PANTHER® PLUS

Terminal

User's Guide

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4-02

METTLER TOLEDO is recognized around the world for manufacturing and marketing high quality scales and weighing systems. With roots tracing back to 1901, the company takes pride in its long established record of employing innovation, technology, and a close working relationship with its customers to meet the diverse needs of the global marketplace. METTLER TOLEDO's worldwide headquarters are in Greifensee, Switzerland. Corporate offices for the North American Marketing Organization are in Columbus, Ohio.

CUSTOMER FEEDBACK

Your feedback is important to us! 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, mail this post-paid form to the address on the reverse, or fax it to (614) 438-4355. If you are outside the United States, apply proper postage before mailing it to the address on the reverse side. You can also send your feedback via email to: quality_feedback.mtwt@mt.com.

Your Name:	Date:
Organization:	METTLER TOLEDO Order Number
Address:	Part / Product Name:
	Part / Model Number:
	Serial Number:
Phone Number: ( ) Fax Number: ( )	Company Name for Installation:
E-mail Address:	Contact Name:
	Phone Number:

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

PROBLEM:

UNACCEPTABLE DELIVERY:

- ☐ Shipped late
- ☐ Shipped early
- ☐ Shipped to incorrect location
- ☐ Other (Please Specify)

OUT OF BOX ERROR:

- ☐ Wrong item
- ☐ Wrong part
- ☐ Missing equipment
- ☐ Equipment failure

- ☐ Wrong documentation
- ☐ Missing documentation
- ☐ Incorrectly calibrated
- ☐ Other (Please specify)

Comments:

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

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Mettler-Toledo, Inc.
Quality Manager - MTWI
1150 Dearborn Drive
Worthington, Ohio 43085
USA

Please seal with tape.

DECLARATION OF CONFORMITY
Konformitätserklärung
Déclaration de conformité
Declaración de Conformidad
Conformiteitsverklaring
Dichiarazione di conformità

We/Wir/Nous/Wij/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: **Panther**

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 se réfère 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.

in combination with a weighing platform produced by Mettler-Toledo is in conformity with the following directives and standards.

Council directive on the harmonization of the laws of the Member states:	**standards:**
relating to non-automatic weighing instruments (90/384/EEC) amended by directive (93/68/EEC)	EN 45501:1992
relating to electromagnetic compatibility (89/336/EEC) amended by directive (93/68/EEC; 92/31/EEC)	EN 55022, B EN 50082-2
relating to electrical equipment designed for use within certain voltage limits (73/23/EEC amended by directive (93/68/EEC)	EN 60950

Worthington, Ohio USA, November, 2000 **Mettler-Toledo, Inc.**

Darrell Flocken, Manager - Weights & Measures
Office of Weights and Measures

Original issue:	January, 1997	
Revised:	February, 1997	added compliance to Non-automatic Weighing Instrument Directive
	November, 2000	added compliance to Heavy Industrial Immunity, EN 50082-2

Introduction

This manual is provided solely as a guide to the operation of the METTLER TOLEDO PANTHER PLUS terminal. Programming, service and maintenance information is presented in the PANTHER PLUS Terminal Technical Manual.

Information regarding METTLER TOLEDO Technical Training may be obtained by writing or calling:

METTLER TOLEDO
1900 Polaris Parkway
Columbus, Ohio 43240
Phone: (US and Canada) 614-438-4511
Phone: (All Others) 614-438-4888

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.

SOFTWARE VERSION

This manual properly describes the operation and functionality of the METTLER TOLEDO PANTHER PLUS terminal, software part number (*)154878 L 02.4. The software version and part number are displayed during the power-up sequence of the scale.

METTLER TOLEDO RESERVES THE RIGHT TO MAKE REFINEMENTS OR CHANGES WITHOUT NOTICE.

PRECAUTIONS

READ this manual BEFORE operating or servicing this equipment.

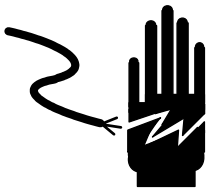
FOLLOW these instructions carefully.

SAVE this manual for future reference.

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

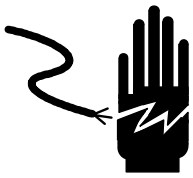
ALWAYS DISCONNECT this equipment from the power source before cleaning or performing maintenance.

CALL METTLER TOLEDO for parts, information, and service.



WARNING

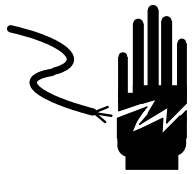
ONLY PERMIT QUALIFIED PERSONNEL TO SERVICE THIS EQUIPMENT. EXERCISE CARE WHEN MAKING CHECKS, TESTS AND ADJUSTMENTS THAT MUST BE MADE WITH POWER ON. FAILING TO OBSERVE THESE PRECAUTIONS CAN RESULT IN BODILY HARM.



WARNING

FOR CONTINUED PROTECTION AGAINST SHOCK HAZARD CONNECT TO PROPERLY GROUNDED OUTLET ONLY.

DO NOT REMOVE THE GROUND PRONG.



WARNING

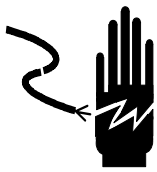
DISCONNECT ALL POWER TO THIS UNIT BEFORE REMOVING THE FUSE OR SERVICING.

CAUTION

BEFORE CONNECTING/DISCONNECTING ANY INTERNAL ELECTRONIC COMPONENTS OR INTERCONNECTING WIRING BETWEEN ELECTRONIC EQUIPMENT ALWAYS REMOVE POWER AND WAIT AT LEAST THIRTY (30) SECONDS BEFORE ANY CONNECTIONS OR DISCONNECTIONS ARE MADE. FAILURE TO OBSERVE THESE PRECAUTIONS COULD RESULT IN DAMAGE TO OR DESTRUCTION OF THE EQUIPMENT OR BODILY HARM.

CAUTION

OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.

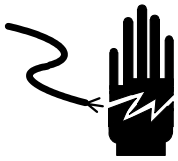


⚠ WARNING!

WHEN THIS EQUIPMENT IS INCLUDED AS A COMPONENT PART OF A SYSTEM, THE RESULTING DESIGN MUST BE REVIEWED BY QUALIFIED PERSONNEL WHO ARE FAMILIAR WITH THE CONSTRUCTION AND OEPRATION OF ALL COMPONENTS IN THE SYSTEM AND THE POTENTIAL HAZARDS INVOLVED. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

⚠ WARNING!

IF THIS DEVICE IS USED IN AN AUTOMATIC OR MANUAL FILLING CYCLE, ALL USERS MUST PROVIDE A HARD-WIRED EMERGENCY STOP CIRCUIT OUTSIDE THE DEVICE CIRCUITRY. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.



⚠ WARNING

POWER OUTLETS MUST BE EASILY ACCESSIBLE AND LOCATED NO FURTHER THAN THE LENGTH OF THE POWER CORD SUPPLIED WITH THE PRODUCT. FAILURE TO DO SO COULD IN RESULT IN PERSONAL INJURY AND/OR PROPERTY.

CONTENTS

1 PANTHER PLUS Terminal Overview

This manual provides detailed information for operating the PANTHER PLUS Industrial Scale Terminal, a high performance, basic capability weighing instrument designed to meet the needs of simple weight indicating and over/under manual checkweighing. Information on installing, programming, and servicing the PANTHER PLUS terminal can be found in the PANTHER PLUS Terminal Technical Manual.

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

If you encounter problems not covered in this manual, please contact your authorized METTLER TOLEDO representative.

Operating Modes and States

To use the PANTHER PLUS terminal's various functions, you should first understand basic weighing terminology, the differences between gross and net state, and the terminal's various operating modes.

Gross and Net State

Gross State - A scale is in the **gross state** when a **tare** (the weight of a container holding the product to be weighed) has not been taken. The full weight of the items on the scale is shown on the display.

Net State - A scale is in the **net state** after a tare has been taken. Only the weight of the items added after the tare will be displayed and the net cursor will be lit.

Operating Modes

The PANTHER PLUS terminal can be used in three different modes, depending on the application for which it is being used.

Indicator Mode - In **Indicator Mode**, the PANTHER PLUS terminal operates as a normal scale. You may weigh products on the platform in the gross or net state, and printing is possible. The over/under LEDs are not functional in this mode.

Over/Under Mode - **Over/Under Mode** is used when checkweighing products. A product is placed on the scale and compared to a target weight (up to 10 pre-programmed weights can be stored). The display can be programmed to show full gross weight or the difference from the target weight. The LEDs for Over, Under and Accept can be enabled to help operators easily determine if the product is within a preprogrammed tolerance of the target weight.

Setpoint Mode - Setpoint Mode is used to perform operations associated with filling and check filling applications. Setpoint and preact values can be set and used in this mode.

Two other modes are also available in the PANTHER PLUS terminal to enable it to perform specific functions.

Setup Mode - **Setup Mode** is used for making programming selections to enable the PANTHER PLUS to be used for specific applications and to determine which functions will be available to the operator using the terminal. **NOTE:** This mode is only to be used by qualified personnel responsible for programming the PANTHER PLUS.

MEMORY Recall Mode - To recall a target weight from memory, **Memory Recall Mode** must be accessed by pressing the **MEMORY** key.

Display

The PANTHER PLUS terminal uses two types of displays on the front panel as shown in figure 2-a below.

- To the right, a line of five multi-colored LEDs provides quick operator feedback to over/under or setpoint conditions.
- On the left is the vacuum fluorescent, seven-digit, seven-segment display. Below the display are legends which indicate gross or net weight or lbs or kg units by means of a cursor that lights up.

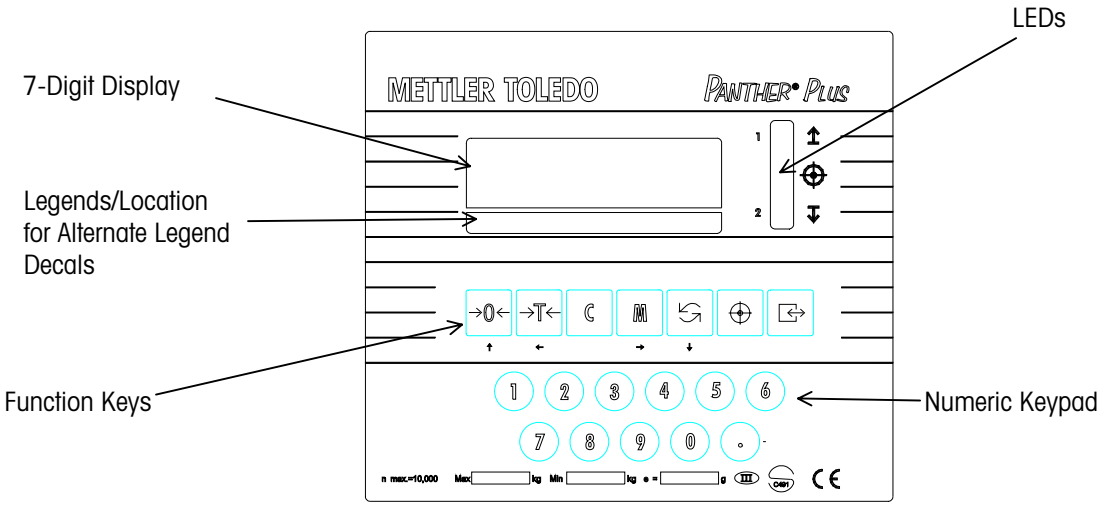
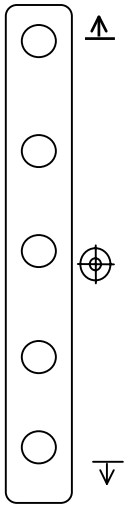


Figure 1-a: Front Panel

LEDs

The five LEDs have the following functions:



(RED) In setpoint mode, the setpoint output 1 is on. In over-under mode, the weight is greater than the over weight.

(YELLOW) In over/under mode, the weight is greater than the high weight.

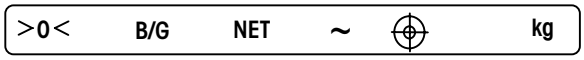
(GREEN) In setpoint mode, zero tolerance output is on. In over-under mode, the weight is within the "accept" zone.

(YELLOW) In over-under mode, the weight is less than the low weight.

(RED) In setpoint mode, setpoint output 2 is on. In over-under mode, the weight is less than the under weight.

Description of Legends (Cursors)

Below the weight display area are the following legends:

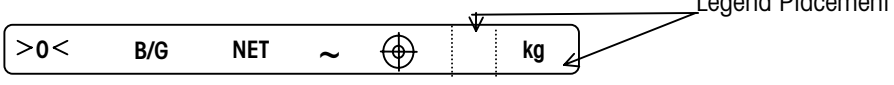


A cursor in the weight display area lights up above the legends to indicate the following:

→ **0** ←	Center of Zero - The scale is within +/- 1/4d of the center of zero increment.
B/G	Gross - The scale is in the gross state; tare not taken.
NET	Net - The scale is in net mode. A tare has been taken.
~	Motion – The scale is in motion.
⊕	Target - A target has been taken.
kg	Kilogram weight units are displayed.

Additional Legend(s)

Additional decals are included with the PANTHER PLUS terminal and can be added to the legend panel for specific applications.



%	g	oz	ozt	t	ton	dwt	lb-oz	lb	

These alternate labels indicate:

%	**Percent** - The current display is represented as a percent of target. The decal is placed over the alternate unit legend when enabled in setup mode.
g	**Grams** - Gram weight units are displayed. The decal is placed over the blank or kg legend when grams are selected as the primary or secondary units in setup mode.
Oz	**Ounces** - Ounce weight units are displayed. The decal is placed over the blank or kg legend when ounces are selected as the primary or secondary units in setup mode.
ozt	**Troy Ounces** - Troy ounce weight units are displayed. The decal is placed over the blank or kg legend when troy ounces are selected as the primary or secondary units in setup mode.
t	**Ton** - Ton weight units are displayed. The decal is placed over the blank or kg legend when tons are selected as the primary or secondary units in setup mode.
ton	**Metric Ton** - Metric ton weight units are displayed. The decal is placed over the blank or kg legends when metric tons are selected as the primary or secondary units in setup mode.
dwt	**Pennyweight** - Pennyweight weight units are displayed. The decal is placed over the blank or kg legend when pennyweight units are selected as the primary or secondary units in setup mode.
lb-oz	**Pounds and Ounces** - Pound and ounce weight units are displayed and separated by a space on the display. The decal is placed over blank legend position when calibrated in lb-oz units. The kg legend should be covered with a blank label.
lb	**Pounds** Pound weight units are displayed. Used only on international versions (if needed).
( )	**Blank** - May be placed over any unused weight legend.

Keypad

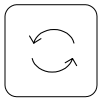
The PANTHER PLUS terminal keypad features the following function keys which are used to perform various operations.

The **ZERO** key is used to compensate for small changes in weight when the platform is empty. To zero the indication of weight, press **ZERO** when the scale is in the gross state.

In Indicator Mode, the **TARE** key is used to subtract the weight of an object on the scale from subsequent indications of weight. **TARE** is also used to terminate a numeric tare entry.

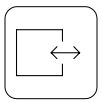
The **CLEAR** key is used to clear a previously entered tare value. When you press **CLEAR**, the indication of weight will return to the gross mode, showing the total weight of the objects on the scale platform. The **CLEAR** key is also used to clear an active target in over-under mode.

The **MEMORY** key is used to access target weight values. Operator access to these values must be enabled in the Setup mode.



The **SELECT** key allows you to switch between primary and secondary weighing units. It is also used in setup mode to select between "yes" and "no" replies and to change displayed values.

The **TARGET** key is used to set or recall a target weight.



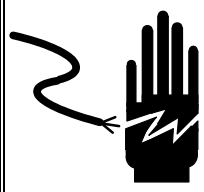
The **PRINT** key is used to initiate a serial output of the weight data. It is also used to accept a response to a setup or programming question.

Numeric Data Entry

The PANTHER PLUS terminal keypad also features an 11-button keypad for entering numeric data. The 11 buttons include 0-9 and a decimal point.

NOTES

2 Operating the PANTHER PLUS Terminal



WARNING

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.

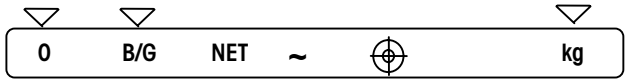
Basic Functions

Zero the Scale

If the scale platform is empty and the cursor on the display is lit:

1. Press →0←

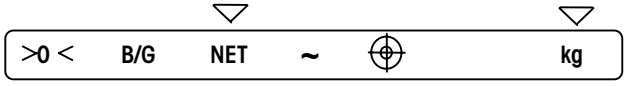
2. The cursor will light up above the ⩾0⩽ in the display .



This compensates for any material which may be on the scale platform. The **ZERO** key is limited to compensating weight that is between ±2% (or ±20%, if programmed accordingly) of the scale's weighing capacity.

Pushbutton Tare

1. To determine the weight inside a container (net weight):
2. Place an empty container on the scale platform.
3. Press →T←
4. The NET cursor will light up.



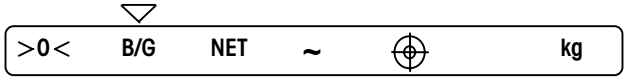
5. Fill the container or place a filled container of equivalent tare weight on the scale. The terminal will display the net weight (total weight on the scale minus the weight of the container.)

NOTE: The motion cursor (~) will blank on and off as items are placed on the scale or removed from the scale.

Keyboard Tare

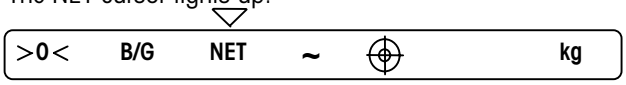
To determine the weight of the material inside a container when the weight of that container is known:

1. The gross cursor lights up.



2. Enter the tare weight (weight of the container) using the numeric keys, followed by the **TARE** key.

3. The NET cursor lights up.



4. Place the full container on the scale. The weight of the contents of the container will be displayed.

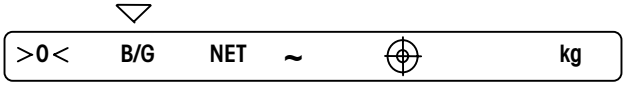
NOTE: The motion cursor (**~**) will blank on and off as items are placed on the scale or removed from the scale.

Clear Tare Function

To clear a tare weight, with the scale in the net weight mode (a tare weight previously entered):

1. Press C

2. The net cursor will go out, the gross cursor will light up, and the gross weight will be displayed.



Print

To print a weight:

1. Tare the weight of an empty container using the steps described above, if desired.

2. Place a load on the weighing platform.

3. Press 

Advanced Functions

The PANTHER PLUS terminal can be programmed (in setup mode) to allow an operator to perform various advanced operations, including:

- Units switching
- Time and date entry

In Over/Under Mode (checkweighing), the PANTHER PLUS terminal can be programmed to allow operators to:

- Store and recall target weights
- Set and edit zone tolerances

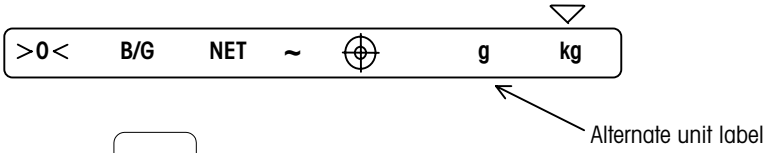
In Setpoint Mode (used for filling applications), the PANTHER PLUS terminal can be programmed to allow operators to:

- Enter setpoint values
- Enter preact values

NOTE: Please verify that the PANTHER PLUS terminal has been programmed to allow these functions to be performed by an operator.

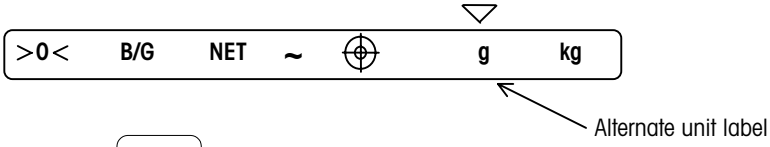
Units Switching

Various weight units (and percent weighing) can be selected in setup mode. Refer to page 1-5 for the full listing of available units. To switch units:



1. Press 

2. The cursor indicating weight units will change to indicate the alternate weight units.



3. Press  again to view the primary units.

Setting the Time

To change the time (this operator function must have been enabled setup):

1. Press the →0← and ⇔ keys. Release them at the same time.

2. The display will show **[F9]**.

   NOTE: If the display shows **[F1]**, press C once then press ↻ twice.

3. Press ⇔ to access the setup sequence.

4. The display shows **[F9.1 X]**. Press ↻

   X=0 Time Disabled

   X=1 HH:MM (12-hour format)

   X=2 HH:MM (24-hour format)

5. Press ⇔

   NOTE: If TIME is disabled, skip to Date Format Entry.

6. The display shows **[HH MM X]** or **[HH MM]**. HH represents the hour. MM represents the minute(s). X is either A for AM or P for PM. NOTE: The display without an A or P is a 24-hour clock.

   If time format is 12-hour clock, enter the time in hours and minutes. Press **SELECT** to toggle between 'A' (AM) and 'P' (PM) after entering all four digits. Press **PRINT**.

   If time format is 24-hour clock, enter the time in hours and minute in 24-hour format. Then press **PRINT**.

7. The display proceeds to **[F9.2 X]**.

8. Press →0← twice, C and ⇔ to exit.

Setting the Date

To set the date (this operator function must have been enabled in setup):

1. Press the →0← and  keys. Release them at the same time.

2. The display will show **[F9]**.

NOTE: If the display shows **[F1]**, press C then →0← twice.

3. Press  to access the setup sequence. The display shows **[F9.1 X]**.

4. Press  until the display shows **[F9.2 X]**. Press  to change X.

X=0	Date disabled.
X=1	MM/DD/YY
X=2	DD.MM.YY

5. Press 

NOTE: If Date is disabled, the display will skip to **[F10].**

6. The display shows **[XXXXXX]**. The format will either be MMDDYY or DDMMYY. DD represents the day. MM is the month. YY is the year.

7. Enter the appropriate date using the numeric keys. Then press 

8. Press C then  to return to the normal weighing mode.

Pushbutton Target (Over/Under Mode)

When the PANTHER PLUS terminal is used as an "over/under" indicator, the LEDs indicate if a weight on the scale platform is within an acceptable tolerance of a target weight. If a sample of the desired target weight is available and the scale is in either gross or net mode:

1. Place the target weight on the weighing platform.
2. Press 
3. Depending on the setup mode programming, the display will either indicate full target weight or the difference from the target weight.
4. Remove the target weight and begin checkweighing.

Setting Zone Tolerances for Pushbutton or Keyboard Targets (Over/Under Mode)

If the PANTHER PLUS terminal was programmed to allow the operator to edit the zone tolerances of the pushbutton target:

1. Press 

2. At the [SP] press the decimal point key and then press 
3. The display reads **[0 xx]** which is the "over" value for the target number as chosen in the previous step.
   - To accept the current value, press 
   - Or, use the numeric keypad to enter a new value. Then press 

4. The display reads **[h xx]**, which is the "high " value for the first target.

- To accept the current value, press 
- Or, use the numeric keypad to enter a new value. Press 

5. The display reads **[l xx],** which is the "low" value for the first target.

- To accept the current value, press 
- Or, use the numeric keypad to enter a new value. Press 

6. The display reads **[u xx]**, which is the "under" value for the first target.

- To accept the current value, press  . Or, use the numeric keypad to enter a new value.
- If a new value is entered, press 

When all target zone values have been entered, the display will show [SP].

7. Enter the next target value or press C to exit.

Clear Target Function (Over/Under Mode)

1. Press C

2. The target cursor will go out and either the gross weight (if in gross weight mode) or net weight will be displayed.

Storing Target Weights (Over/Under Mode)

Ten target values may be stored and recalled by the operator (if this feature was enabled in setup mode.)

1. With the scale in the normal operating mode, press M

2. The display shows the first target **[SP].** Enter the target memory number of the value you want to view or edit.

3. If you do not want to view or edit the value, press  . This moves you to the next target. The display reads **[SP1 1].**

4. To view or edit the current value, press  The display reads **[SP1**].

The following steps occur only if step 3 is followed.

1. Press  The display now shows the current target value.

2. To enter a new value, use the numeric keys. The display will now show the new value.

3. To accept the target value, press 

4. If zone editing was not enabled in setup, **[SP]** will now be displayed. Follow the steps above to accept or set the values for the remaining targets. If zone editing was enabled in setup, follow the instructions below.

Setting Zone Tolerances for Stored Targets (Over/Under Mode)

If setting zone tolerances has been enabled in setup, the following sequence will appear after a target value is entered. During setup, the zone tolerances will have been set as a percentage of the target weight (0% to 100%) or as 0 to full-scale increments of the weight, or as an actual weight value.

The display reads **[o XX]** which is the "over" value for the target number as chosen in the previous step.

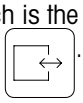
1. To accept the current value, press  Or, use the numeric keypad to enter a new value.

2. If a new value is entered, press  .

3. The display reads **[h XX]**, which is the "high " value for the first target.

4. To accept the current value, press  . Or, use the numeric keypad to enter a new value.

5. If a new value is entered, press  .

6. The display reads **[l XX],** which is the "low " value for the first target. To accept the current value, press  . Or, use the numeric keypad to enter a new value.

7. If a new value is entered, press 

8. The display reads **[u XX]**, which is the "under" value for the first target.

9. To accept the current value, press  . Or, use the numeric keypad to enter a new value.

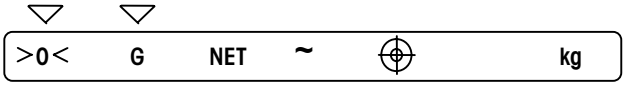
10. If a new value is entered, press 

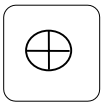
11. When all zone values have been entered, the display will show **[SP].**

12. Enter the next target value or press C to exit.

Recalling a Target Weight (Over/Under Mode)

To recall and use a stored target weight, when the scale is at gross zero as shown here:



1. Press  . The display will read **[SP]** .

2. Enter the target memory number of the value you wish to use. Press 

3. The pre-programmed target weight value will be displayed.

4. To use this target value, press 

5. Or, to return to the normal weighing mode, press C

6. Once you have accepted the recalled target weight you wish to use, an LED will light up to indicate the weight is below tolerance. The ⊕ cursor will light up.

7. Place the material or container of material to be weighed on the scale when it is at gross zero. The LEDs will light up indicating if the weight is over or under the target weight.

NOTE: You will continue to use the target weight selected until you clear it by pressing the **CLEAR** key.

Entering Setpoint Values (Setpoint Mode)

The PANTHER PLUS terminal is provided with the capability of two coincidence setpoints with preact control. A setpoint is a target value used to stop a feeding or discharging device. When the weight on the scale equals the setpoint value, the setpoint output is turned off.

While setpoint values are always entered as positive values, the controls can be set up to turn outputs off when either a positive value (feeding something onto the scale) or a negative weight value (discharging from the scale into a container). If this function was enabled in setup:

1. With the scale in the normal operating mode, press 

.

2. The display shows the first target **[SP1 0].**

3. If you do not want to view or edit the value, press  . This moves you to the next target. The display reads **[SP2 0].**

4. To view or edit the current value, press  .

   The display reads **[SP1 1].**

5. Press  The display now shows the current target value.

6. To enter a new value, use the numeric keys. The display will now show the new value.
7. To accept the value, press  .

8. If entering preact values was enabled in setup, **[P1 0]** will be displayed. If not, you return to normal weighing mode.

Entering Preact Values (Setpoint Mode)

Preact values are used to anticipate the amount of material which may be between the feeder and the scale when the feeder is turned off, or may be used to anticipate the reaction time of the feeder or gate.

The preact amount is entered as a value relative to the setpoint. For example, if you have a final weight on the scale of 100 kg, and the material which will fall from the feeder as it stops will add another 2 kg, set your preact value for 2. When the material settles on the scale, the final weight should be 100 kg.

A zero tolerance value is also available. This can be used as a control check to make sure the hopper or scale has returned to within a preset tolerance of zero before the next operation may begin. If the entering preact function was enabled in setup:

1. After the setpoints have been accessed, **[P1 0]** is displayed.
2. If you do not want to view or edit the value, press  This moves you to the next target. The display reads **[P2 0].**
3. To view or edit the current value, press  . The display reads **[P1 1**].
4. Press  . The display now shows the current target value.
5. To enter a new value, use the numeric keys. The display will now show the new value.
6. To accept the value, press  .

NOTES

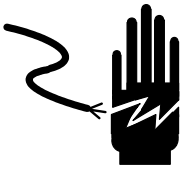
3 Additional Information

Cleaning and Maintenance

You may wipe the PANTHER PLUS keypad and cover with a clean, soft cloth that has been dampened with a mild glass cleaner. Do not use any type of industrial solvent such as toluene or isopropanol (IPA) as it could damage the terminal's finish. Do not spray cleaner directly on the terminal.

Regular maintenance inspections by a qualified service technician are recommended.

Installation, Programming and Service



WARNING

ONLY PERMIT QUALIFIED PERSONNEL TO SERVICE THE TERMINAL. 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 AND/OR PROPERTY DAMAGE.

Information on installing, programming, and servicing the PANTHER PLUS terminal is found in the **PANTHER PLUS Terminal Technical Manual**. Installation, programming, and service should be performed only by qualified personnel. Please contact your local METTLER TOLEDO representative for assistance.

Error Codes

Error	Description	Corrective Measures
E1	PROGRAM MEMORY ERROR	Call your local METTLER TOLEDO representative.
E2	INTERNAL RAM ERROR	Call your local METTLER TOLEDO representative.
E3	EEPROM MEMORY ERROR	Press **CLEAR** to acknowledge. Resets setup constants. Call your local METTLER TOLEDO representative.

Error	Description	Corrective Measures
E4	EXTERNAL RAM ERROR	Call your local METTLER TOLEDO representative.
E7	A/D CIRCUIT MALFUNCTION OR NO ANALOG LOAD CELL CONNECTED	Call your local METTLER TOLEDO representative.
E16	INTERNAL MATH ERROR	Press **CLEAR** to acknowledge. Unit will reset.
E20	PREACT VALUE IS GREATER THAN SETPOINT VALUE	Clear preact value, then re-enter setpoint value
E32	INSUFFICIENT TEST WEIGHT USED FOR CALIBRATION	Use more test weight for calibration.
E34	TEST WEIGHT EXCEEDS 105% OF CAPACITY	Use less than 105% of capacity Press **CLEAR** and re-enter
E35	SPAN CALIBRATION ERROR	Call your local METTLER TOLEDO representative.
E36	ANALOG LOAD CELL OUT OF RANGE	Call your local METTLER TOLEDO representative.
E50	WEIGHT CAN NOT BE DISPLAYED IN ALTERNATE UNITS	Some alternate unit combinations are illegal. Choose another scale build or disable alternate units.
E60	STACK OVERFLOW.	Press **CLEAR**. Unit resets.
EEE	POSITIVE MORE THAN ZERO CAPTURE LIMIT OF 2% OF SCALE CAPACITY	Call your local METTLER TOLEDO Remove material from scale base and cycle power. If problem reoccurs, call your METTLER TOLEDO representative.
-EEE	NEGATIVE MORE THAN ZERO CAPTURE LIMIT OF 2% OF SCALE CAPACITY	Call your local METTLER TOLEDO representative.
o E	OVER ZONE IS OUT OF RANGE OR DOES NOT FIT BUILD (ACTUAL WEIGHT ZONES ONLY).	Press **CLEAR** to acknowledge and re-enter zone.
h E	HIGH ZONE IS OUT OF RANGE OR DOES NOT FIT BUILD (ACTUAL WEIGHT ZONES ONLY).	Press **CLEAR** to acknowledge and re-enter zone.
l E	LOW ZONE IS OUT OF RANGE OR DOES NOT FIT BUILD (ACTUAL WEIGHT ZONES ONLY).	Press **CLEAR** to acknowledge and re-enter zone.
u E	UNDER ZONE IS OUT OF RANGE OR DOES NOT FIT BUILD (ACTUAL WEIGHT ZONES ONLY).	Press **CLEAR** to acknowledge and re-enter zone.

4 Appendix

Standards Compliance

UL and cUL Listing

The PANTHER PLUS terminal has been tested and complies with UL 1950. It carries the UL and cUL labels.

CSA Certification

The PANTHER PLUS terminal is designed to meet CSA standard C22.2 No 143-1975, Office Machines.

Weights and Measures Approval (U.S. and Canada)

The PANTHER PLUS terminal meets or exceeds requirements for Class III, 10,000e NTEP division accuracy requirements in accordance with the National Institute of Standards and Technology (NIST) Handbook 44. A Certificate of Conformance 96-125A2 has been issued under the National Type Evaluation Program (NTEP) of the National Conference on Weights and Measure.

The PANTHER PLUS terminal was submitted for approval to the Canadian Weights and Measures Laboratories in Canada. After evaluation, it was found to meet and/or exceed requirements for Class III, 10,000d rating and approval AM-5162 Rev. 3 was issued by statutory authority of the Minister of Industry, Science and Technology of Canada.

Conducted and Radiated Emissions (RFI)

The PANTHER PLUS terminal meets or exceeds FCC docket 80-284 for conducted and radiated emissions requirements as a Class A digital device.

NOTES

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