



REAL SMART HOME

REAL SMART HOME GmbH

APPMODULE

PLAY

Smarthome App Documentation

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1 INTRODUCTION

Thank you for your trust, and the purchase of the PLAY – Smarthome App for the BAB APPMODULE. With the PLAY – Smarthome App you get one of the most comprehensive integration of SONOS devices into building automation.

This documentation will help you get started with the app and aims to improve your setup experience.

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IMPORTANT INFORMATION ON THE OPERATING INSTRUCTIONS

We reserve the right continually improve the product. This entails the possibility that parts of this documentation might be out-of-date. You will find the latest information at:

www.bab-appmarket.de

This app is an independent product, with no legal ties to SONOS®. Neither **BAB** APP MARKET GmbH nor the developer of this app take any claim in the trademarks owned by SONOS®.

2 PLAY – FUNCTIONAL OVERVIEW

The PLAY Smarthome App allows SONOS music systems to easily be connected to the KNX® system. As a result, not only can the controls be fully integrated into the visualisation, but it is also possible to combine it with other services or control it using simple KNX® buttons.

2.1 HIGHLIGHTS

- Discovery (no fixed IP required)
- Browse libraries and start playback of any elements
- Playback control incl. shuffle and repeat
- Volume control incl. adjustable dimming duration
- Current playback display
- Library control functions can be localised
- 100 1 Byte bookmarks for playlists (selection automatically filled with the known playlists)
- 100 1 Byte bookmarks for Internet radio stations (selection automatically filled with the known stations)
- 50 communication objects (1 Byte) for dynamic grouping

3 THE INNOVATIVE, MODULAR SMARTHOME APP-CONCEPT FOR THE BUILDING AUTOMATION

The innovative, modular Smarthome App concept for building automation. The **APPMODULE** brings the innovative, modular Smarthome App concept into building automation. You can mix and match any of the diverse applications that are available to integrate third-party solutions. With these Smarthome Apps from the dedicated **BAB APPMARKET**, the **APPMODULE** becomes a tailor-made integration unit for your building automation.

HOW IT WORKS

**1****PURCHASE AN APPMODULE**

Purchase BAB TECHNOLOGIE's APP MODULE via a wholesaler.

**2****REGISTER**

Register your APP MODULE.
Each app is bound to one device.

**3****LOAD APPS**

Buy and download your favorite apps for your APP MODULE.

**4****INSTALL YOUR APPS**

Install your downloaded apps on your APP MODULE. You can start to configure your apps immediately.

Manufacturer of the **APPMODULE** [BAB TECHNOLOGIE GmbH](http://www.bab-tec.de)

Distribution of all Smarthome Apps for the **APPMODULE** [BAB APPMARKET GmbH](http://www.bab-appmarket.de)

Smarthome App developer [REAL SMART HOME GmbH](http://www.real-smart-home.de)

3.1 INFORMATION ABOUT THE APPMODULE

Please refer to the separate product documentation of the **APPMODULE** for a detailed product description and setup instructions.

http://www.bab-tec.de/index.php/download_de.html

Product variants:

The **APPMODULE** is available in three variants:

- **APPMODULE KNX/TP** – for stand-alone use on KNX/TP Bus
- **APPMODULE EnOcean** – for stand-alone use in the EnOcean wireless network
- **APPMODULE IP** – for use in an IP-based KNX installation (KNXnet/IP) or as extension for an EIBPORT

4 SMARTHOME APP INSTALLATION / UPDATE

Please proceed as follows to install a Smarthome App.

1. Open the **APPMODULE** web page: Enter <IP Address of **APPMODULE** > into your browser's address bar and press Enter. The **APPMODULE** web interface will appear.
2. Log in with your user credentials. Please refer to the **APPMODULE** documentation for login details.
3. Click on the menu entry "App Manager"
4. You are now on the page where already installed Smarthome Apps are listed. The list will be empty if no Smarthome Apps have been installed. Click "Install App" in order to install a new Smarthome App.
5. Now click on "Select App"; a file selector window will appear. Choose the Smarthome App »PLAY« and click "OK".

The Smarthome App »PLAY« must first be downloaded from the **BAB** APPMARKET (www.bab-appmarket.de).

After the message "Installation successful" appears, click "OK". You are ready to configure the Smarthome App.

To update a Smarthome App manually you have to proceed as follows

1. To update an already installed Smarthome App, click on the App icon in the "App Manager".
2. The detail view of the Smarthome App appears. Click on "Update App" to select the Smarthome App package and start the update. The update version must be downloaded from the **BAB** APPMARKET.

After the message "Installation successful" appears, click "OK". The Smarthome App has been updated. Your instance configurations will remain unchanged.

The Smarthome App can also be updated directly in the web interface. Without having to download the Smarthome App from the **BAB** APPMARKET first.

In the "App Manager" available Smarthome App updates are reported

Information

To configure the Smarthome App please use Google Chrome.

Note

Assign a fixed IP address to the individual SONOS devices in the DHCP settings in the router / server.

5 SMARTHOME APP SETTINGS

The PLAY Smarthome App allows SONOS music systems to easily be connected to the KNX® system. As a result, not only can the controls be fully integrated into the visualisation, but it is also possible to combine it with other services or control it using simple KNX® buttons.

5.1 INSTANCE

Information

The browser-session expires after a period of 60 minutes due to inactivity. Unsaved changes to the configuration will be lost.

As soon as the App is installed, you can create so called "Instance". An Instance is one of several objects of the same class.

In order to create an instance, click on the following symbol "Create Instance".

Instance Name:

Choose a name for this new instance.

Comment:

Insert a description what this instance does.

5.2 DEVICE

Device Selection and Device Status

Select the Sonos device you want to control and check whether it is accessible in your network.

Permissions for Group Configuration

Define to what degree this app instance is allowed to change the group configurations of your Sonos multiroom setup.

Note: a user who has access to the official Sonos smartphone app and to the Wifi used by your Sonos devices can of course act independtly of these restrictions.

Leave exisiting groups and create new groups: The device acts completely as if controlled with a Sonos Smartphone app. It can leave groups, e.g. to leave an ongoing party mode and play music individually. It can also start a party mode and bring other Sonos devices into its group.

Leave existing groups: If the device is in a group controlled by another Sonos device, it will leave that group as soon as a user starts playback of some audio source, so as to be able to fulfill the user's intention. However, this device cannot itself become master for party, i.e. control what other devices play.

No changes: If this device is currently playing music from a different device, then this instance cannot do anything about that (only the volume can still be set individually). Additionally, this device cannot assert control over other devices.

- Leave exisiting groups and create new groups
- Leave existing groups
- No changes

5.3 PLAYBACK CONTROL

Pause

Insert the group address for the Pause command. Default behaviour: 1 will pause playback, 0 will continue playback (Please keep that in mind when using physical switches). If the checkbox "Invert Pause Command" below is checked, 0 will pause and 1 will continue playback. Please note you currently have to start playback of an audio source first through other means (see playlist visualisation element or bookmarks). Sending an initial 0 will not just start playback when nothing was playing before.

Pause Feedback

Feedback group address for play state. Sends a 1 if the Sonos box is paused, 0 in all other cases. If the checkbox "Invert Pause Command" below is checked, 0 will indicate a paused Sonos Box while 1 applies to all other cases.

Invert Pause Command

If this option is active, the values on the "Pause" address will be interpreted differently. 0 will pause, and 1 will continue playback. This setting is e.g. necessary when integrating this app with Alexa.

Stop

Insert the group address for the Stop command. A 1 will stop playback. A 0 has no effect.

Stop Feedback

Feedback group address for play state. Sends a 1 if the Sonos box is stopped, 0 in all other cases.

Playback Feedback

Feedback group address for play state. Sends a 1 if the Sonos box is playing, 0 in all other cases. If the checkbox "Invert Playback Feedback Value" below is checked, 0 will indicate that the Sonos Box is playing, while 1 applies to all other cases.

Invert Playback Feedback Value

If this option is active, the values on the "Playback Feedback" address will be interpreted differently. 0 is sent when the Sonos box is playing, while 1 indicates all other cases. This setting is e.g. necessary when integrating this app with Alexa.

Previous / Next Track

Insert the group address for the command previous / next track. 1: next track, 0: previous track.

Previous / Next Playlist

Insert the group address for the command previous playlist / next playlist. 1: next playlist, 0: previous playlist. If currently no playlist is being played, any command will start the first playlist (first in alphabet)

Previous / Next Radio Station

Insert the group address for the command previous radio station / next radio station. 1: next radio station, 0: previous radio station. If no radio station is being played, any command will start the first radio station (first in alphabet)

Shuffle

Insert the group address for the shuffle command. 1: On, 0: Off.

Shuffle Feedback

Insert the group address for the shuffle feedback. 1: On, 0: Off.

Repeat All

Insert the group address for the repeat all command. 1: On, 0: Off.

Repeat All Feedback

Insert the group address for the repeat all feedback. 1: On, 0: Off.

5.4 VOLUME CONTROL

Absolute Volume

Insert the group address for the absolute volume (e.g. for sliders).

Relative Volume Control (EIS1):

Insert group address for the relative volume control (0: down, 1: up). The step level can be configured below.

Volume Step Level (1-10):

Insert an integer value which will serve as the step level of the relative volume control. The default value is 1.

Volume Start/Stop-Dimming (EIS 2 relative Dimming):

Insert group address for the relative volume control (for start/ stop dimmers).

Volume Step Dimming (EIS 2 relative Dimming):

Insert group address for the relative volume control (for step dimmers).

Volume Dimming Duration (1000-22000)

Insert the duration (in ms) that a complete dimming process (0-100) should take.

Note: Every volume step will be sent to the device individually. This internally calculates, how to increment in order to achieve the desired dimming duration while contacting the Sonos device every 220ms.

If you wanted to have the most precise dimming possible, which is sending an increment of 1 every 220ms, then you would need to set this value to 22000 (22 seconds).

Absolute Volume Feedback

Insert the group address for the absolute volume feedback.

Mute

Insert the group address for the mute command. 1: On, 0: Off.

Mute Feedback

Insert the group address for the mute feedback. 1: On, 0: Off.

5.5 METADATA

Text for Internet Radio State »Connecting«

As your SONOS System connects to a stream, the metadata for artist and title might shortly appear as »ZPSTR_CONNECTING«. You can define a more user-friendly replacement message here.

Text for Internet Radio State »Buffering«

As your SONOS System loads a stream, the metadata for artist and title might shortly appear as »ZPSTR_BUFFERING«. You can define a more user-friendly replacement message here.

Now Playing: Artist

Insert the group address for the information about the currently playing title.

Now Playing: Title

Insert the group address for the information about the currently playing title.

Now Playing: Album

Insert the group address for the information about the currently playing title.

Now Playing: Station Name

Insert the group address for the information about the currently playing internet radio station

5.6 SOURCE SELECTION AND PLAYBACK

Play SONOS Playlist:

Insert the group address with which to start playback of specific playlists. For details see the tooltip of »Assign SONOS Playlist«.

Assign SONOS Playlist:

With this feature, you can assign integers to up to 100 playlists. If you then send the integer on a specific group address, the SONOS device will start playing the corresponding playlist.

Desired Playlist:

The playlist to be played...

Corresponding Integer:

...if this number is sent as a telegram value.

Play "My Radio Station":

Insert the group address with which to start playback of specific radio stations. For details see the tooltip of »Assign Radio Station«.

Assign "My Radio Stations":

With this feature, you can assign integers to up to 100 of the radio stations that can be found under »Radio by TuneIn« > »My Stations«. If you then send the integer on a specific group address, the SONOS device will start playing the corresponding radio station.

Desired Station:

The station to be played...

Corresponding Integer:

...if this number is sent as a telegram value.

Play Line In/TV

Insert the group address with which to select a Line In input as source. For details see the tooltip of »Assign Line In/TV«.

Assign Line In/TV

With this feature you can assign integers from 2 onwards to Line In or TV inputs of all Sonos devices in the network with Line In or TV inputs. If you then send the integer on a specific group address, the Sonos device will start playing audio from the corresponding Line In or TV input. The value 1 is reserved for selecting the Line In or TV input of the zone master device. Send a 0 to return to the previously played source. Please note that the zone master device must have a Line In or TV input for this to work. Also, whenever a TV input of a device which is a member in a group is selected this device will automatically become the group master.

Desired Line In/TV input

The Line In or TV input of a Sonos device device to be played...

Corresponding Integer

...if this number is sent as a telegram value.

Line In/TV Feedback

Insert the group address Line In/TV feedback address. A 1 indicates that the Line In or TV input is currently selected as source.

Play Master:

Insert the group address with which to join specific other SONOS devices as zone member. For details see the tooltip of »Assign Master«.

Assign Master:

With this feature, you can assign integers to up to 50 other SONOS devices. If you then send these integers to the corresponding group address, the SONOS device controlled by this instance will join the group of the other device.

Example: create an instance for the SONOS device in your bathroom, assign the SONOS device in the kitchen to the number 2, send a 2 from an EIS14 switch in the bathroom, and the SONOS device in the bathroom will play what is playing in the kitchen. Sending a 0 will end the connection.

Desired Master:

The SONOS device, whose group the SONOS device of this instance shall join...

Corresponding Integer:

...if this number is sent as a telegram value. Note: 0 is a reserved value. Upon receiving a 0, the device will leave any group and become its own master.

5.7 VISUALISATION ELEMENTS TO BROWSE SOURCES AND START PLAYBACK

Playlist Row 1 (EIS 15 14 Byte text):

Insert the group address for the information of the element in row 1 of the playlist visualization.

Playlist Row 2 (EIS 15 14 Byte text):

Insert the group address for the information of the element in row 2 of the playlist visualization.

Playlist Row 3 (EIS 15 14 Byte text):

Insert the group address for the information of the element in row 3 of the playlist visualization.

Playlist Row 4 (EIS 15 14 Byte text):

Insert the group address for the information of the element in row 4 of the playlist visualization.

Select Playlist Element (EIS 14 0-255):

Insert the group address with which to select the playlist element. Values 0 to 3 select the element from the corresponding row.

Scroll Playlist (EIS 1):

Insert the group address with which to scroll up and down in your playlist.

Text for Playlist Element »Play All«

When you are browsing the music sources via a playlist visualization element, this app will add a »Play All« item in certain cases, e.g. to play all songs in a playlist. Here you can set the text of this element in your language.

5.8 ANNOUNCEMENT MODE

Announcement Mode (EIS 14 0-255)

Insert the group address with which to activate Announcement Mode. Sending "1" will cause all other Sonos devices in your network to join the device controlled by this instance, which will then commence playing a pre-defined announcement playlist. Once the announcement playlist is finished, all Sonos devices will automatically return to their former zone configurations. You can end Announcement Mode prematurely by sending a "0". Both announcement playlist and behaviour of the Sonos devices after Announcement Mode can be specified below.

Announcement

With this feature you can assign integers from 1 to 100 to announcements. Options for announcements include playlists, audio files generated by the "Speech" App, as well as Line In or TV inputs. For the latter case, the Sonos speaker (or at least one Sonos speaker in the group) must have a Line In TV input. Please note that playing the TV input of another device is going to change that device's role to master automatically. Furthermore, Announcements Mode can in this case only be ended manually by sending a "0" to the group address for "Announcement Mode" or by sending either a pause or a stop command.

Announcement Content

The announcement content to be played...

- Selection playlist
- Selection „Speech“ audio file

Corresponding Integer (0-255)

... if this number is sent as a telegram value.

Enable Announcement Volume

Enable announcement volume. The announcement volume value can be configured below.

Announcement Volume (0-100)

Insert an integer value between 0 and 100. If announcement volume is activated, the volume of all Sonos devices will be changed to the inserted value at the beginning of the announcement.

After Ending Announcement Mode

Specify the behaviour of Sonos devices as all previous zone configurations have been restored after Announcement Mode. "Revert to previous state" includes source as well as playback status and, in case of playlists, track and timestamp.

- Play nothing
- Revert to previous state

5.9 MISCELLANEOUS

Party Mode

Insert the group address with which to toggle party mode (1: begin Party Mode, 0: end Party Mode). In Party Mode, all other Sonos devices in your network will join this device and play whatever it is playing.

Party Mode Feedback

Insert the group address for the party mode feedback. A "1" indicates that all Sonos devices in the network are in Party Mode, while a "0" represents all other cases.

After Ending Party Mode

Define the behaviour of slave group members after party mode has been ended, i.e. when group has been dissolved.

- Play nothing
- Continue playing the own playlist

Device Connection Status

Insert the group address for the connection status to the Sonos device controlled by this instance (0: no connection to the device, 1: connection established)

6 ATTACHMENT

function	EIS type	DPT	typical function	typical values	data	identifier
PriorityPosition	EIS1	DPT 1*	Wind alarm	1=high and inhibit	1 Bit	1-bit
Switch	EIS1	DPT 1*	Light switching	0=Off; 1=On	1 Bit	1-bit
DimControl	EIS2	DPT 3*	Dimming	0=Off; 1=On xxx=relative dimming 0-255=absolute dimming	1Bit 4Bit 8Bit	3-bit controlled
Time	EIS3	DPT 10*	Time	Hhh:mm:ss	3 Byte	Time
Date	EIS4	DPT 11*	Date	dd:mm:yyyy	3 Byte	Date
Value	EIS5	DPT 9*	Value	[-671088.64 ... 670760.96]	1Byte	2-byte float value
DimValue	EIS6	DPT 5*	Percent	0-100%	1Byte	8-bit unsigned value
DriveBlade Value	EIS6	DPT 5*	Position value	0-100%; 0-255	1Byte	8-bit unsigned value
DriveShutter Value	EIS6	DPT 5*	Position value	0-100%; 0-255	1Byte	8-bit unsigned value
Position	EIS6	DPT 5*	Control value Heating	0-100%; 0-255	1Byte	8-bit unsigned value
DriveMove	EIS7	DPT 1*	Move shutter	0=up 1=down	1Bit	1-bit
DriveStep	EIS7	DPT 1*	Adjusting the slat blind	0=up; 1= down; 0 or 1 during movement=stop	1Bit	1-bit
PriorityControl	EIS8	DPT 2*	Priority	0,1 switch; 3=forced off; 4=forced on	2Bit	1-bit controlled
FloatValue	EIS9	DPT 14*	IEEE	Floating-point value	4 Byte	4-byte float value
Counter 16bit	EIS10	DPT 7*	Counter 16 bit	0 - 65.535	2Byte	2-byte unsigned value
Counter 16bit	EIS10	DPT 8*	Counter 16 bit with sign	-32.768 - 32.767	2Byte	2-byte signed value
Counter 32bit	EIS11	DPT 12*	Counter 32 bit	0 - 4.294.967.295	4Byte	4-byte unsigned value
Counter 32bit	EIS11	DPT 13*	Counter 32 bit with sign	-2.147.483.648 ... +2.147.483.647	4Byte	4-byte signed value
Access Control	EIS12	DPT 15*	Access control	Card number	4Byte	Entrance access
Char	EIS13	DPT 4*	ASCII characters	Character	1Byte	Character
Counter 8bit	EIS14	DPT 5*	Value	0 - 255	1Byte	8-bit unsigned value
Counter 8bit	EIS14	DPT 6*	Value with sign	-128 - 127	1Byte	8-bit signed value
String	EIS15	DPT 16*	String	max. 14 characters	14 Byte	Character string

EIB/KNX devices exchange fixed prescribed data formats with each other. These are defined in types. The old designations of the types are EIS (EIB Interworking Standard)
The new designations are DPT (Data Point Type)