

# WIRELESS SWITCHES

## Installation Guide



This guide covers all Echoflex switch models.

The Echoflex switch models include:

PTM265n\* Single Decorator style wireless switch

PTM265Dn\* Dual Decorator style wireless switch

ETRS1n# Single Resonate Wave style switch

ETRS2n# Dual Resonate Wave style switch

ETRH1nW Single Resonate Handheld switch

ETRH2nW Dual Resonate Handheld switch

PTM265KCAAnW Keycard Activated switch

The character n is replaced with U for 902MHz, Y for 868MHz, C for 315MHz and J for 928 MHz radios. The character \* is replaced with W for white, B for black, A for almond, V for ivory and R for brown; # available in W - white or B - black only

The package includes the switch and installation guide. Note - cover plates for Decorator style switches are not included (can be ordered separately); Resonate Wave switches include double sided tape.

## Product Overview

The wireless switches communicate with controllers to activate the controllers internal relay. In most applications, the controller's relay is connected to a lighting load or circuit and the wireless switch functions as a basic light switch.

The switches requires no wiring connections and use no batteries. The kinetic energy of a finger press with the ON or OFF side of the switch generates enough energy to transmit the switch event.

Some models have 4 buttons or dual paddles, these operate identically to the single paddle switches. With dual switch models, each switch is separate from the other and can be assigned to the same controller or a different controller.

## Mounting the Switch

Careful consideration should be made for locating the controllers and switches based on the construction materials in the space and possibility of tenant's furniture disrupting the transmissions. The switch should be installed in the space where the controller device is controlling the light fixtures or circuits however the signal will travel through material barriers, refer to the range planning section for more information.

**All switch models can be mounted on any surface;** wall, desk, cubicle wall, etc. with double sided tape (supplied with ETRS models only) or Velcro™ (not supplied). The **ON** side of the switch should be mounted on the top; The **"I"** indicates **ON** (on the front of the Wave and the back of the Decora switches). The **"O"** indicates **OFF**. The Resonate Handheld switches have a depression on the **ON** side of the paddle.

**Decorator style switches** have four (4) mounting holes in the rear mounting plate to attach the switch to a wall surface with screws and wall anchors (not supplied). Install a decorator style faceplate (Leviton 80401 or equivalent-not supplied) over the switch. Test operation of the switch. The paddle should return to a neutral position after release. An audible click is expected.

**The Wave switches** come supplied with double sided tape, you can also remove the front cover of the switch and use the screw guides on the back plate of the switch to mount with screws and wall anchors (not supplied)

**Hand Held switches** have round removable covers on the back (twist off, using small holes for leverage). There are keyholes behind the covers. Use with pre-installed screws (not supplied) - measure 6 cm center to center when placing screws.

**The Key Card switch** is activated with an 85.60 x 53.98 mm (3.37 x 2.125") card as specified by ISO/IEC7810 - ID-1 (thickness of 0.76 mm (0.03")).

For wall mounting, the keycard switch faceplate must be removed before mounting with screws. For proper operation, the provided rear mounting plate must be used when mounting.

1. Remove the faceplate screws and faceplate assembly (includes front cover and insert with key depression tag).
2. There are four (4) mounting holes in the rear mounting plate to attach the switch to a wall surface with screws and wall anchors (not supplied).

3. Reinstall the faceplate assembly. **DO NOT OVER TIGHTEN THE SCREWS.**
4. Test operation of the switch by inserting a card and extracting. There should be an audible click with each insertion and extraction.

### Linking a Switch to a Controller

The linking process requires the controller or receiver to be mounted, powered and within range of the switch to be linked. Each receiver can support up to 20-30 switches, depending on the receiver model.

1. Activate LEARN or LINK mode at the receiver, if necessary refer to the manufacturers documentation.
2. Wall and hand held switches: triple click **ON** quickly. Key card switches: insert a room card into the switch three (3) times quickly.
3. Deactivate LEARN mode at the receiver. Test operation of the switch by switching ON and OFF .

### Wireless System Layout

- Avoid transmitting down a length of wall, this reduces signal strength.
- Avoid transmissions that must penetrate walls at acute angles. This increases the wall material the telegram must pass through, greatly reducing the signal power
- Avoid large obstructions. Place receivers in alternate locations to avoid the radio shadow or use repeaters to go around the obstacle.

Do not locate receivers close to other high frequency transmitters. Leave at least 2' between the receiver and any other source of interference including, computers, video equipment, Wi-Fi/LAN routers, GSM modems and monitors. Transmitters are not affected by these sources of interference.

### Signal Attenuation

The radio signal is attenuated by the materials that it passes through. Dense materials require more power to pass a radio signal consuming more of the signal strength and reducing the signal range. Refer to the table to identify how the building materials will impact the wireless signals.

Material	Attenuation	Material	Range-typical
Wood	10%	Line of site:	100' (30m)corridors
Plaster	10%	Line of site:	330' (100m) open halls
Glass	10%	Plasterboard:	100' (30m)through 5 walls
Brick	35%	Brick:	50' (15m)through 1 wall
MDF	35%	FerroConcrete:	: 33' (10m)
Ferroconcrete	90%	Ceiling:	Not Recommended
Metal	100%		
Aluminum	100%		

**Accessories - also available to order**

PTM2652GF - 2 gang flush mounting plate for decorator style switches (Leviton 80409 coverplate not supplied)

PTM2653GF - 3 gang flush mounting plate for decorator style switches (Leviton 80411 coverplate not supplied)

SC01- Antimicrobial Silicone Sleeve, for use with decorator switch only

**FCC Part 15.231 - Remote Control Transmitters**

The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (i.) this device may not cause harmful interference and
- (ii.) this device must accept any interference received, including interference that may cause undesired operation.

**IC RSS-210**

Devices equipped with 902 MHz radio:

Contains FCC ID: SZV-PTM210U

Contains IC: 5713A-PTM210U



Devices equipped with 868 MHz radio:

Contains FCC ID: SZV-PTM200

Contains IC: 5713A-PTM200

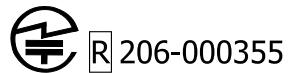
Devices equipped with 315 MHz radio:

Contains FCC ID: SZV-PTM200C

Contains IC: 5713A-PTM200C

Devices equipped with 928 MHz radio:

Contain PTM 210J which complies with the Japanese radio law and is certified according to ARIB STD-T108



Copyright 2013-2016 Echoflex Solutions, Inc. | Specifications subject to change without notice.  
Document #8DC-5303 | Revision 2.6 | 8188M21-5303-1 | Rev E



**Echoflex Solutions, Inc.**

#1, 38924 Queens Way | Squamish | BC | Canada | V8B 0K8

Toll Free: 888-324-6359 | Phone: (778) 733-0111 | Fax: (604) 815-0078

Email: info@echoflexsolutions.com | www.echoflexsolutions.com

