

## BAT WIFI

SKU: IPD-BAT--WIFI

## Wi-Fi & Internet Alarm Communicator



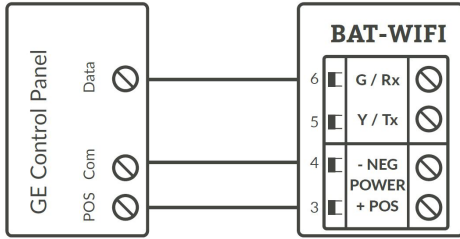
**ETHERNET**



# Product Manual

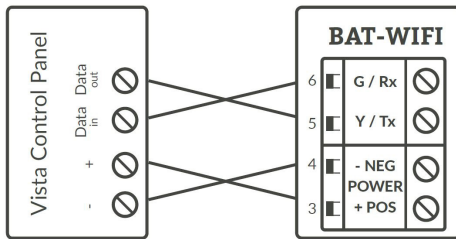
## BAT WIFI

# QUICK REFERENCE



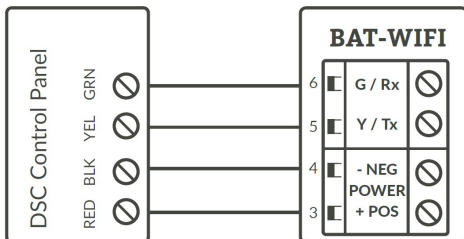
## Programming for TELCO use on GE NetworkX:

Section Device 0	Universal WiFi BAT as Sole Communicator
Location 0	Enter the Phone Number
Location 1	Enter Account Number
Location 2	Enter '13' for Contact ID



## Programming for TELCO use on Vista:

Section	Universal WiFi BAT as Sole Communicator
41	Enter Phone Number
43	Enter Account Number
193	Enter 1, 0. Enable to turn on Address 20



## Programming for TELCO use on DSC:

Section	Universal WiFi BAT as Sole Communicator
301	Enter Phone Number
310	Enter Account Number
350	Enter '03' for Contact ID

# Technical Support Information

For Technical Support, call toll free: (888) 88-ALULA

alula.net

www.alarmdealer.com

setup.alarmdealer.com - Mobile Friendly

Alula

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# Pre-Installation

## Hardware Registration

Before installation of your BAT-WIFI, it must be registered at [www.alarmdealer.com](http://www.alarmdealer.com).

Here are the steps needed to register your hardware:

- Log into [www.alarmdealer.com](http://www.alarmdealer.com) with the dealer login information that was emailed to you.
- Click Create Account Wizard
- Follow the 4-Step Wizard

# Installation Guide

## General Considerations

- Before installation, your BAT-WIFI must be setup using the dealer branded portal [www.alarmdealer.com](http://www.alarmdealer.com).
- The BAT-WIFI should be installed securely in the supplied plastic housing, and be mounted beside your alarm control panel.
- Where available, proximity to the hard-wired Ethernet Internet connection should be taken into consideration when routing wires.
- Choose a location with good reception by monitoring the BAT- WIFI signal strength LEDs with a pre-wire power up.
- The BAT-WIFI must be completely powered down before starting the wire up.
- Programming is simple using the alarm control panel. Written instructions are included in the “Wiring & Programming” section of this manual.

## AP Configuration Tool QuickStart Guide

An easy to use QuickStart Guide has been designed to make the BAT WiFi easily join the customer’s WiFi Network.

## Connecting to a Wireless Network (AP Configuration)

The BAT-WIFI has an AP Configuration Tool which is designed to assist with ensuring the BAT-WIFI joins a wireless network easily.

The following steps should be followed:

1. Power up the BAT-WIFI at the alarm panel.
2. Open your smartphone or laptop and search for Wireless Connections
  - a. In the list of WiFi connections you should see one labeled: IPD-CFG-AP-XX-XX-XX. The last six digits will match the MAC address of your WiFi device. If not, try moving your BAT-WIFI to a different location for better reception.
3. Connect to the WiFi Network: IPD CFG-AP-XX-XX-XX
4. After you are connected to your smartphone or laptop. Open a web browser and type in the following IP Address: 192.168.100.1
5. Once you have connected to the above IP Address it will launch the AP Configuration Tool.
6. Next you will click on “Scan for Wireless Networks”. This will populate a list of all available wireless networks in your area.
7. Find the customers Wireless Network and click on it. If security credentials are required, you will be prompted to enter them.
8. You should now be connected to the customers WiFi Network!

## Connecting to a Wireless Network (WPS)

Press the SW1 button (located on the top left side of the board) once, this will send the device into WPS mode. LED 6 will continue to blink as long as the unit is in WPS mode. Follow the router's directions to turn WPS on for it. Typically, enabling WPS involves simply pressing a button labeled 'WPS'. Once the WiFi device and the router see each other, LED 6 will go solid indicating it has found a network. You can now press the SW1 button twice to see the signal strength of the unit.

## Board Button Configuration

SW1 Button [located on the top left of the board]

There are many uses for the SW1 button and your WiFi device. You can tap on the button from 1 to 4 times depending on what the situation is:

- 1 Tap – The BAT WIFI will go into WPS mode and search for nearest WPS activated WiFi router in the area.
- 2 Taps - The BAT WIFI will update the signal strength [Device must be paired to a WiFi]
- 3 Taps - The BAT WIFI device will factory reset and lose connection to any WiFi it was previously attached to.
- 4 Taps – The BAT WIFI will force a firmware upgrade [Device must be paired to a WiFi router]

## Reset the Wireless Network (AP Configuration Tool)

Locate the button labeled SW1 on the top left of the board. When this button is pressed 3 times in a row, it causes the device to perform a software reset and will allow you to perform the "AP Configuration Tool" again.

## Locating and Installing the BAT-WIFI

The BAT-WIFI connects to the alarm panel's power connections, Telco, virtual keypad bus (if available), and keyswitch connections (optional).

The BAT-WIFI automatically seeks an IP address. There is no need to program routers or switches.

## Telco - Digital Dialer

The BAT-WIFI's signal collection expects Contact ID format from the digital dialer on the alarm panel. Most control panels made in the last decade are CID capable. Wire the Telco side of the alarm control's Tip & Ring to the BAT-WIFI Tip & Ring.

## Virtual Keypad Connection

The BAT-WIFI connects to most panels as a Virtual Keypad. This allows the customer full virtual keypad access after they authenticate using the customer username and password you have assigned them in the pre-installation phase. You will need to refer to the wiring diagram for your specific panel because on the panel side the Virtual Keypad connection has various labels (Data in-Data out, YEL-GRN, or just Data). This connects to the G/RX, Y/TX connections on the BAT-WIFI.

## Power Connection

The last step is to wire the alarm panel's 12VDC auxiliary power and ground to BAT-WIFI positive (pin 3) and negative (pin 4) terminals.

## Basic Programming

Because the BAT-WIFI simulates telephone service to the panel, general programming for the control is limited to configuring the signal format as Contact ID, as well as inputting a telephone number to dial. In this case the actual telephone number does NOT matter and is NOT used in the signal delivery process.

When using Alula mobile and web interfaces, customers can enter their 4 digit code to arm & disarm the system. For panels that are "Interactive Ready" the following programming will give you full Virtual Keypad access:

DSC Panels: No programming required to make the virtual keypad operate.

Vista Panels: Enable \*193 with (1,0) to turn on Address 20.

GE Panels: Automatically enroll to Keypad Slot (Expansion 240) once you enter and exit programming.

## Troubleshooting Diagnostic Information

Under normal operation the Activity light will periodically blink. A power cycle is recommended if the Activity light is NOT periodically blinking.

### LED – 1

- Used for DHCP & Network connection diagnostics:
- Solid: Indicates a connection has been made to Alula. (The unit is Online)
- 3 Flashes: Indicates the device is not connected to the Internet or is not pulling a DHCP from the router.
- 7 Flashes: Indicates the device is still working on "AP Configuration", therefore is not connected to a WiFi Network.

### LED – 2

- Used to indicate signal transmission

### LED – 6 (When not connected to a WiFi Router)

- Flashing: Indicating it's searching for a router in WPS Mode.
- Solid: Indicates it found a router via WPS Mode.

### LEDs – 3 to 6 (When connected to a WiFi Router)

- Display Signal Strength, which is updated on Startup and once every 4 hours.

## Validating the Installation

After the unit is properly connected to the Alarm Panel and powered up, use the following steps to validate that the system is functioning properly:

- Ensure that virtual keypad functionality works through [www.alarmdealer.com](http://www.alarmdealer.com), [www.setup.alarmdealer.com](http://www.setup.alarmdealer.com), or the Alula mobile app.
- Ensure that alarm signals reach your central station.

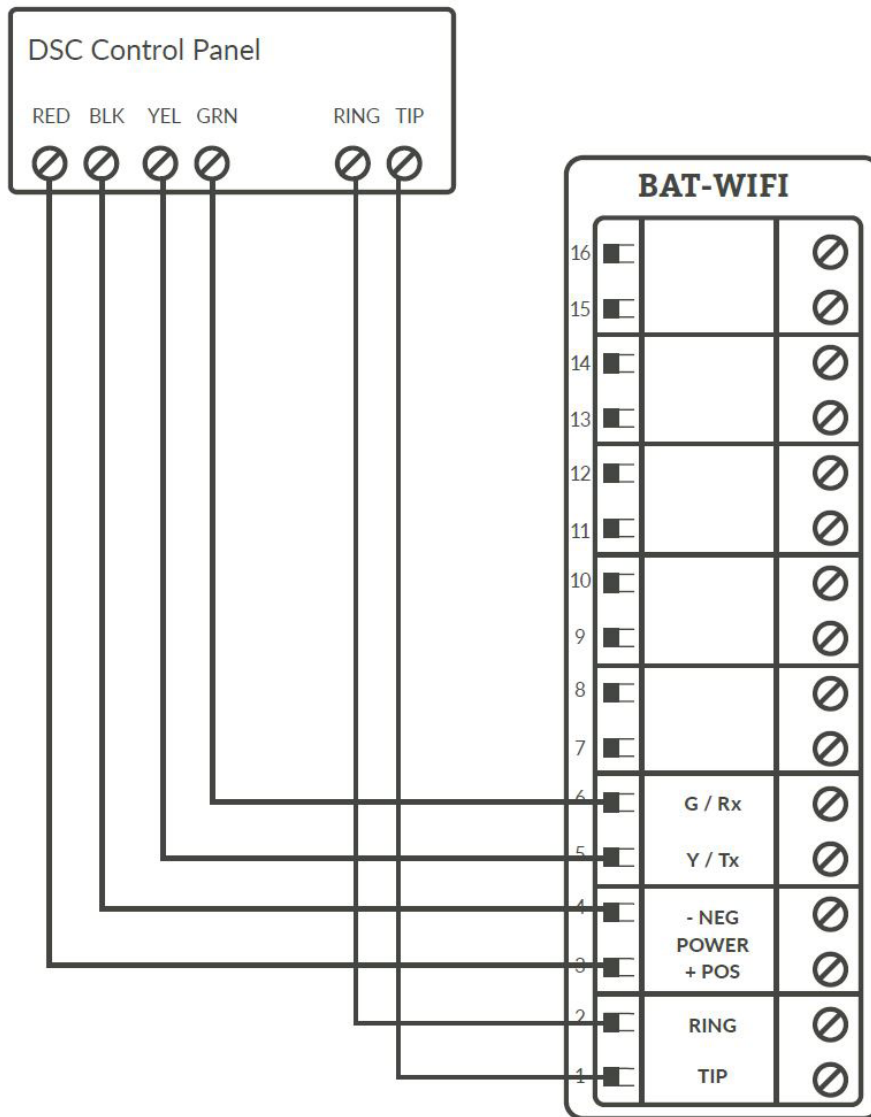
## Wiring & Programming for Popular Panels

The following pages are organized by Alarm Panel type. Wiring and programming instructions are given for:

- Digital Security Control (DSC) Alarm Panels
- Honeywell Vista Alarm Panels
- GE NetworX Alarm Panels

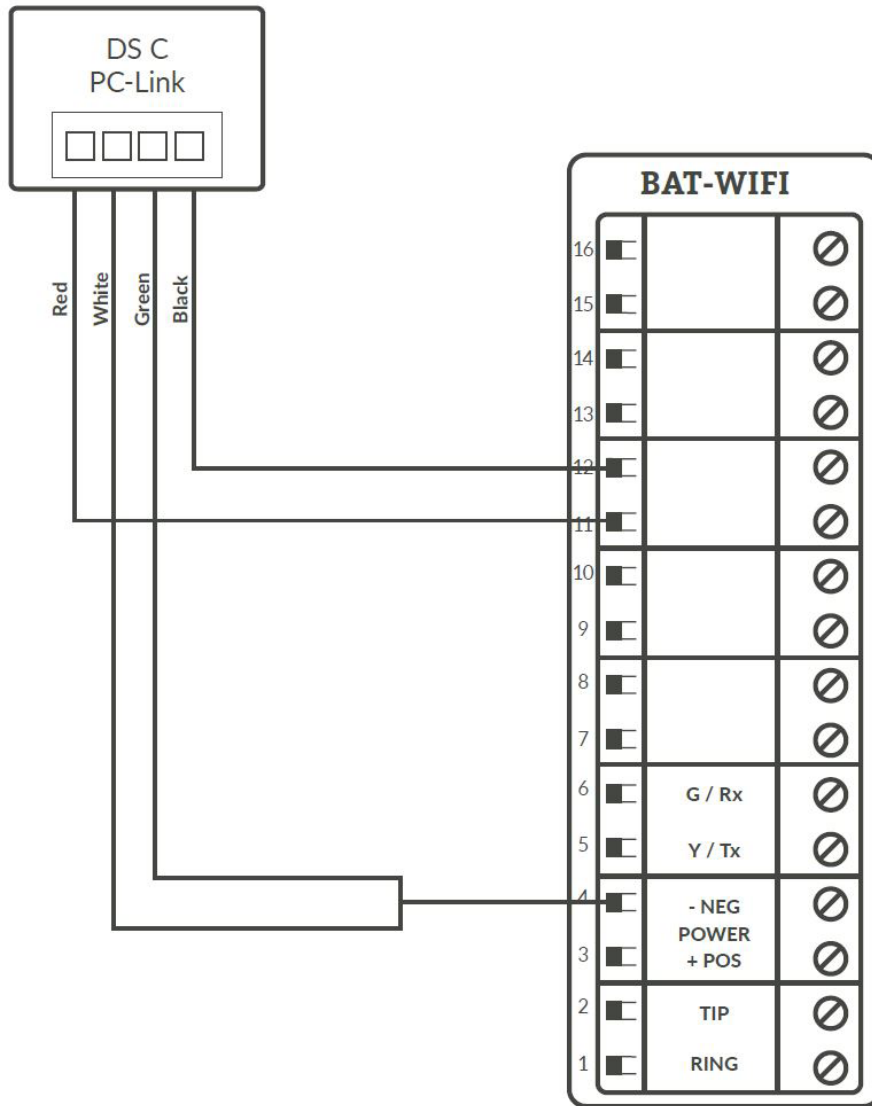


# DSC Panel Wiring and Programming



# DSC PC-Link connection

This allows for remote downloader functionality with Alula's Universal Downloader (uDownloader) software.



## DSC Panel Programming

See Supported Panels section on page 24. All Control Panels must have a Phone Number in the Panel and an Account Number in the Panel. As long as your Reporting Codes are in the Panel and are transmitting in Contact ID it will send signals.

Programming when using TELCO (Recommended): General Concept Programming on DSC (BAT WIFI as Sole Communicator):

Section	BAT as Sole Communicator	Code Summarization
301	Enter a Receiver Number	
310	Enter Account Number	
350	Enter '03' to send Contact ID	Panel default is '04', SIA

Note: Ensure All Report Codes are in, and signals can be sent.

Programming ONLY when using PC-Link to send Signals (Not Recommended): DSC Programming for Communications - GSM Emulation:

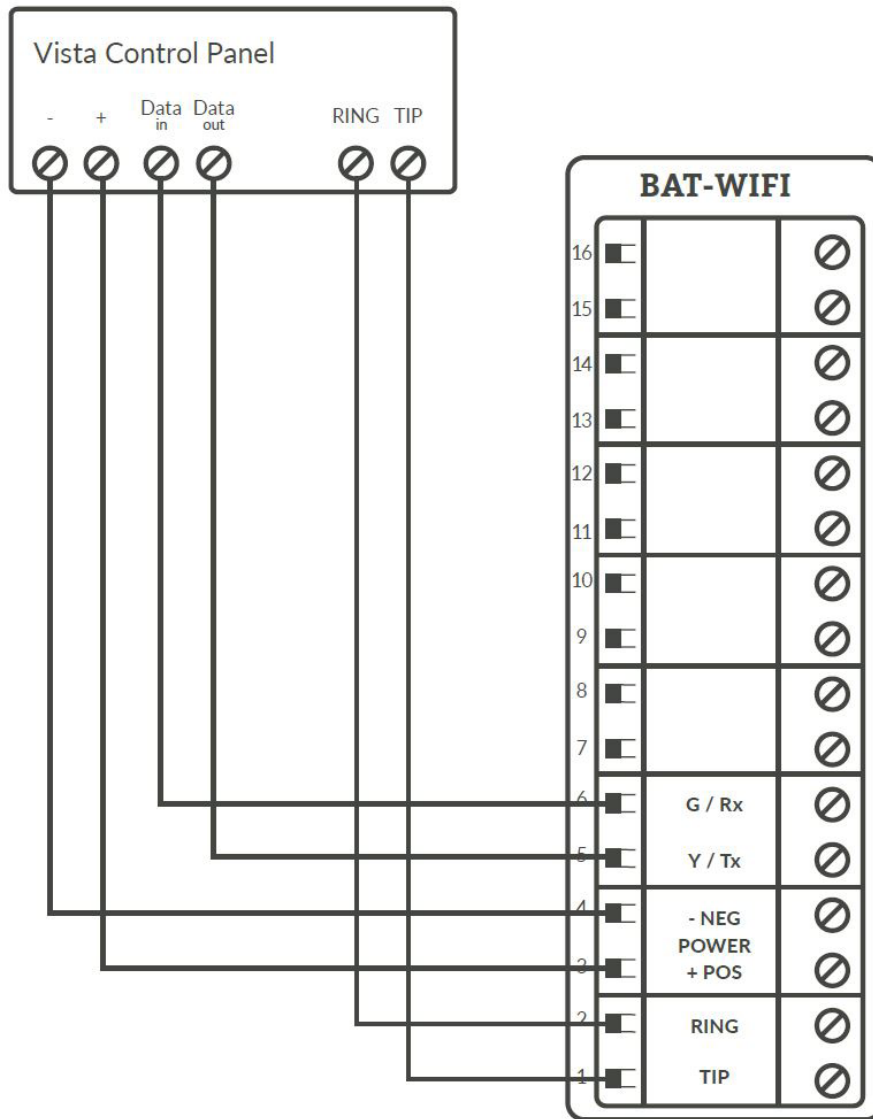
If GSM is used, it must be in dialer capture mode

Section	BAT as Sole Communicator	BAT as Fail over w/Add'l Communication Device	BAT as Dual Reporting w/Add'l Communication Device	Code Summarization
015	Disable Option 7	If GSM, Disable Option 7 If Phone Line, Enable Option 7	If GSM, Disable Option 7 If Phone Line, Enable Option 7	Option 7 turns on/off telephone line supervision.
167	Set '060' Seconds	Set '060' Seconds	Set '060' Seconds	Sets T-Link acknowledgment delay to 60 secs.
301	Set 'CAAF'	Set 'CAAF'	Set 'CAAF'	'CAAF' has to be set for the panel to send signals to the PC- Link
302	N/A	N/A	Set 'Central Station Receiver #'	Second telephone number goes here.
303	N/A	Set 'Central Station Receiver #'	Set 'Central Station Receiver #'	This section is the telephone backup of section 301.
350	Set '04' / '04'	Set '04' / '03 for Contact ID, 04 for SIA FSK' **	Set '04' / '03 for Contact ID, 04 for SIA FSK' **	Format sent as either contact ID (03), or SIA FSK (04). The PC-Link / BAT can ONLY receive signals via SIA FSK (04).

Programming ONLY when using PC-Link to send Signals (Not Recommended): if GSM is used, it must be in dialer capture mode

Section	BAT as Sole Communicator	BAT as Fail over w/Add'l Communication Device	BAT as Dual Reporting w/Add'l Communication Device	Code Summarization
351	Enable Option 1	Enable Option 1, 5	Enable Option 1, 2, 5	Options to turn on/off alarm/restore for telephone 1 (option 1), telephone 2 (option 2), and alternate communications (option 5).
359	Enable Option 1	Enable Option 1, 5	Enable Option 1, 2, 5	Options to turn on/off tamper/restore for telephone 1 (option 1), telephone 2 (option 2), and alternate communications (option 5).
367	Enable Option 1	Enable Option 1, 5	Enable Option 1, 2, 5	Options to turn on/off opening/closing for telephone 1 (option 1), telephone 2 (option 2), and alternate communications (option 5).
375	Enable Option 1	Enable Option 1, 5	Enable Option 1, 2, 5	Options to turn on/off maintenance for telephone 1 (option 1), telephone 2 (option 2), and alternate communications (option 5).
376	Enable Option 1	Enable Option 1, 5	Enable Option 1, 2, 5	Options to turn on/off testing for telephone 1 (option 1), telephone 2 (option 2), and alternate communications (option 5).
380	Enable Option 1	Enable Option 1, 5	Enable Option 1, 5	Option 1 turns on/off communications. Option 5 turns on/off 3rd phone number.
381	Disable Option 3, Enable Option 5	Disable Option 3, Enable Option 5, 6	Disable Option 3, Enable Option 5, 6	Option 3 turns on/off code reporting. Options 5 & 6 turns on/off communication with phone lines 1, 3 & 2 respectively.
382	Enable Option 5	Enable Option 5	Enable Option 5	Option 5 enables/disables T-Link/PC-Link.
389	Set '003'Seconds	Set '003'Seconds	Set '003' Seconds	The time it will take to periodically check for faults on the T-Link/PC-Link.

# Vista Panel Wiring and Programming



## Vista Panel Programming

All Control Panels must have a Phone Number in the Panel and an Account Number in the Panel. As long as your Reporting Codes are in the Panel and are transmitting in Contact ID it will send signals.

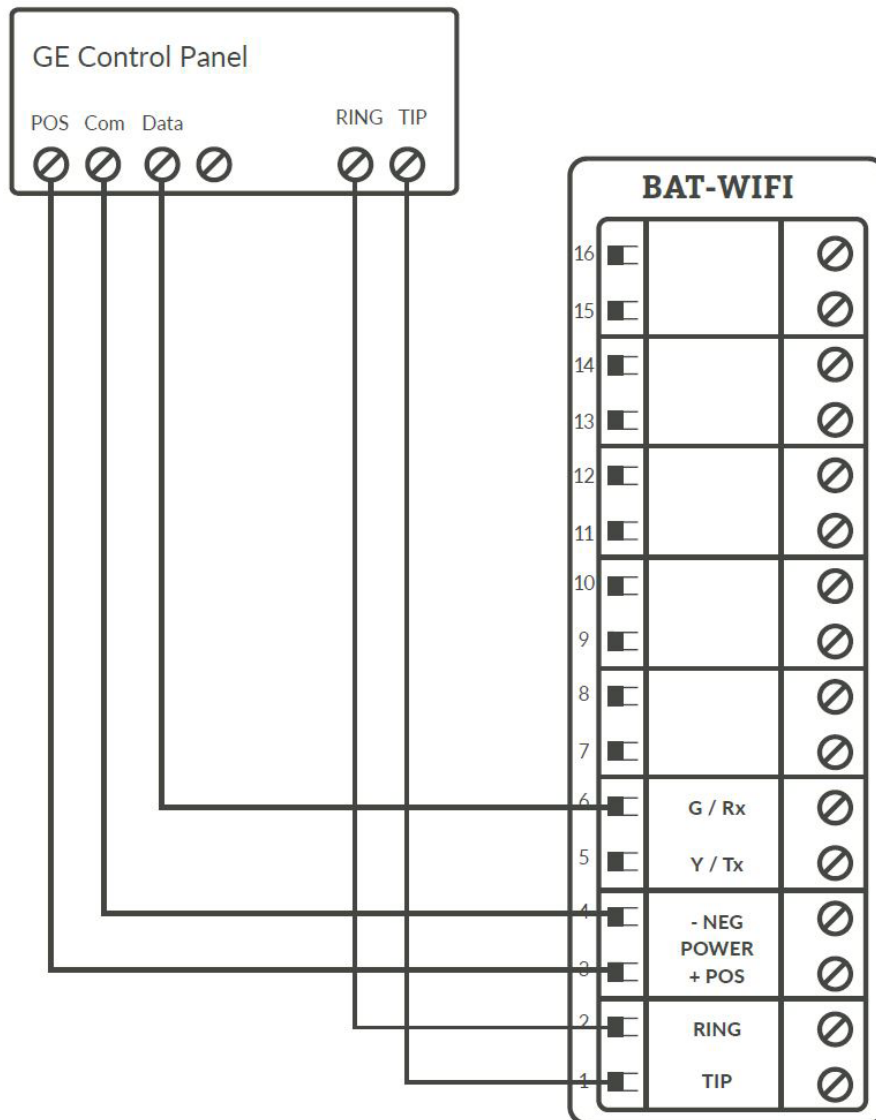
Programming when using TELCO (Recommended): Programming on Vista (BAT WIFI as Sole Communicator):

Section	For BAT as Sole Communicator	Code Summarization
41	Enter Phone Number	
43	Enter Account Number	
49	Enter 5	For All Communications to BAT
54	Enter 0	No Delay Between Communicators
55	Enter 0	Phone Line Communicates First
65 & 66	Enter 1	If you want Opening/Closing Reports
193	Enter 1, 0	Enable to turn on Address 20

Programming when ONLY using Keybus to send Signals (Not Recommended): Vista Programming for Communications - GSM Emulation:

Section	For BAT as Sole Communicator	For BAT in use with another Communication Device for Fail over	For Dual Reporting	Code Summarization
*29	Enter 1	Enter 1	Enter 1	This enables GSM. The BAT Emulates a GSM.
*42	N/A	Enter Central Station Receiver Number	Enter Central Station Receiver Number	Secondary Phone Number.
*43	Enter Account Number	Enter Account Number	Enter Account Number	This is the central station account number.
*49	Enter 5	Please refer to panel manual for your particular application requirements	Please refer to panel manual for your particular application requirements	Dual Reporting; Setting to 5 sends all reporting to both primary and secondary.
*54	Enter 0	Enter 2	Enter 0	The time it takes for the communicator to switch from primary to secondary.
*55	Enter 1	Enter 1	Enter 1 (BAT is Primary Communicator)	Setting to 1 gives signal priority to GSM (BAT).
*65	Enter 1	Enter 1	Enter 1	Report Code for Openings.
*66	Enter 1, 1	Enter 1, 1	Enter 1, 1	Report Code for Arming in Away and Stay.
*193	Enter 1, 0	Enter 1, 0	Enter 1, 0	1 turns on/off keypad address. 0 sets sound to beep.

# GE Panel Wiring and Programming



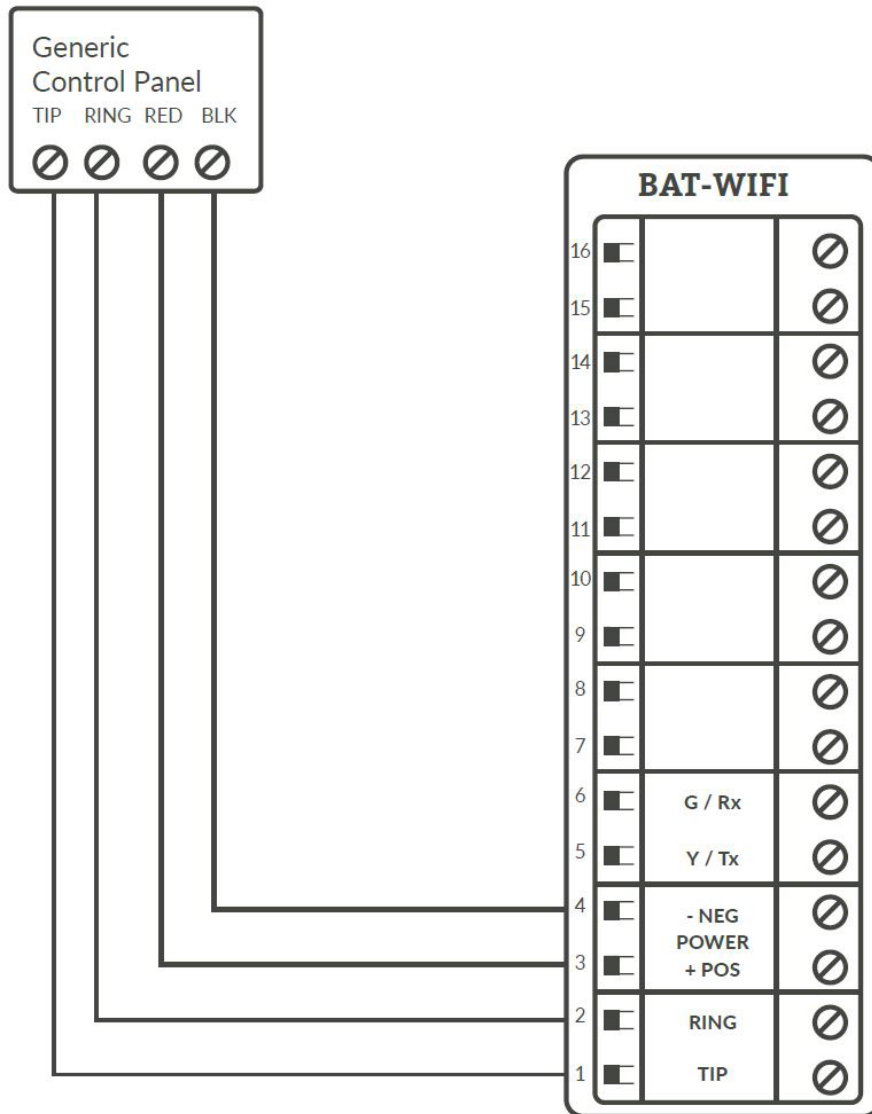
GE Keybus & Tip/Ring Wiring

## GE Panel Programming

Recommended: General Concept Programming on GE NetworX:

Section	BAT as Sole Communicator	Code Summarization
Device 0, Location 0	Enter the Phone Number	
Device 0, Location 1	Enter Account Number	
Device 0, Location 2	Enter '13' Recommended value	Contact ID

# Generic Alarm Panel Wiring and Programming



Generic Keybus & Tip/Ring Wiring

## Generic Alarm Panel Programming

- Program the panel Phone Number into the panel
- Program the Customers Account Number into the panel
- Program Reporting codes into the panel
- Program panel to transmit in Contact ID format

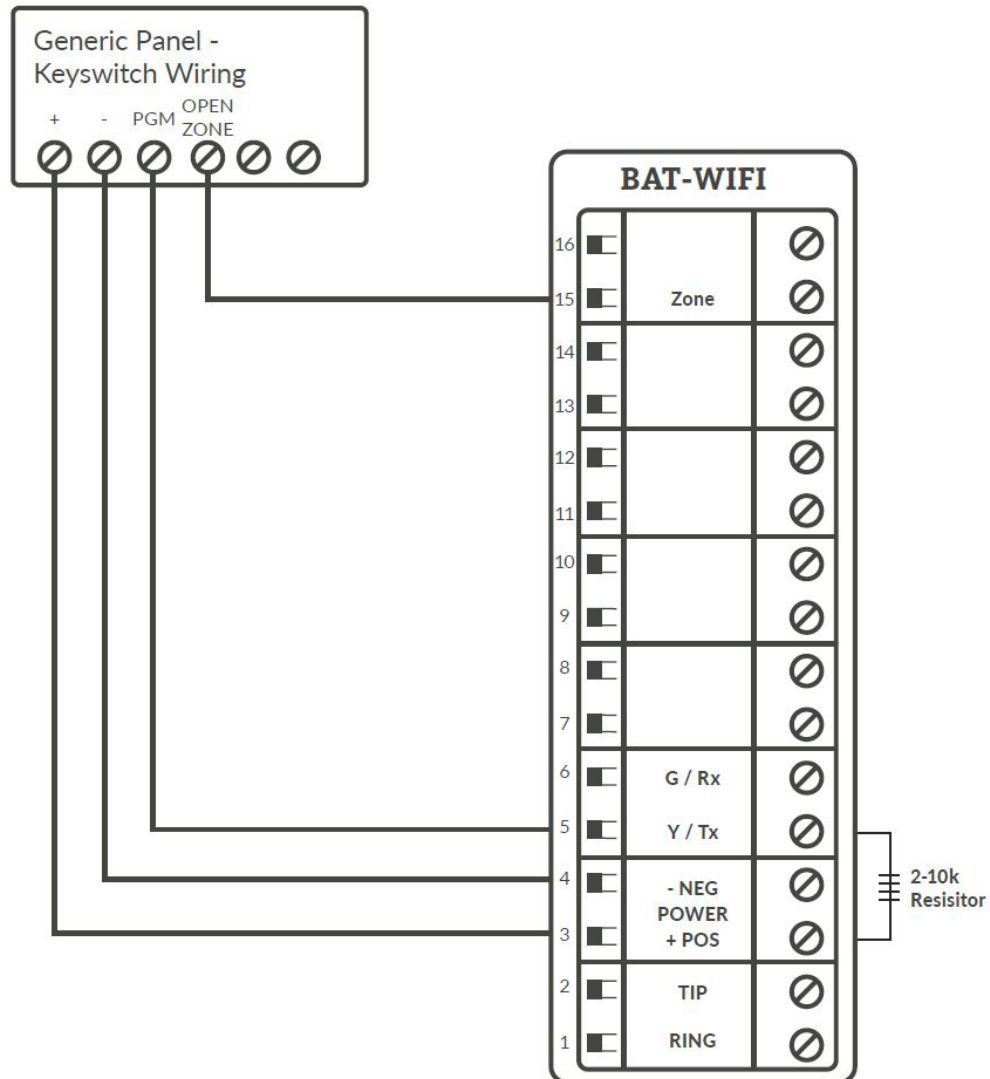
For interactive (Keyswitch) wiring and programming see the next section.



# Generic Keyswitch Wiring and Programming

For basic keyswitch interactive services with the BAT WIFI, the following alarm panel wiring is needed:

- A programmable output on the alarm panel will be used to signal to the BAT (Y/Tx terminal) that the panel has entered Arm/Disarmed State.
- The Z1 output on the BAT WIFI will be used as a keyswitch connecting to a 'zone' terminal on the alarm panel.



\*A pull up resistor may be required between terminal 3 to 5 to determine correct arm & disarm state.

## Generic Keyswitch Programming

Examples for Ademco, Digital Security Controls, and GE NetworX for keyswitch and panel state program output operations, as well as Keyswitch state programming are given below.

Most alarm panel manufacturers will have the capability to configure a zone as a keyswitch and generally have at least one on-board programmable output that can be configured to activate on a number of different control state conditions. Reference the alarm panel installation manual for details on your specific installation.

### Ademco (Typical)

- 56 program zone as type 77
- 80 Menu LED Outs
- Program 17 and 18 zone type 78 and 79

### DSC PowerSeries (Typical)

- Section 001 - Zone must be programmed as a 22
- Section 009 - 05

### DSC Alexor (Typical)

#### Wiring:

- Terminal 5 -> I/01
- Terminal 15 -> I/02
- 6.2k ohms resistor from Terminal 3 -> Terminal 5

#### Programming:

- Section 009 - '05/'22'
- Section 013 - Enable 2 & Disable 1
- Section 134 - Enable 14 (Press 9, then 6)
- Section 206 - Enable Option 2
- Section 501 - Enable 3

### GE NetworX (Typical)

- Device '0' Location 25, press \* until you reach desired zone
- Program zone as '11'
- LED Status Device '0'
- Location 47 Segment 1: 21
- Location 47 Segment 2: 0

# Supported Panels

## Honeywell

Panel	Revision	Digital Dialer	Full Interactive	GSM Emulator
Vista-10P	2.6+			
Vista-10PSIA	4.0+			
Vista-128BP	3.0+			
Vista-128BPE	1.0+			
Vista-128FB	1.0+			
Vista-128FBP	2.0+			
Vista-128FBPE	1.0+			
Vista-128SIA	2008+			
Vista-15	2+			
Vista-15CN	2.6+			
Vista-15P	2.6+			
Vista-15PCN	2.6+			
Vista-15PSIA	4.0+			
Vista-20P	2.6+			
Vista-20PCN	2.6+			
Vista-20PI	5+			
Vista-20PS	2.6+			
Vista-20PSIA	4.0+			
Vista-21IP	1.0+			
Vista-21IPSIA	1.0+			
Vista-32FB	1.0+			
First Alert FA130	2.6+			
First Alert FA148	2.6+			
First Alert FA168	2.6+			
ADT Safewatch Pro 3000/3000EN	2.6+			

## DSC (Digital Security Control)

Panel	Revision	Digital Dialer	Full Interactive	GSM Emulator
PC5010	Any			
PC1616	4.13+			
PC1832	4.13+			
PC1864	4.13+			
Alexor	ALL			

\*Not ALL virtual keypad features may work. Arm/Disarm/System Status do work.

## GE NetworX

Panel	Revision	Digital Dialer	Full Interactive	GSM Emulator
NX-4V2	V2+			
NX-6V2	V2+			
NX-8V2	V2+			

Note: Any Panel not on the supported lists above should function properly as long as it transmits Contact ID through Tip & Ring. If the panel has the ability to use a Dedicated Open Zone that acts as a Keyswitch you can Arm/Disarm from the Website or Mobile Phone.

For non-supported panels: Bridge 12 VDC to "Y/TX" Terminal with any type of radial resistor with a value of 2.7k to 10k as a weak "pull up".

# Specifications

## Frequency:

- WiFi 802.11bg(mixed mode)

## Power:

- Externally provided 12v DC
- Typical Current 130 mA
- Max Current 185mA

## Environmental:

- Temperature Range - 30° to +70° C (- 22° to +158° F)
- Humidity 0 to 95% non-condensing

## Physical:

- Height 7.05 inches
- Width 4.45 inches
- Depth 1.5 inches

## Security Protocols Supported:

- WPA
- WPAII
- WEP





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