

BRAKE PRO™

AUTOMATIC SINGLE CAR TESTING DEVICE
FOR FREIGHT CARS

FOR TESTING AS REQUIRED BY
THE ASSOCIATION OF AMERICAN RAILROADS
SPECIFICATION S-4027



OPERATING MANUAL

UPDATED FEBRUARY 2021

DESIGNED AND PRODUCED BY:

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Table of Contents

Operating Instructions	3
Introduction	3
Charging the Brake Pro™ - older models with external battery	3
Charging the Brake Pro™ - newer models with internal battery	3
Additional Handheld Tablet Information	5
Preparing to Test	7
Attaching Air Hoses for the Daily Test.....	7
Attaching Air Hoses for the Single Car Test	9
Running the Brake Pro™ Application.....	11
Re-Pairing the Tablet.....	12
Screen Brightness.....	13
Touch Mode Setting	13
Calibration Info.....	14
Program Start & Connection	15
Screen Layout.....	15
Stop Test Button.....	15
Running the Single Car Test	16
Car Setup.....	16
Regulator Protection	20
Manual Control Program.....	21
Connecting the Tablet to a WiFi Network	22
Printing and Transferring Reports	22
Transferring Reports	24
International Options	26
Software Operations	28
Version Number	28
Installing the Brake Pro™ Application.....	28
Updating the Brake Pro™ Application.....	28
Reading the Configuration File.....	29
Warranty	31
Contact	33
Intellectual Property Notice	34
Air Connections	35

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Operating Instructions

Introduction

The Brake Pro™ is an automatic single car testing device that enables all operators to perform air brake testing. The Brake Pro™ does this by walking the operator through the test, and basing the testing parameters on the car's properties.

The Brake Pro™ initially requires the device to pass the Daily Test for the testing method to be used. Once the Daily Test has been passed, the operator will be prompted for the testing method: 2 Pressure End-Of-Car, 4 Pressure End-Of-Car or 4 Pressure Adapter. The operator then enters the car's properties. The software will then automatically formulate the correct parameters to test the brakes completely and accurately. Throughout the remainder of the test procedure all display screens are self-prompting for ease of use. Any required entries will be clearly prompted so the operator knows the next step. In the case of PASS/FAIL questions asked of the operator, the passing option is shown in green and the failing option in red.

Charging the Brake Pro™ - older models with external battery

The Brake Pro™ single car testing device is equipped with an external GFCI charging cable. Please take precaution when charging the Brake Pro™ in standing water or rain. Directly handling electrical cables when in direct contact with water is not suggested. The internal charger is a "Smart Charger", it will not over-charge the battery and can be left plugged in for long periods of time. To charge the Brake Pro™, simply follow the steps below.

NOTE: It is highly recommended that new devices be charges for several hours when first received.

1. Insert the black GFCI plug into any 110V outlet (or appropriate outlet for international devices).
2. To begin charging, push the RESET button located on the GFCI plug.
3. A red light will appear on the main face of the Brake Pro™ indicating the unit has begun charging.
4. Once the unit has reached a full charge, the aforementioned light will change to green.
5. When fully charged, the Brake Pro™ is capable of running for up to 8 hours. If, however, the battery runs down to an unacceptable voltage, the Brake Pro™ may experience difficulties communicating with the handheld tablet or operating the internal components. If communication problems are experienced, charging the Brake Pro™ is recommended.

NOTE: Brake Pro™ should be charged when volt meter falls below 12V, and should never be used with volt meter below 11V.

Charging the Brake Pro™ - newer models with internal battery

The Brake Pro™ single car testing device is equipped with an external GFCI charging cable. Please take precaution when charging the Brake Pro™ in standing water or rain. Directly handling electrical

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cables when in direct contact with water is not suggested. The internal charger is a “Smart Charger”, it will not over-charge the battery and can be left plugged in for long periods of time. To charge the Brake Pro™, simply follow the steps below.

NOTE: It is highly recommended that new devices be charges for several hours when first received.

1. Insert the black GFCI plug into any 110V outlet (or appropriate outlet for international devices).
2. To begin charging, push the RESET button located on the GFCI plug.
3. No light will appear if the unit is off. To check if the unit is charging, turn the unit on. A voltage reading of 14+V indicates the unit is charging. Once the reading drops to 13.0 - 13.2V, the unit has charged. Turn the unit off to charge the unit faster.
4. A fully charged battery without AC power (not plugged in) will show 12.6 - 12.8V.
5. When fully charged, the Brake Pro™ is capable of running for up to 8 hours. If, however, the battery runs down to an unacceptable voltage, the Brake Pro™ may experience difficulties communicating with the handheld tablet or operating the internal components. If communication problems are experienced, charging the Brake Pro™ is recommended.

NOTE: Brake Pro™ should be charged when volt meter falls below 12V, and should never be used with volt meter below 11V.

The Brake Pro™ unit comes with a handheld tablet for operating the device. The tablet runs on a rechargeable battery that needs to be maintained in order to operate properly. To charge the tablet, follow the steps below.

1. Plug the black charger, included with the shipment, into any standard 110V outlet (or appropriate outlet for international devices).
2. Plug the round end of the charger into the charging port. This is found underneath the tab on the edge of the tablet.
3. The tablet will display a green light next to the battery icon on the right edge of the tablet if all connections are correct.



Panasonic ToughPad®

Note: Model FZ-L1 pictured. Older models may be different.

Additional Handheld Tablet Information

Turning Tablet On and Off

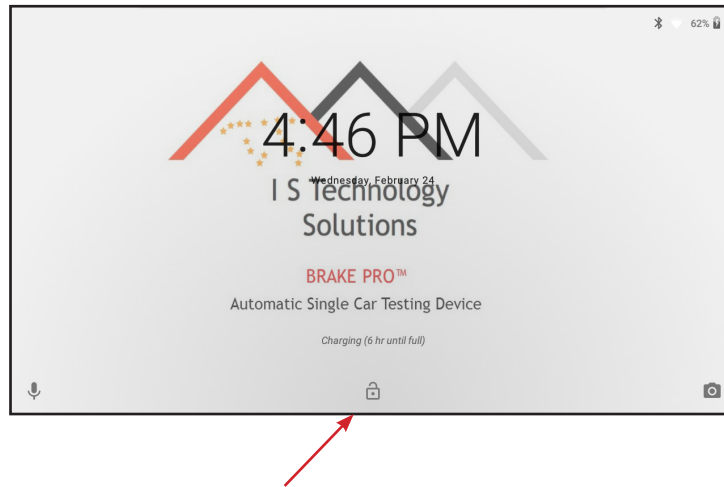
To turn the tablet on, press and hold the Power button until “Powered by android” appears on the screen.

To put the tablet into Standby mode, press and quickly release the Power Button once. This will put the tablet into Standby mode, which turns off the screen, but does not shutdown the tablet. This can be used to temporarily preserve battery life.

To completely shutdown the tablet, press and hold the Power Button until prompted to confirm the shutdown of the device. This will completely power down the tablet. Powering down the tablet is recommended when it will not be used for prolonged periods to preserve battery life.

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To unlock the tablet and access the applications, press the Lock icon (padlock).



Preparing to Test

NOTE: A coalescing filter MUST be used when operating the Brake Pro™. Failure to do so will increase the chance of contamination damaging the internal electronic components. Contamination is NOT covered by warranty.

IMPORTANT SAFETY NOTICE: Quick connect fittings must always be used in accordance with good practice and the instructions and regulations of the manufacturer and your employer. Always ensure connecting fittings are firmly and properly engaged, locked in place, and cannot accidentally become disengaged. An improperly installed fitting may be dangerous and could cause serious injury or death if it becomes disengaged while pressurized. I S Technology Solutions does not accept responsibility for the installation of improper fittings or the misuse of fittings.

Attaching Air Hoses for the Daily Test

To prepare for the 2 Pressure End-Of-Car Daily Test:

1. Connect the coalescing filter to the SUPPLY fitting on the Brake Pro™.
2. Connect the shop air supply hose to the coalescing filter. Supply must be greater than the Operating pressure (90psi).
3. Connect the **BLACK** Brake Pipe hose with Gladhand to the Brake Pipe fitting on the Brake Pro™.
4. Connect the **BLACK** Brake Cylinder hose to the Brake Cylinder fitting on the Brake Pro™.
5. Insert the dummy coupling into the gladhand.
6. Connect the Brake Cylinder Hose to the pressure tap on the dummy coupling.
7. Run the Daily Test on the application from the Main Menu and select 2P EOC.
8. When finished, disconnect the hoses from the dummy coupling pressure tap. Remove the dummy coupling from the gladhand.

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To prepare for the 4 Pressure End-Of-Car Daily Test:

1. Connect the coalescing filter to the SUPPLY fitting on the Brake Pro™.
2. Connect the shop air supply hose to the coalescing filter. Supply must be greater than the Operating pressure (90psi).
3. Connect the **BLACK** Brake Pipe hose with Gladhand to the Brake Pipe fitting on the Brake Pro™.
4. Connect the **BLUE** Auxiliary Reservoir Hose to the Auxiliary fitting on the Brake Pro™.
5. Connect the **YELLOW** Emergency Reservoir Hose to the Emergency fitting on the Brake Pro™.
6. Connect the **GREEN** Brake Cylinder Hose to the Brake Cylinder fitting on the Brake Pro™.
7. Insert the Dummy Coupling with Pressure Tap into the Brake Pipe Gladhand.
8. Connect the Downstream BC Hose to the pressure tap on the dummy coupling.
9. Run the Daily Test on the application from the Main Menu and select 4P EOC.
10. When finished, disconnect the hose from the dummy coupling pressure tap. Remove the dummy coupling from the gladhand.

To prepare for the 4 Pressure Adapter Daily Test:

1. Connect the coalescing filter to the SUPPLY fitting on the Brake Pro™.
2. Connect the shop air supply hose to the coalescing filter. Supply must be greater than the Operating pressure (90psi).
3. Connect the **BLACK** Brake Pipe hose with Gladhand to the Brake Pipe fitting on the Brake Pro™.
4. Connect the **BLUE** Auxiliary Reservoir Hose to the Auxiliary fitting on the Brake Pro™.
5. Connect the **YELLOW** Emergency Reservoir Hose to the Emergency fitting on the Brake Pro™.
6. Connect the **GREEN** Brake Cylinder Hose to the Brake Cylinder fitting on the Brake Pro™.
7. Connect the **BLACK** Downstream Brake Cylinder Hose to the Downstream BC fitting on the Brake Pro™.
8. Connect the **BLACK** 4P Adapter Hose to the 4P Adapter fitting on the Brake Pro™.
9. Connect the Brake Cylinder Hose, Auxiliary Hose, Emergency Hose, and 4P Adapter Tube to the quick-connect fittings on the 4 Pressure Adapter.
10. You will also need the Adapter Blanking Plate for the Daily Test, but this should not be mounted to start the Daily Test. You will be prompted during the test when to attach the blanking plate to

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the adapter, and the Downstream Brake Cylinder hose to the blanking plate.

11. Run the Daily Test on the application from the Main Menu and select 4P Adapter.
12. When finished, remove the blanking plate from the 4 Pressure Adapter.

Attaching Air Hoses for the Single Car Test

To prepare for the 2 Pressure End-Of-Car Test:

1. Connect the coalescing filter to the SUPPLY fitting on the Brake Pro™.
2. Connect the shop air supply hose to the coalescing filter. Supply must be greater than the Operating Pressure (> 95psi).
3. Connect the **BLACK** Brake Pipe hose to the Brake Pipe fitting on the Brake Pro™ and the hose gladhand to the gladhand of the car to be tested.
4. Connect the **BLACK** Brake Cylinder hose to **GREEN** Brake Cylinder fitting on the Brake Pro™ and the other end to the pressure tap on the car to be tested. You will need to use the correct fitting on the Downstream Brake Cylinder hose. The Brake Cylinder pressure tap must be downstream of the Empty/Load Valve, if applicable.
5. Do NOT yet install the Dummy coupling on the gladhand at the other end of the car. You will be instructed to do so by the application after starting the test and checking for Brake Pipe blockage.
6. Run the Single Car Test on the application and select 2P EOC.

To prepare for the 4 Pressure End-Of-Car Test:

1. Connect the coalescing filter to the SUPPLY fitting on the Brake Pro™.
2. Connect the shop air supply hose to the coalescing filter. Supply must be greater than the Operating Pressure (> 95psi).
3. Connect the **BLACK** Brake Pipe hose to the Brake Pipe fitting on the Brake Pro™ and the hose gladhand to the gladhand of the car to be tested.
4. Connect the **BLUE** Auxiliary Reservoir Hose to the Auxiliary fitting on the Brake Pro™. Connect the other end to the Auxiliary Quick Connect on the car.
5. Connect the **YELLOW** Emergency Reservoir Hose to the Emergency fitting on the Brake Pro™. Connect the other end to the Emergency Quick Connect on the car.
6. Connect the **GREEN** Brake Cylinder Hose to the Brake Cylinder fitting on the Brake Pro™. Connect the other end to the Brake Cylinder pressure tap on the car. This pressure tap must be downstream of the Empty/Load Valve, if applicable.
7. Do NOT yet install the Dummy coupling on the gladhands at the other end of the car. You will be instructed to do so by the application after starting the test and checking for Brake Pipe blockage.

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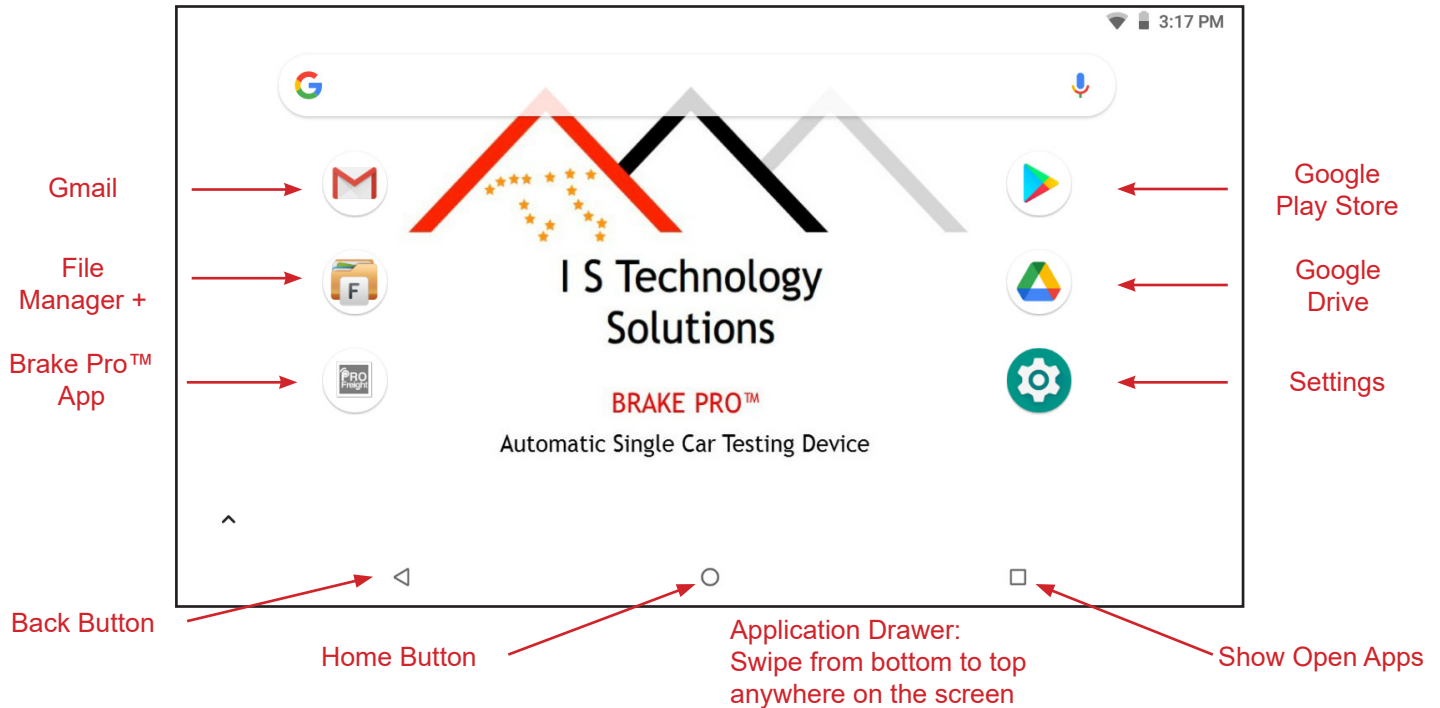
8. Run the Single Car Test on the application and select 4P EOC.

To prepare for the 4 Pressure Adapter Test:

1. Connect the coalescing filter to the SUPPLY fitting on the Brake Pro™.
2. Connect the shop air supply hose to the coalescing filter. Supply must be greater than the Operating Pressure (> 95psi).
3. When connecting the 4 Pressure Adapter, it is usually easier to mount it without the hoses attached. Once the adapter is mounted, the hoses attach via quick couplings.
4. Connect the **BLACK** Brake Pipe hose to the Brake Pipe fitting on the Brake Pro™ and the other end to the 4 Pressure Adapter.
5. Connect the **BLUE** Auxiliary Reservoir Hose to the Auxiliary fitting on the Brake Pro™ and the other end to the 4 Pressure Adapter.
6. Connect the **YELLOW** Emergency Reservoir Hose to the Emergency fitting on the Brake Pro™ and the other end to the 4 Pressure Adapter.
7. Connect the **GREEN** Brake Cylinder Hose to the Brake Cylinder fitting on the Brake Pro™. and the other end to the 4 Pressure Adapter. Connect the **BLACK** 4 Pressure Adapter tube to the 4P Adapter fitting on the Brake Pro™ and the other end to the 4 Pressure Adapter.
8. If the car has an Empty/Load Valve, connect the **BLACK** lightweight Brake Cylinder hose to the Downstream BC fitting on the Brake Pro™ and the other end to the Brake Cylinder pressure tap on the car. This pressure tap must be downstream of the Empty/Load Valve, if applicable.
9. Do NOT yet install the Dummy coupling on the gladhands of the car. You will be instructed to do so by the application after starting the test and checking for Brake Pipe blockage.
10. Run the Single Car Test on the application and select 4P Adapter .

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Brake Pro™ Home Screen

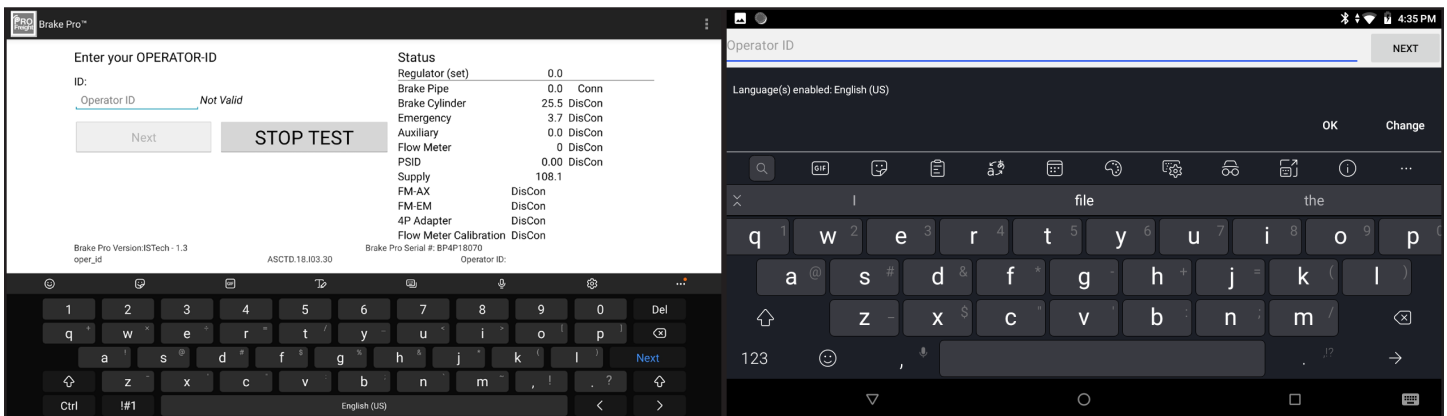


Running the Brake Pro™ Application

NOTE: It is important to turn on the Brake Pro™ testing device BEFORE starting the Brake Pro™ application. This will ensure that the devices pair and connect easily the first time.

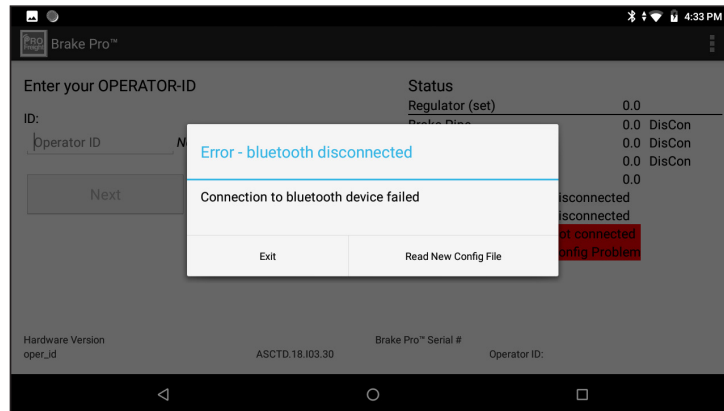
Do NOT turn the Brake Pro™ testing device on, or leave it on for long periods of time, without a supply of pressurized air to the device. Leaving the device on for long periods without a supply of pressurized air can permanently damage the electronic regulator.

Tap the Brake Pro™ icon on the home screen. The program will start and ask for your Operator ID. Enter what your company has chosen to use for Operator IDs.



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If the error screen entitled “Error - bluetooth disconnected” appears, it can usually be resolved by exiting; tap the Exit button on the popup window, and restart the Brake Pro™ app. If the problem persists, the tablet may need to be re-paired with the Brake Pro™.



Re-Pairing the Tablet

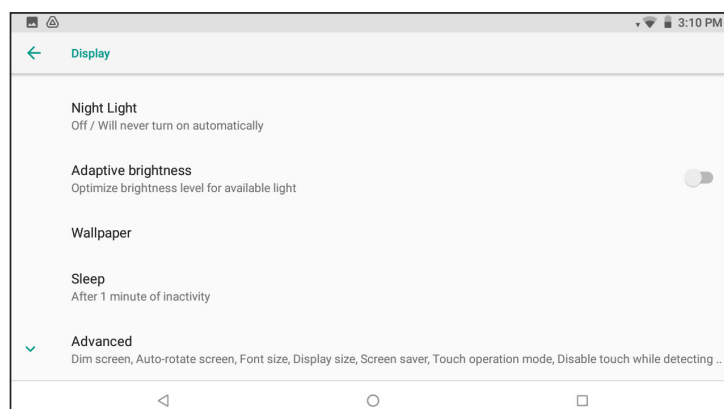
Every Brake Pro™ is paired with its tablet and tested before shipping to the customer, but occasionally they may need to be re-paired. To re-pair, tap the menu button (3 vertical dots) in the upper right corner of the Brake Pro™ application, and choose Restart Bluetooth. This should cause the application to re-pair with the Brake Pro™.

If restarting the bluetooth from within the app does not solve the problem, check to see that both devices are paired in the Settings Menu.

To open Settings, tap the Settings app on the Home Screen, or drag down the Notification Bar from the top of the screen and tap the Settings (gear) icon.

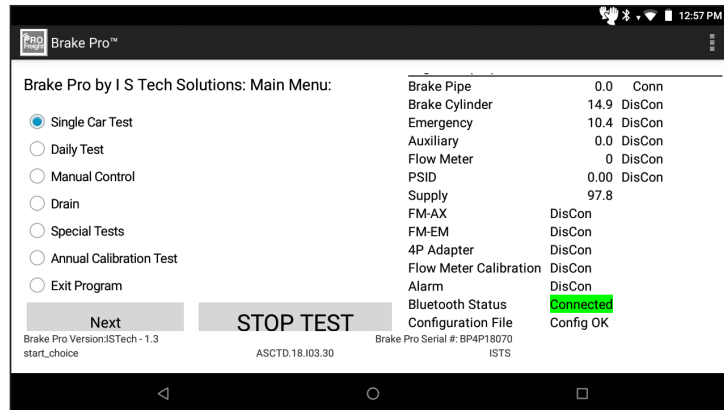
If the Brake Pro™ Bluetooth name is shown as Paired, then repeat the previous steps, starting with loading the Brake Pro™ application. If the Brake Pro™ is not shown as paired, tap SEARCH FOR DEVICES in the upper right corner. Once the Brake Pro™ appears in the list of Available Devices, tap it. It may ask you to enter a Passcode. If a passcode is requested, the code is 1234. Once the devices have paired, return to the previous step and restart the Brake Pro™ application.

If you cannot get the devices to pair and connect, contact I S Technology Solutions Customer Service at (855) 620-5200.



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When the tablet and device are connected, and the configuration file is validated, the bottom of the dashboard will show Bluetooth Status **Connected** and Config OK.

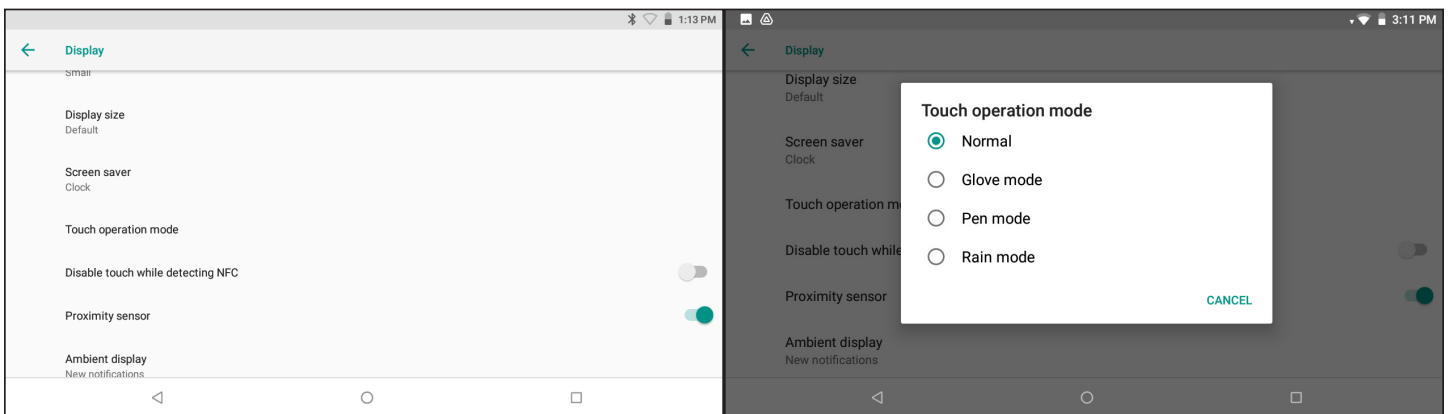


Screen Brightness

Your tablet will come with Auto-Brightness selected to conserve battery life. To adjust the brightness, go to Settings, then Display, then Brightness and adjust as necessary.

Touch Mode Setting

The screen can be set to different touch modes. In the Display setting, select Advanced, then Touch Operation Mode.



Normal mode: Will only work with finger touch. Will not accept stylus input.

Glove mode: Allows the user to use gloves. Does not work with all gloves and stylus will not work.

Pen mode: Will only work with a stylus. Will not accept finger touch.

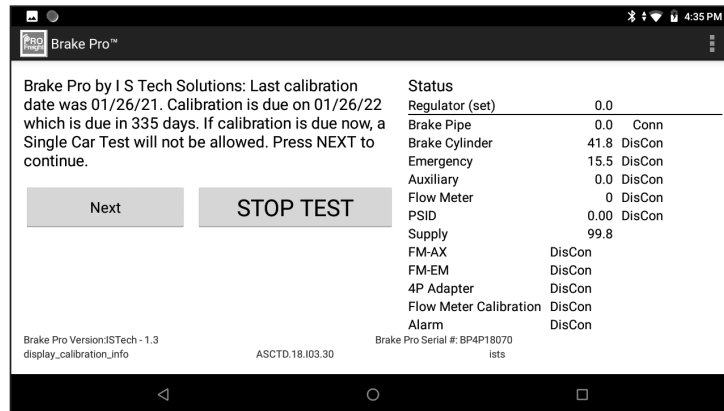
Rain mode: Adjust sensitivity of the touch screen to prevent interference with rain drops or water on screen. Only works with finger touch (not the stylus).

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Calibration Info

Once the Brake Pro™ application has started and connected to the testing device, and an Operator ID has been entered, the Calibration Information screen will appear. This screen gives the calibration date, calibration due date, and days remaining until calibration is due.

Note: The device will not allow tests to be run if the calibration has expired.



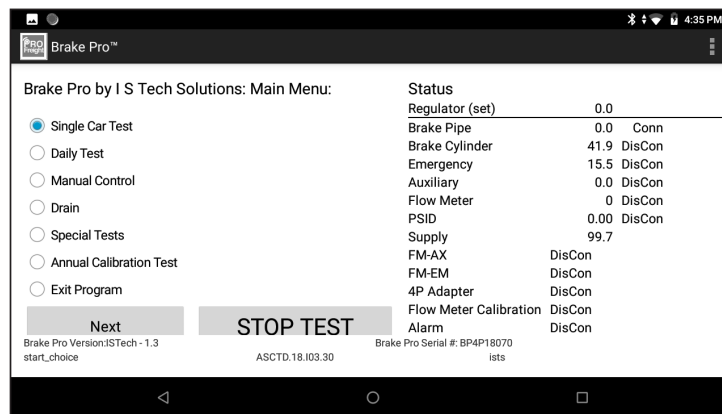
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Program Start & Connection

After advancing from the Calibration Info screen, the Main Menu will appear. The Bluetooth Status in the lower right column will read Connected in green, and will show Config OK.

The Main Menu choices are:

- Single Car Test: Runs the AAR S-4027 single car test
- Daily Test: Runs the Daily Test required to validate the machine before running the Single Car Test. A successful Daily Test is valid for 24 hours.
- Manual Control: Allows the operator to perform standard operations
- Drain: Drains the Brake Pro™ and brake pipe of pressurized air
- Special Tests: Additional tests, such as Set & Release, and Section 4
- Annual Calibration Test: Run during the annual calibration to confirm rate drops
- Exit Program: Exits the application



Screen Layout

The left side of the screen will give the operator step-by-step instructions. The right side is a column showing the various gauge readings and switch settings.

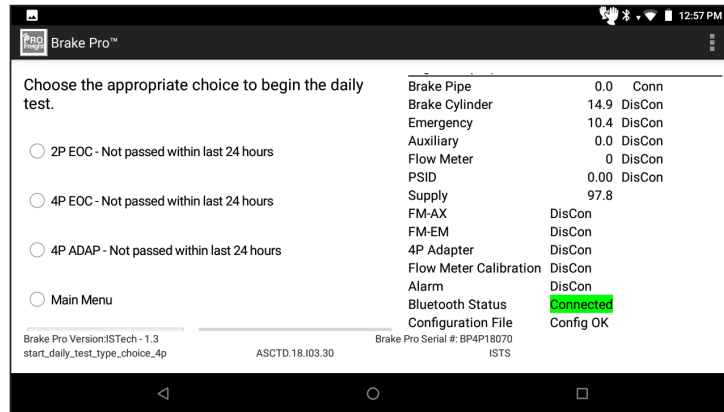
Stop Test Button

The STOP TEST button appears on every screen. Pressing the button once will bring up a confirmation screen. Pressing Continue on the confirmation screen will resume the test. Pressing Stop Test again will stop the test, and enter a FAIL result in the test report. The test can be restarted according to the S-4027 Restart Matrix.

Running the Single Car Test

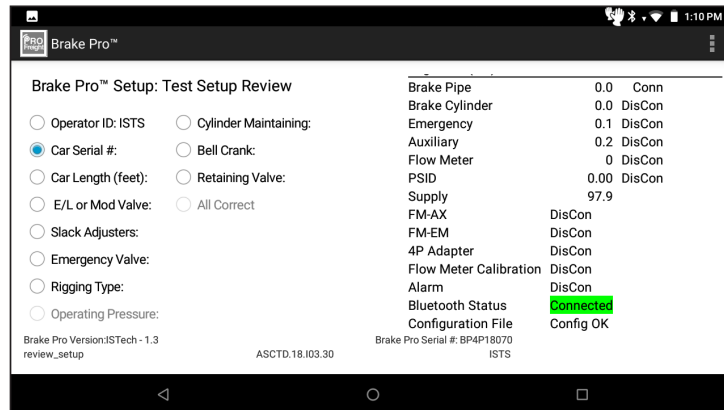
Select Single Car Test from the Main Menu and press NEXT to continue.

The Operator will then be prompted to choose the testing method. The options are 2P EOC, 4P EOC and 4P Adapter. The screen shows the last time the Daily Test for each testing method was passed. The program will only let the operator test with a method that has successfully passed the Daily Test in the last 24 hours.

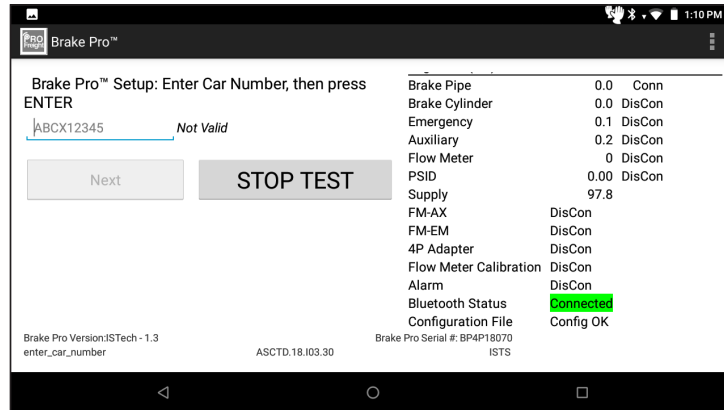


Car Setup

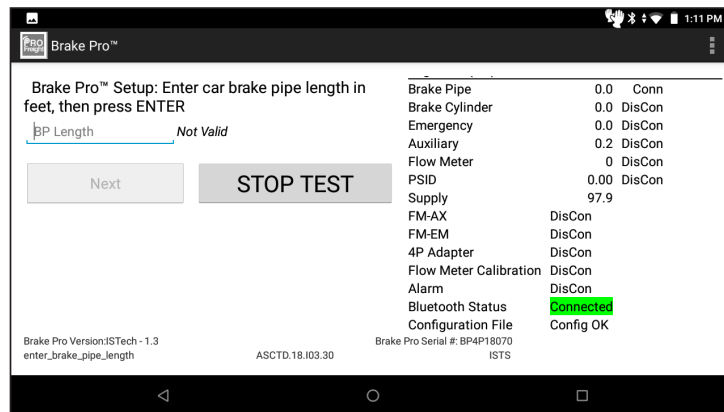
Once the testing method is selected, the Test Setup Screen is shown. This screen allows the operator to see the parameters for the car to be tested. Choose Car Serial # to enter the car number.



On the next screen the keyboard will pop up to enter the number. Then press NEXT to continue.

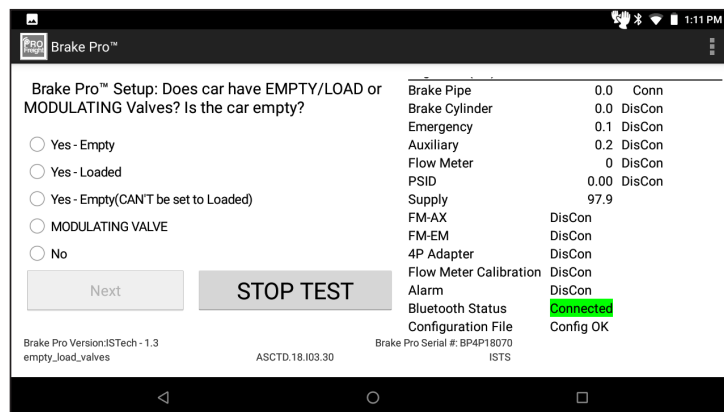


Next select Car Length and enter the length in the selected units.



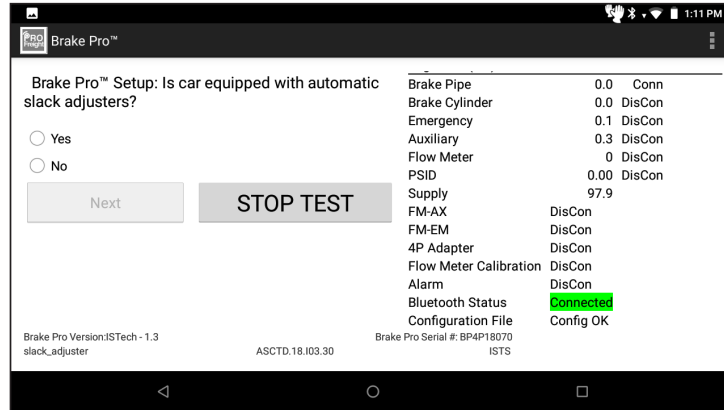
The car length entered will determine if there is a relay valve. If the length is 76 feet or more, the program will automatically assume a vent valve. If 75 feet or less is entered, the program will default to no relay valve.

Next the operator will need to enter whether the car has Empty/Load valves, and the condition of the car if they are present. This is also where Modulating Valve is selected.

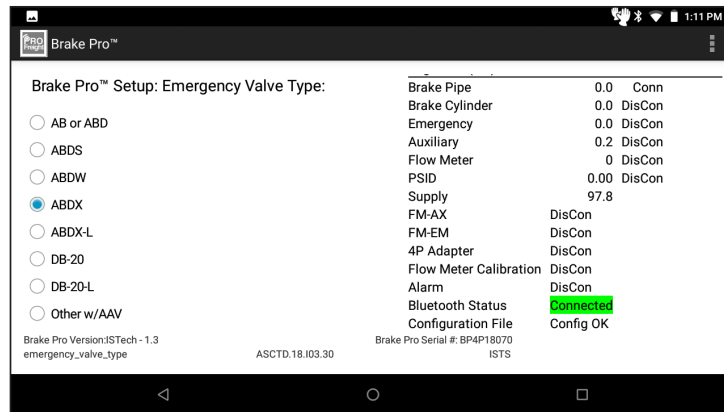


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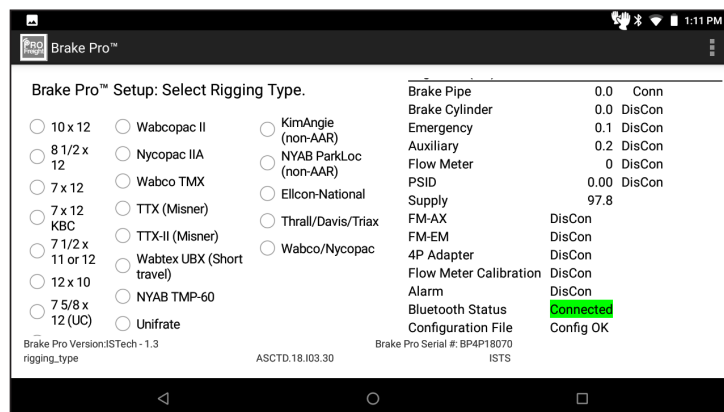
The operator will then need to indicate if Slack Adjusters are present.



Then the operator will need to pick the type of Emergency valve.

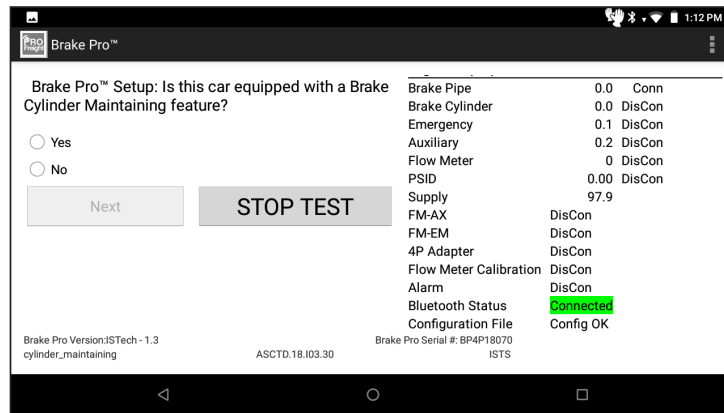


Indicate the rigging type. The rigging selection will be used to validate the piston travel measurement later in the test.

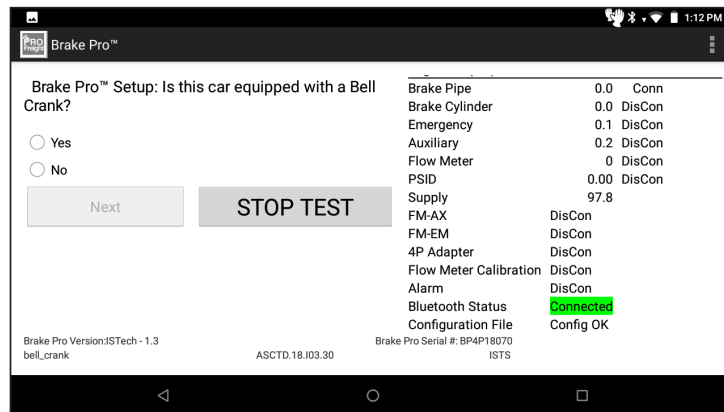


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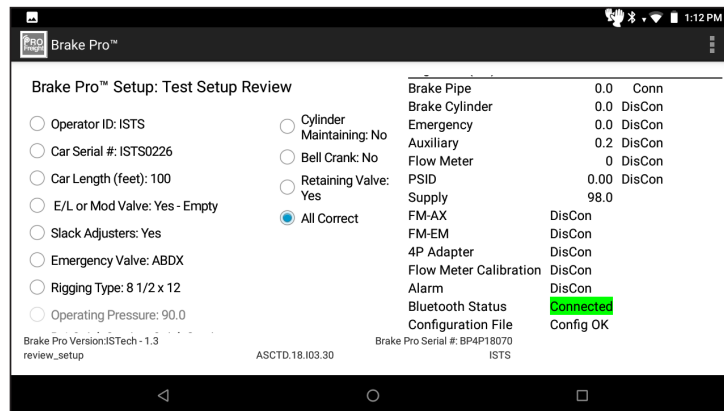
Indicate if the car has Brake Cylinder Maintaining.



Indicate if the car has a Bell Crank.



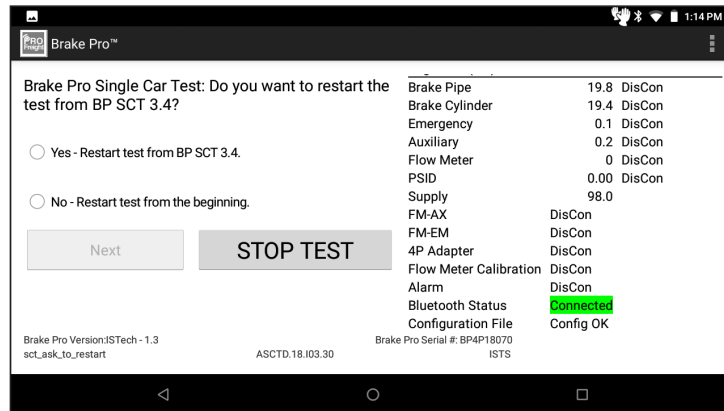
When the car parameters are set, the operator can review them, and change them if necessary. Select All Correct when ready to begin testing.



After the setup is finished, the program will guide the operator through setting up the device for the test, including making all hose connections.

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After completing the safety and setup steps, the test will start from the beginning, unless a retest is being performed. If a restart is available, the operator has the option to restart from the allowed point, or run the test from the beginning.



Once a selection is made, the program will continue to the appropriate test section and begin testing.

Regulator Protection

If Supply Pressure often falls below Operating pressure, the regulator can be damaged over time. This typically occurs with mobile compressors, but can occur in repair yards with insufficient air supplies.

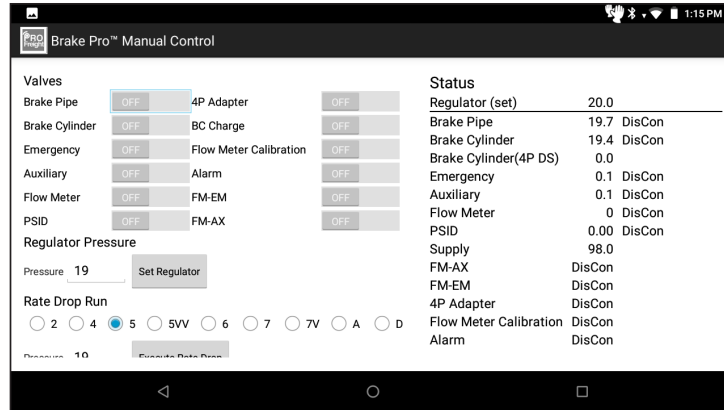
A regulator protection algorithm can be turned on from the Preferences section on the dropdown menu at the upper right corner of the screen. This algorithm stops the program if supply pressure falls under operating pressure for long periods of time. Once the supply pressure recovers, the operator is given the option to continue testing, provide the supply pressure recovers within the timeout period. If the timeout period is exceeded, the tested is stopped and a Fail result entered into the test report.

Before enabling this feature, you must contact ISTS tech support.

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Manual Control Program

The Brake Pro™ can be completely manually controlled. You can access this by pressing the menu button (3 vertical dots) in the upper right of the screen when you are at the Main Menu. When the dropdown menu appears, select Manual Control.



Manual Control Functionality:

Valves: to turn solenoids on and off, touch the appropriate On/Off button next to the desired valve

Regulator: to set the regulator to a specific pressure, enter the pressure and press Set Regulator

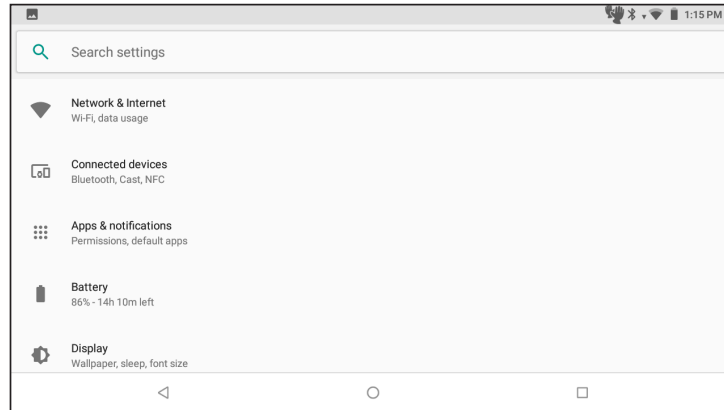
Rate Curve: to run a rate curve, select the desired reduction rate, enter the ending pressure, and select Execute Rate Drop

Press Previous to exit Manual Control

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Connecting the Tablet to a WiFi Network

Open the Settings Menu by clicking the Settings app on the Home Screen or icon on the Notifications Bar. Click Network & Internet.

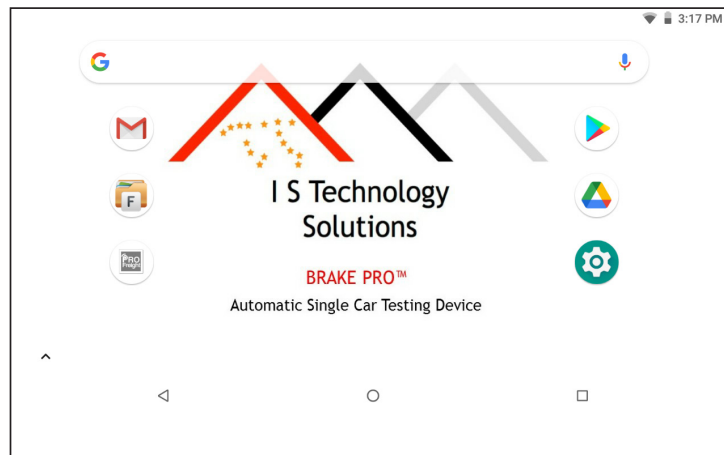


Make sure that Wi-Fi is set to ON. Click the network you would like to join in the right hand column. If a password is required, a popup menu will appear and prompt you for a password. Enter the password and the tablet will connect to the Wi-Fi network.

Printing and Transferring Reports

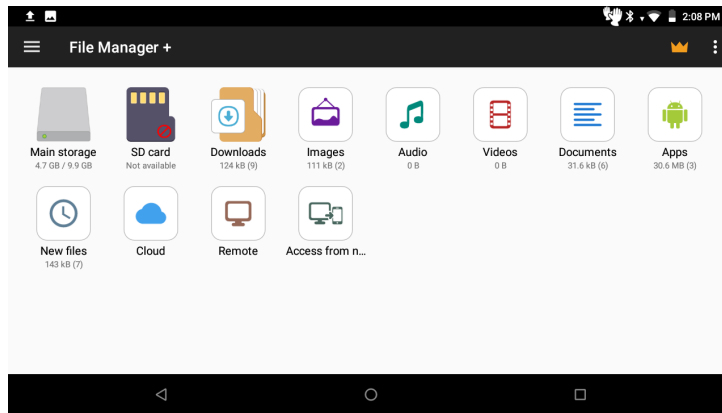
At the conclusion of each Daily Test and Single Car Test a .pdf report file is generated with the results. Daily Tests are appended onto the existing file, while Single Car Test Reports are put into files by car number and date.

To find the report, open the File Manager+ app found on the home screen.

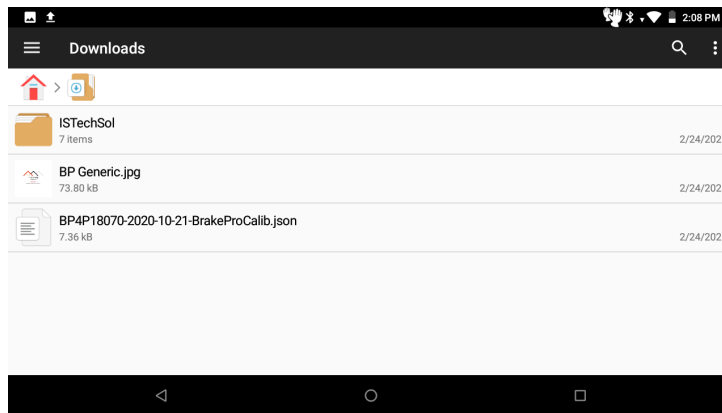


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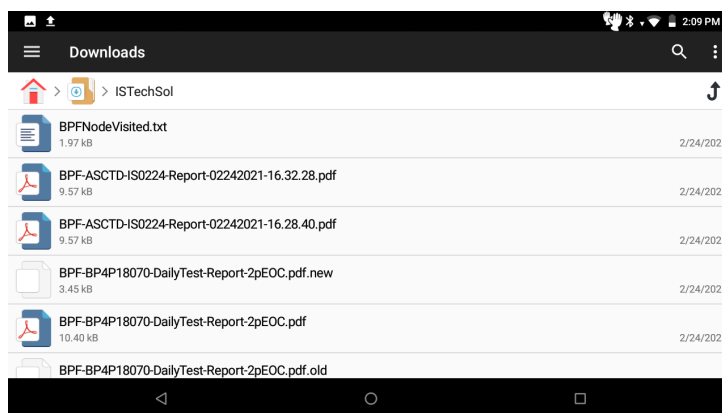
The app will open to the Main directory. You will see a Download folder.



Tapping the Download folder will reveal the ISTechSol folder.

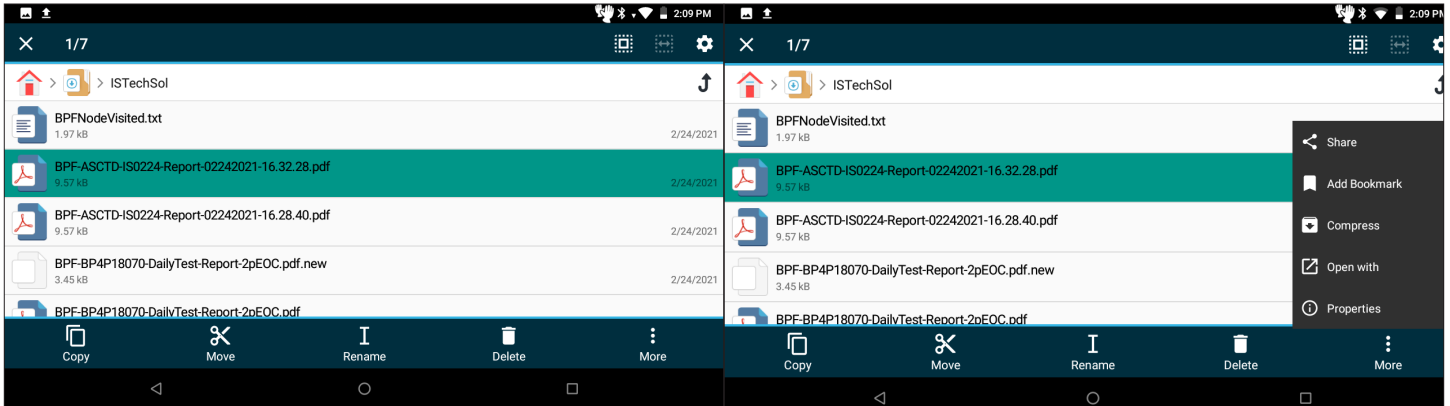


Tapping the ISTechSol folder will show all of the available reports.



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Pressing and holding the the name of the file will bring up a menu. Selecting More will bring up a submenu allowing you to Share (send) or open the file.



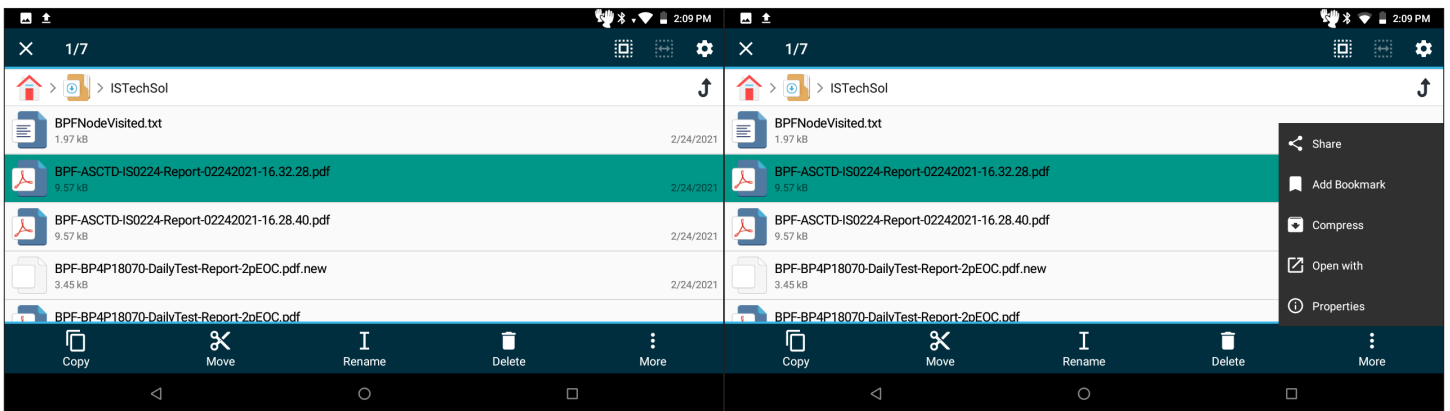
Transferring Reports

Transferring reports from the tablet to the office network can be done in several manners.

Email Transfer

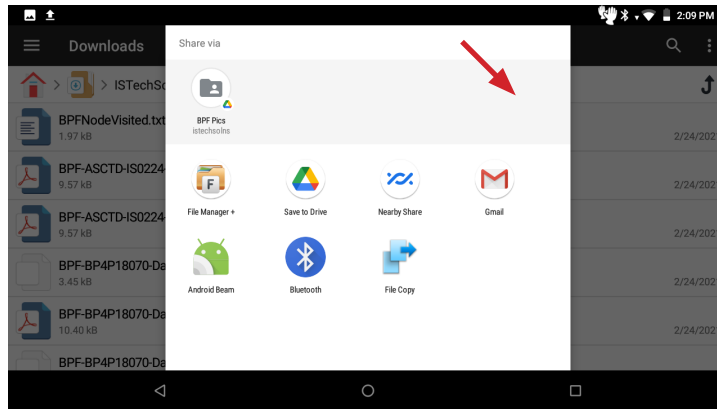
Each tablet is shipped with a Google Gmail account set up. To email a report, the tablet must be connected to a WiFi network. To send a report:

1. Locate the file in the File Manager+ app as described above.
2. Press and hold the name of the file. A menu will appear at the bottom.

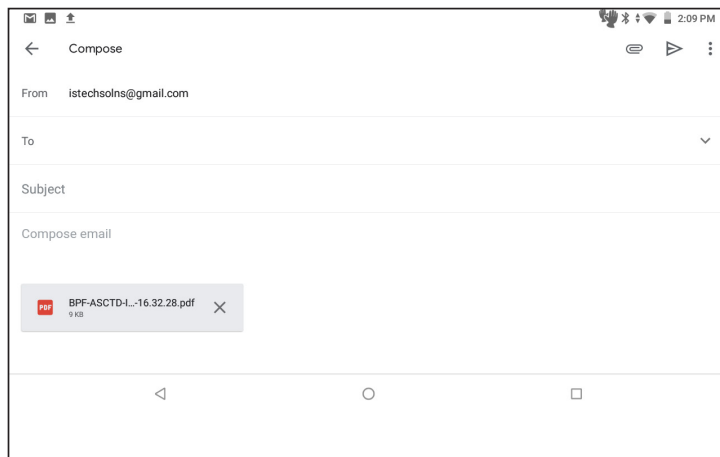


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3. Tap Share, and a popup window will allow you to pick the app. Select Gmail.



4. Gmail will create an email with the selected reports as the attachment. Type in the recipient's email address, and click SEND in the upper right corner. Email addresses will be remembered, so that when the operator begins typing in future emails, the app will show available addresses.



Automatic Emailing

You can also set up your preferences to automatically send an email upon completion of the test. This will send an email with the test to the same email address(es) every time a test report is created.

1. In the Brake Pro™ program, tap the menu button (3 vertical dots in upper right corner)
2. Tap Preferences on the drop-down menu, then Email Address. Enter the email address(es) where reports should be sent after every test.

Note: The program will create an email after every test. If no WiFi connection is available, they will sit in the Outbox until the tablet is connected, when they will all be sent.

Cloud Storage

Various cloud storage can be used such as Google Drive, Dropbox, OneDrive, etc.

International Options

Several options have been built in for international customers.

Retaining Valve Option

This option must be set by manufacturer.

The default assumes all cars have retaining valves. The device can be configured to give the operator the option to choose “No Retaining Valve” in the car setup. The test will then skip the Retaining Valve test.

Cars with No Emergency Valve

This option must be set by manufacturer.

The default assumes all cars have emergency valves, and the operator must choose the type in car setup. The device can be configured to add “No Emergency Valve” as an option in the list of emergency valves. If this option is selected, the test will skip the emergency valve tests.

Car Numbers Not Validated

This option must be set by manufacturer.

The default validates the car number against the AAR standard (2-4 alpha characters followed by 4-6 numeric characters with no space in between or other characters). This option allows the operator to enter any combination of characters as the car number.

Skip Empty/Load Pressure Decay

This option must be set by manufacturer.

The default runs a pressure decay test on cars with Empty/Load valves. In some regions, Empty/Load valves are used that do not settle at a pressure, preventing pressure decay tests. This option skips the Empty/Load pressure decay test.

Rigging Type Additions

This option must be set by manufacturer.

Some regions use additional rigging types beyond those listed in the AAR Field Manual, Rule 3. These can be added.

Metric Car Length

This option is set in the Preferences section of the dropdown menu in the upper right corner.

The operator can set the preferred car length units to metres. This preference will be stored.

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Metric Piston Travel

This option is set in the Preferences section of the dropdown menu in the upper right corner.

The operator can set the preferred piston travel units to millimetres. This preference will be stored.

Obstruction Test Pressure

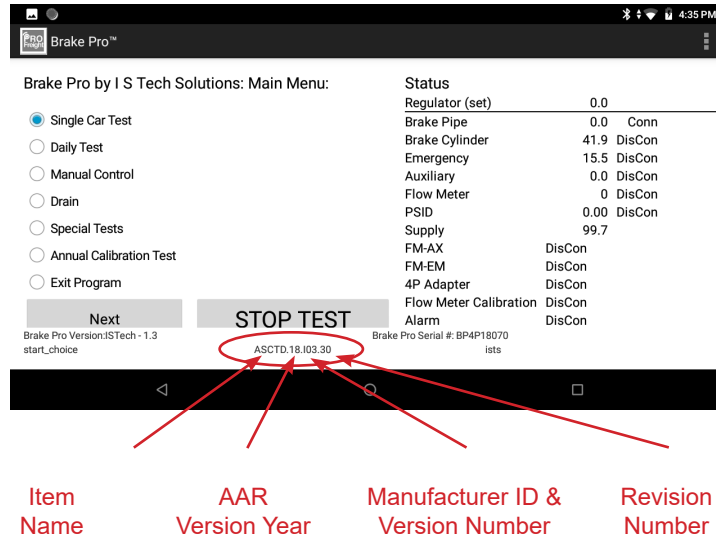
This option is set in the Preferences section of the dropdown menu in the upper right corner.

The operator can set the pressure used during the Obstruction Test. The default pressure is 20psi for detecting a blow of air at the far glad hand. The pressure can be set to 90psi to perform the ball test for blowing the ball through the brake pipe. This preference will be stored.

Software Operations

Version Number

The Brake Pro™ Application shows the version number at the bottom center of the screen. The version number follows the AAR specification.



To check to see if the latest version is installed, search for “brakepro” in the Google Play Store. Tap the Brake Pro by I S Technology Solutions icon. Tap About This App. Make sure the version number in the Play Store matches the version number in the application.

Installing the Brake Pro™ Application

Sometimes the Brake Pro™ Application may become corrupted and need to be uninstalled and reinstalled.

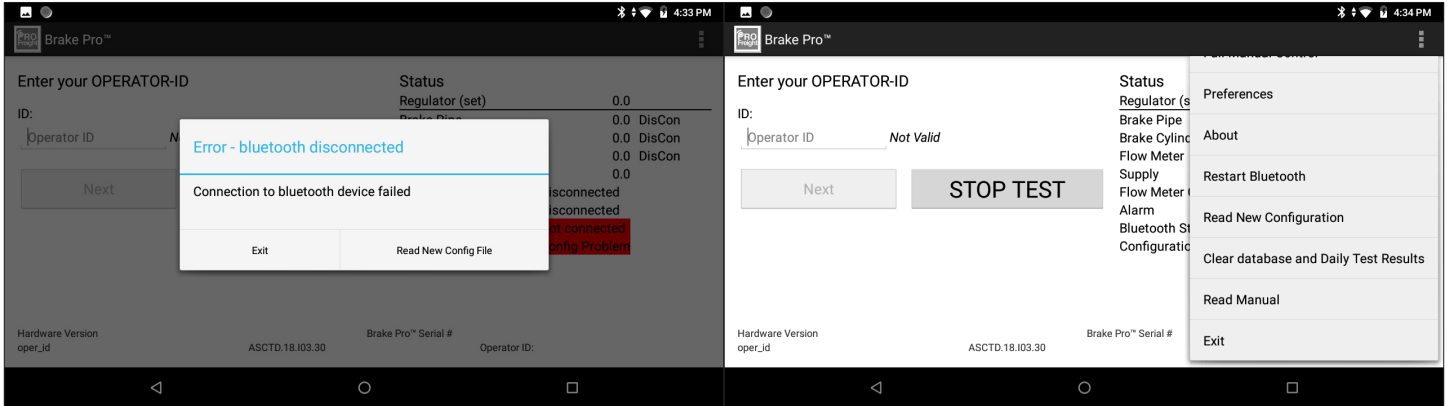
1. To uninstall the application, click and hold the icon. A trash can icon will appear, drag the application to the trash can and release. A message will be displayed that the application has been uninstalled.
2. Open the Google Play store app. Search for “brakepro”. The application will appear in the results. Tap it, and click Install.
3. Once the application has been installed, you will need to perform the Reading the Configuration File steps below.

Updating the Brake Pro™ Application

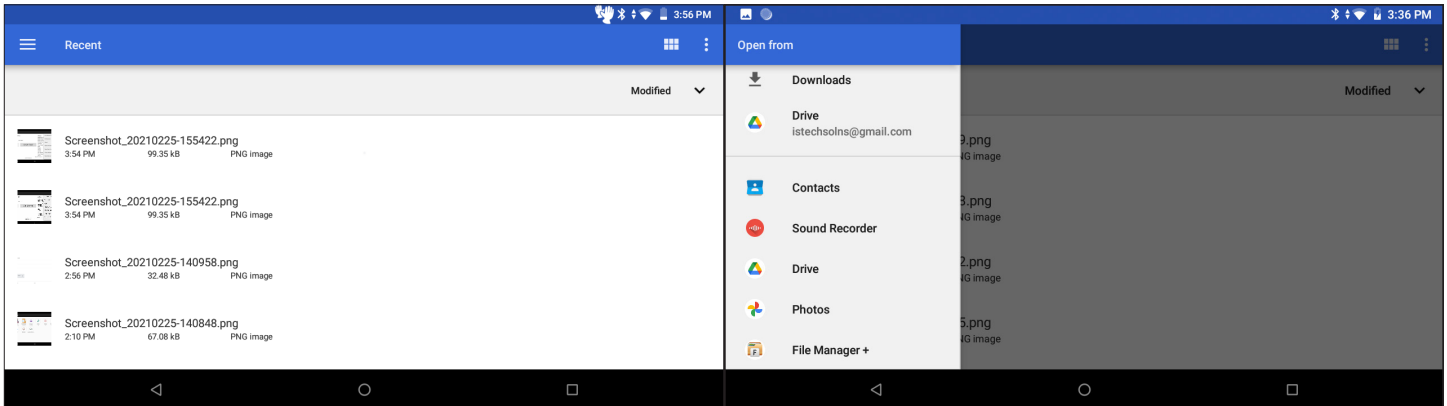
Tablets are sent out with auto-updating turned on. When the tablet is connected to a WiFi network, it will check for updates, and download and install them, if available. To check for updates and manually install them, perform the below.

Reading the Configuration File

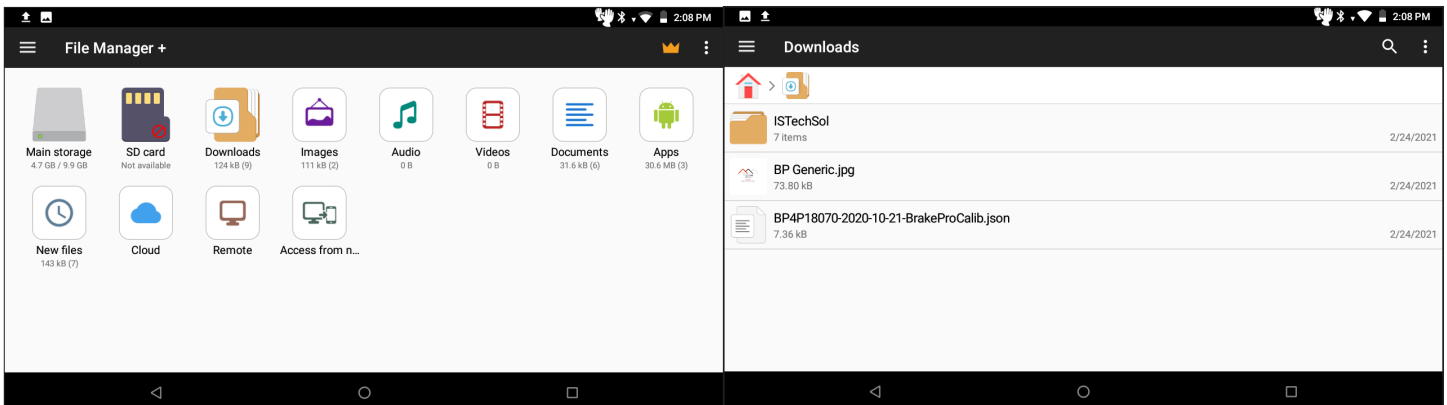
1. From either the popup window “Error - bluetooth disconnected” select Read New Config File, or from the upper right dropdown menu, select Read New Configuration.



2. On the next screen, access the menu of available apps by clicking the 3 horizontal bars in the upper left corner.

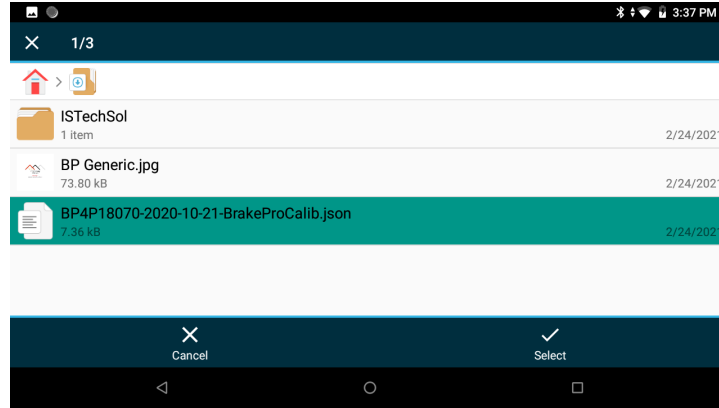


3. Scroll down and select File Manager +.
4. Select the Downloads folder then the ISTechSol folder.



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5. Click on the most recent calibration file, ending in .json, the click Select.



6. You will return to the program, but you will need to Exit the application and restart it for the new config file to take effect.

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Warranty

The following warranty information is the total of the liability that IS TECHNOLOGY SOLUTIONS accepts for the Brake Pro™ and its use. Please read the following carefully, as it is the only agreement between IS TECHNOLOGY SOLUTIONS and the Buyer in connection with warranty claims. The buyer agrees with the terms of this document by placing the device into service and using it in production. If the Buyer does not accept the terms, the device should not be placed into service.

1. Soundness of design and construction. IS TECHNOLOGY SOLUTIONS, an Illinois corporation, conceives, designs, assembles and distributes computer-controlled systems (SYSTEM) for testing railway braking apparatus on rail cars. It is not intended for use on any cars other than railway cars. Using it on any other car or installation may void this warranty, and IS TECHNOLOGY SOLUTIONS accepts no responsibility for the safety or the performance of the testing or the results thereof or the suitability for the task.
2. The sequencing of the events of the tests and the test limits have been described and formulated by others, including the AAR, the individual railroads and repair facilities where our apparatus might be used and governmental regulating bodies having jurisdiction of such activities. IS TECHNOLOGY SOLUTIONS has designed a system and provided operating software that conforms to these standards and lacks the authority to do otherwise.
3. The equipment delivered by IS TECHNOLOGY SOLUTIONS conforms to these standards as of the time of its delivery and thereafter only if the condition and adjustment of the system remains as it was when delivered. Tampering, adjusting or negligent use and handling might cause these adjustments to vary, and IS TECHNOLOGY SOLUTIONS accepts no responsibility for such variations or deviations. IS TECHNOLOGY SOLUTIONS provides the facility for checking and verifying these adjustments and requires that they be used as specified in order that this warranty remains in effect. Certain instructions are included in the operating manual and on the visible enclosures. Failure to follow these instructions may result in voiding or lapsing of this warranty.
4. This SYSTEM includes products and equipment manufactured by third parties that are not under the control of IS TECHNOLOGY SOLUTIONS. Some of these items may contain warranties that are the work of these third parties, and separately determine the warranty responsibilities for these parts and components. The warranty periods of these third parties may be shorter than the warranty period set by IS TECHNOLOGY SOLUTIONS and shall take precedence over IS TECHNOLOGY SOLUTIONS' warranty responsibilities. Notwithstanding the fact that third party warranty periods may be shorter than those of IS TECHNOLOGY SOLUTIONS, IS TECHNOLOGY SOLUTIONS agrees to work diligently toward negotiating with the third parties for extended warranty coverage in cases where no negligence or mishandling are evident.
5. IS TECHNOLOGY SOLUTIONS' warranty does not extend to the braking equipment or the cars. Our apparatus can only determine that as of the time it was used, the condition of the brake equipment was as found by the IS TECHNOLOGY SOLUTIONS system, subsequent deterioration, abuse, maladjustment or wear and tear may cause this to change. IS TECHNOLOGY SOLUTIONS makes no warranties that the condition of the brake equipment as found shall remain so. Due diligence is required of the owner or custodian of the SYSTEM

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to ensure that its conditions of accuracy and adjustment remain substantially comparable to the condition as originally shipped by IS TECHNOLOGY SOLUTIONS.

6. I S TECHNOLOGY SOLUTIONS warrants that the intellectual contribution made to the system (commonly referred to as “software”) fairly tests said brake equipment and evaluates it to the standards published by the entities listed above in paragraph 2. If any findings to the contrary are found within three years from delivery by the Buyer, then I S TECHNOLOGY SOLUTIONS will correct or replace the defective section or part at no further cost to Buyer. In the case of software found defective or incorrect, I S TECHNOLOGY SOLUTIONS shall deliver to buyer within a reasonable time, a corrected section of the software to the place where it will be used, and provide instructions for its installation and use.
7. If any mechanical or electrical part or component is found to be defective because of manufacture or design within one year from date of shipment by I S TECHNOLOGY SOLUTIONS, then I S TECHNOLOGY SOLUTIONS agrees to provide repair or replacement of said part at no cost to buyer. This is offered even though some of the original manufacturers of parts and components might have lesser warranty terms. Abuse or negligent handling or exposure to climatic extremes may void this section of the warranty. Expendable parts, such as gaskets, fuses, handles, knobs and other vulnerable components are exempted from this warranty.
8. The period between the end of the first and third years shall be called “The First Extended Warranty Period” or FEW Period. Failure of any component or part during this period from normal wear and tear shall be covered by the terms of FEW, as follows. “Parts or components that fail to perform during FEW are subject to repair or replacement by I S TECHNOLOGY SOLUTIONS on a pro rata basis. The FEW period has a duration of 24 months, and any part that fails in month 1 shall be repaired or replaced for 10% of the value of a new part, and pro-rata through the period, until one day before the end of month 24, shall be repaired or replaced for 90% of current new value. The repairs or replacement shall be done at I S TECHNOLOGY SOLUTIONS’ facilities f.o.b I S TECHNOLOGY SOLUTIONS facility.
9. I S TECHNOLOGY SOLUTIONS cannot accept claims for consequential loss or damage. Our liability is limited to the value of the property or part thereof as explained herein.
10. The foregoing states our full liability and no employee or officer of I S TECHNOLOGY SOLUTIONS is authorized to modify or amend this policy, except for a general letter to all customers, signed by a principal officer of I S TECHNOLOGY SOLUTIONS.
11. The warranty terms and obligations stated herein are valid only if payment for the device at the time the claim is made is not delinquent as defined in I S TECHNOLOGY SOLUTIONS quotations and invoices. If the quotation and invoice are at variance, the invoice will be considered the applicable document.

Contact

Please call I S Technology Solutions at (855) 620-5200 with any inquiries. If calling for service or assistance, be prepared to provide the serial number of the device, and a complete description of any difficulty or suspected malfunction.

I S Technology Solutions
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Chicago, IL 60644 USA
info@isttechnologysolutions.com
www.isttechnologysolutions.com

Intellectual Property Notice

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Chicago IL 60644, USA

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The name "Brake Pro™" and "I S TECHNOLOGY SOLUTIONS" as used for brake testing are copyrighted and may not be used by anyone in a manner that is contrary to the interests of I S Technology Solutions.

Any wish to use the designs of I S Technology Solutions as a developer of other equipment and systems will require a separate license agreement.

Air Connections

IMPORTANT! A quick connect with shut-off is required at pressure supply side, 1/2" supply line recommended.

Attach coalescing filter at or near supply connection to avoid contaminants. Use clean, dry air that is free of any oil.

Brake Cylinder fitting is the same as the industry standard.

There are no user serviceable parts inside device. Do not open.