



## OPERATION GUIDE



ARB







# WHAT IS LINX?

LINX is a sleek touchscreen interface that enables total control of both new and existing 4X4 Accessories. Gone are the days where the only option for installing aftermarket switches meant drilling multiple holes into the dashboard.

#### INTRODUCING TOTAL CONTROL

LINX is a unique modern controller that declutters the dashboard and centralises the command of vehicle accessories by replacing classic switches, gauges and monitors with one sleek and smart driver interface. Built on an expandable platform, LINX will continue to evolve your on and off road driving experience both now and into the future.

The mobile touchscreen display integrates seamlessly into the vehicle cabin and mounts to a magnetic gimbal that's installed within easy reach of the driver. This connects to the LINX Controller which is the brains behind the system, and is conveniently installed out-of-sight either underneath the dash or the seat.



#### STAY IN THE LOOP

For the latest details, updates and list of accessories, head over to: www.linx.arb.com.au



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Get to know the basic in's and out's of your brand new LINX - the next generation of 4x4 Accessories.

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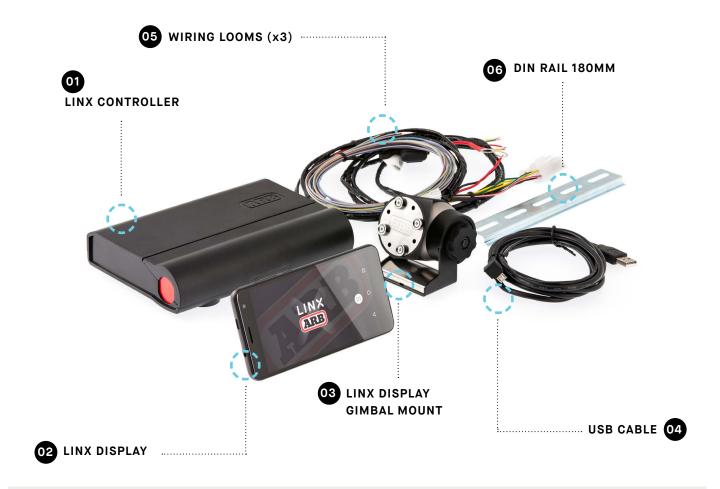






## WHAT'S IN THE BOX?

Congratulations on the purchase of your brand new LINX. Inside the box, you'll find each of the components required to get the system up and running for your next 4x4 adventure.



#### **NOTES**

- The LINX Display 02 was specifically designed to withstand the extremes of heat and cold. It has a metal coupling on the back to connect it to the magnets on the LINX Display Gimbal Mount 03.
- The LINX Controller 01 and wiring looms 05 are normally mounted under the dash, however this may vary depending on the vehicle.
- The DIN rail 06 comes assembled to the back of the LINX controller 01 and is used for securing the unit.
- The USB connection can be used to power and charge the LINX Display, and provide the communications channel between the LINX Controller and LINX Display.





Out of the box, LINX offers total control of six pre-installed modules: Front & Rear Traction, Compressor & Pressure Control, Battery Monitoring, Speedometer, Air Suspension Control and an Accessory Switchboard.

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# COMPATIBLE ARB ACCESSORIES

There's a range of ARB accessories that can be controlled and monitored by LINX.



#### **ARB DRIVING LIGHTS**

ARB offers a large range of LED, HID and Halogen driving lights and light bars to suit your every driving need. Designed to perform in the most extreme conditions, they'll keep the road ahead brightly lit and the rear visible wherever you go.



#### **AIR LOCKERS**

Designed and manufactured in Australia, ARB Air Lockers will enhance the traction of your 4×4 in just about any terrain, whether it's rock, clay, gravel, sand, snow or mud.



#### ARB DUAL BATTERY SYSTEMS

Allowing you to power additional accessories without the risk of flattening the main battery, an ARB Dual Battery System also provides peace of mind in the event of a main battery failure.



#### **ARB AIR COMPRESSORS**

ARB Air Compressors provide many advantages; including inflating tyres and camping accessories, running air tools, activating Air Lockers and even reseating a tyre onto a wheel.



# OPTIONAL ACCESSORIES

A range of products are available to complement the LINX Vehicle Accessory Interface.

Please refer to the LINX Installation Guide or your nearest ARB Store or Stockist for further information.

FIND YOUR NEAREST STORE



#### **A-PILLAR BRACKET**

LINX A-Pillar Brackets are designed to provide a vehicle specific mount that puts the LINX Display in safe and easy reach of the driver. They are available for a large range of popular 4WD vehicles.







PRESSURE CONTROL KIT

(7450107)

Offering 'set & forget' simplicity to either tyre inflation or remote control over your air suspension, the optional LINX Pressure Control Kit (coupled with an ARB air compressor) allows you to take full advantage of LINX's Pressure Control Module.

**Note**: Separate pressure control kits are required for tyre inflation and air suspension.



**AIR SUSPENSION ISOLATION KIT** 

(7450109)

Adding an Air Suspension Isolation Kit allows owners with air suspension to take full advantage of LINX's Air Suspension Module, providing the ability to independently adjust the pressure and ride height in each air bag.



**RELAY KIT** 

(180422)

A pre-wired relay base used for connecting accessories that don't come with a relay in its wiring loom. Most ARB wiring looms already come with a relay.



**LINX TERMINAL KIT** 

(7450105)

LINX already comes with a packet of terminals, enough to do a complete install. This kit is if you require any extra terminals.





It's time to get your LINX device up and running!

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# SETTING UP YOUR LINX

The time taken to connect and configure accessories such as compressor, Air Lockers and driving lights will vary depending on whether the accessory was fitted before or after your next LINX installation. LINX is fully customisable to suit your vehicle, please contact your local ARB distributor to discuss your individual requirements and provide a quote for your installation.



#### LINX SETUP PROCESS

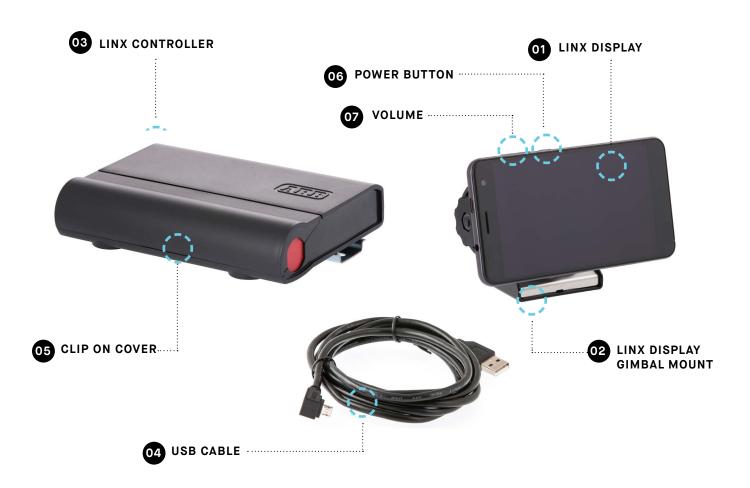
- Mounting of the LINX Controller.
- · Connection of the power loom to the LINX Controller.
- · Updating LINX software.
- Connection of 4 input wires from accessory power, parker/low beam headlamps, high beam headlamps and reverse
   lamp to the LINX Controller.
- · Installation of the LINX Display Gimbal Mount and/or optional vehicle specific LINX A-Pillar Bracket.
- · Connection of the USB cable from the LINX Controller or optional USB power source to the LINX Display.



# GETTING STARTED

### The LINX Display receives power from the LINX Controller via the USB charge cable provided.

The LINX Display's on-board battery will take around 1 hour to fully charge from flat condition and provide approximately 4 hours of non-connected run time. It is normal practice to leave the display on all the time and connected when in the vehicle. When outside the vehicle, the display communicates with the LINX Controller via a Bluetooth connection up to 10m away.



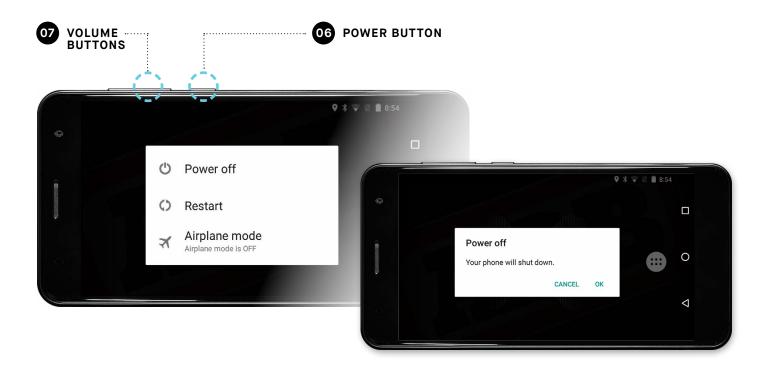


#### SWITCHING ON/OFF

To switch on the Display, press & hold the **power button 06** for approximately two (2) seconds.

With the unit powered on, you can increase or decrease the volume by pressing the volume buttons 07

To switch off the Display, press & hold the power button then tap **Power off** then **OK**.



For more information on installing the LINX system and associated equipment on your vehicle, please refer to the LINX Installation Guide and your nearest ARB outlet.

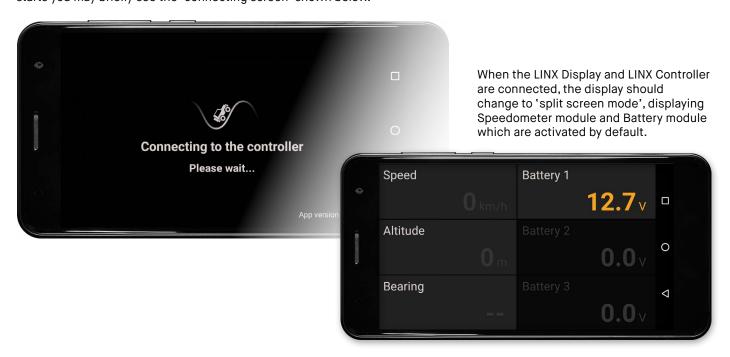


#### **UPDATING LINX SOFTWARE**

Once the LINX Controller has been connected to power it is important to check for and perform a LINX software update before doing any further wiring.

To do this, you will need to turn on the LINX Display, connect to the internet (via wifi for mobile data) and then connect to the LINX Controller using the provided USB cable.

The LINX Display may take up to 1 minute to turn on and start the LINX App. When it starts you may briefly see the 'connecting screen' shown below.



Swipe from left to right across the screen to show the LINX Main Icon Screen. Then tap on the **settings** icon......





1. Upon selecting LINX Update the screen will display:



When LINX re-connects after the update, it will determine if the LINX Controller firmware also needs to be updated and show the following screen. Tap **Update Now** and follow the instructions.





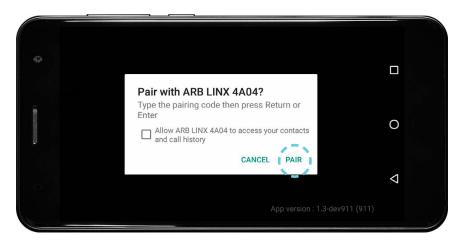
#### BLUETOOTH PAIRING THE DISPLAY WITH CONTROLLER

The LINX Display and LINX Controller can communicate using either the USB or Bluetooth connection. But before Bluetooth communication can be used, first they have to be paired.

#### **AUTO PAIRING**

The easiest way to pair the display and controller is to first connect them via USB and perform a software update as described in the section above. Then simply unplug the USB cable and when the LINX Display will request permission to pair, as shown below.

Tap **PAIR** to accept the pairing. The LINX Display and LINX Controller are now paired and will connect via Bluetooth whenever in range.



**Note:** Once the LINX Display and LINX Controller have been Bluetooth paired, the LINX Controller will become invisible to all other Bluetooth devices. The LINX Controller Bluetooth visibility can only be reset by resetting the LINX Controller, by disconnecting/reconnecting it to power.

#### **MANUAL PAIRING**

If the LINX system installation is already complete and USB cable hasn't been used to connect the LINX Display and LINX Controller, and the LINX Controller is difficult to access, then the display and controller can be manually paired via the Bluetooth settings.



#### Access the **BLUETOOTH SETTINGS** by:

1. Open up the APP DRAWER



#### To pair with LINX:

1. Tap 'ARB LINX' from the available devices.





# ING Learn how to navigate your LINX device. BACK TO TABLE OF CONTENTS

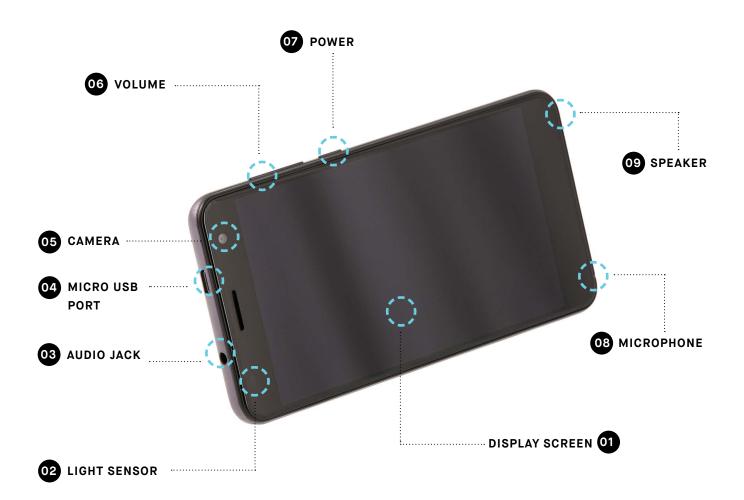


# LINX DISPLAY

The LINX Display is the user interface that enables the driver to access and customise the settings that control the 4X4 equipment installed on the vehicle and connected to the LINX Controller.

It uses a capacitive touch screen and is based on the Android 6.0 operating system. It has been designed to withstand the rigor of 4x4 driving including operating temperatures from -20°C to 80°C.

The LINX Display supports USB, Bluetooth, WiFi and GPS connectivity and complies with FCC, CE and RCM certifications.



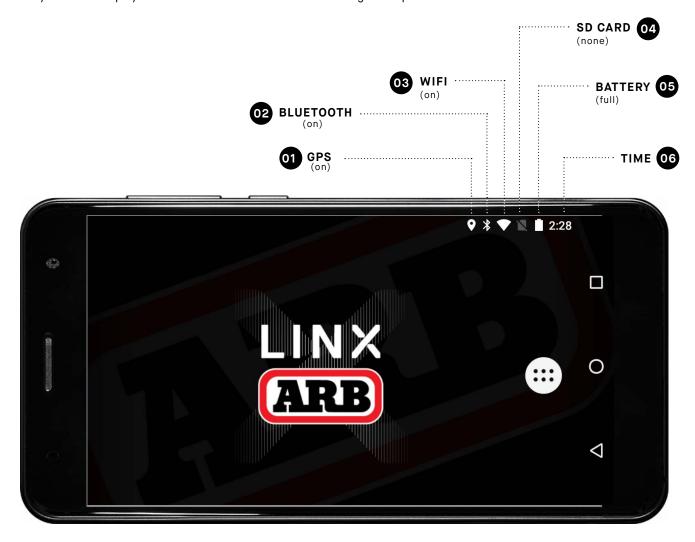


# HOME SCREEN

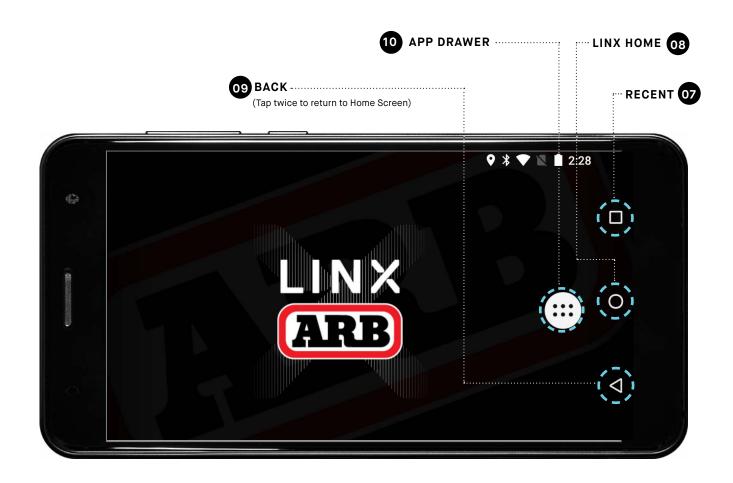
Upon start-up, the LINX Display shows the ARB LINX home screen and then enters 'split screen mode'.

The status bar contains several icons positioned across the top of the display which indicate the status of the unit. Items which are active/on are bright. Items which are inactive/off are greyed out.

Settings that should remain on all the time include GPS (for the LINX Speedometer module to operate), Bluetooth (for LINX Controller communications when the LINX Display is disconnected from the USB cable) and WiFi as this is used by the LINX Display to communicate with the Internet during LINX updates.







#### **NOTES**

- Tap Recent 07 to display a list of recently selected Apps. Scroll up/down and tap an item to return to it. To remove an item from the list tap the X button for that item.
- Tap APP drawer 10 to display all Apps installed on your LINX Display.
- Tap LINX home 08 to return to the LINX home screen.
- Tap Back 09 to return to the previous screen. (When in LINX 'split screen mode', tap and hold to save the current module view as Favourite. To show the Favourite view at any time, tap Back 09 again.



# SETTINGS MENUS

#### **QUICK SETTINGS MENU**

Quick Settings is used to change frequently accessed items. With two fingers, swipe down from the top of the screen to open the Quick Settings menu. To toggle something on or of, simply tap the appropriate icon.



#### **MAIN SETTINGS MENU**

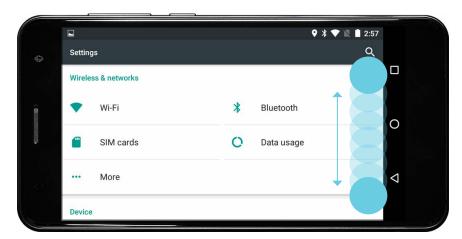
The Main Settings menu is used to control core Android settings.

To open, tap the settings icon at the top right of the Quick Settings menu.

Alternatively, from the Home Screen, tap App drawer, then tap Settings from the list.

Swipe up or down to view setting options.

Tap an item to select it. Tap **Back** to return to the previous menu, or **Home** to return to the LINX home screen.





# LINX USER INTERFACE

The LINX system offers a Graphical User Interface (GUI) similar to that found on most smart phones and tablets.

In order to fast track your use of the LINX interface, please acquaint yourself with these basic methods of interacting with LINX.



**SINGLE TAP** a module or button to select it or turn it on/off.



**DOUBLE TAP** a module to toggle between full / split screen display.



PRESS & HOLD a module for 2 second to go to its settings menu, or to edit an underlined value or text.







PRESS & HOLD swithboard buttons for momentary contact switching.



SWIPE UP/DOWN in split screen mode with one finger to scroll to the next Module.



SWIPE LEFT/RIGHT in 'split screen mode' to return to the LINX Main Icon Screen.

#### **BUTTON COLOUR STATUS**

**SELECTABLE** (but turned off)



SELECTABLE (and turned on)



NON-SELECTABLE (disabled)



**AUTOMATION TRIANGLE** on a button indicates a LINX automated state of the control.

THEMED COLOURED VALUE is a real-time display, as opposed to a set value.

Front Traction



#### LINX DISPLAY SCREENS

#### **MAIN ICON SCREEN**



#### **FULL SCREEN**



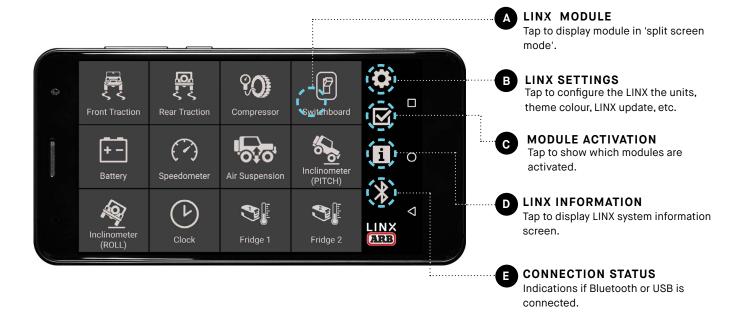
#### **NUMERIC ENTRY**





## LINX MAIN ICON SCREEN

The LINX Main Icon Screen contains a list of the software modules installed on your LINX Display. It provides direct access to each of the LINX modules, the LINX settings, LINX module activation and LINX system information.



LINX information screen contains the LINX systems software versions and disclaimer.





#### **ACCESSING EACH MODULE**

The LINX Display is supplied with pre-installed software modules. These provide access to modules like: Front and Rear Traction, Compressor, Switchboard (for lights), Battery monitor, Speedometer and Air Suspension.

Scroll down or up to see which modules are installed.



#### RETURNING TO LINX MAIN ICON SCREEN

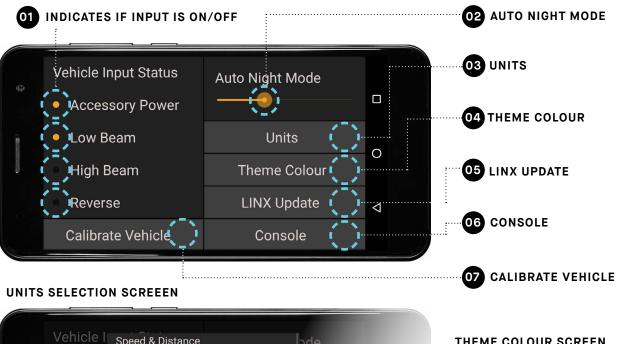
Access to the LINX Main Icon Screen is gained by swiping left or right from 'split screen mode'.





#### LINX SETTINGS SCREEN

The LINX system's **Auto Night Mode** integrates with the vehicles headlights and enables the user to customise the display brightness for specific driving conditions. The **Units** for speed, distance, temperature and pressure can also be set individually. The interface **Theme Colour** may be adjusted and a **LINX Update** will update the LINX software to ensure the system is running the latest version of LINX (**Note:** Run a LINX Update when first installed).





#### **NOTES**

- The Vehicle Input Status area 01 will show a coloured dot next to activated input connections on the controller.
- Use the slide control on **Auto Night Mode** 102 to customise the brightness level of the LINX Display for a specific driving condition. E.g. For night driving you may want to switch your low beam lights on, then adjust the brightness down to a level you want active when the low beam lights are next in operation.
- Tap **Units** 03 to bring up the units menu and tap the combination of units required.
- Tap **Theme Colour** 04. Press and drag or slide to match your vehicle's instrumentation colours.
- Run a LINX Update 05 to check if you have the latest software build and features on your device.
- Tap the **Console** button **06** to enter configuration commands.
- Tap Calibrate Vehicle 07 then follow the instructions to calibrate the controllers orientation within the vehicle.



# UPDATING LINX

The LINX system can check for new updates whenever connected to the Internet by tapping 'LINX Update'.

1. Upon selecting LINX Update the screen will display:



When LINX re-connects after the update, it will determine if the LINX Controller firmware also needs to be updated and show the following screen. Tap **Update Now** and follow the instructions.





# MODULES OVERVIEW

When you're ready to hit the road, accessing each module using LINX is achieved with a simple swipe across the touchscreen display.

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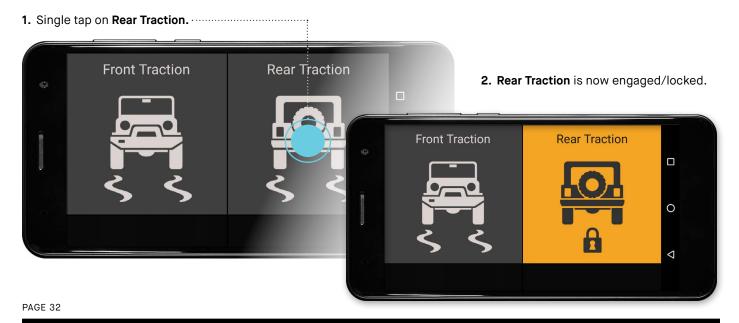
# FRONT AND REAR TRACTION MODULES

The LINX Front Traction and Rear Traction modules are used to control and setup the Air Lockers installed on your vehicle and when selected will automatically turn on the air compressor where required to engage them.

**1.** Double tapping the **Front Traction** (or Rear Traction) module brings up 'full screen mode' for the Traction module.



To engage the rear Air Locker, simply tap the button once. Tap again to switch off the rear Air Locker.

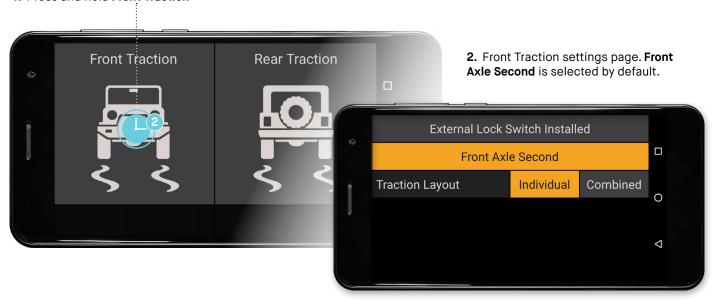




#### CONFIGURING TRACTION MODULES: AIR LOCKER SETUP

To enter settings for the Traction modules, press and hold the module. This will show the traction settings page. Simply tap the option you wish to set. Tap again to unset it.

1. Press and hold Front Traction



The Front Traction module can be setup to operate in two ways: 'front axle second', and 'front independent of rear'.

#### FRONT AXLE SECOND

'Front axle second' is the default mode in which the LINX system is supplied. It automatically greys-out the **Front Traction** button making it unselectable until the **Rear Traction** button is made active. This is a traditional safety feature of Air Lockers that was factory hard wired in conventional installations.





#### FRONT INDEPENDENT OF REAR

'Front independent of rear' mode is available when **Front Axle Second** is deselected. It allows the front and/or rear Air Lockers to be switched on or off independently of the other at any time.

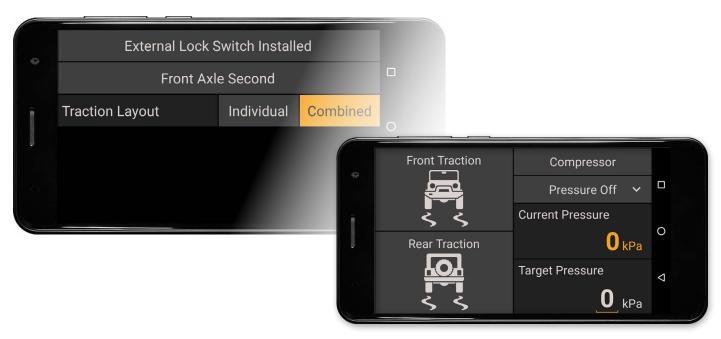


#### **EXTERNAL LOCK SWITCH INSTALLED**

When **External Lock Switch** is selected, this allows you to control the Traction module with an Air Locker dashboard switch. LINX will display the lock / unlock state of the dashboard switch and the LINX Display button will be unselectable.

#### TRACTION LAYOUT OPTIONS

When **Combined** is selected, both the Front and Rear Traction buttons will be combined onto one tile (if they are both installed). This reduces each traction button size but frees up the other half of the display for another module.





# COMPRESSOR MODULE

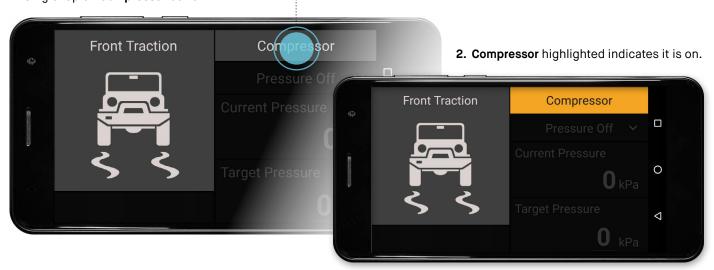
#### AND OPTIONAL PRESSURE CONTROL MODULE

The LINX Compressor module is used to configure and operate your air compressor. 'Pressure Control' is an optional upgrade that is used in conjunction with the LINX Pressure Control Kit (7450107) to inflate or deflate your tyres to a target pressure.

#### **SWITCHING ON COMPRESSOR**

To switch the **Compressor** on, tap the button once. Tap again to switch it off. Note: Vehicle accessory power must be on before Compressor can be turned on.

1. Single tap on Compressor button.



The blue automation triangle appears in the top right corner of the Compressor button to indicate that LINX has changed the state of the Compressor, such as the vehicles accessory power turning off, or Front Traction turning on.





#### **CONFIGURING COMPRESSOR MODULE**

To configure the Compressor module, press and hold anywhere on the module, this will show the compressor settings page. Tap the option you wish to set. Tap again to unset it.

1. Press and hold anywhere on the Compressor module.



#### CONFIGURING PRESSURE CONTROL

To activate the optional Pressure Control feature, tap the Pressure Control Installed button then set the Maximum System Pressure to set the upper limit that can be used when inflating your items.

This must be less than the minimum limit of your compressor's pressure switch (e.g. For an ARB CO35 100psi pressure switch set it to 65psi, for an ARB 180901 150psi pressure switch set it to 130 psi).

1. Tap Pressure Control Installed -----





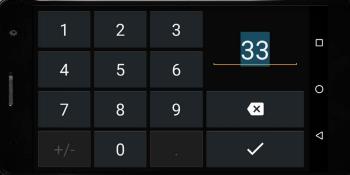
Turn on the **Audible Alert** and a chime will sound when inflation or deflation is complete. Simply tap the **On** or **Off** buttons to turn it on or off.

Tap **Back** to return to 'split screen mode'. The Display will now show the **Current Pressure** in the air line connected to the Pressure Control Kit, and user definable **Target Pressure**.

**1.** To change the **Target Pressure** press & hold the underlined value '33' to bring up the keypad entry. .....



**2.** Use the keypad to input the required value, then tap the **tick** to set it.





#### PRESSURE CONTROL MODE LIST

With pressure control installed the Current Pressure and Target Pressure fields are activated along with the **Pressure Control Mode** list. Tap on the dropdown list to select from the 3 different modes.

1. Tap the 'dropdown list' to view the list of modes. ...



#### PRESSURE CONTROL MODES

**Pressure Off** means no air flow from the compressor, but residual pressure may still be in the air line.

**Pressure Control** will turn on the compressor and the Pressure Control Valve will try to inflate/deflate to achieve the **Target Pressure** to a value less than or equal to the **Maximum System Pressure** setting.

**Pressure Max** will turn on the compressor, and open the Pressure Control Valve, thereby opening up a straight connection between the compressor and air line which is useful when using a blow gun on the air line.

Cancel is used to back out of the menu (ie same as tapping the Back button).



#### **NOTES**

- Parameters that may be set by the user are shown underlined.
- · Theme coloured parameters (e.g. Current Pressure value) are monitored by the system.
- · The Maximum System Pressure will automatically override any Target Pressure entered in excess of it.
- Current Pressure is the pressure monitored by the LINX system in whatever is connected to the LINX Pressure
  control Kit.
- Target Pressure is the pressure that the user may set to either inflate or deflate their tyres.
- The LINX Display uses Bluetooth to communicate with the LINX Controller and may be disconnected from the USB cable then removed from the mount and taken outside of the vehicle to monitor and control your tyre pressures dynamically at the side of your vehicle.

#### **WARNING**

Tyre pressures vary by manufacturer, type, vehicle load, speed and driving conditions. Over inflating your tyres can lead to excessive tread wear and shorten their overall life expectancy. Please consult the tyre manufacturer for the appropriate pressure settings for your tyres and driving conditions. Always remember to re-inflate your tyres to the correct pressure immediately upon returning to sealed roads. Failure to do so could seriously affect vehicle handling and possibly result in tyre failure



# SWITCHBOARD MODULE

The LINX Switchboard module can be used to control up to six (6) optional switched accessories connected to your LINX Controller.

Each accessory can be given a unique name (up to 16 characters) and then be customised to switch on or off; by user input, or an one of the 'vehicle inputs': accessory power, parker/low beam headlamps, high beam headlamps or reverse lamp.

They can also be turned off automatically when a user defined setting for low voltage cut out has been detected by LINX to protect your vehicle from a flat battery. All settings are saved back to the LINX Controller and remain active 24/7 even if the LINX Display is off or is removed from the vehicle.

#### CONFIGURING SWITCHBOARD MODULE

**1.** Press and hold on an individual accessory button to show its settings page.





#### **RENAMING ACCESSORIES**

To rename 'Accessory 1' to suit your vehicle accessory setup:

1. Press and hold the underlined text to show the keyboard.



#### **SWITCHBOARD LAYOUT OPTIONS**

There are two layout choices for the switchboard. There is a 1  $\times$  6 button list layout, and there is also a 2  $\times$  3 square icon button layout.





To select between the layout options tap the **List** or **Icon** button in the setting page of any accessory. Then the icon graphic for each accessory is selected in the each accessorys settings page.

1. First tap the button with the icon graphic. **INTENSITYS AR32** Switchboard Layout List Select Accessory Icon 2. Tap the desired icon for the that accessory. Repeat for each accessory button. **Accessory Automation** Select Accessory Icon ARB (::::<u>:</u>:::::) 0 **##** \*\*\*\*\*\*\*\*\*

# **AUTOMATING ACCESSORIES**

To automate the 'INTENSITYS AR32' to turn on or off with the vehicle's high beams, simply tap the **high beam** button in the **Accessory Automation** menu.

1. Tap the **high beam** button to





All automation functions are user over-ridable by default. For instance LINX might automate the 'INTENSITY AR32' to come on whenever the high beams turn on, but the user can switch the 'INTENSITY AR32' off at any time.

However when the accessory being controlled is a spot light, user override is not allowed in some juristrictions, in this case tap 'Allow Manual Override' to de select it.

#### 1. Tap the Allow Manual Override button to



#### LOW BATTERY PROTECTION

To assign **Low Battery Protection** to switch off the 'INTENSITYS AR32' based on **Battery 1**'s set **Low Voltage Alarm** level:

Tap the Battery 1 button to activate it. .....:



# **NOTE**

• In the example shown above, the **Low Battery Protection** on **Battery 1** will ensure that the 'INTENSITYS AR32' are switched off (even though your high beam lamps are still switched on) once the battery level drops below limit set by **Low Voltage Alarm** in the Battery module settings.



#### **VEHICLE OFF COURTESY LIGHT TIMER**

The courtesy Light feature will turn on the accessory for a set period of time when the vehicle turns off (when LINX ACC input turns off). With the timer value to 0 the feature is inactive. To activate the courtesty light feature simply set the **Vehicle Off Courtesy Light Timer** to a value greater than 0. ......



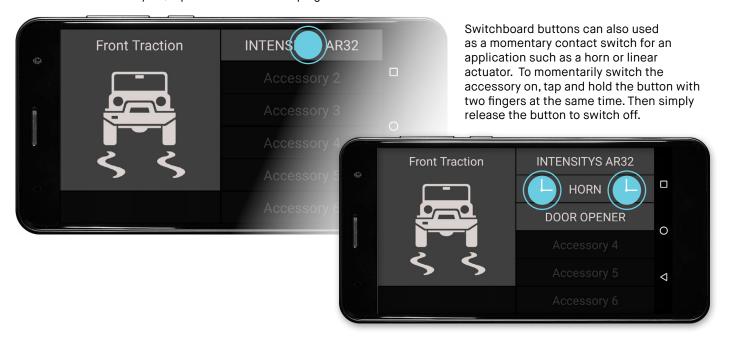
#### **ALLOW ON WHEN VEHICLE OFF**

By default switchboard accessorys are not allowed to be turned on, and will be switched off, when the vehicle is turned off (when LINX ACC input is off). To allow an accessory to be turned on at any time, tap the **Allow On When Vehicle Off** button to select it.



# SWITCHING ON/OFF AN ACCESSORY

To switch the accessory on, tap the button once. Tap again to switch off.





# BATTERY MODULE

The LINX Battery module can be used to monitor and display the charge state of up to three (3) independent batteries simultaneously.

Each battery can be given a unique name (up to 16 characters) and then be configured to operate with your Switchboard accessory via the Switchboard module. (Refer to the section on the Switchboard module for further details).

#### **CONFIGURING BATTERY MODULE**

1. Press and hold Battery 1 to show its settings page.



**Note:** The greyed-out checkbox indicates that **Battery 1** is the battery the LINX Controller is connected to for power. Hence it is active by default and cannot be de-activated.



#### **RENAMING BATTERIES**

To rename 'Battery 1' to suit your vehicle accessory setup:

1. Press and hold the underlined text to show the keyboard.



#### **SELECTING BATTERY TYPE**

Select between **FLA** (Flooded Lead Acid) and **AGM** (Absorbed Glass Mat) battery type to enable battery charge level and predicted discharge curve in the battery fullscreen chart......





#### **LOW VOLTAGE ALARM**

To set the **Low Voltage Alarm** level:

**1.** Press & hold the underlined value '11.8' in the menu to bring up the keypad entry.



A **Low Voltage Alarm** when triggered will highlight in RED. For example, Battery 2 (renamed to "AUX BATTERY") has its **Low Voltage Alarm** level set to "11.5V" and the batteries actual voltage is 11.2V which now highlights in RED



# **NOTES**

- The maximum setting for Low Voltage Alarm and Display Stop Charging is 15.0V
- · Parameters that may be set by the user are shown underlined (e.g. Low Voltage Alarm value).
- Higher **Display Stop Charging** values (e.g. 12.7) will reduce LINX power consumption when the vehicle is not used for long periods.
- Theme coloured parameters (e.g. battery voltage 12.7v) are displayed in real time.



#### **DISPLAY CHARGING**

The LINX Controller can switch on and off the USB charging port, to maintain optimum LINX Display battery condition and charging efficiency, reducing LINX overall power consumption. Additionally when the vehicles battery voltage is below the the **Display Stop Charging** value, the LINX Controller will switch off the USB charging port to further reduce draw on the vehicle battery. To enable this feature:

1. Tap the Batt Saver button.

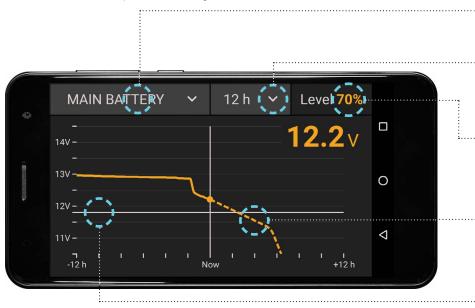


**Note:** Select **Always On** to disable this feature, and the USB charging port will remain always on.



#### **BATTERY MONITORING IN FULLSCREEN**

The battery module in fullscreen contains a battery voltage history graph. When the battery type has been configured in settings, as Flooded Lead Acid (FLA) or Absorbed Glass Mat (AGM), then the battery monitor also estimates the battery level (state of charge) and shows a dashed line for the predicted battery discharge curve when there is a steady load/discharge.



A BATTERY SELECTION

Tap to select from a list of installed batteries.

# B TIME SCALE Tap to select the time scale and view 6,

Tap to select the time scale and view 6, 12 or 24 hours worth of battery voltage history.

# C LEVEL / STATE OF CHARGE Displays the battery level when battery voltage is steady or under moderate

voltage is steady or under moderate discharge.

#### D DISCHARGE CURVE

Dashed line show the predicted battery discharge curve when under steady discharge.

#### LOW VOLTAGE ALARM

The Low Voltage Alarm value configure for each battery is shown in the as the solid horizontal white line.

Single tap anywhere on the history graph (left side of the screen) to show the battery voltage data for that point in time.



#### NOTE

 It will take up to 10 minutes of steady discharge to calculate and show the battery Level and predicted discharge curve.



# SPEEDOMETER MODULE

The LINX Speedometer module works by GPS (Global Positioning System) to show the current speed, altitude and bearing of your vehicle.

The Speedometer module operates independently of tyre size or level of inflation of your tyres, thus providing better accuracy than an uncalibrated vehicle speedometer. The Speedometer module enables the user to assign a speed limit such that a warning is issued if the limit is exceeded by the driver. Greyed-out values indicate poor GPS reception.

#### **CONFIGURING SPEEDOMETER**

**1.** Press and hold anywhere on the **Speed** display, to show its settings page. ..........





#### SETTING SPEED LIMIT WARNING

To set the speed limit:

**1.** Press & hold the underlined value ('0 km/h') next to **Speed Limit Warning** to bring up the keypad entry.



1. Tap the tick box in the top right corner to activate the **Speed Limit Warning**.



#### **NOTES**

- Parameters that may be set by the user are shown underlined (e.g. Speed Limit Warning value).
- Theme coloured parameters (e.g. Altitude, Bearing and Speed) are monitored by the system.
- The GPS in your LINX Display requires good outdoor signal reception from at least three satellites to pinpoint your location for accuracy of operation. Greyed-out values indicate no GPS reception and are not real time (e.g. When driving through a tunnel).



# AIR SUSPENSION MODULE

The LINX Air Suspension module (when fitted with an optional compressor, airbags and LINX Pressure Control Kit 7450107) gives you the ability to control up to 4 airbags either as pairs to level the vehicle from front to rear, or independently to cater for uneven loads from one side to the other.

Independent air bag control requires the optional LINX Airbag Suspension Isolation Kit (7450109). The user can customise the pressure of the airbags then save these mode settings under unique names (up to 16 characters long) to suit different towing and vehicle load conditions then at the press of a button retrieve the settings suited for the day's journey. For example, your modes might be named 'DAILY RIDE', 'BOAT TRAILER', 'CARAVAN' or 'QUAD TRAILER' based on the vehicle loads or range of equipment you have to hook up to your vehicle.

### **CONFIGURING AIR SUSPENSION**

**1.** Press and hold anywhere on the **Air Suspension** module to show its settings page.





There are three options that can be set for the Front and/or Rear airbags as follows:

None will leave the Air Suspension inactive.

Joined will control them as pairs (e.g. to level the vehicle from Front to Rear).

**Split** will control each side of the vehicle independently of the other to compensate for uneven vehicle loads.

The range of control options will be dependent on the hardware and LINX accessories you have configured on your vehicle.

#### SET OPERATIONAL CONTROL STATE

To set the front and/or rear airbags hardware configuration:

1. Single tap on Joined or Split.



# SET MINIMUM AND MAXIMUM AIRBAG OPERATING PRESSURES

1. Press & hold on the underlined values. ...... Joined Split None П Min Max 0 PSI None Joined None **Split** Joined Min o PSI Max 5 PSI Max **30** PSI Min None Joined Split Deflate to Min when ACC is Off 0 Min 5 PSI Max **30** PSI Disable System (deflate to zero) Deflate to Min when ACC is Off ◁ Disable System (deflate to zero)



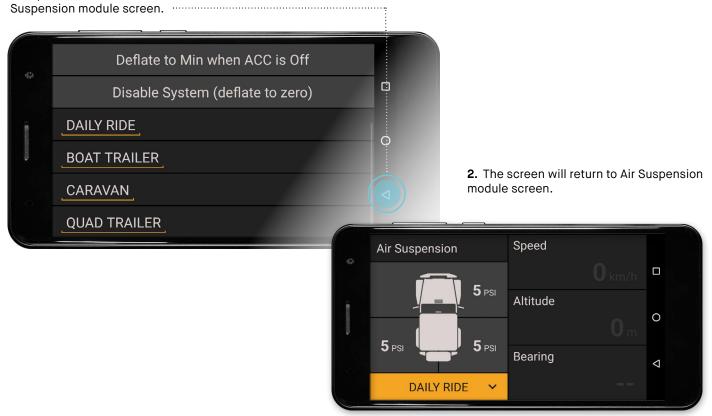
# **RENAMING MODES**

# **RENAMING MODES**

1. Scroll up, then press and hold 'Mode 4'. :



1. Tap the **BACK** button to return to Air





#### **ADJUSTING AIR PRESSURE**

1. Tap the pressure value of one or more values requiring adjustment (tap near '5psi'). Tap again to deselect them.



Tap the value again to deselect it and it will be saved in the current mode such as "DAILY RIDE'.

### **CHANGING MODES**

Select from the different modes by tapping on the drop down menu.

#### **AUTO ADJUST WITH VEHICLE START**

When the vehicle is started, if it is close to level (inclinometer pitch and roll readings of less than 3 deg) and stationary, then LINX will automatically check the air susension pressures and if required re-adjust them to the current pressure setting. For this feature to function correctly the vehicle must first be calibrated via the LINX Settings Screen by tapping the **Calibrate Vehicle** button.

# **NOTES**

- Parameters on the settings page that may be set by the user are shown underlined (e.g. the values next to **Min** and **Max**, and the mode names).
- · Refer to your airbag manufacturer's datasheet for the recommended Min and Max operating pressures
- Disable System option is normally used by technicians when working on and installing the system.



# INCLINOMETER MODULE

The LINX Inclinometer module monitors and displays the roll and pitch of the vehicle independent of the LINX Display. The inclinometer can be configured to sound and display and alarm to warn you of approaching your vehicle roll or pitch limit.

For the inclinometer to function correctly the vehicle must first be calibrated via the LINX Settings Screen by tapping the **Calibrate Vehicle** button.

1. Double tapping the **Inclinometer** (ROLL or PITCH) module brings up 'full screen mode' for the Inclinometer module.





# CONFIGURING THE INCLINOMETER

To enter settings for the Inlinometer modules, press and hold the module. This will show the Inclinometer settings page. To edit the Limit Alarm value, press and hold the value. Simply tap the option you wish to set. Tap again to unset it.

**1.** Press and hold anywhere on the **Inclinometer** modeule to show its settings page.



# **LIMIT ALARM**

A Roll / Pitch Limit Alarm when triggered will highlight in RED. For example, Roll has its Roll Limit Alarm set to 30° and the vehicles roll is at 33° which now highlights in RED. An audible alarm will also sound if selected in the settings.





# CLOCK MODULE

The LINX Clock module includes a range of time related functions such as local and world time, date, timer, alarm, and stop watch.

The date and local time will be automatically set whenever the LINX Display is able to receive GPS signal or a SIM card is used to connect it to a telecommunications network. Alternatively the date and time can be manually set in the Android main setting menu. For help finding the Android settings menu refer to section 8.

1. To access each of the Clock functions tap on the drop down list and tap again to select.



#### **TIMER FUNCTION**

1. Tap and hold on the underlined values to set the timer. :





#### **ALARM FUNCTION**

1. To edit the alarm time, first tap the **Enable** button.





# WORLD TIME FUNCTION

1. Tap Change Time Zone to select from a list of timezones.





# FRIDGE MODULE

The LINX Fridge module can monitor/control the ARB Zero Fridge Freezer range and compatible ARB Classic and Elements Fridge Freezers that have been fitted with an ARB Fridge App Connect module (ARB #10900041).

When connected to an ARB Zero Fridge or Series 2 ARB Fridge the module can be used to monitor and control the Fridge. Series 1 ARB Fridge Freezer manufactured post 2014 allow monitor function only.

#### **CONNECTING TO THE FRIDGE**

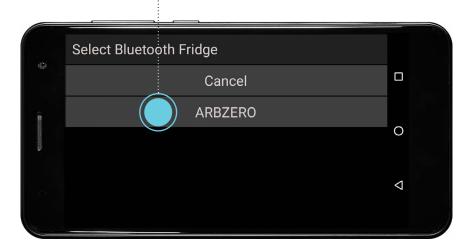
1. Tap and hold the Fridge module to enter settings.





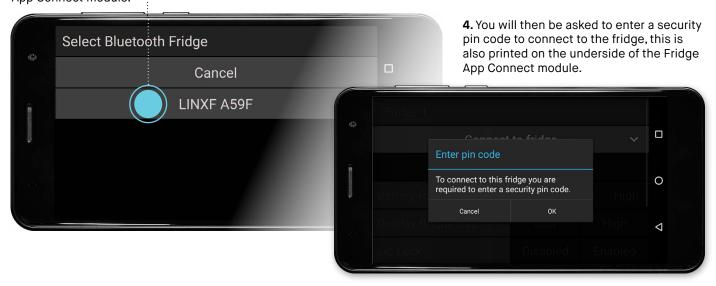
# **ZERO FRIDGES**

**3.** Tap to select 'ARB ZERO' from the list. No pin code is required to connect. ......



# ARB CLASSIC OR ELEMENTS FRIDGE WITH 'FRIDGE APP CONNECT MODULE'

**3.** Tap to select your fridge from the list. Ensure that the name matches that printed on the underside of the Fridge App Connect module.





#### CONFIGURING FRIDGES WITH TWO WAY COMMUNICTION

LINX auto detects which ARB fridge model it is connected to and only enables the relevant features for that model. For example:

- ARB Classic and Elements fridges, only monitor the settings and current status.
- Series 2 ARB Classic and Elements fridges with 2 way communication, monitor the status and also control the set temperature, Battery Protection level, Display Brightness, set 3 temperature mode names and values. Additionally Elements lock can be controlled.
- -ARB Zero Fridge, monitor status and control the set temperature, Boost mode, Battery Protection level, set 3 temperature mode names and values.
- **1.** To change the Battery Protection or Display Brightness on the fridge, simply tap your selection.



3. Tap the BACK button to return to Fridge





#### **CHANGING MODES**

1. To select different temperature modes, or turn the fridge on standby, tap the dropdown list.



# **WARNINGS**

The fridge lid open icon highlights RED when the lid is open.



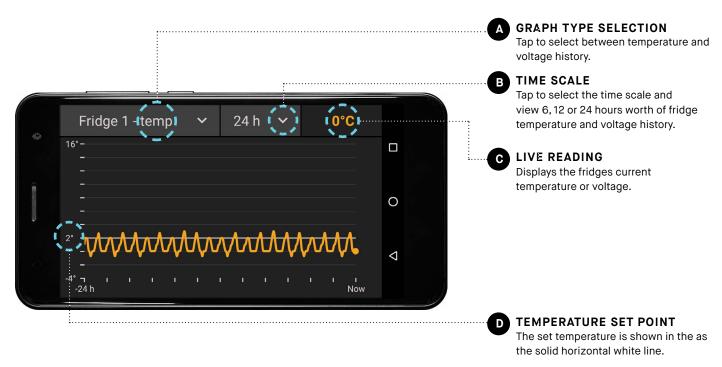
If the fridge has a check status, such 'Low Battery Voltage', a pop-up will be displayed with an explanation. Tap **OK** to clear the pop-up.



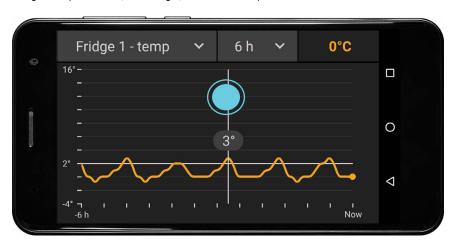


# FRIDGE MONITORING IN FULLSCREEN

The fridge module in fullscreen contains temperature and voltage history graphs. The graph type is selectable from the button in the top left corner.



Single tap anywhere on the history graph (left side of the screen) to show the fridge temperature (or voltage) data for that point in time.





# TPMS MODULE

The LINX TPMS module monitors ARB Air Systems TPMS sensors through the use of the LINX TPMS Comms Box (ARB #7450116). It displays the current tyre pressure and temperature. It sounds and displays alerts related to pressure, temperature, sensor low battery and a non-communicating sensor.

Once trailers have been configured LINX it will automatically switch between them, or active/deactivate them when are are connected/disconnected to your vehicle.

The **TPMS (Vehicle)** module supports 4 tyre sensors and 2 spare tyre sensors. 4 modes can be programmed each with different names and set pressures for front and rear tyres, accommodating the wide range of 4x4 tyre pressures that may be used in different terrain and load conditions.

The **TPMS** (**Trailer**) module supports up to 3 different trailers each with 4 tyre sensors and 2 spare tyre sensors. Each trailer also has 4 modes that can be programmed with a single set pressure for all tyres. Additionally each trailer can be named, configured as single or tandem axle and an appropriate icon chosen.

A pressure alert will occur if a tyre pressure is above or below it set pressure +/- the pressure variation alert.

The setting for temperature alert applies to all tyres, and the spare tyre set pressure applies to all spare tyres on the vehicle and trailers.

#### CONNECTING TO THE LINX TPMS COMMS BOX

1. Tap and hold the TPMS module to enter settings.





3. Tap to select your LINX TPMS Comms Box 'LINXTPMS 1234' from the list. :



#### SENSOR POSITION PROGRAMMING

1 vehicle and 3 trailers can be programmed with up to 4 tyre sensors and 2 spare tyre sensors. To Learn the sensors and their positions follow the on screen text pop ups. The sensor positions can be quickly and easily swapped if you rotate your tyres or change to a spare tyre.

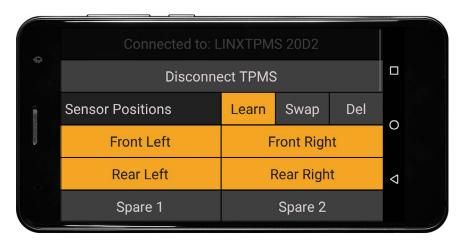
#### **SENSOR POSITION LEARNING**

**1.** Tap the **Learn** button. At first all tyre positions are shown in light grey, indicating no tyre sensor has been associated with this position. .......





When a sensor position has been associated with a tyre sensor the button is shown in the LINX theme colour. Shown here all 4 vehicle tyre sensor positions have been learned.



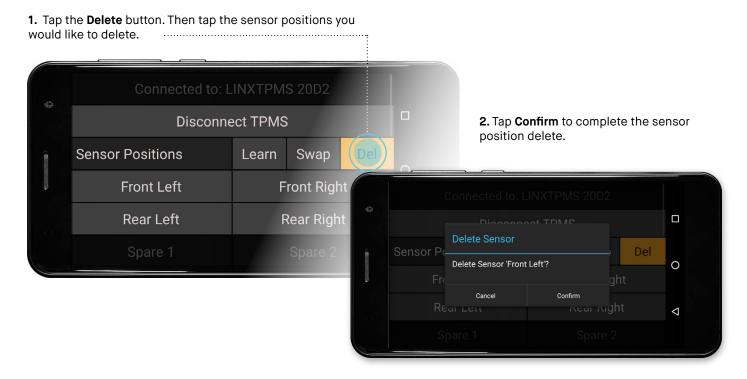
# **SENSOR POSITION SWAPPING**

**1.** Tap the **Swap** button. Then tap the two sensor positions you would like to swap. ......





#### **SENSOR POSITION DELETE**



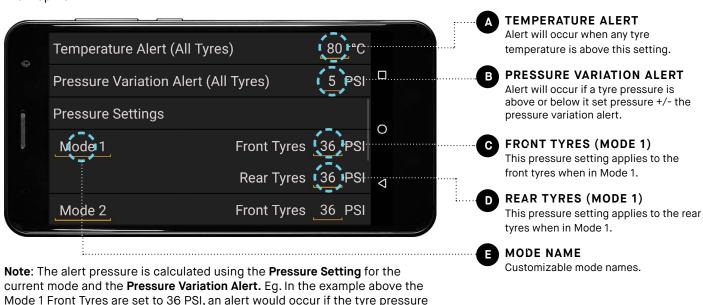
#### **CONFIGURING TPMS ALERTS**

### **TPMS (VEHICLE) SETTINGS**

The vehicle has 4 modes available, each of which can named and configured with different set pressures for the front tyres and the rear tyres, accomodating the wide range of 4x4 tyre pressures that may be used in different terrain and load conditions.

To change the alert values, pressure mode names and values, scroll up then press and hold the underlined text to show the keyboard. Change the name/value as required and then tap **DONE**.

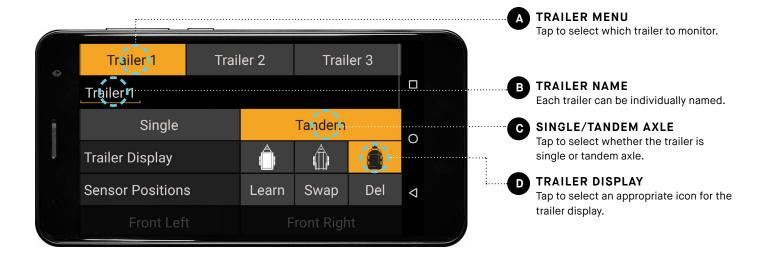
is below 31 PSI (= 36 - 5), or is the tyre pressure is above 41 PSI (= 36 + 5).





# **TPMS (TRAILER) SETTINGS**

The trailer settings are similar to the vehicle with the addition that each trailer can be named, configured as single or tandem axle and an appropriate icon chosen.



#### **TPMS DISPLAY**

The LINX TPMS Comms Box is powered on with the vehicle accessories or ignition, and so it is not active when the vehicle is turned off, as shown below with the vehicle and readouts in grey.





#### **TYRE PRESSURE ALERT**

When tyre pressures are outside the allowable set pressure variation, LINX will sound an audible alert and highlight the tyre sensor corner with the issue in RED as shown.



# TYRE SENSOR NOT COMMUNICATING ALERT

The LINX TPMS modules will display the 'sensor not communicating' alert if no data has been recieved from a sensor for more than 10 minutes and the vehicle speed is greater than 20km/h [12mph]. This speed feature avoids recieving uneccessary alerts when driving offroad at low speeds, as the tyre sensors don't wake-up until the vehicle speed is at least 15km/h [10mph].

Before any data is received from a tyre sensor the readouts will just remain grey.





#### **AUTOMATIC TRAILER DETECTION**

#### TRAILER CONNECTION

When you physically connect a trailer to your vehicle, LINX will recieve data from that trailers sensors once you start moving. If the trailer is not currently activated in the TPMS (Trailer) module, LINX will ask if you want to activate that trailer.

Note: All your trailers must first be configured in LINX and the Sensor position programming completed as described earlier in this section.

A pop-up will inform you when a connected trailer has been detected. Select 'Yes' to simply activate it and start monitoring it for pressure and temperature alerts. Select 'Yes and Show' to also show it in split screen view. Or select Ignore if you don't want to activate it.



#### TRAILER DISCONNECTION

If no data is being received from any of the tyre sensors of your currently activated trailer, then LINX will ask if the trailer has been disconnected and hide it until it is connected again, rather than continuously displaying 'sensor not communication' alerts.









# COMPLIANCE INFORMATION

# **EUROPE - EU DECLARATION OF CONFORMITY**

This declaration of conformity is issued under the sole responsibility of the manufacturer.

This declaration relates to these products: LINX 1.0

The products are in conformity with the following standards or standardized documents:

ETSI EN 301 489-17 V3.1.1:2017 ETSI EN 301 489-1 V2.1.1:2017 ETSI EN 300 328 V2.1.1:2016 EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013

According to the provisions of the directives:

2014/53/EU (Radio Equipment Directive) 2014/30/EU (Electromagnetic Compatibility Directive) 2014/35/EU (Low Voltage Directive)

Technical file at:

ARB Corporation Ltd, 42-44 Garden St, Kilsyth, Victoria, Australia

Signed for and on behalf of ARB Corporation Ltd

Andrew Brown Managing Director Melbourne, March 2018



#### **USA - FCC STATEMENT**

This device complies with part 15 of the FCC Rules. 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### **FCC CAUTIONS**

Changes or modifications made to this device that are not expressly approved by ARB Corporation Ltd may void the user's authority to operate the equipment. This device must not be co-located or operated in conjunction with any other antenna or transmitter.

#### **FCC RADIATION EXPOSURE STATEMENT**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

## **ENVIRONMENTAL PROTECTION**

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.

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Please contact our Export Department
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Email: exports@arb.com.au

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Bendigo (03) 5445 7100
Brighton (03) 9557 1888
Dandenong (03) 9793 0002
Echuca (03) 5480 2600
Geelong (03) 5272 2611
Hoppers Crossing (03) 9749 5905
Keilor Park (03) 9331 7333
Kilsyth (03) 9761 6622
Pakenham (03) 5940 5500
Shepparton (03) 5822 1877
Somerton (03) 9460 9988
Traralgon (03) 5174 9190

#### **SOUTH AUSTRALIA**

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# ACT

NEW SOUTH WALES

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Artarmon (02) 9438 4484

Broken Hill (08) 8087 9250

Brookvale (02) 8507 3073

Dubbo (02) 6885 5777

Moorebank (02) 9821 3633

Newcastle (02) 4953 9555

Orange (02) 6369 0700

Penrith (02) 4731 1266

Port Macquarie (02) 6581 2500

St Peters (02) 9565 2455

Tamworth (02) 6762 0541

Thornleigh (02) 9980 8855

Wagga Wagga (02) 6925 8777

Wentworthville (02) 9631 7889

Fyshwick (02) 6280 7475

#### **WESTERN AUSTRALIA**

Canning Vale (02) 9455 4366 Geraldton (08) 9921 8077 Mandurah (08) 9583 3200 Osborne Park (08) 9244 3553 Wangara (08) 9409 5764 Welshpool (08) 9358 3688

# NORTHERN TERRITORY

Alice Springs (08) 8953 0572 Darwin (08) 8947 2262

#### QUEENSLAND

Biggera Waters (07) 5537 8800 Bundaberg (07) 4153 2929 Burleigh Heads (07) 5535 9223 Caboolture (07) 5499 1955 Capalaba (07) 3823 5900 Cairns (07) 4035 3350 Caloundra (07) 5491 4500
Coopers Plains (07) 3277 2020
Jindalee (07) 3715 6400
Nundah (07) 3266 3255
North Lakes (07) 3491 9600
Springwood (07) 3493 3030
Mackay (07) 4998 6888
Maroochydore (07) 5475 4011
Rockhampton (07) 4922 7788
Toowoomba (07) 4632 1122
Townsville (07) 4728 0900

#### **TASMANIA**

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