

Installation Instructions	
These instructions are designed for persons with at least minimal SmartThings IDE experience. More detailed instructions are available in the <a href="#">gitHub site documentation folder</a> .	
<b>Note</b>	<p><b>Software Type.</b> There are two SW sets used in the speakers and discussed herein. When noted, the step applies only to those speakers.</p> <p>a. <b>Legacy</b> is the software set in all multi-room speakers and early multiroom soundbars.</p> <p>b. <b>SoundPlus</b> is used in newer soundbars (Sound+) that have model numbers with two letters (i.e., MS650).</p>
<b>1</b>	From the IDE <b>My Device Handlers</b> page, select <b>+ Create a New Device Handler</b> . Then select <b>From Code</b> . Copy the device handler code from the gitHub page and paste into the edit area. Select <b>Create</b> then select <b>Publish</b> .
<b>2</b>	From the IDE <b>My SmartApps</b> page, create <b>+ New SmartAp</b> . Then select <b>From Code</b> . Copy the service manager code from the gitHub page and paste into the edit area. Select <b>Create</b> then select <b>Publish</b> .
<b>3</b>	From the phone app, run the Service manager.
<b>4</b>	Select <b>Next</b> . When all your devices appear, select the <b>Select Speakers</b> area and select each speaker you want to install. Press <b>Done</b> and then <b>Save</b> . A green banner indicates success.
<b>Note</b>	Single Speaker Installation. If you have only one speaker or soundbar, you can disable the Group Functions (and tiles) by modifying the Device Handler. Around line 76, is the line <b>def groupSup = "yes"</b> . Change this to <b>def groupSup = "no"</b> .
<b>5</b>	<p>Open preferences in the phone app.</p> <p>a. <b>TTS/SoundtPlus</b>. Obtain the token code for the TTS from <a href="#">voicerss.org</a> and select your TTS language.</p> <p>b. <b>Soundbars</b>. Select if you have the soundbar satellite (rear) speakers and (if so) set the volume.</p> <p>c. <b>TTS/Legacy</b>. Select the default (Amazon tts engine) voice for text to speech operations.</p> <p>d. <b>TTS/SoundPlus</b>. Select the TTS language.</p>
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:	
<b>a</b>	<p><b>playTextAndResume(TEXT, VOLUME)</b>. Plays the string TEXT at the integer Volume.</p> <ol style="list-style-type: none"> <li>1. Null Volume will play text at the current volume.</li> <li>2. Once played, the originally playing audio will resume (not necessarily at same location) at the original volume.</li> </ol>
<b>b</b>	<p><b>playTextAndRestore(TEXT, VOLUME)</b>. Plays the string TEXT at the integer Volume.</p> <ol style="list-style-type: none"> <li>1. Null Volume will play text at the current volume.</li> <li>2. Once played, the originally volume will be set; but, the speaker will not resume playing.</li> </ol>
<b>c</b>	<p><b>playTextAsVoiceAndResume(TEXT, VOLUME, VOICE)</b>. Plays the string TEXT at the interger VOLUME using the VOICE. (Note: This command is unique to this device handler).</p> <ol style="list-style-type: none"> <li>1. VOICE is from the available Amazon Polly voices. VOICE language must match text language.</li> <li>2. Null VOLUME will play text at the current volume.</li> <li>3. Null VOICE will play using the default set by the user in the Device Handler. "Salli" by default.</li> <li>4. Once played, the originally playing audio will resume (not necessarily at same location) at the original volume.</li> </ol>
<b>d</b>	<p><b>playTextAsVoiceAndRetore(TEXT, VOLUME, VOICE)</b>. Plays the string TEXT at the interger VOLUME using the VOICE. (Note: This command is unique to this device handler).</p> <ol style="list-style-type: none"> <li>1. VOICE is from the available Amazon Polly voices. VOICE language must match text language.</li> <li>2. Null VOLUME will play text at the current volume.</li> <li>3. Null VOICE will play using the default set by the user in the Device Handler. "Salli" by default.</li> <li>4. Once played, the originally volume will be set; but, the speaker will not resume playing.</li> </ol>
Other notes	
<p><b>Use of <a href="#">voicerss.org</a> TTS engine.</b> The newer (SoundPlus) soundbars are not compatible with the LAN SamsungAudio. Additionally, using Amazon Polly outside the SetUrlPlayback does not work! I selected <a href="#">voicerss.org</a> since they provide free 350 messages/day plus economical upgrades for extreme users.</p>	

Phone Application Interface						
HMI Area				Design Notes		
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> <div>Update Display: Refreshes display states of Power, Source, Play Status, Volume, Mute, and Marquee. Recommend pressing before creating a preset.</div> <div>Equalizer Mode: From presets defined in Multiroom App.</div> <div>Shuffle / Repeat Modes: Displays when available on playing channel. Otherwise displays "No Shuffle" or "No Repeat".</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		<div>Latest Message: Message generated by Device Handler. Will clear after about 30 sec.</div> <div>Current Group Title: Displays selected group. When displaying, pressing will turn off the group.</div>
Group Preset 1		Group Preset 2		Group Preset 3		
Group Master Volume Label		Speaker Control Toggle			<div>Speaker Control Toggle: "-" when a group is not enables.</div> <div>Toggles between the speakers in the group.</div>	
Group Master Volume Slider		Speaker Volume Slider		Speaker EQVol Slider		<div>Volume Sliders: Work same as volume, using same scales (see Volume).</div> <div>EQ Vol: Used in Surround Sound. Provides +/- 6 scale to volume for device.</div> <div>Used to fine tune volume in Surround/Stereo mode.</div>
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: 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).		