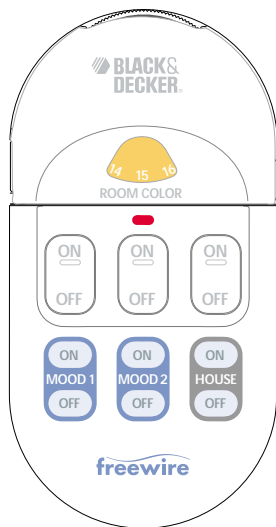


BLACK & DECKER®
freewire™ *Home Automation Starter Kit*

INSTRUCTION MANUAL

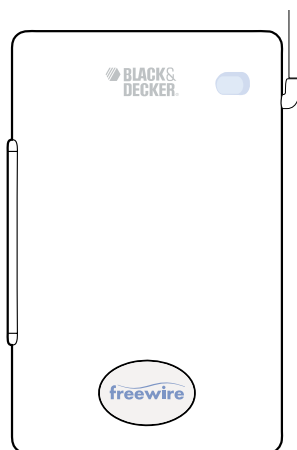
Cat. No. FWSK



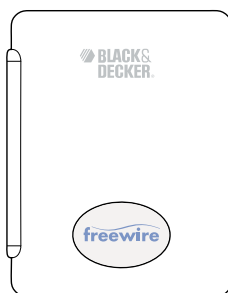
Indoor Remote
Catalog # FWIR



Key Chain Remote
Catalog # FWKR



Messenger Hub
Catalog # FWMH



Lamp Receiver
Catalog # FWLR



Bulb Receiver
Catalog # FWBR

▲General Safety Rules

▲WARNING: Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS

▲CAUTION: To reduce the risk of electric shock, do not disassemble any parts. No user-serviceable parts are inside. If you spill liquid on a unit, disconnect the unit from the AC outlet to prevent possible fire or shock hazard and consult authorized service personnel.

▲WARNING: To prevent electric shock hazard, do not expose any part to rain or moisture.

▲WARNING: Use only incandescent bulbs in lamps that are to be controlled by Lamp Receivers. Using any other type bulbs could damage bulbs and or Lamp Receivers. Attempting to control any other device by the Lamp Receivers, may damage that device and may damage the Lamp Receiver.

FCC Caution

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES.

OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND

(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

This equipment generates and uses radio frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturers instructions, it may cause interference to radio and television reception. It has been type tested and found to comply with the limits for remote control devices in accordance with the specifications in Sub Parts B and C of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by unplugging the equipment, try to correct the interference by one or more of the following measures.

- **Reorient the antenna of the radio/TV experiencing the interference.**
- **Relocate the interference with respect to the radio/TV.**
- **Move the interference away from the radio/TV.**
- **Plug the interface into an outlet on a different electrical circuit from the radio/TV experiencing the interference.**
- **If necessary, consult your local Dealer for additional suggestions**

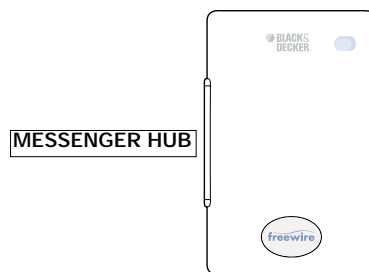
NOTE: Modifications to any of the components in this kit will void the user's authority to operate this equipment.

Getting familiar with your freewire™ home automation kit.

The MESSENGER HUB is the brain of the Freewire™ system. When it is plugged into an AC outlet it has the ability to receive Radio Frequency (RF) signals from the remotes and the ability to send messages through existing house wiring to all receivers that are dialed to the same house code.

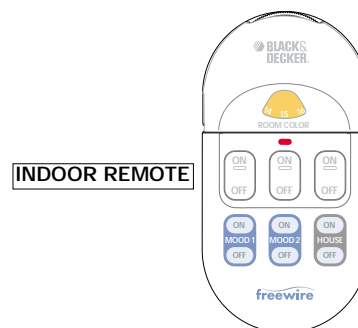
It is also used to control *incandescent lamps only, rated up to 500 watts, connected to the plug receptacle at the bottom of the MESSENGER HUB. **Note:** For restrictions and instructions see MESSENGER HUB section.

*Do not use fluorescent, low wattage, energy saving and halogen bulbs.



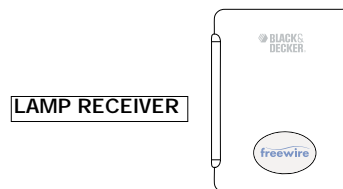
The INDOOR REMOTE sends Radio Frequency (RF) signals to the MESSENGER HUB. These signals can go through walls, so you can use this remote to control lights (or appliances with approved appliance receiver only) from anywhere in or around your home.

NOTE: Walls and other obstructions may reduce the effective range of the RF signal.



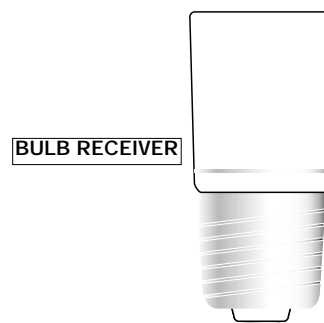
A LAMP RECEIVER must be used in conjunction with at least one active MESSENGER HUB. It is used to control *incandescent lamps only rated up to 300 watts. **Note:** For restrictions and instructions see LAMP RECEIVER section.

*Do not use fluorescent, low wattage, energy saving and halogen bulbs.

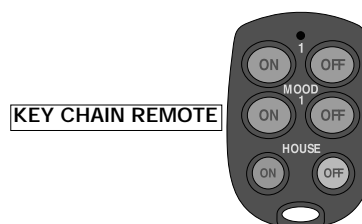


The BULB RECEIVER must be used in conjunction with at least one MESSENGER HUB. It is used to control an indoor or outdoor incandescent light (up to 150 watts) that is normally controlled by a wall switch.

*Do not use fluorescent, low wattage, energy saving and halogen bulbs.



The KEY CHAIN REMOTE can conveniently turn on and off a limited number of lights which you select from the MESSENGER HUB. **NOTE:** For restrictions and instructions see KEY CHAIN REMOTE section



PLEASE FOLLOW THE SEQUENCE LAID OUT IN THIS MANUAL TO AVOID CONFUSION

Step by step instructions to set up the MESSENGER HUB:

A Quick Note Before You Set Up MESSENGER HUB:

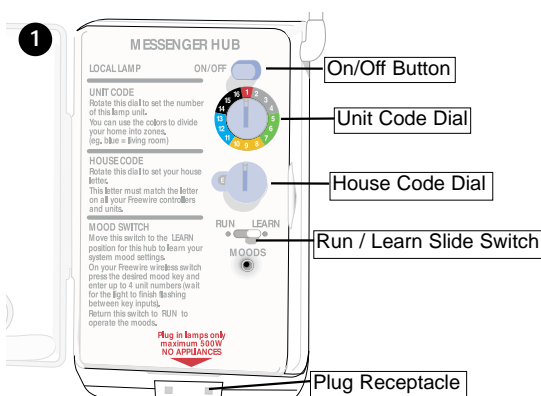
⚠ **WARNING:** For indoor use only.

Each receiver has a specific address made up of a **HOUSE CODE** (bottom dial) and a **Unit Code** (upper dial) which is used to communicate with the MESSENGER HUB.

The function of the **HOUSE CODE** is to prevent interference from another **FREEWIRE** system. If at any time, you experience interference with another system please choose another setting for your **HOUSE CODE A - P**. The letter selected must be the same on all **RECEIVERS** and the **MESSENGER HUB**.

Step 1:

Plug MESSENGER HUB into any operational AC outlet within your home. Rotate antenna to the upright position. Open the front door to expose control panel as shown in **Figure 1**. **NOTE: Placing the MESSENGER HUB on the inside wall closest to driveway or entry way, will often maximize range of the KEY CHAIN REMOTE.**



Step 2:

Select a **HOUSE CODE** on the MESSENGER HUB, any letter **A - P**. (**Note:** The house code you select for the MESSENGER HUB will dictate what letter you will select for all of the **RECEIVERS** you plan to control with this MESSENGER HUB.)

Step 3:

Select a **UNIT CODE** on the MESSENGER HUB, any number **1 - 16**. The number and corresponding color you pick will control the lamp outlet located on the underside of this MESSENGER HUB. (If you select the same number and same house code for any additional receivers on this system they will operate in conjunction with this hub.)

Step 4:

Synchronize your **INDOOR REMOTE** with your MESSENGER HUB so they understand how to communicate with each other. (**Note:** Any additional remote that is introduced to the system must also be synchronized.)

To synchronize, move the MESSENGER HUB slide switch to **LEARN**.

While **facing** the MESSENGER HUB, press and hold any **"ON"** button of the **INDOOR REMOTE** for 5 seconds - **Figure 2**. Be sure to see the green light flash on the MESSENGER HUB. The flash will indicate that the MESSENGER HUB is now synchronized with the **INDOOR REMOTE**.

Now, move the slide switch on the MESSENGER HUB to **RUN**.

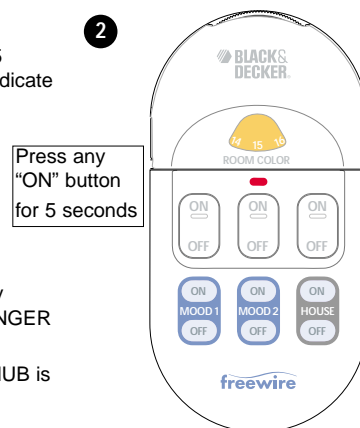
(**Note:** Door cannot be closed while MESSENGER HUB is in the **LEARN** mode.)

Step 5:

Turn lamp on first, then plug into the receptacle on the underside of the MESSENGER HUB. Use only incandescent bulbs up to 500W. Be sure the Lamp has been turned on prior to plugging into MESSENGER HUB.

Press the Local Lamp **"ON/OFF"** button on the MESSENGER HUB to check that the MESSENGER HUB is operating correctly. You will hear a **"click"** when the MESSENGER HUB turns this lamp on and off.

You are now ready to operate the lamp connected to this MESSENGER HUB with the **INDOOR REMOTE**.



Step by step instruction to operate the INDOOR REMOTE:

A Quick Note before You Set Up the INDOOR REMOTE:

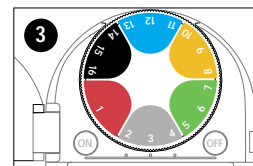
⚠ WARNING: For indoor use only.

Open door to the **INDOOR REMOTE** to expose the colored dial shown in **Figure 3**.

The numbers and colors on the INDOOR REMOTE's dial match the numbers and colors on the MESSENGER HUB and LAMP RECEIVERS.

The colors on the dial for the Unit Code can be used to divide your home into zones with up to 3 dedicated Unit Codes per color (except red which only has one Unit Code.) (eg. Green = Living Room)

The numbers are used to differentiate one receiver from another in each color/zone.









Reference Label Set Up

For your convenience, a blank reference label is located on the back of your INDOOR REMOTE. Write your own customized applications on this blank key. **Figure 4:**

Example: **Red Unit Codes** have been selected for the BULB RECEIVER in the **Entrance**
Gray Unit Codes have been selected for the RECEIVERS in the **Dining Room**
Green Unit Codes have been selected for the RECEIVER in the **Living Room** etc.

NOTE: The top button on the KEY CHAIN REMOTE will only activate UNIT CODE 1(RED). We recommend that you control the lighting near your entrance way by UNIT CODE 1(Red) so that it can be activated by your KEY CHAIN REMOTE. See KEY CHAIN REMOTE instructions on page 8 for further instructions.

4 COLOR ROOM

-  Entrance
-  Dining Room
-  Living Room
-  Bedroom
-  Kids Room
-  Den

REMOTE CONTROL SWITCH MODEL PWWS

Step 1:

Set the dial on your INDOOR REMOTE to the same UNIT CODE (color) that you selected on the MESSENGER HUB in the previous section.

Step 2:

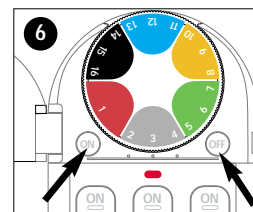
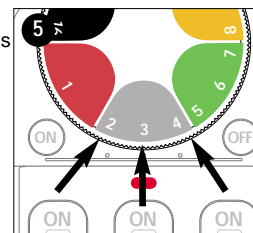
Each of the 3 individual codes on that color can be turned on and off individually, using the 3 white ON/OFF buttons located just below the dial as shown in **Figure 5**.

Example: Gray 2 - Controlled by the top row, left switch
Gray 3 - Controlled by the top row, center switch
Gray 4 - Controlled by the top row, right switch.

The small round ON button and OFF button shown in **Figure 6** allow you to turn on or off all RECEIVERS set to that color.

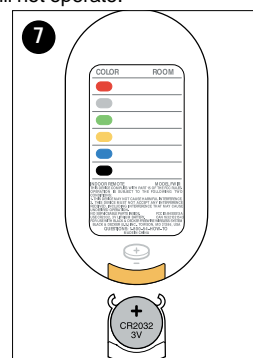
You should now be able to turn the lamp on and off with the corresponding button on the INDOOR REMOTE.

Note: You may have to press and momentarily hold the button before it activates.



INDOOR REMOTE Battery Replacement

Open the battery compartment clip (located on the bottom of the back cover) with your fingernail and install a CR2032 replacement lithium battery as shown in **Figure 7**. **Note:** Writing on battery must face back cover of INDOOR REMOTE or INDOOR REMOTE will not operate.



Step by step operating instructions for the LAMP RECEIVERS

A Quick Note before You Set Up the LAMP RECEIVERS:

▲WARNING: For indoor use only.

Use incandescent bulbs up to 300 watts only.

Step 1:

Set the HOUSE CODE to the same letter that you selected on the MESSENGER HUB, then plug the LAMP RECEIVER into the AC outlet currently being used by the lamp you wish to control.

Step 2:

Select a UNIT CODE color to match the room color that you laid out on the back of the INDOOR REMOTE. Now you will need to assign a specific UNIT CODE for the LAMP RECEIVER. Within the color that you have picked you have 3 number choices. In the example in **Figure 8** the LAMP RECEIVER is set to Yellow 8.

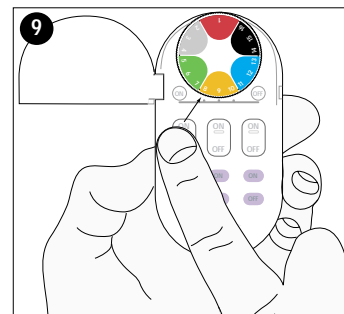
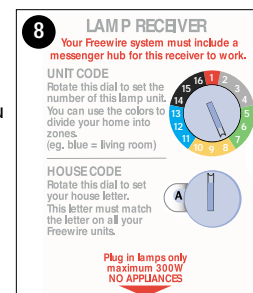
Step 3:

Turn lamp on first, then plug into the receptacle on the underside of the MESSENGER HUB.

Step 4:

Turn color dial on INDOOR REMOTE so that it matches the color setting on the LAMP RECEIVER. To turn the lamp on and off, press the switch which corresponds with the number selected on the LAMP RECEIVER. **Figure 9** depicts activating LAMP RECEIVER set to Yellow 8.

NOTE: Lamps connected to LAMP RECEIVERS can still be controlled by the lamps switch. Remember that lamp switch must be turned on in order for the lamp to be controlled by the Freewire system.

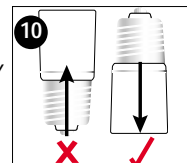


Step by step operating instructions for the **BULB RECEIVER**

A Quick Note before You Set Up the BULB RECEIVERS:

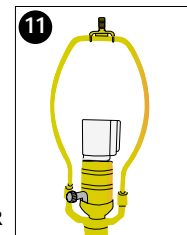
The BULB RECEIVER can be used indoors and outdoors.

▲WARNING: To keep rain out when used outdoors, mount the BULB RECEIVER in the orientation shown in **Figure 10**. Unlike LAMP and APPLIANCE RECEIVERS the BULB RECEIVER does not have any code wheels. You set its code up from the MESSENGER HUB and it then remembers this code, even after a power outage. For ease of programming, initially place the BULB RECEIVER in a lamp that can be set up in the same wall outlet that the MESSENGER HUB is plugged into. After programming you can move it to its final location (in an outdoor light fixture for example).



Step 1:

Make sure the lamp is turned to the “ON” position and then it must be unplugged! Unscrew your existing light bulb from its socket and screw the BULB RECEIVER into the light socket as shown in **Figure 11**. **▲CAUTION:** BULB RECEIVER raises the bulb approximately two inches. If bulb touches lamp shade or lamp frame, you must purchase a shorter bulb to use this lamp. Screw an incandescent light bulbs only (up to 150W) into the BULB RECEIVER. DO NOT use with fluorescent lamps.



Step 2:

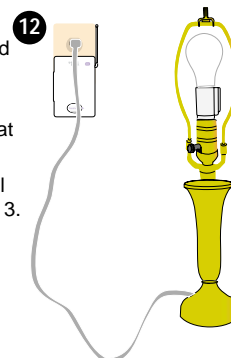
Set the unit code on the INDOOR REMOTE to the color and number that you want to use to control the BULB RECEIVER in its final location. (Example : Red 1)

Step 3:

Plug the lamp into the **same wall outlet** as the MESSENGER HUB or you can move the MESSENGER HUB and plug into the **same wall outlet** as the lamp. (The Messenger Hub will not lose its memory and it can be moved back later.) See **Figure 12**.

Within 30 seconds of plugging lamp in, press and hold for 5 seconds the on button on the INDOOR REMOTE that corresponds to the UNIT CODE that you have selected. The light should turn on.

NOTE: If the light does not turn on in 5 seconds, **unplug** the lamp and then re-plug and repeat step 3. If lamp still does not turn on, move the MESSENGER HUB and lamp to a different outlet in a different room and repeat step 3.



Step 4:

If you wish to use the BULB RECEIVER in a different lamp, unplug lamp, remove bulb and BULB RECEIVER. Place BULB RECEIVER in new lamp. BULB RECEIVER will remember unit code setting that was established in step 3.

BULB RECEIVER NOTES:

- You must leave the lamp switch or wall switch on at all times otherwise the BULB RECEIVER will have no AC power and you won't be able to control it remotely.
- The BULB RECEIVER does not have local control (you cannot turn the light on from its regular switch).
- The BULB RECEIVER does not respond to bright and dim commands. It does respond to ALL lights On and ALL units Off commands.

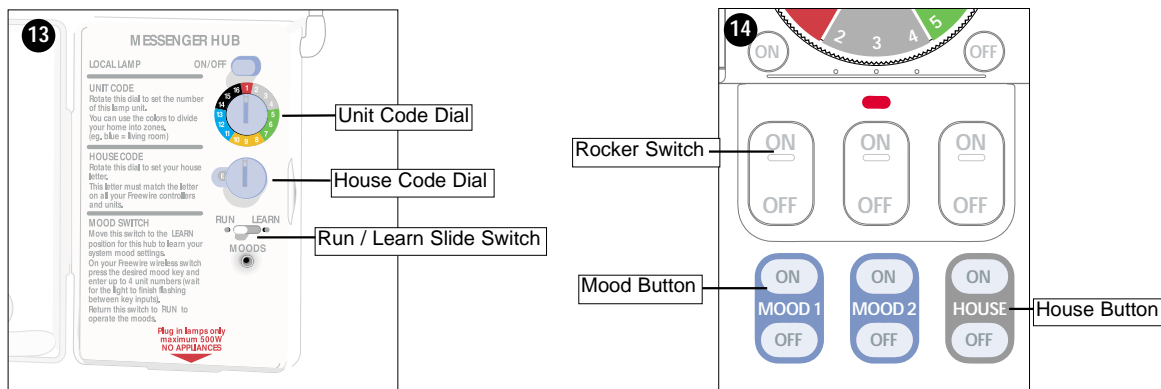
NOTE: When using the BULB RECEIVER, you cannot control the lamp by the lamps switch. Turning the lamp switch off will cause the BULB RECEIVER to go into program mode and will need to be reprogrammed. See page 7.

Step by step instruction to developing **MOOD SETTINGS**

A Quick Note before You Program the Mood Settings:

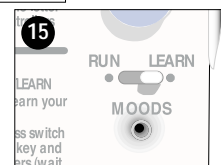
In the Lamp Receiver section you learned how to set up individual LAMP RECEIVERS. These LAMP RECEIVERS are turned on and off by pressing the appropriate rocker switch that corresponds to the receivers unique UNIT CODE. The purpose of the MOOD buttons (blue) are to link multiple receivers (up to 4) so that they can be turned on or off by the MOOD button. See **Figure 16**.

Example: If you have a LAMP RECEIVER in one room and it is set to the number 7 on its UNIT CODE and you have another LAMP RECEIVER in another room and it is set up to the number 13 on its UNIT CODE, the two lamps can be turned on at the same time using a MOOD.



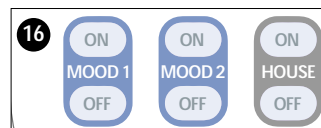
Step 1:

With the MESSENGER HUB still plugged into an AC outlet, set the slide switch to LEARN as shown in **Figure 15**.



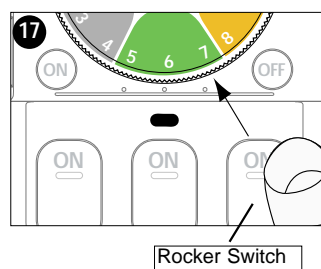
Step 2:

While facing the MESSENGER HUB, press MOOD 1 ON switch on the INDOOR REMOTE. **Figure 16** - The MESSENGER HUB's green indicator light will flash.



Step 3:

Set the UNIT CODE dial of the INDOOR REMOTE to match the UNIT CODE of the LAMP RECEIVER that you want to turn on and off. Press on the rocker switch (white) corresponding to that LAMP RECEIVER as shown in **Figure 17**. Wait for the MESSENGER HUB indicator to flash indicating the code has been stored in the MOOD function.

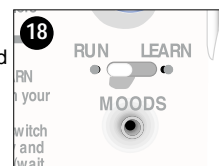


Step 4:

Repeat step 3 a maximum of 3 more times to link up to 4 LAMP RECEIVERS / BULB RECEIVERS with that MOOD key. The 4 LAMP RECEIVERS can be in any combination of UNIT CODES.

Step 5:

Return the slide switch on the MESSENGER HUB to RUN - **Figure 18**. The ON/OFF button of MOOD1 will now turn on and off all of the LAMP RECEIVERS / BULB RECEIVERS that were linked in Step 4. There may be up to a 3 second delay between the time that you press the button and the time that the lights respond.



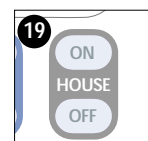
Step 6:

To set up MOOD 2 key, repeat steps 1 thru 5 substituting MOOD 2 key for MOOD 1.

NOTE: Pressing either MOOD ON key while in LEARN mode clears all stored codes for that MOOD.

Using ALL on, ALL off House Button

Pressing the INDOOR REMOTE HOUSE BUTTON (**figure 19**) on and off will activate the MESSENGER HUB and **ALL** the LAMP RECEIVERS / BULB RECEIVERS set to the system's HOUSE CODE.



A Quick Note before You Set Up the KEY CHAIN REMOTE:

The KEY CHAIN REMOTE is very convenient for switching on entrance lights while approaching your home. It lets you turn on and off the Receivers that are set to UNIT CODE 1 (RED) and MOOD 1 on your INDOOR REMOTE and activate all Receivers (same as the House button on the INDOOR REMOTE).

Step by step instructions to set up the KEY CHAIN REMOTE

Step 1:

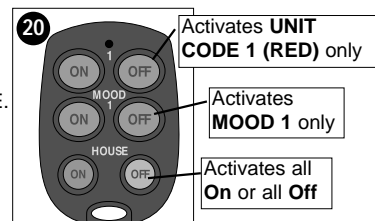
Set the MESSENGER HUB slide switch to **LEARN**.

Step 2:

While facing the MESSENGER HUB, press and hold the top ON button on the KEY CHAIN REMOTE. The green light on the MESSENGER HUB flashes to indicate that the MESSENGER HUB now recognizes the KEY CHAIN REMOTE.

Step 3:

Set the slide switch on the MESSENGER HUB to **RUN**.

**The KEY CHAIN REMOTE is now ready for use.**

The top ON and OFF buttons will activate any Receivers set to UNIT CODE 1 (RED). For convenience we recommend that your entrance lights be controlled by UNIT CODE 1 (RED).

The middle ON and OFF (MOOD 1) buttons of the KEY CHAIN REMOTE will activate all Receivers programmed on the MOOD 1 setting on your INDOOR REMOTE. NOTE: You must have already programmed the MOOD 1 setting on your INDOOR REMOTE for this function of the KEY CHAIN REMOTE to operate.

The bottom ON and OFF buttons of the KEY CHAIN REMOTE perform the same function as the House button on the INDOOR REMOTE. Pressing the ON and OFF buttons will activate the MESSENGER HUB and all the LAMP RECEIVERS / BULB RECEIVERS set to the system's HOUSE CODE.

KEY CHAIN REMOTE BATTERY REPLACEMENT

To change the battery, pry the two halves apart and fit two CR2016 Lithium 3V batteries. Observe the polarity of the batteries. (Writing on back of battery must face back cover of KEY CHAIN REMOTE).

TROUBLESHOOTING

DIFFICULTY PROGRAMMING RECEIVERS

If you are experiencing problems when programming the **BULB RECEIVER**, it may be due to electrical interference on the power lines caused by large appliances such as refrigerators or TV's. To avoid the interference, move the Receiver while it is being programmed to a different wall outlet that is further away from large appliances.

SOME RECEIVERS DON'T RESPOND

Most houses are fed from a 220 volt service which is then split into two phases of 110 volts each in the circuit breaker panel. The most commonly encountered problem with systems which use the existing house wiring to transmit signals is that the signals are received by some Receivers, but not by others. For example, the MESSENGER HUB controls some lights but not others or controls some lights intermittently. This can happen sometimes when the Receiver to be controlled is on the opposite phase of the house wiring to the phase which the MESSENGER HUB is connected to.

If some of the Receivers are not working it may be necessary to:

- move the Receiver to a different wall outlet to test that it works. If it still doesn't work:
- move the Receiver to a different room. If it still doesn't work:
- move the Receiver to the closest outlet that the MESSENGER HUB is plugged into or move the MESSENGER HUB to the closest outlet to the Receiver that is not working.

RECEIVERS TURN ON BY THEMSELVES

If it is suspected that Receivers have turned on by themselves, the first step should be to change the HOUSE CODE on the MESSENGER HUB and all Receivers. It is possible that a neighbor has the same system or another compatible system.

THREE WAY BULBS AND TOUCH ACTIVATED LAMPS

⚠CAUTION: Touch activated lamps should not be used with LAMP RECEIVERS or BULB RECEIVERS, damage to lamp may occur.

Three way bulbs may be used, however, only one level of brightness can be activated using the Freewire system. To change brightness level you will need to turn the switch at the lamp to the desired level of brightness.

NOTE: When using the BULB RECEIVER, you cannot control the lamp by the lamps switch. Turning the lamp switch off will cause the BULB RECEIVER to go into program mode and will need to be reprogrammed. See page 7.

WIRELESS INTERCOMS

Intercom systems which use the house wiring to transmit can "block out" FREEWIRE transmissions while the intercom is left in the permanent transmit (talk) mode. It is NOT possible to have a wireless intercom and a MESSENGER HUB operating in the same house. It is possible that a neighbor's wireless intercom could affect your system.

KEY CHAIN REMOTE RANGE OF USE

Placing the MESSENGER HUB on the inside wall closet to driveway or entry way, will often maximize range of KEY CHAIN REMOTE.

SOME DON'TS

- **Don't** use a LAMP RECEIVER to control a lamp or fixture which already has a dimmer on it.
- **Don't** leave a wireless intercom or baby monitor in the permanent transmit (or talk) mode. Its transmissions could "block out" FREEWIRE transmissions.
- **Don't** exceed the rating of the Receivers, these are:
 - BULB RECEIVER - 150 watts - incandescent bulbs only.
 - LAMP RECEIVER - 300 watts - incandescent bulbs only.
 - MESSENGER HUB - 500 watts - incandescent bulbs only.