SVX-1202 IP Control Specification

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IP Control Protocol

To communicate with the system via the network, the following conditions must be met:

1. The unit must first be powered on. If 'Connected Standby' is enabled in General Settings, IP Control will be enabled as soon as possible after AC power is connected.
2. The unit's IP address must be known. This can be achieved through the device discovery process described below or by setting a static IP address through the unit's configuration interface.
3. A TCP/IP connection to the unit must be established on the defined port (default: 14999) through the unit's configuration interface.

WebSocket

You may also communicate with the unit through a WebSocket running on port 8080. The WebSocket operates in the same way as the TCP socket.

Important: If the system has exceeded the maximum number of simultaneous connections, it will forcibly close the oldest connection.

Device Discovery Protocol

The Anthem Device Discovery Protocol broadcasts and listens to specifically formatted data packets on the device's local subnet.

The DDP packet format is as follows:

offset	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	80 'P'	65 'A'	82 'R'	67 'C'	0	0	announce	powering_off		version				tcp_ip_port		
16	device_name [0-15]															
32	code_name [0-15]															
48	serial_number [0-15]															

Device Discovery Packet Version 1

offset	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	80 'P'	65 'A'	82 'R'	67 'C'	0	0	announce	powering_off		version				tcp_ip_port		
16	device_name [0-15]															
32	code_name [0-15]															
48	serial_number [0-15]															
64	serial_number [16-31]															
80	device_name [16-31]															
96	device_name [32-47]															
112	device_name [48-63]															
128	Extended Metadata [0-128]															
144																
160																
176																
192																
208																
224																
240																

Device Discovery Packet Version 2

Field Descriptions:
- announce: If this bit is set, any Anthem product receiving the packet will broadcast a packet with the appropriate parameters set.
- powering_off: When an Anthem product is shutting down and losing a network connection, this byte will be set to 1.
- version: DDP Packet Version
- tcp_ip_port: The port on which the system will listen for incoming TCP connections
- device_name: Device name as defined by the user in the setup menu
- model_name: Model name - should be the same as what is returned when the device receives an IDM? query.
- serial_number: MAC Address of the device

- Extended Metadata: 128 bytes of product-specific metadata that can signal the device's current status. For example, this section could include "Z1POW1;Z2POW0;Z1VOL-35;" to indicate that the main zone is on, set to volume -35, and the system volume is set to -35.

The SVX-1202 will broadcast a packet with the appropriate parameters set every time the unit establishes a network connection and when it shuts down and loses a connection (in this case, the powering off byte will be set to 1).

The unit will also broadcast a packet when it receives a formatted "announce" packet (with the announce byte set to 1).

Unused bits and bytes are filled with 0's.

Important: device_name, model_name and serial_number are not necessarily null-terminated C-Style strings. Code using these strings should not assume that the last byte is null.

Samples

Microsoft VC++ structure definition

```
#pragma pack(push,1)

struct device_descriptor_t
{
        __int8    unique_header[0x4];
        __int8    reserved1_rw0;
        __int8    reserved2_rw0;
        __int8    announce;
        __int8    powering_off;
        __int32   version;
        __int32   tcp_ip_port;
        __int8    device_name[0x10];
        __int8    model_name[0x10];
        __int8    serial_number[0x10];

        void hton() {
                version = htonl(version);
                tcp_ip_port = htonl(tcp_ip_port);
        }

        void ntoh() {
                version = ntohl(version);
                tcp_ip_port = ntohl(tcp_ip_port);
        }
};
#pragma pack(pop)
```

GCC structure definition

```
struct device_descriptor_t
{
        int8_t    unique_header[0x4];
        int8_t    reserved1_rw0;
        int8_t    reserved2_rw0;
        int8_t    announce;
        int8_t    powering_off;
        int32_t   version;
        int32_t   tcp_ip_port;
        int8_t    device_name[0x10];
        int8_t    model_name[0x10];
        int8_t    serial_number[0x10];

        void hton() {
                version = htonl(version);
                tcp_ip_port = htonl(tcp_ip_port);
        }

        void ntoh() {
                version = ntohl(version);
                tcp_ip_port = ntohl(tcp_ip_port);
        }
} __attribute__ ((__packed__));
```

Control Commands

General Notes

- You must use a semicolon as the command separator/terminator, as it is the only valid line feed

- Query responses will terminate in a semicolon

- Successful commands return a semicolon ";" after the action is completed.
  To receive immediate feedback for the action you've performed, append the query command for that same action to the end of your command. I.e. "Z1VOL-28;Z1VOL?;"
    - This behaviour has changed from the MRX x40 API

- When a recognized command cannot be executed, "!E<OriginalCommand>" is returned.
    - This behaviour has changed from the MRX x40 API

- Invalid commands return the message "!I<OriginalCommand>". Ex 'HELLO;' would result in a response '!IHELLO;'

- Only a few commands are valid when the system is in standby: all queries and 'ZxPOWy', ZxINPy, ZxVOL, ZxPVOL. All other commands are considered 'Invalid' or not officially supported.
    - This behaviour has changed from the MRX x40 API

- The average command processing latency is 20ms

- All queryable settings that can change are reported asynchronously to all active connections whenever a change occurs.

- Multiple commands can be executed simultaneously by combining them into a single message.
    - i.e.:
      Z1POW?;Z1INP?;PLAYAPRV?;PLAYANXT?;PLAYAPP?;PLAYASRM?;PLAYDUR? ;PLAYTITL?;PLAYALB?;PLAYCOVR?;PLAYMODE?;PLAYTIME?;

Sample Command String

To send a power-on command, send "Z1POW1;" using the semicolon ";" command separator/terminator.

- Upper case letters represent a command, and the lower case represents variables which must be entered.

Character Encoding

Textual data will be transferred using hex-encode UTF-8, an extension of ASCII.

Example: set an input name (ISiINyyyy).

Each ASCII letter is sent as two hex (0-9, A-F) characters. Non-English letters are sent as four characters (2 bytes) or six characters (3 bytes). Note padding to 16 bytes.

Spacing between letters has been added for clarity.

Television: IS7IN 54 65 6C 65 76 69 73 69 6F 6E 20 20 20 20 20 20;

Télévision: IS7IN 54 C3A9 6C C3A9 76 69 73 69 6F 6E 20 20 20 20 20 20;

电视: IS7IN E794B5 E8A786 20 20 20 20 20 20 20 20 20 20 20 20 20 20;

System Information

Base System

IDQ?

Description: Query model and firmware version

Query Response: returns IDQ followed by model, software version, region, and software build date, e.g. "IDQSVX-1202 US 0.9.0"

IDM?

Description: Query model

Query Response: returns IDM followed by model, e.g. "IDMSVX-1202"

IDS?

Description: Query software version

Query Response: returns IDS followed by software version, e.g. "IDS0.9.0"

GSN?

Description: Query serial number

Query Response: returns device serial number

IDR?

Description: Query region

Query Response: returns IDR followed by region, e.g. "IDRUS" or "IDREU" or "IDRCN"

IDB?

Description: Query software build date

Query Response: returns IDB followed by software build date, e.g. "IDB20230308153459"

IDH?

Description: Query hardware version

Query Response: returns IDH followed by hardware version, e.g. "IDHD"

Network Module

WMAC?

Description: Query Wi-Fi MAC Address

Query Response: returns Wi-Fi MAC Address, e.g. "01.23.45.67.89.AB"

EMAC?

Description: Query Ethernet MAC Address

Query Response: returns Ethernet MAC Address, e.g. "01.23.45.67.89.AB"

NMST?

Description: Query Network Status

Query Response: returns Network Status, e.g. 192.168.1.54 or 'Up' or 'Down' or 'Connecting'. Up to 32 characters

System Status

Z1AIC?

Description: Query Audio Input Channels

Query Response: returns Z1AICx

Possible Values (x):   0 - No Input

                      1 - Other

                      2 - Mono

Notes: The system will report changes to this value to all connected clients.

Z1AIF?

Description: Query Audio Input Format

Query Response: returns Z1AIFx

Possible Values (x):   0 - No Input

                      1 - Analog

                      2 - PCM

Notes: The system will report changes to this value to all connected clients.

Z1BRT?

Description: Query Audio Input Bit Rate (kbps)

Query Response: returns Z1BRTxxxx

Possible Values (xxxx): 0 - Analog

                      For Analog/PCM inputs, this equals the sample rate multiplied by the bit depth and the number of channels.

Notes: The system will report changes to this value to all connected clients.

Z1SRT?

Description: Query Audio Input Sampling Rate (kHz)

Query Response: returns Z1SRTxxxx

Possible Values (xxxx):   0 - Analog Direct

                              Current Sampling Rate

Notes: The system will report changes to this value to all connected clients.

Z1BDP?

Description: Query Audio Bit Depth

Query Response: returns Z1BDPx

Possible Values (x):   0 - 16-bit

1 - 24-bit

2 - 32-bit

3 - Unknown

Notes: The system will report changes to this value to all connected clients.

Z1AIN?

Description: Query Audio Input Format Name

Query Response: returns Z1AINx

Example: Current audio input format is DTS Master Audio. 'Z1AIN?'
            Returns 'Z1AINDTS Master Audio'

Notes: The system will report changes to this value to all connected clients.

Z1AIR?

Description: Query Audio Input Bit Rate Name

Query Response: Returns Z1AIRx.

For lossy input formats, returns the bit rate (ex 'Z1AIR384 kbps').

It returns the sample rate combined with bit depth (ex: 'Z1AIR48/16') for

lossless audio, analog audio, or PCM audio inputs.

Example: Current audio input bit rate is 384 kbps: 'Z1AIR?' Returns 'Z1AIR384 kbps'

Notes: The system will report changes to this value to all connected clients.

System Set-Up

Profile Set-Up - Bass Management

BMSPc10y

Description: Set Subwoofer Phase Frequency
Possible Values (c): Speaker Channel number 1-2
Possible Values (y): 40 to 120 Hz

Query Response: When queried with BMSPc10? returns BMSPc10y
Notes: The system will report changes to this value to all connected clients.

BMSPc11y

Description: Set Subwoofer Phase
Possible Values (c): Speaker Channel number 1-2
Possible Values (y): 0 to 120 degrees in steps of 1

Query Response: When queried with BMSPc11? returns BMSPc11y
Notes: The system will report changes to this value to all connected clients.

BMSPc12y

Description: Set Subwoofer Polarity
Possible Values (c): Speaker Channel number 1-2
Possible Values (y): 0 - Normal
                          1 - Inverted

Query Response: When queried with BMSPc12? returns BMSPc12y
Notes: The system will report changes to this value to all connected clients.
==This command's parameters differ from the MRX x40 API==

BMSPc5y

Description: Set Speaker Crossover Frequency

Possible Values (c): Speaker Channel number 1-2

Possible Values (y): 40 to 250 Hz in steps of 10 Hz

            30 for Off

Query Response: When queried with BMSPc5? returns BMSPc5y

Notes: The system will report changes to this value to all connected clients.

BMSPc0y

Description: Set Subwoofer Crossover Frequency

Possible Values (c): Speaker Channel number 1-2

Possible Values (y): 40 to 250 Hz in steps of 10 Hz

            30 for Off

Query Response: When queried with BMSPc0? returns BMSPc0y

Notes: The system will report changes to this value to all connected clients.

Profile Set-Up - Listener Position

LPSPc1y

Description: Set Channel Distance

Possible Values (c): Speaker Channel number 1-2

Possible Values (y): 0 to 180

Feet: 0'0" to 30'0", step 2" - 30' = 180

Metric: 0 to 900 cm, step 5 cm - 900 cm = 180

Query Response: When queried with LPSPc1? returns LPSPc1y

Notes: The system will report changes to this value to all connected clients.

Profile Set-Up - Level Calibration

LCSP10y

Description: Set Calibration Level

Possible Values (p): Speaker Profile number 0-3

Possible Values (y): -15 to +15 dB in steps of 0.5 dB

Query Response: When queried with LCSP10? returns LCSP10y

Notes: The system will report changes to this value to all connected clients.

LCSPc1y

Description: Set Channel Level

Possible Values (p): Speaker Channel number 1-2

Possible Values (y): -12 to +12 dB in steps of 0.5 dB

Query Response: When queried with LCSPc1? returns LCSPc1y

Notes: The system will report changes to this value to all connected clients.

LCSP1Ky

Description: Set Test Tone

Possible Values (p): Speaker Profile number 0-3

Possible Values (y): 00000000 - Off

00000001 - Channel 1

00000002 - Channel 2

Query Response: When queried with LCSP1K? returns LCSP1Ky

Notes: Only one channel can have Test Noise active at a time.

The system will report changes to this value to all connected clients.

Input Set-Up

On the SVX-1202, input types are fixed. The factory settings are as follows:

Input Number	Name	Audio Input Type
1	Analog	Analog
2	Digital Coaxial	Digital
3	Streaming	Streaming
4	Bluetooth	Bluetooth

ICN?

Description: Query number of active input configurations
Query Response: returns ICNn
Example: "ICN4" is returned for a system with 4 active inputs
Notes: The system will report changes to this value to all connected clients.

ISiINyyyy

Description: Set Input Name
Possible Values (i): Input Number 1-4
Possible Values (y): Input Name Hex-encoded UTF-8 string, up to 64 bytes

Query Response: When queried with ISiIN? returns ISiINyyyy
Notes: The system will report changes to this value to all connected clients.
This command's parameters differ from the MRX x40 API

ISiITx

Description: Set Input Trim
Possible Values (i): Input Number 1-4
Possible Values (x): -12 to +12 dB in steps of 0.5 dB

Query Response: When queried with ISiIT? returns ISiITx
Notes: The system will report changes to this value to all connected clients.

General Configuration - Preferences

GCLx

Description: Set Language
Possible Values (x): 0 - English
       1 - Chinese
       2 - German
       3 - Spanish
       4 - French
       5 - Italian

Query Response: When queried with GCL? returns GCLx
Notes: The system will report changes to this value to all connected clients.

GCBUx

Description: Set Beta Updates
Possible Values (x): 0 - No
       1 - Yes

Query Response: When queried with GCBU? returns GCBUx
Notes: The system will report changes to this value to all connected clients.

GCDUx

Description: Set Distance Units
Possible Values (x): 0 - Feet
       1 - Centimetres

Query Response: When queried with GCDU? returns GCDUx
Notes: The system will report changes to this value to all connected clients.

GCMVSx

Description: Set Master Volume Scale
Possible Values (x): 0 - Percentage
       1 - dB

Query Response: When queried with GCMVS? returns GCMVSx
Notes: The system will report changes to this value to all connected clients.

GCMMVx

Description: Set Main Maximum Volume

Possible Values (x): -40 to +10 dB, steps of 0.5 dB

Query Response: When queried with GCMMV? returns GCMMVx

Notes: The system will report changes to this value to all connected clients.

GCMPOVx

Description: Set Main Power-On Volume

Possible Values (x): 0 - Last Used

                 1 - -90 dB

                 Any other value up to GCMMV? in steps of 0.5 dB

Query Response: When queried with GCMPOV? returns GCMPOVx

Notes: The system will report changes to this value to all connected clients.

GCMPOIx

Description: Set Main Power-On Input

Possible Values (x): 0 - Last Used

                 Any value between 1-4 set up as a valid input

Query Response: When queried with GCMPOI? returns GCMPOIx

Notes: The system will report changes to this value to all connected clients.

GCNSPOx

Description: Set No Signal Power Off

Possible Values (x): 0 - 5 Minutes

                 1 - 10 Minutes

                 2 - 20 Minutes

                 3 - 1 Hour

                 4 - 2 Hours

                 5 - 6 Hours

                 7 - Never

Query Response: When queried with GCNSPO? returns GCNSPOx

Notes: The system will report changes to this value to all connected clients.

Z1FIXVx

Description: Set Fixed Level

Possible Values (x): 0 - Off

                 1 - On

Query Response: When queried with Z1FIXV? returns GCSHDMIBx

Notes: The system will report changes to this value to all connected clients.

==This command's parameters differ from the MRX x40 API==

GCOMx

Description: Set Operating Mode

Possible Values (x): 0 - Automatic

                 1 - Always On

                 2 - Trigger

Query Response: When queried with GCOM? returns GCOMx

Notes: The system will report changes to this value to all connected clients.

GCAISx

Description: Set Auto Input Switching

Possible Values (x): 0 - Disabled

                 1 - Enabled

Query Response: When queried with GCAIS? returns GCAISx

Notes: If enabled, input switching commands will be ignored.

       The system will report changes to this value to all connected clients.

GCCSTBYx

Description: Set Connected Standby

Possible Values (x): 0 - Disabled

                 1 - Enabled

Query Response: When queried with GCCSTBY? returns GCCSTBYx

Notes: The system will report changes to this value to all connected clients.

General Configuration - Control

GCDNccc

Description: Set Device Name

Possible Values (ccc): Device Name Hex-encoded UTF-8 string, up to 64 bytes

Query Response: When queried with GCDN? returns GDNccc

Notes: The system will report changes to this value to all connected clients.
<mark>This command's parameters differ from the MRX x40 API</mark>

GCTCPx

Description: Set IP Control TCP Port

Possible Values (x): 1025-49150

Default: 14999

Query Response: When queried with GCTCP? returns GCTCPx

Notes: The system will report changes to this value to all connected clients.

System Control

Main Zone Control

Z1POWy

Description: Set Main Zone Power

Possible Values (y):   0 - Off

1 - On

Query Response: When queried with Z1POW? returns Z1POWy

Notes: The system will report changes to this value to all connected clients.
==This command's parameters differ from the MRX x40 API==

Z1INPy

Description: Set Current Input

Possible Values (yy): 1-4

Query Response: When queried with Z1INP? returns Z1INPy

Notes: The system will report changes to this value to all connected clients.

Z1VOLyy

Description: Set Main Zone Volume

Possible Values (yy): -90 to +10 dB

Query Response: When queried with Z1VOL? returns Z1VOLy

Notes: The system will report changes to this value to all connected clients.

Z1VDN

Description: Pulse Volume Down 0.5 dB

Command Response: Z1VOLyy

Z1VUP

Description: Pulse Volume Up 0.5 dB

Command Response: Z1VOLyy

Z1PVOLyy

Description: Set Main Zone Percentage Volume
Possible Values (yy): 0-100% in steps of 1%

Query Response: When queried with Z1PVOL? returns Z1PVOLy
Notes: The system will report changes to this value to all connected clients.

Z1PVDN

Description: Pulse Volume Down 1%
Command Response: Z1PVOLyy
Notes: A step is 1% - this might be 0.5, 1, 2, 3 or 4 dB

Z1PVUP

Description: Pulse Volume Up 1%
Command Response: Z1PVOLyy
Notes: A step is 1% - this might be 0.5, 1, 2, 3 or 4 dB

Z1MUTy

Description: Set Main Zone Muting Value
Possible Values (y): 0 - Unmute
                     1 - Mute
                     t - Toggle

Query Response: When queried with Z1MUT? returns Z1MUTy
Notes: The system will report changes to this value to all connected clients.

Terse volume mapping table:

[0% = -90 db] step 4 dB
[4% = -74 dB] step 3 dB
[11% = -53 dB] step 2 dB
[20% = -35 dB] step 1 dB
[30% = -25 dB] step 0.5 dB
[100% = +10 dB].

Converted dB round up to the next percent. i.e. -89.5 to -86 dB round to 1%.

Z1IPMy

Description: Set Main Zone Audio Listening Mode

Possible Values (y):   S - Stereo
                        M - Mono (Left + Right)
                        L - Left only
                        R - Right only

Query Response: When queried with Z1IPM? returns Z1IPMy

Notes: The system will report changes to this value to all connected clients.

This command's parameters differ from the MRX API

Z1TONyzz

Description: Adjust Tone Settings

Possible Values (y): 0 - Bass
                     1 - Treble

Possible Values (zz): -10 to +10 dB in steps of 0.5 dB

Query Response: When queried with Z1TONy? returns Z1TONyzz

Notes: Z1TON0-01 represents a bass cut by 1 dB.

The system will report changes to this value to all connected clients.

Z1TUPy

Description: Pulse Tone Up

Possible Values (y): 0 - Bass
                     1 - Treble

Notes: This will adjust the selected Tone Control up in steps of 0.5 dB

Z1TDNy

Description: Pulse Tone Down

Possible Values (y): 0 - Bass

1 - Treble

Notes: This will adjust the selected Tone Control down in steps of 0.5 dB

Z1LEVyzz

Description: Adjust Channel Level Settings

Possible Values (y): 1 - Channel 1

2 - Channel 2

Possible Values (zz): -10 to 10 dB in steps of 1 dB

Query Response: When queried with Z1LEVy? returns Z1LEVyzz

Example: Z1LEV1+01 represents Channel 1 boosted by 1 dB.

Notes: Entry is rounded to the nearest valid value.

The system will report changes to this value to all connected clients.

This command's parameters differ from the MRX x40 API

Z1LUPy

Description: Pulse Level Up

Possible Values (y): 1 - Channel 1

2 - Channel 2

Notes: This will adjust the selected channel's level up in steps of 0.5 dB

This command's parameters differ from the MRX x40 API

Z1LDNy

Description: Pulse Level Down

Possible Values (y): 1 - Channel 1

2 - Channel 2

Notes: This will adjust the selected channel's level up in steps of 0.5 dB

This command's parameters differ from the MRX x40 API

Main Zone ARC Metadata

Z1ARCVAL?

Description: Is ARC Valid

Possible Values (x):　　0 - Not Valid

　　　　　　　　　　　　1 - Valid

Query Response: returns Z1ARCVALx

Z1ARCUPL?

Description: ARC Upload Date

Possible Values (ccc): UTF-8 string of up to 64 hex-encoded bytes

Query Response: returns Z1ARCUPLccc

Notes: ==This command's parameters differ from the MRX x40 API==

Z1ARCNAM?

Description: ARC Name

Possible Values (ccc): UTF-8 string of up to 64 hex-encoded bytes

Query Response: returns Z1ARCNAMccc

Notes: ==This command's parameters differ from the MRX x40 API==

Basic Control

UIDx

Description: Set Unit Identification Mode

Possible Values (x,y): 0 - Off

1 - On

Advanced Control

CPYSxy

Description: Copy Settings from x to y
Possible Values (x,y): 0 - Current
                                 1 - User
                                 2 - Installer

CPYS01

Description: Save User Settings
Notes: System will save the current settings as user settings backup.

CPYS02

Description: Save Installer Settings
Notes: System will save the installer settings as user settings backup.
     The system will then respond with 'Bulk Settings Changed' (BSC1) to all open connections.

CPYS10

Description: Load User Settings
Notes: System will reload current settings from the user settings backup.
     The system will then respond with 'Bulk Settings Changed' (BSC1) to all open connections.

CPYS20

Description: Load Installer Settings
Notes: System will reload current settings from the installer settings backup.
     The system will then respond with 'Bulk Settings Changed' (BSC1) to all open connections.

LDFDS

Description: Load Factory Settings
Notes: Loads the factory default settings but does not reset the network settings.
     The system will then respond with 'Bulk Settings Changed' (BSC1) to all open connections.

LOTFS

Description: Reset On-The-Fly Settings

Notes: Load the factory default On-The-Fly settings.

      The system will then respond with 'Bulk Settings Changed' (BSC1) to all open connections.

Streaming Playback Control

PLAYAPRV?

Description: Is the Previous Song/Restart control allowed to be used?

Possible Values (x):   0 - No

                        1 - Yes

Query Response: returns PLAYAPRVx

Notes: The system will report changes to this value to all connected clients.
==This command or its functionality differs from the MRX x40 API==

PLAYANXT?

Description: Is the Next Song control allowed to be used?

Possible Values (x):   0 - No

                        1 - Yes

Query Response: returns PLAYANXTx

Notes: The system will report changes to this value to all connected clients.
==This command or its functionality differs from the MRX x40 API==

PLAYAPP?

Description: Is the Play/Pause control allowed to be used?

Possible Values (x):   0 - No

                        1 - Yes

Query Response: returns PLAYAPPx

Notes: The system will report changes to this value to all connected clients.
==This command or its functionality differs from the MRX x40 API==

PLAYASRM?

Description: Is the Play/Pause control allowed to be used?

Possible Values (b):   0 - No

                        1 - Yes

Query Response: returns PLAYASRMbbbbb

Notes: Boolean values for shuffle, repeatOne, shuffleRepeatOne, repeatAll, shuffleRepeatAll.

The system will report changes to this value to all connected clients.
==This command or its functionality differs from the MRX x40 API==

PLAYDUR?

Description: Query the duration of the current track

Possible Values (x): Duration in Seconds

Query Response: returns PLAYDURx

Notes: For current position, see PLAYTIME?

The system will report changes to this value to all connected clients.

This command or its functionality differs from the MRX x40 API

PLAYTITL?

Description: Query the current track's title

Possible Values (ccc): UTF-8 string of up to 64 hex-encoded bytes

Query Response: returns PLAYTITLccc

Notes: The system will report changes to this value to all connected clients.

This command or its functionality differs from the MRX x40 API

PLAYALB?

Description: Query the current track's album

Possible Values (ccc): UTF-8 string of up to 64 hex-encoded bytes

Query Response: returns PLAYALBccc

Notes: The system will report changes to this value to all connected clients.

This command or its functionality differs from the MRX x40 API

PLAYCOVR?

Description: Query the current track's cover art URL

Possible Values (ccc): UTF-8 string of up to 64 hex-encoded bytes

Query Response: returns PLAYCOVRccc

Notes: The system will report changes to this value to all connected clients.

This command or its functionality differs from the MRX x40 API

PLAYMODEx

Description: Set the Play mode

Possible Values (x):   0 - Normal

1 - Shuffle

2 - Repeat One

3 - Shuffle Repeat One

4 - Repeat All

5 - Shuffle Repeat All

Query Response: When queried with PLAYMODE? returns PLAYMODEx

Notes: The system will report changes to this value to all connected clients.

==This command or its functionality differs from the MRX x40 API==

PLAYCTRLx

Description: Play Control

Possible Values (x):   0 - Stop

1 - Play (Read Only)

2 - Play/Pause

3 - Previous

4 - Next

Query Response: When queried with PLAYMODE? returns PLAYMODEx

Notes: The system will report changes to this value to all connected clients.

==This command or its functionality differs from the MRX x40 API==

PLAYTIME?

Description: Query the play position of the current track

Possible Values (x): Play Position in Seconds

Query Response: returns PLAYTIMEx

Notes: For track duration, see PLAYDUR?

The system will report changes to this value to all connected clients.

==This command or its functionality differs from the MRX x40 API==

PLAYSRVC?

Description: Query the current streaming service's name

Possible Values (ccc): UTF-8 string of up to 64 hex-encoded bytes

I.e., Spotify, AirPlay, Casting

Query Response: returns PLAYSRVCccc

Notes: The system will report changes to this value to all connected clients.

==This command or its functionality differs from the MRX x40 API==

System Broadcasts

BSC1

Description: Bulk Settings Changed

Notes: Sent by the system whenever bulk operations are performed on the Menu Settings / On-the-fly Adjustments / etc. Typically those operations would result in significant system notifications; however, the system can instead send BSC1 to all active connections to indicate that all cached settings should be invalidated.

Example: "Load User Settings" could change hundreds of settings simultaneously; sending notifications for each would be wasteful. Instead, the system will send BSC1.

Application Note: When received, the control system must invalidate cached settings and request updated values