

AMC XO

8 Zone 8 Source Audio Digital Home System

XOi

4 Zone 4 Source Audio Digital Home System

X86

6 Zone 8 Source Audio / Video Digital Home System

RS485 Manual

RS485 ↔ RS232 Converter Module

XO/XOi/X86 MANUAL

RS485 Manual

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Serial port specification

Serial Port Hardware

- RS-232
 - DB-9 Female
- RS-485
 - Screw Terminal (4 connections)
 - RJ-45

Serial Port Communication Protocol

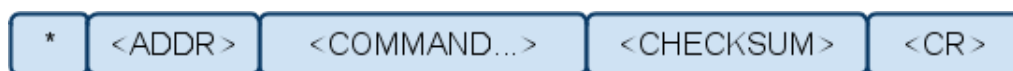
- RS-485 asynchronous serial communication
- Two Wire Half Duplex
- 9600 bps, 8 bits, 1 stop bit, no parity
- no flow control

Command set specification

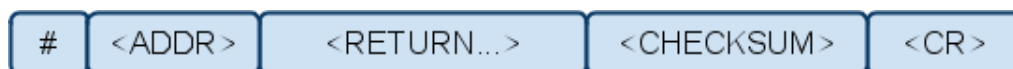
Command Format

- All commands are in ASCII characters format except the first DEVICE ADDRESS byte
- DEVICE ADDRESS is an 8 bit hexadecimal character assigned by the 8 bit DIP switch on this device
- All commands begin with DEVICE ADDRESS and "*" (asterisk) character and end with <CR> character (0D hexadecimal)
- All commands RETURN with some feedback begin with DEVICE ADDRESS and "*" (asterisk) character and end with <CR> character (0D hexadecimal)
- If a command produces an error or structured with incorrect syntax, the system will return with "<ADDR>?<CR>" characters
- Multiple commands require a delay of 500ms between commands

COMMAND



RETURN



ERROR RETURN



Numbering Format and Range

Zone Number Range

- XO: 01-08
- XOi: 01-04
- X86: 01-08

Source Select Range

- XO: 01-08
- XOi: 01-04
- X86: 01-06

Standard Status Feedback Format

Status Feedback Conditions

- Most commands send to the system will receive this type of Status Feedback unless specified explicitly

Status Feedback Format

| | |
|----------------------|--|
| RETURN | ZNaa,SRcbb,GRPc,VOL-dd |
| RETURN PARAMETERS | aa = Zone Number bb = Source Select c = 0 (Group Mode Off), 1 (Group Mode On) dd = dBs of attenuation (00 - 62 where 62=mute) |

Command Reference

Zone Status

| | |
|--------------------|--|
| ACTION | Zone Status Command returns status information on the given zone |
| COMMAND | ZnnSTA00 |
| COMMAND PARAMETERS | nn = Zone Number |
| RETURN | Standard Status Feedback Format |
| RETURN PARAMETERS | |

Tone Control Settings

| | |
|--------------------|--|
| ACTION | Return tone control settings on the given zone |
| COMMAND | ZNnnSET00 |
| COMMAND PARAMETERS | nn = Zone Number |
| RETURN | ZNaa,BASSbb,TREBbb,GRPc |
| RETURN PARAMETERS | aa = Zone Number bb = EQ level +/- 8,6,4,0 c = 0 (Group Mode Off), 1 (Group Mode On) |

Power OFF

| | |
|--------------------|--|
| ACTION | Power OFF the given zone (turn off ALL zones in group mode and leave group mode) |
| COMMAND | ZNnnPWR00 |
| COMMAND PARAMETERS | nn = Zone Number |
| RETURN | Standard Status Feedback Format |
| RETURN PARAMETERS | |

Power ON

| | |
|--------|---|
| ACTION | Power ON the given zone (restore last select source and volume level) |
|--------|---|

| | |
|--------------------|---------------------------------|
| COMMAND | ZNnnPWR01 |
| COMMAND PARAMETERS | nn = Zone Number |
| RETURN | Standard Status Feedback Format |
| RETURN PARAMETERS | |

Power Toggle

| | |
|--------------------|--|
| ACTION | Toggle between power On/Off for the given zone |
| COMMAND | ZNnnPWR02 |
| COMMAND PARAMETERS | nn = Zone Number |
| RETURN | Standard Status Feedback Format |
| RETURN PARAMETERS | |

All Zones OFF

| | |
|--------------------|--------------------|
| ACTION | Turn off ALL Zones |
| COMMAND | ZALLPWR00 |
| COMMAND PARAMETERS | |
| RETURN | ZALLOFF |
| RETURN PARAMETERS | |

Un-mute all Zones

| | |
|--------------------|----------------------------|
| ACTION | Disable mute for ALL Zones |
| COMMAND | ZALLMUT00 |
| COMMAND PARAMETERS | |
| RETURN | ZALLMOFF |
| RETURN PARAMETERS | |

Mute all Zones

| | |
|-----------------------|--------------------------|
| ACTION | Apply mute for ALL Zones |
| COMMAND | ZALLMUT01 |
| COMMAND PARAMETERS | |
| RETURN | ZALLMON |
| RETURN PARAMETERS | |

Source Select

| | |
|-----------------------|--|
| ACTION | Change a input source for the given zone |
| COMMAND | ZNnnSRCss |
| COMMAND PARAMETERS | nn = Zone Number ss = Input Source |
| RETURN | Standard Status Feedback Format |
| RETURN PARAMETERS | |

Adjust Volume

| | |
|-----------------------|---|
| ACTION | Adjust volume for the given zone |
| COMMAND | ZNnnVOLvv |
| COMMAND PARAMETERS | nn = Zone Number vv = Volume Level (00 - 62 where 62=mute) |
| RETURN | Standard Status Feedback Format |
| RETURN PARAMETERS | |

Volume Up 1dB

| | |
|-----------------------|-----------------------------------|
| ACTION | Step volume up 1dB for given zone |
| COMMAND | ZNnnVOLUP |
| COMMAND PARAMETERS | nn = Zone Number |
| RETURN | Standard Status Feedback Format |
| RETURN PARAMETERS | |

Volume Down 1dB

| | |
|--------------------|-------------------------------------|
| ACTION | Step volume down 1dB for given zone |
| COMMAND | ZNnnVOLDN |
| COMMAND PARAMETERS | nn = Zone Number |
| RETURN | Standard Status Feedback Format |
| RETURN PARAMETERS | |

Zone Mute OFF

| | |
|--------------------|--|
| ACTION | Disable mute for the given zone with last volume preserved |
| COMMAND | ZNnnMUT00 |
| COMMAND PARAMETERS | nn = Zone Number |
| RETURN | Standard Status Feedback Format |
| RETURN PARAMETERS | |

Zone Mute ON

| | |
|--------------------|---|
| ACTION | Apply mute for the given zone and memorize the current volume |
| COMMAND | ZNnnMUT01 |
| COMMAND PARAMETERS | nn = Zone Number |
| RETURN | Standard Status Feedback Format |
| RETURN PARAMETERS | |

Adjust Bass

| | |
|--------------------|--|
| ACTION | Adjust Bass by +/- 0,4,6,8 dB |
| COMMAND | ZNnnBASsn |
| COMMAND PARAMETERS | nn = Zone Number s = + or - sign n = Bass Adjustment Level (0,4,6,8) |

| | |
|-------------------|--|
| RETURN | ZNaa,BASSbb,TREBbb,GRPc |
| RETURN PARAMETERS | aa = Zone Number bb = EQ level +/- 8,6,4,0 c = 0 (Group Mode Off), 1 (Group Mode On) |

Adjust Treble

| | |
|--------------------|--|
| ACTION | Adjust Treble by +/- 0,4,6,8 dB |
| COMMAND | ZNnnTRBsn |
| COMMAND PARAMETERS | nn = Zone Number s = + or - sign n = Treble Adjustment Level (0,4,6,8) |
| RETURN | ZNaa,BASSbb,TREBbb,GRPc |
| RETURN PARAMETERS | aa = Zone Number bb = EQ level +/- 8,6,4,0 c = 0 (Group Mode Off), 1 (Group Mode On) |

Group Mode OFF

| | |
|--------------------|--------------------|
| ACTION | Disable Group Mode |
| COMMAND | ZALLGRP00 |
| COMMAND PARAMETERS | |
| RETURN | GRPOFF |
| RETURN PARAMETERS | |

Group Mode ON

| | |
|--------------------|---|
| ACTION | Activate Group Mode |
| COMMAND | ZALLGRPss |
| COMMAND PARAMETERS | ss = Input Source for this group (01 - 04/08) |
| RETURN | GRPON,STC _{ss} |
| RETURN PARAMETERS | ss = Input Source selected for this group |