

Installation Instructions	
Note	Lines marked with TTS are required for Audio Notification and Text-to-Speech to work on Speakers and older soundbars. (Newer soundbars have a two-letter model prefix; i.e., HW- MS 650.) In the HMI, you will see these shortcut references: 1. Speakers - refers to speakers and older soundbars. 2. MS Soundbars - refers to the newer soundbars.
1	TTS. Complete the default installation of the Speakers and Soundbars using the + Add a Thing function on the phone app devices page.
2	TTS. Change the Device Network ID for each speaker, using the IDE My Devices page.
3	From the IDE My Device Handlers page, select + Create a New Device Handler . Then select From Code . Copy the device handler code from the gitHub page and paste into the edit area. Select Create then select Publish .
4	From the IDE My SmartApps page, create + New SmartAp . Then select From Code . Copy the service manager code from the gitHub page and paste into the edit area. Select Create then select Publish .
5	Run the Service manager.
6	TTS. For each speaker and older soundbar, identify the speaker in one of the Select TTS_n Speaker lines.
7	Select Next . When all your devices appear, select the Select Speakers area and select each speaker you want to install. Press Done and then Save . A green banner indicates success.
Note	On trying to open the device from the phone app Devices page, sometimes the device will not display and the phone app quits. Do not know why, just happens on my system. My fix is: 1. Open the device from the My Devices page on the IDE. 2. Rename the device (can be same name) and save. 3. Go to the Preferences section and select Edit. 4. New soundbar only - A good time to enter the TTS Key by copying and pasting from the voicerss.org website. 5. Select Save
Note	The names of the surrogate speaker and the one for this device handler are identical. You may want to change one or the other.
8	Open preferences in the phone app. 1. TTS. Select the id of the TTS speaker from step 6 above. 2. Select the appropriate preferences for your installation.
External Text-To-Speed Commands	
The device handler incorporates additional commands that allow access to the Text-to-Speech functions. There are four external commands:	
a	playTextAndResume(TEXT, VOLUME) . Plays the string TEXT at the integer Volume. 1. Null Volume will play text at the current volume. 2. Once played, the originally playing audio will resume (not necessarily at same location) at the original volume.
b	playTextAndRestore(TEXT, VOLUME) . Plays the string TEXT at the integer Volume. 1. Null Volume will play text at the current volume. 2. Once played, the originally volume will be set; but, the speaker will not resume playing.
c	playTextAsVoiceAndResume(TEXT, VOLUME, VOICE) . Plays the string TEXT at the integer VOLUME using the VOICE. (Note: This command is unique to this device handler). 1. VOICE is from the available Amazon Polly voices. VOICE language must match text language. 2. Null VOLUME will play text at the current volume. 3. Null VOICE will play using the default set by the user in the Device Handler. "Salli" by default. 4. Once played, the originally playing audio will resume (not necessarily at same location) at the original volume.
d	playTextAsVoiceAndRestore(TEXT, VOLUME, VOICE) . Plays the string TEXT at the integer VOLUME using the VOICE. (Note: This command is unique to this device handler). 1. VOICE is from the available Amazon Polly voices. VOICE language must match text language. 2. Null VOLUME will play text at the current volume. 3. Null VOICE will play using the default set by the user in the Device Handler. "Salli" by default. 4. Once played, the originally volume will be set; but, the speaker will not resume playing.
Other notes	
Use of Surrogate Speakers. The dual installation of speakers (LAN SamsungAudio and this DH) is needed since I have been unable to identify the command used to send a URL to the speaker for playing. The URL is how both Text-To-Speech and Audio Notifications are sent to the speakers.	
Use of voicerss.org TTS engine. The newer (MS) soundbars are not compatible with the LAN SamsungAudio. Additionally, using Amazon Polly outside the LAN Samsung Audio does not work. I selected voicerss.org since they provide free 350 messages plus economical upgrades for extreme users.	

Phone Application Interface						
HMI Area				Design Notes		
Automation - Service Manager - Page 1						
Selet tts_1 Speaker				Required for Audio Notification and Text-To-Speech to work on Speakers and older soundbars.		
Selet tts_2 Speaker						
Selet tts_3 Speaker				Tap to set. Your installed LAN SamsungAudio speakers will display. Pick one for each LAN SamsungAudio speaker you have installed		
Selet tts_4 Speaker						
Selet tts_5 Speaker				Once the device is installed, match the number here in on the preferences page of the device handler.		
My Home - Device - Details Page						
<div>Media Player Interface</div> <div>Previous // Play-Pause // Next</div> <div>MuteMarqueeVolume</div>				<div>Previous: Command sent twice to go to beginning then to previous song. CP - Program limited to Amazon, Amazon Prime. DLNA - Send commands. Works IAW the player capabilities. Others - Program disabled with error message.</div> <div>Next: Same as Previous, but add Pandora and 8tracks to CP capable.</div> <div>Play/Pause: Works for cp and dlna players. Disabled (No message) for other modes.</div> <div>Mute: Mutes the audio.</div> <div>Volume: In percent of maximum. Programmed for soundbar to be max of 60. For speaker max is 30.</div> <div>Marquee: Display song or station (CP and DLNA modes) or mode for non-WiFi modes.</div>		
				<div>On/Off: Soundbar turns 'off'. Speaker - stops player. Blue is ON.</div> <div>Source: Toggles between sources available for device.</div>		
				On/Off	Source	Update Display
Player Preset 1		Player Preset 2		Player Preset 3		
Player Preset 4		Player Preset 5		Player Preset 6		
Player Preset 7		Player Preset 8		Delete Preset		
Latest Message (press to clear)				Current Group Title		
Group Preset 1		Group Preset 2		Group Preset 3		
Group Master Volume Label		Speaker Control Toggle			Speaker Control Toggle: "-" when a group is not enables. Toggles between the speakers in the group.	
Group Master Volume Slider		Speaker Volume Slider		Speaker EQVol Slider		
My Home - Device - Preferences Page						
SOUNDBAR ONLY: Rear Speaker				Selected = slider to right, blue color. If selected - you have a Soundbar rear speaker connected and want to control it's level.		
SOUNDBAR ONLY: Rear Speaker Level				Level from -6 to +6 for rear speakers.		
SPEAKER ONLY: Surrogate for TTS				When running service manager, you identified up to 5 TTS speakers that are the "LAN SamsungAudio" speakers that will play TTS and Audio Notifications. Here, you match that selection to the explicit speaker.		
SPEAKER ONLY: TTS Voice				Select the voice for TTS announcements. Language of voice must match the language of your TTS text.		
MS SOUNDBAR ONLY: Text-To-Speech Key				The soundbar uses a different TTS engine than the LAN SamsungAudio (the Amazon engine does not work for this handler). This is the key you obtain from voicerss.org. Limit: 350 calls per day free.		
MS SOUNDBAR ONLY: TTS Language				The soundbar TTS language. Must match the language of the text entered. Voice changes dependent on language (I.e., US is different from Australian).		