

EYFR05 User Manual

v0.3.4

18 June 2026

**DISCLAIMER: THIS IS A WORKING DOCUMENT. ANY AND ALL CONTENTS MAY CHANGE WITH
SUBSEQUENT UPDATES.**

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Chapter 1: Overview

Warnings



Do not disassemble the unit for repair or modifications. There is a high electrical voltage inside the unit that could cause electric shock.



Do not allow any type of liquid to come into contact with any part of the unit.



Insert all fittings fully into their mating receptacles. Failure to do so could result in injury.



Do not fold, bend, or apply excessive force to any cable or fitting.

Cautions

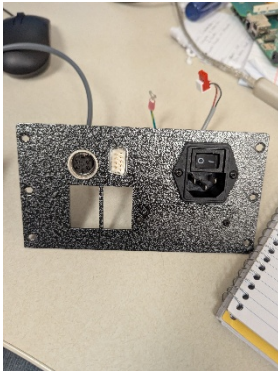
Please use caution when handling this or any other electrical appliance.

- This unit accepts an AC input voltage from 100-240 VAC. Trying to operate this unit with a voltage outside that range may cause damage to the unit.
- Avoid placing or storing this unit in a location where it may become wet or dust covered.
- Do not place or mount this unit in an unstable area.
- Dropping this unit may result in personal injury or damage to the unit.
- Before performing any maintenance on the unit, make sure to turn it off and remove the power cable.
- There are no user serviceable parts inside the main enclosure of the unit.

Unit Overview



The EYFR05 is equipped with 7" TFT LCD touch display.



The bottom side of the EYFR05 has two RJ-45 Ethernet ports to allow it to be used in a chain network configuration or isolated subnets.

The four USB-A connectors are used to provide firmware updates via a standard USB drive. These can also be used with four separate USB barcode readers.

There is also an RS232 DSUB9 connector that is used for serial network protocols.

The 5-pin remote connector provides additional I/O capabilities.

There is an internal speaker that provides an audio indication for any combination of accepts, rejects, and batch completions. The speaker volume can be adjusted through the user interface. (See the *Controller Settings* section in the next chapter.)

The power plug accepts 100-240 VAC at 50-60 Hz.

The top side of the EYFR05 has an antenna for the radio module to communicate with tools.



Compatible Tools

2-way compatible models

- EYFLA7AR, EYFLA8AR, EYFLA8CR, EYFLA8PR, EYFLA9CR, EYFLA9PR, EYFMA2CR, EYFMA2PR, EYFLF1RA, EYFLF1RC, EYFLF1RP, EYFLF2RA, EYFLF2RC, EYFLF2RP, EYFNH2RC, EYFNH2RP, EYFMF1RC, EYFMF1RP, EYFNA1PRT, EYFNA1CRT, EYFNA1JRT, EYFPA1JRT, EYFMH1RC, EYFMH1RP, EYFMH2RC, EYFMH2RP, EYFNH1RC, EYFNH1RP, EYFMH3RC, EYFMH3RP, EYFMH4RC, EYFMH4RP

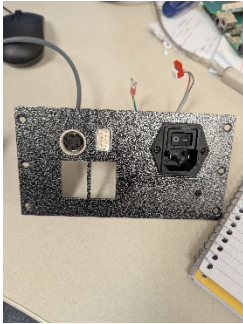
1-way compatible models

- EYFLA4AR, EYFLA5AR, EYFLA5PR, EYFLA5QR, EYFLA6JR, EYFLA6PR, EYFMA1JR, EYFMA1PR, EYGA1NR, EYFGA2NR, EYGA3NR, EYFLA7AR, EYFLA8AR, EYFLA8CR, EYFLA8PR, EYFLA9CR, EYFLA9PR, EYFMA2CR, EYFMA2PR, EYFNA1PRT, EYFNA1CRT, EYFNA1JRT, EYFPA1JRT, EYFLF1RA, EYFLF1RC, EYFLF1RP, EYFLF2RA, EYFLF2RC, EYFLF2RP, EYFMF1RC, EYFMF1RP

Chapter 2: Using the unit

Quick Start

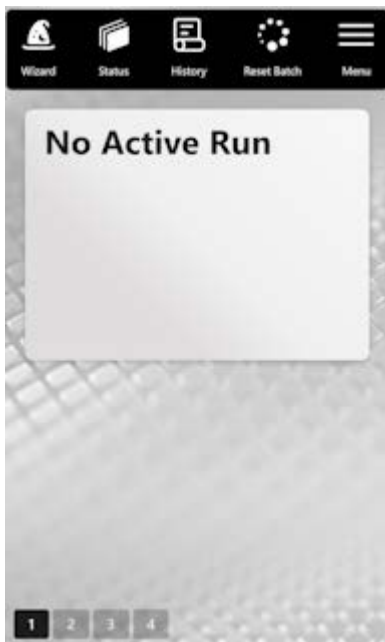
This quick start will guide you through the process of configuring the unit for first time use.



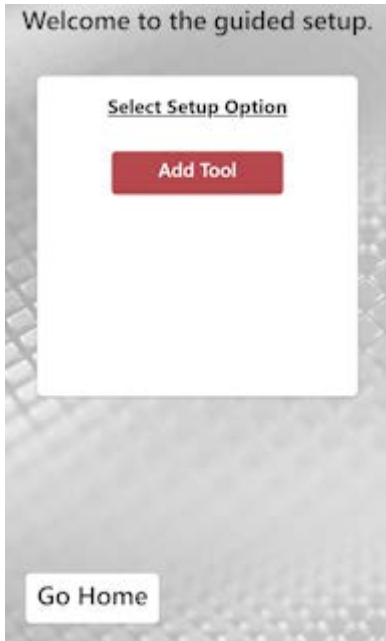
Plug the provided power cable into the unit and 100-240 VAC power and turn on the power switch. The display will show the loading progress.



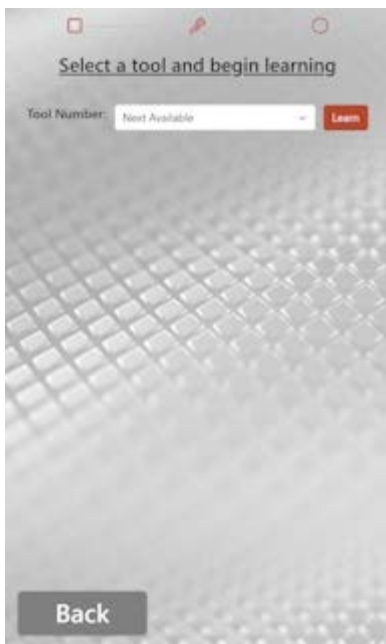
Once loading is completed, the unit should go to the Run screen. If the unit stays on the loading screen with an error, please contact support.



To use a tool with the Controller, you must first add the tool to the Controller. To do so, press the “Wizard” button on the top left of the screen.

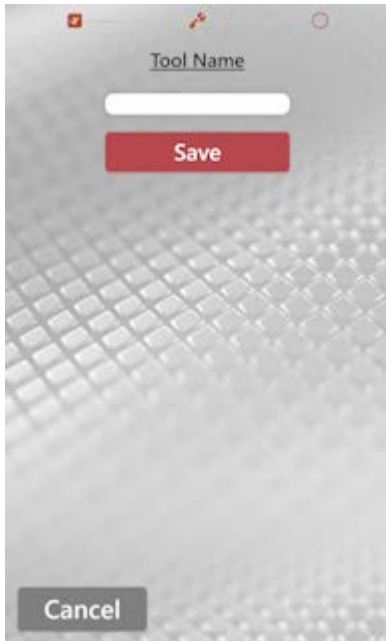


Select “Add Tool” in the option selection page.

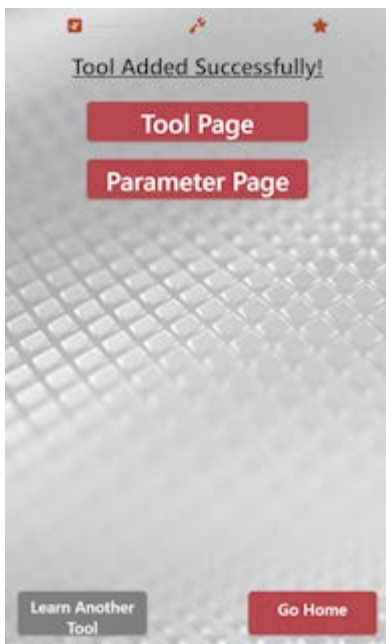


Press the Learn button to start the association process. If you would like to learn the tool into a specific tool slot, select the desired slot from the drop down before pressing Learn.

After pressing Learn, follow the instructions on screen to add the tool to the controller. If the tool is currently associated with another controller, make sure to forget it from that controller first.

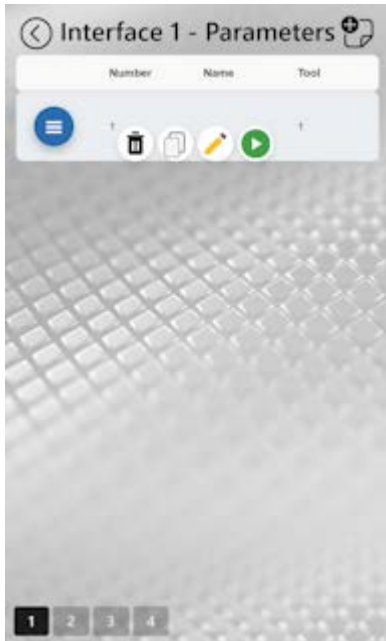


After the tool connects to the controller, enter the name that will be displayed for the tool and press Save.



After the tool is saved, you can go to either the tool or parameter page. You may instead Learn Another Tool by pressing the button in the bottom left or go back to the Run screen by pressing Go Home.

For the quick start, press Parameter Page.



To run a tool, you must select a parameter defined to use the tool. A parameter will be defined with the default setup for the tool as part of the learn process.

Press the blue button next to the parameter number you want to select or edit. If you want to view or edit the parameter setup, press the pencil icon. To run the parameter, press the play icon to start the parameter and return to the Run screen.

AccuPulse

AccuPulse tools work both in one-way communication (Default) or two-way communication. You will have to use the remote control to switch the tool from one-way to two-way mode.

To set the tool from default “90” (one-way) to ‘91” (two-way)

1. Put the tool into program mode.
2. Press “C” button on the remote 4 times
3. “90” is default (one-way), Press the + up to “91” (two-way)
4. Press the Ok button to accept the changes.

To set the tool from default “91” (two-way) to ‘90” (one-way)

1. Put the tool into program mode.
2. Press “C” button on the remote 4 times
3. Press the - down to “90” (one-way)
4. Press the Ok button to accept the changes.

AccuPulse Tools in two-way mode “91” will flash Orange on the rear LED when the parameter is selected. If the tool is in “sleep mode” (timed out from no operation and no display) the tool will not communicate or flash orange. Pulling the tool trigger will “wake” the tool and initiate communication then flash orange. Tool sleep time can be changed in the Controller settings under Controller setting then “Tool on time”. Default is 90 min. Sleep time range is 20 -720 min.

Concepts

Tools

The EYFR05 works with up to 16 Panasonic battery tools at a time, depending on model. To use a tool with the Controller, you must first “learn” the tool to the Controller. The process to do this is described in the Quick Start.

Tools are not activated directly by the unit. Instead, they are activated when a parameter that uses the tool is running. A tool may be used by any number of Parameters 1-200.

For tools with the appropriate firmware and setup, the unit will use the enable/disable or anti-theft feature to only allow the tool to run when a parameter that uses it is active.

Parameters

Parameters are the basic unit of operation for the EYFR05. A parameter contains a tool to run and some settings to use with it, such as the batch size. The EYFR05 supports 200 parameters. Each parameter must be associated with one of the tools learned to the unit before it can be run.

Run Screen

The Run screen shows which parameters the unit is currently running. Depending on the number of active parameters, the Run screen will be in one of several modes.

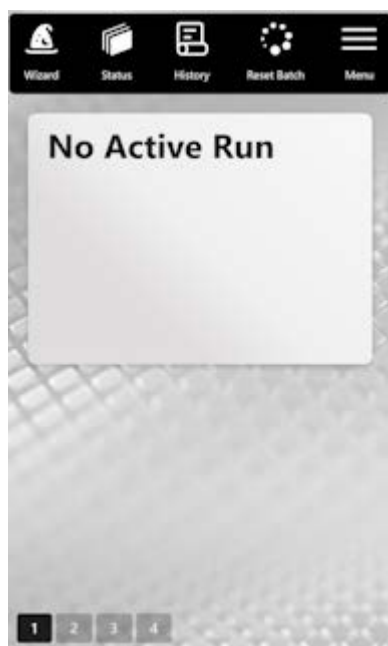


Figure 1: No active parameter



Figure 2: 1 active parameter



Figure 3: Multiple active parameters

Interface selection

The active interface selection is shown on the bottom left of the screen. You can press one of the buttons or swipe left or right to show the running operation of another interface.

Tightening Notifications

Every time a tightening is received from a running tool, the background of the area of the screen showing the current parameter and batch count for the tool will be shaded with a color indicating the status of the tightening.

- Red – A rejected tightening occurred.
- Green – An accepted tightening occurred.
- Yellow – A rejected tightening occurred, but was counted towards the batch due to NOK handling setting.

Status

The Status screen shows some basic information about the current unit configuration that may be useful for diagnostics purposes.



The General status screen shows general controller and radio information such as the firmware version and the internal radio address, channel, and signal strength.

Figure 4: Status - General screen



Figure 5: Status - VIN screen

The VIN status screen shows the current VIN and barcode statuses for each interface. The VINs shown may be from any source, including USB barcode scanners or network protocols. The Last Barcode and Barcode statuses are only related to the USB barcode scanners.

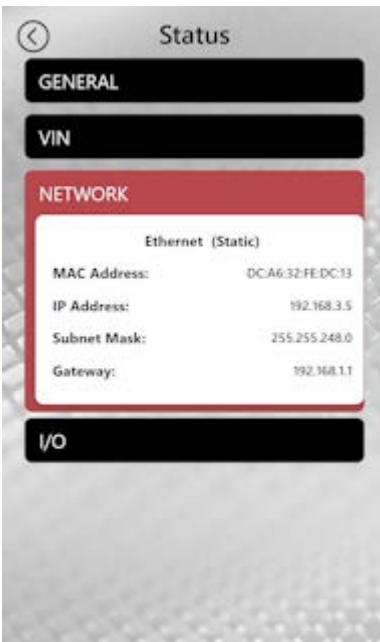


Figure 6: Status - Network screen

The network status screen shows the current Ethernet status of the unit. The MAC address is assigned by the factory and cannot be changed. The IP address, subnet mask, and gateway may be edited from the Network Settings - General screen or assigned via DHCP.

Chapter 3: Configuring the unit

Introduction

The configuration, along with parameter selection is available from the unit menu. The menu is available from the Run screen by pressing “Menu”.

Main Menu



Figure 7: Main Menu

The EYFR05 menu provides the entry point to configure and control the unit.

Tools

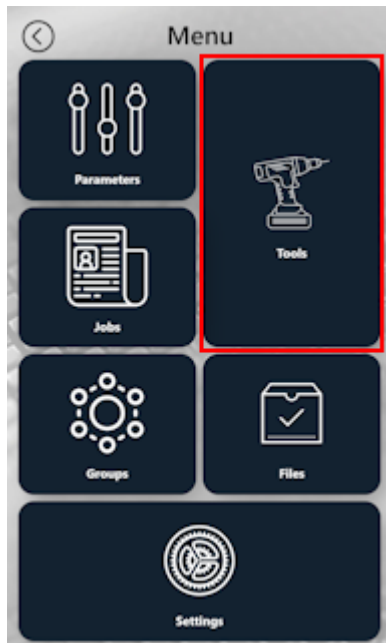


Figure 8: Main Menu - Tools

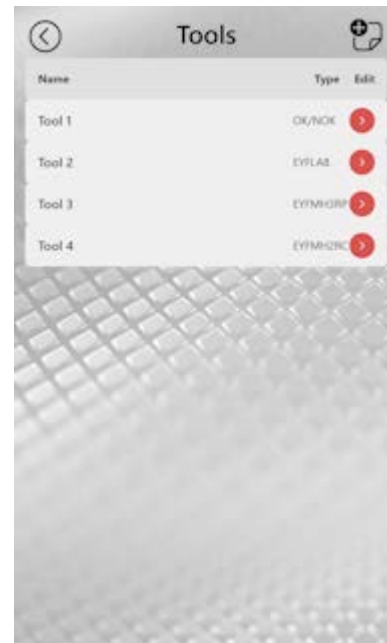


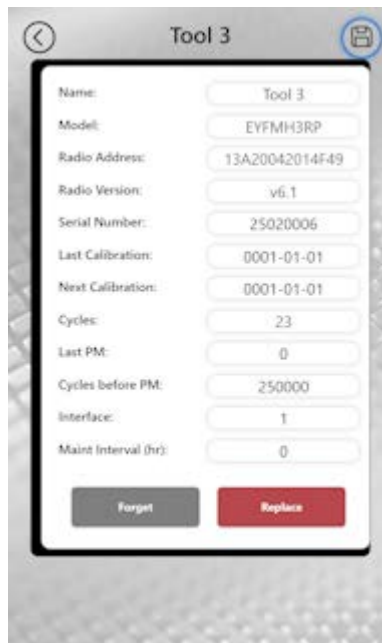
Figure 9: Tools Menu

On this screen, AccuPulse tools will show their model number in two-way mode “90”. AccuPulse in one-way mode “90” and other tools do not report their model number and will be listed as “OK/NOK”. When the Controller features differ between the tool type, they will be noted.

To view and edit information about a tool, such as the name or interface, press the red edit button for the tool.

To add a new tool, press the button in the top right of the screen. This will take you to the wizard described in the Quick Start.

Tool Configuration



Field	Value
Name	Tool 3
Model	EYFMH3RP
Radio Address	13A20042014F49
Radio Version	v6.1
Serial Number	25020006
Last Calibration	0001-01-01
Next Calibration	0001-01-01
Cycles	23
Last PM	0
Cycles before PM	250000
Interface	1
Maint Interval (hr)	0

Buttons: Forget, Replace

Figure 10: Tool Configuration screen

Buttons

Save (top right of screen) – Saves changes made to the tool configuration.

Forget – Removes the tool from the unit.

Replace – Takes user to the learn screen to replace current tool. The replacement tool must be an equivalent model.

Name

The tool name can be up to 25 characters. The tool name is shown on screen when running a parameter that uses the tool but is not reported to the network.

Model

The model of the tool. This field is determined during the learn process and cannot be edited.

Radio Address and Version

The radio info shows the radio address and the firmware version used by the radio to communicate with the Controller. The device has additional firmware to run the tool, but no information about this firmware is reported. Some features require a minimum radio version and tool firmware version.

Radio Version	Features new in the version
6.1	• AccuPulse 4+ buffering
5.59	• AccuPulse 4.0
4.37	• Improved out of range handling
4.33	• Two-way functions
3.19	• Improved result buffering
3.17	• Tool enable/disable/antitheft.

These fields cannot be edited.

Serial Number

The tool serial number can be up to 14 characters. The tool serial number is reported to the network with tightenings performed by the tool but is not shown anywhere on screen besides this menu.

Last Calibration

This field is used to store the date when the tool was last calibrated. The display order of this field is:

year-month-day

This field must be updated manually when the tool is calibrated and is for informational purposes only.

Next Calibration

This field is used to store the date at which the tool should be recalibrated. The display order of this field is:

year-month-day

This field must be updated manually when the tool is calibrated.

Cycles

This field tracks the total number of cycles performed by the tool since it was learned to the box. This cycle count is incremented for both accepted and rejected cycles.

This field cannot be edited. If the tool is forgotten and relearned, the cycle count will restart at 0.

Last PM

This field stores the cycle count at which the tool last received preventative maintenance. This field must be updated manually when the tool is serviced.

Cycles before PM

Range: 0 to 99,999,999

This field indicates the number of cycles between preventative maintenance for the tool. If this field is set to 0, no tracking of cycle counts for preventative maintenance is performed.

Interface

Range: 1 to number of interfaces

This field indicates the interface to which the tool is assigned.

Maint Interval

Range: 0 to 99

This field indicates the maintenance interval in hours of run time for AccuPulse tools. Setting this field to 0 disables the maintenance interval setting in the tool.

This field is not available for OK/NOK tools.

Forgetting Tools

Each tool can only be associated with a single Controller at a time but learning a tool to another Controller does not automatically remove it from the previous Controller. If you have moved or are planning to move a tool from one EYFR05 to another, you should “forget” the tool from the first Controller. To do so, press **Forget** on the Tool Configuration screen to remove the tool from the Controller. This will cause the Controller to no longer respond to the tool and will make any parameters using the tool and any groups or jobs using those parameters invalid. **If you learn AccuPulse in one-way mode “90” and want to relearn it in two-way mode “91”, you must “forget” the tool first. You cannot just “replace”.**

Parameters

Selecting Parameters

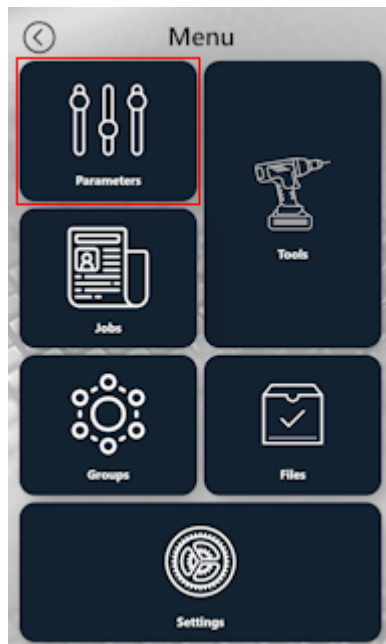


Figure 11: Main Menu - Parameters

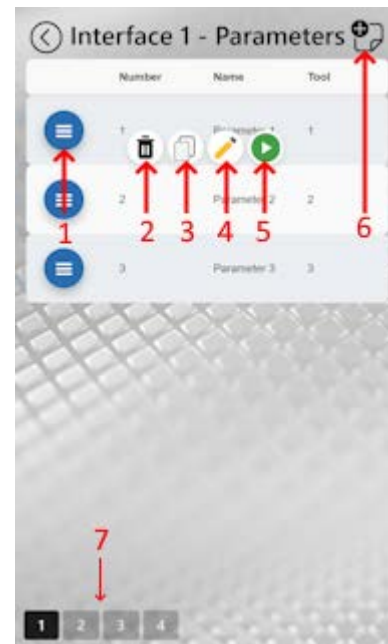


Figure 12: Choose Parameter screen

Buttons

1. Menu – Shows buttons 2-5.
2. Delete – Deletes the parameter.
3. Copy – Copies the parameter.
4. Edit – Edits the parameter.
5. Run – Runs the parameter.
6. Create – Creates a new parameter.
7. Interfaces – Selects which interface to view and modify parameter from.

The Choose Parameter screen shows all the groups for an interface in a list. A defined but not selectable parameter will show a red bar on the left side of the row. A parameter is defined when a tool is assigned to it. A parameter is unselectable if the assigned tool belongs to another interface or the configuration is outside of limits allowed for the tool. Parameters created from AccuPulse 4 tools can only be made when the tool is on and in range. The user can copy an existing parameter for any tool type at any time.

Configuration Options

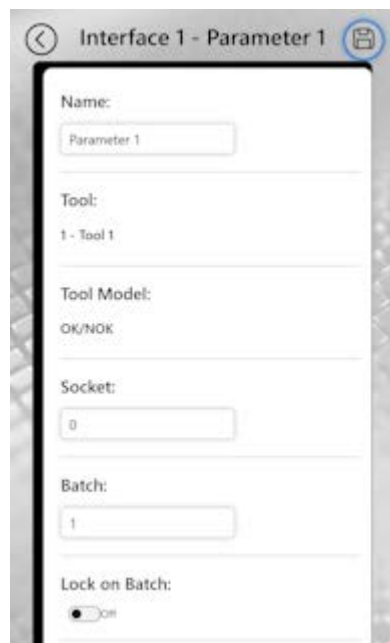


Figure 13: Parameter Edit screen

The Parameter edit screen allows you to configure the settings used to run the tool. The settings that are present for all tool types are shown above. The rest of the settings will vary by tool type. You can save changes to the parameter by pressing the Save button in the top right of the screen or cancel any pending changes to fields by pressing the Cancel Changes button at the bottom of the screen.

Please refer to the tool owner manual for the detail of the tool parameter information
<https://assemblytools.na.panasonic.com/assembly-tools/mechanical-pulse>

Common Fields

Name

The parameter name can be up to 25 characters. The parameter name is shown on screen when running the parameter and reported to the network with tightenings performed in the parameter.

Tool

This setting shows which tool was assigned to the parameter when it was created. If the tool used by a parameter is forgotten or assigned to another interface, the parameter will become invalid.

Batch

Default: 1

Range: 1 to 255

This setting determines how many good tightenings must be performed in the parameter to complete a batch.

Lock on batch

Default: Off

This setting determines if the unit will lock or restart the parameter when a batch is completed. When set to On, the Controller will not restart the parameter when a batch is completed and will require a batch reset or parameter selection command to restart the parameter. When set to Off, the Controller will restart the parameter when a batch is completed.

This setting is ignored when running the parameter as part of a group or job.

Groups

Selecting Groups

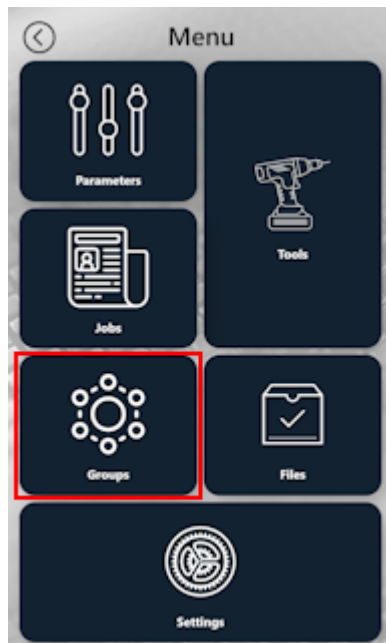


Figure 14: Main Menu - Groups

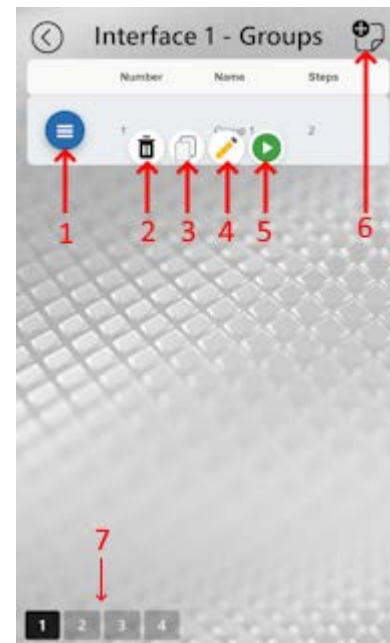


Figure 15: Choose Group screen

Buttons

1. Menu – Shows buttons 2-5.
2. Delete – Deletes the group.
3. Copy – Copies the group.
4. Edit – Edits the group.
5. Run – Runs the group.
6. Create – Creates a new group.
7. Interfaces – Selects which interface to view and modify groups from.

The Choose Group screen shows all the groups for an interface in a list. A defined but not selectable group will show a red bar on the left side of the row. A group is defined when one or more parameters are assigned to it. A group is unselectable if an assigned parameter is unselectable or multiple parameters in the group use the same tool.

Configuration Options



Figure 16: Group Edit screen

Buttons

1. Save – Saves changes to the group and returns to the Choose Group screen.
2. Add – Adds the highlighted Parameter to the group.
3. Move Step Up – Moves the highlighted step up.
4. Move Step Down – Moves the highlighted step down.
5. Delete – Deletes the highlighted group step.

Name

The group name can be up to 25 characters.

The group name is shown on screen when running the group but is not sent to the network.

Lock on done

Default: Off

This setting determines if the unit will lock or restart the group when the group is completed. When set to On, the Controller will not restart the group when all parameter batches are completed and will require a batch reset or parameter selection command to restart the group. When set to Off, the Controller will restart the group when it completes.

This setting is ignored when running the group as part of a job.

Batch beep on

Default: Group

Values: Group, Parameter

This setting determines if the unit will sound the batch beep for each parameter in the group or only when the entire group is completed. The UI will show the batch color for each individual parameter when it completes regardless of this setting.

Free run

Default: Off

This setting determines if the group runs in standard or free run mode. When set to Off, the group will run in standard mode. When set to On, the group will run in free run mode.

In standard mode, all parameters in the group must complete their batches before any parameter can start a second batch. When a parameter completes, the tool used by that parameter will be disabled. When the whole group is completed and *Lock on done* is set to Off, all tools used by parameters in the group will be enabled to run the group again.

Standard mode is intended for applications where multiple parameters must all be run the same number of times. For example, a standard group could be used at a station with two operators that need to attach the left and right brakes to a vehicle. In this case, each vehicle must have both brakes attached, but there is no reason one must be attached before the other. However, each vehicle should have both brakes attached before the next vehicle is started.

In free run mode, parameters in the group can run independently. When a parameter completes, it restarts immediately and may perform additional tightenings. In this mode, the *Lock on done* and *Batch beep on* settings are ignored.

Free run mode is intended for applications where the Controller simply needs to report the tightenings from multiple tools but does not need to synchronize how much one tool runs compared to another.

Batch column

In the batch column of each parameter row, you may enter the batch size for the parameter steps when running it as part of the job. When a parameter is added, this column will be filled with the batch currently defined in the parameter itself. Changing values in this column only affects the parameter while it is running in the group.

Jobs

Selecting Jobs

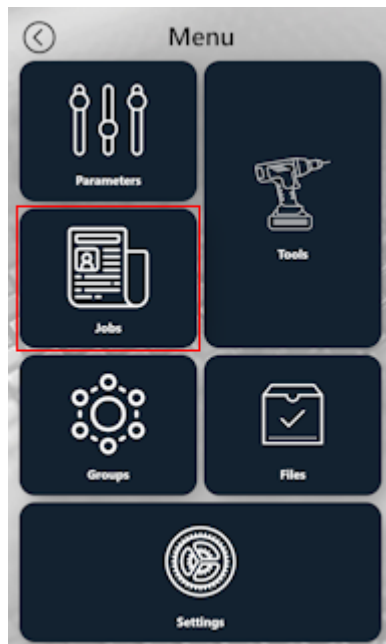


Figure 17: Main Menu - Jobs

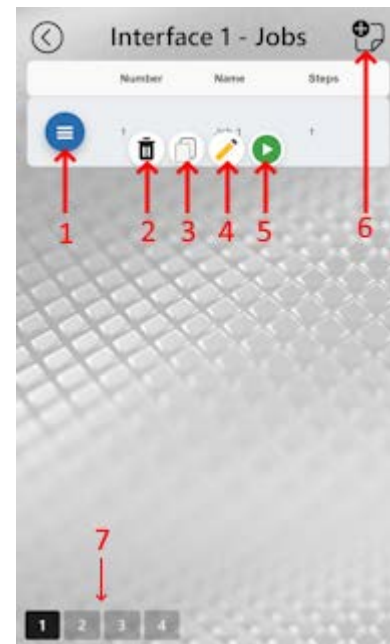


Figure 18: Choose Job screen

Buttons

1. Menu – Shows buttons 2-5.
2. Delete – Deletes the job.
3. Copy – Copies the job.
4. Edit – Edits the job.
5. Run – Runs the job.
6. Create – Creates a new job.
7. Interfaces – Selects which interface to view and modify jobs from.

The Choose Job screen shows all the jobs for an interface in a list. A defined but not selectable job will show a red bar on the left side of the row. A job is defined when one or more parameters or groups are assigned to it. A job is unselectable if an assigned parameter or group is unselectable.



Figure 19: Job Edit screen

Buttons

1. Save – Saves changes to the job and returns to the Choose Job screen.
2. Add – Adds the highlighted Parameter or Group to the next step.
3. Move Step Up – Moves the highlighted step up.
4. Move Step Down – Moves the highlighted step down.
5. Delete – Deletes the highlighted job step.

Name

The job name can be up to 25 characters.

The job name is shown on screen when running the job but is not sent to the network.

Lock on done

Default: Off

This setting determines if the unit will lock or restart the job when the job is completed. When set to On, the Controller will not restart the job when the last step completes. When set to Off, the Controller will restart the job when it completes.

Batch beep on

Default: Job

Values: Job, Parameter

This setting determines if the unit will sound the batch beep for each parameter in the job or only when the entire job is completed. The UI will show the batch color for each individual parameter when it completes regardless of this setting.

Type column

This column indicates whether a step is a group or parameter and its number.

Name column

This column indicates the name of the group or parameter.

Batch column

In the batch column, you may enter the batch size for the parameter steps when running it as part of the job. This column will be empty for group steps. When a parameter is selected, this column will be filled with the batch currently defined in the parameter itself. Changing values in this column only affects the parameter while it is running in the job but does not change it in any other group or job or when the parameter runs on its own.

Network Settings

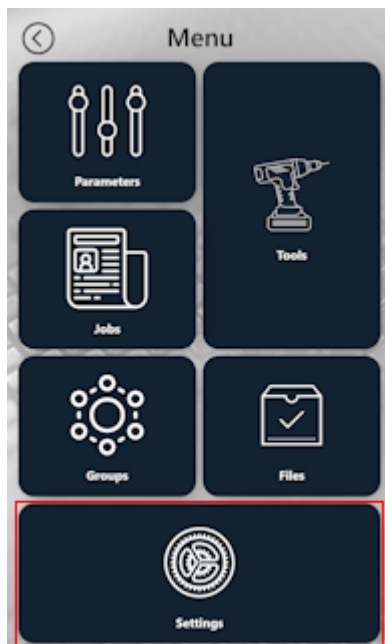


Figure 20: Main Menu - Settings



Figure 21: General Network Settings

Buttons

- Cancel Changes – Resets pending changes to fields.
- Save – Saves changes to the general network settings.

Changes to these settings apply after the settings are saved.

Configuration Options

Ethernet0 and Ethernet1 allow for two unique IP addresses. This allows communication between two distinct subnets. However, when DHCP is enabled, it is enabled for both ports and only a single address will be allowed.

DHCP

Default: Off

This setting determines if the controller will attempt to automatically acquire a network address or if it will use the ones entered manually. When set to On, the IP Address, Subnet Mask, and Gateway settings are ignored for both Ethernet 0 and Ethernet 1.

IP Address

Default: 192.168.1.68

This setting controls the IP address of the Controller for Ethernet networks.

Subnet Mask

Default: 255.255.248.0

This setting controls the subnet mask for Ethernet networks.

Gateway

Default: 192.168.1.1

This setting controls the default gateway setting for Ethernet networks. This setting is shared between both ports.

Controller Settings

The Controller Settings screen contains the settings for the overall unit. This page is accessed by pressing the button in the top right of the Network Settings screen to scroll to the right.

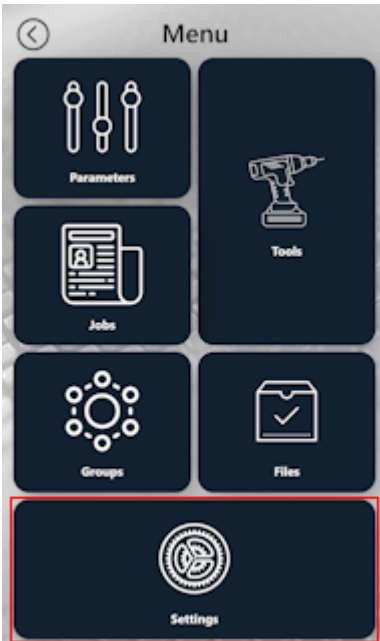


Figure 22: Main Menu - Settings

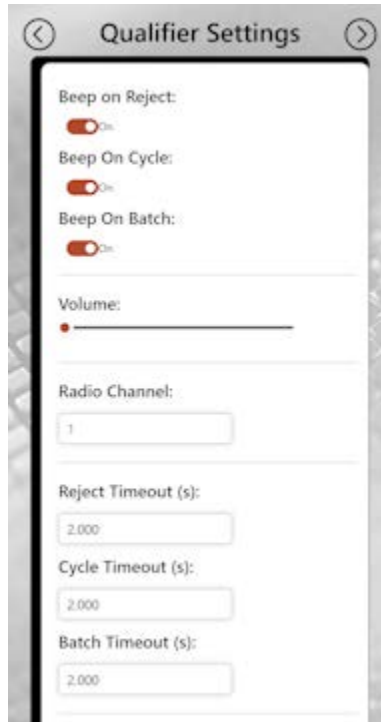


Figure 23: Qualifier Settings - part 1

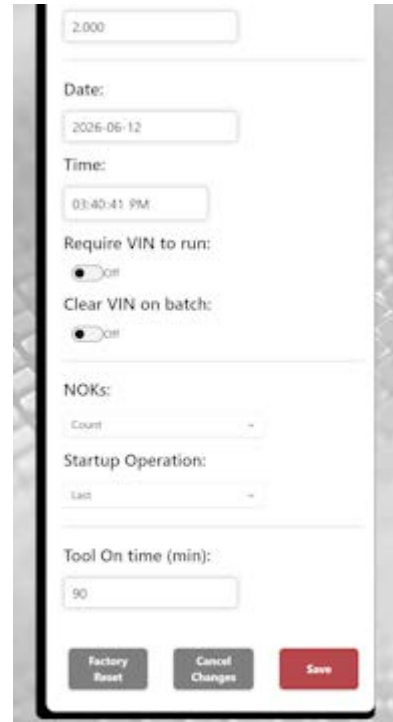


Figure 24: Qualifier Settings - part 2

Buttons

1. Factory Reset – Goes to the Reset Defaults screen.
2. Cancel Changes – Resets pending changes to the fields.
3. Save – Saves changes made to the Controller configuration.

Page 1

Beep on Reject

Default: On

This setting determines if the Controller will sound the beeper when a NOK tightening is received.

Beep on Cycle

Default: On

This setting determines if the Controller will sound the beeper when a OK tightening is received.

Beep on Batch

Default: On

This setting determines if the Controller will sound the beeper when a batch is completed. When running a group or job, the beep controlled by this setting may be for each parameter batch or for the complete group or job. See the Groups and Jobs sections for more information about those settings.

Volume

This setting controls the volume of the beeper. When set to the minimum, the beeper will not sound at all, regardless of the other *Beep on X* settings. A setting of less than half is recommended while using the Controller in an office or other environment without much background noise.

Radion Channel

This setting displays the radio channel on which the Controller is configured to operate. This setting is not editable from this page. To change the radio channel, press the button in the top right of the screen to scroll to the right to the Radio Settings page.

Reject timeout

Default: 2 seconds

Range: 0 to 10 seconds

This setting controls how long the on-screen indication of a rejected tightening will be shown. When set to 0, the indication will remain until another tightening is received for the parameter or the Controller changes or stops the currently running operation. Partial seconds may be entered for this setting.

Rejects are indicated by shading the screen red behind the parameter that received the reject.

Cycle timeout

Default: 2 seconds

Range: 0 to 10 seconds

This setting controls how long the on-screen indication of an accepted tightening that was not the last in a batch will be shown. When set to 0, the indication will remain until another tightening is received for the parameter or the Controller changes or stops the currently running operation. Partial seconds may be entered for this setting.

Cycles are indicated by shading the screen green behind the parameter that received the cycle.

Batch timeout

Default: 2 seconds

Range: 0 to 10 seconds

This setting controls how long the on-screen indication of a tightening that completes a batch will be shown. When set to 0, the indication will remain until another tightening is received for

the parameter or the Controller changes or stops the currently running operation. Partial seconds may be entered for this setting.

Batch completions are indicated by shading the screen blue or yellow behind the parameter that received the result to complete a batch.

Date

This row allows you to set the current date used by the unit. The display order of this field is:
year-month-day

Time

This row allows you to set the current time used by the unit. The display order of this field is:
hour:minute:second

Require VIN to run

Default: Off

This setting determines if the Controller requires a VIN to be entered before tools will be allowed to run. When set to On, the Controller will be automatically suspended whenever there is no currently entered VIN. When set to Off, the Controller will not check the VIN before allowing tools to run.

A VIN may be entered through either the bar code scanner or a network command. The VIN may be cleared by a network command or the *Clear VIN on batch* setting. If the VIN is cleared while an operation is running and this setting is set to On, the Controller will immediately suspend until a new VIN is entered.

Clear VIN on batch

Default: Off

This setting determines if the Controller automatically clears the VIN when a batch completes. When set to Off, the Controller will never automatically clear the VIN. The VIN may still be cleared by other means, such as a network command.

When set to On, the Controller will clear the VIN when an operation completes, regardless of if the operation is set to repeat. When directly running a parameter, the VIN will be cleared when a batch is completed. When running a standard group, the VIN will be cleared when all parameters in the group have completed. When running a free group, the VIN will never be cleared. When running a job, the VIN will be cleared when the last step in the job is completed.

NOK Options

Default: Report

Values: Ignore, Display, Report, Count

This setting determines how the unit will handle NOK results (or rejects). The following table summarizes the behavior for the different levels:

Level	Beep ¹	Show on Screen	Store in Flash	Report to Network	Overall bad ²	Increment Count
Ignore	No	No	No	No	No	No
Display	Yes	Yes	No	No	No	No
Report	Yes	Yes	Yes	Yes	No	No
Count	Yes	Yes	Yes	Yes	Yes	Yes

1. Unit will only beep if Beep on reject is set to Yes and Volume is not 0.
2. Overall bad will be indicated by showing yellow instead of blue in the parameter area when the parameter batch is completed.

All results from tools that are not currently running are ignored, regardless of this setting.

Startup Operation

Default: Last

Values: Last, None

This setting determines what operation will be run on unit startup. If set to Last, the last running operation when the unit turned off will be restarted at the beginning of the operation when the unit turns on. If set to None, the unit will be in the No active parameter state on startup.

Tool On Time

Default: 90 minutes

Values: 20 to 720 minutes

This setting determines how long an AccuPulse tool stays on without use before it sleeps. OK/NOK tools are not affected by this setting.

Radio Settings

On the Radio Settings page, you can either update the radio address manually or scan the available channels and select the one with the lowest detected noise. The Noise Scan screen will test each of the available channels to determine how much noise is already on those channels. The channel with the lowest amount of noise will be indicated by a blue bar.

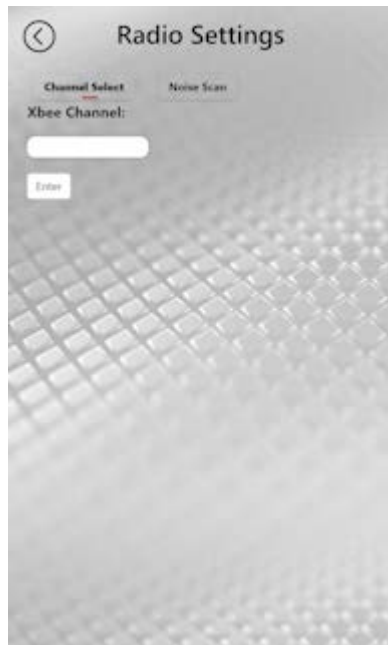


Figure 25: Radio Settings screen



Figure 26: Radio Settings - Noise Scan

Once you select a channel, you will be taken to the Channel Change screen. On the Channel Select screen, you can enter a channel number from 1-12 and press Enter to change the radio channel to that channel. Clicking on a bar in the Noise Scan bar graph will change the radio channel to that channel, or you can press “Select Quietest Channel” to change the radio channel to the channel indicated by the blue bar.



Figure 27: Channel Change screen



Figure 28: Channel Change complete

The channel change process does not start until you press the Start Channel Change button in the top right of the screen. Ensure that all tools are powered on and in range before starting the channel change process. Once all tools have been updated or failed, the “Done” button will appear. A “Retry” button will appear in each failed tool row that can be pressed to attempt to channel change that tool again. If you press “Done” with some tools failed, you can change the tool to the new channel by power cycling the tool by removing and replacing the battery.

Chapter 12: Firmware Updates

1. If the firmware update file was emailed to you, put it on a USB drive, in the root folder of the drive. If you received the firmware update already on a USB drive, proceed to step 2.
2. Turn on power to the unit and let it go through the startup process.
3. Navigate to the USB page.

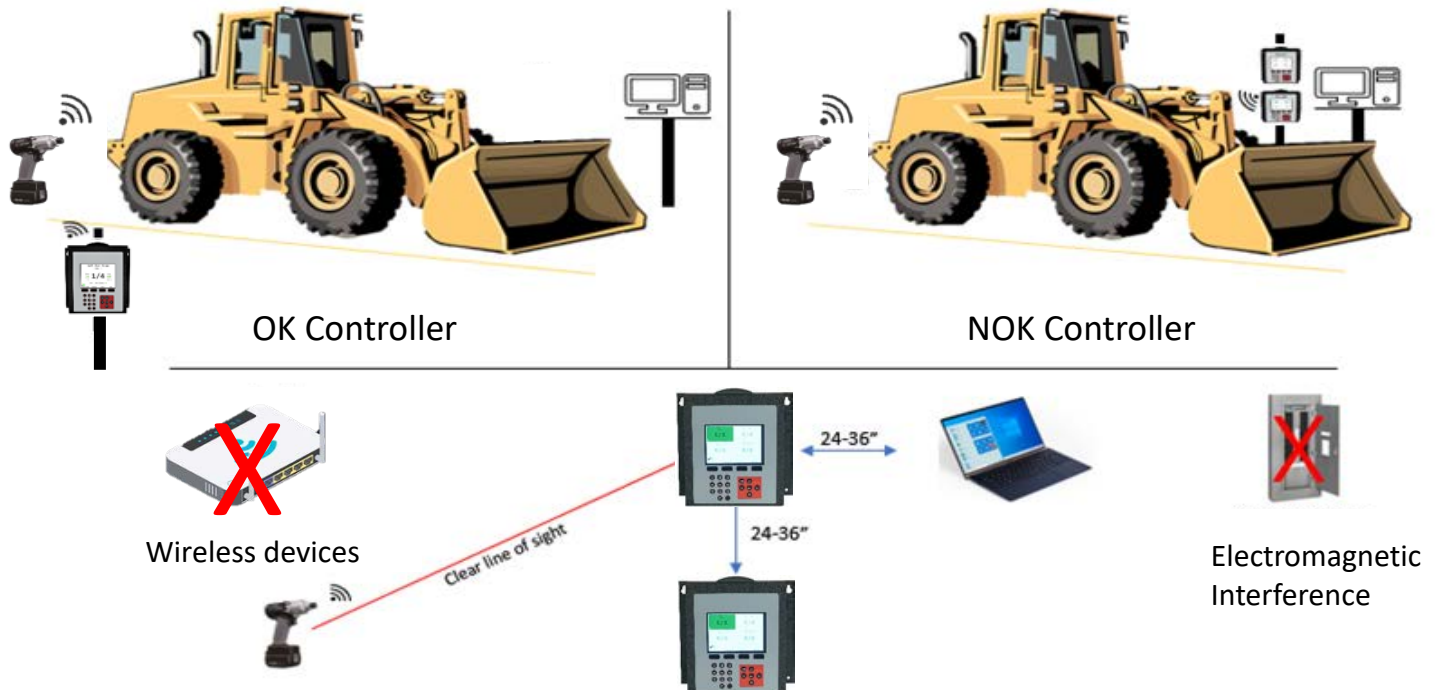


4. Wait for the unit to detect the USB drive. (This may take several seconds.) When the drive is detected, you should see the available file.
If the unit does not detect the drive, contact support. If the update was emailed to you, you may also try another USB drive.
5. To upload the firmware into the unit, press the update file button.
6. The unit will automatically reboot with the new update.
7. When viewing the unit remotely, the user may update the same file through the browser.

Chapter 13: Product Specifications

Controller Placement

- **Mount the Controller within 33ft of the tool during assembly**
- **Controller and Tool must maintain line of sight**
- **When mounting the controller please consider the following:**
 1. Electromagnetic Interference
 - Lighting
 - Other controllers
 - TV's / Monitors
 2. Wireless Interference
 - Wi-Fi Devices
 - Bluetooth
 3. Structural Interference
 - Walls
 - Glass
 - Large metal objects
- **Do not mount equipment within 24-36" of the Controller radio antenna**
- Be aware of interference from other devices such as microwaves, wireless barcode readers, fluorescent lighting, power cables, garage door openers, walkie talkies, cordless phones, wireless security hardware and Bluetooth devices that can interrupt the wireless signal



Dimensions

	English		Metric	
	Value	Unit	Value	Unit
Height	12.1	in	30.68	cm
Width	8.1	in	20.68:	cm
Depth	4.6	in	11.56	cm
Weight		lb		kg
Power consumption			13	W

802.15.4 Channel Frequencies

Channel	Frequency (GHz)
1	2.410
2	2.415
3	2.420
4	2.425
5	2.430
6	2.435
7	2.440
8	2.445
9	2.450
10	2.455
11	2.460
12	2.465

Regulatory Information

This device complies with Part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s).

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 undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CAUTION: Any changes or modifications to the equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Radio Information

This device contains pre-certified radio module with FCC ID: O4O-EYFR05 & IC: 8507AEYFR05 and pre-certified radio module with FCC ID: 2ABCB-RPICM4 & IC: 20953-RPICM4.

The integrator is responsible for its product to comply with FCC Part 15, Sub. B & IC ICES-003 for Unintentional Radiators and does not violate the conditions stated in original modular certifications.

This device has multiple antennas which can be co-located or operated in accordance with FCC & IC's multi-transmitter procedures.

For products available in the USA/Canada market, only channels 1 to 11 are available for 2.4GHz WLAN. This device operates in the 5.15–5.25GHz frequency range and is restricted to indoor use only.

Pour les produits disponibles sur le marché USA / Canada, seuls les canaux 1 à 11 sont disponibles pour le réseau local sans fil 2,4 GHz. La sélection d'autres canaux n'est pas possible.

Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

IMPORTANT NOTE

FCC and IC RADIATION EXPOSURE STATEMENT

This equipment complies with FCC & IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum separation distance of 20cm between the device and all persons.

Cet équipement est conforme aux limites d'exposition au rayonnement IC RSS-102 définies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance de séparation minimale de 20 cm entre l'appareil et toutes les personnes.