

Industrial Terminal User's Guide Software Revision T

> C14553900A (**5/99)**

This manual describes the operation and functionality of the JAGUAR terminal containing software revision T. The software number is displayed during the power-up sequence.

Copyright 1999 Mettler-Toledo, Inc. This documentation contains proprietary information of Mettler-Toledo, Inc. It may not be copied in whole or in part without the express written consent of Mettler-Toledo, Inc.

METTLER TOLEDO reserves the right to make refinements or changes to the product or manual without notice.

U.S. Government Restricted Rights Legend: This software is furnished with Restricted Rights. Use, duplication, or disclosure of the Software by the U.S. Government is subject to the restrictions as set forth in subparagraph (C) (1) (ii) of the Rights in Technical Data and Computer Software clause at 40 C.F.R. Sec. 252.227-7013 or in subparagraphs (c) (1) and (2) of the Commercial Computer Software-Restricted Rights clause at 40 C.F.R. Sec. 52-227-19, as applicable.

Declaration of Conformity

Konformitätserklärung Déclaration de Conformité Declaración de Conformidad Verklaring de Overeenstemming Dichiarazione di Conformitá

We/Wir/Nous/WU/Noi: Mettler-Toledo, Inc. 1150 Dearborn Drive Worthington, Ohio 43085 USA

declare under our sole responsibility that the product,

erklären, in alleiniger Verantwortung, daß dieses Produkt, déclarons sous notre seule responsabilité que le produit, declaramos, bajo nuestra sola responsabilidad, que el producto, verklaren onder onze verantwoordelijkheid, dat het product, dichiariamo sotto nostra unica responsabilitá, che il prodotto,

Model/Type: Jaguar

to which this declaration relates is in conformity with the following standard(s) or other normative document(s). auf das sich diese Erklärung bezieht, mitder/den folgenden Norm(en) oder Richtlinie(n) übereinstimmt. Auquel seréfère cette déclaration est conforme à la (aux) norme(s) ou au(x) document(s) normatif(s). Al que se refiere esta declaración es conforme a la(s) norma(s) u otro(s) documento(s) normativo(s). Waarnaar deze verklaring verwijst, aan de volende norm(en) of richtlijn(en) beantwoordt. A cui si riferisce questa dichiarazione è conforme alla/e sequente/i. norma/e o documento/i normativo/i.

CE Conformity / CE-Konformität / Conformité CE

90/384/EU		Nonautomatic Balances and Scales / Nichteselbsttätige Waagen / Balances à Functionnement non automatique
EN45501:1992		Adopted European, Standard / Norme Européenne Adoptée / Angenommene Europäische Norm
89/336/EU		EMC Directive / EMU-Richtlinie / Directive concernant la CEM
EN55022, A 01.	04.87	Emissions / Funkstörungen

Other Directives and Standards / Andere Richtlinien und Normen / Autres documents

corresponding to local requirements / entsprechend lokalen Anforderungen / correspondant aux exigences locales

13/23/EU	Low volidge / Niederspannung / basse iension
EN61010	el. Safety / el. Sicherheit / sécurité el.
UL1950	el. Safety / el. Sicherheit / sécurité el. (if UL mark is applied)
C222.2 No. 950-M89	el. Safety / el. Sicherheit / sécurité el. (if CUL mark is applied)
FCC, Part 15, class A	Emissions / Funkstdörungen

Office of Weights and Measures Worthington, Ohio USA October, 1996 A14074900A according to EN45014

FCC Notice

This device complies with Part 15 of the FCC Rules and the Radio Interference Requirements of the Canadian Department of Communications. Operation is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

ORDERING INFORMATION

It is most important that the correct part number is used when ordering parts. Parts orders are machine processed, using only the part number and quantity as shown on the order. Orders are not edited to determine if the part number and description agree.

COPYRIGHT

METTLER TOLEDO[®] and JAGUAR[®] are registered trademarks of Mettler-Toledo, Inc. Allen-Bradley[®] is a trademark of Allen-Bradley Company, Inc. ARCnet[™] is a trademark of Novell, Inc. IPX[™] is a trademark of Microsoft Corporation All other brand or product names are trademarks or registered trademarks of their respective companies.



CUSTOMER FEEDBACK

If you have a problem with this product, or just a suggestion on how we can serve you better, please fill out this form and send it to us. Your feedback will help us to improve product performance, quality and service. If you are in the United States, you can mail this postpaid form to the address on the reverse, or fax it to (614) 438-4355. If you are outside the United States, please apply the appropriate amount of postage before mailing. You may also fax it the number above.

Your Name:	Date:
Organization Name:	Mettler Toledo Order Number
Address:	Part / Product Name:
	Part / Model Number:
	Serial Number:
Phone Number: () Fax Number: ()	Company Name of Installation:
E-mail Address:	Contact Name:
	Phone Number:

How well did this product meet your		Comments:
expe	ectations in its intended use?	
	Met and exceeded my needs	
	Met all needs	
	Met most needs	
	Met some needs	
	Did not meet my needs	

UNACCEPTABLE DELIVERY: OUT OF BOX ERROR: Shipped late Wrong item Wrong documentation Shipped early Wrong part Missing documentation Shipped to incorrect location Missing equipment Incorrectly calibrated
Shipped early Wrong part Missing documentation
Other (Please Specify) Equipment failure Other (Please specify)
Other (Please Specify) Equipment failure Other (Please specify)

DO NOT WRITE IN SPACE BELOW; FOR METTLER TOLEDO USE ONLY					
Retail	Light Industrial	Heavy Industrial	Systems		
RESPONSE: Include Root Cause Analysis and Corrective Action Taken.					

FOLD THIS FLAP FIRST



Please seal with tape.

PRECAUTIONS

READ this manual BEFORE operating or servicing this equipment.

FOLLOW these instructions carefully.

SAVE this manual for future reference.

DO NOT allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.

ALWAYS DISCONNECT this equipment from the power source before cleaning or performing maintenance.

CALL METTLER TOLEDO for parts, information, and service.



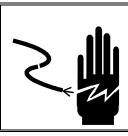
🖄 WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.



A CAUTION

OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.



ONLY PERMIT QUALIFIED PERSONNEL TO SERVICE THIS EQUIPMENT. EXERCISE CARE WHEN MAKING CHECKS, TESTS AND ADJUSTMENTS THAT MUST BE MADE WITH POWER ON. FAILING TO OBSERVE THESE PRECAUTIONS CAN RESULT IN BODILY HARM.



FOR CONTINUED PROTECTION AGAINST SHOCK HAZARD, CONNECT TO PROPERLY GROUNDED OUTLET ONLY. DO NOT REMOVE THE GROUND PRONG.

CONTENTS

1	Introduction	1-1
	Product Overview	
	JAGUAR Display Area	
	JAGUAR Keypad	
	Alphabetical and Special Character Entry	
	Using a PC Keyboard	
	Normal Operating Mode	
2	Basic Operator Functions	2-1
_	Zero the Scale	
	Tare Operations	
	Pushbutton Tare	
	Preset (Keyboard) Tare	
	Auto Tare	
	Print Operations	
	MEMORY Key Operations	
	FUNCTION Key Operations	
	Switch Units	
	Recall Tare	
	Recall Gross	
	Enter Setup	
	JagBASIC Program Manual Operation	
	Scale Selection	

Introduction

This manual provides basic operating instructions for using the JAGUAR Industrial Scale Terminal. This flexible, high performance, highly adaptable terminal supports both proprietary and non-proprietary protocols, providing connectivity to METTLER TOLEDO devices and devices from other vendors. Information on installing, programming, and servicing the JAGUAR terminal can be found in the JAGUAR Terminal Technical Manual. Consult your authorized METTLER TOLEDO representative for information on advanced operations or for information on available options.

Review all instructions and safety precautions carefully. Installation, programming, and service procedures should be performed only by authorized personnel.

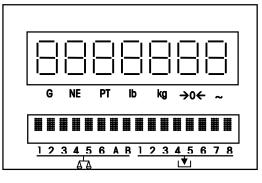
If you discover a problem with the information provided, please complete and return the Publication Evaluation Report found in the back of this manual. If you encounter problems not covered in this manual, please contact your authorized Mettler Toledo representative.

Product Overview

Before using the JAGUAR terminal, read the following information to become familiar with the terminal and its features.

JAGUAR Display Area

The JAGUAR terminal has two displays where scale data and operational messages are presented. The displays are pictured below and on the following page, based on the associated software revision.



Prior to M Revision

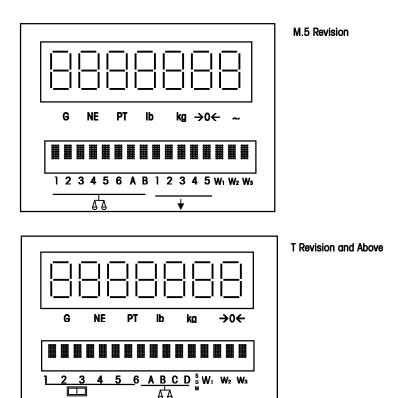


Figure 4-a: JAGUAR Display

The top display is a numeric display. This area can display up to seven numbers each with a decimal point, comma, and annunciators. The top display normally indicates scale weight.

The top display also indicates over-capacity and under-capacity conditions. Over-capacity is indicated when the upper corner of the first and last digits and the top segment of all other digits are lit. Under-capacity is indicated when the lower corner of the first and last digits and the bottom segment of all other digits are lit.

Over- and under-capacity display conditions are shown below:



Annunciators point to labels in the legend directly below the display area to indicate:

Weighing Mode (Gross or NET)

The JAGUAR terminal will be in Net mode when a tare is active. Tare can be entered as a Preset Tare value or tare may be automatically acquired when the operator presses the TARE key. Tare can also be entered through an interface. If no tare is active the JAGUAR terminal will be in Gross mode.

Note: If a POWERCELL[®] fails, the weight display will blank.

Preset Tare (PT)

The preset tare annunciator indicates a preset tare is active. Preset tare is entered manually using the numeric keys on the JAGUAR terminal keypad. Preset tare is also referred to as keyboard tare or manual tare.

Unit of Measure (pound lb, or kilogram kg)

The standard units of measure for the JAGUAR terminal are pounds (lb) and kilograms (kg). These legends indicate the current units. A label included with the JAGUAR terminal may be placed over the kg legend if grams (g) or metric tons (mt) are used.

Center-of-Zero ($\rightarrow 0 \leftarrow$)

The center-of-zero annunciator indicates that the scale is within $\pm 1/4$ increment of gross zero.

Scale Instability (~)

The scale instability annunciator indicates that the scale is in motion. The annunciator will turn off when the scale is stable. The sensitivity of motion detection is adjustable in setup.

The lower display is an alphanumeric display. It can display up to 16 alphanumeric characters. Each character can use a period, comma, decimal point, and annunciator. Annunciators point to labels in the legend directly below the display area to indicate:

Selected Scale

(Prior to T Rev)The eight left-hand annunciators indicate which scale is currently selected. The numeric values (1-6) show the terminal number, and the alpha-numeric character (A or B) indicates the internal scale in that terminal.

(**T Rev and above**) The four middle alpha annunciators indicate which scale is currently selected.

Setpoint Status (Prior to "T" Revision)

The eight (five at M.5 revision) right-hand annunciators indicate the ON/OFF status of the associated setpoints. When a setpoint is ON (below its cutoff point), the respective annunciator will be turned ON.

Selected JAGUAR (Revision "T" or above)

The six left-handed annunciators indicate which JAGUAR scale terminal is currently selected

SUM (Revision "T" or above)

The "SUM" annunciator indicates that the current selected display is the sum of the scales which have been set up to "add in sum".

W1, W2, W3 (Revision "M.5" or above)

The three right-handed annunciators indicate the weighing interval the scale is currently operating in. These annunciators are only active if the selected scale is configured for more than one weighing range.

(Prior to "M.5" Revision) The setpoint status annunciators are active for all enabled setpoints configured for the terminal. If a networked scale is selected, setpoint status will follow to the networked terminal.

JAGUAR Keypad

Each JAGUAR terminal is equipped with a 20-key keypad as shown here:

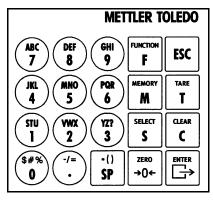
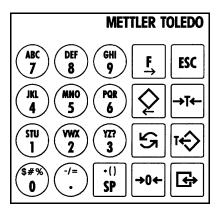


Figure 4-b1: JAGUAR English Keypad (No longer available)





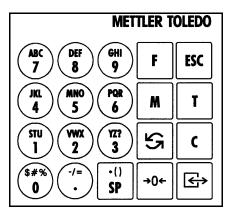


Figure 4-b3: JAGUAR New International Keypad

The keypad consists of numeric keys 0 through 9, decimal point, space and eight function keys. The numeric keys also contain the alphabet characters and some special symbols. The keys perform the following functions:

NUMERIC keys are used to input numbers. They are also used to enter alphabet characters and the symbols that appear on the specific keys. A discussion on alpha-numeric entry follows. (See Alphabetical and Special Character Entry later in this chapter.)

DECIMAL POINT (.) inserts a decimal point as necessary. It is also used to enter the symbols "-", "/", and "=".

SPACE (SP) inserts a space where necessary. It is also used to enter the symbols "*", "(", and ")".

FUNCTION (F) accesses various functions depending on the JAGUAR terminal's setup configuration including:

Switch Units—If enabled, switch units allows for changing of the top weight display unit of measure.

Recall Tare—If the terminal is in the net mode, recall tare allows the tare value to be recalled on the top weight display.

Recall Gross—If the terminal is in the net mode, recall gross allows the gross weight value to be recalled on the weight display.

Enter Setup—Enter setup allows access to the program blocks in setup mode. The W3 jumper on the Controller board must be OUT to allow access.

MEMORY (M) accesses various memory functions depending on the JAGUAR terminal's setup configuration including:

Prompt List—Prompt lists permit data entry into a user-defined prompt list which was created through the Configure Memory program block in setup.

Consecutive Number—This feature displays the current consecutive number. You can also reset the consecutive number.

Enter Setpoint—If accessed, this feature allows entry of the setpoint cutoff values that are assigned to the active scale.

Time—The time feature displays the clock and allows adjustment of the time.

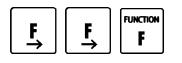
Date—The date feature displays the date and allows adjustment of the date.

SELECT (S) scrolls through and displays items in option lists. This key also selects a scale to be displayed for networked terminals or two-scale JAGUAR terminals.

ZERO (0) zeroes the scale and allows you to exit to the previous level in setup mode.

ESCAPE (ESC) exits an operating mode, exits a sub-block programming level to the level above, or recalls previously stored data.

TARE (T) performs a pushbutton tare function if enabled in setup.





ſ∩∢

ESC

Т

SELECT

S

ZERO

→0←

ESC

TARE

Т

ESC





Alphabetical and Special Character Entry

Only prompts allowing alphabet characters will accept alphabetical or special character entry. **CLEAR** (C) clears a tare value and returns the scale to gross mode. The CLEAR key also functions as a backspace/delete when entering data from the keypad.

ENTER acknowledges a prompt, opens program blocks and sub-blocks, and accepts data entered from the keypad. ENTER also initiates a demand print output.

The JAGUAR terminal is capable of both numeric and alpha-numeric entry. To access the alphabet characters:

- 1. Press the numeric key with the desired letter. The number is displayed.
- 2. Press SELECT until the desired letter appears.
- **3.** Continue to the key that contains the next character you wish to use and repeat steps 1 and 2.
- **4.** When you have finished entering your response, press ENTER. The data is accepted when ENTER is pressed.

Using a PC Keyboard

As an option, you can attach a PC/AT compatible keyboard to the JAGUAR terminal to allow quicker alphanumeric data entry and access to other characters and lower case letters. The JAGUAR Controller board has a PC keyboard controller and plug-in connector to support a keyboard. You can attach your own PC keyboard or order one from METTLER TOLEDO.

The PC keyboard and JAGUAR keypad send the same data to the terminal and operate concurrently. For example, the numeric keys on the keyboard and keypad have the same ASCII value and send the same numeric data.

The table below gives other keystroke equivalents for keyboard and keypad.

Keyboard	Keypad
F5	ZERO
F6	FUNCTION
F7	SELECT
F8	CLEAR
F9	TARE
F10	MEMORY
ESC	ESCAPE
ENTER	ENTER
LINILIX	LINILIX

The backspace key on the PC keyboard functions as a backspace/delete key when entering data. The keyboard supports NUM LOCK and CAPS LOCK.

Normal Operating Mode

The terminal goes through a power-up sequence when it is initially turned on. The power-up sequence may include a count-down timer that gives the JAGUAR terminal sufficient warm-up time before advancing to normal operating mode. The power-up sequence is described in Chapter 2 of the JAGUAR Terminal Technical Manual (Revision T Software), and timer configuration is described in Chapter 3. After power up, the normal operating mode is active.

The JAGUAR terminal's top weight display shows the current gross or net weight values. The top display annunciators indicate the status of the display and the weighing mode (NET or GROSS).

The bottom display shows the current unit of measure in the normal operation mode. If enabled, the lower display also shows tare value or auxiliary units when in net mode.

Normal Weight Display			
Condition	Top Display Data	Display Example	
	Bottom Display Data		
GROSS mode	gross weight	189.8	
	units Gross	lb GROSS	
NET mode	net weight	100.2	
Pushbutton tare active	tare units TARE	189.8 lb TARE	
Display tare enabled			
NET mode	net weight	190.0	
Preset tare active	tare units PT	100.0 lb PT	
Display tare enabled			
NET mode	net weight	100.2	
Display tare disabled	units NET	Ib NET	

The following table illustrates the JAGUAR terminal's display conditions.

NOTES

2

Basic Operator Functions

Basic operator functions are the functions or procedures that can be done by any knowledgeable person with access to the terminal. This section discusses the normal operating mode and the following functions:

- Zero the scale
- Perform tare operations
- Initiate print operations
- Use the MEMORY key operations
- Use the FUNCTION operations
- Select a scale

For information about advanced operations, contact your authorized METTLER TOLEDO representative.

Zero the Scale

If Pushbutton Zero is enabled, you can press ZERO to establish a new zero center of reference for the scale when in gross mode. This is done as follows:

Press the ZERO key. One of the following situations occurs:

- If Pushbutton Zero is disabled, the lower display reads **ZERO INHIBITED**, and returns to Normal Operation mode.
- If Pushbutton Zero is enabled and the scale is in net mode, the lower display reads **ZERO REQ FAILED**, and returns to Normal Operating mode.
- If Pushbutton Zero is enabled and residual weight on the scale is greater than the Pushbutton Zero range as determined in the Application Environment program block, the lower display reads ZERO REQ FAILED. In this case, a new zero value cannot be established using the ZERO key, and the indicator returns to Normal Operation mode.
- If Pushbutton Zero is enabled and residual weight on the scale is within the Pushbutton Zero range, the lower display reads SCALE ZEROED, and the JAGUAR terminal returns to Normal Operation mode.

Tare Operations

The JAGUAR terminal supports three tare operations:

- Pushbutton Tare
- Preset (Keyboard) Tare
- Auto Tare

The following tare-related features are also supported:

- Auto Clear Tare
- Recall Tare
- Recall Gross
- Tare Interlock
- Tare Display
- Net Sign Correction

Tare operations are enabled or disabled through the Application Environment program block. Only authorized personnel should attempt to enable or disable any or all of the tare operations.

Pushbutton Tare

Pushbutton tare compensates for weight (usually an unknown quantity such as an empty box or other container) on the weighing platform with a single keystroke and switches the terminal to net mode.

If Pushbutton Tare is Enabled:

- Place a load to be tared on the scale platform and press TARE on the keyboard. The upper display area reads 0.0 with the net annunciator illuminated. The tare weight is displayed on the lower display if Display Tare is enabled.
- 2. Place the load to be weighed on the platform. The net weight of the load is displayed in the upper display area.
- Press CLEAR. The terminal returns to gross mode, displays the weight on the platform in the upper display area, and clears tare weight from the lower display if Display Tare is enabled.

Example: Pushbutton Tare and Display Tare Enabled

The operator places an empty container on the scale platform and presses TARE. The JAGUAR terminal records the weight (25 pounds) in the lower display as 25.0 lb TARE. The operator then fills the container with 50 pounds of material. The terminal displays the net weight of the load in the container in the upper display area as 50.0 with the NET annunciator lit. When the filled container is removed from the platform, the operator presses CLEAR. The JAGUAR terminal returns to gross mode.

Preset (Keyboard) Tare

Preset tare (keyboard tare) compensates for a known tare weight on the scale. Preset tare is used when the net weight of contents in a filled container must be determined and the tare weight is known.

If Preset (KB) Tare is Enabled:

- **1.** Place a load on the platform. The upper display shows the gross weight. Know the weight of the portion to be compensated for by preset tare.
- 2. Use the numeric keys to enter the known tare weight, then press ENTER. The net weight of the load is displayed in the upper area with an annunciator

indicating NET. The tare weight will be displayed on the lower display if Display Tare is enabled.

3. Clear tare by pressing CLEAR. The terminal returns to gross mode, displays the gross weight on the platform in the upper display area, and clears the tare weight from the lower display if Display Tare is enabled.

Example: Preset Tare and Display Tare Enabled

A loaded truck (80,000 pounds) is driven on to a weigh station platform and the operator enters the known weight of the truck (17,500 pounds). The JAGUAR displays the tare weight in the lower display as 17500 lb PT, and the net weight of the truck's contents is shown in the upper display area (62,500 pounds) with the NET annunciator lit.

When the truck is driven off the platform, the operator presses CLEAR to clear the tare value and return the terminal to gross mode.

Auto tare automatically tares the indicator when a stable load on the platform exceeds a preset gross weight threshold value. A gross weight reset value is also entered to determine when the terminal will be "rearmed" to do another auto tare. The threshold values are configured through the Application Environment program block.

If enabled in the program block, the JAGUAR terminal checks the stability of the load before rearming auto tare. You may want to disable motion check if the load will not become stable, as when rapidly weighing one item after another.

If Auto Tare is Enabled:

The operator does not have to press any key to perform tare if Auto Tare is enabled, but must press CLEAR to return the JAGUAR terminal to gross mode.

- Place a load on the scale platform that exceeds the tare threshold value. When the scale is stable, the terminal automatically tares the scale to net zero and displays the actual tare weight in the lower display area if Display Tare is enabled.
- Place the load to be weighed on the platform. The JAGUAR displays the net weight in the top display area with an annunciator indicating NET.
- Clear tare and return to gross mode by pressing the CLEAR key.
- When the weight is removed and the reset threshold is passed, the scale rearms for the next sequence.

Example: Auto Tare and Display Tare Enabled

The auto tare threshold value has been set to 100 pounds through the Application Environment program block. The operator places on the platform an empty container known to weigh more than 100 pounds. The JAGUAR terminal tares the scale and displays the container's actual weight in the lower display area (125 lb TARE). The operator then fills the container and records the net weight of the load.

When the filled container is removed and the weight on the platform falls below the reset threshold value, the JAGUAR terminal re-arms and is ready for the next container. If check motion is enabled, the terminal will not rearm unless the weight on the scale settles below the reset threshold value.

Auto Tare

Auto Clear Tare

Auto clear tare can be used in conjunction with any or all of the tare options described above. This feature automatically clears the tare and returns the terminal to gross mode when weight on the platform has exceeded, then fallen below a preset gross weight threshold value. The check motion parameter can be enabled to ensure the scale weight is stable before automatically clearing tare.

Recall Tare

The JAGUAR terminal allows you to recall and display the tare value in the upper display area while in net mode. This may be useful if Display Tare is disabled or if auxiliary units are enabled. Tare recall is accessed through the FUNCTION key. See the section entitled Function Key Operations for more information.

Recall Gross

The JAGUAR terminal allows you to recall and display the gross weight value in the upper display area while in net mode. This may be useful if you need to see the gross weight but do not wish to clear the current tare value.

Gross weight recall is accessed through the FUNCTION key. See the section entitled Function Key Operations for more information on gross weight recall.

Tare Interlock

Tare interlock imposes some restrictions on tare operations. If tare interlock is enabled, tare may be cleared only at gross zero, and multiple tares are prohibited. See Chapter 3 for additional information on Tare Interlock.

Tare Display

In each of the tare operations described above, the tare weight has been displayed in the lower display area on the JAGUAR terminal. It is possible to disable the tare display through the Application Environment program block. If disabled, tare is not displayed.

Net Sign Correction

Net Sign Correction delays the decision of which weighment is the gross weight and which weighment is the tare weight until the operator prints the ticket. At that time, the JAGUAR terminal compares the two weighments and takes the lower weight as the tare weight. Then, the net weight is always a positive value. See Chapter 3 for additional information on Net Sign Correction.

Print Operations

The JAGUAR terminal supports the following print operations:

- Demand Print
- Minimum Print
- Print Interlock
- Auto Print
- Continuous Output

Print operations are enabled or disabled through the Configure Serial program block. Refer to Chapter 3 of the JAGUAR Terminal Technical Manual . You can enable or disable any or all of the print operations.

The print output format and destination port are also determined through the Configure Serial program block. Output can be directed through one or more local serial ports (COM1 or COM2), or directed to remote JAGUAR terminals on an ARCNet network.

Demand Print

If a demand mode connection is configured, demand printing is initiated when an operator presses the ENTER key in normal operating mode or through an external interface such as a discrete input port or the optional Allen-Bradley interface. If no conditions exist to inhibit printing, output will be sent to the connected printer and the terminal displays the message **PRINTING** in the lower display area.

If a demand mode connection is not configured, the terminal displays PRINT INHIBITED in the lower display area. This error message is also displayed if demand printing is requested while weight on the scale is unstable.

Minimum Print

The minimum print parameter prohibits data output if gross weight on the scale is below a threshold value configured in setup. If you press ENTER to initiate printing with the scale weight below the threshold value, the terminal displays **PRINT INHIBITED** on the lower display.

Print Interlock

Print interlock prevents multiple print requests for a single weighing transaction. Print threshold and reset values determine operation of print interlock. Additionally, a check motion before reset parameter can be enabled. These parameters are configured through the Configure Serial program block. If print interlock is enabled and conditions of print interlock are not satisfied, the terminal displays **PRINT INHIBITED**.

Auto Print

Auto print enabled in conjunction with print interlock allows printing to occur without operator action. The terminal automatically initiates data output when gross weight on the scale settles above the print threshold value. Auto print is rearmed when the weight falls below the reset threshold value. A check motion before reset parameter can also be configured for auto print.

Continuous Output

Serial ports can be configured to output data continuously. In continuous mode, weight data is transmitted at the following rates:

17 times per second in Process Application High mode*

10 times per second in Process Application Mid mode*

5 time per second in Process Application Low mode

* Unless A/D update rate of scale type is slower. In that case, the continuous output will be at the A/D update rate.

A status bit in the fixed format changes state when a print request is received. See Appendix 1 entitled Serial Interface Reference for more information on the continuous data format.

MEMORY Key Operations

Remember, you can press SELECT to advance to any of the MEMORY key operations, then press ENTER to access the desired operation.

When stepping through the prompt list, previous step data is shown in the lower display area. Press ENTER to accept the previous entry or begin entering new data using the numeric keys. The JAGUAR terminal supports five MEMORY key operations including:

- Prompt list
- Consecutive numbers
- Setpoints
- Time
- Date

Memory operations are enabled or disabled through the Configure Memory and Application Environment program blocks. Refer to Chapter 3 of the JAGUAR Terminal Technical Manual.

Prompt List

The JAGUAR terminal's prompt list feature is an interactive means of facilitating specific data input from the operator. A prompt list is configured in the Configure Memory program block. Each prompt can be configured to accept numeric, alpha-numeric, or tare input. A prompt list can contain up to 20 steps.

To use a prompt list:

- 1. In normal operating mode, press the MEMORY key, then press ENTER at the **Prompt List?** prompt to access your list.
- 2. Respond to the prompt step shown in the lower display area by entering the required data or press ENTER to continue to the next step. You must press ENTER after data entry to continue.
- **3.** Press ENTER after the final prompt step to return to normal operating mode. You can press ESCAPE at any time to exit from a prompt list.

Consecutive Numbering

The JAGUAR terminal maintains a consecutive number (CN) and can assign a unique number to each transaction. The CN automatically increments by one upon print initiation through a specified port. Consecutive numbering is configured through the Configure Memory program block. This should be performed only by authorized personnel. Refer to the JAGUAR Terminal Technical Manual for more information.

To view the current CN:

- 1. Press the MEMORY key.
- 2. Press SELECT until the current CN is displayed as CnNbr = XX.

To reset the CN:

- 1. With the current CN displayed (steps 1 and 2 above), press ENTER.
- 2. At the **Reset ConNbr?** prompt, press SELECT to chose Y(es) or N(o), then press ENTER. If Y(es), confirm your decision at the **Are You Sure?** prompt by

selecting Yes again. The consecutive number will be returned to the reset value configured in setup.

Setpoints

The JAGUAR terminal can control up to twelve setpoints. Setpoints can be assigned to any of the discrete output ports. Status of Setpoints 1 through 8 is available through the Allen-Bradley discrete read option.

For a JAGUAR terminal connected to a single scale, all setpoints are related to the displayed scale weight, net or gross weight, or rate depending on the scale mode. If setpoints are required for gross weight only, it is recommended that tare be disabled.

For a JAGUAR terminal connected to two scales, setpoints are assigned to scale A or B in the Configure Discrete program block.

To enter setpoint values:

- **1.** Press SELECT and choose the appropriate scale (if two scales are connected).
- 2. Press MEMORY, then press SELECT until the prompt Enter Setpoint? is displayed, then press ENTER to access setpoints.
- 3. Press ENTER at the Select? SP1 prompt to access setpoint 1, or press SELECT to access another setpoint. Press ENTER.
- **4.** Enter the setpoint value, then press ENTER.
- 5. At the **Preac?** prompt, enter the preact value. The preact value compensates for material that may come onto the scale after the setpoint is reached.
- 6. At the **Dribl?** prompt, enter the dribble value. Dribble marks the point where a dual speed setpoint switches from fast-feed to slow-feed.
- 7. At the Tol? prompt, enter the setpoint tolerance value.
- 8. Repeat steps 3 and 4 to enter another setpoint or press ESCAPE to exit setpoints.

Time

The JAGUAR terminal's internal battery-backed time can be viewed or set using the MEMORY key. Configuration of the time format is done through the Application Environment program block. This should be performed only by authorized personnel. (Refer to the JAGUAR Terminal Technical Manual for information.) You can disable the time format through the same program block.

To view or reset the time:

- 1. Press MEMORY, then press SELECT until the time is displayed.
- Press ESCAPE to accept the current time and exit, or press ENTER to set the clock. If you are setting the clock: At the Hour? prompt, type the correct hour of day according to the selected time format. Press ENTER.

At the **Minute?** prompt, type the correct minutes, then press ENTER.

If the selected format supports seconds, type the correct value at the **Seconds?** prompt. Press ENTER.

If a 12-hour format is selected, press SELECT at the **AM/PM**? prompt followed by ENTER when the desired designation is displayed.

Preact, dribble, and tolerance values are relative to the setpoint. They are not absolute values. The dribble value is equal to the target value minus the dribble and preact values.

Date

The JAGUAR terminal also has a battery-backed date function. The date format is configured through the Application Environment program block. Refer to Chapter 3 in the JAGUAR Terminal Technical Manual for a complete list of available date formats. You can disable the date function through the same program block.

To view or reset the current date:

- 1. Press MEMORY, then press SELECT until the date is displayed.
- Press ESCAPE to accept the current date and exit, or press ENTER to set the date. If you are setting, complete the date fields as prompted. You must press ENTER after each field to continue. The order of prompting is determined by the selected date format.
- 3. Press ENTER after the last date prompt to exit.

FUNCTION Key Operations

The JAGUAR terminal supports several FUNCTION key operations including:

- Unit switching
- Tare weight recall
- Gross weight recall
- Access to setup
- JagBASIC program manual operation

Unit switching is enabled or disabled through the Application Environment program block, and allows you to change between main and secondary units of measure. This should be performed only by authorized personnel. Refer to the JAGUAR Terminal Technical Manual for more information.

To switch units:

1. Press FUNCTION then press ENTER at the **Switch Units?** prompt. The unit automatically switches to the alternate selection and displays the current unit of measure in the upper display area.

Recall Tare allows the current tare value to be shown in the upper display area. You must be in net mode.

To recall tare:

- 1. Press FUNCTION then press SELECT until the **Recall Tare?** prompt is displayed.
- 2. Press ENTER. The JAGUAR terminal displays the recalled tare value in the upper display area.
- 3. Press ESCAPE to return the display to net weight.

Switch Units

Recall Tare

The recalled tare value is a "snapshot" of the actual weight. It is not an active weight.

Recall Gross

Enter Setup

The recalled gross value is a "snapshot" of the actual weight. It is not an active weight. Recall Gross allows you to view a snap-shot of the current gross weight in situations in which it is undesirable to clear the tare value. You must be in net mode.

To recall gross:

- 1. Press FUNCTION then press SELECT until the **Recall Gross?** prompt is displayed.
- 2. Press ENTER. The JAGUAR terminal displays the recalled gross weight value.
- 3. Press ESCAPE to return the display to net weight.

You can access the JAGUAR terminal's setup programming blocks only if the terminal is used in non legal-for-trade applications and the W3 jumper on the Controller board is OUT.

To enter setup:

- 1. Press FUNCTION then press SELECT until the Enter Setup? prompt is displayed.
- 2. Press ENTER to access the program blocks.

If enabled in setup, JagBASIC programs can be started manually using the FUNCTION key. Please refer to the JagBASIC Programmer's Guide that comes with the Programmer's Kit for operating instructions and information on using JagBASIC.

Scale Selection

Scale ID is programmed in the Application Environment program block and should clearly identify the associated scale. Refer to the JAGUAR Terminal Technical Manual.

It the JAGUAR terminal's keypad does not respond when keys are pressed, it may have been selected by another JAGUAR terminal in the network. To "free" this unit, locate the JAGUAR that is controlling the keypad, press ESC, and then select some other JAGUAR terminal in the network. The JAGUAR terminal can interact with more than one scale. You can connect up to two scales to each JAGUAR unit, a summing scale, and additional scales may be accessed over an ARCnet network.

If the JAGUAR is configured as a single-scale unit that does not have access to other scales, the terminal displays SELECT INHIBITED when the SELECT key is pressed while in normal operating mode.

If multiple scales are connected and the JAGUAR is in normal operating mode, select another scale as follows:

- 1. Press SELECT. The upper display reads ----- and the lower display reads Scale?
- 2. Press SELECT to view the available scales, then press ENTER to accept the desired scale.

The JAGUAR terminal is now "connected" to that scale and its scale-number annunciator is lit. The selected scale remains "connected" until another scale is chosen from the list of scale IDs.

3. To select another scale, press SELECT and repeat step 2 above.

JagBASIC Program Manual Operation NOTES

METTLER TOLEDO

Publication Problem Report

If you find a problem with our documentation, please complete and fax this form to (614) 438-4355

Publication Name: JAGUAR Terminal User's Guide

Publication Part Number: C14553900A_

Publication Date: 5/99

PROBLEM(S) TYPE:	DESCRIBE PROBLEM(S):	INTERNAL USE ONLY
Technical Accuracy	□ Text □ Illustration	
□ Completeness What information is missing?	 Procedure/step Illustration Definition Example Guideline Feature Explanation Other (please explain below) 	Information in manual
		Information not in Manual
□ Clarity What is not clear?		
☐ Sequence What is not in the right Order?		
Other Comments Use another sheet for additional comments.		

Your Name: _____ Location: _____

Phone Number: ()

Fax this completed form to (614) 438-4355

METTLER TOLEDO Scales & Systems 1900 Polaris Parkway Columbus, Ohio 43240

P/N: C14553900A

(5/99)

METTLER TOLEDO® is a registered trademark of Mettler-Toledo, Inc. ©1999 Mettler-Toledo, Inc. Printed in USA

