Safety Guidelines
This manual contains information that is very important to know and understand. This information is provided for safety and to prevent equipment problems. To help recognise this information, observe the following symbols.

- **Danger** indicates an imminently hazardous situation which if not avoided WILL result in death or serious injury.
- **Warning** indicates a potentially hazardous situation which if not avoided, COULD result in death or serious injury.
- **Caution** indicates a potentially minor or moderate injury.
- **Notice** indicates important information, that if not followed, may cause damage to equipment.

Unpacking
After unpacking the unit, inspect carefully for any damage that may have occurred during transit.

- **Warning** Do not operate unit if damaged during shipping, handling or use.

General Safety Information
The operator of this product must take the necessary precautions to prevent the level of danger indicated by these symbols. The operator is required to read and understand this instruction manual and all safety warnings, labels etc.

Any employer allowing the use of this product in their field of work must distribute this instruction manual to all users. The employer must also ensure all users read, understand and follow the instructions as described in the manual, safety warnings, labels, etc.

1. Do not expose the product to flammable gases, vapours or fumes
2. Do not store flammable gases in or near this product
3. Never use flammable or toxic solvents to clean the product or any of the unit’s parts
4. Never remove or alter any safety warning labels, tags, etc. located or provided with product.
5. Follow all directions for maintenance.

The use of other than genuine PCL replacement parts may result in reduced equipment performance. Repairs must be performed by authorised repair personnel, otherwise the warranty will be void.
**General Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max inlet supply</td>
<td>218 psi / 15 bar / 1500 kPa</td>
</tr>
<tr>
<td>Recommended supply</td>
<td>10 psi / 0.7 bar / 70 kPa</td>
</tr>
<tr>
<td></td>
<td>above the max set pressure of Inflator</td>
</tr>
<tr>
<td>Max operating pressure</td>
<td>145 psi / 10 bar / 1000 kPa</td>
</tr>
<tr>
<td>Min operating pressure</td>
<td>4 psi / 0.3 bar / 30 kPa</td>
</tr>
<tr>
<td>Display resolution</td>
<td>1 psi / 0.1 bar / 10 kPa</td>
</tr>
<tr>
<td>Units of measurement</td>
<td>psi / bar / kPa / kg/cm</td>
</tr>
</tbody>
</table>

This Equipment also complies with the EC directives:
- 89/336/EEC (EMC directive) confirmed by report No.10655/TR/1

**Installation**

In order to provide a trouble free operation it is necessary to connect the power supply from the main switchboard with a MAX 3amp fuse/RCB protection device. This must be grounded.

The circuit breaker should be marked as the disconnecting device for the equipment.

The compressor producing the air should have the necessary water and dirt filtration, to minimise accumulation of debris at the inflator line filter strainer.

For efficient tyre inflation, ensure that the air supply is 10 psi, 0.7 bar or 70kpa above the intended maximum inflation range.

**The wall-installed device** has to be tightened to the wall by means of 4 screws.

**Inside installations**

Use 3 pin connecting plugs or 2 pin + Earth with the Earth Ground wire installed on electrical infrastructure.

**Outdoor installations**

The unit can be connected to an earth conductor or conducting metal work (metal pipe conduit or sheathing) which has equipotential bonding to the main Earthing point of the installation.

This unit is designed to run with the earth connection installed. "According to Class 1 - Basic insulation in conjunction with protective Earthing"

**Calibration & Accuracy**

The accuracy of our digital units when released from our factory is that:

The maximum permissible error (MPE) = 0.08 bar

Each unit, before release, is checked and calibrated on test equipment that has accuracy traceable to a UKAS Laboratory No. 0221 referenced to certificate 00293946.

**Control Panel**

- 4 user touch type buttons
- + Increase or decrease to set pressure in all modes
- Start flat tyre inflation
- Toggle OPS/N2 Purge settings

**Key Legend**

- Buzzer
- Air/N2 supply port G1/4
- Tyre out port slide valve with XF coupling
- Deflate exhaust

**NOTICE**

This units has a filter housing G1/4 inlet and a AC71JM outlet ports.

It is recommended that when tightening any hose connections to the unit, the user selects two spanners. Hold the filter housing with one spanner, to ensure it does not spin, then tighten the hose connection with the other.
Start-up

1. Turn on power supply
2. Display will show all LCD digits blank
3. Display will show the current Firmware version number e.g. '3.2.3'
4. Display will show Program model variant '343'
5. Display will show the application 'tir'
6. After 10 seconds the display will show 'PCL'
7. The unit will then display the set default pressure

Do not connect the hoses to the tyres during start-up or E5 will show
On plugging in the unit for the 1st time, the unit will start with both N2 (N2P) and OPS functions available.
If the N2P function is not required, this can be disabled. Then follow the Application Mode Selection.
The Unit will reboot into the desired application and will remain in this mode until an alternative mode is reselected.

Standard Operation

Inflation and deflation

1. Set desired pressure, by touching either + or –
2. Connect the hoses to the tyres.
3. Operate the slide valve.
4. Inflation will not commence until the + is touched, periodically stopping to display the pressure of the tyre.
5. When the Set pressure is reached, the buzzer will sound and the display will show ‘END’ with the final pressure.
6. Wait 10 seconds to allow the tyre to balance out.
7. Operate the slide valve.
8. Remove the hoses from tyres.

To enable setting of OPS

1. Touch + and display will toggle ‘OPS’ and blank value
2. Increment the OPS value between 0-29 psi, 0-2 bar, 0-200 kpa, by touching + and –, to accept the value, touch
3. Display will revert to the set pressure previously selected

To enable setting of N2 Purge

1. Touch + twice and display will toggle ‘N2’ and cycle number
2. Increment the number of N2 cycles by touching + and –, to accept the value touch
3. Display will revert to the set pressure previously selected

Please ensure N2 setting is returned to 0 after use.

For adjustments to Inflators parameters please refer to your Distributor or PCL.

Note:
The OPS value will not be applied when the tyre has a pressure of more than 3 psi, 0.2 bar, or 20 kpa.

To prevent the accidental use of OPS, the OPS setting is not retained after the machine is powered down.

Use of OPS:
The OPS value is added to the final target pressure setting to give the over Pressure.

Example:
A Final Set pressure of 32 psi, 2.2 bar, 220 kpa is required with an OPS value of 15 psi, 1 bar, 100 kpa. The tyre will now inflate from flat condition only to the value of 47 psi, 3.2 bar, 320 kpa.

Once the OPS value has been achieved, the unit will deflate back to the desired set pressure.

For adjustments to Inflators parameters please refer to your Distributor or PCL.

When using the OPS function, the sum pressure must not exceed the tyre manufactures maximum inflation pressure.

This unit is not suitable for the filling of bicycle tyres with a standard (Presta, Woods) bicycle valves and adapters. Over fill of the tyre is possible!

Application Mode Selection

During the start up period the current mode of function can be viewed and altered.
Start up sequence
- LCD check 8.8.8
- Software version number example. 3.1.5
- Model variant number example. 308
- Display shows TIR
- PCL – optional parameter selection
- Start up complete default set pressure 2,00 or 29 psi.

To disable the N2P function,
Switch on the inflator device
When PCL is shown on the display, press +
Display shows L0, Press
Display shows APP, Press +
Display shows N2P, Press + to show OPS
To save the setting press
To escape press the key 2 times

N2 Conversion of Existing Tyres

For normal use a Purity level of between 93% and 96% N2 is sufficient for most road tyres.

If your N2 Generation source is greater than 97% then it is sufficient to leave the default setting of 2 Purges.

For N2 Generation sources less than 97%, then to achieve the required N2 % Purity, consider adding additional Purge cycles.

For adjustments to Inflators parameters please refer to your Distributor or PCL.

The Final N2% concentration can be periodically checked using a N2% concentration meter (PCL Part Number N2A001).
To alter Pressure Unit

Press until CAL appears on display, adjust using or buttons and save by pressing

User Inspection mode

It is possible to set the inflator to act as a pressure gauge. The display resolution is changed and can be used to reference the inflator against a calibrated pressure source. The inflator automatic cycle is inhibited.

To access:
1. Touch and together
2. The unit will beep but the display will not change
3. Touch 5 times (if this is not undertaken within 10 seconds, the Inflator reverts back to normal Inflator mode)
4. Display will show the pressures to the minimum resolution: psi = 0.1 / Bar = 0.01 / kpa = 1 / kg/cm = 0.01
5. Connect the hose to the tyre and the display will show the pressure in the tyre
6. When complete, touch any button to return to the last set mode.


**Service/Maintenance**

There is no requirement to service the following items:

1. Pressure Transducer
2. Electric Control Board

**WARNING**

If these are faulty they can only be replaced by a competent person. Please refer to an Authorised dealer.

**Periodically**

- Check the hose.
- Check the tyre connector.
- Remove air input supply and tyre hose from the head. Unscrew captive sintered filters from filter housings and clean or replace.

**Working safety instructions**

Since the unit is not explosion-proof, the device should not be installed in areas where explosions are possible. Consideration must be given to the requirements relative to Hazardous Area Standards for your region or country.

The unit is designed and built to the relevant basic health and safety requirements of the EC.

**WARNING**

This product can be dangerous if used improperly. Children should not be allowed to use this equipment, as incorrect setting can allow tyre to be over inflated and a subsequent tyre burst/explosion can occur!

Each person who is involved with installation, start-up, maintenance and the operation of the unit must read and understand the complete operating manual.

**CAUTION**

Proper use of the product also implies the observance of the manufacturers instructions with regard to installation, start-up, operation and maintenance.

All works concerning installation, start-up, adjustment and maintenance must be made by qualified staff. For the operation of this tyre pressure inflator the local safety and accident prevention rules must be observed in all cases.

**WARNING**

High Pressure air is stored within the system.

When using N2P mode, locate this system in a well ventilated area. Position the system away from any heat source.

**WARNING**

Do not exceed the maximum air input pressure.

**WARNING**

Do not operate this product if tired or under the influence of medication, drugs or alcohol.

**WARNING**

To avoid the risk of personal injury, especially to the eyes, face or skin DO NOT direct the air/N\textsubscript{2} stream at any person.

The PCL tyre inflators are exclusively approved for the dispensing of air/N\textsubscript{2}. Each use which doesn't follow this purpose as well as modifications to the product will be deemed to be improper use. The manufacturer is not liable for damages caused by improper use, the risk lies solely with the user.
# Trouble Shooting Guide/Error Messages

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No display</td>
<td>No power connected</td>
<td>Switch power on</td>
</tr>
<tr>
<td>No inflation process</td>
<td>Tyre is below 3 psi&lt;br&gt;Faulty connector</td>
<td>Press flat tyre button&lt;br&gt;Replace faulty connector</td>
</tr>
<tr>
<td>Buzzer does not sound</td>
<td>Buzzer volume has been turned off&lt;br&gt;Buzzer is damaged</td>
<td>Turn buzzer on&lt;br&gt;Replace buzzer</td>
</tr>
<tr>
<td>Inflation process starts but does not complete</td>
<td>Low or no supply pressure&lt;br&gt;Leaks exist</td>
<td>Check supply pressure&lt;br&gt;Confirm leaks do not exist</td>
</tr>
<tr>
<td>Supply pressure leaks out input</td>
<td>Input and tyre hoses are incorrectly reversed</td>
<td>Ensure input connection is to offset port, tyre connection is central between input and exhaust</td>
</tr>
<tr>
<td>Inflating or deflating is very slow</td>
<td>Check that mesh filters under input and output port fittings are blocked</td>
<td>Clean and or replace mesh filters</td>
</tr>
<tr>
<td>Connector will not seal to the tyre stems</td>
<td>Connector worn</td>
<td>Replace connector</td>
</tr>
<tr>
<td>Connector leak while not connected to tyres</td>
<td>Connector worn</td>
<td>Replace connector</td>
</tr>
<tr>
<td>E1</td>
<td>Unstable or insufficient supply pressure</td>
<td>Check the supply pressure</td>
</tr>
<tr>
<td>E4</td>
<td>Small volume, caused inflator to check pressure &gt; 2bar / 29psi over target pressure</td>
<td>Check hose is not kinked or blocked, ensure a OPEN END connector is installed</td>
</tr>
<tr>
<td>E5</td>
<td>Inflator started under pressure i.e. is connected to tyre or a CLOSED END connector is being used</td>
<td>Remove hose from tyre and allow inflator to reset&lt;br&gt;Change connector to OPEN END type</td>
</tr>
<tr>
<td>E6</td>
<td>Pressure sensor drift out</td>
<td>New sensor required - Refer to authorised repairer</td>
</tr>
<tr>
<td>E8</td>
<td>Pressure sensor disconnected from PCB or faulty</td>
<td>New sensor required - Refer to authorised repairer</td>
</tr>
<tr>
<td>E9</td>
<td>Pressure sensor failure - high</td>
<td>New sensor required - Refer to authorised repairer</td>
</tr>
<tr>
<td>E10</td>
<td>Under voltage</td>
<td>Check power supply</td>
</tr>
<tr>
<td>E11</td>
<td>Over voltage</td>
<td>Check power supply - Refer to authorised repairer</td>
</tr>
<tr>
<td>E12</td>
<td>Checksum corrupted</td>
<td>New PCB required - Refer to authorised repairer</td>
</tr>
<tr>
<td>E13</td>
<td>Lost or corrupted calibration settings</td>
<td>New PCB required - Refer to authorised repairer</td>
</tr>
<tr>
<td>E16</td>
<td>Unit started under pressure</td>
<td>Unit started when connected to a tyre or new sensor required - Refer to authorised repairer</td>
</tr>
<tr>
<td>E17</td>
<td>Calibration settings corrupt</td>
<td>Recalibrate unit - Refer to authorised repairer</td>
</tr>
<tr>
<td>E18</td>
<td>Runtime error</td>
<td>New PCB required - Refer to authorised repairer</td>
</tr>
<tr>
<td>E19</td>
<td>Touch screen error</td>
<td>New PCB required - Refer to authorised repairer</td>
</tr>
<tr>
<td>E20 - E23</td>
<td>Startup sequence error(s)</td>
<td>New PCB required - Refer to authorised repairer</td>
</tr>
</tbody>
</table>
PCL LIMITED WARRANTY

PCL warrants the components of each unit to which this Limited Warranty applies against defects in materials and workmanship for a period of twelve (12) months from date of sale (as evidenced by bill of sale or equivalent) or for a period of eighteen (18) months from date of shipment from PCL manufacturing facility (identifiable by the serial number and noted on original bill of lading from the manufacturing facility), whichever period is shorter. During this warranty period and subject to the conditions set forth in this statement, PCL will, at its option, repair or replace component parts that were defective at the time of shipment from PCL manufacturing facility, subject, however, to the following specific EXCLUSIONS: hoses and connections.

Repair or replacement will not extend the warranty period.

Customer must give PCL timely notice of any warranty claim by contacting an authorized PCL service centre. Claims must be accompanied by (1) evidence, by a bill of sale or equivalent, which clearly establishes date of purchase of the unit and (2) the serial number, found on the unit. Customers must properly pack parts in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk for loss or damage in shipment. Return shipment to customer will be freight collect unless otherwise agreed. For service at a customers location, customer will be charged the then prevailing service rates.

The Limited Warranty applies to PCL manufactured units only. Items listed in the applicable operators manual under routine maintenance are not covered by this or any other warranty. Failure to complete maintenance as stated in any applicable maintenance schedule will void the Limited Warranty. The Limited Warranty is expressly conditioned upon proper and normal use and service of the unit and upon strict compliance by customer with all of PCL instructions and recommendations for installation, operation and maintenance. The Limited Warranty does not apply to the unit or parts that are damaged or become defective due to improper handling, maintenance, storage, use, or operation, and does not cover ordinary wear and tear, corrosion, or erosion.

THE LIMITED WARRANTY SET FORTH IN THIS STATEMENT CONSTITUTES PCL'S SOLE WARRANTY FOR THE UNIT AND THE REMEDIES SET FORTH HEREIN CONSTITUTE CUSTOMERS SOLE REMEDIES FOR BREACH OF WARRANTY. THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, IN FACT OR BY LAW, INCLUDING WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Determination of the suitability of the unit for the use contemplated by the customer is the sole responsibility of the customer. PCL shall not, under any circumstances, be liable in contract, tort or otherwise (including negligence and strict liability) for indirect, special, incidental, or consequential damages, and PCL’s total liability shall not exceed the net purchase price for the unit. PCL shall be excused for delay or inability to perform obligations due to events beyond its reasonable control.

Warranty Registration
Please complete and mail this form to activate warranty
Or visit us at www.pclairtechnology.com

Mail

Name ___________________________________ Title __________
Company Name __________________________________________________________________________
Type of Business __________________________________________________________________________
Address __________________________________________________________________________________
City ______________ County ______________ Post Code __________
Telephone ________________________________________________________________________________
Part Number __________________ Serial No __________________
Purchased From __________________
Purchase Date ____________________________
Calibration Certificate

Each unit, before release, is checked and calibrated on test equipment that has accuracy traceable to Druck pressure indicator S/N2329290.

The Druck unit is referenced to Certificate 0029346 issued by UKAS Laboratory No. 0221. This accuracy exceeds BS EN 12645:2014 (MPE = 0.08 bar).

<table>
<thead>
<tr>
<th>READING</th>
<th>SET PRESSURE</th>
<th>ACTUAL PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BAR</td>
<td>PSI</td>
</tr>
<tr>
<td>2</td>
<td>BAR</td>
<td>PSI</td>
</tr>
</tbody>
</table>

This Equipment also complies with the EC directives:

- 2014/30/EC (EMC directive) confirmed by report No.10655/TR/1
- 2006/95/EC (LOW Voltage Directive)

Emission: EN 61000-6-3:2007 Electromagnetic compatibility Generic standards
EN 61000-3-2:2006; EN 61000-3-3:1995 +A1+A2

EN61000-4-8:1993+A1:2001