



Operation Manual

GAUGE BUSTER 3





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FORWARD

Gauge Buster 3 has been designed and constructed with great care in every phase of assembly. In order to insure reliability, both the mechanical and electrical components have been built with the best available materials. Nevertheless, it has been proven that a thorough understanding of the machine, together with proper attention, will return large dividends. The sections of this manual provide description and instruction on the operation and maintenance of the mechanical, electrical and software components.

You as a customer are our most valued asset. We take pride in our systems and are proud that you have become an owner. We welcome your comments about our products and wish that you express them. It is the only way that we can continue to build the best available test systems to satisfy your needs. Thank-you for your support.

HOW TO USE THIS MANUAL

This manual is intended to educate the customer on the capabilities, operation and maintenance of the **Gauge Buster 3**. In addition, it is to be used as a supplement for any information supplied by the load frame manufacturer. Maintenance procedures specified by the load frame manufacturer should be followed unless specifically noted herein. Read this manual and become familiar with the operation of your test machine prior to operating the **Gauge Buster 3**.

TECHNICAL SUPPORT

If a problem should occur with your testing machine:

1. Consult troubleshooting section on-line and in this manual
2. Check that all external inputs are properly connected.
3. Call the supplier/manufacturer of your test machine.
4. Call ADMET's technical support at (781) 769-0850 (9AM to 5PM EST) or email us at support@admet.com.

1.0. INTRODUCTION

The Gauge Buster 3 indicator is a low cost versatile indicator designed for a variety of materials, product, remote on-site and force calibration testing applications. Features include an Auto-Test-Reset mode for hands free operation, bar graph load rate display, permanent storage of test data and easy transfer of results into data base programs. Its accuracy, which exceeds ASTM E4, ease-of-use and ruggedness results in a system of unrivaled price/performance.

The Gauge Buster 3 is ideal for:

Tension/Compression	Cement Cube Testing
Concrete Cylinder & Beam Testing	Remote On-Site Testing
Force Calibration	Product Evaluation
Quality Control	Pre-Stressing Jacks
Proof Testing	



1.1. GAUGE BUSTER 3 FEATURES

- Display Live Load, Maximum Load, Live Stress and Maximum Stress numerically.
- Indicate Load/Stress Rate numerically or with a bar graph.
- The bar graph rate pointer moves between limits. Adjust the upper and lower rate limits depending on the testing requirements. Ex: ASTM C39 28-42 psi/sec.
- Activate average load rate analysis to calculate and report actual test speeds.
- Select between force units of lbf, N, kN, kg and stress units of psi, MPa, KPa, ksc.
- Define specimen geometries as cylinder, cube, beam center-pt. loading, beam-3rd pt. loading, round, flat and general area.
- Activate/De-Activate Cylinder ASTM C39 correction factor.
- Define cylinder break type according to ASTM C39.
- Perform beam tests according to ASTM C78 and C293.
- Store up to 2,000 test results to permanent memory. Results include: Date, Time, Specimen ID#, Maximum Load, Maximum Stress, Average Load Rate plus a statistical summary of each.
- Additional test information fields and calculations which the operator can activate and include with the results are: Operator ID#, Specimen Weight, Specimen Age, Cylinder Break Type, Cylinder Cap Type and Yield by Halt of the Pointer calculation.

- Pair a barcode reader (option) with the GB3 and accurately and effortlessly enter the Specimen ID# prior to each test.
- Store up to 6 test methods to permanent memory. Test methods enable the user to define and store cylinder, beam and cube test procedures to memory. With the press of a key they can be quickly recalled for efficient testing.
- Activate Auto-Store to automatically store the results of each test.
- Auto-Test-Reset is standard and automatically enables the indicator for the start of the next test without requiring operator interaction.
- Define and detect the end of test with the Sample Break Detector. Use the GB3 digital output to turn the testing machine pump motor off at sample break.
- Transmit via USB port XY data, test results and calibration data to a remote computer running ADMET's optional GaugeSafe software.
- Automatically transmit at the end of each test via the GB3 RS232 serial port test results or recorded XY data.
- An optional position channel can be purchased to measure displacement/deflection/extension.
- Increased log data buffer size from 15,000 to 20,000 data points per channel.
- Certify your testing machine to lower ASTM E4 force values with the GB3s low noise analog front end and digital filter.

1.2. GAUGE BUSTER 3 OPTIONS

- GaugeSafe™ Data Exchange Software (see Section 1.3)
- Rechargeable Battery with higher energy density 18650 lithium-ion batteries which allow for up to 20 hours of continuous operation between charges. Charging and fully charged indicator LEDs plus a power chord for charging are included.
- Optional Quadrature Encoder Channel Input for measuring displacement. Typically used with a linear or rotary encoder to measure displacement, deflection or strain. Live displacement and displacement rates can be viewed on the GB3 display. The recorded displacement data can also be transmitted real-time or post test to GaugeSafe for viewing or printing of force vs. displacement or displacement vs. time plots.
- Barcode Reader to quickly enter the Specimen ID# prior to each test.
- Shunt Calibration
- RS232 Transmit Cable

1.3. GAUGE BUSTER 3 REPORTING CAPABILITIES

1.3.1. GaugeSafe™ Data Exchange Program

GaugeSafe is a PC Windows based software program. Users transmit via the GB3 USB port XY data, results and calibration data to a remote computer running GaugeSafe. View or print recorded data and results from your PC. Export recorded XY data and test results to CSV files for import into spreadsheet and database programs. Transfer transducer calibration data to GaugeSafe, store calibration data to file for archiving.

2.0. KEY FUNCTIONS

2.1. The <ZERO/0> Key

The ZERO key performs the following functions.

- Defines a new zero load.
- Places the Indicator Test Status in Ready Mode.
- Clears out the previous test results from the test buffer and initializes the indicator for the next test. **Make sure the previous test was stored prior to pressing ZERO or it will be lost.**
- Enters the number zero.

2.2. The <STORE> Key

The STORE key writes the current test result which consists of peak load, date, time and specimen ID# to permanent memory then increments the specimen ID#. All results stored to memory can be printed or download to a remote computer.

2.3. The <ENTER> Key

The ENTER key performs the following functions.

- Accepts/assigns the value in a data entry field to that field.
- Turns ON/OFF a menu option.
- Toggles between display values on main indicating real-time screen.

2.4. The <ESC> Key

The ESC key performs the following functions.

- Returns to the Live Indicating Screen from any menu.
- Clears a data entry mistake by restoring the original number in a data entry field.

2.5. The <UP & DOWN ARROW> Keys

The ARROW keys allow the operator to scroll through menu items.

2.6. The <NUMBER> Keys

The NUMBER keys are used to select a menu option from within a menu or input a numerical value in a data entry field.

GB3 INDICATOR LAYOUT

Display while specimen under test:
Live Load and Load Rate Pointer shown between High and Low Rate Limits.

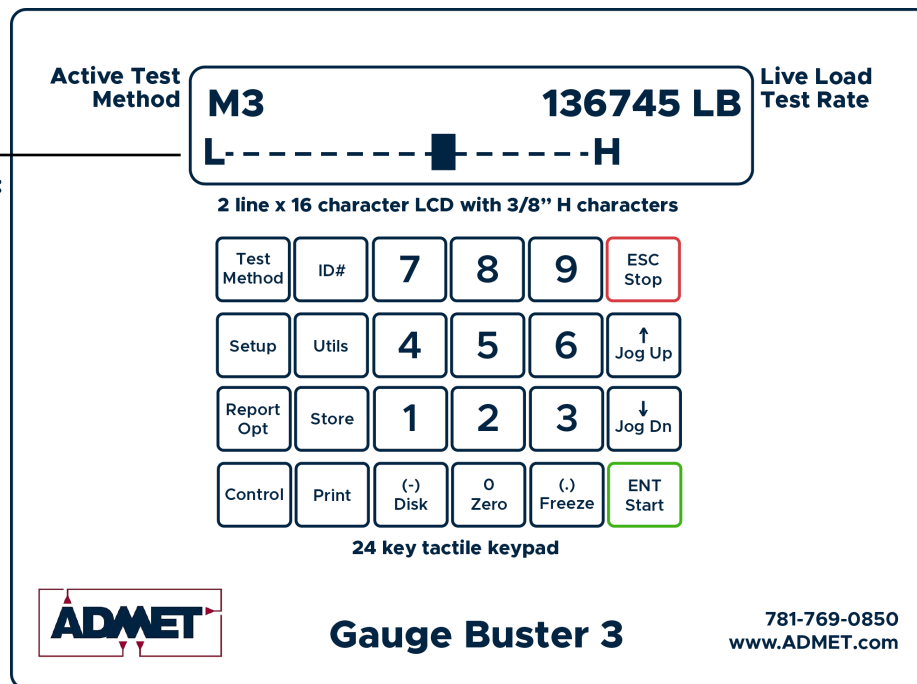
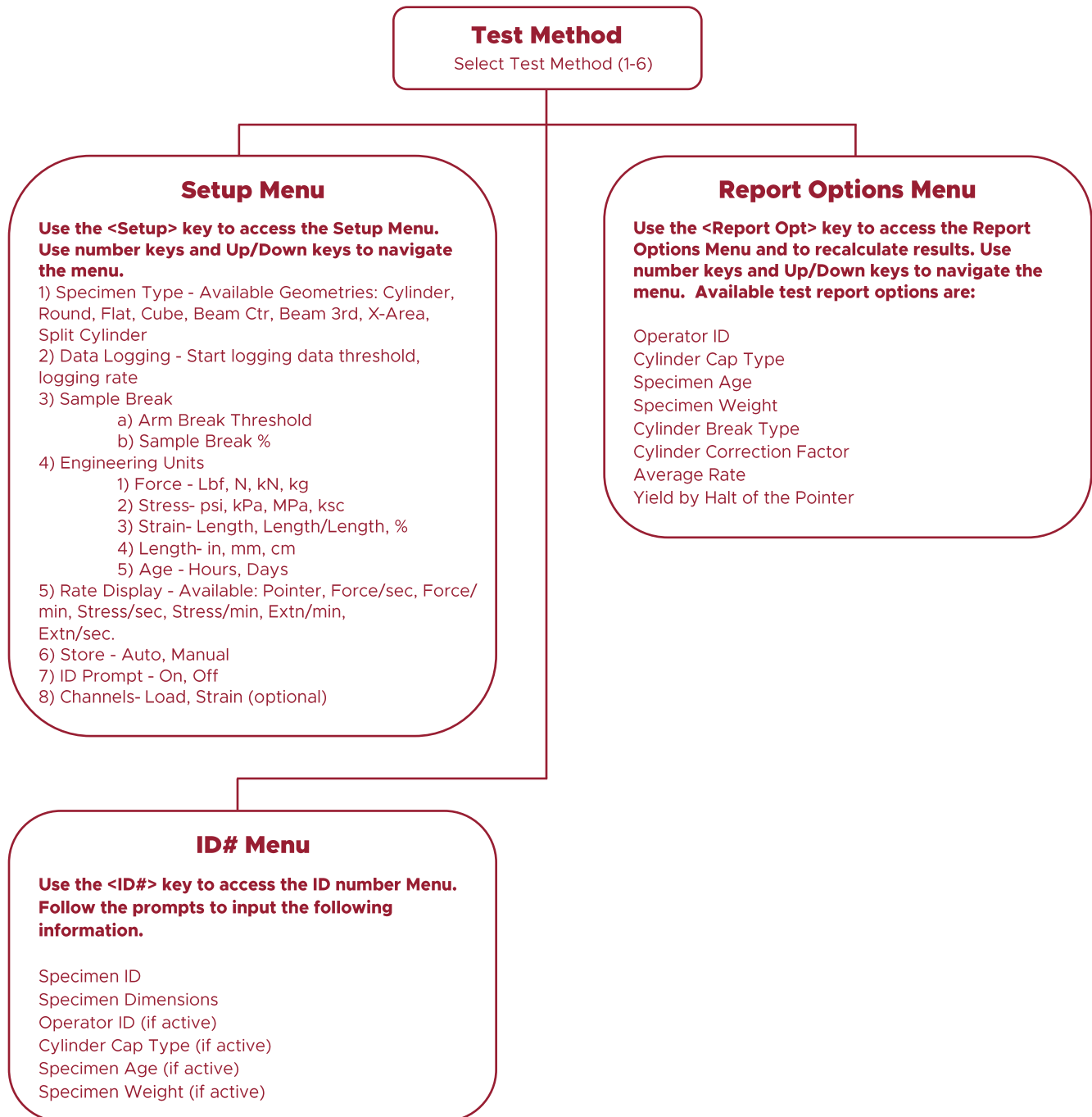


Figure 2.1 - Gauge Buster 3 Keypad and Screen Display

3.0. MENUS AND KEYS

3.0.1. Test Method Specific Menu Solutions

The Gauge Buster 3 can store up to 6 test methods. These menu items apply to the current selected test method and need to be set for each test method being used.



3.0.2. Global Menu Selections

These menu items are not test method specific.

Utils Menu

Use the number keys and Up/Down keys to navigate the menu.

- 1) Clear Results
- 2) Set Date/Time
- 3) Ck Trans & IO
- 4) Install Def
- 5) Supervisor (On/Off)
- 6) Stream
- 7) Com2
- 8) Calibrate

3.1. The Setup Menu

Press the <Setup> key from the Indicating Screen to enter the Setup Menu. Use the <ARROW> keys to scroll through the menu items. Use the <NUMBER> keys to select the menu item. The following functions are provided in the Setup Menu.

1. **Specimen Type.** Select the specimen type for the sample to be tested. After selecting the type of specimen, the appropriate dimensions are requested.
2. **Data Logging.** Specify the Logging Threshold (**Log Thresh**) and the Data Logging Rate (**Log Rate**) Log Threshold is the force value at which data logging begins. Make sure Rate is set correctly to ensure enough time to log all data during test.
3. **Sample Brk.** Select the threshold for arming sample break (**Brk Thresh**) and sample break percent age (**Sample Break (%)**). Sample Break is defined as a percentage of peak load and is used to define the end of a test. If Break Threshold is 1000lb, Sample Break (%) = 10 percent and the Maximum Load during test is 100,000 Lb, then the Gauge Buster 3 will be armed for sample break when the load exceeds 1000lbs and the test will end (data logging stops, Max Load/Max Stress displayed) when load drops below 10,000 lbs, which is 10% of the 100,000lb maximum.
4. **Engineering Units.** Used to select between load units of Lb, N, KN, and Kg, Stress units of PSI, Mpa, Kpa and ksc and rate units on a per second or per minute basis. Length units of in, mm and cm and Age units of days and hours.
5. **Rate Display**
 - a.) Choose type of load rate display with **Rate**-selection: Select between Load/min, Load/sec, Stress/min, Stress/sec OR Pointer. Pointer displays the load rate relative to defined lower and upper limits. The lower limit is marked as an "L" on the rate display line and the upper limit is marked as an "H" on the rate display line during a test.
 - b.) Also choose average time period for load rate calculation with **AvgTm**.
6. **Auto Store.** If **Store** is set to AUTO, the results are automatically written to the results buffer and the specimen ID# is incremented when sample break is detected. If **Store** is set to MAN, it is necessary to press the <STORE> at the end of test to save the test results to memory and increment the specimen ID#.
7. **Load Cell.** Use to select load cell. You can select between valid force calibrations set up in the calibration menu.

3.2. The Report Opt Menu

Press the <Report Opt> key from the Indicating Screen to enter the Report Options/Analysis Menu. Use the <ARROW> keys to scroll through the menu. Press the <NUMBER> keys to select the menu item. The following items are found in the Report Opt Menu.

1. **Report Options.** Choose which analyses and report parameters to activate. Use <Arrow> keys to scroll through items and toggle the 1) key to activate option. Available options include:

Oper ID:	Operator ID.	CylCorFact:	Cylinder Correction Factor
CylCapType:	Cylinder Cap Type	Statistics:	Statistics
SpecAge:	Specimen Age	Avg Rate:	Average Rate Calculation
Spec Wt:	Specimen Weight	Yld Halt:	Yield by Halt of Force
CylBrkType:	Cylinder Break Type	Avg Rate:	Average Rate Calculation
2. **ReCalc Results.** Recalculates all analyses.

3.3. The ID# Menu

Press the <ID#> key from the Indicating Screen to input the Specimen ID number. The Specimen ID number can be a maximum 10 digits long. Input the Specimen ID number and press <ENTER> to accept. Note: The Specimen ID number will be automatically incremented after the current test result has been printed or stored. You will then be prompted to enter dimensional information for your selected specimen. Prompts for any items enabled in the Report Options menu will follow the specimen dimensions prompt.

3.4. The Control Menu (Option)

1. Test Rate. Set the loading rate for the test (force / time)
2. Preload. put an initial force on the sample prior to test. Preload determines the value of that force.
3. Preload Rate. Set the rate in force / time to achieve preload conditions.
4. Start control. The megaforce controller is always controlled by force per unit time. If there is a space between the sample and the crosshead (crushing a cylinder etc) at the start of the test there will be no appreciable load no matter what voltage is sent to the actuator which can cause the crosshead to take off at the start of testing. The Start control allows the operator to manually send a voltage (set as a percent of full voltage) to move the crosshead to the start load (user defined here).
5. Hold Load. Set a load for the machine to stop at and maintain.
6. Control gains. Gains control how the motor interprets the voltage sent to it. The Position Integral and Derivative terms effects are shown in the table below. For better control at lower force values the gains can be set high enough to create instability at the higher force values. To adjust for this the gain shift option exists. Set the gain shift for the desired gains drop percentage. Shift 1 and 2 are the locations by percent of full scale of machine to implement the gain shift.

Gain	Rise Time	Overshoot	Setting Time	S-S Error
Proportional	Decreases	Increases	Little Effect	Decreases
Integral	Decreases	Increases	Increases	Eliminates
Derivative	Little Effect	Decreases	Decreases	Increases

3.5 The Utils Menu

Press the <Utils> key from the Indicating Screen to enter the Utils Menu. Use the <ARROW> keys to scroll through the menu. Press the <NUMBER> keys to select the menu item. The following items are found in the Utils Menu.

1. **Clear Results.** Erase all test results stored in the results buffer. Make sure you have printed the data before erasing memory.
2. **Set Date and Time.**
3. **Ck Trans-DOUT and I/O.** This function displays Input/Output status as well as the transducer readings in A/D counts. Possible A/D values are between -2,200,000,000 and +2,200,000,000.

4. **Install Defaults.** Used to put all setup parameters in a known default state. **Installing defaults DOES NOT effect any of the calibration information.**
5. **Supervisor.** Select Supervisor ON or OFF. This is a password protected field. With Supervisor set to ON, the user has full access to all menus. **With Supervisor set to OFF, the user has access to the ID# field only.**
6. **Stream.** Toggle to ON to stream XY data to GaugeSafe Data Exchange Program.
7. **Com2.** Set Com2 RS232 output format. Options are full and basic.
8. **Calibrate.** Calibrate a load cell according to ASTM E4 standards, See Section 5.0 for calibration procedures. Users can also edit calibrations from the Calibration Menu.

3.6. The Print/Host Menu

The Host menu contains options for transmitting data to the GaugeSafe Data Exchange Program. GaugeSafe is not included with the Gauge Buster 3 and must be purchased separately.

The following items are found in the **Host PC** menu:

1. **XY Data -> Host.** Transmit XY data from the current test to GaugeSafe.
2. **Results -> Host.** Transmit stored test results to GaugeSafe.
3. **Method -> Host.** Transmit Test Methods to GaugeSafe.
4. **Cal -> Host.** Transmit calibration to GaugeSafe.

4.0. OPERATION

4.1. How to Set Up a Test

You can store up to 6 test methods in the Gauge Buster 3. Test methods can be transferred to the GaugeSafe Data Exchange software for record keeping.

Section 4.1 describes how to setup for a test. Section 4.2 describes how to perform a test and store the results to memory. Section 4.3 describes how to generate test reports. Section 4.4 describes how to download the stored test results to a remote PC.

Step 1: Press <SETUP> from the Indicating Screen. From the SETUP Menu select the following and enter values for each.

Specimen Type	Specimen type to be tested, Cylinder, Cube, Beam Ctr, Beam 3rd, Round or Area.
Data Logging	Set Logging Threshold. When the logging threshold load value is exceeded, data logging begins and the test starts. Set the Data Logging rate appropriate to your test. As data logging rate increases, total test time buffer decreases. The total test time for each data logging rate is displayed in menu item. Make sure enough time is allocated to record the entire test.
Sample Break	Set the Break Threshold to a load value where you want the Gauge Buster 3 to be armed for sample break. This value needs to be greater than the data logging threshold. Set Sample Break % to define when the test terminates as a percentage of peak load. For example, if Break Threshold is 1000lb, Sample Break (%) = 10 percent and Maximum Load during test is 100,000 Lb, then the Gauge Buster 3 will be armed for sample break when load exceeds 1000lbs and the test will end (data logging stops, Max Load/Max Stress displayed) when load drops below 10,000 lbs, which is 10% of the maximum of 100,000lbs.
Rate Display	Set Rate Display to force/sec; force/min; stress/sec; stress/min or Pointer. If pointer then set the low rate and the high rate: Rate-Lo. Enter the lower rate limit, marked as "L" in the rate display. Rate-Hi. Enter the upper rate limit, marked as "H" in the rate display.

NOTE: If Specimen Type is set to Cylinder, then lo and hi rate values automatically set to appropriate value as specified by ASTM C39.

Engineering Units	Set load units to Lb, N, KN or Kg. Set stress units to psi, kPa, MPa, or ksc. Set length units to in, mm or cm, Set Age units to Days or Hours
Auto Store	Select if you want to automatically store every test result.
Load Cell	Select the load cell number if necessary.

See Section 3.1 for more information.

Step 2: Press <UTILS> from the Indicating Screen. Clear results from memory. Note: If the stored results are important, print before clearing. See Section 3.3 for more information.

Step 3: Press the <ID#> from the Indicating Screen. Input the specimen ID#. The specimen ID# will automatically increment after the current test is stored. If any Report Options have been turned ON, additional prompts will follow.

4.2. How to Perform a Test and Save Results

If the steps in Section 4.1 were followed, you are now ready to perform a test. The current test settings are saved in permanent memory and will not change unless they are modified by the operator.

Step 1: Insert the specimen in the machine and move the crosshead to the desired starting position. If using a hydraulic machine, float the piston by moving off it's stop.

Step 2: Press the <ZERO> key to tare any residual load from the readout.

Step 3: Begin loading the specimen. Once the load exceeds the start test threshold value, the lower display line will change to the specified rate display (load/stress rate or pointer). Once the load exceeds the break threshold the Sample Break detector is armed.

Step 4: Once sample break is detected the test is complete and the lower display line will show peak load. If Auto Store is turned ON, the results will be saved to memory. If Auto Store is turned OFF, press <STORE> to save the current test results. Note: If you do not press <STORE> before pressing <ZERO> or the start of a new test, the results will be lost.

To continue running tests, repeat Steps 1, 3, 4.

NOTE: The Gauge Buster 3 is designed to operate in a "hands free" mode. This means that once it has been setup and properly zeroed, the operator should not have to touch the keypad. If a test result is stored, the specimen ID# will automatically increment.

READY and TESTING are the two possible Indicator Modes.

4.2.1 Indicator Live Screen During Test

Display while specimen under test:
Live Load and Load Rate Pointer shown between High and Low Rate Limits.

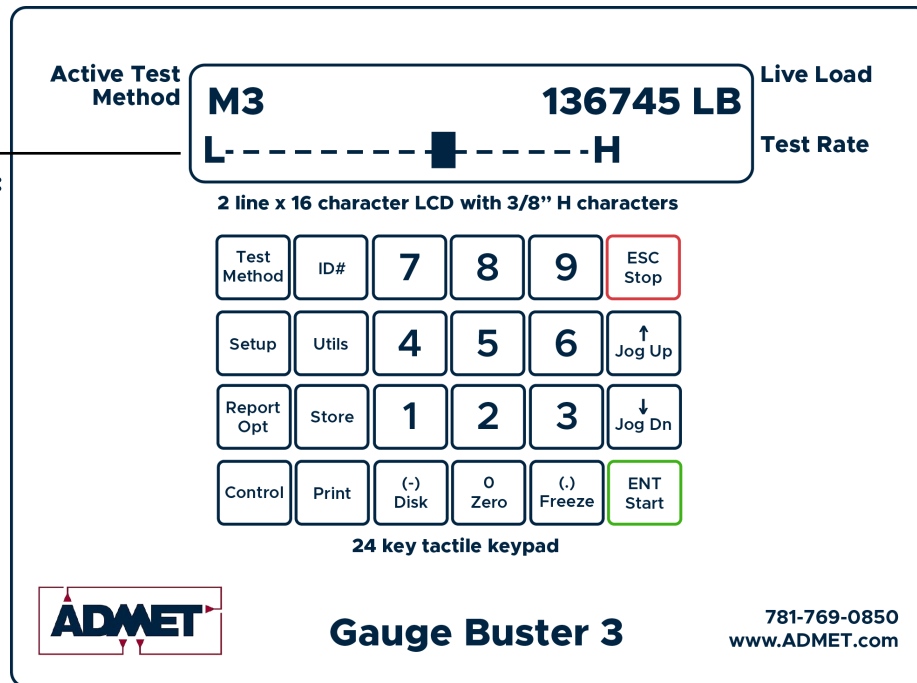


Figure 4.2.1 - The Live Indicating Screen Testing

4.2.2 Indicator Live Screen End of Test/Ready Mode

Display after specimen break detected:
Live Load is displayed on the first line and Peak Load and Peak Stress toggle automatically on the second line.

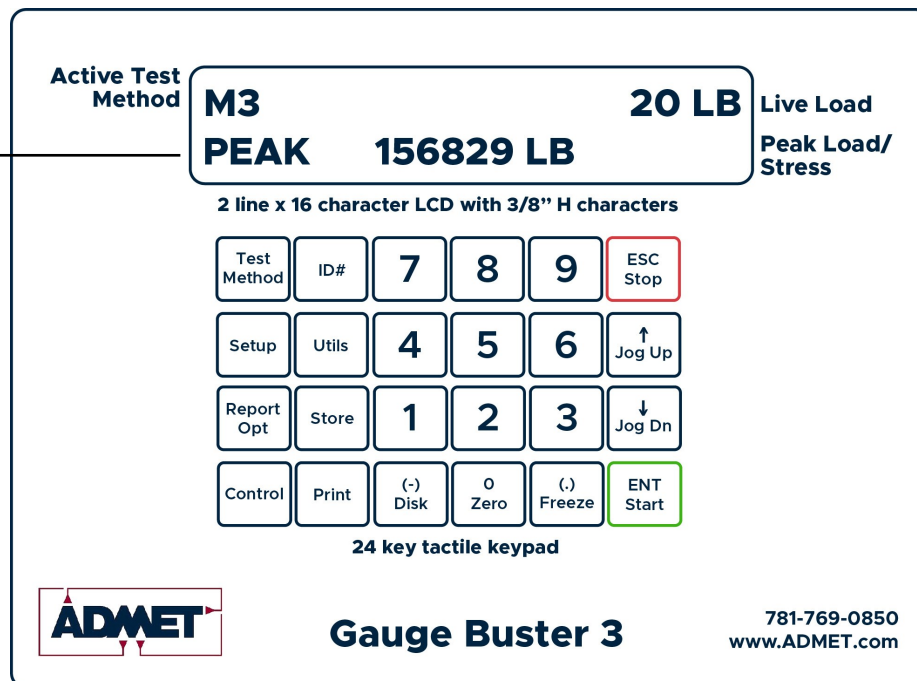


Figure 4.2.2 - The Live Indicating Screen End of Test/Ready Mode

4.3. Download Test Results to a Remote PC

A data transfer cable and GaugeSafe Data Exchange Software manufactured by ADMET is required to download data to a remote PC. Refer to the GaugeSafe Data Exchange program manual for downloading data to a computer.

5.0. CALIBRATION

Refer to Section 7.1 for details on transducer connections.

5.1. How to Calibrate Analog Transducers

You can calibrate up to 6 load cells to the Gauge Buster 3. There can be up to 5 points in each calibration.

Step 1: Turn on the system and allow it to run for 10 minutes before calibrating.

Step 2: Select the Engineering Units for calibration from the SETUP Menu. See Section 3.1 for more information.

Step 3: Select <8> Calibrate from the Utils Menu.

Step 4: Enter the password. Contact ADMET technical support if you have lost the password.

Step 5: Enter the load cell number. Use zero if your system has only one load cell.

Step 6: Input the full scale range or the capacity of the machine. The range should be input in the currently active engineering units.

Step 7: Input the resolution or minimum load increment.

Step 8: Press <1> Set Cal Points to enter the measure mode or <ESC> to exit.

NOTE: If you decide to exit the Calibration Menu at this time the values entered for Full Scale and Resolution will be saved.

Required Information Before Continuing Calibration

The program will enter the measurement mode if <1> is pressed in Step 8. During this mode, the technician can take up to ten calibration point readings (a minimum of 2 points is required).

NOTE: The first calibration point must be at zero load.

It may be beneficial to take a few more calibration readings in areas of greatest inaccuracy. The number next to **"Set PT No"** on the display will indicate how many calibration readings have been taken. As the calibration points are entered, write down the corresponding load value. After all ten calibration points have been taken, or the <STORE> key is pressed when using less than ten points, the **Gauge Buster 3** automatically switches to engineering input mode. Input the load value corresponding to each calibration point reading stored. The calibration points are stored sequentially. The first point is zero followed by the second, third and so forth. Once an engineering unit value has been entered for each calibration point stored, the unit will automatically save the calibration.

NOTE: Display will prompt for **Set PT No 0** when setting the first point. The first point in the calibration **MUST** be zero load. After all of calibration points have been stored, the first Engineering unit value entered will be 0. The prompt for this will be **PT(1)**.

Step 9: Unload the machine or place the transducer at its zero point. If calibrating a hydraulic machine, float the piston before taking any readings. Press <ENTER> to take the zero reading. The left side of the display will indicate PT1 has been read.

Step 10: Load the machine to a desired load and press <ENTER> to set a calibration point (voltage measurement). The voltage value is NOT displayed but it has been saved to nonvolatile memory. Write down the corresponding engineering unit value for each calibration point. Repeat this step until all readings are taken.

Step 11: Press <STORE> to exit the measurement mode if fewer than ten calibration points are used. The program will automatically proceed from Step 10 to Step 12 after the tenth reading.

Step 12: Input the corresponding engineering unit value for each measurement point. After all values have been entered, the program will automatically generate the corresponding scale factors and store them to permanent memory.

DONE! READY TO VERIFY CALIBRATION

Step 13: To verify the calibration, exit out to the Indicating Screen and apply specific loads to the machine and compare the reading on the indicator with the standard.

Step 14: If you choose to adjust one or some of the calibration points, press **2) Edit Values** during Step 8 above. Note: to get to Step 8 you will need to start at Step 3 first. This function will allow you to edit load values for one, some or all calibration points without forcing you to repeat Steps 2-12.

5.2 What Occurs During Calibration

The calibration procedure allows up to ten calibration points to be entered. Each successive pair of points is connected by a straight line and the slope of each line is the calibration scale factor used for that region. This results in a piecewise linear function which maximizes accuracy.

5.3 Saving Calibration Data

All calibration data can be transferred to the GaugeSafe Data Exchange software running on a remote PC if purchased with the unit.

6.0. TROUBLESHOOTING

Gauge Buster 3 Troubleshooting		
Problem Description	Possible Causes	Action
Not holding peak load OR Not tracking load while machine actually loading and breaking sample OR Rate Bar not being displayed	Sample break threshold and sample break % settings	NOTE: The Gauge Buster 3 digital goes into TESTING MODE when the actual load exceeds the programmed load threshold value. When the Gauge Buster 3 Digital is in the TESTING MODE, the live load is displayed on the upper right and the load rate bar or load rate is displayed in the bottom of the display. If you do not see the load rate bar or the numeric load rate in the bottom display then you are NOT in the testing mode and you need to look at your data logging threshold value. Ensure that the Break Threshold (Sample Brk menu item in the Setup menu) is set to a value that is appropriate for the test. Break Threshold is the point where the Gauge Buster 3 digital is armed for sample break. If the break threshold is too low then a load drop in the early part of the test could trigger the Gauge Buster 3 to detect premature specimen break (end of test) and stop logging data. For example, if the Break Threshold is set to 10lbs (much too low) and the sample break percentage is set to 50% and the load climbed to 20lbs and then dropped to 10lbs the Gauge Buster 3 would detect sample break, stop logging data and report a peak load of 20lbs. Ensure that Sample Break (SETUP, End of Test menu) is set appropriately. Sample Break is defined as a percentage of peak load and is used to define the end of a test. If Sample Break = 10 percent and Peak Load = 100,000 Lb, then the test will terminate when the load drops below 10,000 Lb. Setting sample break percentage to 0 disables it so the Gauge Buster 3 will continue logging data until the test buffer is full. If the sample break percentage is set too high then end of test can be triggered early.
	Applying Load too quickly after taring Gauge Buster 3	NOTE: The Gauge Buster 3 is designed for hands-free operation. You should only need to zero the digital once. It is not necessary and NOT recommended to zero the digital prior to each test. Doing so can prevent the digital from going into Testing Mode and not recording the peak load. If you do not see the rate bar or load rate display on bottom line of the display it then the digital is not going into testing mode. Ensure that you are that you are waiting at least 3 seconds after zeroing digital before running a test (applying load to your break machine).

Gauge Buster 3 Troubleshooting (Cont'd)

Problem Description	Possible Causes	Action
Load Reading Wrong	Calibration	Ensure that correct load calibration is selected. The Active Calibration # is displayed in the upper left of the live screen. The Gauge Buster 3 can store up to six load cell calibrations.
	Analog/Digital Electronics	Contact ADMET technical support.
	Excitation Voltage bad	Contact ADMET technical support.
	Load Transducer Cable	Replace/fix transducer cable NOTE: refer to See Electrical/Mechanical Data section of this manual for cable wiring information.
	Load Transducer	Replace load transducer
Stress Reading Wrong	Specimen Information	Stress is a calculated value. It is equal to the load divided by the programmed specimen cross-sectional area. Ensure that Specimen Type and specimen dimension information is correct in the Setup menu.
Load Reading Unstable	Calibration	Ensure that there is a valid calibration in the selected load channel. A valid calibration has at least two points, the first point MUST be zero, appropriate full scale and resolution settings and a good A/D count span between the points in the calibration.
	Analog/Digital Electronics	Contact ADMET technical support.
	Excitation voltage bad	Contact ADMET technical support.
	Load Transducer Cable	Ensure that cable gain strap is properly wired for transducer being used. Replace / fix transducer cable. NOTE: refer to See Electrical/Mechanical Data section of this manual for cable wiring information.

7.0. ELECTRICAL/MECHANICAL DATA

7.1. User Connections

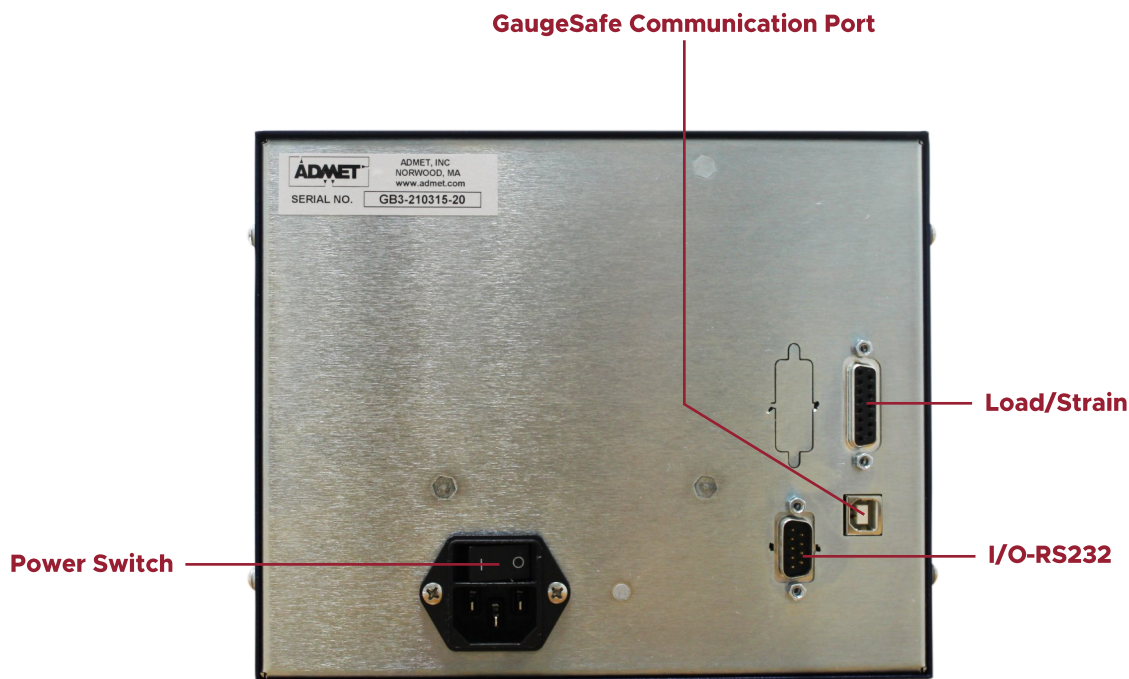
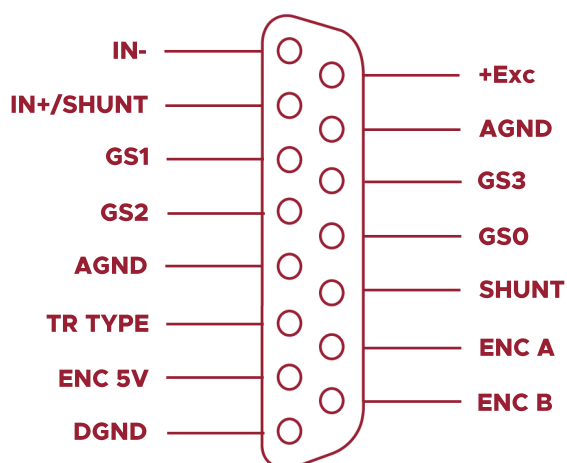


Figure 7.1.1 - Gauge Buster 3 Rear Connection Panel



Analog Channel Connections

Analog-Load Input

Analog Excitation:

pins 9 & 10 (+Exc & AGND)
5 Vdc

Analog Inputs:

Analog Input Range:

up to 2.5 mv/v Tie pin 3 to pin 12
up to 4.5 mv/v Tie pin 4 to pin 12
+/- 5 V No Connection
User definable Tie <25 ppm/C resistor
between pin 11 & pin 12.
Gain = 1 + 50000/Rg.

Connect all shields to chassis.

Transducer Identification (Contact Factory)

Figure 7.1.2 - Analog Transducer Pin Designation

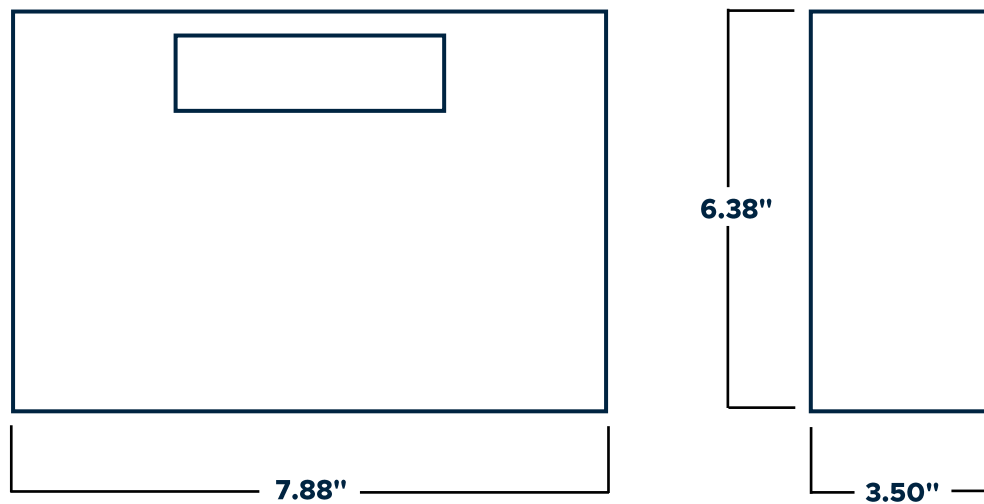
7.2 USB Port

The USB port is used to transmit exchange data with GaugeSafe Data Exchange software.

7.3 Power (AC) Input

The Gauge Buster 3 Power requirements: 85 to 265 VAC (50 - 60Hz).

7.4 Dimensions



7.5 Password

Factory Password: 268

Use this for calibration and other password protected areas, except **Set Load Cell** in **SETUP** menu.

Password for Load Cell Select: 157

ADMET suggests removing this page from the manual and placing it in a safe place.

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