

# FREE SWITCH MAX INSTRUCTIONS

Please Read This Manual  
Before Operating



*The World at a Touch*

ADAPTIVATION  
INCORPORATED

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# Table of Contents

INTRODUCTION .....	3
FEATURES .....	3
TERMINOLOGY .....	4
MODES OF CONTROL .....	5
THEORY OF OPERATION .....	6
KEYPAD DESCRIPTION .....	7
SETTING THE TIMER .....	9
DELAYED ACTIVATION .....	10
SINGLE APPLIANCE SET UP .....	10
MULTIPLE APPLIANCE SET UP .....	11
SCANNING OPTIONS .....	12
MULTIPLE APPLIANCE SETUP USING VISUAL SCAN ....	14
MULTIPLE APPLIANCE AUDITORY SCANNING .....	15
CONSIDERATIONS .....	16
TROUBLESHOOTING .....	17
OVERLAY TEMPLATE .....	19
WARRANTY .....	20

## INTRODUCTION

With your new Adaptivation FreeSwitch Max environmental control system you can operate most AC or battery powered devices. Because the FreeSwitch Max is wireless, you are not tied down by cords or limited to a particular area in the room. The range of the FreeSwitch Max is approximately 35 to 50 feet or more.

The FreeSwitch Max can accommodate a wide range of users through its various activation options. The FreeSwitch Max can operate up to 4 appliances through direct selection using the on-board keypad or by activating an external switch. It is also capable of operating up to 8 appliances when in the scanning mode. It can accommodate users who prefer either visual or auditory scanning.

The various mode operations of the FreeSwitch Max, which include a momentary, latched, or timed option, allow you to match the needs of the user to the appliance they wish to operate.

The uses of the FreeSwitch Max are limited only by your imagination and ingenuity. Adaptivation strives to offer our clients the highest quality products and support. Feel free to contact us at any time for assistance using your FreeSwitch.

## FEATURES

- Independently activate up to four AC or battery powered appliances with direct selection and eight with scanning selection all at the same time.
- On-board keypad for direct and scanning selection.
  - Keypad templates can be made using Boardmaker

from Mayer-Johnson

- External jacks for direct and scanning selection using adaptive switches.
- All eight channels are independently capable of momentary, latching, timed seconds or timed minutes activation.
- Easy to read LED bar graph lets you know exactly what the timer is set to for each channel using timing activation. NO GUESSING.
- Up to 16 FreeSwitch Max units can be used in an area at the same time, each capable of operating its own eight devices.
- Visual scanning selection with 4 choices of scan speed.
- Auditory scanning selection with 4 choices of scan speed.
  - High quality, recordable voice messages for each channel.
  - External speaker jack for use with headphones.
  - Volume control knob for auditory scanning.
- Scan among 2, 3, 4, 5, 6, 7 or all 8 channels.
- Automatic and Inverse scanning selection.
- Delayed activation with choice of four delay lengths.
- Wireless (radio frequency) operation using a battery powered transmitter optimizes safety.
- Up to 100 foot range indoors.
- Durable design resists damage due to dropping, throwing and other rough usage.
- Compatible with Powerhouse X-10 or Radio Shack Appliance Modules.
- Compatible with Adaptivation's wireless receiver for operating battery powered devices.

## TERMINOLOGY

### RF

RF stands for radio frequency. RF devices can transmit through walls unlike infrared (IR) which requires line of sight.

### LED

LED's (light emitting diode) are the small red lights on the FreeSwitch Max.

### Transceiver Module

The Transceiver Module will allow most electrical or AC appliances to be activated. The FreeSwitch sends a RF to the transceiver module which then controls other appliance modules.

### Appliance Module

Appliance Modules activate electrical appliances. They receive their signal from the transceiver module through the wiring in your house.

### Wireless Receiver

A Wireless Receiver will allow the FreeSwitch to control most battery-operated devices.

### House Code

The House Code is the frequency the FreeSwitch Max uses to transmit to either a transceiver module or a wireless receiver. The House Code must be set to the same letter on both devices. Using different House Codes can allow different individuals to operate their own devices without interfering with each other.

## Unit Code

This code allows one transceiver module to operate up to 16 other appliances. The unit code on the FreeSwitch refers to the numbers 1 through 8 on the keypad.

## MODES OF CONTROL

Momentary selection : The appliance activates for as long as the input button is depressed.

Latched selection : Press once and the appliance turns on. Press again and it turns off

Timed seconds : Press once and the appliance turns on then automatically turns off anywhere from 1 to 60 seconds later.

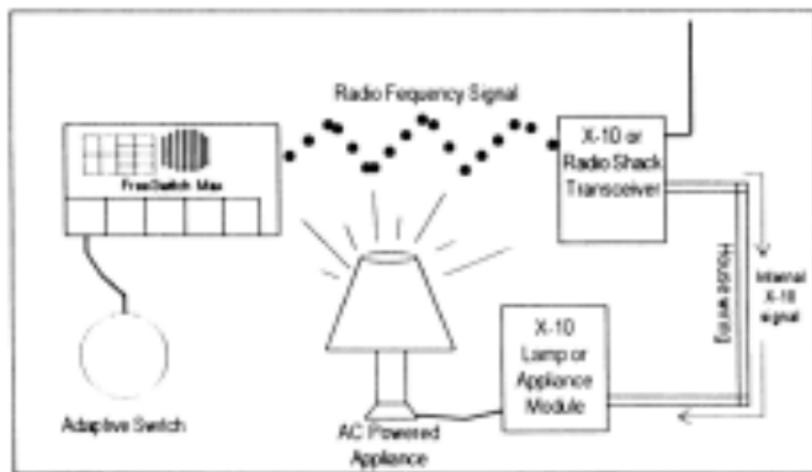
Timed minutes : Press once and the appliance turns on then automatically turns off anywhere from 1 to 60 minutes later.

Off: If a channel is set to Off, it will not activate. If a channel is in the off mode, there is no LED indicator on.

## THEORY OF OPERATION

This section contains useful information on the operation of your FreeSwitch Max.

The FreeSwitch Max activates AC appliances via transceiver and appliance modules. Diagram 1 helps illustrate a typical scenario.



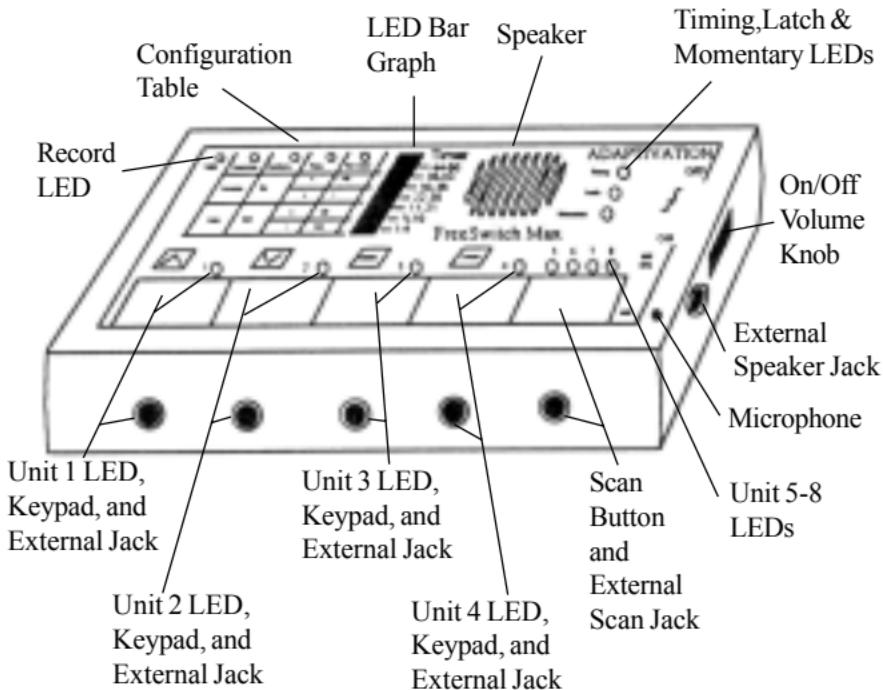
*Diagram 1. FreeSwitch Setup.*

- 1.) The FreeSwitch Max is activated by pressing one of the keypad buttons or an external switch.
- 2.) The FreeSwitch sends a radio frequency (RF) signal to a transceiver module (included with your FreeSwitch).
- 3.) The transceiver module sends another signal over the house wiring which is picked up by the appliance modules set to the same house code as the FreeSwitch.
- 4.) When the appliance module activates, the AC appliance plugged into it turns on.

## KEYPAD DESCRIPTION

Diagram 2 shows the FreeSwitch Max face panel with each of the major features identified.

Figure 2



### Configuration Table

The configuration table is used to show the settings of the various features (e.g. delayed activation, scan speed, etc..). When a LED on the top of the configuration table is illuminated, a portion of the LED bar graph will also be illuminated indicating the setting of that feature.

### Record LED

The record LED illuminates when the device is in record mode.

## Scanning Activation LED

When illuminated, scanning can be set to activate either in Inverse mode or Auto mode.

## Auditory Scanning

When illuminated, auditory scanning can be turned on or off

## Scan Rates

Both visual and auditory scan rate can be adjusted when this LED is lit.

## Delayed Activation

Typically when a keypad or external switch is pressed, the appliance activates almost immediately. A 1/2, 1, or 1 1/2 second delay can be added. This means that the keypad or external switch must be held down for the delay period before the channel activates or scanning begins.

## LED Bar Graph

The LED bar graph is composed of 10 individual LEDs indicating the settings of various features in the configuration table. The LED bar graph also shows the timer setting for each channel set in the timing mode.

## CHAN Button

The CHAN (short for channel) button is used to cycle through the eight channels and the configuration table for the purpose of programming.

## MODE Button

The MODE button places the selected channel in Timing, Latching, Momentary, and Off mode.

## **SETTING THE TIMER**

There are 10 LEDs on the Timer bar graph, however there are 30 possible timer settings. Starting at 1 second, the timer advances one second with each press of the  $\wedge$  button, up to 20 seconds.

Once the timer reaches 20 seconds, the timer advances four seconds with each press of the  $\wedge$  button.

To set the timer in minutes instead of seconds. Continue pressing the  $\wedge$  button until the Timing LED and Channel LED flash. When these are flashing, timing is set in minutes.

The timer decreases when the  $\vee$  button is pressed.

## **DELAYED ACTIVATION**

Delayed activation refers to the amount of time you hold your hand on the keypad or external switch before an appliance operates. This is an important option for individuals with extaneous movement or those who tend to drag their hands across activation areas to get to their desired target. By using delayed activation, an appliance will only be activated if the keypad or external switch is held down for the preset time.

### **TO SET DELAYED ACTIVATION**

1. Press the “CHAN” button until the LED above “Delayed Activation” is lit.
2. Look at the LED bar graph. The current “Delayed Activation” setting will be indicated by which part is lit up.
3. To change the delayed activation, press the  $\vee$  button or the  $\wedge$  button until the desired area is lit up.

## **SINGLE APPLIANCE SET UP**

1. Set the FreeSwitch and transceiver module House code dial to the same letter. The FreeSwitch's House code dial is inside the battery compartment. Set using a small screwdriver (included). The red mark on the dial is the arrow.
2. Insert a nine volt battery into the battery compartment.
3. Check the wattage of the appliance to be activated and make sure it does not exceed 500 watts. The transceiver module is limited to 500 watts.
4. Plug the appliance into the bottom of the transceiver module. Turn the appliance to its "on" position.

## **SINGLE APPLIANCE OPERATION USING ON-BOARD KEYPAD**

1. Turn the volume knob to the "on" position.
2. Press the "CHAN" button continually until the LED next to the number lights up.
3. Press the "MODE" button until the LED next to the desired mode lights up.
4. Allow the LED to turn off (wait four seconds).
5. Press the area on the keypad designated for CHAN 1 and the appliance will turn on.

\*Note - Overlays can be slid under the keypad. Overlays can be easily made with Boardmaker from Mayer-Johnson or by using the overlay template at the end of this manual.

## **SINGLE APPLIANCE USING AN EXTERNAL SWITCH**

1. Follow steps 1-5 of single appliance setup.
2. Plug an external switch into the external jack corresponding to CHAN 1. (See diagram 2.)
3. Follow steps 1-4 of single appliance operation.

4. Press the external switch and the appliance will turn on.  
\*Keypad remains active.

## **MULTIPLE APPLIANCE SET UP**

\*An appliance module will be needed for each appliance to be activated.

1. Set the FreeSwitch, transceiver module, and all appliance modules to the same House code letter.
2. Insert a 9 volt battery into the battery compartment.
3. Set “unit code” dial on each appliance module to the number (1-4) which corresponds to the area on the keypad which you have designated for that appliance.
4. Check wattage of appliance to be activated to be sure it does not exceed the wattage limit of the appliance module.
5. Plug the appliances into the bottom of the appliance modules. Turn the appliance to the “on” position.
6. Plug the transceiver module into an outlet.

## **MULTI-APPLIANCE OPERATION**

1. Turn the volume knob to the “on” position.
2. Press the “CHAN” button until the LED next to the desired area on the keypad lights up.
3. Press the “MODE” button until the LED next to the desired mode for the appliance programmed lights up.
4. Repeat steps 2-3 for each appliance to be activated.  
\*Each channel or appliance can be activated in a different mode.
5. Wait 4 seconds for the LED to turn off.
6. Press the area of the keypad designated to the desired appliance and the appliance will turn on.  
\* To use external switches, simply plug the switches into the designated jack which corresponds to the area of the keypad.

## **SCANNING OPTIONS**

### **SCANNING ACTIVATION**

1. Inverse Mode - Scanning starts when the scan button is pressed and held. When the scan button is released the channel whose LED is currently lit activates.
2. Auto Mode - Scanning starts when the scan button is pressed and released. The scan automatically progresses from one channel to the next. When the scan button is pressed again, the channel whose LED is currently lit activates.

### **TO SET SCANNING ACTIVATION**

1. Press the “CHAN” button until the LED above “Scanning Activation” is lit.
2. Look at the LED bar graph. If lower half of bar is lit, the FreeSwitch is in the “Auto” mode. If the upper half is lit, the FreeSwitch is in “Inverse” mode.
3. To change mode, press the  $\vee$  button or the  $\wedge$  button until the appropriate area is lit.

### **SCANNING RATE**

1. Visual Scanning Rate - Refers to the amount of time the LED for each channel remains on. Rate can be set for 1, 2, 3, or 4 seconds.
2. Auditory Scanning Rate - Refers to the amount of time the FreeSwitch pauses after speaking a message. Rate can be set for 1, 2, 3, or 4 seconds.

## **TO SET THE SCANNING RATE**

1. Press the “CHAN” button until the LED above “SCAN RATE” is lit.
2. Look at the LED bar graph. The current rate setting will be indicated by which number is illuminated.
3. To change the rate press the  $\wedge$  button or the  $\vee$  button until the area of the bar graph associated with desired rate is lit.

## **AUDITORY SCANNING**

This refers to the ability to add a recorded voice message as an auditory cue for each channel associated with an appliance. Each message can be 2 1/4 seconds long. This is an important option for someone with limited visual skills.

## **TO SET AUDITORY SCANNING**

1. Press the “CHAN” button until the LED above “Auditory Scanning” is lit.
2. Look at the LED bar graph. If the lower half is lit, the auditory scanning is off. If the upper half is lit, the auditory scanning is on.
3. To change mode - Press the  $\wedge$  button or the  $\vee$  button until the appropriate part of the bar graph is lit.

## **RECORDING MESSAGES**

1. Press the “CHAN” button until the LED above “REC” is lit.
2. Press and continue to hold down the area of the keypad associated with the appliance being programmed and speak your message into the microphone (MIC).
3. When done talking, release the keypad. The message is

automatically limited to 2 1/4 seconds. Upon releasing the keypad, you will hear an automatic playback of the message to verify your recording.

4. To access and record channels 6, 7, and 8, press the  $\wedge$  button until desired LED is lit. Then press and hold the area directly under the LED and talk into the microphone.
5. Adjust volume of auditory feedback using the volume control knob.

\*If needed, an external speaker can be plugged into the jack marked “EXT SPK.” This may be useful for those who want the auditory feedback very quiet. A set of headphones or pillow speaker may be plugged in.

## **MULTIPLE APPLIANCE SETUP USING VISUAL SCAN**

### **VISUAL SCAN SETUP**

1. Set scanning activation.
2. Set desired scan rate.
3. Check to be sure auditory scanning is set to “Off.”
4. Follow steps 1-6 of multiple appliance setup (page ?) for each appliance being programmed.
5. Plug an external switch into the external switch jack designated for scanning.

\*The keypad can also be used to initiate the scan.

### **VISUAL SCAN OPERATION**

1. Follow steps 1-5 of multiple appliance operation (see page ?)
2. To begin scanning, press the external switch or the lower right corner of the keypad designated for scanning.

\*The FreeSwitch will only scan through the channels which have mode programming. It will not scan through channels which are turned to the “Off” mode.

3. When the LED of the desired channel is lit, activate the input switch and the corresponding appliance will turn on, and scanning will stop,
4. To begin scanning again, activate the external switch or the keypad.

\*Note - Scanning will automatically stop after it has scanned through all the active channels 10 times without being activated.

## **MULTIPLE APPLIANCE AUDITORY SCANNING**

### **AUDITORY SCANNING SETUP**

1. Set scanning activation
2. Set desired scan rate.
3. Set auditory scan to “ON.”
4. Follow steps 1-6 of multiple appliance setup. (See page ?)
5. Plug an external switch into the external jack designated for scanning.  
\*The keypad can also be used to initiate scanning.
6. If needed, plug an external speaker into the jack marked “EXT SPK” (see page ?.)

### **OPERATION**

1. Follow steps 1-4 of multiple appliance operation. (See page ?)
2. Record messages. (See page ?)
3. To begin scanning, press the external switch or the lower right corner of the keypad designated for scanning.

4. Activate the switch when the appropriate recorded message is heard. The corresponding appliance will turn on and scanning will stop.
5. To begin scanning again, activate the switch.

## CONSIDERATIONS

\*If you are using more than one transceiver unit in the same area, they should be placed at least 5 feet apart. If the transceivers are too close, they may interfere with each other. Appliance modules may be placed as close together as you wish.

\*The FreeSwitch transmits one channel at a time, so if you touch two or more input switches simultaneously, it may not activate the correct channel. Allow 2 seconds between activations of appliances.

\*The FreeSwitch does not need to be in the line-of-sight with the transceiver. It works well around most objects and corners. To improve performance try to keep the transceiver module out in the open. Other appliance modules can be placed essentially anywhere since they receive their signal through the power lines.

\*Appliance modules typically work well throughout a house. However the signal can't always cross from one circuit in a house or building to another circuit. Consult Adaptivation for further assistance.

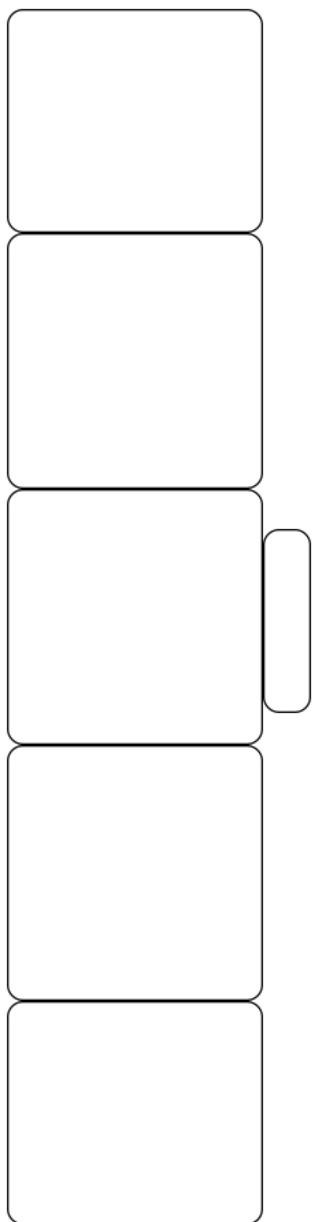
\*There are many different types of appliance modules available. Some examples are: Universal module for operating battery devices, Chime module, 3 prong module, and wall outlet module. Contact Adaptivation for complete details.

## TROUBLESHOOTING

The appliance is not activating.

- Be sure the 9 volt battery is fresh and properly installed.
- Make sure the House code setting on the Transceiver module and any appliance modules are the same as the FreeSwitch.
- Make sure the unit code number on the appliance module is the same as the channel number on the FreeSwitch.
- Make sure the appliance is in the “On” position.
- Make sure the transceiver module is not “hidden.”
- Is the channel you are trying to use turned to the “Off” position.
- Make sure the appliance module is not on a different house wiring circuit. Contact Adaptivation for further details.

## KEYPAD TEMPLATE



## **FreeSwitch Max**

### **1 Year Limited Warranty**

Your Adaptivation *FreeSwitch Max* was carefully tested and inspected before it was shipped from the factory. We warrant this product to be free from defects in materials and workmanship under normal use and service for one (1) year from the date of purchase. In the event of a defect in materials or workmanship, we will either repair or replace without charge, at our option, any part which in our judgment shows evidence of such defect within one (1) year of purchase. Taction Pads are warranted for six months from the original date of purchase.

This warranty does not apply if the *FreeSwitch Max* or Taction Pads have been misused, abused, altered, or tampered with. At the end of the warranty period, Adaptivation shall be under no further obligation expressed or implied.

This warranty gives you specific rights, and you may also have other rights which vary from state to state.

For repair service, contact Adaptivation's technical dept. to receive a required RMA# (return material authorization number) prior to the return of the device.

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Please insure your *FreeSwitch Max* is clean before returning it to Adaptivation for service.

***This is not a medical device. It should not be used where incorrect or faulty operation could reasonably be expected to result in injury or worse!***