

METTLER TOLEDO

IND780

AxleView™

Application

User Manual

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	2/24	Changed screen shots showing RollOn to AxleView

INTRODUCTION

This publication is provided solely as a guide for individuals who have received Technical Training in servicing the METTLER TOLEDO product.

Information about METTLER TOLEDO Technical Training can be obtained by writing, calling, or emailing:

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Precautions

READ this manual BEFORE operating or servicing this equipment.

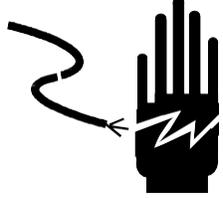
FOLLOW these instructions carefully.

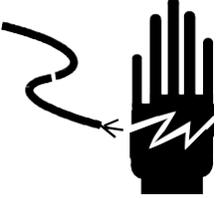
SAVE this manual for future reference.

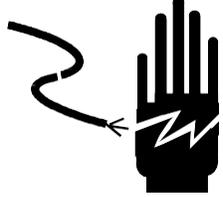
DO NOT allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.

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

CALL METTLER TOLEDO for parts, information, and service.

	 WARNING
	PERMIT ONLY 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.

	 CAUTION
	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 INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

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

	 CAUTION
	OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.

	 WARNING
	USE EXTREME CAUTION WHEN LIFTING AND MOVING THE SCALE TO THE DESIRED LOCATION. DO NOT ATTEMPT TO LIFT AND MOVE THE SCALE BY YOURSELF OR INJURY COULD OCCUR.



Disposal of Electrical and Electronic Equipment

In conformance with the European Directive 2002/96 EC on Waste Electrical and Electronic Equipment (WEEE) this device may not be disposed of in domestic waste. This also applies to countries outside the EU, per their specific requirements.

Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment.

If you have any questions, please contact the responsible authority or the distributor from which you purchased this device.

Should this device be passed on to other parties (for private or professional use), the content of this regulation must also be related.

Thank you for your contribution to environmental protection.

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Introduction

General

METTLER TOLEDO terminals can carry out specialized tasks when combined with add-on applications. The AxleView™ application can be used on the IND780 terminal to provide the user with estimations of a vehicle's axle group weights.

The IND780 AxleView application provides static vehicle weighing for over-the-road trucks. It will estimate the different axle group weights while the vehicle rolls onto the scale at speeds below 5 mph (8 km/hr.) and provides a legal-for-trade gross weight once the vehicle is no longer in motion. This is useful for operations that involve loading vehicles that will then travel on roadways. The axle group weight estimations can alert the user when an axle group weight is over the limit set by the applicable Department of Transportation. This manual will cover the installation and set-up of the IND780 AxleView application.

Process Requirements

The IND780 AxleView configuration must meet the requirements listed below:

- An IND780 with the application iButton for AxleView software
- DataBridge™ MS v1.1.5 or higher
- Level approach (no more than $\pm 2\%$ grade)
- Vehicle speed < 5 mph (8 km/hr.) for axle group weight accuracy of $\pm 5\%$
- PDX, GDD, MTX, or analog load cells

Installation Steps

The IND780 AxleView application is used in conjunction with a full-length vehicle scale. To ensure proper operation, the following installation steps are recommended.

Step 1 - Begin at the IND780 home screen

Step 2 - Load AxleView.exe, APIcommon.dll, WIMAPIcommon.dll, SKKeyboard.dll into the IND780 via FTP

- a. IND780 Location: /CustomNET/Programs

Step 3 - Navigate to Setup > Application > Custom .NET Start

Step 4 - Create a new task by pressing the center softkey (New)

a. File Name: AxleView.exe

b. Auto Start: Enabled

c. Manual Start: Enabled

d. Reserve Console: Disabled

Step 5 - Exit setup. Application will automatically start.

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Setup Parameters

Introduction

The IND780 AxleView parameter setup can be divided into five sections: general, timers, data entry fields, printer configuration, and ticket format. Each parameter must be configured prior to using the application.

General

General setup for the IND780 terminal and AxleView application involves selection of the operational mode, axle mode, start trigger, and threshold value.

IP=172.18.64.249		24/Jan/2017 15:12	
General			
Operational Mode	Attended	▼	
Axle Mode	RollOn	▼	
Start Trigger	Threshold	▼	
Threshold Value	1000	lb	
←			More

The operational set up defines the mode of the terminal, whether that be Attended or Unattended. Attended mode is for use when an operator is present. In attended mode, the application requires interaction to process and print the transaction. Unattended mode is for use with DataBridge™MS. It requires no operator interaction with the IND780.

The axle mode setup is where the user selects RollOn as the application. RollOn mode is only used with a full-length scale platform. Estimated axle group weights are calculated as the vehicle slowly pulls on to the scale. Once the vehicle is completely on the scale and there is no motion, the legal-for-trade gross weight is available for ticket printing, along with the estimated axle group weights. It is important to note that for AxleView mode usage, scale approaches must be smooth, level, and in the same plane as the scale platform.

The start trigger is the method to start processing the vehicle. The selected threshold method uses a predetermined weight value to signify the beginning of the vehicle. The Loop start trigger is not currently implemented.

Finally, the threshold value is the inputted weight value for which the application should be processing vehicle weight data. When Start Trigger is set to Threshold, this weight value is used to determine when to begin processing the vehicle data.

Timers

AxleView uses two timers to facilitate the weighing process. The motion timeout is used to determine how many seconds the vehicle must be static on the scale before completing the processing of the vehicle. Once the motion timeout timer expires, axle group weights are calculated and gross weight is captured.

The RollOn max timeout is the maximum amount of time to process a vehicle if the scale is continuously in a state of motion. Once the timer expires, the captured data is processed.

IP=172.18.64.249		24/Jan/2017 15:12	
Timers			
Motion Timeout	<input type="text" value="5"/>	seconds	
Roll On Max Timeout	<input type="text" value="45"/>	seconds	
			More

Data Entry Fields

Data entry fields 1-5 allow the operator to create data field names to be used during attended operation. If the field name is left blank in setup, it will not appear during operation or on the ticket.

IP=172.18.64.249		24/Jan/2017 15:16	
Data Entry Fields			
Field #1	Truck ID		
Field #2	Trailer ID		
Field #3	Company		
Field #4	Product		
Field #5	Order		
↖			More

Printer Configuration

The printer can be configured through either a serial or Ethernet port. If using a serial port with the AxleView application, the COM1 and COM2 settings need to be assigned to Custom.NET in the standard IND780 setup.

The following list and figure show the correct printer configuration settings for AxleView if using a serial port.

- Printer port: COM1 or COM2
- Baud: 9600
- Data bits: 7 or 8
- Parity: None, Odd, Even
- Star cut paper: Disabled or Enabled
 - For use when using the Star Micronics TUP series printers. When enabled, this will issue the 'cut' command to the printer to cut the paper.

IP=172.18.64.249		24/Jan/2017 15:16	
Printer Configuration			
Printer Port	COM1		
Baud	9600		
Data Bits	8		
Parity	None		
Star Cut Paper	Enabled		
↖			

The following list and figure show the correct printer configuration settings for AxleView if using Ethernet.

- Printer Port: Ethernet
- Printer IP Address: Enter IP Address
- Port: 9100

The screenshot shows a 'Printer Configuration' window. At the top left, it displays 'IP=172.18.64.249' and at the top right, '24/Jan/2017 15:17'. The title 'Printer Configuration' is centered. Below the title, there are three input fields: 'Printer Port' with a dropdown menu set to 'Ethernet', 'Printer IP Address' with the value '192.168.0.1', and 'Port' with the value '9100'. At the bottom left of the window, there is a back arrow icon.

Ticket Format

When using attended mode, a ticket is printed via serial or Ethernet connection once the DONE softkey is pressed to complete the transaction. Ticket format layout is below.

Note: Data entry field name/data are printed only when field name is configured in Setup.

The screenshot shows a printed ticket with the following text:
24/Jan/2017
15:27:46
Truck ID: 12345
Trailer ID: 54321
Company: ACME
Product: STEEL
Order: 2445

Axle 1 : 11440
Axle 2 : 16140
Axle 3 : 13920
Axle 4 : 13740

Gross: 55240 lb

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Operation

Introduction

The IND780 AxleView application estimates a vehicle's axle group weights when the vehicle rolls onto the scale and provides a legal-for-trade gross weight once the vehicle is no longer in motion. AxleView possesses two operational modes: Attended and Unattended.

Attended mode utilizes an operator and provides a printed ticket when the vehicle weighment and transaction are complete. With attended mode, the IND780 is the interface. With unattended mode, DataBridge MS is the interface; it can send transactional results to a host computer automatically.

The weighing sequence begins when the vehicle weight exceeds the On Scale Threshold value, based on the setting of the Vehicle Detect parameter in the terminal. As the vehicle continues to roll onto the scale, weight samples are collected. Once the vehicle is completely on the scale, it comes to a stop in order to obtain a legal-for-trade gross weight. The captured weight samples are analyzed, and the axle group weights are estimated and stored.

AxleView uses two timers to assist in the vehicle weighing operation. The Motion Timeout parameter is used to determine how many seconds the vehicle must remain in a stationary state before completing the processing of the vehicle. Once the Motion Timer expires, weights are calculated and gross weight is captured. The AxleView Max Timeout is the maximum amount of time to process a vehicle if the scale is continuously in a state of motion. Once the timer expires, the captured data is processed.

The following sections describe the various screens displayed during the weighing process.

Attended Mode

The attended mode of the IND780 AxleView application walks the operator through the weighing process in a step-by-step fashion, providing axle group weight estimates and a legal-for-trade gross weight. The following screens show the operation of attended mode.

Attended Mode – Idle Screen

The idle screen is shown below. This screen is present when the application is waiting to begin capturing data. AxleView will begin capturing data once the threshold value is exceeded.



Attended Mode – Weight Screen

The Weight Screen is shown below. After the vehicle has pulled entirely on to the scale and either the Motion Timeout or the AxleView Max Timeout has expired, the data will be processed. After processing, the weights will be displayed. It is important to note that only the gross weight is considered legal-for-trade. The calculated weights are estimated values only with an accuracy of +/- 5%. The operator can choose to abort the transaction by pressing the Esc softkey or proceed to the next screen by pressing the Next softkey.



Attended Mode – Data Entry Screen

The Data Entry Screen is shown below. If no action is taken in the Setup, the five rows below will appear with the title "Field" followed by their corresponding row value. If any of the Data Entry Fields (1-5) are configured in Setup to be a specific parameter, that parameter name will appear on this screen for the operator to key in data. An example of this is shown below. Data entered here can be printed onto the ticket. The operator will have the option to abort the transaction by pressing the Esc softkey or complete the transaction by pressing the Done softkey.

IP=172.18.64.249		24/Jan/2017 15:25	
55240 lb		B/G Scale 1	
Truck ID			
Trailer ID			
Company			
Product			
Order			
Esc			Done

Attended Mode – Completed Data Entry Screen

The Completed Data Entry Screen is shown below. Once all the data has been entered, the operator can press the Done softkey to complete the transaction and print a ticket. The Esc softkey can be pressed to abort the transaction.

IP=172.18.64.249		24/Jan/2017 15:27	
55240 lb		B/G Scale 1	
Truck ID	12345		
Trailer ID	54321		
Company	ACME		
Product	STEEL		
Order	2445		
Esc			Done

Unattended Mode

Unattended mode is intended to be utilized in conjunction with DataBridge MS where the IND780 is providing data to DataBridge, and DataBridge is the user interface. The data capture process is identical to Attended mode, but no key presses are required to end the transaction after the weights are processed. As the vehicle pulls off of the scale, the application will reset once the weight is below the threshold.

Unattended Mode – Idle Screen

The Idle Screen is shown below. The application will wait to begin capturing data until the threshold value is exceeded.



Unattended Mode – Weight Screen

The Weight Screen is shown below. An operator can intervene and abort a transaction by pressing the Esc softkey. Once the weighing process is complete, an electronic ticket can be emailed to the appropriate party through DataBridge MS.



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Publication Suggestion Report

If you have suggestions concerning this publication, please email them to vehicle.documentation@mt.com

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

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