

RS-232/IR Protocol for Hisense® Prosumer TV

Version 3.6
17 April 2017

Models

55F1600 | LTDN55K2205BWUS
55U1600 | HU55K324UBWG
65U1600 | LTDN65K550GUBWUS
75U1600 | LTDN75K700GUBWUS
86U1600 | LTDN86XT910MUBWUS



Questions? Give us a call: 888-935-8880

REVISION NOTES

V1.0 02-Apr-2014
Discrete IR Commands – Initial version.

V2.0 02-Jul-2014
Discrete IR Commands – Add Component Configuration File (CCF) codes.

V3.0 13-May-2016
RS-232 Commands & Status Query – Initial version.

V3.1 26-Jul-2016
RS-232 Commands & Status Query – Control Functions
Added [ARC] to the QUERY TV SPEAKER ON/OFF Mode [SPKM].
Changed SET PANEL BUTTON command to PANL.
Changed QUERY PANEL BUTTON command to PANL.
Changed a number of parameters based on QD feedback.
Changed Remote Control Buttons simulator [BTTN] parameters to have a "1" prefix.
Added note to QUERY POWER ON COMMAND SETTING to specify that this command is not available in STANDBY mode.

V3.2 25-Jan-2017
RS-232 Commands & Status Query – Command support for ALL TVs on a system with Query for a single TV system -and- for MAC address specific commands and query to individual TVs on a multiple TV system.

V3.3 10-Mar-2017
RS-232 Commands & Status Query – Error checking and correcting commands.

V3.4 16-Mar-2017
Supported Series model name change.

V3.5 17-Mar-2017
Supported Series model name change, redux.

V3.6 17-Apr-2017
Model offering update and corrections to Discrete IR commands.

Discrete IR Control

NOTES:

- 1) Check User Manual for your specific TV to identify supported IR commands by model.
- 2) Visit <https://www.hisense-usa.com/support> to download an ASCII file with the discrete IR codes for cut & paste ease and accuracy.
- 3) Questions? Give us a call: 888-935-8880

DISCRETE IR CODES						
FUNCTION	LOW CUSTOM	HIGH CUSTOM (LOW CUSTOM COMPLEMENT)	DATA CODE	DATA CODE COMPLEMENT	COMPLETE HEX CODE	PRONTO CCF CODE FILE
PIP POSITION	04	FB	AC	53	04FB AC53	0000 006C 0022 0002 0158 00AD 0016 0016 0016 0016 0016 0041 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0041 0016 0041 0016 0016 0016 0041 0016 0041 0016 0041 0016 0041 0016 0041 0016 0016 0016 0016 0016 0041 0016 0041 0016 0016 0016 0041 0016 0016 0016 0041 0016 0041 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 05F7 015B 0057 0016 0E6C
PIP SIZE	04	FB	AD	52	04FB AD52	0000 006C 0022 0002 0158 00AD 0016 0016 0016 0016 0016 0041 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0041 0016 0041 0016 0016 0016 0041 0016 0041 0016 0041 0016 0041 0016 0041 0016 0041 0016 0016 0016 0041 0016 0041 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 05F7 015B 0057 0016 0E6C
Guide (toggle)	04	FB	AE	51	04FB AE51	0000 006C 0022 0002 0158 00AD 0016 0016 0016 0016 0016 0041 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0041 0016 0041 0016 0016 0016 0041 0016 0041 0016 0041 0016 0041 0016 0041 0016 0016 0016 0041 0016 0041 0016 0041 0016 0016 0016 0041 0016 0016 0016 0041 0016 0041 0016 0016 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 05F7 015B 0057 0016 0E6C
Freeze (toggle)	04	FB	AF	50	04FB AF50	0000 006C 0022 0002 0158 00AD 0016 0016 0016 0016 0016 0041 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0016 0041 0016 0041 0016 0016 0016 0041 0016 0041 0016 0041 0016 0041 0016 0041 0016 0041 0016 0041 0016 0041 0016 0041 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 0016 0016 0016 0016 0016 0016 0041 0016 0016 0016 0041 0016 0016 0016 05F7 015B 0057 0016 0E6C

NOTES:

- 1) Check User Manual for your specific TV to identify supported IR commands by model.
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Serial Control

TV Setup:

To control the Hisense® Prosumer TV via serial connection, the following setting must be applied in the Custom Install menu.

- 1) To access the Custom Install menu, power on the TV and press the Quick Settings Menu key on the remote control. When the Quick Settings menu appears, enter the numeric string “7 3 1 0” using the number keys on the remote control. The Custom Install menu will appear.



- 2) Scroll to the bottom of the menu using the down arrow key. The menu item Custom Installation will be highlighted. The available selections are Disable and Enable. Use the Left / Right arrow keys to select Enable and press the OK key. This enables the RS-232 port on the TV.
- 3) If your usage model necessitates the RS-232 port to be active while the TV is in standby mode, set the Power On Command to Enable before exiting the Custom Install Menu. This setting allows the TV to be turned on or set to standby remotely via RS-232.

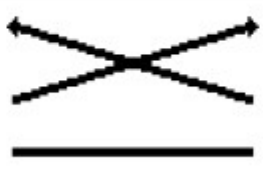
NOTES:

- 1) For a full description of the configuration settings available in the Custom Install Menu, please refer to the User's Manual.
- 2) Visit <https://www.hisense-usa.com/support> to download the User's Manual and an ASCII file with the HEX commands and queries for cut & paste ease and accuracy.
- 3) After connecting the TV to a network, press Menu > Network > Network Information to identify the TV's MAC address.
- 4) Questions? Give us a call: 888-935-8880

Physical Definition:

The interface connector on the TV for serial control is a standard DB9 D-sub connector.

The jack type on the TV is a female chassis mount connector.

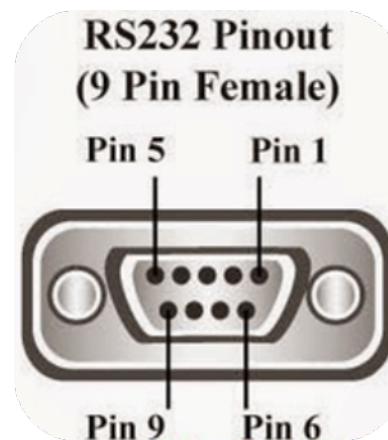
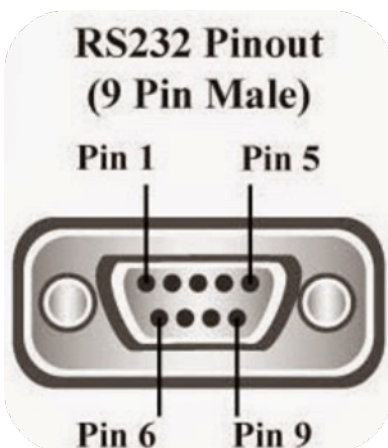
Signal	Pin	Main Cable	Pin	Signal
RxD	2		2	RxD
TxD	3		3	TxD
GND	5		5	GND

Male D-sub 9-pin:

1. N/C
2. RXD
3. TXD
4. DTR
5. GND
6. DSR
7. RTS
8. CTS
9. Power Input

Female D-sub 9-pin:

1. RI
2. TXD
3. RXD
4. DSR
5. GND
6. DTR
7. CTS
8. RTS
9. Power Input/DCD



NOTE:

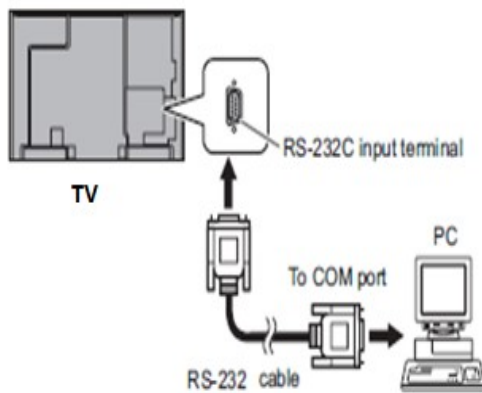
To connect the TV to a PC or controller with a USB port, please use a USB-to-Serial Controller (sold separately).

Electrical Definition: RS-232C Compliant

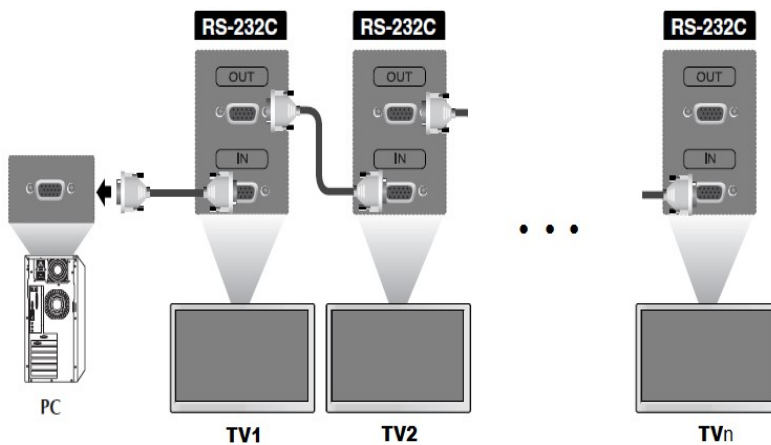
RS-232C Port configuration

Baud Rate	9600bps (UART)
Data Length	8bits
Parity Bit	None
Stop Bit	1bit
Flow Control	None
Communication Code	ASCII code

Connecting to one TV:



Connecting to multiple TVs:



Basic Format for Control:

Transmission / Receiving Protocol(Fixed Length)

Command(PC /Control System)

OPERATION DIRECTION	CLIENT ID	COMMAND	DATA	CHECKSUM	TERMINATION
↓ 1 Bytes	↓ 3 Bytes	↓ 4 Bytes	↓ 4 Bytes	↓ 1Byte	↓ 1Byte

Acknowledgement(TV)

CLIENT ID	: Colon	ACK	DATA	CHECKSUM	TERMINATION
↓ 3 Bytes	↓ 1 Bytes	↓ 4 Bytes	↓ 4 Bytes	↓ 1Byte	↓ 1Byte

OPERATION DIRECTION : S-Set, Q-Query

CLIENT ID : 0-9,A-F.SmartTV, the last 3 Bytes of Ethernet MAC address; Feature TV, Selected in the TV Menu.ALL means broadcast.

COMMAND : A-Z, refer to "Command & Data"

DATA : 0-9,A-Z,#.? refer to "Command & Data"

CHECKSUM : The 8-bit Checksum of a sequence of hexadecimal bytes to ensure the command has no error during transmitting. The checksum of whole string of the command including CHECKSUM byte equal to zero.

TERMINATION : Carriage Return, HEX Code 0x0D

: Colon : ASCII code 0x3A

ACK : A-Z, refer to "Command & Data". The most common ACK are OKAY,ERROR, WAIT

Query Command

Q	[CLIENT ID(3Bytes)]	[COMMAND(4 Bytes)]	????	[CHECKSUM]	Cr
↓ 3 Bytes	↓ 1 Bytes	↓ 4 Bytes	↓ 4 Bytes	↓ 1Byte	↓ 1Byte

Acknowledgement

[CLIENT ID(3Bytes)]	:	OKAY	[DATA(4Bytes)]	[CHECKSUM]	Cr
↓ 3 Bytes	↓ 1 Bytes	↓ 4 Bytes	↓ 4 Bytes	↓ 1Byte	↓ 1Byte

EXAMPLE 1:

Turn on set ID[SFA]

ASCII mode

HEX mode

===Command===

===ACK===

SFAPOWER232[0xCD][0x0D]	SFAOKAY###[0x4A][0x0D]	/enable RS232 Power on command
SFAPOWERON###[0x6][0x0D]	SFAWAIT###[0x49][0x0D]	SFAOKAY###[0x4A][0x0D] //Turn on TV SFA
53 35 46 41 50 4F 57 45 52 32 33 32 CD 0D	35 46 41 3A 4F 4B 41 59 23 23 23 4A 0D	/enable RS232 Power on command
53 35 46 41 50 4F 57 52 4F 4E 23 23 C6 0D	35 46 41 3A 57 41 49 54 23 23 23 49 0D	35 46 41 3A 4F 4B 41 59 23 23 23 4A 0D //Turn on TV SFA

EXAMPLE 2:

Query set SFA current input source

ASCII mode

HEX mode

===Command===

===ACK===

QSFANPT????[0xB C][0x0D]	SFAOKAYHDMI[0xCB][0x0D]
51 35 46 41 49 4E 50 54 3F 3F 3F BC 0D	35 46 41 3A 4F 4B 41 59 48 44 4D 31 C8 0D

NOTES:

- 1) The protocol is case sensitive.
- 2) Visit <https://www.hisense-usa.com/support> to download an ASCII file with the HEX commands and queries for cut & paste ease and accuracy.
- 3) Questions? Give us a call: 888-935-8880

Function	Command	Parameter/Return Value	Command/Return Value Explanation	TV Specific HEX command (MAC address, last three digits: example '465')	Generic HEX Command (all TVs)
POWER ON COMMAND ENABLE/ QUERY POWER ON COMMAND SETTING	PWRE0000	OKAY	Disable RS-232 Remote Power On	53 34 36 35 50 57 52 45 30 30 30 10 0D	53 41 4C 4C 50 57 52 45 30 30 30 D6 0D
	PWRE0001	OKAY	Enable RS-232 Remote Power On	53 34 36 35 50 57 52 45 30 30 30 31 0F 0D	53 41 4C 4C 50 57 52 45 30 30 30 D5 0D
	PWRE????	0	Disable RS-232 Remote Boot	51 34 36 35 50 57 52 45 3F 3F 3F D6 0D	51 41 4C 4C 50 57 52 45 3F 3F 3F 9C 0D
	PWRE????	1	Enable RS-232 Remote Boot	51 34 36 35 50 57 52 45 3F 3F 3F D6 0D	51 41 4C 4C 50 57 52 45 3F 3F 3F 9C 0D
SET POWER ON/OFF CONTROL	POWR0000	OKAY	Stand by	53 34 36 35 50 4F 57 52 30 30 30 06 0D	53 41 4C 4C 50 4F 57 52 30 30 30 CC 0D
	POWR0001	OKAY	Power on	53 34 36 35 50 4F 57 52 30 30 30 31 05 0D	53 41 4C 4C 50 4F 57 52 30 30 30 C8 0D
SET INPUT SOURCE SELECTION	INPT0000	OKAY	Change Input Signal One at a Time	53 34 36 35 49 4E 50 54 30 30 30 13 0D	53 41 4C 4C 49 4E 50 54 30 30 30 D9 0D
	INPT0001	OKAY	Set Input Signal: TV	53 34 36 35 49 4E 50 54 30 30 30 31 12 0D	53 41 4C 4C 49 4E 50 54 30 30 30 D8 0D
	INPT0004	OKAY	Set Input Signal: AV	53 34 36 35 49 4E 50 54 30 30 30 34 0F 0D	53 41 4C 4C 49 4E 50 54 30 30 30 D5 0D
	INPT0003	OKAY	Set Input Signal: Component	53 34 36 35 49 4E 50 54 30 30 30 33 10 0D	53 41 4C 4C 49 4E 50 54 30 30 30 D6 0D
	INPT0009	OKAY	Set Input Signal: HDMI1	53 34 36 35 49 4E 50 54 30 30 30 39 0A 0D	53 41 4C 4C 49 4E 50 54 30 30 30 D0 0D
	INPT0010	OKAY	Set Input Signal: HDMI2	53 34 36 35 49 4E 50 54 30 30 30 31 12 0D	53 41 4C 4C 49 4E 50 54 30 30 30 D8 0D
	INPT0011	OKAY	Set Input Signal: HDMI3	53 34 36 35 49 4E 50 54 30 30 30 31 11 0D	53 41 4C 4C 49 4E 50 54 30 30 30 D7 0D
	INPT0012	OKAY	Set Input Signal: HDMI4	53 34 36 35 49 4E 50 54 30 30 30 31 32 10 0D	53 41 4C 4C 49 4E 50 54 30 30 30 D6 0D
	INPT0006	OKAY	Set Input Signal: VGA	53 34 36 35 49 4E 50 54 30 30 30 36 0D 0D	53 41 4C 4C 49 4E 50 54 30 30 30 D3 0D
QUERY CURRENT INPUT SOURCE	INPT????	1	Current Input: TV	51 34 36 35 49 4E 50 54 3F 3F 3F D9 0D	51 41 4C 4C 49 4E 50 54 3F 3F 3F 9F 0D
	INPT????	4	Current Input: AV	51 34 36 35 49 4E 50 54 3F 3F 3F D9 0D	51 41 4C 4C 49 4E 50 54 3F 3F 3F 9F 0D
	INPT????	3	Current Input: Component	51 34 36 35 49 4E 50 54 3F 3F 3F D9 0D	51 41 4C 4C 49 4E 50 54 3F 3F 3F 9F 0D
	INPT????	9	Current Input: HDMI1	51 34 36 35 49 4E 50 54 3F 3F 3F D9 0D	51 41 4C 4C 49 4E 50 54 3F 3F 3F 9F 0D
	INPT????	10	Current Input: HDMI2	51 34 36 35 49 4E 50 54 3F 3F 3F D9 0D	51 41 4C 4C 49 4E 50 54 3F 3F 3F 9F 0D
	INPT????	11	Current Input: HDMI3	51 34 36 35 49 4E 50 54 3F 3F 3F D9 0D	51 41 4C 4C 49 4E 50 54 3F 3F 3F 9F 0D
	INPT????	12	Current Input: HDMI4	51 34 36 35 49 4E 50 54 3F 3F 3F D9 0D	51 41 4C 4C 49 4E 50 54 3F 3F 3F 9F 0D
	INPT????	6	Current Input: VGA	51 34 36 35 49 4E 50 54 3F 3F 3F D9 0D	51 41 4C 4C 49 4E 50 54 3F 3F 3F 9F 0D
SET PICTURE MODE	PMOD0000	OKAY	Set Picture Mode: Standard	53 34 36 35 50 4D 4F 44 30 30 30 30 1E 0D	53 41 4C 4C 50 4D 4F 44 30 30 30 E4 0D
	PMOD0002	OKAY	Set Picture Mode: Vivid	53 34 36 35 50 4D 4F 44 30 30 30 32 1C 0D	53 41 4C 4C 50 4D 4F 44 30 30 30 E2 0D
	PMOD0003	OKAY	Set Picture Mode: Energy Saving	53 34 36 35 50 4D 4F 44 30 30 30 33 1B 0D	53 41 4C 4C 50 4D 4F 44 30 30 30 E1 0D
	PMOD0004	OKAY	Set Picture Mode: Theater	53 34 36 35 50 4D 4F 44 30 30 30 34 1A 0D	53 41 4C 4C 50 4D 4F 44 30 30 30 E0 0D
	PMOD0005	OKAY	Set Picture Mode: Game	53 34 36 35 50 4D 4F 44 30 30 30 35 19 0D	53 41 4C 4C 50 4D 4F 44 30 30 30 DF 0D
	PMOD0006	OKAY	Set Picture Mode: Sport	53 34 36 35 50 4D 4F 44 30 30 30 36 18 0D	53 41 4C 4C 50 4D 4F 44 30 30 30 DE 0D
QUERY PICTURE MODE	PMOD????	0	Current Picture Mode: Standard	51 34 36 35 50 4D 4F 44 3F 3F 3F E4 0D	51 41 4C 4C 50 4D 4F 44 3F 3F 3F AA 0D
	PMOD????	2	Current Picture Mode: Vivid	51 34 36 35 50 4D 4F 44 3F 3F 3F E4 0D	51 41 4C 4C 50 4D 4F 44 3F 3F 3F AA 0D
	PMOD????	3	Current Picture Mode: Energy Saving	51 34 36 35 50 4D 4F 44 3F 3F 3F E4 0D	51 41 4C 4C 50 4D 4F 44 3F 3F 3F AA 0D
	PMOD????	4	Current Picture Mode: Theater	51 34 36 35 50 4D 4F 44 3F 3F 3F E4 0D	51 41 4C 4C 50 4D 4F 44 3F 3F 3F AA 0D
	PMOD????	5	Current Picture Mode: Game	51 34 36 35 50 4D 4F 44 3F 3F 3F E4 0D	51 41 4C 4C 50 4D 4F 44 3F 3F 3F AA 0D
	PMOD????	6	Current Picture Mode: Sport	51 34 36 35 50 4D 4F 44 3F 3F 3F E4 0D	51 41 4C 4C 50 4D 4F 44 3F 3F 3F AA 0D
Set Brightness Value	BRIT (0000-0100)	OKAY	Set Brightness Value	53 34 36 35 42 52 49 54 30 30 33 35 15 0D	53 41 4C 4C 42 52 49 54 30 30 33 D8 0D
Set Brightness to 0	BRIT (0000)	OKAY	Set Brightness Value to 0	53 34 36 35 42 52 49 54 30 30 30 30 E3 0D	53 41 4C 4C 42 52 49 54 30 30 30 E3 0D
Set Brightness to 50	BRIT (0050)	OKAY	Set Brightness Value to 50	53 34 36 35 42 52 49 54 30 30 35 30 DE 0D	53 41 4C 4C 42 52 49 54 30 30 35 DE 0D
Set Brightness to 100	BRIT (0100)	OKAY	Set Brightness Value to 100	53 34 36 35 42 52 49 54 30 30 30 30 E2 0D	53 41 4C 4C 42 52 49 54 30 30 30 E2 0D
Set Contrast Value	CONT (0000-0100)	OKAY	Set Contrast Value	53 34 36 35 43 4F 4E 54 30 30 36 39 0B 0D	53 41 4C 4C 43 4F 4E 54 30 30 36 39 D1 0D
Set Contrast to 0	CONT (0000)	OKAY	Set Contrast Value to 0	53 34 36 35 43 4F 4E 54 30 30 30 30 E0 0D	53 41 4C 4C 43 4F 4E 54 30 30 30 E0 0D
Set Contrast to 50	CONT (0050)	OKAY	Set Contrast Value to 50	53 34 36 35 43 4F 4E 54 30 30 35 30 DB 0D	53 41 4C 4C 43 4F 4E 54 30 30 35 DB 0D
Set Contrast to 100	CONT (0100)	OKAY	Set Contrast Value to 100	53 34 36 35 43 4F 4E 54 30 30 30 30 DF 0D	53 41 4C 4C 43 4F 4E 54 30 30 30 DF 0D
Set Color Saturation Value	COLR (0000-0100)	OKAY	Set Color Saturation Value	53 34 36 35 43 4F 4C 52 30 30 30 31 1D 0D	53 41 4C 4C 43 4F 4C 52 30 30 30 E3 0D
Set TINT Value	TINT (0000-0100)	OKAY	Set TINT Value	53 34 36 35 54 49 4E 54 30 30 39 39 FD 0D	53 41 4C 4C 54 49 4E 54 30 30 39 39 C3 0D
Set Sharpness Value	SHRP (0000-0020)	OKAY	Set Sharpness Value	53 34 36 35 53 48 52 50 30 30 32 30 0F 0D	53 41 4C 4C 53 48 52 50 30 30 32 D5 0D
Set Sharpness to 0	SHRP (0000)	OKAY	Set Sharpness Value to 0	53 34 36 35 53 48 52 50 30 30 30 30 D7 0D	53 41 4C 4C 53 48 52 50 30 30 30 D7 0D
Set Sharpness to 10	SHRP (0010)	OKAY	Set Sharpness Value to 10	53 34 36 35 53 48 52 50 30 30 30 30 D6 0D	53 41 4C 4C 53 48 52 50 30 30 30 D6 0D
Set Sharpness to 20	SHRP (0020)	OKAY	Set Sharpness Value to 20	53 34 36 35 53 48 52 50 30 30 30 30 D5 0D	53 41 4C 4C 53 48 52 50 30 30 30 D5 0D
Query Brightness Value	BRIT????	0-100	Query Brightness Value	51 34 36 35 42 52 49 54 3F 3F 3F E3 0D	51 41 4C 4C 42 52 49 54 3F 3F 3F A9 0D
Query Contrast Value	CONT????	0-100	Query Contrast Value	51 34 36 35 43 4F 4E 54 3F 3F 3F E0 0D	51 41 4C 4C 43 4F 4E 54 3F 3F 3F A6 0D
Query Color Saturation Value	COLR????	0-100	Query Color Saturation Value	51 34 36 35 43 4F 4C 52 3F 3F 3F E4 0D	51 41 4C 4C 43 4F 4C 52 3F 3F 3F AA 0D
Query TINT Value	TINT????	0-100	Query TINT Value	51 34 36 35 54 49 4E 54 3F 3F 3F D5 0D	51 41 4C 4C 54 49 4E 54 3F 3F 3F 9B 0D
Query Sharpness Value	SHRP????	0-20	Query Sharpness Value	51 34 36 35 53 48 52 50 3F 3F 3F D7 0D	51 41 4C 4C 53 48 52 50 3F 3F 3F 9D 0D

Function	Command	Parameter/Return Value	Command/Return Value Explanation	TV Specific HEX command (MAC address, last three digits: example '465')	Generic HEX Command (all TVs)
Query Sharpness Value	SHRP????	0-20	Query Sharpness Value	51 34 36 35 53 48 52 50 3F 3F 3F 3F D7 0D	51 41 4C 4C 53 48 52 50 3F 3F 3F 3F 9D 0D
SET ASPECT RATIO	ASPT0000	OKAY	SET ASPECT RATIO: Auto	53 34 36 35 41 53 50 54 30 30 30 30 16 0D	53 41 4C 4C 41 53 50 54 30 30 30 30 DC 0D
	ASPT0002	OKAY	SET ASPECT RATIO: Normal	53 34 36 35 41 53 50 54 30 30 30 32 14 0D	53 41 4C 4C 41 53 50 54 30 30 30 32 DA 0D
	ASPT0003	OKAY	SET ASPECT RATIO: Zoom	53 34 36 35 41 53 50 54 30 30 30 33 13 0D	53 41 4C 4C 41 53 50 54 30 30 30 33 D9 0D
	ASPT0004	OKAY	SET ASPECT RATIO: Wide	53 34 36 35 41 53 50 54 30 30 30 34 12 0D	53 41 4C 4C 41 53 50 54 30 30 30 34 D8 0D
	ASPT0005	OKAY	SET ASPECT RATIO: Direct	53 34 36 35 41 53 50 54 30 30 30 35 11 0D	53 41 4C 4C 41 53 50 54 30 30 30 35 D7 0D
	ASPT0006	OKAY	SET ASPECT RATIO: 1-to-1 pixel map	53 34 36 35 41 53 50 54 30 30 30 36 10 0D	53 41 4C 4C 41 53 50 54 30 30 30 36 D6 0D
	ASPT0007	OKAY	SET ASPECT RATIO: Panoramic	53 34 36 35 41 53 50 54 30 30 30 37 0F 0D	53 41 4C 4C 41 53 50 54 30 30 30 37 D5 0D
	ASPT0008	OKAY	SET ASPECT RATIO: Cinema	53 34 36 35 41 53 50 54 30 30 30 38 0E 0D	53 41 4C 4C 41 53 50 54 30 30 30 38 D4 0D
QUERY CURRENT ASPECT RATIO	ASPT????	0	QUERY CURRENT ASPECT RATIO: Auto	51 34 36 35 41 53 50 54 3F 3F 3F 3F DC 0D	51 41 4C 4C 41 53 50 54 3F 3F 3F 3F A2 0D
	ASPT????	2	QUERY CURRENT ASPECT RATIO: Normal	51 34 36 35 41 53 50 54 3F 3F 3F 3F DC 0D	51 41 4C 4C 41 53 50 54 3F 3F 3F 3F A2 0D
	ASPT????	3	QUERY CURRENT ASPECT RATIO: Zoom	51 34 36 35 41 53 50 54 3F 3F 3F 3F DC 0D	51 41 4C 4C 41 53 50 54 3F 3F 3F 3F A2 0D
	ASPT????	4	QUERY CURRENT ASPECT RATIO: Wide	51 34 36 35 41 53 50 54 3F 3F 3F 3F DC 0D	51 41 4C 4C 41 53 50 54 3F 3F 3F 3F A2 0D
	ASPT????	5	QUERY CURRENT ASPECT RATIO: Direct	51 34 36 35 41 53 50 54 3F 3F 3F 3F DC 0D	51 41 4C 4C 41 53 50 54 3F 3F 3F 3F A2 0D
	ASPT????	6	QUERY CURRENT ASPECT RATIO: 1-to-1 pixel map	51 34 36 35 41 53 50 54 3F 3F 3F 3F DC 0D	51 41 4C 4C 41 53 50 54 3F 3F 3F 3F A2 0D
	ASPT????	7	QUERY CURRENT ASPECT RATIO: Panoramic	51 34 36 35 41 53 50 54 3F 3F 3F 3F DC 0D	51 41 4C 4C 41 53 50 54 3F 3F 3F 3F A2 0D
	ASPT????	8	QUERY CURRENT ASPECT RATIO: Cinema	51 34 36 35 41 53 50 54 3F 3F 3F 3F DC 0D	51 41 4C 4C 41 53 50 54 3F 3F 3F 3F A2 0D
Set Overscan	OVSNO000	OKAY	On	53 34 36 35 4F 56 53 4E 30 30 30 30 08 0D	53 41 4C 4C 4F 56 53 4E 30 30 30 30 CE 0D
	OVSNO002	OKAY	Off	53 34 36 35 4F 56 53 4E 30 30 30 32 06 0D	53 41 4C 4C 4F 56 53 4E 30 30 30 32 CC 0D
Query Overscan	OVSNO???	0	On	51 34 36 35 4F 56 53 4E 3F 3F 3F 3F CE 0D	51 41 4C 4C 4F 56 53 4E 3F 3F 3F 3F 94 0D
	OVSNO???	2	Off	51 34 36 35 4F 56 53 4E 3F 3F 3F 3F CE 0D	51 41 4C 4C 4F 56 53 4E 3F 3F 3F 3F 94 0D
Reset Picture Settings	RSTP1000	OKAY	Reset Picture Settings	53 34 36 35 52 53 54 50 31 30 30 30 04 0D	53 41 4C 4C 52 53 54 50 31 30 30 30 CA 0D
SET COLOR TEMP	CTEM0000	OKAY	SET COLOR TEMP: High	53 34 36 35 43 54 45 4D 30 30 30 30 25 0D	53 41 4C 4C 43 54 45 4D 30 30 30 30 EB 0D
	CTEM0002	OKAY	SET COLOR TEMP: Middle	53 34 36 35 43 54 45 4D 30 30 30 32 23 0D	53 41 4C 4C 43 54 45 4D 30 30 30 32 E9 0D
	CTEM0003	OKAY	SET COLOR TEMP: Mid-Low	53 34 36 35 43 54 45 4D 30 30 30 33 22 0D	53 41 4C 4C 43 54 45 4D 30 30 30 33 E8 0D
	CTEM0004	OKAY	SET COLOR TEMP: Low	53 34 36 35 43 54 45 4D 30 30 30 34 21 0D	53 41 4C 4C 43 54 45 4D 30 30 30 34 E7 0D
QUERY COLOR TEMP	CTEM????	0	Current Color Temp: High	51 34 36 35 43 54 45 4D 3F 3F 3F 3F EB 0D	51 41 4C 4C 43 54 45 4D 3F 3F 3F 3F B1 0D
	CTEM????	2	Current Color Temp: Middle	51 34 36 35 43 54 45 4D 3F 3F 3F 3F EB 0D	51 41 4C 4C 43 54 45 4D 3F 3F 3F 3F B1 0D
	CTEM????	3	Current Color Temp: Mid-Low	51 34 36 35 43 54 45 4D 3F 3F 3F 3F EB 0D	51 41 4C 4C 43 54 45 4D 3F 3F 3F 3F B1 0D
	CTEM????	4	Current Color Temp: Low	51 34 36 35 43 54 45 4D 3F 3F 3F 3F EB 0D	51 41 4C 4C 43 54 45 4D 3F 3F 3F 3F B1 0D
SET BACKLIGHT VALUE	BKLV (0000-0100)	OKAY	SET BACKLIGHT VALUE: 0000-0100	53 34 36 35 42 4B 4C 56 30 30 33 30 1C 0D	53 41 4C 4C 42 4B 4C 56 30 30 33 30 E2 0D
QUERY BACKLIGHT VALUE	BKLV????	0-100	CURRENT BACKLIGHT VALUE: 0-100	51 34 36 35 42 4B 4C 56 3F 3F 3F 3F E5 0D	51 41 4C 4C 42 4B 4C 56 3F 3F 3F 3F AB 0D
SET SOUND MODE	AMOD0000	OKAY	SET SOUND MODE: Standard	53 34 36 35 41 4D 4F 44 30 30 30 30 2D 0D	53 41 4C 4C 41 4D 4F 44 30 30 30 30 F3 0D
	AMOD0002	OKAY	SET SOUND MODE: Theater	53 34 36 35 41 4D 4F 44 30 30 30 32 2B 0D	53 41 4C 4C 41 4D 4F 44 30 30 30 32 F1 0D
	AMOD0003	OKAY	SET SOUND MODE: Music	53 34 36 35 41 4D 4F 44 30 30 30 33 2A 0D	53 41 4C 4C 41 4D 4F 44 30 30 30 33 F0 0D
	AMOD0004	OKAY	SET SOUND MODE: Speech	53 34 36 35 41 4D 4F 44 30 30 30 34 29 0D	53 41 4C 4C 41 4D 4F 44 30 30 30 34 EF 0D
	AMOD0005	OKAY	SET SOUND MODE: Late night	53 34 36 35 41 4D 4F 44 30 30 30 35 28 0D	53 41 4C 4C 41 4D 4F 44 30 30 30 35 EE 0D
QUERY SOUND MODE	AMOD????	0	QUERY SOUND MODE: Standard	51 34 36 35 41 4D 4F 44 3F 3F 3F 3F F3 0D	51 41 4C 4C 41 4D 4F 44 3F 3F 3F 3F B9 0D
	AMOD????	2	QUERY SOUND MODE: Theater	51 34 36 35 41 4D 4F 44 3F 3F 3F 3F F3 0D	51 41 4C 4C 41 4D 4F 44 3F 3F 3F 3F B9 0D
	AMOD????	3	QUERY SOUND MODE: Music	51 34 36 35 41 4D 4F 44 3F 3F 3F 3F F3 0D	51 41 4C 4C 41 4D 4F 44 3F 3F 3F 3F B9 0D
	AMOD????	4	QUERY SOUND MODE: Speech	51 34 36 35 41 4D 4F 44 3F 3F 3F 3F F3 0D	51 41 4C 4C 41 4D 4F 44 3F 3F 3F 3F B9 0D
	AMOD????	5	QUERY SOUND MODE: Late night	51 34 36 35 41 4D 4F 44 3F 3F 3F 3F F3 0D	51 41 4C 4C 41 4D 4F 44 3F 3F 3F 3F B9 0D
Reset Audio Settings	RSTA2000	OKAY	Reset Audio Settings	53 34 36 35 52 53 54 41 32 30 30 30 12 0D	53 41 4C 4C 52 53 54 41 32 30 30 30 D8 0D
SET Volume ADJUST	VOLM (0000-0100)	OKAY	SET Volume ADJUST:0-100	53 34 36 35 56 4F 4C 4D 30 30 31 35 0A 0D	53 41 4C 4C 56 4F 4C 4D 30 30 31 35 D0 0D
Set Volume to 0	VOLM (0000)	OKAY	SET Volume Value to 0	53 34 36 35 56 4F 4C 4D 30 30 30 30 D6 0D	53 41 4C 4C 56 4F 4C 4D 30 30 30 30 D6 0D
Set Volume to 50	VOLM (0050)	OKAY	SET Volume Value to 50	53 34 36 35 56 4F 4C 4D 30 30 35 30 D1 0D	53 41 4C 4C 56 4F 4C 4D 30 30 35 30 D1 0D
Set Volume to 100	VOLM (0100)	OKAY	SET Volume Value to 100	53 34 36 35 56 4F 4C 4D 30 31 30 30 D5 0D	53 41 4C 4C 56 4F 4C 4D 30 31 30 30 D5 0D
QUERY VOLUME	VOLM????	0-100	QUERY CURRENT VOLUME	51 34 36 35 56 4F 4C 4D 3F 3F 3F 3F D6 0D	51 41 4C 4C 56 4F 4C 4D 3F 3F 3F 3F 9C 0D
SET MUTE	MUTE0000	OKAY/OFF	MUTE OFF	53 34 36 35 4D 55 54 45 30 30 30 30 13 0D	53 41 4C 4C 4D 55 54 45 30 30 30 30 D9 0D
	MUTE0001	OKAY/ON	MUTE ON	53 34 36 35 4D 55 54 45 30 30 30 31 12 0D	53 41 4C 4C 4D 55 54 45 30 30 30 31 D8 0D
QUERY MUTE STATUS	MUTE????	0	CURRENT STATUS: NOT MUTE	51 34 36 35 4D 55 54 45 3F 3F 3F 3F D9 0D	51 41 4C 4C 4D 55 54 45 3F 3F 3F 3F 9F 0D
	MUTE????	1	CURRENT STATUS: MUTE	51 34 36 35 4D 55 54 45 3F 3F 3F 3F D9 0D	51 41 4C 4C 4D 55 54 45 3F 3F 3F 3F 9F 0D
SET TV Speaker	ASPK0000	OKAY	SET TV Speaker TO Off	53 34 36 35 41 53 50 4B 30 30 30 30 1F 0D	53 41 4C 4C 41 53 50 4B 30 30 30 30 E5 0D
	ASPK0002	OKAY	SET TV Speaker TO On	53 34 36 35 41 53 50 4B 30 30 30 32 1D 0D	53 41 4C 4C 41 53 50 4B 30 30 30 32 E3 0D
QUERY TV Speaker	ASPK????	0	CURRENT TV Speaker: Off	51 34 36 35 41 53 50 4B 3F 3F 3F 3F E5 0D	51 41 4C 4C 41 53 50 4B 3F 3F 3F 3F AB 0D
	ASPK????	2	CURRENT TV Speaker: On	51 34 36 35 41 53 50 4B 3F 3F 3F 3F E5 0D	51 41 4C 4C 41 53 50 4B 3F 3F 3F 3F AB 0D

Function	Command	Parameter/Return Value	Command/Return Value Explanation	TV Specific HEX command (MAC address, last three digits: example '465')	Generic HEX Command (all TVs)
Tuner Mode	TUNR000	OKAY	Tuner Mode: Antenna	53 34 36 35 54 55 4E 52 30 30 30 05 0D	53 41 4C 4C 54 55 4E 52 30 30 30 0B 0D
	TUNR002	OKAY	Tuner ModeCable	53 34 36 35 54 55 4E 52 30 30 30 32 03 0D	53 41 4C 4C 54 55 4E 52 30 30 30 32 09 0D
Query Tuner Mode	TUNR????	0	Tuner ModeAntenna	51 34 36 35 54 55 4E 52 3F 3F 3F 3F 0D	51 41 4C 4C 54 55 4E 52 3F 3F 3F 3F 91 0D
	TUNR????	2	Tuner ModeCable	51 34 36 35 54 55 4E 52 3F 3F 3F 3F 0D	51 41 4C 4C 54 55 4E 52 3F 3F 3F 3F 91 0D
Automatic Search	TSCN001	OKAY	Automatic Search	53 34 36 35 54 53 43 4E 30 30 30 31 15 0D	53 41 4C 4C 54 53 43 4E 30 30 30 31 0B 0D
频道切换	CHAN000	OKAY	Channel down	53 34 36 35 43 48 41 4E 30 30 30 30 34 0D	53 41 4C 4C 43 48 41 4E 30 30 30 30 FA 0D
	CHAN001	OKAY	Channel up	53 34 36 35 43 48 41 4E 30 30 30 31 33 0D	53 41 4C 4C 43 48 41 4E 30 30 30 31 F9 0D
Caption Control	CC#0000	OKAY	CC: off	53 34 36 35 43 43 23 23 30 30 30 82 0D	53 41 4C 4C 43 43 23 23 30 30 30 48 0D
	CC#0002	OKAY	CC: on	53 34 36 35 43 43 23 23 30 30 30 32 80 0D	53 41 4C 4C 43 43 23 23 30 30 30 32 46 0D
	CC#0003	OKAY	CC: CC on when mute	53 34 36 35 43 43 23 23 30 30 30 33 7F 0D	53 41 4C 4C 43 43 23 23 30 30 30 33 45 0D
Query Caption Control	CC#????	0	CC: off	51 34 36 35 43 43 23 23 3F 3F 3F 3F 48 0D	51 41 4C 4C 43 43 23 23 3F 3F 3F 3F 0E 0D
	CC#????	2	CC: on	51 34 36 35 43 43 23 23 3F 3F 3F 3F 48 0D	51 41 4C 4C 43 43 23 23 3F 3F 3F 3F 0E 0D
	CC#????	3	CC: CC on when mute	51 34 36 35 43 43 23 23 3F 3F 3F 3F 48 0D	51 41 4C 4C 43 43 23 23 3F 3F 3F 3F 0E 0D
Restore Factory Settings	RSET9999	OKAY	Reset Function Mode	53 34 36 35 52 53 45 54 39 39 39 39 EC 0D	53 41 4C 4C 52 53 45 54 39 39 39 39 B2 0D
OSD	LANG0000	OKAY	English	53 34 36 35 4C 41 4E 47 30 30 30 30 2C 0D	53 41 4C 4C 4C 41 4E 47 30 30 30 30 F2 0D
	LANG0002	OKAY	Español	53 34 36 35 4C 41 4E 47 30 30 30 32 2A 0D	53 41 4C 4C 4C 41 4E 47 30 30 30 32 F0 0D
	LANG0003	OKAY	Français	53 34 36 35 4C 41 4E 47 30 30 30 33 29 0D	53 41 4C 4C 4C 41 4E 47 30 30 30 33 EF 0D
OSD	LANG????	0	English	51 34 36 35 4C 41 4E 47 3F 3F 3F 3F F2 0D	51 41 4C 4C 4C 41 4E 47 3F 3F 3F 3F B8 0D
	LANG????	2	Español	51 34 36 35 4C 41 4E 47 3F 3F 3F 3F F2 0D	51 41 4C 4C 4C 41 4E 47 3F 3F 3F 3F B8 0D
	LANG????	3	Français	51 34 36 35 4C 41 4E 47 3F 3F 3F 3F F2 0D	51 41 4C 4C 4C 41 4E 47 3F 3F 3F 3F B8 0D
Standby LED	PLED0000	OKAY	Standby LED: Off	53 34 36 35 50 4C 45 44 30 30 30 30 29 0D	53 41 4C 4C 50 4C 45 44 30 30 30 30 EF 0D
	PLED0002	OKAY	Standby LED: On	53 34 36 35 50 4C 45 44 30 30 30 32 27 0D	53 41 4C 4C 50 4C 45 44 30 30 30 32 ED 0D
Query Standby LED	PLED????	0	Standby LED:Off	51 34 36 35 50 4C 45 44 3F 3F 3F 3F EF 0D	51 41 4C 4C 50 4C 45 44 3F 3F 3F 3F B5 0D
	PLED????	2	Standby LED:On	51 34 36 35 50 4C 45 44 3F 3F 3F 3F EF 0D	51 41 4C 4C 50 4C 45 44 3F 3F 3F 3F B5 0D
CH+	BTTN1034	OKAY	CH+	53 34 36 35 42 54 54 4E 31 30 33 34 0E 0D	53 41 4C 4C 42 54 54 4E 31 30 33 34 D4 0D
CH-	BTTN1035	OKAY	CH-	53 34 36 35 42 54 54 4E 31 30 33 35 0D 0D	53 41 4C 4C 42 54 54 4E 31 30 33 35 D3 0D
VOL-	BTTN1032	OKAY	VOL-	53 34 36 35 42 54 54 4E 31 30 33 32 10 0D	53 41 4C 4C 42 54 54 4E 31 30 33 32 D6 0D
VOL+	BTTN1033	OKAY	VOL+	53 34 36 35 42 54 54 4E 31 30 33 33 0F 0D	53 41 4C 4C 42 54 54 4E 31 30 33 33 D5 0D
BACK	BTTN1045	OKAY	BACK	53 34 36 35 42 54 54 4E 31 30 34 35 0C 0D	53 41 4C 4C 42 54 54 4E 31 30 34 35 D2 0D
POWER	BTTN1012	OKAY	POWER	53 34 36 35 42 54 54 4E 31 30 31 32 12 0D	53 41 4C 4C 42 54 54 4E 31 30 31 32 D8 0D
MUTE	BTTN1031	OKAY	MUTE	53 34 36 35 42 54 54 4E 31 30 33 31 11 0D	53 41 4C 4C 42 54 54 4E 31 30 33 31 D7 0D
—(DASH)	BTTN1010	OKAY	—(DASH)	53 34 36 35 42 54 54 4E 31 30 31 30 14 0D	53 41 4C 4C 42 54 54 4E 31 30 31 30 DA 0D
INPUT	BTTN1036	OKAY	INPUT	53 34 36 35 42 54 54 4E 31 30 33 36 0C 0D	53 41 4C 4C 42 54 54 4E 31 30 33 36 D2 0D
Media Player	BTTN1023	OKAY	HIMedia	53 34 36 35 42 54 54 4E 31 30 32 33 10 0D	53 41 4C 4C 42 54 54 4E 31 30 32 33 D6 0D
0	BTTN1000	OKAY	0	53 34 36 35 42 54 54 4E 31 30 30 30 15 0D	53 41 4C 4C 42 54 54 4E 31 30 30 30 DB 0D
1	BTTN1001	OKAY	1	53 34 36 35 42 54 54 4E 31 30 30 31 14 0D	53 41 4C 4C 42 54 54 4E 31 30 30 31 DA 0D
2	BTTN1002	OKAY	2	53 34 36 35 42 54 54 4E 31 30 30 32 13 0D	53 41 4C 4C 42 54 54 4E 31 30 30 32 D9 0D
3	BTTN1003	OKAY	3	53 34 36 35 42 54 54 4E 31 30 30 33 12 0D	53 41 4C 4C 42 54 54 4E 31 30 30 33 D8 0D
4	BTTN1004	OKAY	4	53 34 36 35 42 54 54 4E 31 30 30 34 11 0D	53 41 4C 4C 42 54 54 4E 31 30 30 34 D7 0D
5	BTTN1005	OKAY	5	53 34 36 35 42 54 54 4E 31 30 30 35 10 0D	53 41 4C 4C 42 54 54 4E 31 30 30 35 D6 0D
6	BTTN1006	OKAY	6	53 34 36 35 42 54 54 4E 31 30 30 36 0F 0D	53 41 4C 4C 42 54 54 4E 31 30 30 36 D5 0D
7	BTTN1007	OKAY	7	53 34 36 35 42 54 54 4E 31 30 30 37 0E 0D	53 41 4C 4C 42 54 54 4E 31 30 30 37 D4 0D
8	BTTN1008	OKAY	8	53 34 36 35 42 54 54 4E 31 30 30 38 0D 0D	53 41 4C 4C 42 54 54 4E 31 30 30 38 D3 0D
9	BTTN1009	OKAY	9	53 34 36 35 42 54 54 4E 31 30 30 39 0C 0D	53 41 4C 4C 42 54 54 4E 31 30 30 39 D2 0D
SLEEP	BTTN1024	OKAY	SLEEP	53 34 36 35 42 54 54 4E 31 30 32 34 0F 0D	53 41 4C 4C 42 54 54 4E 31 30 32 34 D5 0D
MTS/SAP	BTTN1054	OKAY	MTS/SAP	53 34 36 35 42 54 54 4E 31 30 35 34 0C 0D	53 41 4C 4C 42 54 54 4E 31 30 35 34 D2 0D
Live TV	BTTN1055	OKAY	Live TV	53 34 36 35 42 54 54 4E 31 30 35 35 0B 0D	53 41 4C 4C 42 54 54 4E 31 30 35 35 D1 0D
PAUSE	BTTN1018	OKAY	PAUSE	53 34 36 35 42 54 54 4E 31 30 31 38 0C 0D	53 41 4C 4C 42 54 54 4E 31 30 31 38 D2 0D
PLAY	BTTN1016	OKAY	PLAY	53 34 36 35 42 54 54 4E 31 30 31 36 0E 0D	53 41 4C 4C 42 54 54 4E 31 30 31 36 D4 0D
MENU	BTTN1038	OKAY	MENU	53 34 36 35 42 54 54 4E 31 30 33 38 0A 0D	53 41 4C 4C 42 54 54 4E 31 30 33 38 D0 0D
EXIT	BTTN1046	OKAY	EXIT	53 34 36 35 42 54 54 4E 31 30 34 36 0B 0D	53 41 4C 4C 42 54 54 4E 31 30 34 36 D1 0D

Function	Command	Parameter/Return Value	Command/Return Value Explanation	TV Specific HEX command (MAC address, last three digits: example '465')	Generic HEX Command (all TVs)
STOP	BTTN1020	OKAY	STOP	53 34 36 35 42 54 54 4E 31 30 32 30 13 0D	53 41 4C 4C 42 54 54 4E 31 30 32 30 D9 0D
FRW <<	BTTN1015	OKAY	FRW <<	53 34 36 35 42 54 54 4E 31 30 31 35 0F 0D	53 41 4C 4C 42 54 54 4E 31 30 31 35 D5 0D
CC	BTTN1027	OKAY	CC	53 34 36 35 42 54 54 4E 31 30 32 37 0C 0D	53 41 4C 4C 42 54 54 4E 31 30 32 37 D2 0D
Red button	BTTN1050	OKAY	Red button	53 34 36 35 42 54 54 4E 31 30 35 30 10 0D	53 41 4C 4C 42 54 54 4E 31 30 35 30 D6 0D
Green button	BTTN1051	OKAY	Green button	53 34 36 35 42 54 54 4E 31 30 35 31 0F 0D	53 41 4C 4C 42 54 54 4E 31 30 35 31 D5 0D
Yellow button	BTTN1053	OKAY	Yellow button	53 34 36 35 42 54 54 4E 31 30 35 33 0D 0D	53 41 4C 4C 42 54 54 4E 31 30 35 33 D3 0D
Blue button	BTTN1052	OKAY	Blue button	53 34 36 35 42 54 54 4E 31 30 35 32 0E 0D	53 41 4C 4C 42 54 54 4E 31 30 35 32 D4 0D
UP	BTTN1041	OKAY	UP	53 34 36 35 42 54 54 4E 31 30 34 31 10 0D	53 41 4C 4C 42 54 54 4E 31 30 34 31 D6 0D
DOWN	BTTN1042	OKAY	DOWN	53 34 36 35 42 54 54 4E 31 30 34 32 0F 0D	53 41 4C 4C 42 54 54 4E 31 30 34 32 D5 0D
LEFT	BTTN1043	OKAY	LEFT	53 34 36 35 42 54 54 4E 31 30 34 33 0E 0D	53 41 4C 4C 42 54 54 4E 31 30 34 33 D4 0D
RIGHT	BTTN1044	OKAY	RIGHT	53 34 36 35 42 54 54 4E 31 30 34 34 0D 0D	53 41 4C 4C 42 54 54 4E 31 30 34 34 D3 0D
OK/ENTER	BTTN1040	OKAY	OK/ENTER	53 34 36 35 42 54 54 4E 31 30 34 30 11 0D	53 41 4C 4C 42 54 54 4E 31 30 34 30 D7 0D
FFW >>	BTTN1017	OKAY	FFW >>	53 34 36 35 42 54 54 4E 31 30 31 37 0D 0D	53 41 4C 4C 42 54 54 4E 31 30 31 37 D3 0D
PREVIOUS <<	BTTN1019	OKAY	PREVIOUS <<	53 34 36 35 42 54 54 4E 31 30 31 39 0B 0D	53 41 4C 4C 42 54 54 4E 31 30 31 39 D1 0D
NEXT >>	BTTN1021	OKAY	NEXT >>	53 34 36 35 42 54 54 4E 31 30 32 31 12 0D	53 41 4C 4C 42 54 54 4E 31 30 32 31 D8 0D
Connected Home	BTTN1039	OKAY	HiSmart	53 34 36 35 42 54 54 4E 31 30 33 39 09 0D	53 41 4C 4C 42 54 54 4E 31 30 33 39 CF 0D
POWER OFF CONTROL MODE	PBTN0000	OKAY	AC ONLY	53 34 36 35 50 42 54 4E 30 30 30 30 1A 0D	53 41 4C 4C 50 42 54 4E 30 30 30 30 E0 0D
	PBTN0001	OKAY	ALL	53 34 36 35 50 42 54 4E 30 30 30 31 19 0D	53 41 4C 4C 50 42 54 4E 30 30 30 31 DF 0D
Query POWER OFF CONTROL MODE	PBTN????	0	AC ONLY	51 34 36 35 50 42 54 4E 3F 3F 3F 3F E0 0D	51 41 4C 4C 50 42 54 4E 3F 3F 3F 3F A6 0D
	PBTN????	1	ALL	51 34 36 35 50 42 54 4E 3F 3F 3F 3F E0 0D	51 41 4C 4C 50 42 54 4E 3F 3F 3F 3F A6 0D
VOLUME RANGE	MAVL (0000-0100)	OKAY	0 - 100	53 34 36 35 4D 41 56 4C 30 31 30 30 1D 0D	53 41 4C 4C 4D 41 56 4C 30 31 30 30 E3 0D
Query VOLUME RANGE	MAVL????	0-100	0-100	51 34 36 35 4D 41 56 4C 3F 3F 3F 3F E4 0D	51 41 4C 4C 4D 41 56 4C 3F 3F 3F 3F AA 0D
VOLUME CONTROL	SVOL0000	OKAY	LOCKED	53 34 36 35 53 56 4F 4C 30 30 30 30 0A 0D	53 41 4C 4C 53 56 4F 4C 30 30 30 30 D0 0D
	SVOL0001	OKAY	LAST VOLUME	53 34 36 35 53 56 4F 4C 30 30 30 31 09 0D	53 41 4C 4C 53 56 4F 4C 30 30 30 31 CF 0D
	SVOL0002	OKAY	AC RESET	53 34 36 35 53 56 4F 4C 30 30 30 32 08 0D	53 41 4C 4C 53 56 4F 4C 30 30 30 32 CE 0D
	SVOL0003	OKAY	STANDBY RESET	53 34 36 35 53 56 4F 4C 30 30 30 33 07 0D	53 41 4C 4C 53 56 4F 4C 30 30 30 33 CD 0D
Query VOLUME CONTROL	SVOL????	0	LOCKED	51 34 36 35 53 56 4F 4C 3F 3F 3F 3F D0 0D	51 41 4C 4C 53 56 4F 4C 3F 3F 3F 3F 96 0D
	SVOL????	1	LAST VOLUME	51 34 36 35 53 56 4F 4C 3F 3F 3F 3F D0 0D	51 41 4C 4C 53 56 4F 4C 3F 3F 3F 3F 96 0D
	SVOL????	2	AC RESET	51 34 36 35 53 56 4F 4C 3F 3F 3F 3F D0 0D	51 41 4C 4C 53 56 4F 4C 3F 3F 3F 3F 96 0D
	SVOL????	3	STANDBY RESET	51 34 36 35 53 56 4F 4C 3F 3F 3F 3F D0 0D	51 41 4C 4C 53 56 4F 4C 3F 3F 3F 3F 96 0D
VOLUME LOCKED LEVEL	VLFL (0000-0100)	OKAY	0 - 100	53 34 36 35 56 4C 46 4C 30 30 31 30 19 0D	53 41 4C 4C 56 4C 46 4C 30 30 31 30 DF 0D
Query VOLUME LOCKED LEVEL	VLFL????	0-100	0-100	51 34 36 35 56 4C 46 4C 3F 3F 3F 3F E0 0D	51 41 4C 4C 56 4C 46 4C 3F 3F 3F 3F A6 0D
REMOTE KEY	RMOT0000	OKAY	ENABLE	53 34 36 35 52 4D 4F 54 30 30 30 30 0C 0D	53 41 4C 4C 52 4D 4F 54 30 30 30 30 D2 0D
	RMOT0001	OKAY	DISABLE	53 34 36 35 52 4D 4F 54 30 30 30 31 0B 0D	53 41 4C 4C 52 4D 4F 54 30 30 30 31 D1 0D
	RMOT0002	OKAY	PARTIAL	53 34 36 35 52 4D 4F 54 30 30 30 32 0A 0D	53 41 4C 4C 52 4D 4F 54 30 30 30 32 D0 0D
Query REMOTE KEY	RMOT????	0	ENABLE	51 34 36 35 52 4D 4F 54 3F 3F 3F 3F D2 0D	51 41 4C 4C 52 4D 4F 54 3F 3F 3F 3F 98 0D
	RMOT????	1	DISABLE	51 34 36 35 52 4D 4F 54 3F 3F 3F 3F D2 0D	51 41 4C 4C 52 4D 4F 54 3F 3F 3F 3F 98 0D
	RMOT????	2	PARTIAL	51 34 36 35 52 4D 4F 54 3F 3F 3F 3F D2 0D	51 41 4C 4C 52 4D 4F 54 3F 3F 3F 3F 98 0D
PANEL KEY	PANL0000	OKAY	ENABLE	53 34 36 35 50 41 4E 4C 30 30 30 30 23 0D	53 41 4C 4C 50 41 4E 4C 30 30 30 30 E9 0D
	PANL0001	OKAY	DISABLE	53 34 36 35 50 41 4E 4C 30 30 30 31 22 0D	53 41 4C 4C 50 41 4E 4C 30 30 30 31 E8 0D
Query PANEL KEY	PANL????	0	ENABLE	51 34 36 35 50 41 4E 4C 3F 3F 3F 3F E9 0D	51 41 4C 4C 50 41 4E 4C 3F 3F 3F 3F AF 0D
	PANL????	1	DISABLE	51 34 36 35 50 41 4E 4C 3F 3F 3F 3F E9 0D	51 41 4C 4C 50 41 4E 4C 3F 3F 3F 3F AF 0D
MENU ACCESS	MENU0000	OKAY	ENABLE	53 34 36 35 4D 45 4E 55 30 30 30 30 19 0D	53 41 4C 4C 4D 45 4E 55 30 30 30 30 DF 0D
	MENU0001	OKAY	DISABLE	53 34 36 35 4D 45 4E 55 30 30 30 31 18 0D	53 41 4C 4C 4D 45 4E 55 30 30 30 31 DE 0D
Query MENU ACCESS	MENU????	0	ENABLE	51 34 36 35 4D 45 4E 55 3F 3F 3F 3F DF 0D	51 41 4C 4C 4D 45 4E 55 3F 3F 3F 3F A5 0D
	MENU????	1	DISABLE	51 34 36 35 4D 45 4E 55 3F 3F 3F 3F DF 0D	51 41 4C 4C 4D 45 4E 55 3F 3F 3F 3F A5 0D
AV SETTING MENU	AVMN0000	OKAY	DISABLE	53 34 36 35 41 56 4D 4E 30 30 30 30 1C 0D	53 41 4C 4C 41 56 4D 4E 30 30 30 30 E2 0D
	AVMN0001	OKAY	ENABLE	53 34 36 35 41 56 4D 4E 30 30 30 31 1B 0D	53 41 4C 4C 41 56 4D 4E 30 30 30 31 E1 0D
Query AV SETTING MENU FIXED	AVMN????	0	DISABLE	51 34 36 35 41 56 4D 4E 3F 3F 3F 3F E2 0D	51 41 4C 4C 41 56 4D 4E 3F 3F 3F 3F A8 0D
	AVMN????	1	ENABLE	51 34 36 35 41 56 4D 4E 3F 3F 3F 3F E2 0D	51 41 4C 4C 41 56 4D 4E 3F 3F 3F 3F A8 0D

Function	Command	Parameter/Return Value	Command/Return Value Explanation	TV Specific HEX command (MAC address, last three digits: example '465')	Generic HEX Command (all TVs)
OSD MODE	OSD#000	OKAY	ENABLE	53 34 36 35 4F 53 44 23 30 30 30 45 0D	53 41 4C 4C 4F 53 44 23 30 30 30 0B 0D
	OSD#001	OKAY	DISABLE	53 34 36 35 4F 53 44 23 30 30 30 31 44 0D	53 41 4C 4C 4F 53 44 23 30 30 30 0A 0D
Query OSD MODE	OSD#????	0	ENABLE	51 34 36 35 4F 53 44 23 3F 3F 3F 0B 0D	51 41 4C 4C 4F 53 44 23 3F 3F 3F D1 0D
	OSD#????	1	DISABLE	51 34 36 35 4F 53 44 23 3F 3F 3F 0B 0D	51 41 4C 4C 4F 53 44 23 3F 3F 3F D1 0D
INPUT MODE	INPM000	OKAY	LOCKED	53 34 36 35 49 4E 50 4D 30 30 30 30 1A 0D	53 41 4C 4C 49 4E 50 4D 30 30 30 30 E0 0D
	INPM001	OKAY	SELECTABLE	53 34 36 35 49 4E 50 4D 30 30 30 30 19 0D	53 41 4C 4C 49 4E 50 4D 30 30 30 30 DF 0D
	INPM002	OKAY	AC RESET	53 34 36 35 49 4E 50 4D 30 30 30 32 18 0D	53 41 4C 4C 49 4E 50 4D 30 30 30 32 DE 0D
	INPM003	OKAY	STANDBY RESET	53 34 36 35 49 4E 50 4D 30 30 30 33 17 0D	53 41 4C 4C 49 4E 50 4D 30 30 30 33 DD 0D
Query INPUT MODE	INPM????	0	LOCKED	51 34 36 35 49 4E 50 4D 3F 3F 3F 3F E0 0D	51 41 4C 4C 49 4E 50 4D 3F 3F 3F 3F A6 0D
	INPM????	1	SELECTABLE	51 34 36 35 49 4E 50 4D 3F 3F 3F 3F E0 0D	51 41 4C 4C 49 4E 50 4D 3F 3F 3F 3F A6 0D
	INPM????	2	AC RESET	51 34 36 35 49 4E 50 4D 3F 3F 3F 3F E0 0D	51 41 4C 4C 49 4E 50 4D 3F 3F 3F 3F A6 0D
	INPM????	3	STANDBY RESET	51 34 36 35 49 4E 50 4D 3F 3F 3F 3F E0 0D	51 41 4C 4C 49 4E 50 4D 3F 3F 3F 3F A6 0D
POWER ON INPUT SELECTION	POIS000	OKAY	LAST	53 34 36 35 50 4F 49 53 30 30 30 30 13 0D	53 41 4C 4C 50 4F 49 53 30 30 30 30 D9 0D
	POIS001	OKAY	Air	53 34 36 35 50 4F 49 53 30 30 30 30 12 0D	53 41 4C 4C 50 4F 49 53 30 30 30 30 D8 0D
	POIS002	OKAY	AV	53 34 36 35 50 4F 49 53 30 30 30 32 11 0D	53 41 4C 4C 50 4F 49 53 30 30 30 32 D7 0D
	POIS003	OKAY	Component	53 34 36 35 50 4F 49 53 30 30 30 33 10 0D	53 41 4C 4C 50 4F 49 53 30 30 30 33 D6 0D
	POIS005	OKAY	HDMI1	53 34 36 35 50 4F 49 53 30 30 30 35 0E 0D	53 41 4C 4C 50 4F 49 53 30 30 30 35 D4 0D
	POIS006	OKAY	HDMI2	53 34 36 35 50 4F 49 53 30 30 30 36 0D 0D	53 41 4C 4C 50 4F 49 53 30 30 30 36 D3 0D
	POIS007	OKAY	HDMI3	53 34 36 35 50 4F 49 53 30 30 30 37 0C 0D	53 41 4C 4C 50 4F 49 53 30 30 30 37 D2 0D
	POIS008	OKAY	HDMI4	53 34 36 35 50 4F 49 53 30 30 30 38 0B 0D	53 41 4C 4C 50 4F 49 53 30 30 30 38 D1 0D
	POIS004	OKAY	VGA	53 34 36 35 50 4F 49 53 30 30 30 34 0F 0D	53 41 4C 4C 50 4F 49 53 30 30 30 34 D5 0D
Query POWER ON INPUT SELECTION	POIS????	0	LAST	51 34 36 35 50 4F 49 53 3F 3F 3F 3F D9 0D	51 41 4C 4C 50 4F 49 53 3F 3F 3F 3F 9F 0D
	POIS????	1	Air	51 34 36 35 50 4F 49 53 3F 3F 3F 3F D9 0D	51 41 4C 4C 50 4F 49 53 3F 3F 3F 3F 9F 0D
	POIS????	2	AV	51 34 36 35 50 4F 49 53 3F 3F 3F 3F D9 0D	51 41 4C 4C 50 4F 49 53 3F 3F 3F 3F 9F 0D
	POIS????	3	Component	51 34 36 35 50 4F 49 53 3F 3F 3F 3F D9 0D	51 41 4C 4C 50 4F 49 53 3F 3F 3F 3F 9F 0D
	POIS????	5	HDMI1	51 34 36 35 50 4F 49 53 3F 3F 3F 3F D9 0D	51 41 4C 4C 50 4F 49 53 3F 3F 3F 3F 9F 0D
	POIS????	6	HDMI2	51 34 36 35 50 4F 49 53 3F 3F 3F 3F D9 0D	51 41 4C 4C 50 4F 49 53 3F 3F 3F 3F 9F 0D
	POIS????	7	HDMI3	51 34 36 35 50 4F 49 53 3F 3F 3F 3F D9 0D	51 41 4C 4C 50 4F 49 53 3F 3F 3F 3F 9F 0D
	POIS????	8	HDMI4	51 34 36 35 50 4F 49 53 3F 3F 3F 3F D9 0D	51 41 4C 4C 50 4F 49 53 3F 3F 3F 3F 9F 0D
	POIS????	4	VGA	51 34 36 35 50 4F 49 53 3F 3F 3F 3F D9 0D	51 41 4C 4C 50 4F 49 53 3F 3F 3F 3F 9F 0D
TV SPEAKER Mode	SPKM000	OKAY	SPEAKER	53 34 36 35 53 50 4B 4D 30 30 30 30 13 0D	53 41 4C 4C 53 50 4B 4D 30 30 30 30 D9 0D
	SPKM001	OKAY	OFF	53 34 36 35 53 50 4B 4D 30 30 30 30 12 0D	53 41 4C 4C 53 50 4B 4D 30 30 30 30 D8 0D
	SPKM002	OKAY	ARC FIRST	53 34 36 35 53 50 4B 4D 30 30 30 32 11 0D	53 41 4C 4C 53 50 4B 4D 30 30 30 32 D7 0D
Query TV SPEAKER ON/OFF Mode	SPKM????	0	SPEAKER	51 34 36 35 53 50 4B 4D 3F 3F 3F 3F D9 0D	51 41 4C 4C 53 50 4B 4D 3F 3F 3F 3F 9F 0D
	SPKM????	1	OFF	51 34 36 35 53 50 4B 4D 3F 3F 3F 3F D9 0D	51 41 4C 4C 53 50 4B 4D 3F 3F 3F 3F 9F 0D
B2B Function MODE	B2BM000	OKAY	ENABLE	53 34 36 35 42 32 42 4D 30 30 30 30 4B 0D	53 41 4C 4C 42 32 42 4D 30 30 30 30 11 0D
	B2BM001	OKAY	DISABLE	53 34 36 35 42 32 42 4D 30 30 30 30 31 4A 0D	53 41 4C 4C 42 32 42 4D 30 30 30 30 10 0D
Query B2B Function MODE	B2BM????	0	ENABLE	51 34 36 35 42 32 42 4D 3F 3F 3F 3F 11 0D	51 41 4C 4C 42 32 42 4D 3F 3F 3F 3F D7 0D
	B2BM????	1	DISABLE	51 34 36 35 42 32 42 4D 3F 3F 3F 3F 11 0D	51 41 4C 4C 42 32 42 4D 3F 3F 3F 3F D7 0D
USB BEHAVIOR	USBM000	OKAY	Home	53 34 36 35 55 53 42 4D 30 30 30 30 17 0D	53 41 4C 4C 55 53 42 4D 30 30 30 30 DD 0D
	USBM001	OKAY	B2B	53 34 36 35 55 53 42 4D 30 30 30 30 16 0D	53 41 4C 4C 55 53 42 4D 30 30 30 30 DC 0D
Query USB BEHAVIOR	USBM????	0	Home	51 34 36 35 55 53 42 4D 3F 3F 3F 3F DD 0D	51 41 4C 4C 55 53 42 4D 3F 3F 3F 3F A3 0D
	USBM????	1	B2B	51 34 36 35 55 53 42 4D 3F 3F 3F 3F DD 0D	51 41 4C 4C 55 53 42 4D 3F 3F 3F 3F A3 0D
PIXEL SHIFTING	PSHF000	OKAY	Off	53 34 36 35 50 53 48 46 30 30 30 30 1D 0D	53 41 4C 4C 50 53 48 46 30 30 30 30 E3 0D
	PSHF001	OKAY	On	53 34 36 35 50 53 48 46 30 30 30 30 1C 0D	53 41 4C 4C 50 53 48 46 30 30 30 30 E2 0D
Query PIXEL SHIFTING	PSHF????	0	Off	51 34 36 35 50 53 48 46 3F 3F 3F 3F E3 0D	51 41 4C 4C 50 53 48 46 3F 3F 3F 3F A9 0D
	PSHF????	1	On	51 34 36 35 50 53 48 46 3F 3F 3F 3F E3 0D	51 41 4C 4C 50 53 48 46 3F 3F 3F 3F A9 0D