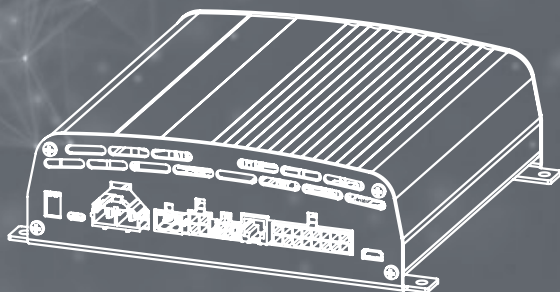


Installation manual

Pursuit Siren



Warnings & Guidance

IMPORTANT! Read all instructions before installing and using. Installer: This manual must be delivered to the end user.



WARNING!

Failure to install or use this product according to manufacturers recommendations may result in property damage, serious injury, and/or death to those you are seeking to protect!



Do not install and/or operate this safety product unless you have read and understand the safety information contained in this manual.

1. Proper installation combined with operator training in the use, care, and maintenance of emergency warning devices are essential to ensure the safety of you and those you are seeking to protect.
2. Exercise caution when working with live electrical connections.
3. This product must be properly grounded. Inadequate grounding and/or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or severe vehicle damage, including fire.
4. Proper placement and installation are vital to the performance of this warning device. Install this product so that output performance of the system is maximised and the controls are placed within convenient reach of the operator so that they can operate the system without losing eye contact with the roadway.
5. Do not install this product or route any wires in the deployment area of an air bag. Equipment mounted or located in an air bag deployment area may reduce the effectiveness of the air bag or become a projectile that could cause serious personal injury or death. Refer to the vehicle owner's manual for the air bag deployment area. It is the responsibility of the user/operator to determine a suitable mounting location ensuring the safety of all passengers inside the vehicle particularly avoiding areas of potential head impact.
6. It is the responsibility of the vehicle operator to ensure during use that all features of this product work correctly. In use, the vehicle operator should ensure the projection of the warning signal is not blocked by vehicle components (i.e., open trunks or compartment doors), people, vehicles or other obstructions.
7. The use of this or any other warning device does not ensure all drivers can or will observe or react to a warning signal. Never take the right-of-way for granted. It is your responsibility to be sure you can proceed safely before entering an intersection, driving against traffic, responding at a high speed, or walking on or around traffic lanes.
8. This equipment is intended for use by authorised personnel only. The user is responsible for understanding and obeying all laws regarding warning signal devices. Therefore, the user should check all applicable city, state, and federal laws and regulations. The manufacturer assumes no liability for any loss resulting from the use of this warning device.



Caution: This device produces high sound pressure levels which can cause damage to hearing. Appropriate safety precautions should be taken to minimise exposure.

Important! This unit is a safety device and it must be connected to its own separate, fused power point to assure its continued operation should any other electrical accessory fail.

Caution: When drilling into any vehicle surface, make sure the area is free from any electrical wires, fuel lines, vehicle upholstery, etc. that could be damaged

Product Overview



Designed in Australia, the Code-3 Pursuit Siren sets a new benchmark in audible warning systems. With two independent 100W speaker channels and multi-voltage operation, the Pursuit Siren is ready for action on the full spectrum of emergency vehicles. Approved to the highest standards in acoustics, EMC and reliability, the siren is fully compatible with the C3-DNA network and integrates seamlessly with other C3-DNA enabled products such as the Pursuit Lightbar and Matrix Display, to provide complete vehicle warning systems with truly unique features.

Specifications

Input Voltage Range	V_s	10 – 30VDC
Current Draw - Standby	I_o	10mA
Current Draw (200W)	I_L	18A (12V) / 9A (24V)
Speaker Voltage	V_{RMS}	33Vrms
Dimensions		See page 4
Ambient Operating Temperature	Top	-30C / +65C

Product Certifications

European EMC Regulation	ECE-R10
European EMC Regulation	CISPR-25
Australian Media and Communications Authority	RCM Approved
Siren Output	SAE J1849 when paired with Code 3 C3900 & C3100HD speakers

Mounting

Before installation, examine the equipment for transit damage. Do not use damaged or broken parts.

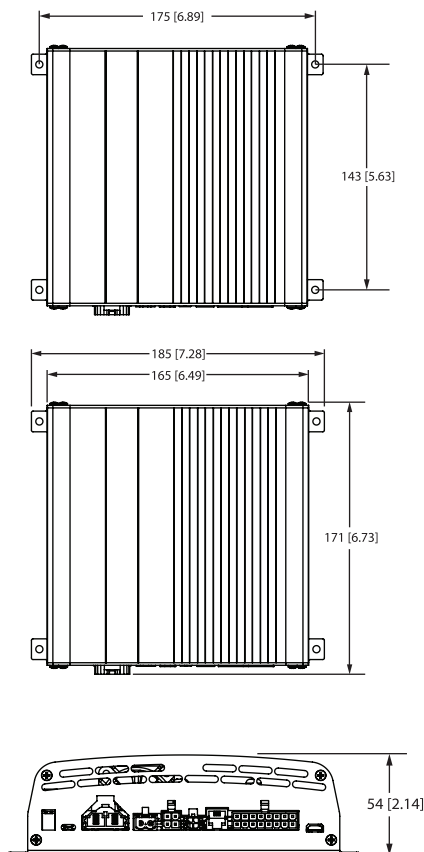
Before any installation work is carried out, plan where the various components will be mounted and what route the wiring will take. The siren can be mounted by screwing it into any flat surface using the 4 x supplied screws, preferably with a drip loop so it is not possible for water to run down the cables into the unit.



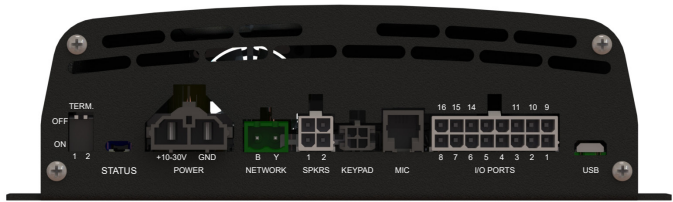
WARNING!

The siren is not waterproof, and it must be mounted within the vehicle cabin.

Suggested mounting locations include the boot, under passenger seat or passenger footwell area.



Wiring

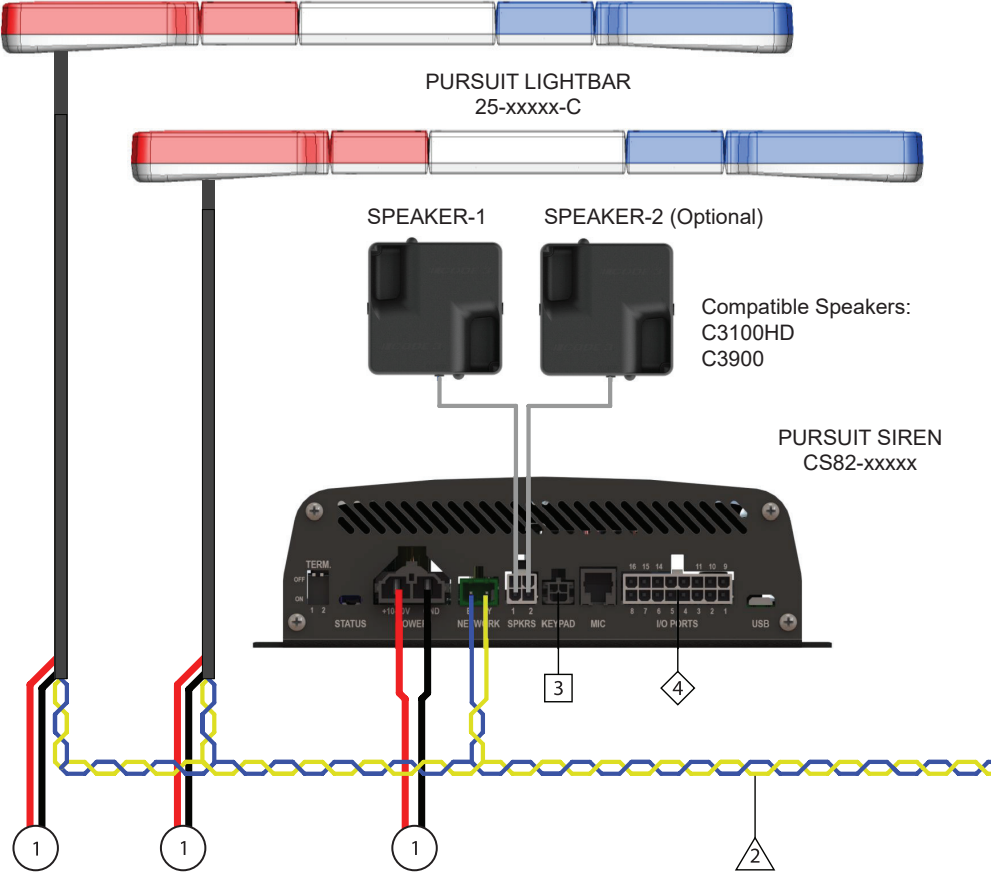


The Pursuit siren may have been configured for customised operation as part of a C3-DNA network. Before proceeding with installation and wiring, please refer to the C3-DNA Toolbox software connection tables provided with the product in addition to the generic wiring diagram provided in this installation manual.

PORT	REF	DESCRIPTION
TERM.		Network termination setting. Default 1=ON; 2=OFF. For further details, refer to Network Application Note.
STATUS		The Status LEDs indicate various aspects of the current operation of the siren. RED = Bootloader (programming mode / firmware update).
POWER	+10-30V	Connect to 4.5mm ² (10 AWG) automotive wire to a fused power source, using the shortest possible wire length. Fuses should be 15A for 100W variants, and 25A for 200W variants. Do not connect this power wire until all other connections have been made to the unit.
	GND	Connect to 4.5mm ² (10 AWG) automotive wire to a good chassis ground point or the battery negative terminal, using the shortest possible wire length.
NETWORK	B / CAN-	Connect the Blue wire from the C3 DNA device(s).*
	Y / CAN +	Connect the Yellow wire from the C3 DNA device(s).*
SPKRS	1	Connect Speaker 1 here.
	2	Connect Speaker 2 here (for 200W applications only).
KEYPAD		Connect C3 DNA compatible devices (via extension cable if required) to this port (optional).
MIC		Connect the microphone here.
I/O PORTS		Refer wiring diagram. When configured, output pins are capable of 200mA drive current, suited to driving relays or logic pins to other legacy product
USB		Configuration and firmware updates via Software Graphical User Interface.

*Network cable requirements: Twisted pair, 30mm pitch Blue/Yellow. 0.25mm² / 24AWG.

GENERIC WIRING DIAGRAM



NOTES



① Each product must be wired and appropriately fused as close to the battery terminal or power distribution point as possible.

② Network Data Cable Requirements:
Twisted Pair, 30mm Pitch (see C3-DNA wiring section).

③ Controller Port: Provides regulated power and data for C3-DNA controllers. Up to 3 controllers can be driven from each port. For use with controllers, Y-adaptors and extension cables.

④ I/O Connections:
Refer to C3-DNA Toolbox connection table for more detail.

ACCESSORIES

Y-SPLITTER
CZ8014



EXTENSION CABLES
CR8007 - 2.5m
CR8021 - 6.0m



C3-DNA General Wiring Information

The Code 3 Distributed Network Architecture uses a proprietary communication protocol operating over the highly reliable and industry standard CAN bus physical layer.

For correct and reliable operation, “twisted-pair” data wires must be used to connect between each of the C3-DNA devices on a vehicle. C3-DNA uses a yellow wire for CANH and a blue wire for CANL. These wires are typically 0.25mm² with a nominal 30mm twist-pitch.

Often the data wires are integrated into product power cables. This is the case for all C3-DNA compatible Lightbars, Message-Displays and Keypads. For long data-only runs without power (the length of a fire-truck for example) it is often convenient to use the yellow and blue twisted-pair in the standard keypad extension cables, leaving the red and black power wires unconnected.

CAN bus wiring is ideally a linear “bus” or “back-bone” arrangement, with devices on short “stubs” along the length and with termination at each end. However, due to the nature of Emergency Vehicles and the location of warning devices, this ideal topology is often hard to achieve in practice. Because of this, C3-DNA has been designed to allow for somewhat more flexible wiring and termination arrangements. When installing a C3-DNA system, there is generally no need to be concerned about termination and bus-topology, so long as there are at least one or two devices that include termination components, and twisted-pair data wires are used.

CAN termination and biasing is provided by the JBox and the Siren. A C3-DNA system must contain at least one of these devices, unless the system consists of a single device only (e.g. a Switch Node performing stand-alone battery management functions), or unless discrete termination resistors are added to the system. Contact the factory for more information about these special cases.

C3-DNA Configuration Software

C3-DNA devices and systems can be configured using the code 3 DNA Syssem Configuration Toolbox software. For more information, including download links, please refer to:













Glossary of Functions

Name	Description
Level-#	System warning level. 1 = lowest level.
ALERT	Legacy term. Activates Lights and Sirens
PRI	Legacy term. Primary warning level - highest level of warning light function.
SEC	Legacy term. Secondary warning level - for lower level of warning lights.
White Flash	Activates white flash steady output. Normally de-activated at night.
White Cut	Masks white flashing warning modules. Normally enabled at night.
Alley Left	Steady white light illumination - LHS of vehicle.
Alley Right	Steady white light illumination - RHS of vehicle.
Takedown	Steady white light illumination - FRONT of vehicle.
Worklight	Steady white light illumination - REAR of vehicle.
Sign Light	Illuminated sign light option on lightbars.
LF-Enable	"Enables the operation of siren low-frequency tones, where configured. Low frequency tones are normally only activated for a timed burst of 8 seconds for enhanced an intersection warning signal."
Test Volume	Once enabled, reduces the siren volume by 45dB for safe workshop operation and testing.
Parklight	Vehicle parklight circuit. Dims the lightbar output at night.
Ignition (IGN)	Vehicle ignition circuit.
Accessories	Vehicle accessory circuit.
MDT	Required for Mobile Data Terminal. Output/s active when lights, siren or both are active (as configured).
EM BLUE	Emergency warning lights - blue. Normally connected to discrete directional modules.
EM RED	Emergency warning lights - red. Normally connected to discrete directional modules.
DNC	Do Not Connect
Reserved	Do Not Connect
C3DNA-	C3-DNA CAN port, low.
C3DNA+	C3-DNA CAN port, high.
C2L	Auxiliary CAN port, low. Do not connect to C3DNA+ or C3DNA-.
C2H	Auxiliary CAN port, high. Do not connect to C3DNA+ or C3DNA-.
Input L	Input pin - active low (GND).
Input H	Input pin - active high (12V / 24V).
Output H	Output pin - high.
Radio In	For the radio rebroadcast function
Horn: 1T	Single Tap.
Horn: 2T	Double Tap.
Horn: H	Hold.
Momentary switch	Operates only while pressed.
Latching switch	Switched on by the user, remains on until switched off again
Momentary input	Triggers function only while input is active.
Latching input	Triggers function with either the rising edge or falling edge of an input.

Hardware Pin Colour Guide

Hardware Pin Colour Guide Colours are referenced on the C3-DNA Toolbox tables provided with the product or online. The following guide provides information on the hardware functionality and limitations for each type of pin.

Function	Colour	Description
Power		Refer to wiring instructions
Ground		Refer to wiring instructions
CAN-H		Refer to wiring instructions
CAN-L		Refer to wiring instructions
N/C		No function - do not connect. Reserved for alternative functions.
±Input		Configurable input that can detect either connection to GND or connection to +ve voltage range 10-30V
+Input		Input that can only detect connection to +ve voltage range 10-30V.
±In/Out		Multi-function pin: Configurable input that can detect either connection to GND or connection to +ve voltage range 10-30V. Configurable positive switched output - refer to wiring section for hardware limitations.
+In/Out		Multi-function pin: Configurable input that can detect either connection to +ve voltage range 10-30V. Configurable positive switched output - refer to wiring section for hardware limitations.
Output		Positive switched output - refer to wiring section for hardware limitations.

Troubleshooting

The red status LED indicates that the Switch Node is in configuration mode. It is normal for this LED to briefly flash once when the Switch Node initially powers up and self-tests are performed. It is also normal for this LED to be on while the Switch Node is being reconfigured via the C3-DNA-Toolbox software. Apart from these two cases it should never be on during normal operation.

Symptoms	Possible Explanation	Solution
Red Status LED remains On (Device is in config mode)	Missing or Corrupt configuration data or firmware	Load correct configuration from C3-DNA-Toolbox
Red Status LED pulses every 4–6 seconds (Device is repeatedly resetting)	Address Conflict – two or more devices are configured with the same address	Disconnect conflicting device. Load correct configuration (with correct address) from C3-DNA-Toolbox
Outputs 1-12 turn on sequentially	Device contains factory test configuration	Load correct configuration from C3-DNA-Toolbox
Device cannot be configured	Refer to C3-DNA-Toolbox troubleshooting guide	
Other	Check both power and ground connections. Check for stable power with multimeter min/max-hold function. Check CAN connection and polarity (yellow & blue wires). Check for different operation with output plug disconnected.	

Warranty

Manufacturer Limited Warranty and Limitation of Liability:

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NOTES



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