M2 Commands List

Index

Introduction

Welcome to the commands user manual of the AUDAC M2. The M2 is a Multi−Media digital Audio Mixer containing various in− and outputs. This instruction manuals describes how the functions of the M2 can be controlled using RS−232, RS−485 and TCP/IP control devices.

Input list

Direct inputs
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   Input 9 *Can be switched between input A, B, C & D using the 'SLINE' Command*

Priority & test inputs
12   Prio 1
13   Prio 2
14   Internal sine generator
15   Internal white noise generator
16   Internal pink noise generator

Wall panel inputs
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)

Fiber inputs
25   FB1 input
26   FB2 input
27   FB3 input
28   FB4 input
29   FB5 input
30   FB6 input
31   FB7 input
32   FB8 input

Scenes

When a scene is selected, the configured scene for the selected output will be triggered. The scene configurations can be different for every output.

51   Scene 1
52   Scene 2
53   Scene 3
54   Scene 4
55   Scene 5
56   Scene 6
57   Scene 7
58   Scene 8

Global scenes

When a global scene is selected, the output settings will be made for all outputs simulta–neously as configured in the global scene, no matter for which output the global scene is triggered.

61   Global scene 1
62   Global scene 2
63   Global scene 3
64   Global scene 4
65   Global scene 5
66   Global scene 6
67   Global scene 7
68   Global scene 8

Output list

Direct outputs
1   Output 1
2   Output 2
3   Output 3
4   Output 4
5   Output 5
6   Output 6
7   Output 7
8   Output 8

Wall panel outputs
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)

Fiber outputs
20   FB1 output
21   FB2 output
22   FB3 output
23   FB4 output
24   FB5 output
25   FB6 output
26   FB7 output
27   FB8 output

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Using the commands

The M2 has various control ports which are all accepting the same commands.
- – RS–232 port
- – All RS–485 ports (Peripheral inputs 1 to 10)
- – TCP/IP

The RS–232 / RS–485 ports must be configured as following:
- – 19200 baud
- – 8 data bits
- – 1 stop bit
- – No parity

The TCP/IP port accepts the commands at port 5001.
All TCP/IP answers returned by the M2 are followed with 0x00.

Command overview

Startsymbol|destination|source|command|argument's|checksum|stopsymbol

Example: Set volume M001 zone 1 to –30dB
ASCII   *#|M001|F001|SV1|30|55b8|return*
HEX   *237C4D3030317C463030317C5356317C33307C363338307C0D0A*

Important:
– Return = 0x0d 0x0a
The 'return' at the end of a command is always a carriage return followed by a line feed. In hexadecimal representation this is '0x0D 0x0A' (0x0d is carriage return, 0x0A is line feed). When sending the commands in ASCII, this should be sent as a <CR> <LF>.

– The checksum is CRC–16 excluding the '#'. You can replace the checksum with 'U', this is always accepted as checksum.
To avoid any problems due to communication failure between the controlling device and the receiving device, it is always recommended to calculate the checksum instead of sending the 'U' character. The calculation of the checksum can be done using software tools which are available on the audac website.

Command flow
1) The client sends a command to the M2
2) The M2 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 M2 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.

Commands list

SVxx

Set volume for an output to a certain level

    Command: SVxx, where xx is the output number
    Arguments: Volume in neg dB –> 0 is maximum volume / 100 is minimum volume

Example: Set volume in output 2 to –40dB
    Command   *#|M001|F001|SV02|40|4b69|return*
    Answer   *#|F001|M001|SV02|+|4503|return*
    Update   *#|ALL|M001|V02|040|6734|return*

SVUxx

Set volume up with 3dB for an output
    Command: SVUxx, where xx is the output number
    Arguments: 0 (none)

Example: Current volume for output 5 is –40dB, set volume up with 3dB
    Command   *#|M001|F001|SVU05|0|348f|return*
    Answer   *#|F001|M001|SVU05|+|69ed|return*
    Update   *#|ALL|M001|V05|037|2186|return*

SVDXX

Set volume down with 3dB for an output
    Command: SVDxx, where xx is the output number
    Arguments: 0 (none)

Example: Current volume for output 5 is –40dB, set volume down with 3dB
    Command   *#|M001|F001|SVD05|0|758c|return*
    Answer   *#|F001|M001|SVD05|+|28ee|return*
    Update   *#|ALL|M001|V05|043|2035|return*

SVALL

Set volume for all outputs to a level (level can be different for all outputs)
    Command: SVALL
    Arguments: XX^XX^XX^XX^XX^XX^XX^XX where XX are the volumes

Example: Set volumes for the outputs as following: output 1= –10 dB, output 2= –12 dB,
    output 3= –20 dB, output 4 = –19 dB, output 5 = –15 dB, output 6 = –7 dB,
    output 7 = –70 dB, output 8 = –0 dB
    Command   *#|M001|F001|SVALL|10^12^20^19^15^7^70^0|e7d6|return*
    Answer   *#|F001|M001|SVALL|+|eba6|return*
    Update   *#|ALL|M001|VALL|010^012^020^019^015^007^070^000|81f7|return*

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GVXX

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

Example: Get volume in zone 3
        Command   *#|M001|F001|GV3|0|29fb|return*
        Answer   *#|F001|M001|V03|025|235a|return*
        Update   none, nothing changed

GVALL

Get volume in all zones
        Command: GVALL
        Arguments: 0 (none)

Example: Get all volumes
        Command   *#|M001|F001|GVALL|0|49c4|return*
        Answer   *#|F001|M001|VALL|010^012^020^019^015^007^150^000|0|7d5f|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   *#|M001|F001|SR2|3|f108|return*
        Answer   *#|F001|M001|SR2|+|e260|return*
        Update   *#|ALL|M001|R02|000^002|69e8|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   *#|M001|F001|SRU5|0|a4d7|return*
        Answer   *#|F001|M001|SRU5|+|bd4f|return*
        Update   *#|ALL|M001|R05|000^002|b359|return*

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   *#|M001|F001|SRD5|0|a72b|return*
      Answer   *#|F001|M001|SRD5|+|beb3|return*
      Update   *#|ALL|M001|R05|000^002|b359|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   *#|M001|F001|SRALL|2^2^8^12^1^15^8^16|0f5e|return*
      Answer   *#|F001|M001|SRALL|+|2be3|return*
      Update   *#|ALL|M001|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   *#|M001|F001|GR3|0|d142|return*
      Answer   *#|F001|M001|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   *#|M001|F001|GRALL|0|8981|return*
      Answer   *#|F001|M001|002^002^008^012^001^015^008^016|e211|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   *#|M001|F001|SB5|−3|4112|return*
        Answer   *#|F001|M001|SB5|+|55a0|return*
        Update   *#|ALL|M001|B05|−03|7272|return*

GBXX

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

Example: Get Bass from zone 5
        Command   *#|M001|F001|GB5|0|a2cb|return*
        Arguments   *#|F001|M001|B05|−03|b6fe|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   *#|M001|F001|ST7|−6|276a|return*
        Answer   *#|F001|M001|ST7|+|2ee8|return*
        Update   *#|ALL|M001|T07|−06|e6f1|return*

GTXX

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

Example: Get treble from zone 7
        Command   *#|M001|F001|GT7|0|d983|return*
        Answer   *#|F001|M001|T07|−06|227d|return*
        Update   none, nothing changed

STI

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

Example: Set time to 13h45m10s
>   Command   *#|M001|F001|STI|134510|09f2|return*
>   Answer   *#|F001|M001|STI|+|06f0|return*
>   Update   *#|F001|M001|TI|134510|9001|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 M2.

GTI

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

Example: Get current time (13h45m10s)
>   Command   *#|M001|F001|GTI|0|f19b|return*
>   Answer   *#|F001|M001|TI|134510|9001|return*
>   Update   none, nothing changed

SDA

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

Example: Set date to 2009 march 26
>   Command   *#|M001|F001|SDA|090326|de86|return*
>   Answer   *#|F001|M001|SDA|+|a533|return*
>   Update   *#|F001|M001|DA|090326|4775|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 M2.

GDA

Get date
>   Command**: GDA**
>   Arguments: 0 (none)

Example: Request current date (26th of march 2009)
>   Command: *#|M001|F001|GDA|0|5258|return*
>   Answer: *#|F001|M001|DA|090326|4775|return*
>   Update: none, nothing changed

SMXX

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

Example: Enable mute in zone 1
      Command   *#|M001|F001|SM1|1|179c|return*
      Answer   *#|F001|M001|SM1|+|64f5|return*
      Update   *#|ALL|M001|M01|1|3e83|return*

SMALL

Set mute states in all zone's (mute can be different for all zones)
      Command: SMALL
      Arguments: X^X^X^X^X^X^X^X, where X 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   *#|M001|F001|SMALL|1^0^0^0^0^1^0^0|45f0|return*
      Answer   *#|F001|M001|SMALL|+|ea0d|return*
      Update   *#|ALL|M001|MALL|1^0^0^0^0^1^0^0|d336|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   *#|M001|F001|GM1|0|939e|return*
      Answer   *#|F001|M001|M01|1|b091|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   *#|M001|F001|GMALL|0|486f|return*
      Answer   *#|F001|M001|MALL|1^0^0^0^0^1^0^0|502a|return*
      Update   none, nothing changed

GL

Get's the system load in %.

The load increases when you add generators, mixing, bass, treble …. the M2 will respond with 'L' in the argument of the answer instead of '+'.

    Command: GL
    Arguments: 0 (none)

Example: Get load
    Command   *#|M001|F001|GL|0|411c|return*
    Answer   *#|F001|M001|L|61|24ac|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   *#|M001|F001|SSG|1^2000|02de|return*
    Answer   *#|F001|M001|SSG|+|2e47|return*
    Update   *#|ALL|M001|SG|1^2000|c848|return*

GSG

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

Example: Get sine generator (1= enable, 2000 = frequency)
    Command   *#|M001|F001|GSG|0|d92c|return*
    Answer   *#|F001|M001|SG|1^2000|9b2d|return*
    Update   none, nothing changed

SAVE

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

Example: Save Zone Setting for M001
    Command   *#|M001|F001|SAVE|0|c78b|return*
    Answer   *#|F001|M001|SAVE|+|de13|return*
    Update   none, nothing changed

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DEF

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

Example: Reset M001 to factory settings
　　　Command　　　*#|M001|F001|DEF|0|d564|return*
　　　Answer　　　　*#|F001|M001|DEF|+|360c|return*
　　　Update　　　　none

GSV

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

Example: Request sofware version of DSP board
　　　Command　　　*#|M001|F001|GSV|0|e529|return*
　　　Answer　　　　*#|F001|M001|SV|1.0|eeb9|return*
　　　Update　　　　none, nothing changed

WOM

Who is online M types. Request a response from all 'M' type devices that are connected to each other by fibre Link.
　　　Command: WOM
　　　Arguments: 0 (none)

Example: Request M2's connected to the M2
　　　Command　　　*#|ALL|M001|WOM|0|53fc|return*
　　　Answer　　　　*#|F001|M001|OM|+|6ecc|return*
　　　　　　　　　　#|F001|M025|OM|+|7708|return
　　　　　　　　　　#|F001|M030|OM|+|bb9c|return
　　　Update　　　　none, nothing changed

WOR

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

Example: Request R2's connected to the M2
　　　Command　　　*#|ALL|M001|WOR|0|87fb|return*
　　　Answer　　　　*#|F001|R025|OR|+|063e|return*
　　　　　　　　　　#|F001|R030|OR|+|caaa|return
　　　Update　　　　none, nothing changed

WOW

Connected Wall Panels. Request a response from all Wall Panel devices that are connected to the M2.

      Command: WOW
      Arguments: 0 (none)

Example: Request wall panels connected to the M2
      Command   *#/ALL/F001/WOW/da3b/return*
      Answer   *#/F001/W001M001/OW/+/ b8ac/return*
                            #/F001/W002M001/OW/+/fca3/return
      Update   none, nothing changed

PGRQ

Page Request command asks the M2 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   *#/M001/A001/PGRQ/001^1^00000066^0/97fd/return*
      Answer   *#/F001/M001/PGRQ/+/88d4/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   *#|M001|A001|PGRQ|001^1^00000056^0|97b9|return*
     Answer   *#|F001|M001|PGRQ|+|88d4|return*
     Start Paging
     Command   *#|M001|A001|PG|1|2cda|return*
     Answer   *#|F001|M001|PG|+|745a|return*
     Stop Paging
     Command   *#|M001|A001|PG|0|bdcb|return*
     Answer   *#|F001|M001|PG|+|745a|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.

GIN

Get Input Names
     Command: GIN
     Arguments: 0 (none)

Example: request names for all Inputs
     Command   *#|M001|F001|GIN|0|8776|return*
     Answer   *#|F001|M001|IN|Input 1^Input 2^Input 3^Input 4^Input 5^Input 6^Input 7^Input 8^Line In^Voice FI^NOT USED^Prio 1^Prio 2^Sine^W Noise^P Noise^WP In 1^WP In 2^WP In 3^WP In 4^WP In 5^WP In 6^WP In 7^WP In 8^Fb In 1^Fb In 2^Fb In 3^Fb In 4^Fb In 5^Fb In 6^Fb In 7^Fb In 8|1ecc|return*
     Update   none, nothing changed

GZN

Get Zone Names
     Command: GZN
     Arguments: 0 (none)

Example: request Zone Names for all outputs
     Command   *#|M001|F001|GZN|0|44f3|return*
     Answer   *#|F001|M001|ZN|Output 1^Output 2^Output 3^Output 4^Output 5^Output 6^Output 7^Output 8^NOT USED^NOT USED^NOT USED^WP Out 1^WP Out 2^WP Out 3^WP Out 4^WP Out 5^WP Out 6^WP Out 7^WP Out 8^Fb Out 1^Fb Out 2^Fb Out 3^Fb Out 4^Fb Out 5^Fb Out 6^Fb Out 7^Fb Out 8|83e2|return*
     Update   none, nothing changed

SLINE

Set line 9 (line 1 to 4 can be set to line 9)
        Command: SLINE
        Arguments: Line 1 to 4

Example: set a line to line 9 (line 1 to 4 can be set)
        Command   *#|M001|F001|SLINE|1|f305|return*
        Answer   *#|F001|M001|SLINE|+|3e66|return*
        Update   *#|ALL|M001|LINE|1|38d9|return*

GLINE

Get line 9
        Command: GLINE
        Arguments: 0 (none)

Example: request which line has been set to line 9 (can be line 1 to 4)
        Command   *#|M001|F001|GLINE|0|9c04|return*
        Answer   *#|F001|M001|LINE|1|35d7|return*
        Update   none, nothing changed

SMXxx

Set mixing output
        Command: SMXxx
        Arguments: Line^Level(6 becomes −6dB)

Example: set line 2 of mixing output 1 to −40dB
        Command   *#|M001|F001|SMX1|2^40|06e5|return*
        Answer   *#|F001|M001|SMX1|+|2361|return*
        Update   *#|ALL|M001|MX01|02^040|5c64|return*

SRON

Switch relay on
        Command: SRON
        Arguments: 00000000 (32 bit hex value)

Example: turn on relay 1 and 2
        Command   *#|M001|F001|SRON|00000003|a783|return*
        Answer   *#|F001|M001|SRON|+|9b0e|return*
        Update   *#|ALL|M001|SZSET|0003|8016|return*

SROFF

Switch relay off
>   Command: SROFF
>   Arguments: 00000000 (32 bit hex value)

Example : turn off relay 1 and 2
>   Command   *#|M001|F001|SROFF|00000003|9cde|return*
>   Answer   *#|F001|M001|SROFF|+|dc79|return*
>   Update   *#|ALL|M001|SZSET|0000|7016|return*

GMXAxx

Get output mixing
>   Command: GMXAxx
>   Arguments: 0 (none)

Example: get mixing output for output 1
>   Command   *#|M001|F001|GMXA01|0|a033|return*
>   Answer   *#|F001|M001|MXA01|150^150^000^150^150^150^150^150*
>   *^150^150^150^150^150^150^150^150^150^150^150^*
>   *150^150^150^150^150^150^150^150^150^150^150^*
>   *150^150|1778|return*
>   Update   none, nothing changed

SMXUxx

Set mixing output up
>   Command: SMXUxx
>   Arguments: Line^Step (Step = 6 represents a step up of +6 dB)

Example: set mixing input 2 +6 dB for output 1
>   Command   *#|M001|F001|SMXU1|2^6|ff99|return*
>   Answer   *#|F001|M001|SMXU1|+|4d0a|return*
>   Update   *#|ALL|M001|MX01|02^040|5c64|return*

SMXDxx

Set mixing output down
>   Command: SMXDxx
>   Arguments: Line^Step (Step = 6 represents a step down of –6 dB)

Example: set mixing input 2 –6 dB for output 1
>   Command   *#|M001|F001|SMXD1|2^6|fe98|return*
>   Answer   *#|F001|M001|SMXD1|+|4ef6|return*
>   Update   *#|ALL|M001|MX01|02^040|5c64|return*

PLVFxx

Play voice file preset
    Command: PLVFxx
    Remark: Number in commands does not match preset number
    PLVF00 corresponds with preset 1, PLVF01 corresponds with preset 2, ...
    Arguments: '01' (argument is always '01')

Example: Play voice file preset 4
    Command   *#|M001|F001|PLVF03|01|f7e7|return*
    Answer   *#|F001|M001|PLVF03|+|4d50|return*
    Update   *none*

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