

OptionFinder[®] G4

Keypads and Base Station

Hardware Guide



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About this Guide

The purpose of this guide is to provide you with instructions for setting up and configuring your keypad system. Please refer to the on-line help for additional troubleshooting tips and information about the software.

How the G4 Keypads Work

- The keypads work with both OptionFinder G4 and OptionFinder Micro 4 base stations/receivers
- We use the terms base station and receiver interchangeably. Both refer to the piece of equipment that connects to your computer and receives input from the keypads
- The G4 Keypads must be turned on before polling. Press the power key in the lower right corner of the keypad.
- Each base station supports up to 500 keypads.
- To enter a response on single-digit slides press the number that corresponds with the response choice. To enter responses on multi-digit slides the participants press all of the numbers that apply and press Send
- On single-digit slides press 0 key to enter a zero and the SYM key to enter a response of 10. On multi-digit slides the SYM key is used to enter a decimal point.
- If polling is open, participants may change their response to a question. To change a response to a single-digit question, press a new number. The last number pressed is the number that is saved. To change the response to a multi-digit question, enter the series of numbers and press Send.
- The range for the base station is 650 feet.
- The OptionFinder G4 system is a wireless radio system that works in the 2.4GHz range. The base stations may be set to 31 different ID's within this range.
- The base station will work with either a USB or Ethernet connection.
- The three arrow keys and the LINK keys are used for programming the keypads or linking to a base station. They are not used on polling slides.
- During polling, the SEND key is used to send a multi-digit response, i.e. enter all of the numbers in your sequence and press Send. The Send key is also used to save changes you make when programming keypads.
- The DEL key is used to delete one digit in a multi-digit response, i.e. you enter 451 and meant to enter 452, press DEL to remove the 1 and enter the correct number. DEL is also used when programming the keypads.

- The system has two modes: Dynamic and Static. In static mode, a specific address (ID) is programmed into the keypads and the keypads are programmed to work with a specific base station ID. The software tracks responses from the keypad by the address. In Dynamic mode the keypad is not programmed to work with a specific base station. The keypad searches for all available base stations and a list of the base station ID's appears in the keypad display. The user selects the base station they want to use. The keypads do not use their programmed addresses; the responses are tracked by the keypad's serial number.
- If the base station is disconnected or turned off, the keypads will turn off automatically after ten minutes
- The keypads will not turn off automatically as long as the base station is on and a slide show with OptionPower slides is open.
- Each keypad has 2 AA alkaline batteries. The batteries should be good for 150 hours of use.
- OptionPower automatically generates a log file with a list of keypads that have low batteries each time you test the keypads or use them during polling. To view the log file click System on the OptionPower tab, click Preferences, click Battery Report, click Load Log File.

Setting Up the Keypad System

Connecting the Base Station

If your computer is in a docking station, remove the computer from the docking station and reboot before attempting to setup the base station.

OptionFinder G4 Base Station

USB Connection

Connect one end of the USB cable to the base station and other end to a USB port on your computer. **DO NOT** use the power cord when using a USB connection.

Ethernet Connection

1. Connect one end of the RJ-45 cable to your computer and the other end to the base station. If the network card in your computer does not auto-negotiate, you must use a cross-over cable or a cross-over adaptor.
2. Connect the power cord to the base station. Plug the cord into a power outlet.

OptionFinder Micro 4 Receivers

- Connect the receiver to a USB port on your computer

Note The first time you connect the receiver to your computer you will receive a “New Hardware Found” message. You must install drivers for the receiver. See the instructions below.

Drivers for the Base Station

Hardware drivers must be installed for the base station before use. The drivers should install automatically when you connect the base station to your computer. If you receive a message that the hardware failed to install, follow the instructions below to install the drivers manually

Installing Drivers Manually

1. Make sure you have permission to install hardware drivers on your computer
2. Go to Start, type Device Manager in the Search field
3. Click **Device Manager**
4. The base station may appear as “**USB Serial Converter**” under Universal Serial Bus Controllers or be listed under Other Devices by the model number. If it appears under Other Devices or if appears under Universal Serial Bus Controllers but has a yellow question mark or exclamation point next to the name (USB Serial Converter) then you need to install the drivers. If no symbol appears next to the name and the USB Serial Converter is listed under Universal Serial Bus Controllers then the drivers are already installed and you may move to the “Define and Test Keypads” section of this document.
5. Right-click **USB Serial Converter** and click **Update Driver Software**.
6. Click **Browse my computer for driver software**
7. Click **Browse** and go to **c:\Users\Public\Public Documents\OptionPower\Drivers\FTDI G3-G2 Universal Driver – ftdibus (or ftdibus_64)**
8. Click **OK**
9. Click **Next** to install the drivers

Placing the OptionFinder G4 Base Station

- Place the base station in a central location within 650 feet of the keypads.
- Position the base station 5 to 6 feet off the ground.
- Position the base station away from other electronic devices, i.e. projectors, speakers, computers, etc.
- If you are using multiple base stations, place the base stations at least 3 feet apart.

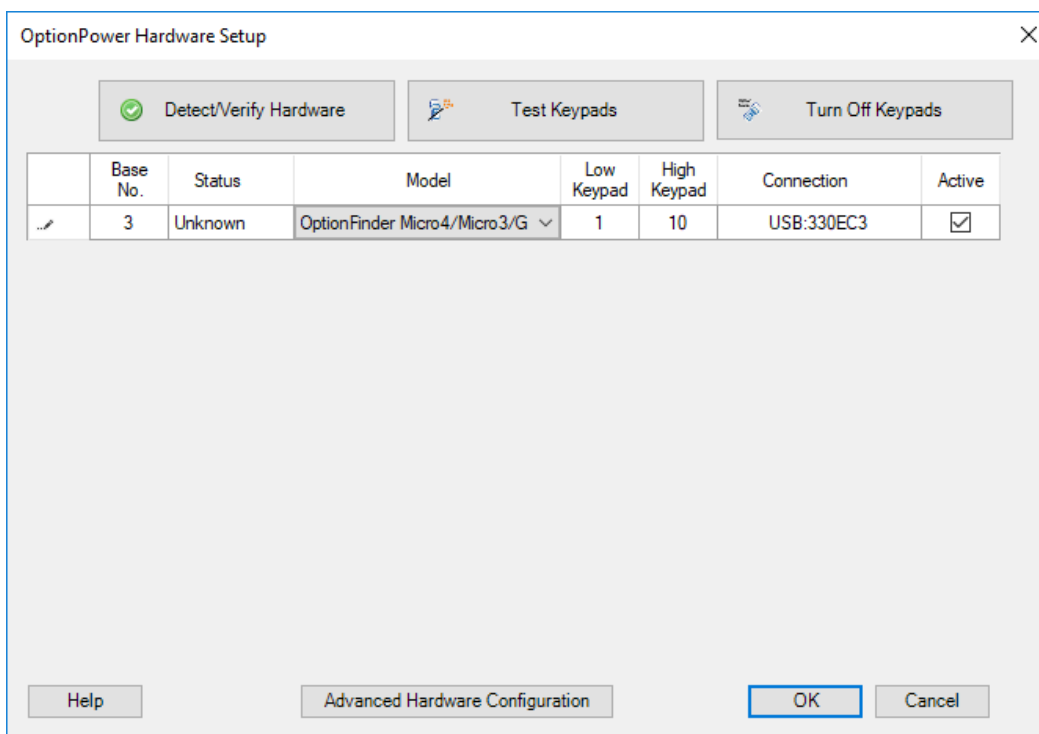
Define and Test the Keypads

OptionFinder Micro 4 Receivers and OptionFinder G4 Base Stations with a USB Connection

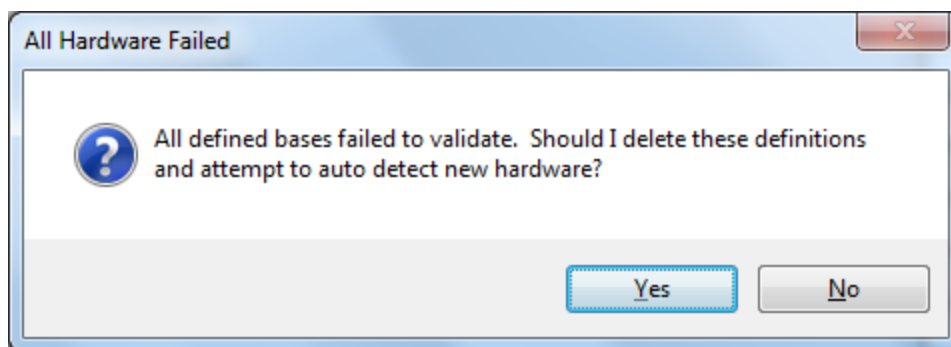
OptionPower Office 2016, 2013 and 2010

Automatically Define the Hardware Setup

1. Connect the base station or stations to the computer
2. On the **OptionPower** tab, click **Hardware**



3. Click **Detect/Verify Hardware**. When you click this button OptionPower searches your computer for the base station or stations listed, i.e. OptionFinder G4 base with serial number 1111AB. When you click Detect/Verify for the first time after installing OptionPower it will Fail because it is searching for the default base station and not your specific hardware. Click **Yes** on the message to remove the default base definition and search again.



4. If the connections are found, the model name will appear and the status will change to green and **Found**.
5. Enter the low and high keypad numbers. The low and high number fields define the range of accepted keypad numbers not just the quantity of keypads you intend to use. For example, if you enter 1 as the lowest number and 10 as the highest number you may only use the keypads numbered 1 through 10.
6. Click **Test Keypads**
7. Press a number on each keypad, if the keypad is working properly the number you press will appear next to the keypad's address
8. Click **Close**
9. Click **OK**

Manually Define the Hardware Setup

1. Look on the bottom of the base station and write down the six character serial number
2. Connect the base station to the computer
3. On the **OptionPower** tab, click **Hardware**
4. Click **Advanced Hardware Configuration**
5. You may either modify the settings for an existing base station or add a new one
6. To modify the settings for an existing base station, click the Model drop down menu and select your hardware platform
7. To add an new base station, remove all existing base stations and click **Add New Base Station**, click the Model drop down menu and select your hardware platform
8. Click **Base station settings** and enter the serial number for the base station
9. Click **Verify**. If a connection is found, the status will change to green and **Found**. If it changes to red and Not Found check the cables and double-check the serial number that was entered. Click OK to return to the Base Station Setup page.

10. Enter a number for the base station. Unless you are using multiple base stations you should use the number 1 for the base station. This base station number does not need to correspond with the base ID (channel).
11. Enter the low and high keypad numbers
12. Click **Test Keypads**
13. Press a number on each keypad, if the keypad is working properly the number you press will appear next to the keypad's address
14. Click **Close**
15. Click **OK** to save changes and close the Base Station Setup dialog

Ethernet Connection

There are two things that must occur before using the OptionFinder G4 base station in Ethernet mode: your computer must have a static IP address and you must assign a compatible IP address to the base station. You may permanently assign the IP address for the base station or may assign it a temporary address. If you use a temporary address you will have to re-enter the IP address every time you turn the base station off and on.

Obtain an IP address for your computer

Your computer must have a static IP address if you wish to use the G4 base station in Ethernet mode. You must obtain the IP address, subnet mask and default gateway (if any) before assigning an IP address to the base station.

If you are connected to a Network

If your base station is connected to a network you should contact your IT department for a static IP address, the subnet mask, and the default gateway.

If you are not connected to a Network

If the base station is connected directly to your computer then you must define an alternate IP address or, if that isn't available, set your computer to a specific IP address.

Windows 10

1. Right-click Start and click Network Connections
2. Click Ethernet
3. Click Change Adaptor Options
4. Right-click Ethernet and click Properties
5. Click Internet Protocol Version 4
6. Click **Properties**

7. Click the **Alternate Configuration** tab and then click **User Configured**
8. Enter an IP address, i.e. 10.1.1.1
9. Enter 255.255.255.0 as the subnet mask
10. Click **OK**
11. Click **Close**

Windows 7

1. Open the Control Panel
2. Open the Network and Sharing Center
3. Click **Change Adaptor Settings**
4. Right-click Local Area Connection and then click **Properties**.
5. **Internet Protocol Version 4**
6. Click **Properties**.
7. Click the **Alternate Configuration** tab and then click **User Configured**
8. Enter an IP address, i.e. 10.1.1.1
9. Enter 255.255.255.0 as the subnet mask.
10. Click **OK**
11. Click **OK** again

Set the IP Address for the Base station and Define the Hardware Settings

1. On the **Start** menu, click **All Programs**, point to **OptionPower** and then click **G3 Ethernet Utility**
2. The Digi Device Discovery dialog appears
3. When it finds the base station it will list its IP Address, MAC address, Name and Device number. If you wish to change the base station IP Address, Click **Configure network settings**, enter the new IP Address and subnet mask. Do NOT enter a default gateway unless you are connecting to a corporate network. If you change the address for the base station you must change the IP address for the computer as well. For example, if you assign the base an IP address of 10.1.1.1 then you must change the IP address for the computer to 10.1.1.x where x is any number other than 1.

4. Click **Save**
5. Click **OK** to reset the base station (this will take 30 to 45 seconds)
6. Close the Digi Device Discovery dialog

Define the Base Station and keypads in OptionPower for Office 2016, 2013 and 2010

1. On the **OptionPower** tab, click **Hardware**
2. You may either modify the settings for an existing base station or add a new one
3. To modify the settings for an existing base station, click the Model drop down menu and select your hardware platform
4. To add a new base station, remove all existing base stations and click **Add New Base Station**, click the Model drop down menu and select your hardware platform
5. Click **Base station settings**, click Ethernet and enter the IP Address for the base station
6. Click **Verify**. If a connection is found, the status will change to green and **Found**. If it changes to red and **Not Found** check the cables and double-check the IP Address that was entered.
7. Click OK to return to the Base Station Setup page.
8. Enter a number for the base station. Unless you are using multiple base stations you should use the number 1 for the base station. This base station number does not need to correspond with the base ID (channel).
9. Enter the low and high keypad numbers
10. Click OK to save the changes and close the dialog

Programming Keypads

All programming changes to the keypad are done through the keypad menu. Some of the menu options for keypads set to static mode are different from those for keypads set to dynamic mode.

You must enable the menu through the hardware settings in the keypad setup wizard.

Enable the Keypad Menu for OptionPower for Office 2016, 2013 and 2010

1. The base station must be connected to your computer, have power, and be recognized by the software (see Defining your Hardware Settings)
2. On **OptionPower** tab, click **Hardware**

3. Select the G4 base station for the keypads you wish to change and click Base Station Settings
4. Click **Advanced**
5. Change the Menu Access to **Enabled**
6. Click **OK** to save changes.
7. Click **Test Keypads**
8. Turn the keypads on
9. Press and hold the **link** key and press the **DEL** key. Use the right and left arrows to move between menu options and the center arrow to select an option. Note The keypad menu will not appear if the keypads and base stations are set to different ID's or different modes, i.e. one is set to static and one dynamic. If you cannot access the menu, change the mode for the base station or change the base station ID.
10. Press **Send** to save changes
11. Press **DEL** to close the menu
12. Turn the keypad off

Changing and Verifying the Keypad Address

Changing keypad addresses is only necessary when using the keypad in static mode. In dynamic mode, the keypad serial number is used. To change the address

1. Enable the keypad menu
2. Press the right arrow three times until the menu reads Address
3. Press the center arrow
4. The current address will appear in the display, enter a new three digit address and press **Send**
5. Press **DEL** to return to the menu
6. Press **DEL** to close the menu

Changing the Keypad Base ID

1. Enable the keypad menu
2. Press the right arrow four times until the display reads Base ID
3. Press the center arrow
4. Enter a new two-digit ID
5. Press **Send**

6. Press **DEL** to return the menu
7. Press **DEL** again to close the menu

Change the Keypad Mode

1. Enable the keypad menu
2. Press the left arrow once until the display reads Mode
3. Press the center arrow
4. Use the right or left arrow to select a different mode
5. Press **Send** to save your changes
6. Press **DEL** once to return to the menu
7. Press **DEL** again to close the menu

Change the ID for the Base Station with OptionPower for Office 2016, 2013 and 2010

1. Connect the base station to your computer
2. On the **OptionPower** tab, click **Hardware**, click **Advanced Hardware Configuration**
3. Select the base station you wish to change and click **Base Station Settings**
4. Click **Verify**
5. The base ID is listed on the lower portion of the dialog, select a new ID and click **Change to ID**
6. Click **OK** to save your changes and close the dialog box