

INTELLI-IQ CONTROLLER 2-INCH SMART DISPLAY BLUETOOTH, LINBUS



Warning:

Prior to initial installation and usage of the IQD2, it is imperative to follow the manual's instructions for conducting a firmware update for the IQD2 and any other PROJECTA INTELLI-IQ series products within your DCDC system via the PROJECTA IQ APP. This ensures all product software is upgraded to the most current version.

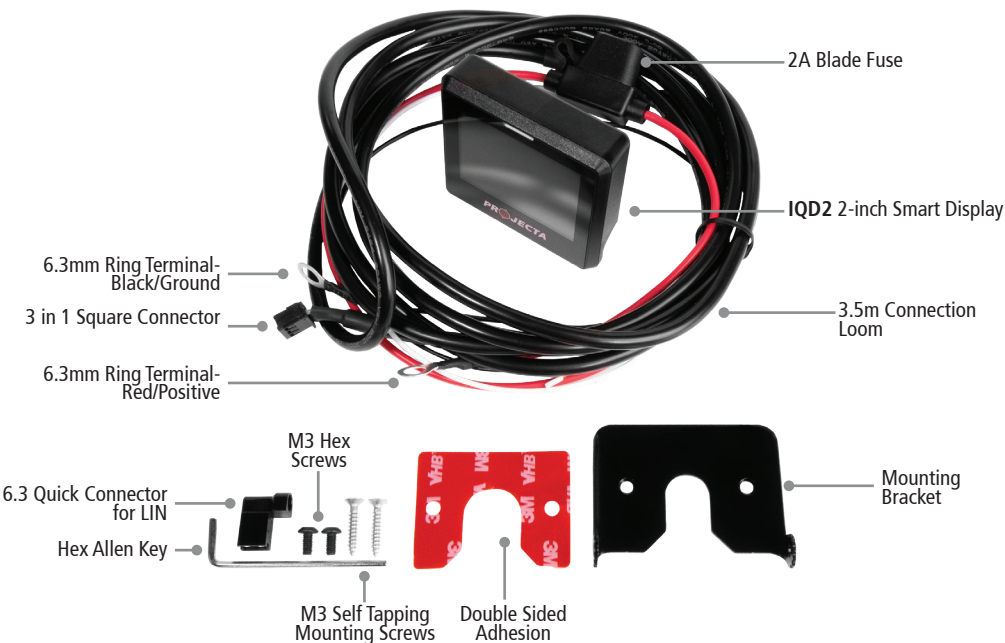
INTRODUCTION

The PROJECTA IQD2, 2" Intelli-IQ Display, introduces an innovative way to control IDCX and various accessories with its advanced LIN bus design. This design allows real-time control and monitoring of multiple devices from a single 2-inch high-definition capacitive touchscreen.

FEATURES

- **Real-Time Monitoring of Device Operating Status:** Gain real-time insights into your device's performance with the convenience of continuous monitoring. The display provides a clear and comprehensive overview of the devices' operating status, enabling prompt action and informed decisions.
- **Plug 'n Play System:** The system is designed for effortless integration in any PROJECTA LIN environment that recognize all LIN product range automatically with minimum user intervention. All PROJECTA LIN products can simply connect and ready to use.
- **Simple Single-Loom Connection Method:** Simplify your setup process with the straightforward single-loom connection method. This efficient design facilitates easy installation and usage, minimising complexities and streamlining operations.
- **Bluetooth 5.2 Connection:** Stay connected seamlessly with the latest 5.2 version Bluetooth technology. Benefit from fast and stable data transmission, enabling swift and reliable communication with compatible devices.
- **2-Inch High-Definition Capacitive Touchscreen:** Enjoy a visually engaging and user-friendly interface with this high-definition capacitive touchscreen. Its precise responsiveness ensures intuitive and smooth navigation experience.
- **Haptic Feedback Operation Mechanism:** Elevate your user interaction experience with haptic feedback. This mechanism provides subtle vibrations, offering tactile confirmation for every action, enhancing user engagement and confidence.
- **Auto Brightness:** Experience optimal visibility towards ambient lighting conditions with the automatic backlight adjustment feature. The display intelligently adapts its brightness to match the day/night conditions, ensuring clarity and comfort in all environments.

PRODUCT OVERVIEW

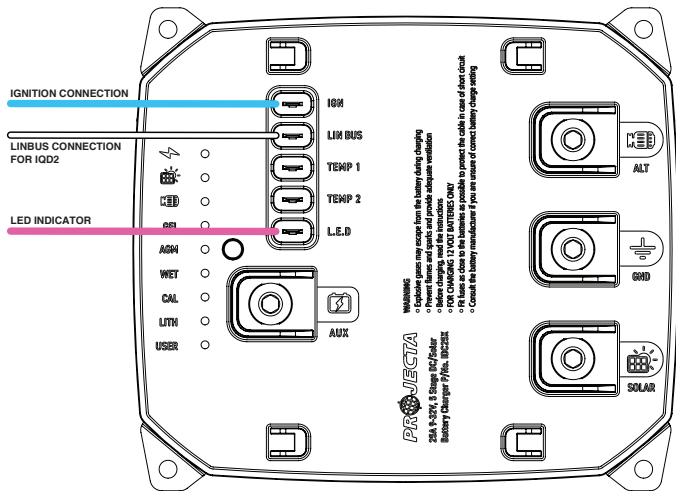
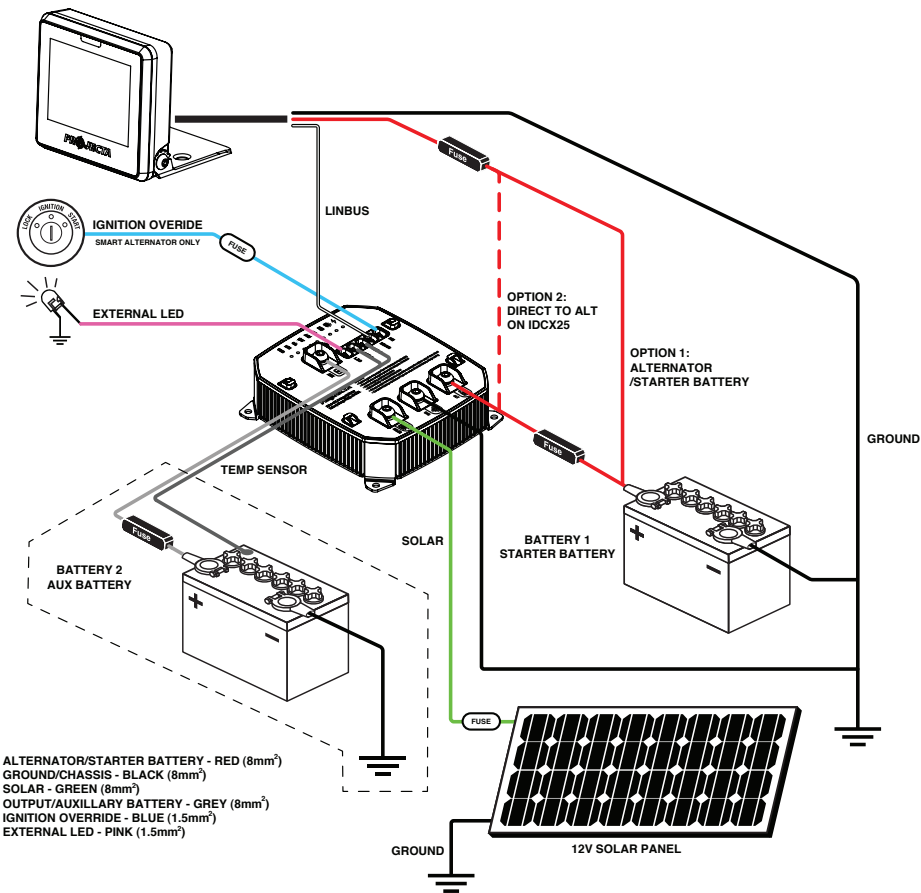


SPECIFICATIONS

PART NO.	IQD2
INPUT VOLTAGE RANGE	9-32V
INPUT CONSUMPTION CURRENT	<150mA DC
INPUT CURRENT AT POWER SAVING MODE	<10mA DC
POWER SAVING INPUT THRESHOLD	<13.4V
DISPLAY PHYSICAL CHARACTERISTICS	
SCREEN SIZE	2 inches
SCREEN RESOLUTION	320 x 240 pixel
SCREEN TYPE	Capacitive touch
SCREEN COLOUR	TFT + Backlight
EXTERNAL DIMENSIONS	56mm (L) x 17mm (W) x 51mm (H)
WEIGHT	53g
OPERATING TEMPERATURE	-10~50°C
COMMUNICATIONS	
	Bluetooth 5.2
	LIN 2.1
SAFETY	
	Thermal Protection Shutdown
	Overvoltage Protection
COMPLIANCE	
STANDARDS	ECE R10, AS/NZS 4268, CISPR 11

APPLICATION DIAGRAM

FULL SYSTEM WITH INTELLI-IQ CONFIGURATION



DISPLAY SCREEN INSTALLATION

Choose a flat location which is easily accessible and easy to view on the display screen. The location should be in the vehicle, away from the weather. Drill a 15mm diameter hole using the provided drilling template to allow the connector to pass through. Clean the mounting location, removing any dirt, foreign particles, and rust.

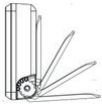
A. Using the supplied mounting screws:



1. Attach the bracket with self-tapping screws to the desired location.



2. Thread the loom through the pre-drilled hole. Then, connect the plug to the smart display's back receptacle.



3. Insert the screen in the bracket, adjust for viewing, and ensure proper gear engagement.

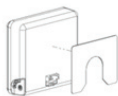


4. Fasten the bracket and screen with provided screws and hex key.

Note: The accompanying self-tapping mounting screws are only suitable for use on wooden or plastic material surfaces and must not be used on high-hardness metal materials or stone surfaces.

B. Using the supplied 3M double-sided adhesive:

i. Without the bracket



1. Clean the back of the IQD2 with an alcohol swab, attach the provided double-sided tape.



2. Thread the loom through the pre-drilled hole. Then, connect the plug to the smart display's back receptacle.



3. Stick the product on the clean, even surface and let it set 12+ hours for strong adhesion.

ii. With the bracket



1. Clean the back of the bracket with an alcohol swab and attach the provided double-sided tape.



2. Thread the loom through the pre-drilled hole. Then, connect the plug to the smart display's back receptacle.



3. Insert the screen in the bracket, adjust for viewing, and ensure proper gear engagement.

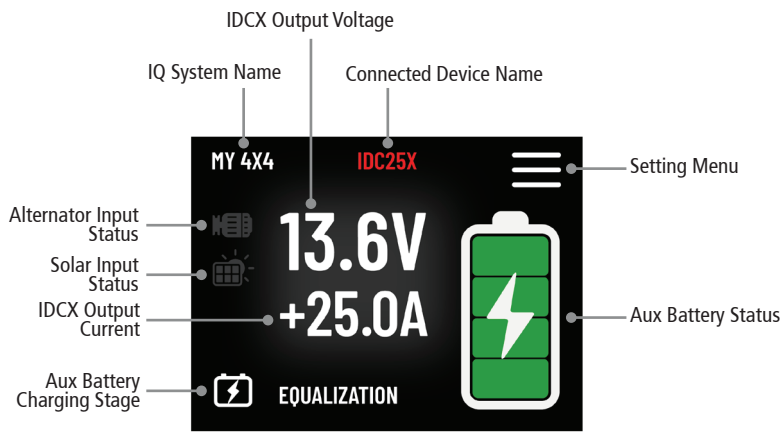


4. Fasten the bracket and screen with provided screws and hex key.



5. Stick the product on the clean, even surface and let it set 12+ hours for strong adhesion.

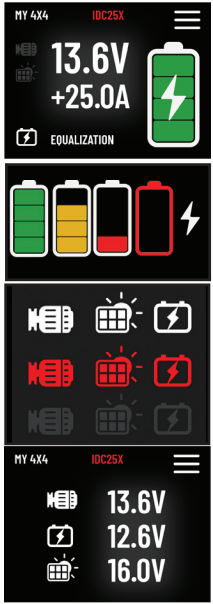
MAIN DISPLAY SCREEN LAYOUT



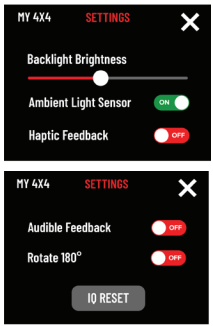
DISPLAY INSTRUCTIONS

1. System Setup

STEP	INSTRUCTION	DISPLAY
1	After successfully installing and powering up IQD2, the display screen will transition to the welcome page and initiate Bluetooth search automatically. To connect, users can activate the Bluetooth feature on their smart devices and launch the Intelli-IQ APP. During the initial Bluetooth setup, it's crucial to maintain a stable power source for IQD2. Ensure the smart device is within 3 meters of IQD2 and keep the APP open throughout. The connection process typically takes 20 seconds to 1minutes. For step-by-step instructions, please consult Page 13 for detailed application guidance.	
2	Upon a successful connection and device search, the display will indicate "New Device Connected." Tap the CONTINUE icon to main screen. In instances where a device has been previously connected and recognized, subsequent connections will not be labelled as "New Device Connected." This streamlined plug 'n play functionality, which retains settings for recognized devices, simplifies the configuration of battery groups to a one-time setup.	
3	If the IQD2 fails to detect any device within the network, it will prompt the user to perform the network searching procedure once more. Ensure the LIN connections of the network are securely connected together for optimal functionality.	

MAIN DISPLAY	DISPLAY
Upon system start, the device shows the charging system’s status on two main pages: The IQD2 system’s Main Screen displays the DC/DC chargers’ status. Users can swipe for additional details about the charging system. Features of the screen include: IQD2 System Name: Editable in the app settings. Current Device Name: Editable in the app settings. AUX Battery Voltage: Displays the auxiliary battery’s voltage. IDCX Charging Current: Shows the current for charging. AUX Battery State: Indicates the auxiliary battery’s charge level: - Green: High - Yellow: Medium - Red: Low - Red Outlined: Warning-Disconnected - Lightning: Charging in process IDCX Charging Stages¹²: Details the stages of IDCX charging. Input Source Status: - White: Active/Charging - Grey: Inactive/Disconnected - Red: Error Click red icons for details and check the warning section for more information. More options and information about charging system warnings are available in the app settings. The Charging Details page lists the alternator input voltage, the auxiliary battery voltage, and the solar panel input voltage. The settings menu is accessible for system adjustments and monitoring.	 The screenshots show the main display interface. The top screen displays 'MY 4X4', 'IDC25X', a large '13.6V +25.0A' reading, an 'EQUALIZATION' button, and a battery status icon. Below this is a row of four battery level indicators (green, yellow, red, red-outlined) and a lightning bolt icon. The bottom screen shows a grid of icons for various charging stages and input sources, with some icons highlighted in red. The bottom screenshot shows a summary of input voltages: '13.6V', '12.6V', and '16.0V'.

- 1.For deep cycle batteries: Bulk, Absorption, (Equalization for Calcium batteries), Float (3-stage charging).
- 2.For Lithium batteries: Soft Start 1, Soft Start 2, Bulk, Absorption, Float (5-stage charging).

SETTING MENU	DISPLAY
Swipe left or right to move through the settings pages. Press the top right close button to exit settings. Settings Include: Backlight Brightness: Set LCD screen brightness. Auto Brightness: Turns on automatic brightness adjustment in dark or bright conditions. Haptic Feedback: Activates vibration on user input. Audible Feedback: Activates sound on user input. Rotate Switch: Allows screen rotation for different setups. Reset: Resets system to default, erasing all devices. After changing settings or resetting, wait five seconds for the system to restart and update	 The screenshots show the settings menu. The top screen displays 'MY 4X4', 'SETTINGS', and a close button (X). It includes sliders for 'Backlight Brightness' and 'Ambient Light Sensor' (set to ON), and a toggle for 'Haptic Feedback' (set to OFF). The bottom screen shows 'Audible Feedback' (set to OFF) and 'Rotate 180°' (set to OFF), with a 'IQ RESET' button at the bottom.

ERROR AND ALERT MESSAGES

ALERT TYPE	INSTRUCTION	DISPLAY
Manual Inquiry	- Click the red error icon to view system issue details. - Popup messages indicate the specific problem. - To close the error detail popup, click the 'X'.	MY 4X4 IDC25X 13.6V +25.0A EQUALIZATION OVERVOLTAGE SOLAR INPUT Warning! Solar input over-voltage (>32V). Ensure panel is connected in parallel and is 12V rated.

AUX BATTERY VOLTAGE (V)				LOW VOLTAGE(V)		CRITICAL LOW VOLTAGE (V)
Chemistry	High	Medium	Low	Default	Setting Range	Range
GEL	≥12.65	12.65≥V≥12.00	<12.00	11	10-12.6	1.5<V<10
AGM	≥12.60	12.65≥V≥12.00	<12.00	11	10-12.6	1.5<V<10
WET	≥12.40	12.40≥V≥12.00	<12.00	11	10-12.6	1.5<V<10
CAL	≥12.40	12.40≥V≥12.00	<12.00	11	10-12.6	1.5<V<10
LITH	≥13.14	13.14≥V≥12.85	<12.85	12	11-13.0	1.5<V<11

ERROR SOURCE	ERROR TYPE	ERROR DETAIL
INTELLI-IQ	FIRMWARE UPDATE	The system is updating its firmware. Please do not turn off any device in the network and wait until the process is complete. This process may take up to 15 minutes for a major update that includes a graphic library update.
	OVERHEAT	The system is overheating and will shut down soon to protect itself. Please let the device cool down before using it again.
	DEVICE ERROR	A connection problem has occurred on the LIN network. Please check the hardware connections and wait for IQD2 to detect the network automatically. This process takes about one minute.
AUXILIARY BATTERY	SHORT CIRCUIT	The auxiliary battery has a short circuit problem. Please fix the issue before the battery gets damaged.
	OVERVOLTAGE	The battery voltage is over 16.5V, which is too high. Please check the battery pack setup. The charging system will stop charging if the voltage is above the limit.
	REVERSE CONNECTION	The auxiliary battery is connected in the wrong way, which can harm other devices. Please disconnect and check the battery or it will not be charged.
	FAULTY BATTERY	The battery is faulty and does not work well after charging. Please replace the battery in the system.
	NO BATTERY CONNECTED	The charging system cannot detect an auxiliary battery. Please make sure the connection is secure.
ALTERNATOR INPUT	OVERVOLTAGE	The alternator input voltage is too high and exceeds the limit of 32.5V, which stops the charging process. Please remove and make sure the source voltage is within the operating range.
	REVERSE CONNECTION	The alternator input is connected in the wrong way, which can damage the charging system. Please disconnect and inspect the input to avoid any harm.
SOLAR INPUT	OVERVOLTAGE	The solar input voltage is too high and exceeds the limit of 32.5V, which stops the charging process. Please remove and make sure the source voltage is within the operating range.
	REVERSE CONNECTION	Solar input is connected in the wrong way, which can damage the charging system. Please disconnect and inspect the input to avoid any harm.
IDCX	OVERHEAT	The charging system is affected by high ambient temperature, which reduces the charging performance. The charging process is still continuing within a safe range.
	LOW VOLTAGE & CRITICAL LOW VOLTAGE	The supply voltage is not enough to charge the battery. Please check the input source, such as the alternator or the solar panel, to ensure they provide enough voltage to start the charging process.

TROUBLESHOOTING

1. Why my IQD2 screen not turn on?

Monitor the supply voltage and the operating temperature of the system. The system will enter sleep mode if the supply voltage drops below 13.0V, or will not start if the supply voltage falls below 8.5V.

The system will activate protect mode if the operating temperature exceeds 50°C.

2. 'NO DEVICE FOUND' when start up.

Ensure that every device in the network has a LIN wire connected to IQD2. You can connect the LIN wires in parallel or in a daisy chain. To scan the devices, press the reset button on the screen.

3. Mobile app failed to connect IQD2.

Verify that the Bluetooth is turned on your mobile phone. The IQD2 device must be within 15 meters of your phone for a Bluetooth connection.

4. How to reset default settings?

To reset your IQ settings, click the 'IQ Reset' button on the settings page. Please note that this will erase all the device records in your IQD2 device.

INTELLI-IQ APP QUICK GUIDE

Downloading the App:

Go to your smart device's App Store (iPhone/iPad) or Play Store (Android) and search for "Intelli-IQ" or scan the following QR codes to download this app for free to your smart devices.



PROJECTA IQ APP

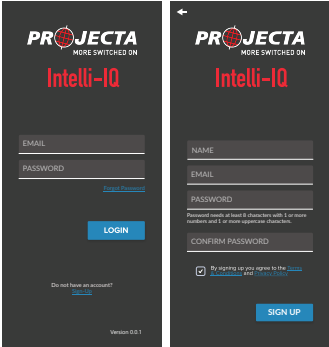
Connect your smart devices via Bluetooth® wireless technology



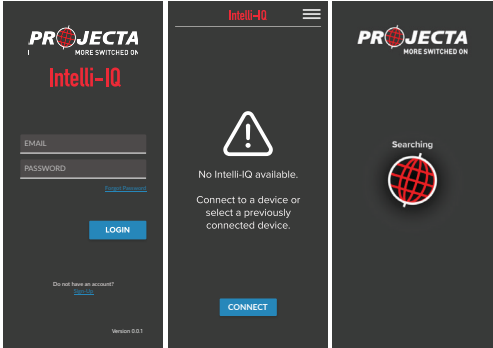
 Available on the
App Store

 GET IT ON
Google Play

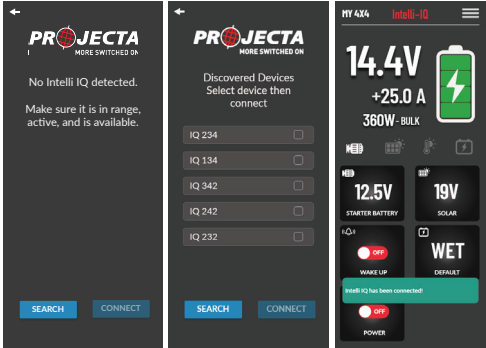
Installing the App:

INSTRUCTION	DISPLAY
Upon completing the download, open the INTELLI-IQ APP and proceed to the login page.	
New users, please tap SIGN UP to access the account creation page.	
Follow the on-screen prompts to complete the account registration process.	
Ensure that you agree to the privacy policy and user terms and conditions in order to establish an account and utilize the application.	
Tap SIGN UP to complete the account setup.	
Existing users, please enter your login details, then tap LOGIN to continue.	
Please make sure your IOS or Android device is with stable internet connectivity while Login/ Sign Up.	

Prepare the Device:

INSTRUCTION	DISPLAY
Wire up the IQD2 and Intelli-IQ devices to the power supply. Ensure the smart device’s Bluetooth function is enabled and authorize the Intelli-IQ application to use this function to establish device connections. Tap the CONNECT button to enter Bluetooth pairing and searching mode. Please keep the IQD2 and the smart device within three meters of each other to ensure optimal search performance.	

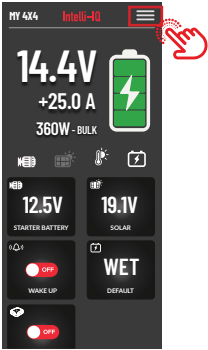
Connect the Intelli-IQ:

INSTRUCTION	DISPLAY
To find the device nearby press the SEARCH button. You will need to wait 20 seconds while the app searches for and prepares devices to connect to. Once a device is ready to be connected, you will see the device listed. Select the device you wish to connect to. Tap the CONNECT button and your device will proceed with a paired connection. After the connection is successful, you will be presented with the IQ charging dashboard.	

Open Device Settings:

INSTRUCTION	DISPLAY
When a device is selected. The name of the device will be shown on the top left, and a dashboard will be presented to you. To enter the general screen settings screen, tap the top left "DEVICE NAME".	

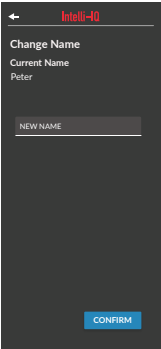
Open App Settings:

INSTRUCTION	DISPLAY
At any point after you have signed up, or logged in, you can enter and explore the App Settings. In the dashboard screen, even if you have not connected to a device. To explore App Settings, tap  on the top right of the dashboard.	

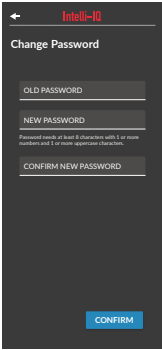
Update User Settings:

INSTRUCTION	DISPLAY
In the App Settings screen, you will see a "MORE" section. To enter the User Settings screen, select "Settings" then in the general settings screen, select "Preferences". In the User Settings screen, you will have the option to : - Change Name - Change Login E-mail address - Change Password	

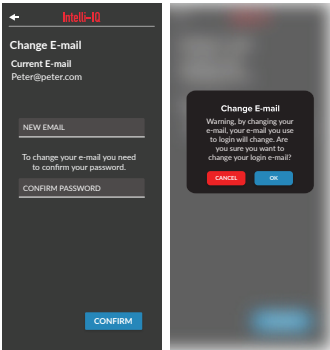
Change Name:

INSTRUCTION	DISPLAY
Inside the User settings screen to change the name, tap your name to open the Change Name screen. Your current name will be shown. Enter your new name in the "NEW NAME" text field. When ready, tap the CONFIRM button. When the username update is complete, you will be automatically returned to the User Settings screen. NOTE: Your name must not be empty. NOTE: Please press the "return" or "enter" button on your input keyboards to confirm the inputs.	

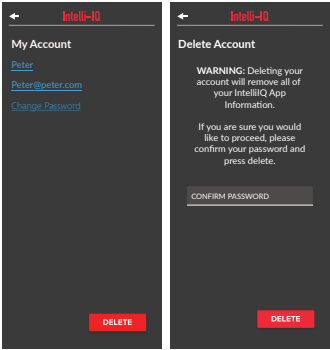
Change Password:

INSTRUCTION	DISPLAY
Inside the User settings screen to change the name, tap "CHANGE PASSWORD" to open the Change Password screen screen. To change your password you will need to enter your old password, a new password and also confirm the new password again. When ready, tap the CONFIRM button. When the password update is complete, you will be automatically returned to the User Settings screen. NOTE: Your password needs to be at least 8 characters long with 1 or more numbers and 1 or more uppercase characters.	

Change E-mail:

INSTRUCTION	DISPLAY
Inside the User settings screen to change the name, tap your current e-mail to open the Change E-mail screen screen. To change your e-mail you will need to enter a new e-mail and also enter your password to confirm the change. When ready, tap the CONFIRM button. When the e-mail update is complete, you will be automatically returned to the User Settings screen. NOTE: Upon changing your e-mail, you can no longer login using your old e-mail address and you must use your new e-mail address to login.	

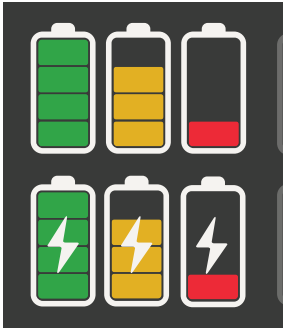
Delete Account:

INSTRUCTION	DISPLAY
In the user account settings screen, on the bottom right of the screen, tap the DELETE button. You will be presented with a warning screen. To confirm you want to delete your account, type in your password in "CONFIRM PASSWORD". After pressing DELETE, you user account data and Intelli IQ account will be deleted. When complete, you will be presented with the login screen again.	

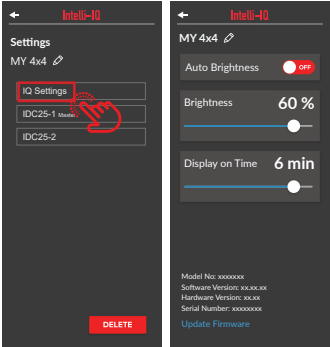
Turn On Charging:

INSTRUCTION	DISPLAY
When connected to an Intelli-IQ device. On the IQ dashboard screen. Swipe up to show the "POWER" switch. To start the charging process, when the "POWER" switch is red "OFF" tap the "POWER" switch and if it stays in the "ON" position, the connected charger should be working.	

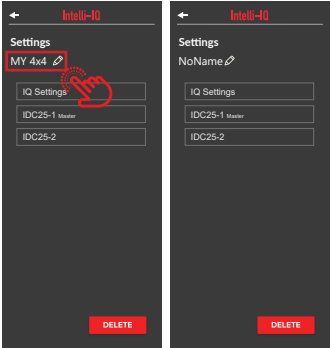
Check Charging Status:

INSTRUCTION	DISPLAY
When connected to an Intelli-IQ device. On the IQ dashboard screen. In the left top the battery charging icon is presented. When a battery is correctly connected and detected, the battery indicator will indicate the current battery level with three different indicators. • Green (Fully, Almost Charged) • Orange (Medium Charge) • Red (Low Charge/Empty) If the IDC is correctly charging the battery, a power icon indicator will be visible on the battery icon. If there is an error with charging, the battery icon will be highlighted red and possibly flashing. NOTE: For more information on errors with charging, please refer to the trouble shooting guide	

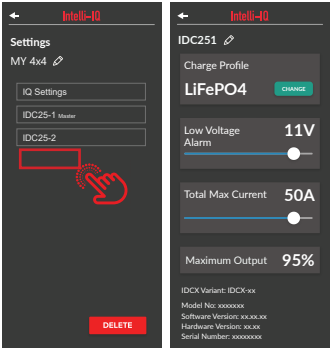
Check IQ Display Settings:

INSTRUCTION	DISPLAY
In the Main Device Settings screen select the IQ Display settings. In this screen you can control the following options: Auto Brightness: When "ON" the IQ unit will adjust brightness automatically based on the ambient light, in general it will be darker at night and brighter during day. Depending on total ambient light. Brightness: The display brightness amount for the Intelli IQ. Display on Time: The unit will stay on for the selected period of time without any user input.	

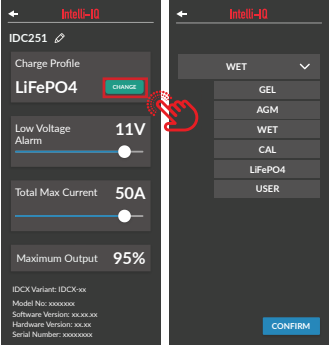
Rename Intelli-IQ:

INSTRUCTION	DISPLAY
You can rename your Intelli-IQ in either the Main device settings screen or the IQ Display settings screen. To change your device name, in either screen, select the text of the existing device name. After completing the name, the device name will automatically change on the unit. NOTE: The device name can only be a maximum of 6 characters. NOTE: If you enter no text, the name will revert to "NONAME".	

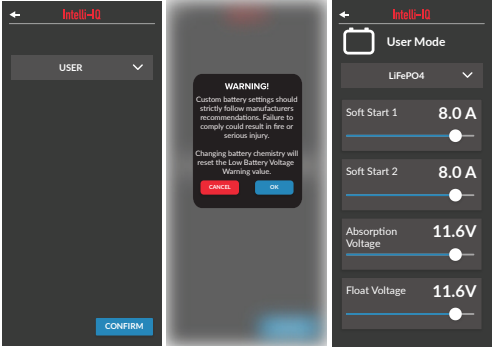
Check IDC Settings:

INSTRUCTION	DISPLAY
In the Main Device Settings screen select the IDC device you wish the edit. If your device is indicated to the master device, all controls will be available. For slave devices, you can only update the device firmware and check the product information. NOTE: To change the battery charge settings, you need to select device indicated as "Master". In this screen you can control the following options : Charge Profile: Select when you wish to change the battery charge profile or create a custom battery chemistry profile. Low Voltage Warning: When the battery voltage falls below this indicated value an alert will be display indicating this. Display on Time: The unit will stay on for the selected period of time without any user input.	

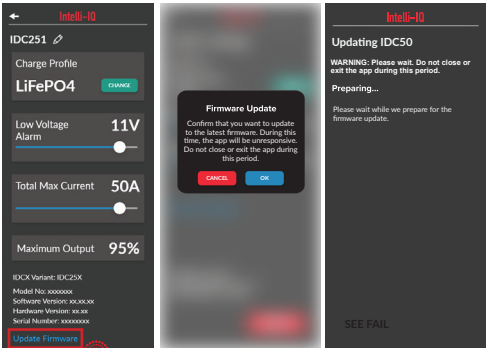
Change IDC Battery Profile:

INSTRUCTION	DISPLAY
In the IDC settings screen you can select a predefined battery profile from a collection of different profile settings. So change the battery profile, select one from the dropdown and tap "CONFIRM". WARNING: Custom battery settings should strictly follow manufacturer recommendations. Failure to comply could result in fire or serious injury.	

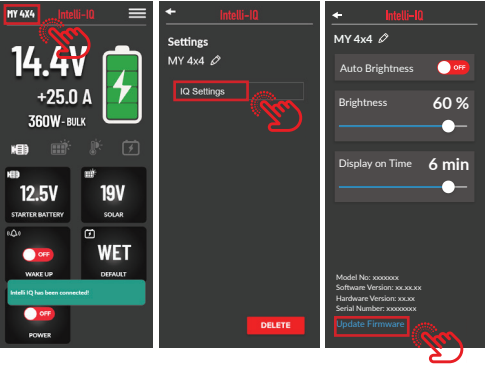
Configure IDC User Battery Profile:

INSTRUCTION	DISPLAY
When selecting the battery profile, one of the options available is "USER". After selecting the "USER" profile, you will be able to set custom parameters for the charging profile. Each profile comes with both a preset collection of values and custom parameters. Select the starting settings for the chemistry your charger will power. In the IDC settings screen you can select a predefined battery profile from a collection of different profile settings. So change the battery profile, select one from the dropdown and tap "CONFIRM". WARNING: Custom battery settings should strictly follow manufacturer recommendations. Failure to comply could result in fire or serious injury.	

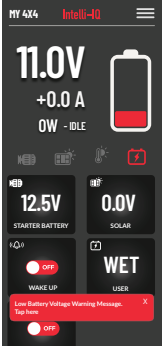
Update the IDC Firmware:

INSTRUCTION	DISPLAY
In the IDC device settings screen, at the bottom of the screen, there will be an Update Firmware button. If you cannot see it, swipe up the view. When tapping this button, we will check if the device you have requires a firmware update. If your device does require a firmware update, you will be asked to confirm. Please select "CONTINUE" to proceed with the firmware update. Once you have started the process, the following three steps will occur, depending on which device you are updating. 1. New firmware file download from our cloud servers. 2. Firmware is uploaded on to the IntelliIQ 3. Firmware is updated on the selected device. NOTE: To update your firmware, you will need to have the following ready. 1. A strong internet connection. 2. Phone with more than 50% battery power. WARNING: Do not exit or close the app during a firmware update as it can cause issues with your device.	

Update IQD2 Firmware:

INSTRUCTION	DISPLAY
In the IQD2 device settings screen, at the bottom of the screen, there will be an Update Firmware button. If you cannot see it, swipe up the view. When tapping this button, we will check if the device you have requires a firmware update. NOTE: • Before first use of the IQD2, please update it to the latest firmware version. • To update your firmware, you will need to have the following ready. 1. A strong internet connection. 2. Phone with more than 50% battery power. NOTE: To update your firmware, you will need to have the following ready. 1. A strong internet connection. 2. Phone with more than 50% battery power. WARNING: Do not exit or close the app during a firmware update as it can cause issues with your device.	

Warning Displays and Alerts:

INSTRUCTION	DISPLAY
During operation, you may be presented with a warning or error alert. Warning and error alerts will be appearing during app operation, or if the app is in the background, they will appear as app notifications. To receive app notifications, you will need to accept the permissions for notifications. On the Dashboard screen, if you notice an item is highlighted red or flashing red, tap it to present the alert to learn more about the error.	

WARRANTY STATEMENT

Brown & Watson International Pty Ltd ("BWI") of 1500 Ferntree Gully Road, Knoxfield, Vic., telephone (03) 9730 6000, fax (03) 9730 6050, warrants that all products described in its current catalogue will under normal use and service be free of failures in material and workmanship for a period of five (5) years from the date of the original purchase by the customer as marked on the invoice. This warranty does not cover ordinary wear and tear, abuse, alteration of products or damage caused by the purchaser.

To make a warranty claim the consumer must deliver the product at their cost to the original place of purchase or to any other place which may be nominated by either BWI or the retailer from where the product was bought in order that the warranty assessment may be performed. The consumer must also deliver the original invoice evidencing the date and place of purchase together with an explanation in writing as to the nature of the claim.

In the event that the claim is determined to be for a minor failure of the product then BWI reserves the right to repair or replace it at its discretion. In the event that a major failure is determined the consumer will be entitled to a replacement or a refund as well as compensation for any other reasonably foreseeable loss or damage.

This warranty is in addition to any other rights or remedies that the consumer may have under State or Federal legislation.

IMPORTANT NOTE

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

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