all zones
        Command   *#|R001|F001|GRALL|0|5bb6|return*
        Answer   *#|F001|R001|002^002^008^012^001^015^008^016|b56d|return*
        Update   none, nothing changed

SBXX

Set bass in a zone
        Command: SBXX
        Arguments: from −9dB to +9dB

Example
        Set bass in zone 5 to −3dB
        Command   *#|R001|F001|SB5|−3|772a|return*
        Answer   *#|F001|R001|SB5|+|81c4|return*
        Update   *#|ALL|R001|B05|−03|ed58|return*

GBXX

Get bass in a zone
        Command: GBXX
        Arguments: 0 (none)

Example
        Get Bass from zone 5
        Command   *#|R001|F001|GB5|0|9a83|return*
        Arguments   *#|F001|R001|B05|−03|29d4|return*
        Update   none, nothing changed

STXX

Set treble in a zone
        Command: STXX
        Arguments: from −9dB to +9dB

Example
        Set treble in zone 7 to −6dB
        Command   *#|R001|F001|ST7|−6|1152|return*
        Answer   *#|F001|R001|ST7|+|fa8c|return*
        Update   *#|ALL|R001|T07|−06|79db|return*

AUDAC

GTXX

Get treble in a zone
> Command: GTXX
> Arguments: 0 (none)

Example
> Get treble from zone 7
> Command   *#|R001|F001|GT7|0|e1cb|return*
> Answer   *#|F001|R001|T07|−06|bd57|return*
> Update   none, nothing changed

SBR

Set Bridging
> Command: SBR
> This command defines which zones must be bridged
> Arguments: X^X^X^X^X^X^X^X, 0 = not bridged, 1 = bridged

Example
> Increase routing zone5
> Command   *#|R001|F001|SRU5|0|**chksm**|return*
> Answer   *#|F001|R001|SRU5|+|**chksm**|return*
> Update   *#|ALL|R001|R05|000^002|**chksm**|return*

STI

Set time
> Command: STI
> Arguments: time (hhmmss, only in 24h format)

Example
> Set time to 13h45m10s
> Command   *#|R001|F001|STI|134510|671f|return*
> Answer   *#|F001|R001|STI|+|d294|return*
> Update   *#|F001|R001|TI|134510|985e|return*

Important: The built−in timeserver client synchronizes time every 10 min, if you want to set the time with this command then you have to disable the timeserver client. This can only be done trough the webpage of the R2.

GTI

Get time
> Command: GTI
> Arguments: 0 (none)

Example
> Command   *#|R001|F001|GTI|0|c9d3|return*
> Answer   *#|F001|R001|TI|134510|985e|return*
> Update   none, nothing changed

SDA

Set date
> Command: SDA
> Arguments: date (yymmdd)

Example
> Set date to 2009 march 26
> Command   *#|R001|F001|SDA|090326|b06b|return*
> Answer   *#|F001|R001|SDA|+|7157|return*
> Update   *#|F001|R001|DA|090326|4f2a|return*

Important: The built–in timeserver client synchronizes the date every 10 min, if you want to set the date with this command then you have to disable the timeserver client. This can only be done trough the webpage of the R2.

SMXX

Set mute state in a zone
> Command: SMXX
> Arguments: 0 (disable) or 1 (enable)

Example
> Enable mute in zone 1
> Command   *#|R001|F001|SM1|1|2fd4|return*
> Answer   *#|F001|R001|SM1|+|b091|return*
> Update   *#|ALL|R001|M01|1|eae7|return*

SMALL

Set mute states in all zone's (mute can be different for all zones)
> Command: SRALL
> Arguments: XX^XX^XX^XX^XX^XX^XX^XX, where XX is the mute state

Example
> Enable mute in zone 1, disable in zone 2, disable in zone 3 ,disable in zone 4, disable in zone 5, enable in zone 6, disable in zone 7, disable in zone 8
> | Command | *#|R001|F001|SMALL|1^0^0^0^0^1^0^0|61fe|return* |
> |---|---|
> | Answer | *#|F001|R001|SMALL|+|7527|return* |
> | Update | *#|ALL|R001|MALL|1^0^0^0^0^1^0^0|2c86|return* |

GMXX

Get mute state from a zone
> Command: GMXX, where XX is the zone number
> Arguments: 0 (none)

Example
> Get mute from zone 1
> | Command | *#|R001|F001|GM1|0|abd6|return* |
> |---|---|
> | Answer | *#|F001|R001|M01|1|64f5|return* |
> | Update | none, nothing changed |

GMALL

Get mute states from all zone's
> Command: GMALL
> Arguments: 0 (none)

Example
> Get mute states from all zone's
> | Command | *#|R001|F001|GMALL|0|9a58|return* |
> |---|---|
> | Answer | *#|F001|R001|MALL|1^0^0^0^0^1^0^0|af9a|return* |
> | Update | none, nothing changed |

GL

Get's the system load in %.

The load increases when you add FIR filters, generators, …. If you reach 90% load then the R2 won't accept more FIR filters or generators, the R2 will respond with 'L' in the argument of the answer instead of '+'.

> Command: GL
> Arguments: 0 (none)

Example
> Get load
> Command   *#|R001|F001|GL|0|4943|return*
> Answer   *#|F001|R001|L|61|819d|return*
> Update   none, nothing changed

SSG

Set sine generator
> Command: SSG
> Arguments: 0 (disable) or 1 (enable), freq in Hz

Example
> Enable sine generator and set to 2000Hz
> Command   *#|R001|F001|SSG|1^2000|6c33|return*
> Answer   *#|F001|R001|SSG|+|fa23|return*
> Update   *#|ALL|R001|SG|1^2000|c017|return*

GSG

Get sine generator
> Command: GSG
> Arguments: 0 (none)

Example
> Command   *#|R001|F001|GSG|0|e164|return*
> Answer   *#|F001|R001|SG|1^2000|9372|return*
> Update   none, nothing changed

SAVE

Save's the current zone settings (routing, volume, names, bass, treble, filters, …)
> Command: SAVE
> Arguments: 0 (none)

Example
> Command   *#|R001|F001|SAVE|0|f1b3|return*
> Answer   *#|F001|R001|SAVE|+|35c6|return*
> Update   none, nothing changed

DEF

All zone settings and device settings will be reset to factory default.
> Command: DEF
> Arguments: 0 (none)

Example
> Command   *#|R001|F001|DEF|0|ed2c|return*
> Answer   *#|F001|R001|DEF|+|e268|return*
> Update   none

GSV

Get the software version of the DSP board
> Command: GSV
> Arguments: 0 (none)

Example
> Command   *#|R001|F001|GSV|0|dd61|return*
> Answer   *#|F001|R001|SV|1.0|056c|return*
> Update   none, nothing changed

WOR

Who is online R types. Request a respond from all 'R' type devices that are connected to each other by fibre Link.
> Command: WOR
> Arguments| 0 (none)

Example
> Command   *#|R001|F001|WOR|0|bfb3|return*
> Answer   *#|F001|R001|OR|+|1ffa|return*
>   *#|F001|R025|OR|+|063e|return*
>   *#|F001|R030|OR|+|a96a|return*
> Update   none, nothing changed

SDI

Set Digital Input
> Command: SDI
> Arguments: X, 0 = COAX, 1 = TOSLINK

Example
> Set digital input to toslink
> Command   *#|R001|F001|SDI|1|**chksm**|return*
> Answer   *#|F001|R001|SDI|+|**chksm**|return*
> Update   *#|F001|R001|DI|1|**chksm**|return*

PGRQ

Page Request command asks the R2 if a paging is possible in a specific zone and if the port the APM is connected to is free, this is priority based.

        Command: PGRQ
        Arguments: XXX^X^XXXXXXXX^X

                XXX $-$> priority of the paging, 001 is highest, 999 is lowest
                X $-$> 1 to 8, PI interface on back where APM is attached (defines audio source)
                XXXXXXXX $-$> each X or 4 bits , each bit or 4 zones $-$>00000001, zone1 used $-$> 00000010 $-$> zone 5 used $-$> 00000040 $-$> zone 7 used
                X $-$> 0 = Local, 1 = Global. Global pagings are automaticly placed on fibre channel .

Example
        Local page request in zone 2,3,5,7
        Command   *#|R001|A001|PGRQ|001^1^00000066^0|**chksm**|return*
        Answer   *#|F001|R001|PGRQ|+|**chksm**|return*

Important: APM paging tables can be cascaded to the same port, if another APM table on the same port is paging with a higher priority the request will be answered with NACK ($-$).

PG

Page command starts the page that is requested with the PGRQ command.
        Command: PG
        Arguments: X $-$> 0 = stop paging, 1 = start paging

Example of complete paging.
        Local page in zone 2,3,5,7

        Request
        Command   *#|R001|A001|PGRQ|001^1^00000056^0|**chksm**|return*
        Answer   *#|F001|R001|PGRQ|+|**chksm**|return*
        Start Paging
        Command   *#|R001|A001|PG\1|**chksm**|return*
        Answer   *#|F001|R001|PG|+|**chksm**|return*
        Stop Paging
        Command   *#|R001|A001|PG|0|**chksm**|return*
        Answer   *#|F001|R001|PG|+|**chksm**|return*

Important: APM paging tables can be cascaded to the same port, if another APM table on the same port is paging with a lower priority this paging will be interrupted for the new higher priority paging.