# 9.0 System

- 9.1 Menu Language
  - 9.1.1 Menu Language Requirements
- 9.2 Time
  - 9.2.1 Time and Date Requirements
  - 9.2.1 Automatic Time
  - o 9.2.2 Time Zone
  - o 9.2.3 Daylight Saving Time
    - 9.2.3.1 Daylight Saving Time Requirements
  - o 9.2.4 Time Format
    - 9.2.4.1 Time Format Requirements
- 9.3 TV Name
- 9.4 Input Name
  - o 9.4.1 Input Name uses CEC Name
    - 9.4.1.1 Non-VIZIO Audio Devices Named Audio System
  - 9.4.2 Input Name uses Xbox SPD IF name
- 9.5 Voice Remote
  - 9.5.1 Voice Remote Application
  - o 9.5.2 Voice Remote Control LED
  - 9.5.3 Voice Remote Maintenance
  - o 9.5.4 Voice Remote Supported Skus
- 9.6 Hide From Input List
  - 9.6.1 Hide from Input List Requirements
- 9.7 Input at Power On
  - 9.7.1 Input at Power On: VIZIO Home
  - o 9.7.2 Input at Power On: Last Used TV Input
  - 9.7.3 Input at Power On CEC Power-On Commands
  - 9.7.4 Input Switching to No Signal Messaging
- 9.8 Power Mode
- 9.9 OLED Panel
  - 9.9.1 Screen Refresher
    - 9.9.1.1 Screen Refresher Requirements
    - 9.9.1.2 Screen Refresher Demo Mode
  - o 9.9.2 Pixel Shift
    - 9.9.2.1 Pixel Shift Requirements
- 9.10 USB Power
  - 9.10.1 USB Power Requirements
- 9.11 Power Indicator
  - 9.11.1 Power Indicator Requirements
  - o 9.11.2 Power Indicated LED blinking when off
  - 9.11.3 OLED Power Indicator LED Requirements
- 9.12 Timers
  - o 9.12.1 Sleep Timer
    - 9.12.1.1 Sleep Timer Requirements
  - 9.12.2 Auto Power Off Settings
    - 9.12.2.1 Auto Power Off Requirements
    - 9.12.2.2 Auto Power Off with AirPlay
  - o 9.12.3 Blank Screen

- 9.13 System PIN
  - o 9.13.1 Master System Unlock Code
  - 9.13.2 PIN Entry to Release Lock
- 9.14 CEC
  - o 9.14.1 CEC setting
  - 9.14.2 One Touch Play
  - 9.14.3 CEC Discovery and Device Control
  - 9.14.4 CEC Audio Device
  - 9.14.5 CEC Automatic Input Naming
  - 9.14.6 CEC Automatic Power On

	Setting/Submenu header	Submenu settings	Notes
1	Menu Language		
2	Time		
3		Automatic Time	
4		Time Zone	
5		Daylight Saving Time	
6		Time Format	
7	TV Name		
8	Input Name		
9	Voice Remote		Voice Remote moved up from bottom.
10	Hide From Input List		
11	Input at Power On		
12	Power Mode		
13	Energy Saving Mode (TBD)		Deleted 2020, 2021, 2022.
14	OLED Panel		
15		Screen Refresher	
16		Pixel Shift	
17	USB Power		
18	Power Indicator		
19	Timers		
20		Sleep Timer	
21		Auto Power Off	
22		Blank Screen	
23	System PIN Code		

24	CEC		
25		CEC	
26		One Touch Play	
27		Device Discovery	

# 9.1 Menu Language

	Menu Language settings	Notes
1	English	
2	Español	Native language for user - not translated
3	Français	Native language for user - not translated

### 9.1.1 Menu Language Requirements

	Menu Language settings
1	The menu language for the TV OSD applies to the TV platform display but not the language heard.
2	After changed, the selected language is used thereafter for all annunciations and notifications on the TV and the VIZIO app.

# 9.2 Time

	Time settings	Notes
1	Time and data, static display	If unknown, display "Time not available".
2	Automatic Time	When network connected, supported by geofencing.
3	Time Zone	
4	Daylight Saving Time	
5	Time Format	

### 9.2.1 Time and Date Requirements

	Time and Date Requirements	Notes
1	When time is unknown (network never connected), the time in the Info Bar as well as the Time menu is blank (nothing displayed, not 00:00).	

### 9.2.1 Automatic Time

	Automatic Time Requirements	Notes
1	Automatic Time includes settings:	

	<ul><li>Checked (default)</li><li>Unchecked</li></ul>	
2	When networked connected the time is provided. There are two states:  Checked, automatic time applies from UTC  Unchecked, manual time applies and time is not provided from UTC	Time is automatically displayed based on UTC from the Internet.
3	Includes a check box with checked as the default.	<ol> <li>Checked supports geofencing to set time automatically. After network connected,         Geolocation defines the time zone and DST offset to UTC time.</li> <li>Time Zone and DST in the Time menu are grayed out.</li> </ol>
4	If check box for automatic time is unchecked then Time Zone and DST in the Time menu are selectable.	
5	UTC time from the network (or from tuner) are offset by manual selection of Time Zone and DST.	

### 9.2.2 Time Zone

	Time Zone settings	Notes
1	HST (GMT-10)	Includes all UTC time zones in the world
2	AKST (GMT-9)	
3	PST (GMT-8)	default
4	MST (GMT-7)	
5	CST (GMT-6)	
6	EST (GMT-5)	
7	AST (GMT-4)	
8	ART (GMT-3)	
9	AT (GMT-2)	
10	WAT (GMT-1)	
11	GMT (GMT+0)	
12	CET (GMT+1)	
13	EET (GMT+2)	
14	MSK (GMT+3)	
15	AMT (GMT+4)	

16	PKT (GMT+5)
17	OMSK (GMT+6)
18	KRAT (GMT+7)
19	CST (GMT+8)
20	JST (GMT+9)
21	AEST (GMT+10)
22	SAKT (GMT+11)
23	NZST (GMT+12)
24	IDLW (GMT-12)
25	NT (GMT-11)

### 9.2.3 Daylight Saving Time

	Daylight Saving Time settings	Description
1	Auto (default)	When DST is in effect in the spring, the time is advanced one hour, and in the fall, when standard time zone resumes, time falls back one hour.
2	On	DST is always applicable and must be turned off if no longer in effect.
3	Off	DST never applies, desirable for regions such as Arizona and Hawaii where DST does not apply.

### 9.2.3.1 Daylight Saving Time Requirements

	Daylight Saving Time Requirements	Notes
1	Daylight Saving Time, Auto setting, is provided to ensure time automatically changes with DST if applicable for the time zone.	
2	Daylight Saving Time is grayed out if Automatic Time is checked.	
3	If Automatic Time is selected, then always include Daylight Saving Time offset in System Time if applicable. (DST setting does not apply)	The DST offset of the time is applied based on geolocation and time of year.
4	Automatic Time is NOT selected and Daylight Saving Time is Automatic, include DST offset in System Time.	The DST offset of the time is applied based on manual selection of the time zone.
5	When Automatic time is NOT selected and Daylight Saving Time is OFF, ignore geolocation response including DST offset.	

### 9.2.4 Time Format

Time Format settings	Notes	

1	12 hour (default)	
2	24 hour	

### 9.2.4.1 Time Format Requirements

	Time Format Requirements	Notes
1	The time format can be displayed in either 12 hour format (with AM/PM) or in 24 hour format.	

### 9.3 TV Name

	TV Name Requirements	Notes
1	TV Name is included in the Info status and the sidebar header.	
2	The TV name can be changed with the onscreen keyboard. A maximum of 24 characters is supported.	
3	If a 25th character is attempted, a notification displays.	
4	The TV font includes a character set limited to letters, digits and a specific set of symbols, emoticons are not supported.	If TV name is created with emoticons or a foreign character set using VIZIO mobile, when displayed on the TV, the emoticons or unsupported characters in the TV name are replaced with a box.

# 9.4 Input Name

	Input Name Requirements	Notes
1	Inputs can be named in three ways:  • automatically through CEC  • HDMI SPD IF  • entering a custom name:  • select a predefined name  • type in a name.	
2	If no change is desired (input not renamed or CEC/SPD IF name is satisfactory), then no further action is taken.	
3	Once renamed the name displays when the input is selected instead of the physical input name (e.g. HDMI-1).	
4	The current input is the input renamed and must be one the following:  • HDMI-1  • HDMI-2  • HDMI-3  • HDMI-4 (M/P/OLED only)  • COMP (composite)	Input Name is grayed out if the source is TV (AKA Antenna), VIZIO Home, WatchFree, AirPlay, virtual apps.

5	The input name entry in the sidebar displays with	
	input name for current physical input	
	• predefined names, default is port name	
	text entry field with current name	
	<ul> <li>physical port (default)</li> </ul>	
	CEC name or SPD IF name	
	custom name	
	alphanumeric keyboard to allow entry of a custom name	
	OK and Cancel buttons	
6	Predefined names are:	Added Xbox because no
	Port Name	self report of device
	• Blu-ray	name with CEC.
	Cable Box	
	Computer	
	• DVD	
	• DVR	
	• Game	
	Satellite	
	• Xbox	
7	Maximum number of characters is 15. If a 16 <sup>th</sup> character is attempted, a notification displays.	Name limited to 15 characters in Info bar and input tray.

### 9.4.1 Input Name uses CEC Name

	Input Name Uses CEC Name Requirements	Notes
1	When a hot plug detection of an HDMI input occurs, the CEC device name applies: TV input is automatically renamed to the CEC name detected during discovery.	If a CEC name is not included at discovery display HDMI-X.
2	The CEC identified name can be changed to a user input name.	
3	If a different CEC device is later discovered, then the user input name is replaced with the CEC assigned name for the new device.	
4	If the CEC device is removed the HDMI port falls back to the customized name (not the HDMI port name).	Align with Apple requirement.
5	For VIZIO Soundbars input name assigned as follows:  • VIZIO 2022 Atmos and AiO use the simplified name:  • VIZIO Elevate (both M and P skus)  • VIZIO AIO  • VIZIO 2024 Karaoke soundbar use the simplified name:  • VIZIO MicMe SB  • VIZIO: For all other soundbars display as  • VIZIO soundbar	

- For CEC device connected to an audio device (not directly connected to TV)
  - Gray out the port name (**HDMI-1**) and predefined names. The grayed out port name is for the audio device.
  - A custom name can be en tered to replace discovered CEC name

For example HDMI-1 for port name and HDMI-1 for the preferred name if the device is connected to an eARC sound bar.

### 9.4.1.1 Non-VIZIO Audio Devices Named Audio System

	Requirement	
1	Non-VIZIO sound bars or audio devices are named "Audio System"	

### 9.4.2 Input Name uses Xbox SPD IF name

Input Name uses Xbox SPD IF name Requirements	
1	If no CEC name detected during discovery then detect the name with HDMI Source Product Description Infoframe (SPD IF) if available.

### 9.5 Voice Remote

	User Story	TV	Remote
1	OOBE setup - Bluetooth pairing of Voice Remote	Initial Setup (OOBE) – TV is in BT pairing during OOBE when the RC setup page is displayed.	1.Remote goes into pairing mode with insertion of batteries only if the remote is not paired to any TV.  2.Remote pairing mode times out at 10 minutes if not paired.  3.Fresh remote is not paired out of the box.  4.Press MIC and MUTE keys to relaunch pairing mode.
2	Launch BT remote app from side menu.	<ul><li>1.Select Pair remote -&gt; TV is in pairing mode.</li><li>2.The HTML launches and allows remote pairing with or without a network connection</li></ul>	1.Long press (5 seconds) of MIC and MUTE keys places remote into pairing mode.  NOTE: If remote not paired to any TV, the MIC key cannot function.
3	Re-Pairing remote that was paired but fails or loses pairing.	<ol> <li>Select Pair remote -&gt; TV is in pairing mode.</li> <li>On successful pair, previous remote credentials deleted.</li> </ol>	1.Long press (5 seconds) of MIC and MUTE keys places remote into pairing mode for 1 minute.
4	Pair remote with a different TV.	<ol> <li>Select Pair remote -&gt; TV is in pairing mode.</li> <li>On successful pair, previous remote credentials deleted, if any.</li> </ol>	1.If not paired with TV, long press (5 seconds) of MIC and MUTE key places remote into pairing mode for 1 minute.  2.When paired to new TV,

			delete pairing credentials for former TV.
5	Delete paired remote (remote factory reset)	N/A	1.Long press (5 seconds) of MUTE and INPUT clears all BT credentials to return to factory defaults.
6	Force unpair remote from TV	Delete paired remote     invoked, then TV deletes     remote credentials and goes     into pairing mode.	N/A
7	TV not paired to any TV but user presses MIC key to speak.	<ol> <li>TV displays notification with instruction to pair remote and begins BT search mode.</li> <li>Notification not to show this again.</li> </ol>	If not paired, press of MIC and MUTE keys places remote in pairing mode for 1 minute.
8	Paired remote out of range and not connected.	TV is BT listening to relink to remote.	When remote is in range, on press of any key, the remote issues relink request to TV to reconnect.
9	If remote is paired and insert batteries.	TV is BT listening to relink to remote.	On insertion of batteries, remote issues relink request to TV to reconnect.
10	TV is powered off, press Power key. NOTE: At power off, connected if quick start but not connected if eco mode	TV is BT listening to relink to remote.	On press of POWER key, the remote issues relink request to TV to reconnect.
11	Press and hold MIC key to speak	TV returns search results from SoundHound in full (aka Tom Cruise movies.)	MIC key press and release events are captured. MIC key press indicates start of speech. End pointing of an utterance is on MIC key release + 20 msec (TBD).
12	Launch Remote app but network not connected.	TV still switches to VIZIO Home and displays the Remote app. Remotes pairs via Bluetooth, network not required for remote pairing.	

### 9.5.1 Voice Remote Application

	Voice Remote Application settings	Type of setting
1	Pair new Remote	setting
2	Check for Update	setting
3	Unpair Remote	setting

4	Status (e.g. connected)	Informational
5	Battery Level	Informational
6	FW versio	Informational

### 9.5.2 Voice Remote Control LED

1	User Story	Remote status	Remote LED
2	User is pairing	Remote is in pairing mode	2 strobes ON every 3 seconds
3	User expects pair confirmed	Remote pair completed	5 strobed ON
4	User reset remote	Remote reset factory defaults successful	LED flashes 3 times

### 9.5.3 Voice Remote Maintenance

1	Requirements	Comments
2	A maximum of 24 devices can be bluetooth paired with the TV for VIZIO mobile app.	
3	The internal paired list is maintained within the product but not displayed to the end user.	The purpose of the list and rules governing it will allow for a seamless Bluetooth user experience.
4	Paired Bluetooth devices will go on the internal "Paired" list, with up to 22 devices in non-volatile memory.	
5	The last (most recently) used Bluetooth device with VIZIO mobile app will be #1 on the list.	
6	<ul> <li>The order of the list depends on last used device:</li> <li>last device with VIZIO mobile app used to control TV.</li> <li>list continues to the next most recently used device with VIZIO mobile app</li> <li>the last device on the list will be the device that the longest duration of time has passed since paired.</li> </ul>	
7	If a 23th device is paired then the "Longest-since- used" rule applies: the device that has not been used more recently than any other on the list will be dropped from memory.	
8	If "Reset" or "Reset to Factory Settings" selected, all paired devices will be erased from the "Paired" list memory.	

### 9.5.4 Voice Remote Supported Skus

	soc	YEAR	Skus shipping/supporting Voice remote	Bluetooth antenna	Notes
1	5691	2020 - H	Not included all skus	NO	Not included all skus
2	5691	2021 - J	All everyday skus (no seasonal)	yes except for 3 seasonal skus	seasonal SKUs: no BT remote V705x-J03, V756x- J03, <del>M70Q6x J03 (</del> cancelled)
3	5691	2022 - K	All everyday skus	yes	
4					
5	5695	2020 - H	Not included all skus: P65Q9-H1, P75Q9-H1, P65Qx-H1, P75QX-H1, P85QX-H1	yes	
6	5695	2020 - H OLED	Not included all skus: OLED55-H1, OLED65-H1	yes	
7	5695	2021 - J	All skus: P65Q9-J1, P75Q9-J1	yes	
8	5695S	2022 - K	All skus	yes	
9					
10	5583	2021 - J	none	NO	Not included all skus
11	5583	2022 - K	all D skus (confirmed Dec10, 21)  D32fP-K01  D40fP-K09  D24fM-K01  D32fM-K01  D40fM-K09  D43fM-K04	yes	

# 9.6 Hide From Input List

	Hide From Input List settings	Inputs	Notes
1	Visible -(default)	<ul><li>Antenna</li><li>COMP (if supported)</li><li>HDMI-1</li><li>HDMI-2</li><li>HDMI-3 (if supported)</li></ul>	Input displays in the Input list

		HDMI-4 (M/P/OLED only, if supported)	
2	Hidden		Input is hidden and does not display in the list

### 9.6.1 Hide from Input List Requirements

	Hide From Input List Requirements	Notes
1	The Hide From Input List allows a user to hide inputs that are not connected.	
2	The hidden inputs do not display in the Input list.	
3	<ul> <li>The TV supports hot plug detection of HDMI ports. If Hide From Input List is set to Hidden and a device is connected to a HDMI input:</li> <li>Hot plug (5V connection signal) annunciates detection of the connected device</li> <li>HDMI input is included in the Input list.</li> <li>Setting remains Hidden so if the device is removed then the input is again hidden from the Input list.</li> </ul>	Intended for temporary devices such as a camcorder.  5V connection signal is used by TV to detect the connected source device.  Hot Plug Detection is used by the source device to detect the sink (TV).
4	Hide From Input List can be changed to Hidden for any physical input but if HDMI port has a device connected, the HDMI port remains visible in the input list.	
5	<ol> <li>VIZIO Home is current source with Last Used and More Inputs tiles.</li> <li>The input listed as Last Used source changed from Visible to Hidden.</li> <li>From VIZIO Home, remove the Last Used tile (input that was hidden).</li> <li>More Inputs remains without a Last Used input.</li> <li>When another input is selected then the next time VIZIO Home display, the Last Used input tile displays again.</li> </ol>	
6	If Antenna is hidden and is current source then no change to the source but WatchFree+ is the source in the input list.	

# 9.7 Input at Power On

		Input at Power On settings	Notes
	1	VIZIO Home (default)	
:	2	Last Used TV Input	Behavior for fielded skus prior to this feature

### 9.7.1 Input at Power On: VIZIO Home

	Requirements VIZIO Home at power On	Details
1	At power on do not switch to VIZIO Home remain on current source:	Specifically if no Ethernet connection detected and no SSID and password e.g. Wi-Fi not setup

	if no network/network not connected, remain on current source for         HDMI no sync         antenna channels scanned or unscanned         WatchFree+ with scanned channels      Network connected but no TOS, remain on current source for         no sync for HDMI, comp         antenna channels scanned or unscanned         WatchFree+ with scanned channels	in OOBE or "forget" WI-Fi. This prevents switch to VIZIO Home with display of "No Network" error for a TV planned for no network connection use case.  For network connected but no TOS  No TOS display for Antenna  Display TOS for WatchFree+
2	Using Input Selector, switch to HDMI or Comp if no network connection. Do not display countdown or notification, do not switch to VIZIO Home.	This prevents switch to VIZIO home with display of "No Network" error if no SSID/password (consumer has never setup the network).
3	For power on, if last input is VIZIO, even if the TV is no longer connected, power on to VIZIO.	Network connection may be temporarily disconnected or may not be detected during power on sequence.
4	If Input at Power On is VIZIO do not display countdown and notification and do not go to the SC Home page for these cases:  Power on from Partner button  Power on from WF+ button  Power on from Airplay  Power on from Cast  Power on from CEC One Touch Play and "One Touch Play" setting is enabled OR setting not added  Power on or input switch from Apple WebApp/HomeKit.	Power On from CEC One Touch Play is supported if  The setting for "One Touch Play" not included.  The setting for "One Touch Play" is set to Enabled.

### 9.7.2 Input at Power On: Last Used TV Input

	Requirements for Last Used TV Input	Details
1	At power on, display the last used physical input. This is true for physical inputs even if no sync. This includes Antenna and applies to WatchFree+.	Applies to:  • HDMI ports  • COMP (if supported)  • Antenna scanned or unscanned  • WatchFree+. (confirm with engineering)
2	If Last Used Input is setting at TV power on, issue the CEC power on command.	Restore behavior for CEC power on to same behavior prior to inclusion of Boot to VIZIO Home.
3	If last used input is Antenna (channels scanned or not scanned) or WatchFree+, power on to Antenna or WatchFree+ respectively.	Preferred customer experience.  Encourage WatchFree+ use.

	4	If Last Used Input is setting and from Input Selector, switch to input that has no sync, do not display countdown, do not switch to VIZIO Home.	Restore behavior at input switching to same behavior prior to inclusion of Boot to VIZIO Home.
	5	If an app was the source at power off, power on to VIZIO Home, not the app.	<ul><li> AirPlay</li><li> USB</li><li> Casted app</li><li> App</li></ul>
	6	If the last used input is USB then TV powers on to	USB requires a player app included in VIZIO
9.7.3 Input at	Pow	VIZIO Home not USB even if USB stick inserted. er On CEC Power-On Commands	Home to play content.

	CEC Power-On Commands	Notes
1	Do not issue a CEC power command to peripheral devices when:  • The user powers on the TV  • If Last Used Input is setting at TV power on, issue the CEC power on command.	<ul> <li>Intent is to drive users to VIZIO Home if no sync when peripheral device is off.</li> <li>CEC power on command issued if Input Selector used to switch to HDMI port.</li> </ul>
2	A CEC power command MUST be issued to ARC audio device or sound bar when:  • The user powers on the TV	
3	One Touch Play continues to have full support to power on TV and CEC device.	If "One Touch Play" setting is disabled then One Touch Play is disabled.

### 9.7.4 Input Switching to No Signal Messaging

	Requirements Input at Power with No signal	Notes/Notification
1	TV is powered on and input change is selected.	
2	Selected input has no detectable incoming signal for one second.	
3	Standard "No Signal" displays for 30 seconds in screen center with SOC OSD.	<ul> <li>Adding time to allow devices with long power on to do so.</li> <li>30 seconds display is configurable via sc config</li> </ul>
4	Display VIZIO home system UI message with an 30 second countdown icon.	<ul> <li>"No signal available. Returning to VIZIO Home"</li> <li>Buttons: "Cancel" and "Return to Home (default)"</li> </ul>
5	After 30 second icon countdown dismiss notification and automatically launch VIZIO Home	30 seconds display is configurable via sc config
6	This message is displayed when the user switches input sources to:  • HDMI  • Composite	If Tuner has been scanned but no sync, then display notification and switch to VIZIO.

	<ul> <li>Component</li> <li>Tuner, if no sync, channels have or have not been scanned</li> </ul>	
7	If channels not yet scanned:  Display the scan channels notification for 30 seconds.  A press of OK starts channel scan.  If channel scan not started then after 30 seconds dismiss scan channel notification and display SmartCast home system UI message with 30 second countdown icon.	
8	If sync is detected anytime during 60 second period (30 seconds of "no Signal" plus 30 seconds of VIZIO Home system UI notification) then no switch to VIZIO home.	
9	If screen is quiescent except for the countdown, a press of OK key launches VIZIO home.	
10	If screen is quiescent except for the countdown, a press of Left followed OK key cancels launch VIZIO.	
11	During countdown if the following keys are pressed, take down countdown, do not launch VIZIO, and take action as expected for key.  • Input  • Back  • Menu  • Home  • WatchFree+  • Partner button  All other keys have no effect on the timer or notification.	NOTES:  Home launches VIZIO Home.  WatchFree+ launches  Partner buttons launch  Volume, Mute, Info display concurrently with the countdown if key is pressed.
12	If countdown and notification is dismissed from above, then do not display again during the viewing session for the input.	
13	Do not display this message if "Input at Power On" is "Last Used Input".	
14	If demo mode is enabled, do not display countdown or notification.	

# 9.8 Power Mode

	Power Mode settings	Definition
1	Eco Mode (default)	Eco Mode setting powers off TV to passive standby. Passive standby (also known as Passive Low) is defined as the lowest

		power state of <= 0.5w for Canada and USA and <= 1 watt for Mexico.
2	Quick Start	TV power off powers down the panel and all components except those required for Wake functions, required for power on from cast. Quick Start supports fast transitions to power on.

### 9.9 OLED Panel

	OLED Panel	Notes
1	Screen Refresher	
2	Pixel Shift	

### 9.9.1 Screen Refresher

	esner	
	Screen Refresher Settings	Definition
1	Cancel (default)	<ul> <li>If "Cancel" is selected, then:</li> <li>Remove the popup notification</li> <li>The Screen Refresher setting is again highlighted.</li> <li>No further action taken.</li> </ul>
2	Start Now	<ul> <li>If "Start Now" is selected:</li> <li>A confirmation popup displays with buttons of "Start Now" (default) and "Cancel" and a notification. The Notification is "Select Start Now to begin Screen Refresher. The TV is off for up to an hour."</li> <li>If "Start Now" button is selected, then the TV automatically powers down and compensation begins after Active Standby. No audio should be heard.</li> <li>After completion of compensation, the TV powers on and a notification displays "Screen refresh completed."</li> <li>If Cancel is selected from the notification, then Screen Refresher does not start.</li> <li>Selection of Start Now from VIZIO Mobile immediately powers down TV and launches Screen Refresher, no second confirmation.</li> </ul>
3	Start at Power Off	<ul> <li>If "Start at Power Off" is selected:</li> <li>The pop up is dismissed.</li> <li>A second pop up display with notification and OK button. The notification is "Screen refresher starts when TV is turned off".</li> <li>When OK is selected then second pop up dismissed.</li> <li>The Screen Refresher setting is again highlighted.</li> <li>Selection of Start Power Off schedules the Screen Refresher to begin compensation at full power off (after Active Standby).</li> </ul>

### 9.9.1.1 Screen Refresher Requirements

	Screen Refresher Requirements
1	Over time during power on, the screen dims. The Screen Refresher compensates for this issue by brightening the screen (AKA JB).
2	JB runs automatically every 1500 hours (every 500 hours if in demo mode) at DC power off. After 1500 hours the TV will continue to try to run JB at power down.
3	The Screen Refresher forces JB if required prior to 1500 hours or if automatic compensation fails.
4	The TV must be powered off and the compensation takes about an hour during which time the TV can be powered back on. If JB runs automatically after 1500 hours (or 3000, 4500, etc), then no LED fade in/out.
5	Screen Refresher setting is grayed out and unavailable during demo mode.
6	Help text: "The Screen Refresher corrects picture dimness that may result after the TV has been powered on for an extended period of time."

### 9.9.1.2 Screen Refresher Demo Mode

	Screen Refresher Behavior Demo Mode	Notification text
1	If in demo mode after 600 hours and JB has not been run at 500 hours then display a pop up notification	"Run Screen Refresh?" with YES and DECLINE buttons.
2	If YES is selected, then TV powers off automatically, runs JB and then powers TV on.	
3	If DECLINE is selected, then the pop up displays again every power on until YES is selected or JB is run.	
4	After 5 minutes of no response, the pop up is dismissed.	

### 9.9.2 Pixel Shift

	Pixel Shift Settings	Definition
1	On (default	
2	Off	If the Off settings is selected the TV must be recentered from previous pixel shift.  A user may want to turn off Pixel Shift if connected

### 9.9.2.1 Pixel Shift Requirements

Pixel Shift Requirements	Notes	
Tixer offite Requirements	140103	

The Pixel Shift (AKA Orbit) prevents screen burn in by moving the screen slightly at VIZIO defined 9.10 USB Power setting).

HELP Text: "The Pixel Shift shifts the screen slightly to prevent screen burn."

	USB Power Settings	Description	Notes
1	Always On (default)	Power is persistent to the device powered through USB even if TV is powered off (DC power cycles).  If device is inserted in a USB port, the .5 watt limitation for Eco Mode no longer applies: power is increased to TV to support power to the USB device.	If the device connected to the USB port draws too much power then a notification displays: "Power drawn from USB exceeds limit. Remove a device and try again. "
2	Off When TV off	When the TV powers down, power is no longer supplied to the device from the USB port.	For some devices, such as Bias Lighting, the preference is to stop supplying power to the connected device when the TV is powered off.

### 9.10.1 USB Power Requirements

	USB Power Requirements	Notes
1	When a device is powered by plugging into the USB port, power persists through DC power cycles.	

### 9.11 Power Indicator

	Power Indicator Settings	Description
1	Off (default)	After LED lights during power on, LED fades to off and remains off while the TV is powered on.
2	On	The LED remains dimly lit when the TV is powered on.

### 9.11.1 Power Indicator Requirements

	Power Indicator Requirements	Notes
1	The LED is never lit when the TV is powered off.	
2	If Power Indicator is On and demo mode is enabled and running:  Power indicator is suppressed during demo mode.  Power indicator is restored if demo mode is disabled.	
3	Blank Screen is invoked, then the LED for the Power Indicator is turned on to dim even if the setting is Off.	The LED remains dim until Blank screen no longer applies from an applicable key

press or a power cycle.

### 9.11.2 Power Indicated LED blinking when off

	Condition	LED behavior	Notes
1	Reset to Factory Settings	At launch LED blinks rapidly for 2 seconds	Confirms reset is in progress.
2	Reboot TV	LED blinks three times	Aka Soft Power Cycle

### 9.11.3 OLED Power Indicator LED Requirements

	OLED Power Indicator Requirements
1	At power On the LED is maximum white and fades to off after 5 seconds (AC on) or 1 second (DC on) if Power Indicator setting is Off.
2	If Power Indicator is Off then after power on the LED is Off.
3	If Power Indicator is On then the LED remains lit when the TV is powered on.
4	If OLED suffers a hard failure the LED blinks rapidly and TV powers off. Power Indicator LED blink continues while power is plugged in.
5	For Screen protection, after 10 minutes the panel powers off while the TV remains fully active and the power indicator LED is lit at maximum brightness.

### 9.12 Timers

	Timer Settings	Notes
1	Sleep Timer	Automatically turn off the TV.
2	Auto Power Off	Automatically turn off the TV.
3	Blank Screen	

### 9.12.1 Sleep Timer

	Sleep Timer Settings	Notes
1	Off (default)	
2	30 minutes	
3	60 minutes	
4	90 minutes	
5	120 minutes	
6	180 minutes	

### 9.12.1.1 Sleep Timer Requirements

Sleep Timer requirements	Notification	

1	Twenty seconds before the Sleep Timer expires, a warning notification displays.	Hello! Sleep Timer will soon power off your TV. To cancel, press the 'volume' key on your remote.
2	Any key press from the remote resets the sleep timer to Off and removes the notification.	
3	If the sleep timer is disabled from a key press, then the TV notification is removed. If not, then sleep timer turns the TV off.	
4	When the sleep timer powers down the TV, the setting also is reset to the default (Off).	
5	OLED only: If screen protection is in effect due to static picture and panel is powered off but TV not yet powered off then the sleep timer powers off the TV but without the display of the 1 minute notification.	

### 9.12.2 Auto Power Off Settings

	Auto Power Off Settings	Definition
1	10 minutes (default)	To comply with California Energy Commission (CEC), after 10 minutes of no video and/or audio sync, the television is automatically powered down.
2	Off	

### 9.12.2.1 Auto Power Off Requirements

	Auto Power Off requirements	Notification
1	If enabled, then after 10 minutes of no sync, the TV automatically powers down. Twenty seconds before the TV turns off, a warning message displays.	No input signal. Power will be turned off.
2	If a channel or program is locked, after 10 minutes of blanked screen, though there is actual sync, the TV powers down.	
3	<ul> <li>Even though there is no video sync auto power off does not power down the TV for the following:</li> <li>Audio ceases from an audio app (not a typical use case). The TV remains on with the LED lit.</li> <li>Retail Demo enabled and Overlay Retail Demo is running over input with no sync.</li> <li>VIZIO Home is current source and video is not streaming.</li> </ul>	

4	If demo mode is enabled the Auto Power Off setting is changed to Off if set to "10 minutes".  When demo mode is turned off then Auto Power off is restored to the "10 minutes" setting.	
5	Auto Power Off set to 10 minutes: Use cases to auto power off TV after 10 minutes of no sync	Auto Power Off set to 10 minutes: Use cases to NOT auto power off TV after 10 min. no sync
	<ul><li>HDMI with without signal</li><li>Demo mode is turned off</li></ul>	Source is VIZIO Home or app with graphics (netflx, YouTube, WatchFree+)
	<ul> <li>TV channel or program is locked, no signal</li> <li>TV channel or program is locked, with signal</li> <li>AirPlay is source but iPhone is not connected to TV</li> </ul>	<ul> <li>Audio ceases from an audio app</li> <li>Overlay Retail Demo is running over input with no sync</li> <li>VIZIO Home is current source, no video</li> </ul>
	COMP without signal	streaming  OOBE  AirPlay is source, iPhone is connected but
Power	Off with AirPlay	content is no longer playing (still image)  • COMP with signal

# 9.12.2.2 Auto Power Off with AirPlay

	Condition	Requirement if Auto Power is 10 minutes
1	Input selected is AirPlay but iPhone is not connected to TV	After 10 minutes of no sync, TV is powered down
2	Input selected is AirPlay, iPhone is connected but content is no longer playing (still image)	TV does not power off after 10 minutes of no action from the iPhone as the connection is still live.

### 9.12.3 Blank Screen

	Blank Screen Requirements	Notes
1	When the Blank Screen is selected, the backlight is immediately turned off for any source including VIZIO TV and apps, and TV settings is taken down.	No warning, no delay.
2	Once invoked, a press of any key on the remote or panel restores backlight, not processing the IR code.	
3	Or, from the VIZIO app, a tap of any function that controls the TV (input selection, settings, selection of content to play onscreen, etc) restores backlight and processes the function.	
4	One exception: a press of the key or tap of the function for VOLUME or MUTE changes the volume without restoring backlight to display the volume slider.	A long (2 second) key press of the MUTE key also elicits a video mute, the same as if the Blank Screen setting was selected.
5	When Blank Screen is invoked, the LED for the Power Indicator is turned on to dim even if the setting is Off. The LED remains dim until Blank screen no longer applies from an applicable key press or a power cycle.	

# 9.13 System PIN

	System PIN requirements	Detailed Requirements
1	System PIN displays differently for:	First time Setup     Selection after setup
2	<ul> <li>First time setup displays</li> <li>PIN entry</li> <li>PIN confirmation</li> <li>Digit PAD displays</li> <li>Cancel and grayed out Save buttons.</li> </ul>	For remotes with digits, direct digit entry of PIN is supported.
3	Steps for first time entry of PIN:	<ol> <li>Enter new PIN.</li> <li>Enter PIN again to confirm.</li> <li>If PIN's match then Save button is available.</li> <li>Select Save button, the PIN is set.</li> <li>If the PINs do not match, error message displays and user can try again or cancel.</li> <li>If Cancel button selected, exit System PIN. PIN entry is not saved.</li> <li>Each PIN digit entry is obscured on entry of the next PIN digit or after 5 seconds, whichever is first.</li> </ol>
4	The new PIN is not annunciated from the TV.	
5	Default System PIN is 0 0 0 0 and is not set	0 0 0 0 is not allowed for customer use, only for testing.
6	If a System PIN has not been set, selection of Parental Controls invokes the System PIN to force first time setup of the System PIN.	
7	System PIN does not lock until next power cycle.	After a power cycle, at next power on, PIN protection applies.
8	Once System PIN is set, at the next power cycle, selection of System PIN requires entry of the saved PIN. Then the System PIN Code can be changed.	Requirements to change system PIN same as for First time Setup.

### 9.13.1 Master System Unlock Code

	Requirements	Detailed Requirements
1	Default System PIN is 0 0 0 0 and is not set	System PIN of 0 0 0 0 is not allowed for customer use, only for testing.
2	To clear and remove the user entered system PIN code, enter the Master System Unlock Code of 5351.	The System PIN code reverts back to 0 0 0 0 and not set. A new System PIN code must be created.

### 9.13.2 PIN Entry to Release Lock

	System PIN Requirements to Release Lock	Detailed Requirements
1	To access PIN protected content, the saved PIN must be entered to release PIN protection:	<ul> <li>For the tuner, a locked channel per Parental Control settings (lock can be by content or channel)</li> <li>For composite, recorded content (usually from Tuner), locked per Parental Control settings</li> <li>Reset to Factory Settings</li> <li>Parental Controls menu entry</li> <li>Picture Edit Mode if Lock Picture Mode has been invoked. Locked Picture mode can not be relocked because setting deleted.</li> <li>System PIN to release the current code and re-enter a new code.</li> </ul>
2	During a power session, PIN entry to release the lock is only required once.	For example, correct PIN entry to enter the Parental Controls menu has released the PIN lock so Edit Picture Mode is no longer PIN protected.

### 9.14 CEC

	CEC requirements	Notes
1	Consumer Electronics Control (CEC) supports control of HDMI connected devices using one remote, typically the TV remote, using CEC commands.	Not all HDMI devices support CEC.
2	CEC support must be enabled on both the TV and the device to work.	
3	CEC Vendor ID 00:19:9D.	
4	HDMI EDID ID is VIZ (3A59h).	

### 9.14.1 CEC setting

	CEC Settings	Description	TestRail Test Case #
1	Enabled (default)	The enabled setting provides automatic discovery and name assignment for CEC for devices as well as device control.	C21644885
2	Disabled	<ul> <li>If CEC is disabled:</li> <li>No CEC commands are issued for any devices including a sound bar or audio system</li> <li>One Touch Play and Device Discovery are grayed out</li> <li>Devices are delisted under device discovery</li> <li>CEC device name resets to default HDMI port name (e.g. HDMI-1) or custom name if entered prior to discovery.</li> </ul>	<u>C21644886</u>

 Mute eArc channel and turn off encoders (not enough computing resource on the audio processor while sound effects of the speaker channel are in use and may cause audio cutting issues)

### 9.14.2 One Touch Play

	Setting	Requirement	Notes	TestRail Test Case #:
1	Disabled default for -K	<ol> <li>Disables support for         One Touch Play to         power on the TV with         press of the PLAY key         on a CEC device.</li> <li>Disables support for         One Touch Play to         switch to CEC device         with press of the         device PLAY key.</li> </ol>	TV remote must be used to power on the TV and to switch inputs.	C21644892 C21644897
2	Enabled default for -J/-H	<ol> <li>Enables support for         One Touch Play to         power on the TV with         press of the PLAY key         on a CEC device.</li> <li>Enables support for         One Touch Play to         switch to CEC device         with press of the         device PLAY key.</li> </ol>		C21644893 C21644894 C21644895 C21644896

### 9.14.3 CEC Discovery and Device Control

	Requirements CEC Device Control	Notes	TestRail Test Case #:
1	A maximum of 12 CEC devices can be connected to the TV, directly or indirectly.	Only one audio device is allowed per TV.	
2	<ul> <li>If CEC is enabled:</li> <li>CEC enabled devices are automatically discovered.</li> <li>If a CEC device is not discovered, select Device Discovery and press OK to force discovery.</li> <li>Discovered devices are grayed out and listed below Device Discovery.</li> <li>Controls received by the TV are issued as CEC commands to the discovered device.</li> </ul>	<ul> <li>Examples of supported commands:</li> <li>Play/Pause of BD player</li> <li>Volume and Mute for ARC/eARC device</li> </ul>	C21644882 C21644873

3	Current remotes do not include transport functions. A press of OK, Right and Left keys are issued as CEC commands as OK, Right and Left as some devices interpret as Pause, Forward and Reverse.	If using an older remote, Pause, Play, Forward and Reverse are included and sent as CEC commands to the device.	C21644873
4	If CEC is disabled:  No commands are issued for any device including ARC/eARC device  Device discovery is grayed out and discovered devices are delisted.  Name reverts back to the default port name or customer name if entered before discovery.		C21775659 C21644881

### 9.14.4 CEC Audio Device

	CEC Audio Device Requirements	Notes	TestRail Test Case #:
1	Supported CEC Commands limited to  Power  Volume  Mute	<ul> <li>A power on command for ARC/eARC device issued when TV is powered on.</li> <li>A remote key press of Volume Up/ Down or Mute issues CEC command to the ARC/eARC device.</li> <li>Volume and Mute IP based commands from the VIZIO app issues CEC command to the ARC/eARC audio device.</li> </ul>	
2	TV speakers setting is Auto, then TV speakers are automatically turned off with ARC/eARC audio device		C21644923
3	The volume slider displays with "Audio System" above with each volume adjustment including mute.		C21644832
4	The ARC/eARC device is powered on and off with the TV. If turned off while the TV is on, then the TV speakers are turned on again and volume/mute control TV speakers.		C21644924
5	When ARC/eARC device is discovered, a notification is NOT displayed.	DELETED NOTIFICATIONS.	C21644913

### 9.14.5 CEC Automatic Input Naming

Requirements CEC Automatic Input	Notes	TestRail Test
Naming		Case #

1	if CEC is enabled, hot plug detection of HDMI device assigns a name to the HDMI input as supplied by the device.	Exception: VIZIO Sound bars are named  • VIZIO Soundbar  • VIZIO Elevate  • VIZIO AIO  • VIZIO MicMe SB	C21644876
2	No notification displays including when an ARC/eARC device is detected on an HDMI port other than HDMI-1 (the ARC port).		C21644913

### 9.14.6 CEC Automatic Power On

	Requirements CEC Automatic Power On	Notes	TestRail Test Case #:
1	Do not issue a CEC power command to peripheral devices when:  • The user powers on the TV.	The intent is to drive users to VIZIO  Home when no sync is found because peripheral device is off.	
2	A CEC power command MUST be issued to ARC audio device or sound bar when:  • The user powers on the TV		C21644902
3	Do issue a CEC power command to peripheral devices when:  • HDMI input or AppleTV selected from the input selector  • HDMI input or AppleTV selected from VIZIO Home.		C21644903 C21644904