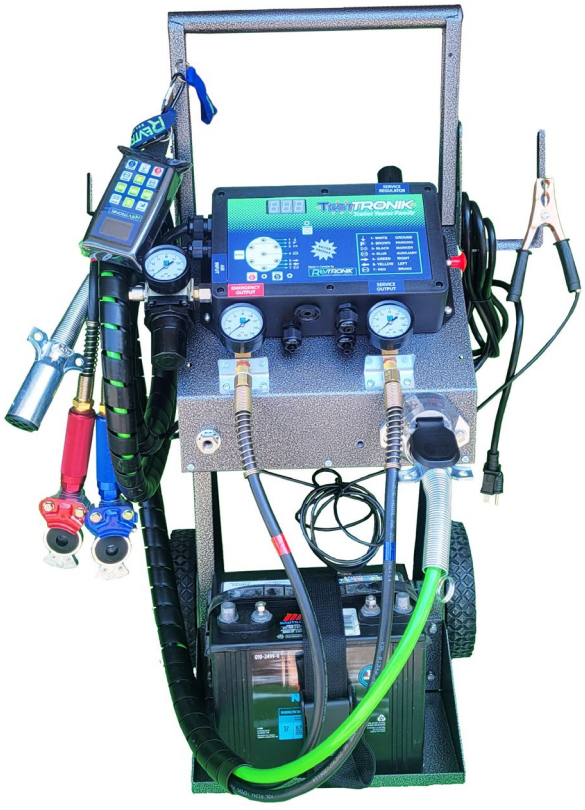
TEST TRONIK

Wireless Trailer Testers



TT1-S User Manual

Introduction

Thank you for purchasing this Testtronik trailer tester.

Once you become familiar with the operation of the Testtronik, trailer brake and light inspections will become faster and simpler.
Please take a moment to review this manual so you will understand all of the benefits this machine offers.

Contact us directly if you have any questions regarding this product.

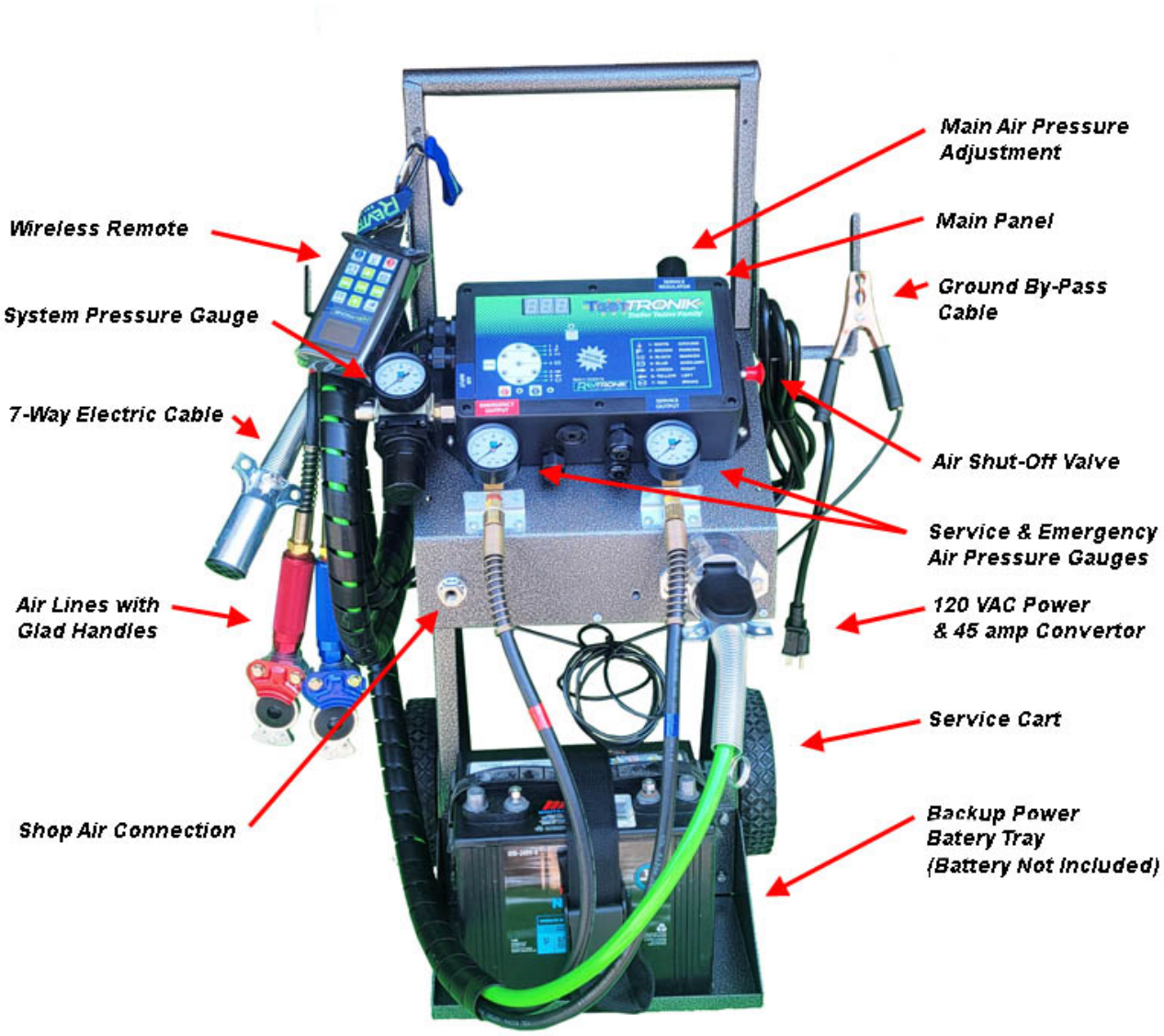
Warnings

Caution – Welding Damage:
Disconnect the Testtronik from the trailer prior to doing any welding.
Failure to do so will create a current loop and damage the tester.
This type of damage will not be covered under warranty.

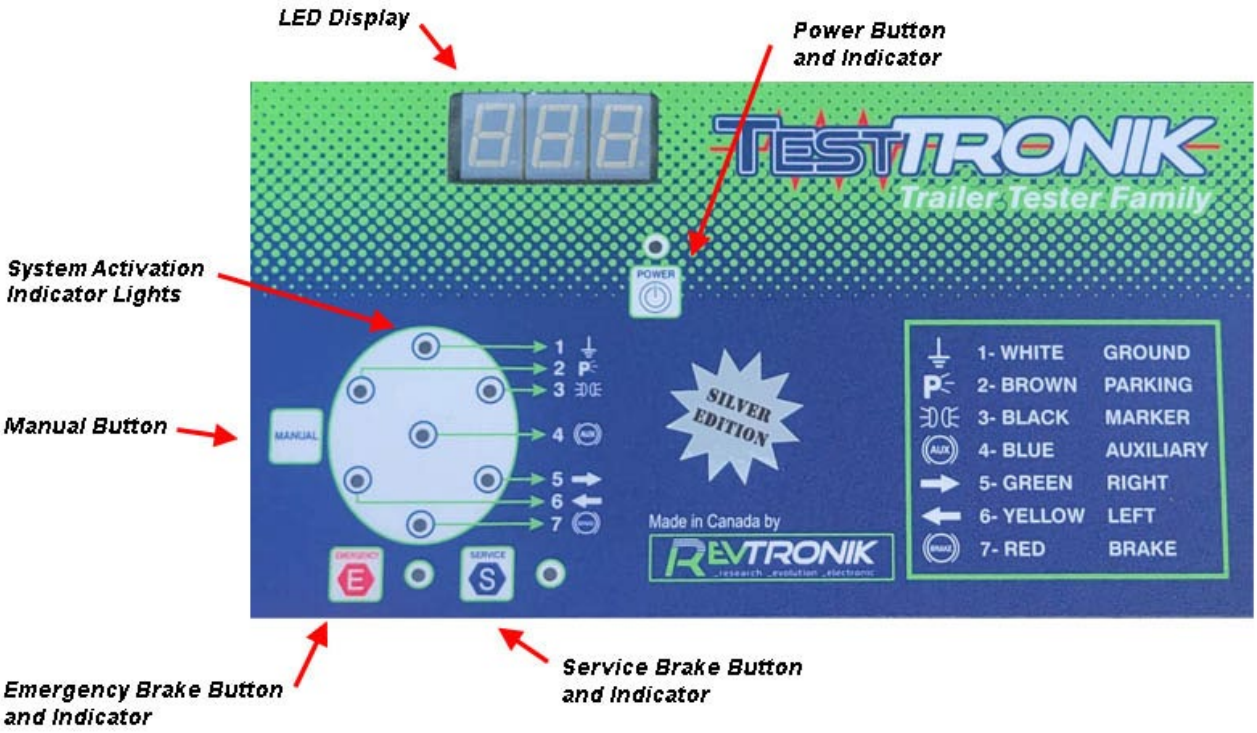
Warning - Bodily Injury From Power Failure:
Eliminate chance of power failure by installing a 12 volt battery backup on the tester.
Failure to have backup power may result in brake systems being deactivated unexpectedly in the event of a power loss.
This situation could result in a bodily injury from the braking system.

Table of Contents

I. Main Components



II. Main Panel - Layout



II. Main Panel – LED Screen Displays

Display	Description
	Supply Voltage Displays for 3 seconds on start up.
	Current Draw of activated circuit.
	Electrical brake mode activated. To activate, Press and hold for 8 seconds. To exit choose another function.  
	Electric hydraulic brake mode activated. To activate, Press and hold for 8 seconds. To exit choose another function. .  
	Domestic light (4-Pin) mode activated. To activate, Press and hold for 8 seconds. To exit choose another function.  
7-Way Mode (blank screen)	7-Way System mode activated. To activate, Press and hold for 8 seconds. To exit choose another function  
	Sequence test mode activated S-1 to S-15 To proceed, Continue to press until complete. 
	Hold mode activated To activate, Press and hold for 8 seconds Repeat to disable the function. 
	Low battery indicator (< 11.5 volts)
	Search mode activated To activate, Press and hold Activates alarm on remote (Works only if the remote is with in signal range) 
	Electrical test mode activated To activate, Press and hold for 8 seconds and select electrical test 

III. Remote


Circuit Indicators
(See Legend)
Current Draw
Signal Strenght
0.0 A
REVTRONIK
Marker
Parking & Marker /
Menu - Up
Parking
PARKING
P + M
UP
MARKER
Left/
Menu - Back
Hazard/
Menu - Mode
Right/
Menu - Select
LEFT
BACK
HAZARD
MODE
RIGHT
SELECT
Brake
Sequence/
Menu - Down
Aux (ABS)
AUXILIARY
AUX
ABS
SEQUENCE
DOWN
BRAKE
BRAKE
Emergency - Air
Hold/
Paring Remote
Service - Air
EMGCY
E
HOLD
PROG
SERVICE
S

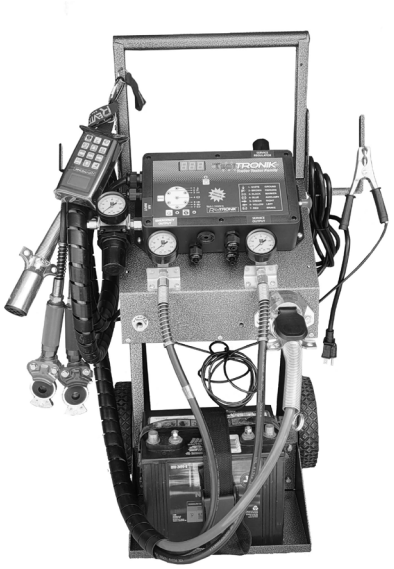
III. Remote – Circuit Icon Legend

Icon	Description
	Non Active Circuit
	Activated Circuit
	Intermittent Signal
	Short Circuit Current is too high (Short to ground)
	Cross Circuit Circuit is feeding power to another circuit
	Signal Strength

IV. Testtronik Setup

Depending upon the model of Testtronik purchased, some assembly may be required.

1. Connect 12v battery power and plug in 120 VAC power convertor
2. Connect emergency glad hand (red hose and glad hand)
3. Connect service glad hand (blue hose and glad hand)
4. Connect 7-wire power cord to the 7-way socket.
5. Install appropriate air fitting and connect the shop air to it.



<u>Warning - Bodily Injury From Power Failure:</u>

It is recommended that you always install a 12v battery with the Testtronik even if your model comes with the 45 amp power convertor.

Eliminate chance of power failure by installing a 12 volt battery backup on the tester.

Failure to have backup power may result in brake systems being deactivated unexpectedly in the event of a power loss.
This situation could result in a bodily injury from the braking system.

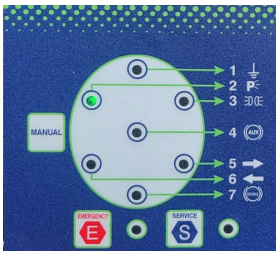
V. Testing Operations

Depending upon the task at hand, the Testtronik can perform several different functions to fit your specific needs.
We recommend that you familiarize yourself with all of these test operations available.

1. Lighting – Manual Operation
2. Ground Circuit
3. Brake Operation
4. Sequence Test
5. Air Leak Test
6. Comprehensive Automated Test
7. Main Panel Operation

V. Testing Operations - 1. Manual Lighting Operation

This test will give you a quick visual confirmation that lights and brakes are functional.
Simply activate each circuit individually by pressing the corresponding button on the remote.
When a circuit is activated, a corresponding icon will be displayed on the main panel and remote.
The combined current draw of the activated circuits will also be displayed.

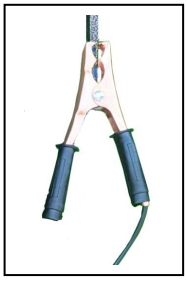


Refer to the Circuit Icon Legend for additional details relating to remote display.

V. Testing Operations - 2. Ground Circuit

If there is a weak ground circuit, lights may flicker while in operation or show erratic behavior during Manual Lighting test.
First test the trailer without the ground clip attached then attach the ground clip to the trailer and retest.
If the retest makes an improvement, it indicates there is a faulty ground circuit.

Attach the ground Clip
to the trailer frame



V. Testing Operations - 3. Brake Operation

The Testtronik gives the technician the unique opportunity to control the brakes while directly observing their activation.

Press the Emergency button
to energize the Emergency brake
air circuit and allow it to stabilize.

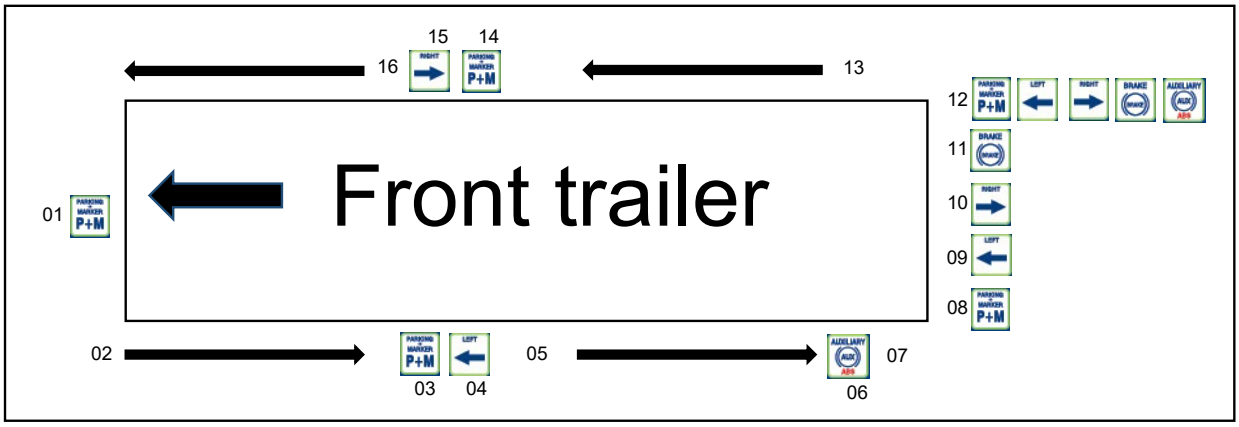
Press the Service button
to energize the Service brake
air circuit and allow it to stabilize.

Reverse these steps to de-energize each circuit.
Make appropriate measurements and observe stroke movement to ensure
brakes are operating properly.

Note that during this operation, you can observe the air pressure applied to each circuit.

V. Testing Operations - 4. Sequence Test

This feature allows the technician to do a walk around the trailer and complete the lighting test by simply pressing one button repeatedly.



Start at the front of the trailer
Press repeatedly

Lights will be activated in this sequence
Remote will show status of test and active circuits.

Front of Trailer

01	Tail & Marker
02	All Off

Left Side of Trailer

03	Tail & Marker
04	Tail & Marker and Left Flasher
05	All Off
06	ABS On
07	All Off

Back of Trailer

08	Tail & Marker
09	Left Signal
10	Right Signal
11	Brakes
12	All Lights On
13	All Off

Right Side of Trailer

14	Tail & Marker
15	Tail & Marker and Right Flasher
16	All Off

V. Testing Operations - 5. Air Leak Test

To test the Emergency and Servicer brake system for an air leaks;

Activate the Emergency air brake system and allow pressure to stabilize.
Activate the Service air brake system and allow pressure to stabilize.
Ensure there are no leaks at the glad hand connections.
Pull the air shutoff valve (Red Knob) outwards to isolate the system.

Observe the pressure gauges to determine if there are unacceptable leaks for either system.

V. Testing Operations - 6. Comprehensive - Automated Test

This feature is a programmed electrical test that makes a complete comprehensive electrical diagnosis.
At the end of the test, you will have a pass or fail result depending on warnings or errors given by the tester.

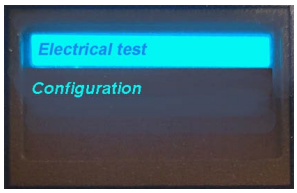
Note:
A warning may not necessarily be defective circuit.
Example #1;
The park lights and the marker lights on some trailers may be connected together intentionally.
A warning in this case is not a problem.
In this case the tester will give a warning.

Example #2
There is a cross wire between park lights and left flasher.
An error is detected because no trailer should have a cross wire between these two circuits.

To initiate the Automated Test:

Press and hold for 8 Seconds

This screen will appear;



Press Select button to proceed

Navigate through this test using these 5 buttons;

The test will include a Sequence test to check each circuit visually.
Exit the Automated Test mode using a combination of the UP and SELECT Buttons

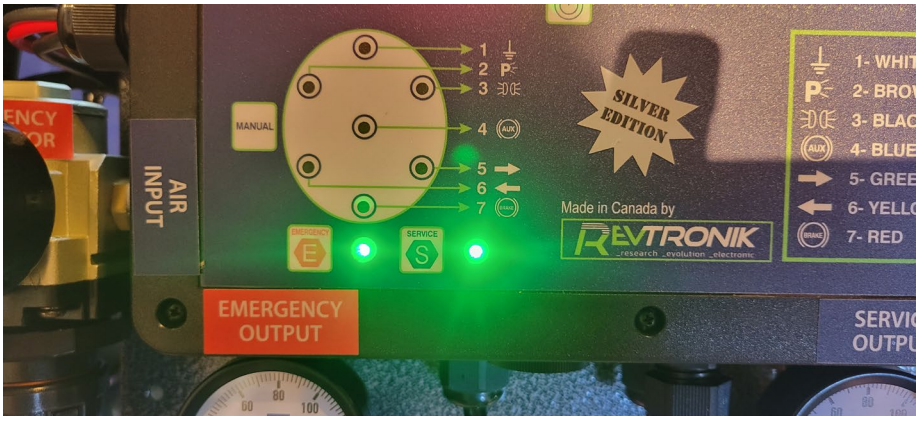
Understanding Test Results:
Refer to the Detecting Electrical Problems section for further information about the results from this test.

V. Testing Operations - 7. Main Panel Operation

In addition to using the remote, basic operations can be performed using the main panel.
This can be useful in case the remote is lost or stops functioning.

Press the Manual button repeatedly to toggle through the light circuits.

Press the Emergency then Service buttons to activate the air brake circuit.
Deactivate in reverse order.



VI. Detecting Electrical Problems

On power up, main panel shows system voltage for 3 seconds
LED screen then switches to show current draw (amps).

Current Consumption Test:
Observing current draw can identify electrical problems such as faulty connections or corrosion.
These problems create resistance resulting in rising current draw.

Activate all the electrical functions while , ensuring Flashers are not in FLASHING mode so current will be stable.
Wait for one minute for current to stabilize

If you observe a slow, continuous increase in current draw (0.1 Amp at a time), this is indication of an electrical problem.
Turn off all the functions and activate individually to isolate all problem circuits.

Short Circuits and Overload: 

Short Circuits and Overloaded Circuits

- "X" on Remote
- Blinking light on main panel
- Audible alarm

Indicates current is too high on activated circuit.

Cross Wire Detection: 

If voltage is detected on a circuit that is not activated this indicates a Cross Wire. (Tester will detect as little as 3 or 4 volts)
This happens when two or more wires touch or corrosion at a plug or junction box allows power flow to other functions.
The Cross Icon will appear on the remote for every wire that is not activated where voltage is detected.

VII. Alternative Modes

The Testtronik can operate in several different operating modes to accommodate different trailer systems.

VII. Alternative Modes - 1. Commercial or Semi-Trailer Mode (7-Way):

To activate this function;
Press and hold Brake and Parking for 8 seconds

This is the default setting and uses
Standard 7-Way wiring circuit.

The remote will display current draw and active circuits
The main panel display screen will display current

VII. Alternative Modes - 2. Electric Brakes Mode:

To activate this function;
Press and hold Brake and Left Signal for 8 seconds

The remote will display Electric Brake
The main panel display screen will display E-b

To use this function you will require a wiring adapter.
These are available through Revtronik or you can make your own.
Wiring will connect as follows:

Revtronik Colour Code	**RV Colour Code**
Black - Markers	Blue – Electric Brakes
Brown - Park Lights	Green – Park lights
Green - Right Signal	Brown - Right Signal
Yellow- Left Signal	Red - Left Signal
Red - Brake Lights	Black - Battery
Blue - Auxiliary	Yellow – Back Ups
White - Ground	White - Ground

With this wiring configuration, buttons on the remote will align.
Ie. Park activates Park, Left signal activates left signal, etc.
The brake light button operates both electric brakes and brake lights together.

VII. Alternative Modes - 3. Electric Hydraulic Brake Mode:

To activate this function;
Press and hold Brake and Right Signal for 8 seconds

The remote will display Hydraulic Brake
The main panel display screen will display Hbr

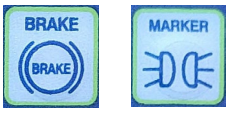
To use this function you will require a wiring adapter.
These are available through Revtronik or you can make your own.
Wiring will connect as follows (Only black and blue wires change)

Revtronik Colour Code	RV Colour Code
Black - Markers	Blue – Electric Hydraulic
Brown - Park Lights	Brown - Park Lights
Green - Right Signal	Green - Right Signal
Yellow- Left Signal	Yellow- Left Signal
Red - Brake Lights	Red - Brake Lights
Blue - Auxiliary	Black- Markers
White - Ground	White - Ground

With this wiring configuration, buttons on the remote will align.
Ie. Park activates Park, Left signal activates left signal, etc.
The brake light button operates both electric brakes and brake lights together.

VII. Alternative Modes - 4. Domestic Wiring Mode (4-Pin Flat):

To activate this function;
Press and hold Brake and Park for 8 seconds



The remote will display Domestic
The main panel display screen will display dbr

Revtronik Colour Code	RV Colour Code
Black - Markers	Not Used
Brown - Park Lights	Brown - Park Lights
Green - Right Signal	Green - Right Signal
Yellow- Left Signal	Yellow- Left Signal
Red - Brake Lights	Not Used
Blue - Auxiliary	Not Used
White - Ground	White - Ground

With this wiring configuration, buttons on the remote will align.
Park Lights, Right Signal, Left Signal and Brake Lights

VIII. Additional Features

VII. Additional Features - 1. Pairing Remote

Each Testtronik tester is sold with a pre-programmed remote.
To reprogram a remote follow these steps;

Switched off machine.
On Main Panel, press and hold Power
For 8 seconds until the Power light begins to flash.

- C20 will appear in the screen
- C20 indicates remote Channel 20

Release Power button.
Set the desired channel by toggling the brake system buttons
Select channels from 11 to 26

Decrease

Increase

Press and hold the program button on remote for 10 seconds until it displays Channel 20.
Choose from channel 11 - 27 using up and down arrows to match desired channel.
Press the select button to finish.

Note:
The Tester can only be synchronized with one remote at a time.

VIII. Additional Features - 2. Configuring Remote

Four options are available for configuring remote.

Press and hold
to enter configuration mode

These options are available:

1. Language (French / English)
2. Contrast
3. Display Time (Delay after pushing on a button)
4. Comm. Refresh (Time interval between remote to tester communication)

Use these buttons to navigate and adjust configuration settings;

VIII. Additional Features -3. Search For Remote

This feature helps you recover a lost remote.
With the machine already on,
Press and hold the Power Button on the panel

The main panel will display SEA
If the remote is within signal range, it will activate an alarm

VIII. Additional Features - 4. Safety Lockout

This feature allows you to lockout the controls.
This is a helpful safety feature if you are working on the brakes.

To activate,
Press and hold the Hold button for 8 seconds.
Repeat to disengage.

The main panel will display HLD

VIII. Additional Features - 5. Buzzer Control

To enable or disable buzzer,
Press and hold the Marker button for 8 seconds.

VIII. Additional Features - 6. Flasher Control

To enable or disable flasher mode,
Press and hold respective buttons for 8 seconds.

Limited Warranty

This product is covered by the manufacturer's warranty for twelve (12) months from the date of purchase by the original purchaser against any defect in materials or workmanship.

These external components of the unit are warranted for a period of 90 days from the date of purchase:

- Electrical cables
- Pneumatic hoses
- Glad-hands, glad grips
- Electrical connectors and cord
- Pressure gages
- Regulators

Parts deemed defective during this period will be replaced or repaired at the manufacturer's discretion.
The manufacturer reserves the right to replace the complete unit in lieu of parts.
This warranty does not cover failures due to damage caused by accident or during transport, by inappropriate manipulation or operation, by abuse, by inappropriate use, or by repairs carried out by unauthorized persons.
This limited warranty supersedes any other warranty, express or implied, including warranties of merchantability or fitness for a particular purpose, nor will the manufacturer be held responsible for fortuitous damages for any reason whatever.

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