



Application Note	06-0001-A
Product	mControl v1 (Home Edition)
Subject	Getting Real-time Status of SwitchLinc Devices

Purpose

This document provides instructions on how to set-up to receive real-time information from these devices into mControl.

The following procedure will allow for near instantaneous status information of SwitchLinc paddle presses. **mControl does not use polling to ensure that there is no additional traffic on the INSTEON bus.** (Generally speaking, Embedded Automation believes that polling causes unnecessary traffic which may conflict with device to device messaging – we believe that event-based messaging is best.)

The steps required to enable this functionality are:

1. Download the TimerCoreApp (v1.06) to the 2414U using the SALadDownloader application

SwitchLinc devices will only send paddle press changes to devices linked to it. As shipped from the factory, PowerLinc devices can not be linked to SwitchLinc devices due to limitations in the “SALad core application”, a software application, which manages the interface between the INSTEON connection and the computer.

First, to enable this functionality, a new SALad core application must be downloaded to the PowerLinc. In the third step, we’ll actually establish this link.

2. Link the SwitchLinc to the PowerLinc

As shipped from the factory, PowerLinc adapters can send messages to SwitchLinc devices and “hear” the result.

However, if any other 3rd party device, say a ControlLinc sends a message to a SwitchLinc device, the PowerLinc can not hear the SwitchLinc's response – this is a security feature of INSTEON.

To enable the PowerLinc adapter to hear the SwitchLinc device's response to a 3rd party command, the SwitchLinc's address must be known to the PowerLinc, that is, the address must reside in the PowerLinc's link database.

Fortunately, mControl automatically will create this entry upon creation of a corresponding device.

3. Link the PowerLinc to the SwitchLinc

Now, the SwitchLinc has to link to PowerLinc, to know that it must send messages to it if a paddle press occurs. Currently, this is a manual procedure.

Requirements

1. **mControl v1.31A** – please uninstall any previous version, then install v1.31A of mControl.
2. **2414U INSTEON PowerLinc device with firmware Rev 1.4 or Rev 1.6**
3. **SALad Core Downloader v1.0.2**
4. **TimerCoreApp v1.06 downloaded to the PowerLinc** (refer to Quick-Start Guide: Resetting the PowerLinc device).
5. **INSTEON SwitchLinc (2476D or 2476S)**. *This document is also relevant to related devices like the KeypadLinc (2486D).*

Instructions

1 - Download the TimerCoreApp (v1.06) to the 2414U using the SALad Downloader application

As shipped from the factory, the 2414U PowerLinc Adapter can not “hear” messages originating from SwitchLinc. As a result, mControl can not show any status changes initiated by paddle presses on SwitchLinc devices.

The following steps allow the SwitchLinc to link to a PowerLinc by loading new software within the 2414U to allow it to register as a slave during an enrolment process.

1.1 – Download the SALad Downloader Application

Download the SALad Downloader from Embedded Automation’s website:

<http://www.embeddedautomation.com/SetupSALadDownloader-v1.0.2.exe>

This application is used to reset or download SALad software to the 2414U adapter. (The SALad software extends the functionality of the 2414U adapter.)

If you have a previous installation of the SALad Downloader, please confirm it is v1.0.2. Previous versions will not work with the v1.6 of the 2414U adapter.

1.2 – Install the SALad Downloader Application

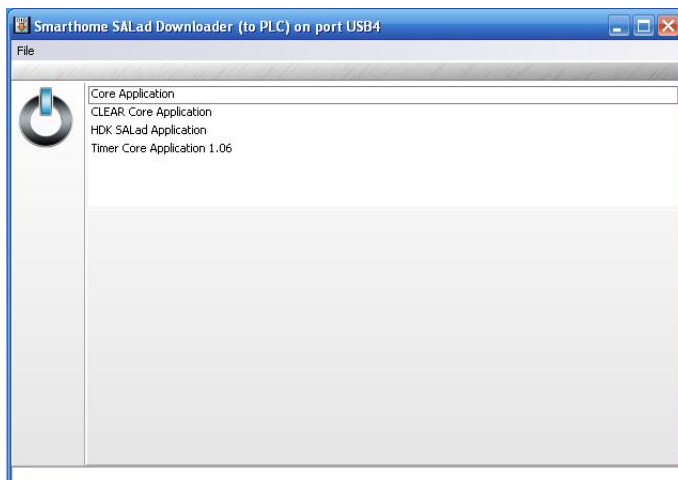
Run **setupsaladdownloader.exe** and proceed with the installation of the app

Once the application is installed, you should see an icon on your desktop with the name “Smarthome SALad Downloader” such as the following



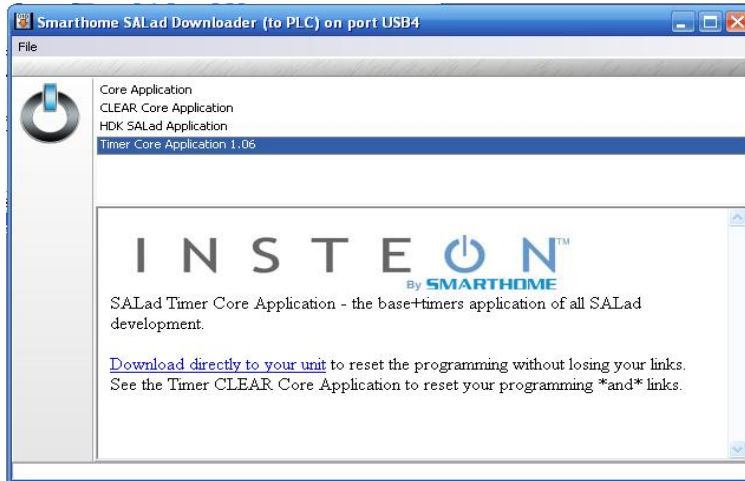
1.3 - Download the TimerCoreApp (v1.06) to the 2414U

Double click on the “Smarthome SALad Downloader” application icon to run the app. You will see the following page.

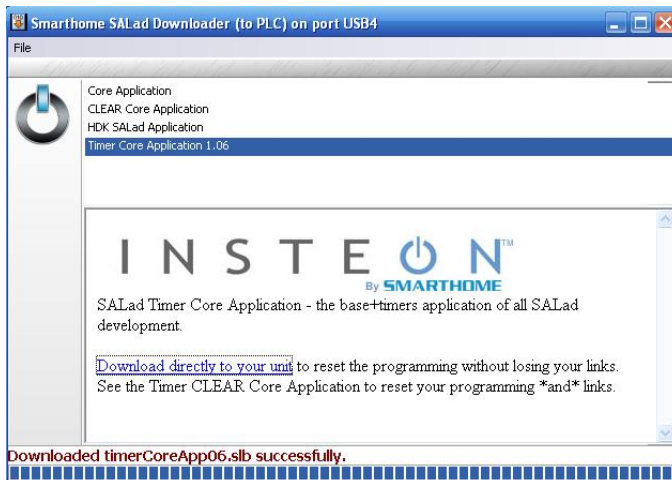


Please ensure that the PowerLinc adapter is connected to the computer (plug the USB link into the USB port).

Click on the option “Timer Core Application 1.06”. You will see the following:



Click on “[Download directly to your unit](#)”. Once TimerCoreApp is downloaded, you will see the following:



2 – Link the SwitchLinc to the PowerLinc

To allow the PowerLinc, and hence, mControl, to see any responses from the SwitchLinc to commands initiated by 3rd party devices, you must establish a link between the SwitchLinc to the PowerLinc. PowerLinc adapters can only “hear” these responses if they “know” the address of the SwitchLinc – that is, the address must be within the PowerLinc’s link database. (This is a security feature of INSTEON – basically, allowing the PowerLinc to hear messages of known devices.)

To make it easy, when you add a SwitchLinc in mControl, mControl automatically registers this device within the 2414U PowerLinc’s link database. Specifically, mControl automatically registers a link from the 2414U (master) to the SwitchLinc (slave).



The screenshot shows the mControl interface for adding a device. The title is "ADD DEVICE" and it is page "1 of 2". There are navigation buttons: "Back", "Home", "Save Changes", and a "Main" tab (selected) with an "Advanced" tab. The configuration fields are:

- Name: switchlinc 2.0
- Adapter: 2414U-INSTEON
- Module: 2476D
- Insteon Address: 00.10.98
- Image: Lamp

NOTE: This however is not sufficient to allow the 2414U, hence mControl, to see any messages initiated by the SwitchLinc. For example, if you toggle ON at the SwitchLinc. To do this, you must make a link from SwitchLinc (master) to the PowerLinc (slave).

3 – Link the PowerLinc to the SwitchLinc

To allow the PowerLinc, and hence, mControl to see any messages initiated by a SwitchLinc, you must establish a link from the PowerLinc to the SwitchLinc.

3.1 - Enter Linking Mode for the SwitchLinc

Press and Hold the SET button on the SwitchLinc device for about 10 seconds – then release. The LED will start blinking to indicate that it is in “Linking Mode” and if you have a light attached, it will also blink once.

3.2 – Link the PowerLinc to the SwitchLinc

Select the device you would like to link (in this case, the PowerLinc). Press and Hold the SET button located in the side of the PowerLinc for about until the LED of the SwitchLinc stops blinking (about 3 – 5 seconds) – then release. This indicates that the PowerLinc is now linked and the SwitchLinc is out of the “Linking Mode”. The following image illustrates the location of the SET button on the PowerLinc.



mControl Functionality and Limitations

Please note the following mControl capabilities:

- All ON, OFF, Fast ON and Fast OFF changes initiated by the SwitchLinc will be heard by mControl – this will reflect in the device status and macro trigger functionality
- mControl now supports Macro Triggering using SwitchLinc ON, OFF, Fast ON and Fast OFF.

Please note the following limitations:

- Quick button presses to dim and brighten SwitchLinc devices may not be seen. Empirically speaking, if the paddle is held down for <0.5seconds, insufficient information is sent to mControl and hence, status information is not updated. However, a button is held down for >0.5 seconds, sufficient information is sent to mControl and status information is available.
- Single click ON (for example, to a preset dim value) may not be instantaneous. Insufficient information is available to determine the actual brightness level, so additional communication is required. This may take ~1 second to complete.

Appendix A: Resetting SwitchLinc Devices

Resetting the SwitchLinc device should be performed on the following conditions:

1. When the SwitchLinc cannot be put into “Linking Mode”. For example, after pressing and holding the ON button for 10 seconds to put the SwitchLinc into “Linking Mode”, the LED will blink twice and go back ON instead of blinking continuous to indicate that the device is in “Linking Mode”
2. When the link has been made previously but the status of the device on the GUI does not change according to the manual (ON/OFF/DIM/BRIGHT) events.

NOTE: Resetting the SwitchLinc device will clear all the previous links that were made to this device.

The steps to reset the SwitchLinc are as follows:

1. Pull the SET button of the device all the way out until the LED of the device turns OFF. The following image shows the location of the SET button.



2. Push the SET button all the way in and hold for 3 seconds – then release.
3. After 3 seconds the light attached to the SwitchLinc will turn ON fully and the LED on the SwitchLinc will also turn ON.

Customer Support

If you require further assistance in mControl usage, please contact Embedded Automation at support@embeddedautomation.com

If you require further assistance related to SwitchLinc, KeypadLinc and manual linking INSTEON devices, please call an INSTEON support personnel @ 1-800-SMARTHOME (800-762-7846)