FREEHAND

Instruction Manual

The World at a Touch

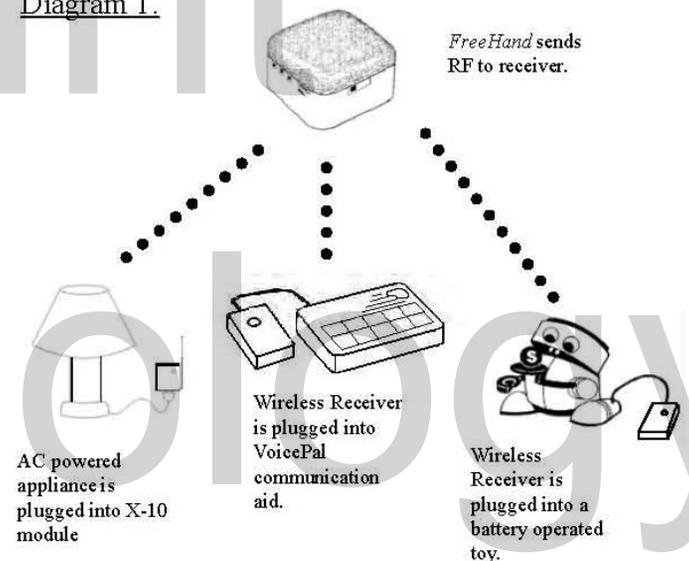## Table of Contents

INTRODUCTION

FreeHand has been designed to provide access for individuals with physical or mental disabilities to basic environmental control. The *FreeHand* will allow one electrical appliance or battery operated device to be activated by touching the device itself or by plugging in an external switch such as Taction Pads or Pal Pads. The *FreeHand* uses a RF signal to remotely operate either a X-10 powerhouse module or a Wireless Receiver. Each unit is sold separately. Because the *FreeHand* is wireless, you are not tied down by cords or limited to a particular area. Wireless activation will allow greater flexibility and convenience for the user. Adaptivation strives to offer our clients the highest quality products and support. Feel free to contact us at any time for assistance using your *FreeHand*.

Operating your *FreeHand*

Theory of Operation

The *FreeHand* activates by sending a radio frequency (RF) signal to an Powerhouse X-10 module (also known as Lamp and Appliance Modules at Radio Shack) or a Wireless Receiver. Diagram 1 helps illustrate a typical scenario.

Diagram 1.

FreeHand sends RF to receiver.

AC powered appliance is plugged into X-10 module

Wireless Receiver is plugged into VoicePal communication aid.

Wireless Receiver is plugged into a battery operated toy.

Terminology

RF
RF stands for radio frequency. RF devices can transmit through walls unlike infared which requires line of sight.

Wireless Receiver
A Wireless Receiver will allow the *FreeHand* to control most battery operated devices and also communication aids or other assistive devices.

<u>Transceiver Module</u>
The Transceiver Module accepts the RF siganl from the *FreeHand* and will allow activation of most electrical or AC appliances.

<u>House Code</u>
The house code is the frequency the *FreeHand* uses to transmit to either a Wireless Receiver or a Transceiver Module. 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.

<u>Unit Code</u>
This code allows one Transceiver Module to operate up to 16 other appliance modules. The unit code on the *FreeHand* must be set to the same number as the number on the appliance module.

Modes of Control

Direct selection: The appliance activates for as long as the switch is pressed

Latched selection: Press once and the appliance turns on. Press again and it turns off. The latch mode is effective when a device needs to be turned on for an extended amount of time.

<u>Diagram 2.</u>

Mode Selection Switch
OFF/Timing Knob
External Switch Jack
Unit Code Dial
House Code Dial

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

Timed Minutes: Press once and the device turns on, then automatically turns off at the preset time anywhere from 1 to 60 minutes later.

<u>Note</u>: The timing is adjusted using the Timing Adjustment Knob. See Diagram 2. If you wish to stop the device before the timed amount is over, turn the Timing Knob to the "OFF" position, then back to the "On" position. This will reset the *FreeHand*.

Battery Installation

1. With the *FreeHand* lying face down, open the battery compartment cover by removing the single Phillips head screw.
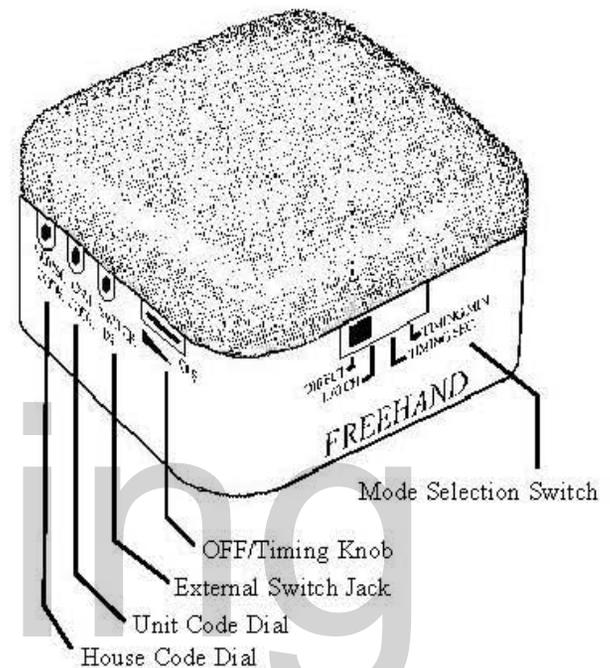
2. Properly insert one 9 volt battery.   We recommend using only Alkaline 9 volt batteries to ensure long battery life.

3. Replace the battery compartment cover and secure with screw. Take care not to overtighten.

<u>Note</u>: To conserve the batteries, turn off the *FreeHand* when not in use.

Operation for AC Appliances

1. Set the *FreeHand* and the Transceiver Module to the same house code. Also make sure the unit code is set to the number 1 position, unless you are plugging the applicance to be activated into another Appliance Module set to a different unit code.

2. Plug the appliance you wish to operate into the bottom of the Transceiver and plug it into the wall outlet. Make sure the appliance is in the "on" position.

3. Check to make sure the wattage of the appliance does not exceed the recommended maximum amount on the back of the Transceiver Module.

4. Set the *FreeHand* to the desired mode of control and make sure it is turned on by moving the OFF/TIMING DIAL to the "on" position. . Press the top of the *FreeHand* or an external switch to activate the appliance.

Note: If using other Appliance Modules other than the Transceiver Module, you must still have the Transceiver Module plugged in since the FreeHand sends the RF signal to this module first. Also make sure both the *FreeHand* and the Appliance Module are set to the same unit code number.

Operation for Battery-Operated Devices

1. Set the *FreeHand* and the Wireless Receiver to the same house code. Also make sure both have the unit code set to the same number.

2. Make sure you have inserted batteries into the Wireless Receiver and it is turned on.

3. Insert the plug on the Wireless Receiver into the battery operated device you wish to activate.

4. Set the *FreeHand* to the desired mode of control and make sure it is turned on by moving the OFF/TIMING KNOB to the on position.

5. Press the top of the *FreeHand* or an external swtch to activate.

Options: If you are activating a communication aid such as Adaptivation's VoicePal, insert the plug on the Wireless Receiver into the switch jack on the communication aid. Set the *FreeHand* to the Direct mode. Activate the *FreeHand* to access your message on the communication aid.
If you are activating a battery-operated device or toy, insert the plug on the Wireless Receiver into the switch jack on the adapted device. If your device is not adapted use a battery interrupter which is inserted into the battery compartment of the device.

External Switch Jack

For those individuals who are unable to access the top of the *FreeHand*, any external switch may be plugged into the jack marked SWITCH IN.

Mounting Options

The *FreeHand* has 3 threaded inserts on the bottom side. These inserts can be used to easily mount the *FreeHand* to a small triangular plate often found on common mounting aids such as the Magic Arm or E-Mount.
        The *FreeHand* also comes with rubber feet to help keep it from sliding. When mounting on a table or other flat surface, Velcro or Dual-Lock can be used as an alternate mounting method. If necessary, remove the rubber feet to help secure the Velcro.

Since the *FreeHand* is square in shape, this makes it very easy to mount multiple *FreeHands* next to each other. You may also try combining the *FreeHand* with other devices such as the Chipper or Sequencer to make affordable communication boards with environmental control.

Delayed Activation

Typically when the *FreeHand* is pressed, the corresponding device activates almost immediately. A 1 second delay can be added. This means the *FreeHand* or external switch must be held down for 1 second before the device will operate. This can be very helpful for a person who may accidentally drag their hands. Delayed activation will help with these accidental activations.
To set the 1 second delay, take the battery cover off the back of the *FreeHand*. A two position slide switch is located on the same side as the wires connected to the battery. Use a small screwdriver to slide the switch. Now your *FreeHand* is set for a 1 second delay.

Trouble Shooting

Your AC appliance is not working.
        -Make sure the device works independently of the *FreeHand*.
        -Make sure the *FreeHand* is turned to the "on" positon.
        -Make sure the device is turned "on" at all times.
        -Make sure the house code is set the same on both transceiver and *Freehand*.
        -Make sure you are within range (25 to 45 feet or more) and there are no obstructions covering the an tenna on the Transceiver Module.
        -Check mode of control.

Your Battery-Operated device is not working.
        -Make sure the device works indepedently of the *FreeHand*.
        -Make sure the *FreeHand* is turned to the "on" position.
        -Make sure the Wireless Receiver is turned on, batteries are fresh, and it is plugged into the device.
        -Make sure you are within range.
        -Make sure you the house code and unit code are set the same on both receiver and *FreeHand*.

The device activates intermittenly.
    -Move the *FreeHand* closer to the receiver.
    -Make sure batteries are fresh.
    -Be sure to wait approximately 2 seconds before reactivating. The *FreeHand* needs time to send the RF signals. If activated rapidly, signals will become backed up and receiver may not respond.

The device activates without using the *FreeHand*.
    -Something in the environment is causing interference. Set the *FreeHand* and receiver units to a different house code.
    -Check to make sure other X-10 compatible environmental controls are not set to the same house code and, or unit code.