

1 Introduction

Wheel Press Recorder Version 5

The Wheel Press Recorder program is part of the Wheel Shop Management System. It is used to record mounting graphs on a wheel press. Additional data may be collected, such as wheel serial numbers, wheel type, wheel class, wheel boresize, wheel tapesize, and axle information. The program will automatically recognize several types of misfits, however wheel shop personnel **must review each chart for correctness** per Association of American Railroad requirements. The Wheel Press Recorder saves and retrieves data from the database server via the TCP/IP protocol and works with Microsoft Windows XP, and Windows 7. The database server program may be located on the same computer as the Wheel Press Recorder or on any computer in the network.

The default installation folder is C:\Program Files\Wheel Shop Automation\Press.

Network connectivity to the database server is required.



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2 Login

This is the login screen for the Wheel Press Recorder. You must enter your current shift number, username and password. No screens may be accessed without a proper username and password being entered. Some screens are not available to certain authority levels.

The authority levels are:

| | |
|---------------|---|
| Operator | Cannot enter calibration screen or setup screen. |
| Technician | Same as operator plus can access calibration screen. |
| Supervisor | Same as technician plus can access setup screen. |
| Manager | Can access all screens. Cannot edit wheel status after wheel has been reviewed. |
| Administrator | Can access all screens and has full editing capability. |

Wheel Press Recorder v5

Wheel Press Recorder

WheelShop
automation.com
DATA COLLECTION • AUTOMATION

Shift: < > UserName: Password:

| | | | | | | | | | | | | |
|------------|-------|---|---|---|---|-------|---|---|---|---|---|---|
| Q | W | E | R | T | Y | U | I | O | P | 7 | 8 | 9 |
| A | S | D | F | G | H | J | K | L | 4 | 5 | 6 | |
| Z | X | C | V | B | N | M | 1 | 2 | 3 | | | |
| Back Space | Clear | | | | | Enter | 0 | . | | | | |

Log In Press Config History Trends Calibrate Diagnostics Setup

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3 Logout

This is the logout screen of the Wheel Press Recorder.

Press the Log Out button to log out.

Press the Shop Manager button to start the Shop Manager application.

Press the Change Password button to change the password that was used to login.

Press the Exit button to exit the program. You must have supervisor authority or above to exit the program.

If the machine needs to go out of service. Select the reason why and then press the Start Down Time button.



4 Press Screen

This is the press screen of the Wheel Press Recorder. The red box at the top left of the screen will display the wheel 1 serial number when it is scanned. To enter manually, touch the box onscreen and enter the serial number into the dialog box which pops up. The red box at the top right of the screen will display the wheel 2 serial number when it is scanned. The box at the top center of the screen will display the axle serial number. If the box is red the serial number is required, if it is gray, then the axle serial number is not required.

The status box in the center of the screen will display the current status of the wheelset mounting. The Wheel #1, Axle and Wheel #2 information boxes will display the information currently entered into the Config Screen or the last information scanned with a barcode scanner.

Press ReMount to open the Remount Dialog to select one wheel to remount.

Press Skip Wheel to skip the current wheel that is ready to mount.

The screenshot displays the 'Press Screen' interface. At the top, there are two graphs for 'Wheel #1' and 'Wheel #2'. Each graph plots 'Inches' (y-axis, 0 to 8) against 'Tons' (x-axis, 0 to 180). Below the graphs is a status bar with '0.0' on the left, 'Ready to Mount Wheel #1...' in the center, and '0' on the right. The main area contains three data entry boxes: 'Wheel #1', 'Axle', and 'Wheel #2'. Each box has fields for 'Mfg Code', 'Bore', 'Type', 'Tape', 'Heat Class', 'Heat #', 'Condition', 'Temp.', and 'Max Tons'. The 'Axle' box also includes 'Facility Code', 'Mfg. Timestamp', 'Condition', and 'Heat Grade'. Below these are fields for 'Axle Config', 'Component ID', 'BM Operator', 'WIP ID', 'Customer Name', 'Sequence #', 'ID', and 'Press Sequence #'. On the right side, there are buttons for 'Print', 'ReMount', and 'Skip Wheel', along with a 'Wheelsets' counter showing '14'. At the bottom, there is a navigation menu with 'Log Out', 'Press', 'History', 'Trends', 'Calibrate', 'Diagnostics', and 'Setup'. The footer contains 'CONNECTED', 'AIC (ADMINISTRATOR) [1]', 'Copyright © 1996-2012, Arkansas Industrial Computing, Inc., All Rights Reserved.', and 'Version 5.5.3.0'.

5 Remount Dialog

To remount a wheel you must press the Remount button on the Press Screen. Pressing the Remount button will display the following dialog box. Enter the wheel serial number to be remounted and the wheelset information will be displayed. Press the button with the wheel serial number that is to be remounted. This will take you to the Press Screen so the wheel can be remounted. You can exit the remount option by pressing the "Do Not Remount" button.

Show the Remount button on the Press Screen by selecting the "Setup" navigation button, select the "Pressing" tab and then select the "Show Remount Button on Press Screen" option.

Note-This option is to remount one wheel on a wheelset. Do not use this option if both wheels were demounted. That is considered to be a new press.

Remount one Wheel

This wheel set was last mounted on at Operator:

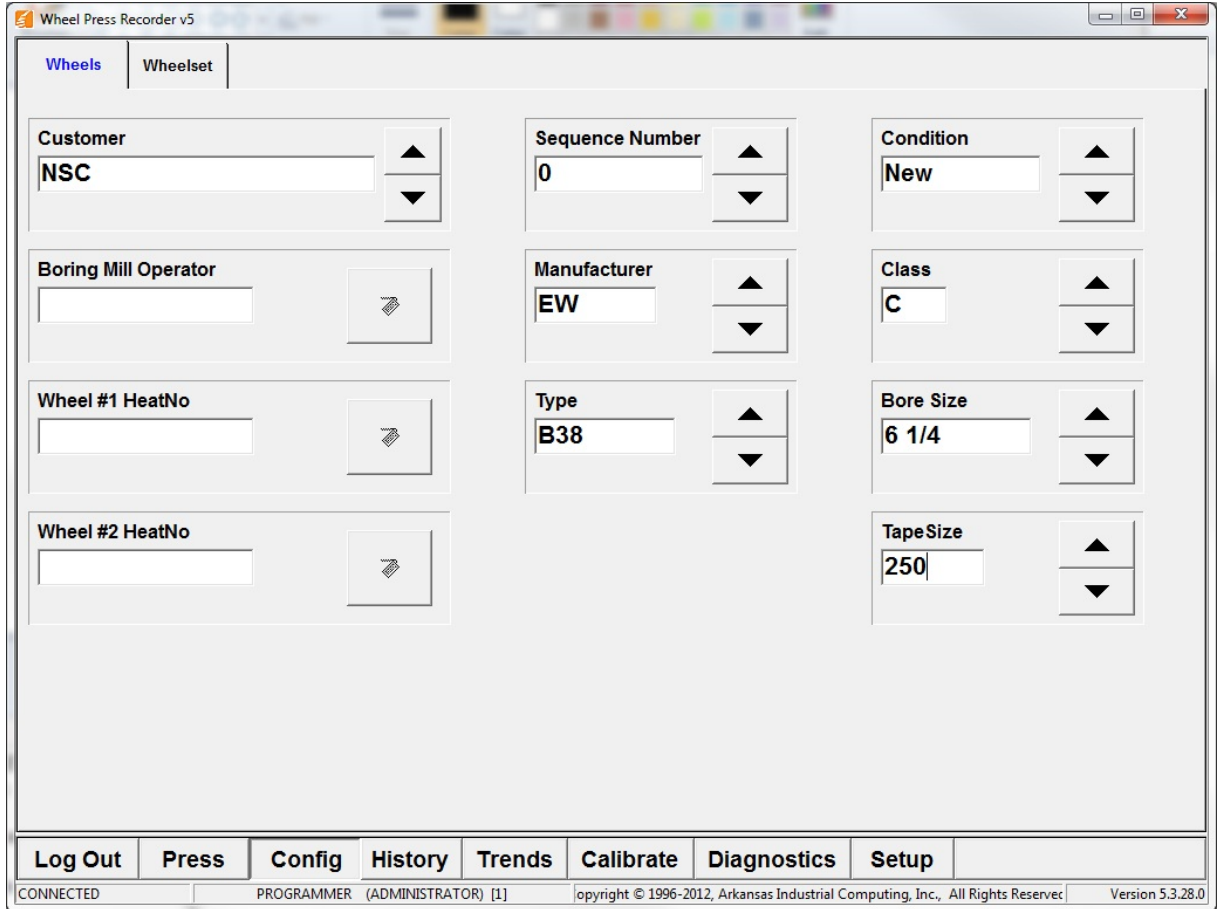
| | | | | | | | | |
|-------------------|-----------------------------------|--|-------------------|-----------------------------------|--|--|--|---|
| Remount This Side | | | Remount This Side | | | | | |
| Wheel 1 SN: | <input type="text" value="3683"/> | | Wheel 2 SN: | <input type="text" value="3683"/> | | | | |
| Max Tons: | <input type="text" value="134"/> | | Max Tons: | <input type="text" value="112"/> | | | | |
| Wheel Mfg: | <input type="text" value="C"/> | | Wheel Mfg: | <input type="text" value="C"/> | | | | |
| | | | | | | | | <input type="button" value="Do Not Remount"/> |

Wheel Serial Number:

| | | | | | | | | | | | |
|----|---|---|---|---|---|---|-------|---|---|---|---|
| A | B | C | D | E | F | G | H | I | 7 | 8 | 9 |
| J | K | L | M | N | O | P | Q | R | 4 | 5 | 6 |
| S | T | U | V | W | X | Y | Z | | 1 | 2 | 3 |
| BS | | | | | | | Clear | | 0 | . | |

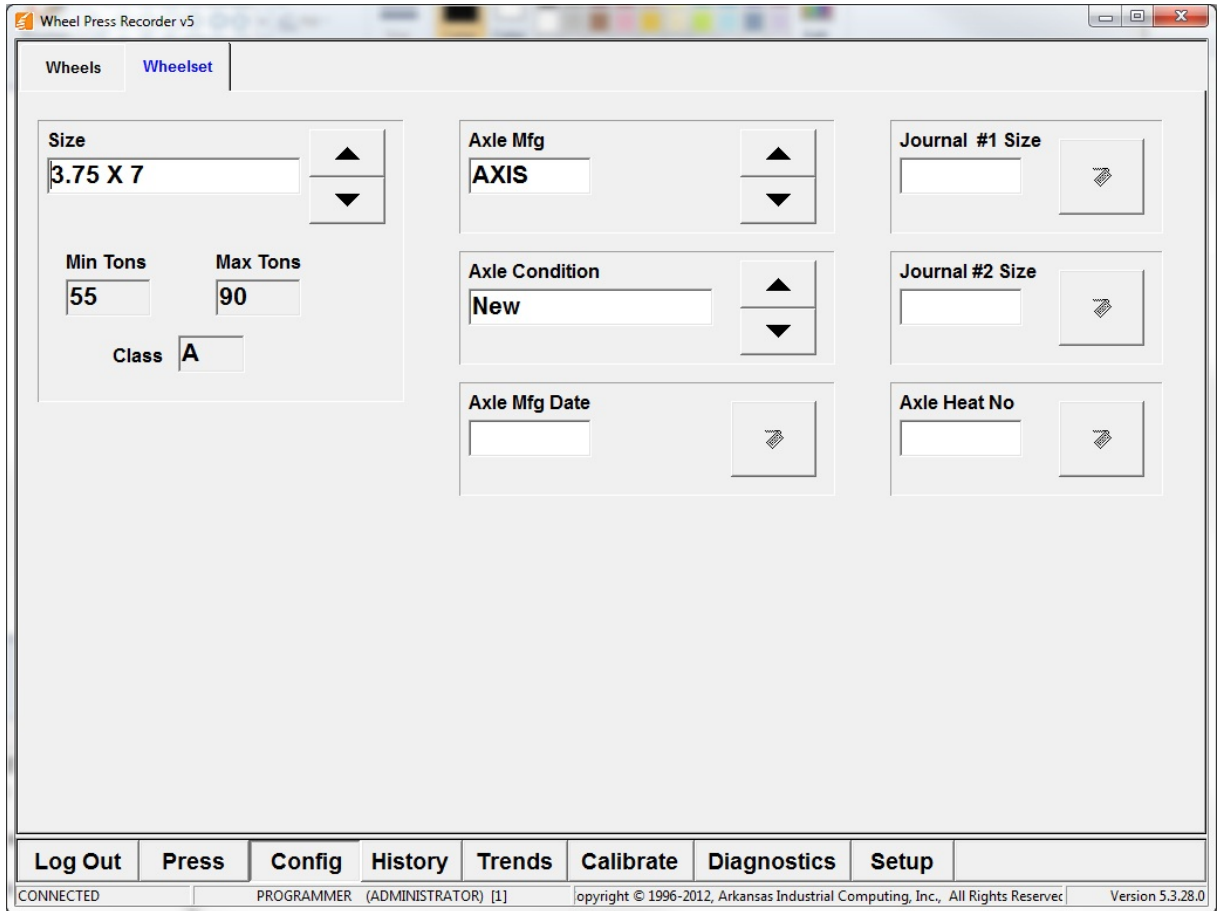
6 Config Screen - Wheels Tab

The configuration screen is for entering default wheel and wheelset information.



7 Config Screen - Wheelset Tab

The configuration screen is for entering default wheel and wheelset information.



8 History Screen

The history screen allows the viewing of previously mounted wheelsets. The information with white edit boxes may be edited. The information with gray edit boxes may not be edited.

Press the Last button to go to the last wheelset mounted.

Press the Find button to enter a wheel serial number to search for.

Press the Print button to print the currently displayed wheelset.

Press the Back and Forward buttons located at the top left to jump back and forth between days. The date desired will be displayed between buttons.

Press the Back and Forward buttons located just above the Last button to cycle through wheelsets for the current day that was selected. The wheelset desired will be displayed between buttons.

6/25/2012

12 of 12

Last

Find

Print

Wheel #1 - 1000015432

Wheel #2 - 1000015322

| Wheel #1 | | | Axle | | Wheel #2 | | |
|--|------|--|---------|-----------------------------------|---------------|------------------------------------|------|
| Mfg Code | GC | Bore | 10 3/4 | Facility Code | MWSP | Mfg Code | GC |
| Type | CH36 | Tape | 243 | Mfg. Timestamp | 06/12 | Type | CH36 |
| Heat Class | C | Heat # | ABCD015 | Condition | New | Heat Class | C |
| Condition | New | | | Heat Grade | F | Condition | New |
| Temp. | 0 | Max Tons | 136 | Serial # | 8977152 10010 | Temp. | 0 |
| Axle Config <input type="text" value="6.0x11"/> <input type="text" value="E"/> | | | | Customer Name | | <input type="text" value="Stock"/> | |
| Component ID <input type="text" value="AARE9900000014"/> WIP ID <input type="text"/> | | | | Sequence # | | <input type="text" value="7"/> | |
| BM Operator <input type="text"/> | | | | ID | | <input type="text"/> | |
| Shop Code | | <input type="text" value="AIC"/> | | Machine# | | <input type="text" value="11"/> | |
| Operator | | <input type="text" value="aic"/> | | Shift | | <input type="text" value="1"/> | |
| Date/Time | | <input type="text" value="6/25/2012 2:32:22 P"/> | | Reviewed By | | <input type="text" value="JD"/> | |
| Disposition | | | | <input type="text" value="Good"/> | | | |
| Comment | | | | <input type="text"/> | | | |

Log Out

Press

History

Trends

Calibrate

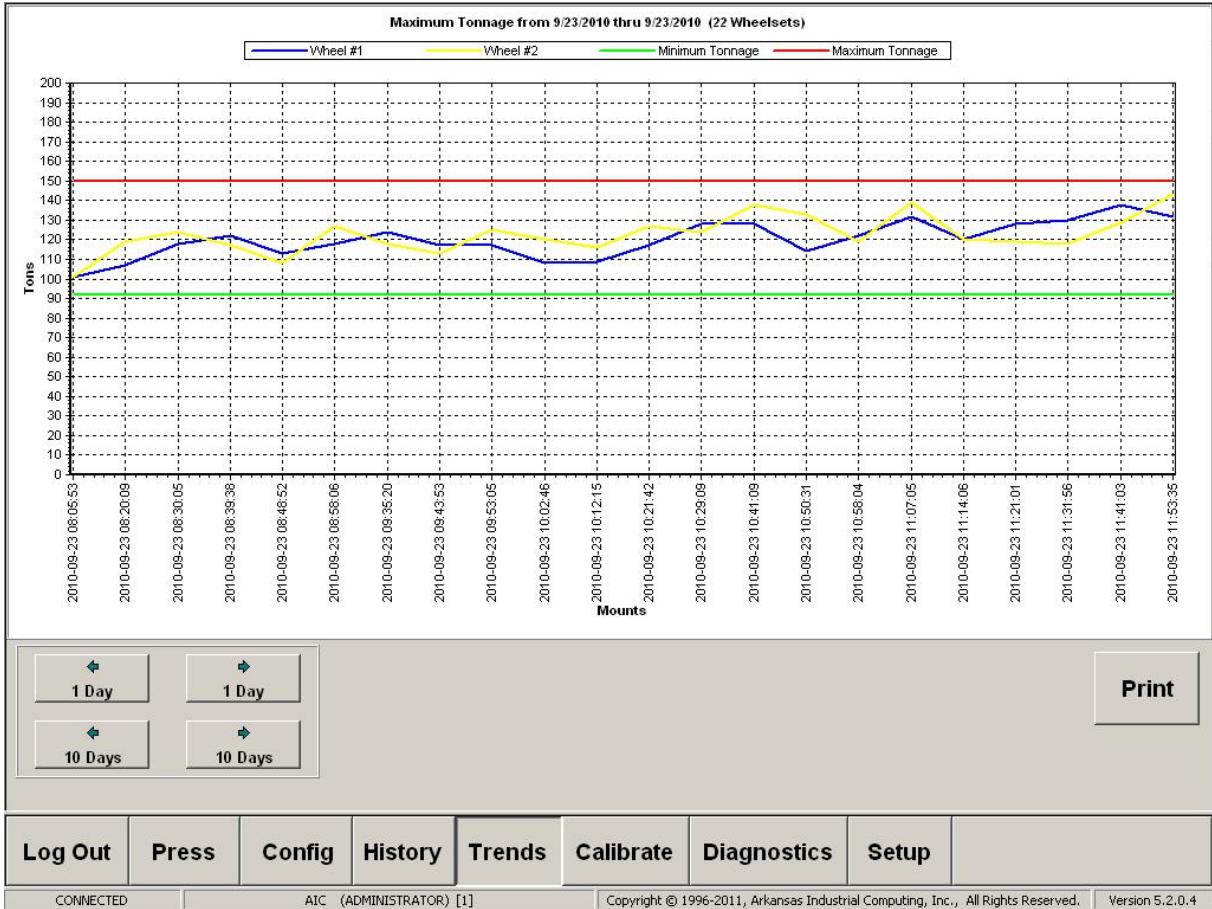
Diagnostics

Setup

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9 Trends Screen

The trends screen displays a graph showing the maximum mounting pressure of both wheels.



10 Calibration Main Screen

This is the main screen for calibration. It shows the details of the current and previous calibration.

Press the radio button next to Ram 1 or Ram 2 to select which ram to calibrate.

Press the Calibration Report button to print the current calibration settings.

Press the Next button to proceed to the Calibration Distance Screen.

This is the WPR calibration process. The following screens will guide you step-by-step through the process of calibrating your recorder.

Press the NEXT button to continue...

Distance

0.0

Ram Select

 Ram 1
 Ram 2

Pressure

1

Calibration Report

3560

11992

Previous Calibration

| | Pressure | Distance |
|---------------|------------|------------|
| Operator: | | |
| Date: | 6/26/2012 | 6/26/2012 |
| Time: | 4:00:08 PM | 4:00:08 PM |
| Scale: | 1.00000 | 1.00000 |
| Offset: | 0.00000 | 0.00000 |
| Low Reading: | 0.00000 | 0.00000 |
| Low Counts: | 0 | 0 |
| High Reading: | 0.00000 | 0.00000 |
| High Counts: | 0 | 0 |

No Details

Current Calibration

| | Pressure | Distance |
|---------------|-------------|-------------|
| Operator: | aic | aic |
| Date: | 6/19/2012 | 6/19/2012 |
| Time: | 10:35:43 AM | 10:35:22 AM |
| Scale: | 74.85714 | 1974.85714 |
| Offset: | -159.34351 | -1.82697 |
| Low Reading: | 0.00000 | 0.00000 |
| Low Counts: | 11928 | 3608 |
| High Reading: | 140.00000 | 7.00000 |
| High Counts: | 22408 | 17432 |

Next

Log Out
Press
History
Trends
Calibrate
Diagnostics
Setup

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11 Calibration Distance Screen

Follow the directions to calibrate the distance transducer.

Press the Previous button to return to the Calibration Main Screen.

Press the Next button to proceed to the Calibration Pressure Screen.

Step #1: Distance Calibration
 If you do not wish to calibrate the distance transducer, press the NEXT button to calibrate pressure.

1. Move the press ram to the fully retracted position.
 Make the following two measurements:
 A: (Fully Retracted ----> Min Bump-Up position) minus 2 inches.
 B: (Fully Retracted ----> Max Extension While Pressing) plus 2 inches
 Calculate C = B measurement minus A measurement
2. Measuring from the fully retracted position, move the ram out Distance A.
3. Enter 0 in the Low Reading Box.
4. Press the READ button.
5. Measuring from the fully retracted position, move the ram out Distance B.
6. Enter C calculation in the High Reading Box.
7. Press the READ button.
8. Press the SAVE CALIBRATION button to save the Distance Calibration.

4096

Low Reading

High Reading

Save Calibration <== Press here to save Distance Calibration

<== ENTER MAXIMUM DISTANCE IN INCHES

| | | | |
|---|---|---|-----|
| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |
| 9 | 0 | . | CLR |

Previous Next

Log Out Press Config History Trends **Calibrate** Diagnostics Setup

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12 Calibration Pressure Screen

Follow the directions to calibrate the pressure transducer.

Press the Previous button to return to the Calibration Distance Screen.

Step #2: Pressure Calibration

1. Isolate the pressure transducer and master gauge from the hydraulic system.
2. Hook up a hydraulic hand pump to the isolated transducer and master gauge..
3. Select a low reading value (ie, 5 tons) and enter the value in the low reading box.
4. Pump the hand pump until the master gauge EXACTLY matches the low reading value.
5. Press the READ button.
6. Select a high reading value (ie, 200 tons) and enter the value in the high reading box.
7. Pump the hand pump until the master gauge EXACTLY matches the high reading value.
8. Press the READ button.
9. Press the Save Calibration button to save the Pressure Calibration.

4096

Low Reading
0

High Reading
200

Save Calibration <==== Press here to save Pressure Calibration

<==== Enter Maximum Pressure in Tons

| | | | |
|---|---|---|-----|
| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |
| 9 | 0 | . | CLR |

Previous Finish

Log Out Press Config History Trends **Calibrate** Diagnostics Setup

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13 Diagnostics Screen

The diagnostics screen displays the various logging files generated by the program.

The Digital I/O status is also displayed in the top center of the screen.

Status information is displayed in the upper left corner of the screen. The 2 boxes should be green when the program is operating properly.

Press the Print WPR Setup button to print the current program setup information.

Press the Save Setup button to save system settings a text file

Press the Export Settings save system settings to an xml file.

Press the View Logfile opens the Log in notepad.

The screenshot displays the Diagnostics Screen interface. At the top left, two green status boxes indicate 'Database Communications OK' and 'Database Synchronized'. Below these, a summary section shows 'DB Inserts Today' (1), 'Time for Last Save' (0.00), and 'Wheelsets Not Saved' (0). To the right, a vertical list of digital I/O status indicators includes 'Press Enable' (checked), 'Wheel Mismatch' (unchecked), 'Bad Press' (unchecked), 'Wheel Release' (checked), 'Board Power' (unchecked), 'Wheel Present' (unchecked), 'Press Ready' (unchecked), and 'Input 4' (unchecked). Further right, system information is displayed, including 'Machine Number' (11), 'AAR Shop Code' (AIC), 'DB Connection String', 'Memory Installed' (989M), 'Memory Load' (83%), 'CPU Usage' (3.01% / -0.02% / 1.49%), and 'Version' (WPR: 5.5.0.23 DB: 15). Below the status indicators are four buttons: 'Print WPR Setup', 'Save Setup', 'Export Settings', and 'View Logfile'. The 'Scanner Log' section shows messages for 'Wheel 1 Scanner' and 'Wheel 2 Scanner' being enabled on COM5 and COM6 respectively. The 'General Log' section contains a detailed startup log, including messages about WPR object creation, scanner loading, and system configuration. At the bottom, a navigation bar includes buttons for 'Log Out', 'Press', 'History', 'Trends', 'Calibrate', 'Diagnostics', and 'Setup'. The status bar at the very bottom shows 'CONNECTED', user 'AIC (ADMINISTRATOR) [1]', copyright information, and 'Version 5.5.0.23'.

14 Press Tab - General

Graph Appearance and Storage:

Distance Deadband - Distance in inches which the ram has to travel for a graph point to be recorded.

Pressure Deadband - Pressure in tons which has to occur for a graph point to be recorded.

DAQ Averaging Factor - Smoothing factor applied to incoming data points.

Graph Start Parameters:

Press Start Distance - Distance at which recording starts (along with Press Start Pressure).

Press Start Pressure - Pressure at which recording starts (along with Press Start Distance).

False Start Distance - If distance is below False Start Distance and pressure falls below Press Start Pressure, graph will be cleared and press returns to ready state.

Graph Ending Parameters:

Mount Ending Pressure Drop - When Current Pressure equals Peak Pressure minus Mount Ending Pressure Drop the press is complete.

Delay Between Wheelsets - Seconds to wait after a wheelset is completed before clearing the graphs for the next wheelset.

Server Save Timeout - Seconds to wait for the data to be save to the Database Server before declaring an error.

Wheel Press Recorder v5

Press | Scanners | Charts | Options | Axles | Security | Database | Version

General | Misfits | DAQ

WARNING! Changing any of these settings can cause recording errors

| Graph Appearance and Storage | Graph Start Parameters | Graph Ending Parameters |
|---|--|--|
| Distance Deadband <input type="text" value="0.1"/> Distance must change this much before a data point will be recorded | Press Start Distance <input type="text" value="0"/> Distance must be above this value before recording starts | Mount Ending Pressure Drop <input type="text" value="20"/> After the pressure peaks, it must drop off this amount before the press is complete |
| Pressure Deadband <input type="text" value="0.5"/> Pressure must change this much before a data point will be recorded | Press Start Pressure <input type="text" value="8"/> Pressure must be above this value before recording starts | Delay Between Wheelsets <input type="text" value="10"/> Time in seconds before a chart is cleared and the recorder is ready for a new wheelset |
| DAQ Averaging Factor <input type="text" value="15"/> Graph smoothing factor. A higher number is more smoothing. | False Start Distance <input type="text" value="1"/> If pressure drops to zero before this distance is reached, the chart resets | Server Save Timeout (Seconds) <input type="text" value="5"/> Time in seconds that the recorder waits for a database server connection before saving to a local file |

Log Out | Press | Config | History | Trends | Calibrate | Diagnostics | Setup

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15 Press Tab - Misfits

Min Press Distance - If mount distance is less than this value and Detect Low Distance Misfit is checked, the mount will be a misfit.

Max Press Distance - If mount distance is greater than this value and Detect High Distance Misfit is checked, the mount will be a misfit.

Detect High Tonnage Misfit - If checked, will mark a mount as a misfit if maximum tonnage is greater than the allowed max tonnage for the axle size.

Detect Low Tonnage Misfit - If checked, will mark a mount as a misfit if minimum tonnage is less than the allowed min tonnage for the axle size.

Detect High Distance Misfit - If checked, will mark a mount as a misfit if maximum distance is greater than Max Press Distance.

Detect Low Distance Misfit - If checked, will mark a mount as a misfit if minimum distance is less than Min Press Distance.

Detect Pressure Dip - detects a drop in force greater than 2 tons between the leading edge spike "Window Depth" and the 75% Line.

Detect Pressure Drop - detects drop in force below the minimum tonnage after the 75% Line.

Detect Leading Edge Spikes - Detects entry spikes per AAR rules.

Leading Edge Spike "Window Depth" - The distance from the start of the press to look for leading edge spikes.

The screenshot shows the 'Wheel Press Recorder v5' application window. The 'Press' tab is selected, and within it, the 'Misfits' sub-tab is active. The interface includes a top navigation bar with tabs for 'Press', 'Scanners', 'Charts', 'Options', 'Axles', 'Security', 'Database', and 'Version'. Below this, there are sub-tabs for 'General', 'Misfits', and 'DAQ'. The 'Misfits' sub-tab contains several configuration sections:

- Min Press Distance:** A text input field containing the value '5'. Below it, the text reads 'Misfit if this distance isn't reached'.
- Max Press Distance:** A text input field containing the value '9'. Below it, the text reads 'Misfit if distance is greater than this distance'.
- Detection Checkboxes:** A list of seven checkboxes, all of which are checked:
 - Detect High Tonnage Misfit
 - Detect Low Tonnage Misfit
 - Detect High Distance Misfit
 - Detect Low Distance Misfit
 - Detect Pressure Dip from 0.25 Inches thru 75% Line
 - Detect Pressure Drop after 75% and less than Min Tonnage
 - Detect Leading Edge Spikes from 0 thru 0.25 Inches
- Leading Edge Spike "Window Depth":** A text input field containing the value '0.25'.

At the bottom of the window, there is a status bar with buttons for 'Log Out', 'Press', 'Config', 'History', 'Trends', 'Calibrate', 'Diagnostics', and 'Setup'. The status bar also displays 'CONNECTED', 'PROGRAMMER (ADMINISTRATOR) [1]', 'opyright © 1996-2012, Arkansas Industrial Computing, Inc., All Rights Reserved', and 'Version 5.3.28.0'.

16 Press Tab - DAQ

Use the DAQ tab to select which type of Data Acquisition System will be used.

- Computer Boards DAS08
- OPC Server
- Wago PLC

The screenshot shows a software interface for configuring a Data Acquisition System (DAQ). The main window is titled 'Press Tab - DAQ'. The top navigation bar includes 'Press' (highlighted in blue), 'Scanners', 'Charts', 'Options', 'Axle Config', 'Security', and 'Version'. Below this, a sub-navigation bar shows 'General', 'Misfits', and 'DAQ' (highlighted in blue). The central area is a large white box containing a 'DAQ Type' label and three radio button options: 'ComputerBoards DAS08', 'OPC Server', and 'Wago PLC'. The 'Wago PLC' option is selected. At the bottom of the window, there is a status bar with several buttons: 'Log Out', 'Press', 'History', 'Trends', 'Calibrate', 'Diagnostics', and 'Setup'. To the right of these buttons is a digital clock showing '04:04 PM'. Below the status bar, a small text area contains the following information: 'CONNECTED', 'AIC (ADMINISTRATOR) [1]', 'Copyright © 1996-2012, Arkansas Industrial Computing, Inc., All Rights Reserved.', and 'Version 5.5.0.23'.

17 Press Tab - DAQ - OPC Server

If an OPC Server is selected use the tabs below:

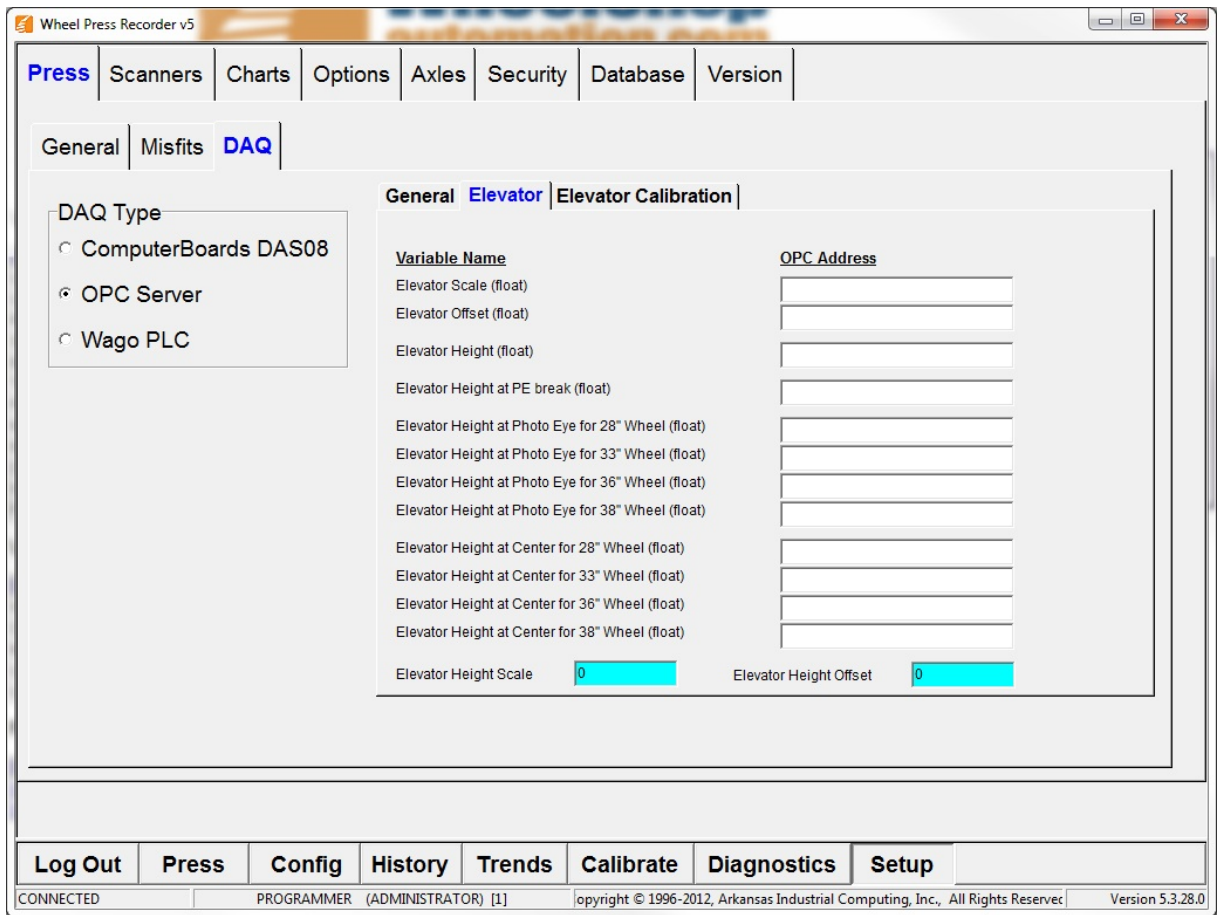
General Tab - use this tab to enter the sever name, general variable addresses, and set Max Force Fault setting (percentage or tons).

The screenshot displays the configuration window for the DAQ tab. The 'DAQ Type' is set to 'OPC Server'. The 'General' sub-tab is selected, showing the following configuration options:

- OPC Server Name:** [Empty text field]
- OPC Address:** A list of text input fields for:
 - PLC Status (string)
 - PLC Fault (string)
 - Filter Factor (float)
 - Max Force Fault (float)
 - Wheel Diameter (float)
 - Axle Length (float)
 - Press Enable (bit)
 - Wheel Release (bit)
 - Operator Alert (bit)
 - Wheel Present (bit)
 - Tape Size (float)
 - Misfit Detected (bit)
 - Press Ready (bit)
- Left Ram:**
 - Pressure Counts (float) *
 - Pressure Scale (float) *
 - Pressure Offset (float) *
 - Distance Counts (float) *
 - Distance Scale (float) *
 - Distance Offset (float) *
- Right Ram:**
 - Pressure Counts (float) *
 - Pressure Scale (float) *
 - Pressure Offset (float) *
 - Distance Counts (float) *
 - Distance Scale (float) *
 - Distance Offset (float) *
- Max Force Fault Setting:** 0 %
- Max Force Fault Setting Options:**
 - Percent above current Axle Max Force
 - Max Force in Tons

The bottom status bar shows: CONNECTED, AIC (ADMINISTRATOR) [1], Copyright © 1996-2012, Arkansas Industrial Computing, Inc., All Rights Reserved., and Version 5.5.0.23. The time is 04:08 PM.

Elevator Tab - use this tab to set the Elevator variable addresses, Elevator Height scale, and Elevator Height Offset.



Elevator Calibration Tab - use this tab to Set the Elevator Height at the Photo Eyes and Set the Elevator Height at Center of Mounting Press. Follow instructions listed below to calibrate each height.

Wheel Press Recorder v5
[Window Controls]

Press
Scanners
Charts
Options
Axles
Security
Database
Version

General
Misfits
DAQ

DAQ Type

ComputerBoards DAS08

OPC Server

Wago PLC

General
Elevator
Elevator Calibration

| Variable Name | OPC Value | | |
|--|---|---------|---|
| Elevator Height at Photo Eye for 28" Wheel | <input style="width: 50px;" type="text" value="0"/> | <<< Set | Elevator Height at PE break 0.0 |
| Elevator Height at Photo Eye for 33" Wheel | <input style="width: 50px;" type="text" value="0"/> | <<< Set | |
| Elevator Height at Photo Eye for 36" Wheel | <input style="width: 50px;" type="text" value="0"/> | <<< Set | |
| Elevator Height at Photo Eye for 38" Wheel | <input style="width: 50px;" type="text" value="0"/> | <<< Set | |
| Elevator Height at Center for 28" Wheel | <input style="width: 50px;" type="text" value="0"/> | <<< Set | Current Elevator Height 0.0 |
| Elevator Height at Center for 33" Wheel | <input style="width: 50px;" type="text" value="0"/> | <<< Set | |
| Elevator Height at Center for 36" Wheel | <input style="width: 50px;" type="text" value="0"/> | <<< Set | |
| Elevator Height at Center for 38" Wheel | <input style="width: 50px;" type="text" value="0"/> | <<< Set | |

Set the Elevator Height at Photo Eye

1. Load Wheelset in press and Manual Raise the elevator until stopped by the Photo Eye
2. Click the Set button above for the Elevator Height at Photo Eye setting for the correct wheel size

Set the Elevator Height at Center of Mounting Press

3. Manual Lower the elevator until it stops at the center setpoint
4. Click the Set button above for the Elevator Height at Center setting for the correct wheel size

Log Out
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18 Scanners Tab - Scanners

To add a New Scanner:

Click New

Enter name

Check Enabled

Select Wheel Number

Select Scanner Type

For Serial Scanner:

-Select Com Port

For Ethernet Scanner:

-Enter IP Address

-Enter TCP Port

For USB Scanner: (Note-USB Scanners are currently not supported)

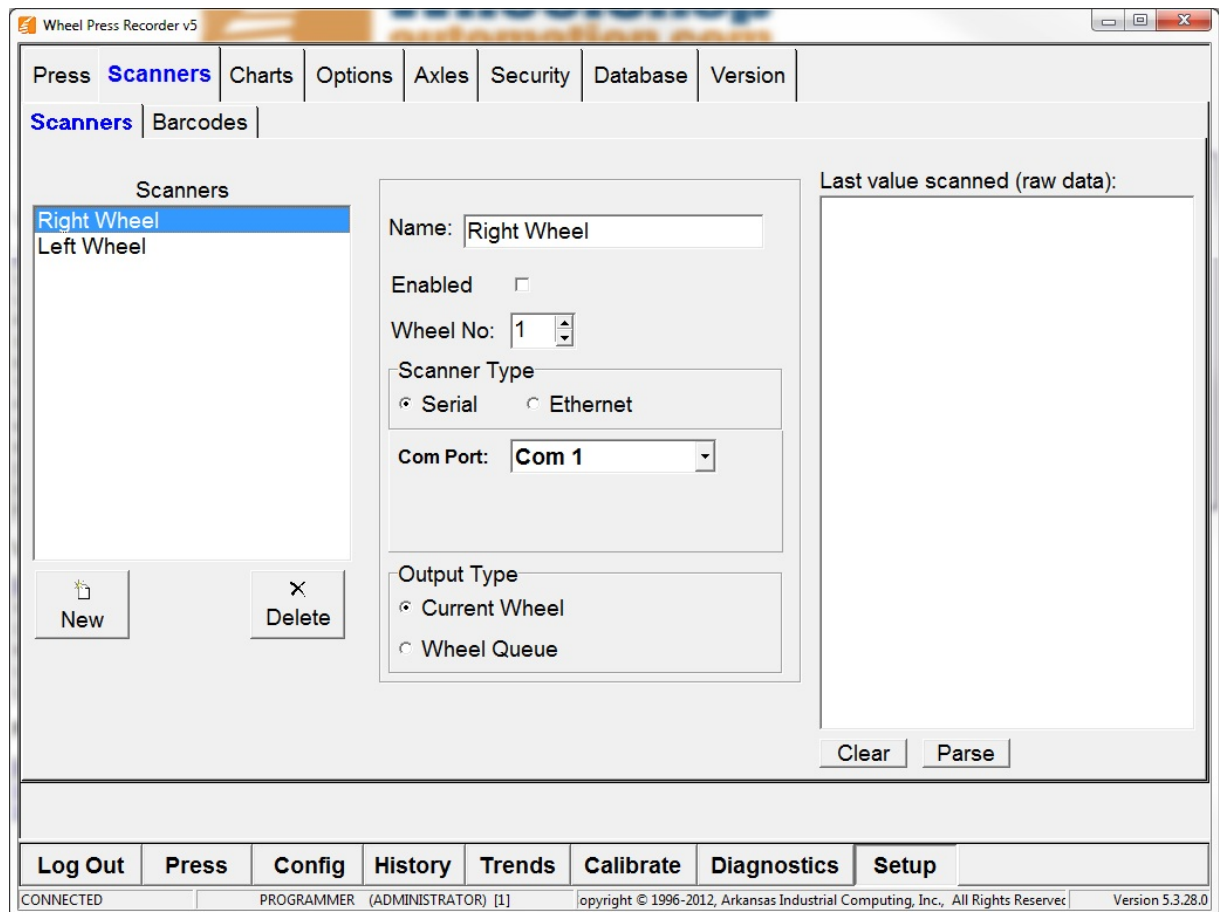
-Select the Associate button, the button will then turn Green.

-Scan a barcode with the USB scanner.

-The Scanner Serial Number will be displayed in the Scanner Serial Number field.

Select Output Type - Current Wheel

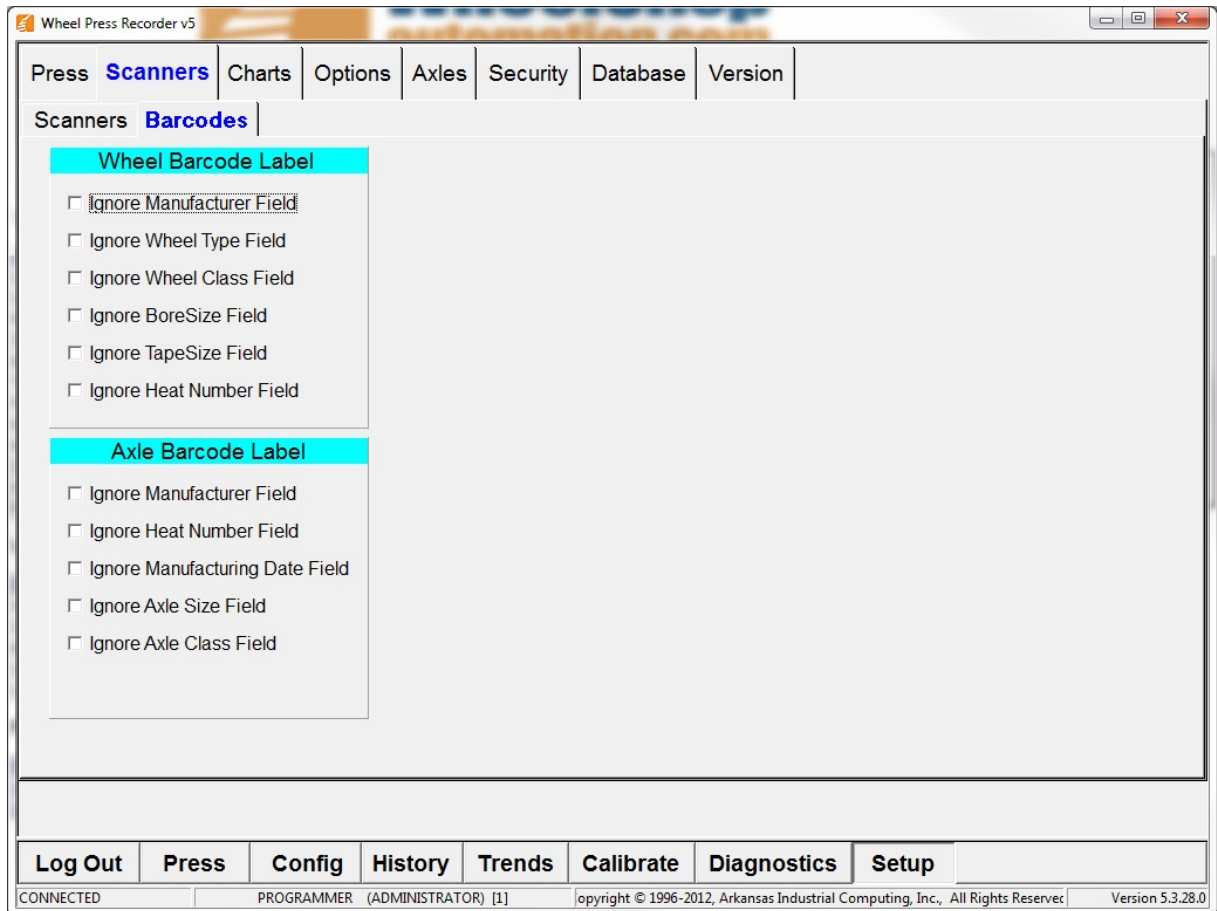
Last Value Scanned - insures the scanner is working properly by allowing the user to view what has been scanned.



19 Scanners Tab - Barcodes

Wheel Barcode Label Processing: Check the boxes for any fields from the Wheel Barcode Label which should be ignored.

Axle Barcode Label Processing: Check the boxes for any fields from the Axle Barcode Label which should be ignored.



20 Charts Tab

Select colors for the various parts of the mounting graph. Use the Chart Minimums and Chart Maximums buttons to set the chart scales. Check the Draw Mounting Charts Inverted checkbox to reverse the mounting graph orientation.

Check the Show Mounting Template checkbox to draw the AAR mounting template on all mount charts.

| | | | | | | |
|-------|----------|---------------|---------|-------------|----------|---------|
| Press | Scanners | Charts | Options | Axle Config | Security | Version |
|-------|----------|---------------|---------|-------------|----------|---------|

| | Screen | Printer |
|----------------------------|--------|---------|
| Chart Background Color | White | White |
| Chart Panel Color | White | White |
| Chart Title Color | Black | Black |
| Chart Axis Color | Black | Black |
| Chart Grid Color | Black | Black |
| Pressure Trend Color | Blue | Black |
| Min Tonnage Line Color | Lime | Black |
| Max Tonnage Line Color | Red | Black |
| Trend Tonnage 1 Line Color | Blue | |
| Trend Tonnage 2 Line Color | Yellow | |
| Template Line Color | Purple | |

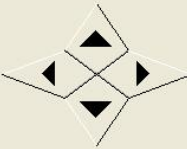


Chart Minimums

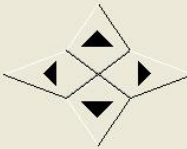


Chart Maximums

Draw Mounting Charts Inverted
 Show Mounting Template

| | Font Color | Back Color |
|-----------------|------------|------------|
| Distance Signal | White | Black |
| Pressure Signal | White | Black |

| | | | | | | | |
|-----------|-------|-------------------------|--------|--|-------------|-------|------------------|
| Log Out | Press | History | Trends | Calibrate | Diagnostics | Setup | 04:09 PM |
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21 Options Tab - Page 1

Wheel 1 Name - Display name for Wheel # 1.

Wheel 2 Name - Display name for Wheel #2.

Axle Name - Display name for the Axle.

Pressure Units - Display name for pressure units.

Distance Units - Display name for distance units.

Default Printer - Select the printer where all reports will be printed.

Prompt For Wheel Gage Result - If checked, a dialog will be presented to the operator to obtain results of the back-to-back measurement of the wheelset.

Measurement Frequency - How often to prompt the operator for a back-to-back measurement.

Press Sequence Number Reset - Select the method of resetting the press sequence number.

| | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|----------------|--|-------------|------------------|--------------|----------|---------|---|---|--------------|--|--|--|-----------------------------|--|--|---|---|---|
| Press | Scanners | Charts | Options | Axle Config | Security | Version | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td>Setup</td> <td>Pressing</td> <td>Reports</td> </tr> <tr> <td> Wheel 1 Name <input type="text" value="Wheel #1"/> Wheel 2 Name <input type="text" value="Wheel #2"/> Axle Name <input type="text" value="Axle"/> </td> <td colspan="2"> Default Printer <input type="text" value="HP LaserJet 1022n"/> </td> </tr> <tr> <td> Pressure Units <input type="text" value="Tons"/> Distance Units <input type="text" value="Inches"/> </td> <td colspan="2"></td> </tr> <tr> <td colspan="3" style="text-align: center;"> Press Sequence Number Reset </td> </tr> <tr> <td> <input type="radio"/> Reset on Time of Day <input checked="" type="radio"/> Reset on 1st Login of Day <input type="radio"/> Reset on Every Login <input type="radio"/> Reset on Shift Change </td> <td> Time To Reset SeqNo <input type="text" value="0"/> Hours <input type="text" value="1"/> Minutes </td> <td> <input type="checkbox"/> Prompt For Wheel Gage Result Measurement Frequency <input type="text" value="10"/> Wheelsets </td> </tr> </table> | | | | | | | Setup | Pressing | Reports | Wheel 1 Name <input type="text" value="Wheel #1"/> Wheel 2 Name <input type="text" value="Wheel #2"/> Axle Name <input type="text" value="Axle"/> | Default Printer <input type="text" value="HP LaserJet 1022n"/> | | Pressure Units <input type="text" value="Tons"/> Distance Units <input type="text" value="Inches"/> | | | Press Sequence Number Reset | | | <input type="radio"/> Reset on Time of Day <input checked="" type="radio"/> Reset on 1st Login of Day <input type="radio"/> Reset on Every Login <input type="radio"/> Reset on Shift Change | Time To Reset SeqNo <input type="text" value="0"/> Hours <input type="text" value="1"/> Minutes | <input type="checkbox"/> Prompt For Wheel Gage Result Measurement Frequency <input type="text" value="10"/> Wheelsets |
| Setup | Pressing | Reports | | | | | | | | | | | | | | | | | | | |
| Wheel 1 Name <input type="text" value="Wheel #1"/> Wheel 2 Name <input type="text" value="Wheel #2"/> Axle Name <input type="text" value="Axle"/> | Default Printer <input type="text" value="HP LaserJet 1022n"/> | | | | | | | | | | | | | | | | | | | | |
| Pressure Units <input type="text" value="Tons"/> Distance Units <input type="text" value="Inches"/> | | | | | | | | | | | | | | | | | | | | | |
| Press Sequence Number Reset | | | | | | | | | | | | | | | | | | | | | |
| <input type="radio"/> Reset on Time of Day <input checked="" type="radio"/> Reset on 1st Login of Day <input type="radio"/> Reset on Every Login <input type="radio"/> Reset on Shift Change | Time To Reset SeqNo <input type="text" value="0"/> Hours <input type="text" value="1"/> Minutes | <input type="checkbox"/> Prompt For Wheel Gage Result Measurement Frequency <input type="text" value="10"/> Wheelsets | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td>Log Out</td> <td>Press</td> <td>History</td> <td>Trends</td> <td>Calibrate</td> <td>Diagnostics</td> <td>Setup</td> </tr> </table> | | | | | | Log Out | Press | History | Trends | Calibrate | Diagnostics | Setup | 04:00 PM | | | | | | | | |
| Log Out | Press | History | Trends | Calibrate | Diagnostics | Setup | | | | | | | | | | | | | | | |
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22 Options Tab - Page 2

Require Serial Number Before Pressing - Wheel serial numbers must be entered before pressing wheels. WARNING - mount will not be recorded if serial numbers are not entered and the Press Enable output is not wired.

Detect Remounts by Duplicate Serial Number - When checked, a remount is detected by searching for a duplicate serial number.

Print Every Wheelset - When checked, a mount report will be printed after every wheelset is completed.

Print Only Misfit Wheelsets - When checked, a mount report will be printed for every wheelset containing a misfit.

First Wheel Mounted is the Left Chart - Controls whether Wheel #1 is displayed as the left or right chart.

Hide Distance and Pressure Readings on Press Page - turns off digital display of distance and pressure on the Press Screen.

Operator Must Acknowledge Misfits - When checked, a dialog box will be displayed for the Operator to acknowledge when a misfit is detected.

Supervisor Must Acknowledge Misfits - When checked, a dialog box will be displayed for the Supervisor to acknowledge when a misfit is detected.

Prompt Operator for Tape Size on every press - When checked, the operator must manually enter the wheel tape size.

Detect Remounts by Demount Log - When checked and a Misfit Tracking client is installed, remounts are detected by finding the wheel serial number in the demount log.

Prompt Operator for Axle Condition - When checked, the operator will be prompted to enter an Axle Condition.

Allow Operator to skip Wheels - When checked, the operator is allowed to skip wheels.

Show Remount button on Press Page - When checked, a remount button is shown on the Press Page.

Show Message when tape size is changed - Causes the text in the textbox to be displayed when the tape size is changed.

Use Watchdog Timer While Pressing Wheels - When checked, a timer is run after graph recording has started, if the timer times out the mount is forced complete.

Enable Tonnage Alarm - When checked, the Tonnage Alarm is enabled. This can be set on the Config page.

Disable Press While Waiting on Serial Numbers - When checked, the press will be disabled until serial numbers are scanned or entered.

Require wheel set present signal to press - Enables handshake bit with the wheelpress control system

Save wheelsets to queue - Enabling this option allows wheel information to be entered downstream in an automated system

Require serial numbers - Enabling this option requires wheel serial numbers to be entered before a wheelset can be saved

Double ended press - Enabling this option allows for calibration of a press with two pressing rams

Run unattended - Enabling this option suppresses all operator warnings. Use this option for a completely automated press

Require Axle Serial Numbers - Require axle serial number to be entered.

Require WIP ID Tag - When checked, a Work In Progress tag is required before a wheelset can be saved.

Require Component ID Tag - When checked a component ID is required before a wheelset can be saved

Require CEPM Data - Check to require data per CEPM requirements

| | | | | | | | |
|--|-------------------------|----------------|----------------|--|--------------------|------------------|--|
| Press | Scanners | Charts | Options | Axle Config | Security | Version | |
| Setup | Pressing | Reports | | | | | |
| <input type="checkbox"/> Require Serial Numbers Before Pressing | | | | | | | <input checked="" type="checkbox"/> Use WatchDog Timer While Pressing Wheels |
| <input type="checkbox"/> Detect Remounts by Duplicate Serial Number | | | | | | | WatchDog Timer (Seconds) <input type="text" value="60"/> |
| <input type="checkbox"/> Print Every Wheelset | | | | | | | |
| <input type="checkbox"/> Print Only Misfit Wheelsets | | | | | | | <input type="checkbox"/> Enable Tonnage Alarm |
| <input checked="" type="checkbox"/> First Wheel Mounted is the Left Chart | | | | | | | <input type="checkbox"/> Disable Press While Waiting for Serial Numbers |
| <input type="checkbox"/> Hide Distance and Pressure Readings on Press Page | | | | | | | <input type="checkbox"/> Require Wheel Set Present Signal to Press |
| <input type="checkbox"/> Operator Must Acknowledge Misfits | | | | | | | <input type="checkbox"/> Save Wheelsets to Queue |
| <input type="checkbox"/> Supervisor Must Acknowledge all Misfits | | | | | | | <input checked="" type="checkbox"/> Require Serial Numbers |
| <input type="checkbox"/> Prompt Operator for Tape Size on every press | | | | | | | <input type="checkbox"/> Double ended press |
| <input checked="" type="checkbox"/> Detect Remounts by Demount Log (Req Misfit Tracking) | | | | | | | <input type="checkbox"/> Run Unattended (suppress all warning) |
| <input type="checkbox"/> Prompt Operator for Axle Condition | | | | | | | <input checked="" type="checkbox"/> Always Require Axle Serial Numbers |
| <input checked="" type="checkbox"/> Allow Operator to Skip Wheels | | | | | | | <input type="checkbox"/> Require WIP ID Tag |
| <input checked="" type="checkbox"/> Show Remount Button on Press Page | | | | | | | <input checked="" type="checkbox"/> Require Component ID Tag |
| <input type="checkbox"/> Show Message when Tape Size is Changed | | | | | | | <input checked="" type="checkbox"/> Require CEPM Data |
| Message displayed to operator when tape size is changed | | | | | | | |
| <input type="text"/> | | | | | | | |
| Log Out | Press | History | Trends | Calibrate | Diagnostics | Setup | 11:42 AM |
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23 Options Tab - Page 3

Show Press Sequence Number on Mount Report - When checked, the Press Sequence Number will be shown on the Mount Report.

Show Bearings on Mount Report - When checked, Bearings will be shown on the Mount Report.

Show Journals on Mount Report - When checked, Journals will be shown on the Mount Report.

Show Remount Label on Mount Report for Remounted Wheels - When checked, a remount label will be shown on the Mount Report for remounted wheels.

Number of mount to show on Boring Mill Remote monitor - When checked, the mount number will be shown on the Boring Mill Monitor.

Barcode Printer - Set the printer that will be used to print Barcodes.

Barcode Font - Set the Barcode font.

Barcode Font Size - Set the Barcode font size.

Print Barcodes on a Single Label - When checked, Barcodes will be printed on a single label.

Print Barcodes After Every Press - When checked, Barcodes will be printed after every press.

Test - Press the Test Button to Print a test Barcode.

The screenshot shows the 'Options' tab in the 'Reports' section of the 'Wheel Press Recorder v5' software. The 'Options' tab is selected, and the 'Reports' sub-tab is active. The main content area contains several settings:

- Show Press SeqNo on Mount Report
- Show Bearings on Mount Report
- Show Journals on Mount Report
- Show Remount Label on Mount Report for Remounted Wheels
- Number of mounts to show on Boring Mill remote monitor: 25
- Barcode Printer: HP LaserJet 5000 Series PCL6
- Barcode Font: (empty dropdown)
- Barcode Font Size: 20
- Print Barcodes on a Single Label
- Print Barcodes After Every Press
- Test button (with printer icon)

The bottom of the window features a navigation bar with buttons for Log Out, Press, Config, History, Trends, Calibrate, Diagnostics, and Setup. The status bar at the very bottom displays 'CONNECTED', 'PROGRAMMER (ADMINISTRATOR) [1]', 'copyright © 1996-2012, Arkansas Industrial Computing, Inc., All Rights Reserved', and 'Version 5.3.28.0'.

24 Axles Tab

Press the New button to add a new axle configuration. Enter the information for the Axle Configuration and press the Save button.
Press the Edit button to edit information for the currently selected Axle Configuration.

| | | | | | | | |
|-------|----------|--------|---------|--------------------|----------|----------|---------|
| Press | Scanners | Charts | Options | Axle Config | Security | Database | Version |
|-------|----------|--------|---------|--------------------|----------|----------|---------|

| | | |
|--|-------------------------------------|----------------------------------|
| Configuration | | |
| <input type="text" value="5.5x10 (50 Ton)"/> | | |
| Class | Min Tons | Max Tons |
| <input type="text" value="D"/> | <input type="text" value="80"/> | <input type="text" value="130"/> |
| Length | <input type="text" value="86.125"/> | |

| | | | | | | | |
|---------|-------|---------|--------|-----------|-------------|-------|----------|
| Log Out | Press | History | Trends | Calibrate | Diagnostics | Setup | 01:55 PM |
|---------|-------|---------|--------|-----------|-------------|-------|----------|

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Configuration


Axle Class:

Min Tonnage:

Max Tonnage:

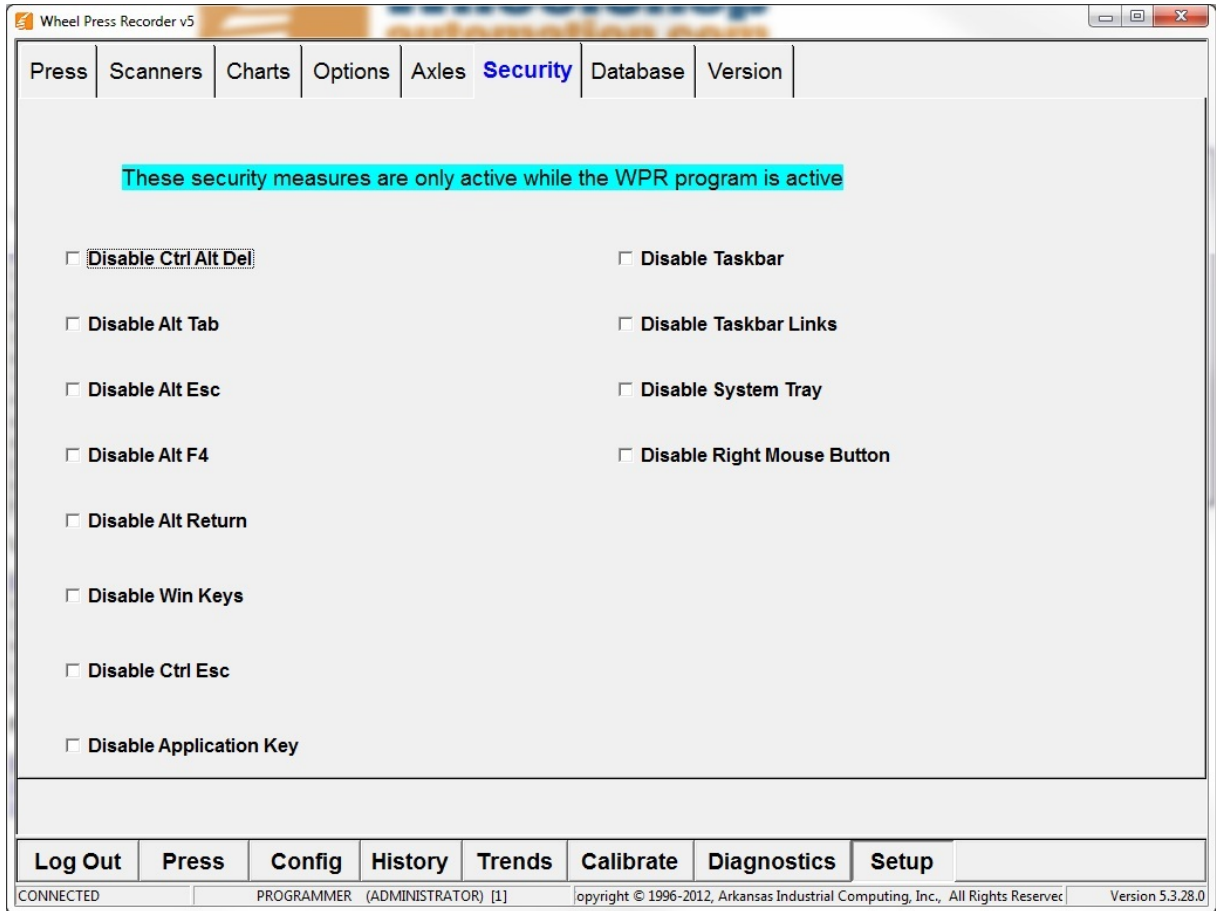
Axle Length:

 Cancel

 Save

25 Security Tab

Disabling these security measures are only active while the WPR program is active.

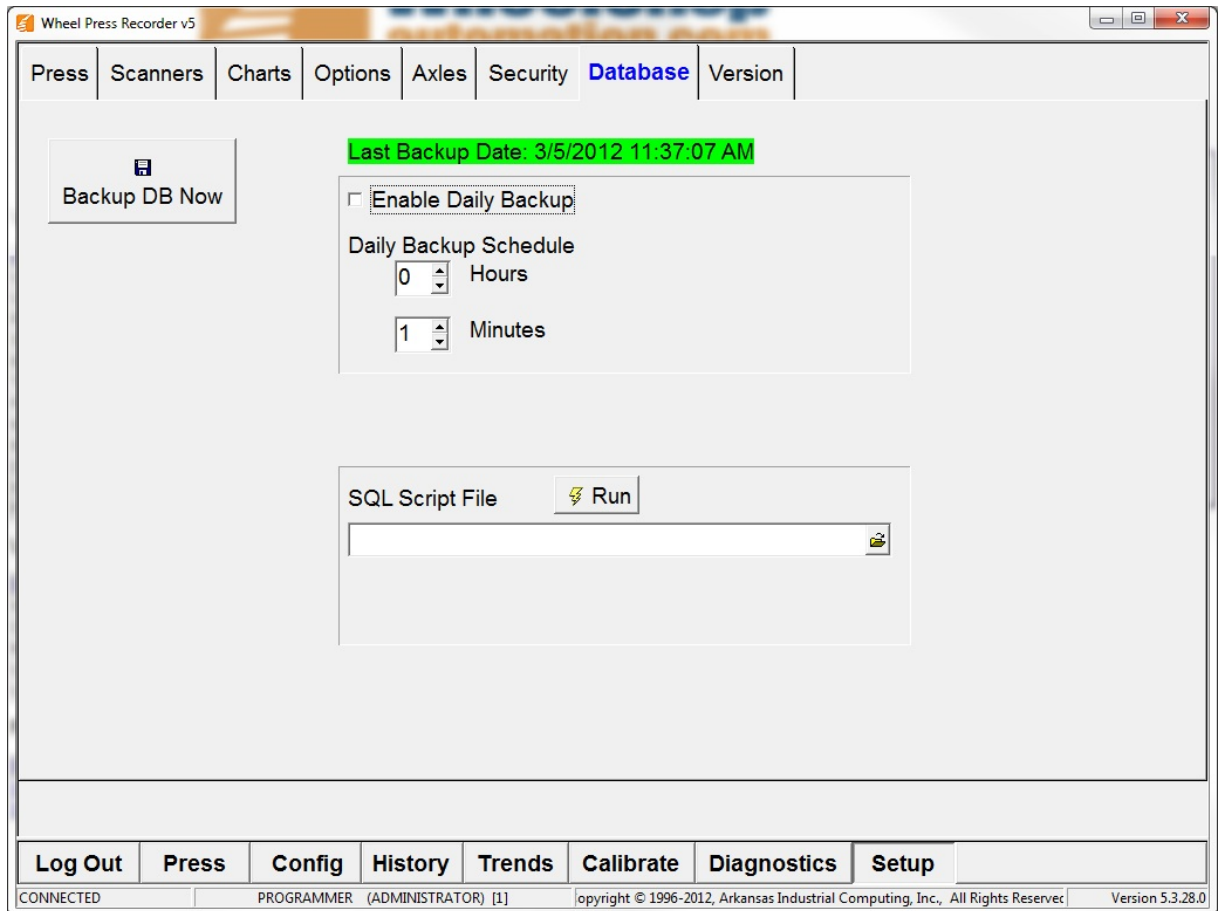


26 Database Tab

Backup DB Now - Select this button to backup the Database immediately.

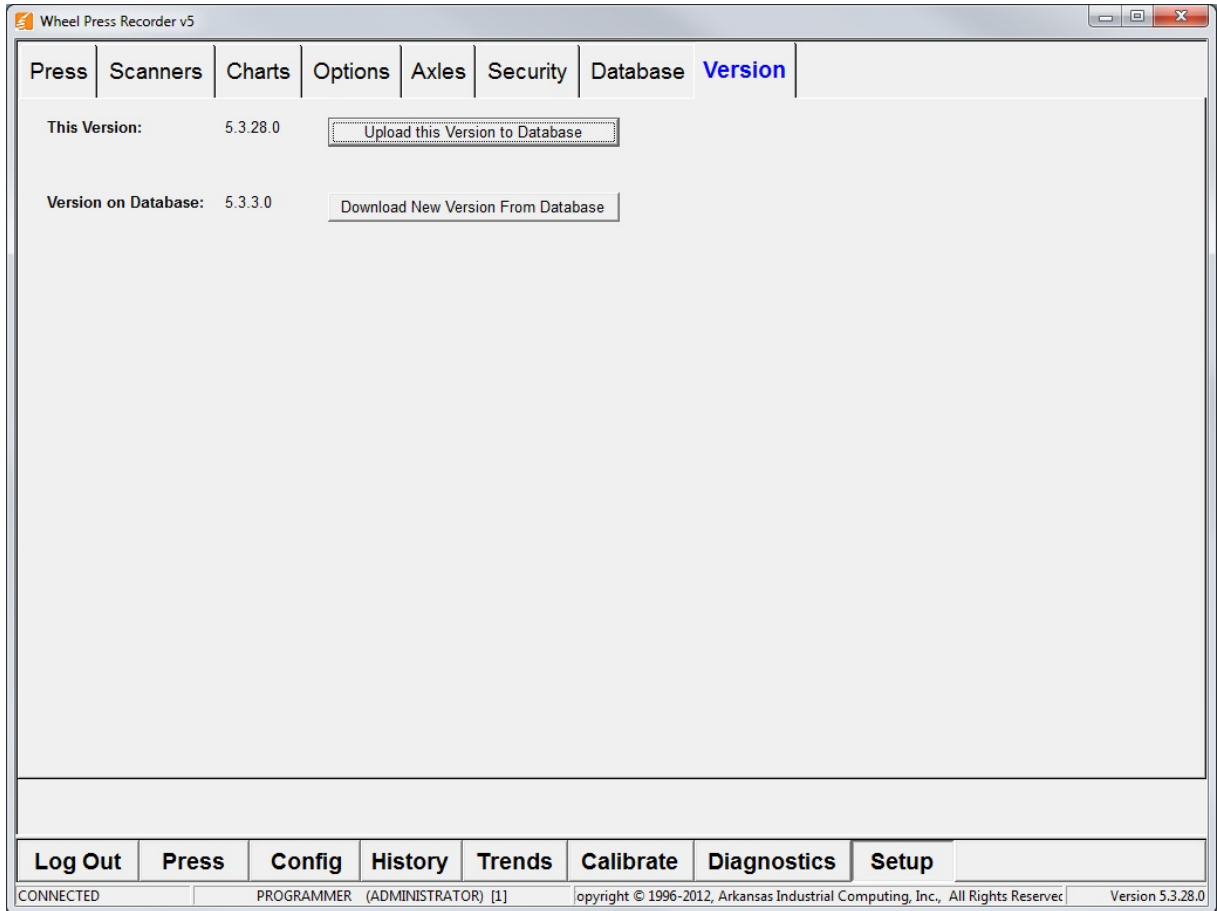
Enable Daily Backup - When checked, the Daily Backup of the Database is enabled. Daily Backup Schedule can be set using the Hours and Minutes boxes. This should be configured as a scheduled task in MS-SQL.

SQL Script File - browse for the SQL Script file that needs to be ran.

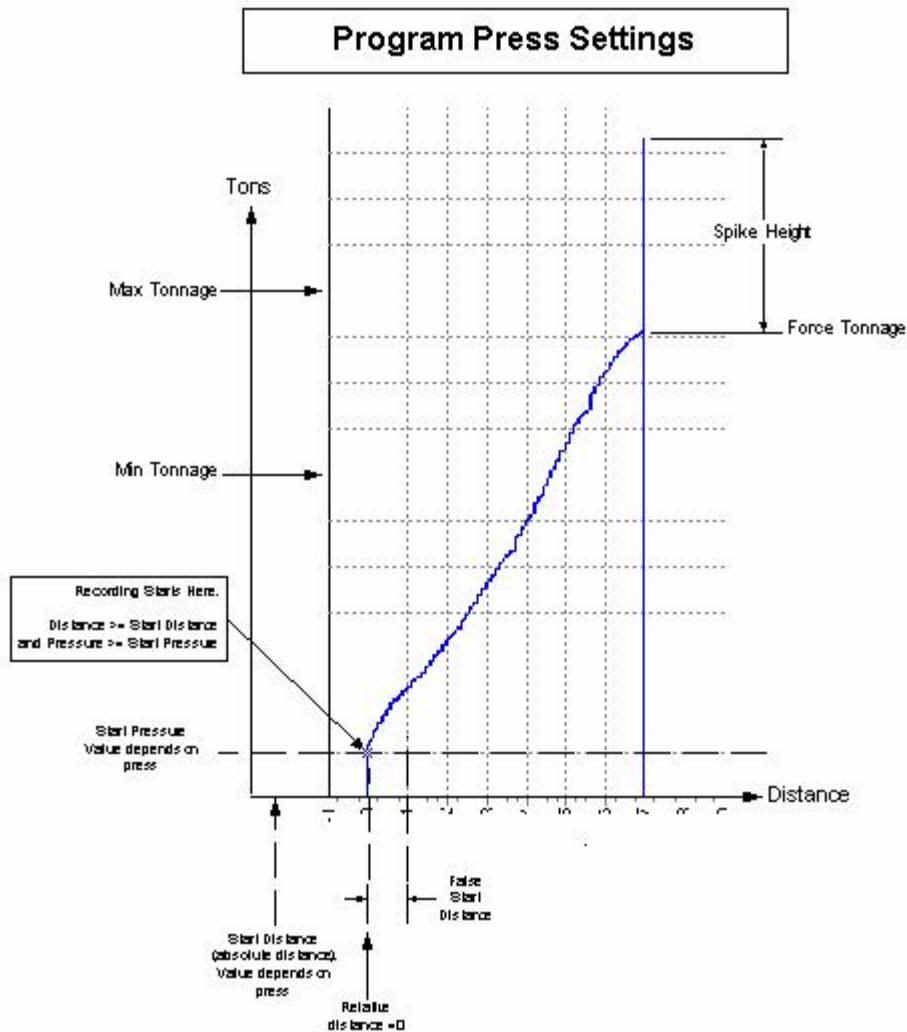


27 Version Tab

The Version Tab displays the current version of WPR and the version on the Database. The current version can be uploaded to the Database. The new version can be downloaded from the Database.



28 Press Settings



Notes:

1. Must meet start distance (absolute distance) and start pressure to begin recording.
2. Once recording begins, if pressure drops to below start pressure before false start distance is reached, the recording stops and distance resets to 0. This is to prevent recording 'bumping'.
3. Once the false start distance is exceeded then the chart is stored as is.