

## Troubleshooting ThermaSync® Defroster Controls Connecting to Switch Boss

The procedure for networking multiple Clear View defrosters for single switch operation can be confusing. This Bulletin provides the background needed to install and troubleshoot these installations.

ThermaSync Defroster controls can be set up for single switch activation of up to four Clear View defrosters. Ideal for defrosting multiple windows at the same time, single switch operation is handy in tractor cabs, cranes, snow plows and other applications.

To implement single switch networking, plug the ThermaSync connector into the Switch Boss network box after configuring each of the ThermaSync defroster controls.

### ThermaSync Defroster Controls

Before networking the ThermaSync controls and Clear View defrosters using the Switch Boss, some background on the controls is important.

- Only 2812 and 2824 ThermaSync defroster controls are compatible with the Switch Boss network box. The 2812 has a green label and the 2824 a red label.
- Power modulation, automatic timing and networking options can be set on the 2812 and 2824 ThermaSync defroster controls using jumpers. These settings are normally done at the factory prior to shipment.
- Each Clear View defroster is paired with its own ThermaSync Control based on the DEFROSTER'S power modulation requirement. The control and the defroster are paired and designed to work together. All defrosters with the same part number have the same modulation.
- ThermaSync controls **MUST BE CONFIGURED** individually to work with Switch Boss.
- It is easy to mix up the controls and defroster when more than one defroster is installed at the same time. Make sure the modulation is correct for the defroster it powers.

Example: 1212-1624-L has a requirement for 50% modulation and its ThermaSync Control **MUST** be set to 50%. Lower modulations will result in poor defroster performance, higher modulations can cause burn out.

### ThermaSync Switch Boss

Switch Boss has four connection points which allows it to control up to four Clear View defrosters. Two, three or four defrosters can be networked to a single Switch Boss for single switch activation.

## ThermaSync® Controls Compatible with Switch Boss

### 2812 - 12 Volt M Series

Green label



12 Volt

### 2824 - 24 Volt M Series

Red label



24 Volt

## ThermaSync Switch Boss Network Box



Switch Boss with Master CT and Modules.  
Network up to four defrosters for single switch operation.

The  
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## ThermaSync Control Configuration

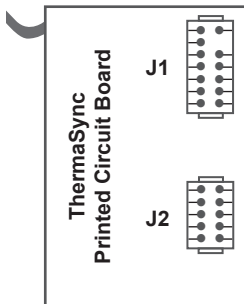
This configuration is normally done at the factory but can be done by setting the jumpers on the ThermaSync Printed Circuit Board.

### THERMASYNC CONTROLS MUST BE CONFIGURED TO WORK WITH SWITCH BOSS

One ThermaSync Control connected to Switch Boss must be configured as the MASTER. Up to three other controls can be configured as MODULES for use with Switch Boss. ANY 2812/2824 ThermaSync can be configured as a Master or Module.

#### Control Configured as Master

The Master controls function is to set the shut-off time for ALL the defrosters connected to Switch Boss. Any 2812/2824 control can be configured as the Master by setting the jumpers on J1.



#### Controls Configured as Modules

Module controls also must be configured using jumpers and the ThermaSync jumper guide. Up to three controls can be configured as modules.

#### Defroster Time

A second jumper array (J2) on the printed circuit board establishes the time the defroster is ON. All ThermaSync Controls connected by Switch Boss will shut off at the time MASTER (CT) control.

No timer jumpers are needed on the ThermaSync controls configured as a MODULE. If used with the Switch Boss the Master Control will override any time settings on the MODULE controls regardless of their jumper settings on J2.

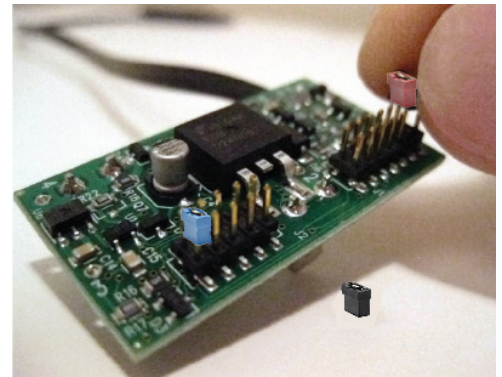
## Troubleshooting Master/Module Installations

The first step in setting up or verifying Switch Boss and ThermaSync single switch operation is to review the control's jumper settings.

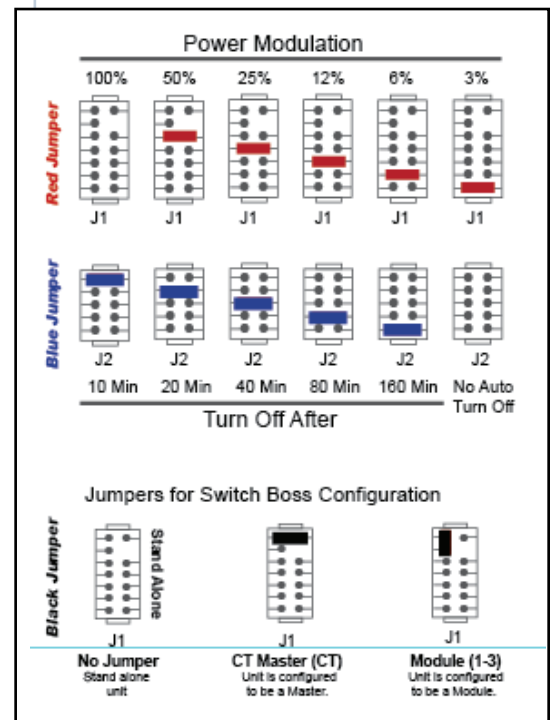
1. Check the jumpers for modulation setting. Modulation is set in the control for the specific defroster powered. Check that this modulation setting matches the defroster. Defroster modulation can be found in Attachment Two instructions.

**CAUTION: DO NOT CHANGE POWER MODULATION.** Running defrosters at higher than indicated modulation can cause burn out. It is NOT normally necessary to change the modulation setting.

2. Check the gender of the control  
The MASTER control should be plugged into the CT position on the Switch Boss. Use the jumper guide to determine the jumper settings for MASTER and MODULE configuration.
3. Check that the control is plugged into the correct port on the Switch Boss. See the Switch Boss instructions or the illustration at right.
4. Check the time on the MASTER  
The Master sets the TIME the defroster is on for all the controls attached to the Switch Boss.

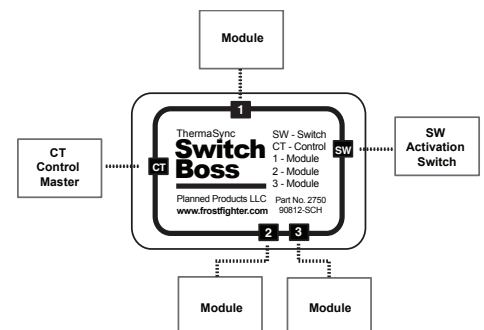


Start configuring the ThermaSync defroster controls by locating the jumpers on the control.



Jumper guide for ThermaSync Controls showing the jumpers for each function. Not all controls have color coded jumpers.

## Switch Boss Network Box



Switch Boss with Master CT and Modules