CasaTunes®

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CasaTunes Serial Interface V1.5

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CasaTunes

Multi-Room Music Solution

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CasaTunes Serial Interface

Purpose

The CasaTunes Serial Interface (CSI) API provides a simple interface designed to allow remote control of your CasaTunes distributed audio system via a serial interface.

Enabling the CasaTunes Serial Interface

Before you can use the CasaTunes Serial Interface you must enable the *CasaTunes Serial Interface*. By default, the CasaTunes Serial Interface is disabled. To enable the CasaTunes Serial Interface you need to edit the CasaTunesSvc.exe.config file located in the CasaTunes Program Files Folder, typically C:\Program Files\CasaTools\CasaTunes2. The settings are located in the <AppSettings> section of the configuration file.

To enable the CasaTunes Serial Interface make sure the following setting is set to *true*.

<add key=”CSIEnable” value=”true” />

By default, the CasaTunes Serial Interface will send a heartbeat message every minute to notify the serial device that the link is still alive. If you want to disable this, then set the *CSIEnableHeartBeat* to *false*.

<add key="CSIEnableHeartBeat" value="false"/>

If the Serial Interface is being used by a remote control type device that ignores responses or unsolicited messages from CasaTunes, then disable CasaTunes messages by setting *CSIEnableFeedback* to *false*. In this case, you will also want to disable the heartbeat, above.

<add key="CSIEnableFeedback" value="false"/>

✍ If you are using Windows Vista and UAC is enabled, you will need to open Notepad in Administrator mode, or you will not be able to save your changes.

Interfaces supported

The CasaTunes Serial Interface protocol is supported using either an RS-232 or a TCP/IP (Serial Over Ethernet) interface.

To configure the CasaTunes Serial Interface protocol to use a TCP/IP connection (Telnet), you must configure the following setting, and set its value to “Telnet”:

<add key="CSISerialDeviceType" value="Telnet"/>

To configure the CasaTunes Serial Interface protocol for use over RS-232, you must configure the following setting, and set its value to “Serial”:

<add key="CSISerialDeviceType" value="Serial"/>

Configuring the TCP/IP Connection

To change the TCP/IP Port to use for the TCP/IP connection change the following settings:

<add key ="CSISocketsPort" value="[23],xxxx"/>

The default value is 23 (Telnet port), however, you can change this value to use a custom port, in particular when Telnet is being used by another process.

✍ If you are using a firewall to protect your CasaTunes Music Server, you will need to make sure that you configure the firewall to allow traffic through on either TCP/IP Port 23 (Telnet) or the custom port you specified above, if any.

Configuring your Serial Port

To configure your serial port change the following settings:

<add key="CSICommPort" value="[1], 2, .., 32” />
<add key="CSIBaudRate" value="[19200] or any valid baud rate" />
<add key="CSIDataBits" value="[8], 7, 9" />
<add key="CSIStopBits" value="[One], OnePointFive, Two” />
<add key="CSIParity" value="[none], even, odd, mark, space" />
<add key="CSIHandshake" value="[none], XonXoff, Rts" />

You should change these values to match your device serial port settings. Values delimited within [] are the default option, with other options provided by a comma separated list. You should only include a single value from the available options.

You can specify the delay between messages sent by CasaTunes. This might be necessary for slower serial devices that may require additional processing time before processing another message or response from CasaTunes. To change the delay between messages, change the following setting. The delay is specified in ms.

<add key="CSIMessageDelay" value="50"/>

To avoid any delays, set the value to “0”.

You can also create a trace or log file that will log all messages sent between CasaTunes and your serial device. To enable logging these messages, change the following settings:

<add key="EnableLogFile" value="[false], true" />
<add key="LogFilePath" value "[CSI.Log]" />

The log file is overwritten each time the service is restarted (and the CasaTunes Serial Interface is enabled).

✍ Before changing a setting in your CasaTunesSvc.exe.config file you must first stop the CasaTunes Windows Service, make your changes to the file, save the file, and then restart the service.

Serial Protocol

The CSI protocol uses different start characters for commands and responses. The format is similar for both commands and responses.

The format of a typical command consists of:

Start Command Character	Command	Parameters (comma separated list)	End of Command Character
!	POWER	,ZON1,PWRON	<CR>
Comments:	3 or more characters	Each parameter name is ***always*** 3 characters	

The format of a typical response consists of:

Start Command Character	Response to Command	Returns a comma separated list	End of Command Character
*	SYSINFO	,ZON1,SRC2,VOL80	<CR>
Comments:	3 or more characters	Each parameter name is ***always*** 3 characters thereby simplifying parsing response data.	

Where, <CR> is 0x0D hex (or 13 decimal).

All characters sent before the start of command character (!) and all characters sent after the <CR> are ignored.

Commands can either be in lower, upper or mixed case. All responses (with the exception of strings) are in upper case.

All strings are returned within double quotes (“”). For example when a command is issued to find the name of the first Zone, the following command and response packet are sent and received, respectively:

!ZNAME,ZON1<CR>
*ZNAME,ZON1,NAM “Kitchen”<CR>

The ID of the first Source, Zone or Zone Group always starts at 1 (and not 0).

Unsolicited Responses

Unsolicited responses are sent whenever the system configuration changes. For example, when a user presses the power button on a keypad in Zone 1, the following unsolicited response is sent:

*ZINFO,ZON1,PWRON,SRC2,VOL23,MUTOFF<CR>

The heartbeat, when enabled, will send the following message approximately every 60 seconds:

*OK<CR>

Invalid Commands

The System ignores invalid commands, and parses the serial stream looking for the next start of command character (“!”) to re-sync the next command. All correctly formatted commands will result in the CasaTunes Serial Interface issuing a corresponding response command (see individual commands).

Terminating a TCP/IP (Serial-over-IP) connection

When you connect via TCP/IP, CasaTunes keeps the current socket open until the CasaTunes Windows Service is stopped, or it detects the client has closed the connection. It automatically detects the client has closed the connection when notified that a heartbeat packet has timed out. This implies the client will need to wait for the socket to timeout, which can be up to 3 seconds, before a new connection can be established.

If your client application does not want to wait for the socket to timeout, or the client application would like to disable the heartbeat, the client can terminate the session by sending a !CLOSESESSION command, or the special <EOT> character (04).

Hints for implementing a User Interface using the serial interface

1. Issue a Version command to check communication and the version of the Serial Interface.
2. Issue a Get System Information command to get the number of Zones, Zone Groups, and Sources, as well as whether zones support DND, Master Mode, Party Mode, and Keypad Locking.
3. Get the names for each available Source.

4. Get the names for each available Zone and Zone Group.
5. Get the status for each Zone and Zone Group (if displaying all Zone & Zone Groups).
6. Parse any unsolicited responses to keep the UI updated.

Development Tools

When developing and testing the CasaTunes Serial Interface there are several tools that could benefit your development and testing.

The first tool we recommend is a product called *Virtual Serial Ports Emulator* from EterLogic (http://www.eterlogic.com). This free tool allows you to create a *virtual* serial port session emulating the hardware. For example, you can create two virtual COM (serial) ports, such as COM4 and COM5, and create a virtual link between the two. You configure CasaTunes to use COM4 and your terminal program to use COM5.

The second tool we recommend is a product called *Tera Term VT*. This free product is a virtual terminal program that runs on Windows. We used it because HyperTerminal is no longer included with Windows Vista.

You can also use the Tera Term application as a Telnet terminal as well (if you plan to use the Serial Over Ethernet interface).

Using these tools, or other tools similar to these, you can manually test the Serial Interface; validating commands, checking responses, and viewing unsolicited messages.

What's New

Version 1.41

1. Fixed bug with Zone Groups (ZGPX) commands
2. Added commands to scroll up or down through sources (SRCUP and SRCDOWN commands)

Version 1.4 (Part of CasaTunes v2.8)

1. Added support for *SAVE* and *RESTORE* commands. These commands allow you to save the state of one or more zones and associate these with a label. You can then *RESTORE* the state to the previously *SAVE*d state. State information saved for each zone includes: Power, Volume, Mute and Source.
2. Added support for getting *NOWPLAYING* meta-data information.
3. Added support for enabling and disabling the receipt of unsolicited meta-data responses. By default unsolicited meta-data responses are enabled.

4. Added support for a TOGGLE parameter. The TOGGLE parameter is now available for the POWER, MUTE, DND, PARTY, LOCK, and MASTER commands.
5. Added support for specifying more than one Zone and Zone Group for most commands. For example, !POWER,ZON1,ZON2,ZON3,PWRON will turn on all 3 zones. Commands that support multiple zones will include the signature: "NOTE: You can specify multiple zones with this command"
6. Starting with Version 1.4 we changed support for the PLAYMUSIC command. The following command parameters are no longer supported:
    a. TYP, ART, ALB, FRQ, GEN, PLY, STN
7. The PLAYMUSIC command now only supports playing previously created CasaTunes Playlists. The advantage of using CasaTunes Playlists is they support all current (and future) Music Services supported by CasaTunes, and allow the customer to update their playlists without the installer having to reprogram their controller.
8. The TUNERTUNE command replaces the ability for the PLAYMUSIC command to tune to specific AM/FM/DAB/XM/SIRIUS stations
9. In addition to TUNERTUNE, there are tuner commands to Step, Seek, Change Bands, and Scan.

CasaTunes Serial Interface Commands

CLOSESESSION

This command will end the telnet (serial-over-IP) session. The client application will need to open a new telnet session before it can send any new commands, or receive any feedback from CasaTunes.

Command:

!CLOSESESSION<CR>

Response:

There is no response. The socket is closed.

ECHO On and Off

This command will turn on or off echoing back all commands.

Command:

!ECHO,ECOON<CR>
!ECHO,ECOOFF <CR>

Response:

Only responds if ECHO is on. Response is the same as the command but with an * as the start character, that is:

*ECHO,ECOON <CR>

Heartbeat On and Off

This command will turn sending out a Heartbeat on or off

Command:

!HEARTBEAT,HBTON<CR>
!HEARTBEAT,HBTOFF <CR>

Response:

Same as the command but with an * as the start character, that is:

* HEARTBEAT,HBTON <CR>

Note: When using Serial over Ethernet (or telnet) communications, you must not turn the heartbeat off permanently or CasaTunes may not be able to detect that the telnet client has dropped the connection and closed the socket.

Enable MetaData Change Notifications

This command will enable or disable CasaTunes sending unsolicited metadata changes. By default CasaTunes will send out any metadata changes that occur on any active sources (See NPINFO for more information).

Command:

!METADATA,MDTON<CR>
!METADATA,MDTOFF <CR>

Response:

Same as the command but with an * as the start character, that is:

* METADATA,MDTON <CR>

Note: Turning off unsolicited metadata responses does not affect responses to NPINFO requests.

All Zones On or Off

This command will turn all Zones on or off. If a Zone is *powered* and *DND* (Do Not Disturb) is set, the Zone is not affected.

Command:

!ALLZONES,ALLON<CR>
!ALLZONES,ALLOFF<CR>

Response:

Same as the command but with an * as the start character, that is:

*ALLZONES,ALLON<CR>
*ALLZONES,ALLOFF<CR>

Power Zone or Zone Group On or Off

This command will turn a Zone or Zone Group on or off. When turning a Zone or Zone Group Off, you can also specify a delay (in minutes) before turning off the Zone.

Command:

!POWER,ZON1,PWRON<CR> - Turn the first Zone on
!POWER,ZON2,PWROFF<CR> - Turn the second Zone off
!POWER,ZON2,TOGGLE<CR> - Toggle power for Zone 2
!POWER,ZON2,PWROFF,DEL15<CR>
- Turn the second Zone off after 15 minutes
!POWER,ZGP1,PWRON<CR> - Turn the first Zone Group on

Response:

Same as the command but with an * as the start character

NOTE: You can specify multiple zones with this command

Change Source for a Zone or Zone Group

This command will change the Source for the specified Zone or Zone Group.

Command:

!SRCCHG,ZON1,SRC3<CR> - Change the Source on Zone 1 to 3
!SRCCHG,ZGP2,SRC3<CR> - Change the Source on Zone Group 2 to 3

Response:

Same as the command but with an * as the start character

NOTE: You can specify multiple zones with this command

Change to the next Source for a Zone or Zone Group

This command will change the Source for the specified Zone or Zone Group.

Command:

!SRCUP,ZON1 <CR> - Change to the next Source on Zone 1
!SRCUP,ZGP2 <CR> - Change to the next Source for Zone Group 2

Response:

Same as the command but with an * as the start character

NOTE: You can specify multiple zones with this command

Change to the previous Source for a Zone or Zone Group

This command will change the Source for the specified Zone or Zone Group.

Command:

!SRCDOWN,ZON1 <CR>	- Change to the previous Source on Zone 1
!SRCDOWN,ZGP2 <CR>	- Change to the previous Source for Zone Group 2

Response:

Same as the command but with an * as the start character

NOTE: You can specify multiple zones with this command

Set the Volume for a Zone or Zone Group

This command will change the volume for the specified Zone or Zone Group.

If this Zone is a Master Zone it will change the volume for all Zones in the Zone Group.

Although setting the volume to 0 will turn the volume off for this Zone or Zone Group, we recommend using the Mute command as it preserves the volume setting for the Zone, or each Zone in the Zone Group, in the event that you select to un-mute the volume later.

The valid range for this command is 0 (off) to 99 (maximum volume) for the Zone or Zone Group.

Command:

!VOLUME,ZON1,VOL40<CR> - Set the volume for Zone 1 to 40
!VOLUME,ZGP3,VOL25<CR>- Set the volume for Zone Group 3 to 25

Response:

Same as the command but with an * as the start character

NOTE: You can specify multiple zones with this command

Increase/Decrease the Volume in a Zone or Zone Group

This command will increment or decrement the volume for the specified Zone or Zone Group.

If this Zone is a Master Zone it will change the volume for all Zones in the Zone Group.

Command:

!VOLCHG,ZON1,VO+2<CR> - Increase the volume in Zone 1 by 2
!VOLCHG,ZGP3,VO-5<CR> - Lower the volume in Zone Group 3 by 5

Response:

Same as the command but with an * as the start character

NOTE: You can specify multiple zones with this command

Mute the volume for a Zone or Zone Group

This command will mute the volume for the specified Zone or Zone Group.

If this Zone is a Master Zone it will change the volume for all Zones in the Zone Group.

Command:

!MUTE,ZON3,MUTON<CR> - Mutes Zone 3
!MUTE,ZON2,TOGGLE<CR> - Toggles Mute on Zone 2
!MUTE,ZGP3,MUTON<CR> - Mutes Zone Group 3
!MUTE,ZON3,MUTOFF<CR> - Turns mute on Zone 3 off

Response:

Same as the command but with an * as the start character

NOTE: You can specify multiple zones with this command

Enable or Disable Do Not Disturb for a Zone

This command will enable or disable DND for a Zone, if the matrix switch supports Do Not Disturb (DND) mode. You can verify whether the current controller supports DND Mode by issuing a *Get Extended Zone Information* command.

Command:

!DND,ZON1,DNDON<CR> - Enable DND on Zone 1
!DND,ZON2,TOGGLE<CR> - Toggles Mute on Zone 2
!DND,ZON2,DNDOFF<CR> - Disable DND on Zone 2

Response:

Same as the command but with an * as the start character, or:
*DND,NAV<CR> if DND is not supported on the current controller

NOTE: You can specify multiple zones with this command

Enable or Disable Party Mode for a Zone

This command will enable or disable Party Mode for a Zone, if the matrix switch supports Party mode (for example, Russound AV Controllers). You can verify whether the current controller supports Party Mode by issuing a *Get Extended Zone Information* command.

Command:

!PARTY,ZON4,PTYON<CR> - Enable Party Mode on Zone 4
!PARTY,ZON2,TOGGLE<CR>- Toggles Party Mode on Zone 2
!PARTY,ZON4,PTYOFF<CR> - Disable Party Mode on Zone 4

Response:

Same as the command but with an * as the start character, or:
*PARTY,NAV<CR> if Party Mode is not supported on the current controller

NOTE: You can specify multiple zones with this command

Enable or Disable Master Mode for a Zone

This command will enable or disable Master Mode for a Zone, if the matrix switch supports Master mode. You can verify whether the current controller supports Master Mode by issuing a *Get Extended Zone Information* command.

Command:

!MASTER,ZON4,MSTON<CR>	- Enable Master Mode on Zone 4
!MASTER,ZON2,TOGGLE<CR>	- Toggles Master Mode on Zone 2
!MASTER,ZON4,MSTOFF<CR>	- Disable Master Mode on Zone 4

Response:

Same as the command but with an * as the start character, or:

*MASTER,NAV<CR> if Master Mode is not supported on the current controller

NOTE: You can specify multiple zones with this command

Lock or Unlock the keypad for a Zone

This command will lock or unlock a keypad for a Zone, if the matrix switch supports keypad locking. You can verify whether the current controller supports keypad locking by issuing a *Get Extended Zone Information* command.

Command:

!LOCK,ZON4,LCKON<CR>	- Lock keypad on Zone 4
!LOCK,ZON2,TOGGLE<CR>	- Toggles Lock on Zone 2
!LOCK,ZON4,LCKOFF<CR>	- Unlock keypad on Zone 4

Response:

Same as the command but with an * as the start character, or:
*LOCK,NAV<CR> if keypad locking is not supported on this matrix switch

NOTE: You can specify multiple zones with this command

SAVE the current settings for one or more zones & zone groups

This command saves the current settings for one or more zones (or zone groups). The saved settings include: Power, Volume, Mute and Source settings.

The saved settings are associated with a label you provide. You specify this label in the RESTORE command, to restore the previously saved settings. If a SAVE command specifies an existing label, then the previously saved settings associated with the label are overwritten.

Command:

!SAVE,ZON1,ZON4,ZGP2,NAM"EVENING SCENE"<CR>

Response:

Response is the same as the command but with an * as the start character, that is:

*SAVE,ZON1,ZON4,ZGP2,NAM"EVENING SCENE"<CR>

RESTORE previously saved zone and/or zone group settings

This command restore any previously saved settings for one or more zones (or zone groups). The saved settings include: Power, Volume, Mute and Source settings.

See the **SAVE** command for more information.

Command:

!RESTORE,NAM”EVENING SCENE”<CR>

Response:

Response is the same as the command but with an * as the start character, that is:

*RESTORE,NAM”EVENING SCENE”<CR>

Source Control – Play

This command will start or continuing *playing* the current song or internet radio station.

Command:

!SRCPLAY,ZON1<CR> - Start playing on Zone 1

– or –

!SRCPLAY,SRC1<CR> - Start playing on Source 1

Response:

Same as the command but with an * as the start character

NOTE: You can specify multiple zones with this command

Source Control – Pause

This command will pause the current song.

Command:

!SRCPAUSE,ZON2<CR> - Pause playing on Zone 2

– or –

! SRCPAUSE,SRC3<CR> - Pause playing on Source 3

Response:

Same as the command but with an * as the start character

Source Control – Stop

This command will stop the current song or internet radio station. When you stop a playlist, the next time you select play, the list is played from the beginning again.

Command:

!SRCSTOP,ZON1<CR> - Stop playing on Zone 1

– or –

!SRCSTOP,SRC1<CR> - Stop playing on Source 1

Response:

Same as the command but with an * as the start character

NOTE: You can specify multiple zones with this command

Source Control – Skip To Next Track

This command will play the next song in the playlist.

Command:

!SRCNEXTTRK,ZON1<CR> - Play the next song on Zone 1

– or –

!SRCNEXTTRK,SRC1<CR> - Play the next song on Source 1

Response:

Same as the command but with an * as the start character

Source Control – Skip To Previous Track

This command will play the previous song in the playlist.

Command:

!SRCPREVTRK,ZON1<CR> - Play the previous song on Zone 1

– or –

!SRCPREVTRK,SRC1<CR> - Play the previous song on Source 1

Response:

Same as the command but with an * as the start character

Play Music

Use this command to select a *CasaTunes playlist* to play.

!PLAYMUSIC,ZON2,NAM"My Playlist",ADD<CR>

This command will add the music selections from your CasaTunes Playlist called "My Playlist in Zone 2 to the Now Playing queue.

Notes:

- You can specify either the Zone or Source where you want the music to play
- **NAM** is the name of your CasaTunes Playlist
- **ADD** to add your selection to the queue. If ADD is not specified the current playlist is replaced.

Tune To A Specific Channel or Station

Use this command to select a specific station on a hardware based tuner.

!TUNERTUNE,SRC6,BND”XM”,FRQ”26”<CR>

This command will tune to XM Channel26 on Source 6.

Notes:

- You can specify either the Zone or Source to tune, however, the zone must have been previously switched to the tuner source.
- **BND** specifies the band. This is an optional parameter. If specified, the tuner will automatically switch to this band. If not specified, station tuning will be performed on the current band (if supported). The supported bands depend on the tuner. Valid bands include: “AM”, ”FM”,”DAB”, ”SIRIUS” and “XM”.
- **FRQ** specifies the station frequency or channel to tune to.

Tuner Step Up or Down

Use this command to step up or down on a hardware based tuner.

!TUNERSTEP,SRC6,BND"XM",STPUP<CR> - Move up a channel
!TUNRESTEP,SRC6,BND"XM",STPDN<CR> - Move down a channel

Notes:

- You can specify either the Zone or Source to tune, however, the zone must have been previously switched to the tuner source.
- **BND** specifies the band. This is an optional parameter. If specified, the tuner will automatically switch to this band. If not specified, stepping will be performed on the current band (if supported). The supported bands depend on the tuner. Valid bands include: "AM", "FM","DAB", "SIRIUS" and "XM".
- **STPUP/DN** Step up or down

Tuner Seek Up or Down

Use this command to seek up or down on a hardware based tuner.

!TUNERSEEK,SRC6,BND"FM",SEKUP<CR> - Seek up a channel
!TUNRESEEK,SRC6,BND"FM",SEKDN<CR> - Seek down a channel

Notes:

- You can specify either the Zone or Source to tune, however, the zone must have been previously switched to the tuner source.
- **BND** specifies the band. This is an optional parameter. If specified, the tuner will automatically switch to this band. If not specified, seeking will be performed on the current band (if supported). The supported bands depend on the tuner. Valid bands include: "AM", "FM","DAB", "SIRIUS" and "XM".
- **STPUP/DN** Step up or down

Tuner Scan

Use this command to scan for stations on a hardware-based tuner.

!TUNERSCAN,SRC6,BND”FM”,SCNON<CR> - Start Scan
!TUNRESCAN,SRC6,BND”FM”,SCNOFF<CR> - Stop Scan

Notes:

- You can specify either the Zone or Source to tune, however, the zone must have been previously switched to the tuner source.
- **BND** specifies the band. This is an optional parameter. If specified, the tuner will automatically switch to this band. If not specified, scanning will be performed on the current band (if supported). The supported bands depend on the tuner. Valid bands include: “AM”, ”FM”,”DAB”, ”SIRIUS” and “XM”.
- **SCNON/OFF** Start and Stop scanning for stations

Tuner Band

Use this command to switch to a different band on a hardware-based tuner.

!TUNERBAND,SRC6,BND”XM”<CR> - Select the “XM” Band

Notes:

- You can specify either the Zone or Source to tune, however, the zone must have been previously switched to the tuner source.
- **BND** specifies the band to select. The supported bands depend on the tuner. Valid bands include: “AM”, ”FM”,”DAB”, ”SIRIUS” and “XM”.

Get Now Playing Information

This command gets the metadata for the current song playing in the specified zone or zone group.

Note: CasaTunes automatically sends an unsolicited NPINFO response whenever the meta-data for a source changes, if enabled (Refer to the METADATA command).

Command:

!NPINFO,ZONxx<CR>
!NPINFO,ZGPxx<CR>

Response:

* NPINFO, SRCyy,STSs,LIN1"Info1",...,LIN4"Info4" <CR>

Where:

xx is the ID of the Zone or Zone Group
yy is the ID of the Source
s is 0 (Stopped), 1 (Paused), 2 (Playing), 3 (Retrying) or 4 (Buffering)
LIN1..4 are four lines of meta-data (set to "" if no metadata is available)

Get System Information

This command provides information about the capabilities of the matrix switch. You can use this command to get information on the number of Zones, Zone Groups, Sources, and whether DND, Party Mode, Keypad Locking, and Master Mode commands are supported.

Command:

!SYSINFO<CR>

Response:

* SYSINFO,ZONxx,ZGPgg,SRCyy,DNDzzz,PTYzzz,LCKzzz,MSTzzz<CR>

Where:

xx are the total number of Zones available
gg are the total number of Zone Groups available
yy are the total number of Sources available
zzz is ON (if available) or OFF (Not Available)

Get Zone or Zone Group Information

This command provides information about the specified Zone or Zone Group. You can use this command to determine the Source, or volume level for a Zone or Zone Group, and whether the Zone or Zone Group is on and muted.

Command:

!ZINFO,ZON1<CR>	- Get the information for Zone 1
!ZINFO,ZGP3<CR>	- Get the information for Zone Group 3

Response:

*ZINFO,ZONxx,PWRzzz,SRCyy,VOLww,MUTzzz<CR>

Where:

ZONxx – Specifies the ID of the Zone (ZGxx for Zone Group)
PWRzzz – Specifies whether the Zone/Zone Group is Powered (ON/OFF)
SRCyy – Specifies the Source ID for the Zone or Zone Group
VOLww – Specifies the current volume level for the Zone or Zone Group
MUTzzz – Specifies whether the Zone or Zone Group is Muted (ON/OFF)

Get Extended Zone Information

This command provides extended information for the specified Zone. You can use this command to determine whether DND, Party Mode, Master Mode, and/or keypad Locking features are enabled for this Zone, as well as whether this Zone is configured as Hidden (in the CasaTunes Setup application). If a feature is not supported it is set to OFF.

Command:

!ZEXINFO,ZON1<CR> - Get the extended information for Zone 1

Response:

* ZEXINFO,ZONxx,HIDzzz, DNDzzz,PTYzzz,LCKzzz,MSTzzz<CR>

Where,

ZONxx – Specifies the ID of the Zone
HIDzzz – Specifies whether the Zone is hidden (ON/OFF)
DNDzzz – Specifies whether DND is enabled (ON/OFF)
PTYzzz – Specifies whether Party Mode is enabled (ON/OFF)
LCKzzz – Specifies whether Keypad Locking is enabled (ON/OFF)
MSTzzz – Specifies whether Master Mode is enabled (ON/OFF)

Get the Zone or Zone Group Name

This command will return the name for the specified Zone or Zone Group. The name is returned in double quotes.

Command:

!ZNAME,ZON1<CR> - Get the name of Zone 1
!ZNAME,ZGP2<CR> - Get the name of Zone Group 2

Response:

*ZNAME,ZONxx,NAM”Kitchen”<CR>
*ZNAME,ZGPxx,NAM”PARTY”<CR>

Where,

ZONxx – Specifies the Zone ID
ZGPxx – Specifies the Zone Group ID

Get the Source Name

This command will return the name for the specified Source. The name is returned in double quotes.

Command:

!SNAME,SRC1<CR> - Get the name of Source 1

Response:

*SNAME,SRCxx,NAM”Player 1”<CR>

Where,

SRCxx – Specifies the Source ID

Get CasaTunes Serial Interface Version Information

This command will return the current version of the CasaTunes Serial Interface. There is a Major and Minor version. This is a good command to submit initially to verify communications are functioning correctly.

Command:

!VERSION<CR>

Response:

*VERSION,MAJxx,MINyy,NAM"CasaTunes Serial Interface"<CR>

Where,

MAJxx	- Specifies the Major version
MINyy	- Specifies the Minor version

