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113 Hope Road
Cranberry Twp. PA 16066
Phone: 866. 683. 1832
Fax: 724. 432. 3387
Web: www. automatedshadeinc.com

Somfy RTS Trouble Shooting Guide

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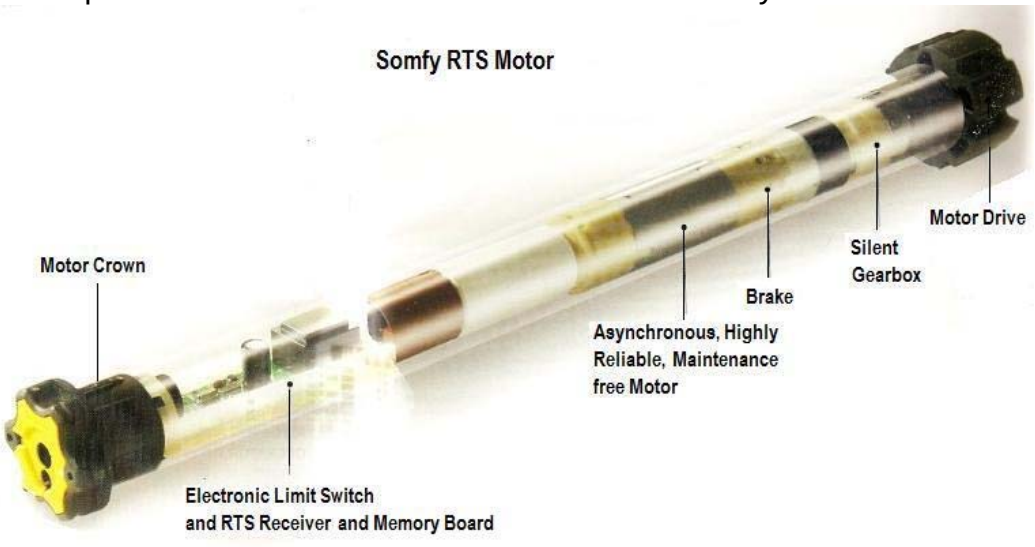
Updated: 4-19-2012

Understanding How RTS Motors Work

Somfy RTS (**R**adio **T**echnology **S**omfy) is a proprietary RF (Radio Frequency) wireless communication protocol that is used for communicating between all Somfy RTS sending and receiving devices. ***Sending devices*** are the Telis Family of remote controllers, DecoFlex wall switches, Chronis Timers, Sun Sensors and Automation control units such as the URTSII and dry contact RTS interfaces. The ***Receiving devices*** are the motors in the blinds or drapery tracks. All receiving devices have an antenna which receives the RTS signal. RTS operates on a narrow bandwidth that is less susceptible to interference (433.42 MHz). The RTS system also features 16 million rolling codes to provide for maximum security and prevent you from operating your neighbor's shades.

Each RTS motor stores the Upper and Lower travel limits on a memory board located inside the motor when the motor is initially programmed. After the motor is initially programmed, a preferred position can also be stored or deleted in memory.



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The RTS motor memory can also store and remember up to twelve different transmitter channels or sending units. In rare instances, twelve different transmitter or channels can be exceeded. For example, if the motor is programmed to respond to 3 different sending units, a remote, a wall switch and a timer, and the motor is a member of 4 groups, then 12 channels are used. If a sensor is then added at a later date, a previously recorded channel will be lost and replaced with the new one.

Thermal Protection for Motors

All Somfy motors have a thermal sensor to protect the lifespan of the motors and to prevent overheating. As a guide, the motors will cease to function once it has been continuously used for about 3-4 minutes. When the blind or awning stops functioning, let the motor cool down for about 15-20 minutes before trying to activate the blind again.

Understanding How RTS Programming Works

Since all the programming and limit setting instructions reside on the memory board inside the motor (See How RTS Motors Work), you can think of the Remote Control, DecoFlex Wall Switch, Sunis Sun Sensor, etc as a simple transmitter or sending unit. **If you are attempting to reset a motor to its Factory Mode Settings, you need to fully understand how the system works before doing so or face hours of aggravation and frustration.**

Programming Mode - Factory Mode Setting

Programming Mode or Factory Mode are terms that are used interchangeably and mean the same thing in regard to this text. Returning a motor to factory mode will erase all previously recorded limits, transmitters and channels.

Important Note: Power should ONLY be connected to current shade being programmed. All other shades, if there are any, should be disconnected from their respective power while programming.

All RTS motors, when initially made at the factory, have no programming stored in them and are shipped with no internal limit settings or transmitter ID's. Once a motor is installed in a shade or window covering, the motor needs to learn how far it should travel in each direction (Up and down for Shades or Side to Side for Drapery Motors). These travel limits are referred to as the *Upper and Lower Limits*. Once these travel limits have been establish and memorized, the motor needs to record what Sending Unit ID and Channel it will listen to. Once the motor limits and Transmitter ID are assigned and memorized, exit Programming Mode and the motor is ready for operation. Upper and Lower Limit adjustments can be refined and additional transmitter and channels can be assigned or deleted in **User Mode** (see below).

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For Detailed instructions in resetting a particular motor to Factory Mode, see the detailed instructions for that exact motor. A "Quick Programming Guide for all RTS Motors" can be downloaded for generic programming instructions, however you might find that in older RTS motors, the sequence of steps may vary, so it is best to use the programming instructions for your particular motor.

User Mode

Once the initial Factory programming has been completed (see Programming/Factory Mode above) simple adjustments can be made such as adjusting the Upper or Lower Travel limits, Adding or deleting Transmitters, switches, sensors, and channels or setting a preferred or "MY" position.

It is a good practice to disconnect the power from all other shades to ensure that you are talking or communicating with just one motor. Remember that RTS is a Radio Frequency system and is omni-directional (RF signal travels 360°) and the RF signal travels quite a distance 50+ feet in most instances. If you have more RTS shades in other areas of the space, it is a good practice to disconnect power to them while in user mode.

RTS Range Problems

The published range for all Somfy sending devices in the **United States** is approximately 75Ft of open space. This range decreases when the RF signal needs to penetrate walls, ceilings and floors or encounters RF interference from other RF devices located near or in the vicinity of both the sending and receiving units. If your system has worked consistently for a period of time and then starts to work intermittently, change the batteries in the sending units and the motors if they are battery operated. Federal FCC requirements limit the power output of the sending units to 1 Watt of power.

If you are experiencing problems during the initial setup of the system, the offending shade(s) are probably out of range of the sending unit. If the offending shade works with a remote controller located close to the unit but does not work or operates intermittently from a wall switch or sensor located in another room then purchase a ***Signal Repeater***. Place the repeater half way between the sending unit and the furthest shade motor.

RF Interference Problems

Examples of RF interference include cellular phones, RF house phones, LED and plasma TV's, microwave ovens, fluorescent lights, lighting dimmers, computers, short wave radios, AM and FM radio signals among many other sources. Since many sources of RF interference exist and are difficult to trace to the originating sources or eliminate, try these simple steps:

1) Replace the batteries in the sending unit and battery wand if the shade motor operates on battery power.

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2) Make sure the motor antenna is not touching any metal bracketing, window trim or power source wiring. If the antenna is touching any metal or wiring, gently bend the antenna away. If the antenna cannot be located away from the metal, insert the antenna into a sipping straw and tape the straw to the antenna.

3) Slightly move the antenna on the motor by gently bending the antenna in a different direction. * Use Scotch Tape to hold the antenna in a different direction of away from any metal. **Note:** Just slight movements in the antenna position can have a dramatic impact on reception. If using an URSTII to send commands, slightly adjusting the URTSII antenna can solve the problem.

4) Switch the offending motor to the other side of the shade. This will require taking the motor out of the tube or drapery track and moving it the opposite side and will require erasing all limits and reprogramming the motor. See the instructions for your type of motor and how to reset the motor. When programming a motor, provide power only to the motor being programmed and make sure to disconnect power from all other motors!

5) If using a wireless DecoFlex wall switch, make sure the switch is not located in a metal gang box. **Note:** Older DecoFlex Wall switches (Pre-2011 with no wire antenna sticking out the back) can have the signal range increased by laying a thin gauge wire 24-26 AWG on the back of the circuit board and letting a 3-6” wire tail stick out the back of the switch.

MY Button Problems

The **MY** button on the Telis family of remote controllers serves two functions:

1) It acts as a STOP button when the window covering is in motion.
STOP Button: When the window covering is ***set in motion*** *(by briefly pressing either the Up or Down buttons)*, pressing the MY button will simply stop the window covering.

2) It acts as a PREFERRED SETTING button when the window covering is at rest.

PREFERRED SETTING button: Pressing the MY button when the window covering ***is at rest*** will move the window covering to the preferred setting ***but only if*** a preferred setting has been already programmed.

You can really think of a preferred setting as a certain position that you find yourself opening your window covering to every day. For instance, if you find yourself opening or closing your bedroom blinds half way or three quarter way open or closed every day, then this is really a preferred setting or a favorite or “MY” position that you like your window coverings set at hence the “MY” button. The motor in your window covering can remember or be programmed for only ***one preferred setting***. You can program or change this preferred setting with simple programming done right on the remote controller.

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Programming or recording a preferred "MY" Button setting: **(*See Important Note BELOW before continuing)**

1) Simply move the window covering (by pressing the Up or Down buttons) to where you would like your favorite position to be then briefly push and release the MY/Stop button and the window covering will now be at rest or not moving.

2) Press and **hold down** the "MY" button **until** the window covering jogs (a brief movement of the window covering) which should take about 5 seconds then release. Once the window covering jogs, the preferred setting is now recorded in memory. To test your new setting, move the window covering out of its current position by briefly pushing the Up or Down button and let it move for a few seconds then briefly push MY button to stop it. Now that the window covering is at rest, briefly push and release the MY button. The window covering should travel to the preferred position that you just recorded.

Deleting a preferred "MY" Button setting: **(*See important note below before continuing)**

1) Briefly press the MY button to move the window covering to the existing preferred position.

2) Press and hold down the MY button **until** the window covering jogs (a brief movement of the window covering). The previously recorded preferred setting is now deleted. To set a new preferred position, see above.

MY Button Problems

*** Important Note: Setting / Deleting preferred position**

If more than 1-Motor is on the ***same channel*** when setting or deleting a preferred position, provide power to only the motor that is being programmed.

Providing power to only the motor being programmed will allow you to talk to just a single motor and allow you to precisely move the shading being programmed to the exact location that you would like the preferred setting to be. Once the preferred location is set, leave the shading in that location so that the next shade in the grouping can be moved to the same reference point, disconnect its power and move onto the next shading that will receive the same preferred setting and so on if multiple shades are programmed onto the same group channel. Once all preferred settings are programmed, plug in power to all the shadings and test the new MY setting. If adjustments need to be made then disconnect power to all other shades in that group except the one that needs adjusted.

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MY Button Settings for Hunter Douglas Silhouette© Shadings

Programming Silhouette© or other types of sheer shadings that tilt to open can be accomplished easily by using the MY button feature. The initial programming should be setup as follows:

Pressing the Down button: Lowers the shading to the full down with louvers in the tilted fully open position.

Pressing the MY button: Tilts the louvers to the fully closed position with shade in full down position.

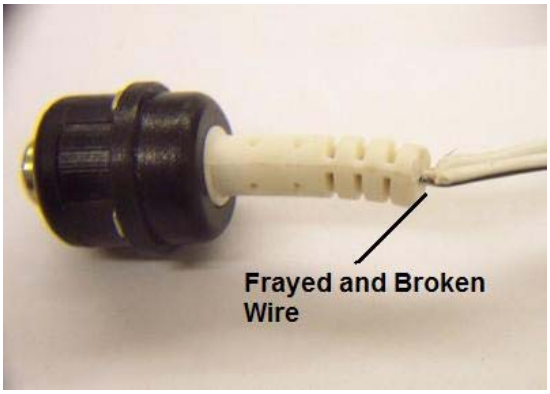
Pressing the Up button: Fully raises the shade.

Through many years of installing these sheer type of shadings and asking customers how they use their shadings, we have obtained a general consensus that most people leave their Silhouette© type shadings in the full down position and just tilt the louvers for light control and privacy. Since the most common method of using the sheer type shadings is just to use the tilting feature, we can program the motor for a simple button press to go to that preferred position. Having the shades operate in the above programmed scenario will also allow for simple group tilting actions and facilitate automation control for third party integration.

Power Issues - Faulty Battery Wand/Tubes

If your shade uses a battery tube for power, thoroughly inspect the tube spring for discoloration and power leads for any breakage or shorting in the power lead wire.

Picture of a good and shorted out battery tube spring.



Picture of broken/shorted battery power lead wire

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Take care when handling the battery tube!. Here are some tips:

1) Make sure batteries are loaded in the tube correctly. See the diagram on the tube for reloading instructions.

2) When loading batteries in the tube, hold the tube ***sideways*** and PUSH the batteries into the tube. If the tube is held vertically (up & down), the batteries fall into the tube hitting against one another and WILL damage the seals on the batteries and ultimately lead to battery failure.

3) Make sure all batteries are pointed the same way.

4) Do not drop the tube. Dropping the tube can damage the battery seals and break or short out the wiring.

5) If you test the batteries with a tester and find that the tester reads a good battery, replace ALL of them anyways just to see if this is the problem. Some testers are cheap and provide bad readings.

6) If you changed the batteries in the tube, reconnected the battery tube to the motor and the motor does not respond or reacts differently than before see below

Reversing the Direction of a Motor

To reverse the direction of a motor *that has already been programmed*, you must return the motor to factory mode (See above) which will erase all travel limits and previously recorded transmitters…so basically start all over! This may be a lot of work if the motor is part of a large system with many sending units and sensors. If it is part of an integrated automation system, the motor will have to be programmed exactly as it was before in order to respond to unique commands sent from the automation system.

Changed Batteries and Motor Quit Working

Changing the batteries in the CT32 or LT30 motor will sometimes send the motor back to factory mode or worse. Typical symptoms are:

1) Motor does not respond at all and is dead.
2) Motor works intermittently or only moves when the Up or Down button is pressed
3) Only moves about 3” or jogs when button is pressed.
4) Won’t quit running. (LT30 Motors - Check to make sure the white plastic crown that holds the motor in the end of the tube is not spinning. The crown for this motor has magnets embedded in the plastic that this motor uses for limit reference and encoding)
5) I reset the Limits but motor does not remember them.

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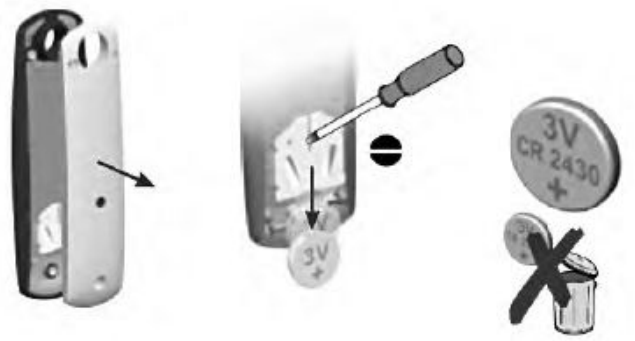
If your motor exhibits any of these symptoms, the motor control board is fried and the motor will have to be replaced. Contact your Somfy Dealer for possible warranty replacement.

We have recently experienced a rash of ST30 and ST50 problems of the same variety… (February 2011 to present April 2012). I hope this is just a blip in quality control however it has now been a consistent problem for us. If you have purchased a motor from us, we will replace it at no charge. Please contact us and provide your order number.

Replacing Telis Remote Battery

1) Using a small screwdriver loosen the screws on the backside of the remote control and remove the back cover.

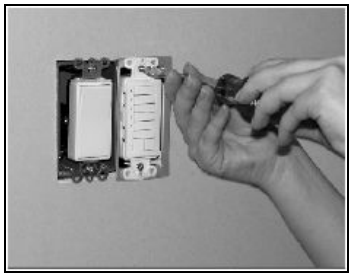
2) Replace with one 2430 Lithium 3V battery.



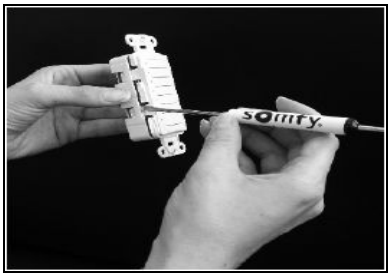
The battery in the Telis series remotes has a life of around 5 years depending on daily usage. Dropping the remote control can damage it. If it worked before you dropped it or stepped on it then you probably broke it.

Replacing DecoFlex Switch Battery

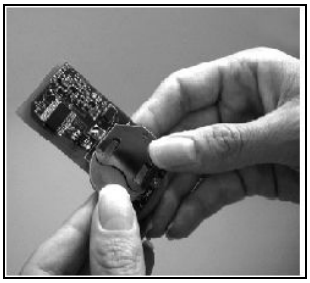
1) Using a small screwdriver remove switch from the wall.



2) Remove switch faceplate pry with small screwdriver



3) Replace with one 2450 3V Lithium cell



The battery life for the DecoFlex wall switch has a life of around 5 years depending on daily usage. If the shade no longer responds to button presses or the LED no longer illuminates then replace the battery.

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Why I Publish this Content

Motorized shades are the coolest thing since the invention of the PC. If your shade system is setup correctly, you will enjoy years of service and smile every time you press the button…I do! ☺

I have written this document to help frustrated users who call and get no response or service from their provider. If you have any additional information you would like published or find errors or omissions, please drop me an email…bill@automatedshadeinc.com

I have been fabricating, installing and tinkering with shade and drapery systems fulltime since May 1980 and will probably continue to do so till the Lord calls me home…I believe he has a an infinitely more reliable system than I have.