DETECTO®

APS
ENTERPRISE SCALE
Setup and Operation Manual

TABLE OF CONTENTS

SERIAL NUMBER _____

DATE OF PURCHASE _____

PURCHASED FROM _____

_____

_____

_____

RETAIN THIS INFORMATION FOR FUTURE USE

PRECAUTIONS

Before using this scale, read this manual and pay special attention to all "NOTIFICATION" symbols:

⚠ **IMPORTANT**   ⚡ **ELECTRICAL WARNING**

INTRODUCTION

Thank you for selecting and purchasing the Detecto APS Enterprise Scale. It was built with Detecto quality and reliability and incorporates the latest in digital technology and innovative features for the weighing industry.

This manual is provided to guide you through installation, setup/calibration and operation of the Detecto APS Enterprise Scale. Please read it thoroughly before attempting to install the scale and keep it handy for future reference.

FCC COMPLIANCE STATEMENT

This equipment generates uses, can radiate radio frequency, and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference in which case the user will be responsible to take whatever measures necessary to correct the interference.

You may find the booklet "How to Identify and Resolve Radio TV Interference Problems" prepared by the Federal Communications Commission helpful. It is available from the U.S. Government Printing Office, Washington, D.C. 20402, stock No. 001-000-00315-4.

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DISCLAIMER

While every precaution has been taken in the preparation of this manual, the Seller assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from use of the information contained herein. All instructions and diagrams have been checked for accuracy and ease of application; however, success and safety in working with tools depend to a great extent upon the individual accuracy, skill and caution. For this reason, the Seller is not able to guarantee the result of any procedure contained herein. Nor can they assume responsibility for any damage to property or injury to persons occasioned from the procedures. Persons engaging the procedures do so entirely at their own risk.

PROPER DISPOSAL

When this device reaches the end of its useful life, it must be properly disposed of. It must not be disposed of as unsorted municipal waste. Within the European Union, this device should be returned to the distributor from where it was purchased for proper disposal. This is in accordance with EU Directive 2002/96/EC. Within North America, the device should be disposed of in accordance with the local laws regarding the disposal of waste electrical and electronic equipment.

It is everyone's responsibility to help maintain the environment and to reduce the effects of hazardous substances contained in electrical and electronic equipment on human health. Please do your part by making certain that this device is properly disposed of. The symbol shown to the right indicates that this device must not be disposed of in unsorted municipal waste programs.
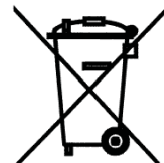
SPECIFICATIONS

Model	Platform Size	Capacity	Increments	Divisions	Load Cell
APS8	6 in x 10 in 15 cm x 25 cm	15 lb	0.01 lb	1500	TSP-10kg
		7.5 kg	0.005 kg	1500	
APS10	6 in x 10 in 15 cm x 25 cm	30 lb	0.01 lb	3000	TSP-15kg
		15 kg	0.005 kg	3000	
APS12	6 in x 10 in 15 cm x 25 cm	160 oz	0.1 oz	1600	TSP-10kg
APS160	10 in x 10 in 25 cm x 25 cm	160 oz	0.1 oz	1600	TSP-10kg
APS15	10 in x 10 in 25 cm x 25 cm	15 lb	0.01 lb	1500	TSP-10kg
		7.5 kg	0.005 kg	1500	
APS20	10 in x 10 in 25 cm x 25 cm	30 lb	0.01 lb	3000	TSP-15kg
		15 kg	0.005 kg	3000	
APS30	12 in x 14 in 31 cm x 36 cm	30 lb	0.01 lb	3000	TSP-15kg
		15 kg	0.005 kg	3000	
APS70	12 in x 14 in 31 cm x 36 cm	70 lb	0.02 lb	3500	TSP-30kg
		31 kg	0.01 kg	3500	
APS150	12 in x 14 in 31 cm x 36 cm	150 lb	0.05 lb	3000	TSP-100kg
		60 kg	0.02 kg	3000	
APS250	18 in x 18 in 46 cm x 46 cm	250 lb	0.1 lb	2500	TSP-100kg
		113 kg	0.05 kg	2500	

Power Requirements:	100 to 240 VAC 50/60Hz 12 VDC 1A wall plug-in UL/CSA listed AC power adapter (Cardinal part number 6800-1045)
Operating Environment:	Temperature Range: 14º to 104º F (-10º to +40º C)
Display:	Five digit, seven segment, 0.875 inch (22 mm) high LCD
Interfaces:	2 RS-232 serial, 1 USB-B, 1 OPOS compatible serial, most POS system protocols included (Cardinal Scale/SMA, Avery Berkel, NCI/Worldship, Mettler PS, Mettler SICS)

Options

- APSWIFI – APS Wi-Fi
- APSFS – Foot Switch Zero
- APSPB – Push Button Zero
- APSRD – Remote Display w/6ft. cable
- APSPOST – Remote Display Tower
- BT1214 / BT1818 – Ball Top Transfer

Certifications

This equipment is certified to comply with the requirements for a Class III device by the:

- National Conference on Weights and Measurements (Certificate No. 14-057).
- Measurement Canada (Approval No. AM-5968


MEASUREMENT CANADA

SITE PREPARATION REQUIREMENTS

The Detecto APS Enterprise Scale is a precision weight-measuring instrument. As with any precision instrument, they require an acceptable environment to operate at peak performance and reliability. This section is provided to assist you in obtaining such an environment.

Site Requirements

In order to keep cooling requirements to a minimum, the indicator should be placed out of direct sunlight and to provide adequate air circulation, keep the area around the indicator clear.
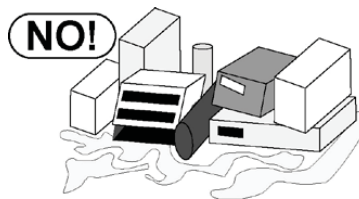
Make certain the indicator is not directly in front of a heating or cooling vent. Such a location will subject the indicator to sudden temperature changes, which may result in unstable weight readings.
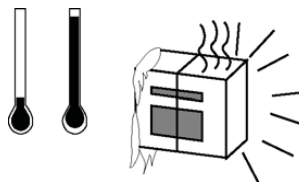
Insure that the indicator has good, clean AC power and is properly grounded. In areas subject to lightning strikes, additional protection to minimize lightning damage, such as surge suppressors, should be installed.
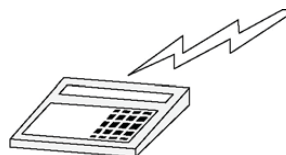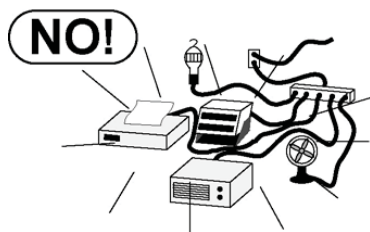
Environmental Conditions

The APS Enterprise scale has been designed to operate under the following environmental conditions:

- Indoor use only.

- Ambient temperature range of 14 to 104 °F (-10 to +40 °C

- Main supply voltage fluctuations not to exceed ±10% of the nominal voltage.

- Transient overvoltage's according to Installation Categories II (Overvoltage Categories per IEC 1010). Temporary voltage spikes on the AC input line that may be as high as 1500V for 115V models and 2500V for 230V models are allowed.

- Used in an environment of Pollution degrees 2 (i.e., where normally only non-conductive atmospheres are present). Occasionally, however, a temporary conductivity caused by condensation must be expected, in accordance with IEC 664.

SITE PREPARATION REQUIREMENTS, CONT.

Electrical Power

The APS Enterprise scale is powered by a 100 to 240 VAC 50/60Hz 12 VDC 1A wall plug-in UL/CSA listed AC power adapter. Note that a special order is not required for operation at 230/240 VAC.

- The socket-outlet supplying power to the scale should be on a separate circuit from the distribution panel and dedicated to the exclusive use of the scale.

- The socket-outlet shall be installed near the equipment and shall be easily accessible. Note that the wall plug-in AC power adapter serves as the power disconnect.

- The wiring should conform to national and local electrical codes and ordinances and should be approved by the local inspector to assure compliance.

- On installations requiring 230 VAC power, **it is the responsibility of the customer** to have a qualified electrician install the proper power adapter plug that conforms to national electrical codes and local codes and ordinances.

Electrical Noise Interference

To prevent electrical noise interference, make certain all other wall outlets for use with air conditioning and heating equipment, lighting or other equipment with heavily inductive loads, such as welders, motors and solenoids are on circuits separate from the scale. Many of these disturbances originate within the building itself and can seriously affect the operation of the scale. These sources of disturbances must be identified and steps must be taken to prevent possible adverse effects on the scale. Examples of available alternatives include isolation transformers, power regulators, uninterruptible power supplies, or simple line filters.

Transient Suppression

The following recommendations will help to reduce transients:

- Always use shielded cables to connect signal wires to the weight scale.

- Do not run signal cables from the scale alongside or parallel to wiring carrying AC power. If unavoidable, position the signal cables a minimum of 24" away from all AC wiring.

- Always use arc suppressors across all AC power relay contacts (see recommendations at http://www.paktron.com/pdf/Quencharch_QRL.pdf).

RFI Immunity

The operation of sensitive electronic equipment can be adversely affected by RF (Radio Frequency) radio transmissions. Digital weight scales are one such type of equipment. Radio transmissions come from things like hand-held radio transmitters and cell phones. One symptom of RFI (Radio Frequency Interference) in a digital weight scale is weight indication instability during a radio transmission.

The APS Enterprise scale was designed with special grounding and RFI shielding to achieve a high degree of immunity to common RFI. To maximize the scale's immunity to radio transmissions, follow these guidelines:

1. ALWAYS use shielded cable for all I/O (Input/Output) connections to the scale.

2. NEVER operate any radio transmitter within 2 meters (~6ft.) of the scale.

3. NEVER connect un-terminated cables to the scale.

4. KEEP the intended external I/O devices connected to I/O cables entering the scale.

5. ALWAYS connect the shield of the shielded I/O cable at the scale end only. Leave the shield unconnected at the I/O device.

INSTALLATION
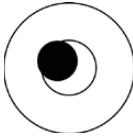## (ALL MODELS EXCEPT APS250)

Unpacking

Remove the scale from the shipping carton. Remove all packing material and then examine the scale to make certain there is no shipping damage. Should damage be discovered contact the shipping company as soon as possible. The packing material and shipping carton should be retained for possible examination by the shipping company.

Determine where the scale is to be located. It should be a smooth surface capable of supporting both the scale and any load to be placed on the scale. It should not be in direct sunlight nor should it be subject to air flow from heating/cooling vents, fans or similar devices. Plug-in the 12VDC adapter to use scale. Refer to Electrical Power section of this manual for more instruction. The scale is now ready for use.

Level Adjustment

Place the scale in the chosen location and remove the stainless steel platform. The platform can be removed by lifting upward on it removing it from the weighbridge. Locate the small level indicator on the scale base to the right of the display and check to make certain that the scale is level.

NOT LEVEL
Bubble is not
within circle

LEVEL
Bubble is
within circle

If the level indicator does not show a level indication, the mounting feet should be adjusted to obtain a level condition. To adjust a mounting foot, first loosen the lock nut (located under the scale base) and then turn the mounting foot in the required direction to raise or lower that corner of the scale. Once a level condition has been achieved, secure the mounting foot settings by tightening each of the lock nuts. Replace the platform on the weighbridge.

LOCK NUT

MOUNTING FOOT

INSTALLATION, CONT.
(APS250 ONLY)

Unpacking and Setup

1. Remove the scale display, hardware pack, power supply, scale cover and scale base assembly from the shipping carton. Remove all packing material and then examine the scale to make certain there is no shipping damage. Should damage be discovered contact the shipping company as soon as possible. The packing material and shipping carton should be retained for possible examination by the shipping company.

2. Remove the four leveling feet from the hardware pack and install in each corner of scale base as shown. **NOTE:** Leveling feet must be in place to operate the scale.
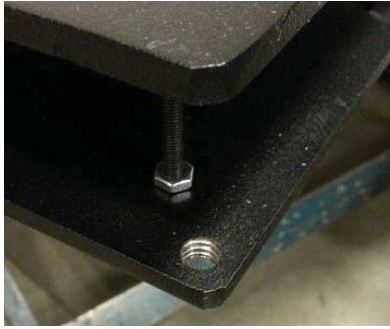
3. To mount the display on the scale base, use the two included mounting screws in the hardware pack.

4. Insert the screws through the two holes in the scale display bracket and attach the bracket to the scale base.

5. Route the cable into the scale and plug into scale display port (see interconnection section for port location and more information).

INSTALLATION, CONT.
(APS250 ONLY)

Unpacking and Setup, Cont.

6. Determine where the scale is to be located. It should be a smooth surface capable of supporting both the scale and any load to be placed on the scale. It should not be in direct sunlight nor should it be subject to air flow from heating/cooling vents, fans or similar devices.

7. Plug-in 12VDC adapter to use scale. Refer to Electrical Power section of this manual for more instruction.

8. The scale is now ready for use.

Level Adjustment

Place the scale in the chosen location and remove the stainless steel platform. The platform can be removed by lifting upward on it removing it from the weighbridge. Locate the small level indicator on the scale base to the right of the display and check to make certain that the scale is level.

NOT LEVEL
Bubble is not within circle

LEVEL
Bubble is within circle

If the level indicator does not show a level indication, the mounting feet should be adjusted to obtain a level condition. To adjust a mounting foot, first loosen the lock nut (located under the scale base) and then turn the mounting foot in the required direction to raise or lower that corner of the scale. Once a level condition has been achieved, secure the mounting foot settings by tightening each of the lock nuts. Replace the platform on the weighbridge.

LOCK NUT

MOUNTING FOOT

INSTALLATION, CONT.

Interconnections

All input, output and power connections to the APS Enterprise scale are made internally to the main board inside the scale. Connections for the scale display, remote display and OPOS compatible serial device are made using RJ11 snap-in modular connectors. The USB port is a device (or upstream) port using an industry standard Type B connector. The 12VDC 1A wall plug-in UL/CSA listed AC power adapter is connected using a power jack.

| POS SERIAL PORT 3 | REMOTE DISPLAY SERIAL PORT 2 | SCALE DISPLAY SERIAL PORT 1 |

12VDC   USB

PCB COVER
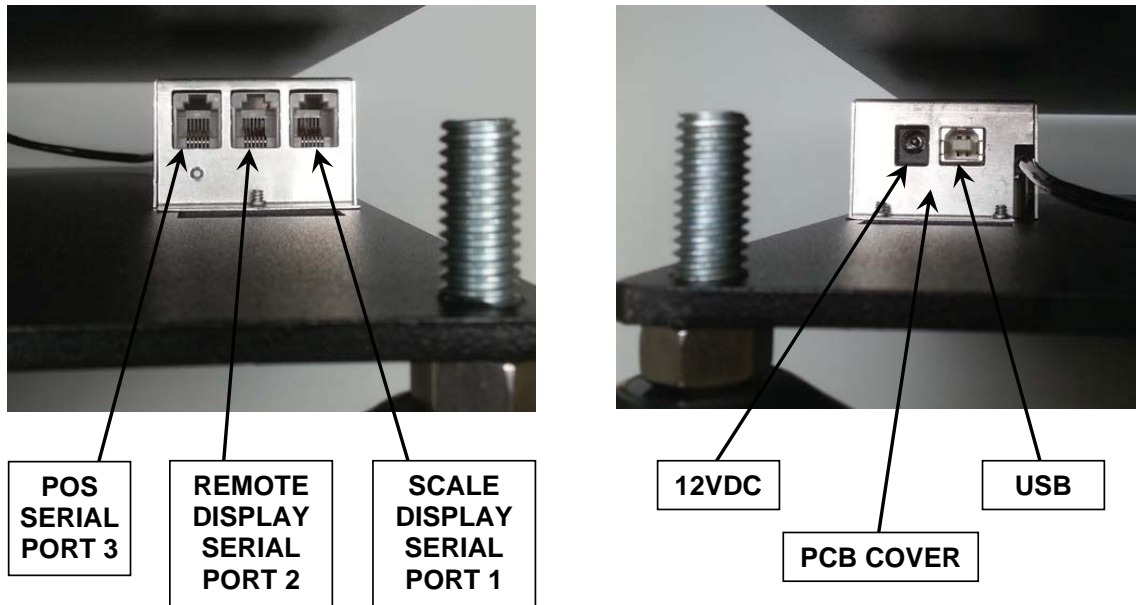
Data Cable Installation

SCALE DISPLAY/SERIAL PORT 1
Plug the RJ11 connector from the Scale Display cable into the scale base as marked.

REMOTE DISPLAY/SERIAL PORT 2
To use a remote display, plug the remote display RJ11 connector into the scale base where marked.

POS/SERIAL PORT 3
NOTE: The included serial data cable uses an RJ11 phone type connector (scale base) to a DB9 connector (OPOS compatible serial device).

Plug the RJ11 connector of the included 4' serial data cable into the scale base where marked and then plug the other end into an available serial port on the POS device.

USB Cable Installation

USB
To use the USB interface, obtain an industry standard Type B connector USB cable and plug it into the scale base where marked and then plug the other end into a USB port on your computer.

Power Adapter

12VDC
To apply power to the scale using the supplied 12VDC 1A wall plug-in UL/CSA listed AC power adapter, insert the plug from the power adapter cable into the power jack on the scale base where marked (refer to previous page) and then plug the power adapter into a proper electrical outlet. The scale is now ready for operation.

INSTALLATION, CONT.

Serial Data Cable, 8527-0545-0A

8527-0545-0A

(Included 4' Serial Data Cable, 8527-0545-0A)

6 PIN MOD.			DB9S
6	WHT	DTR	4
5	BLK	DSR	6
4	RED	GND	5
3	GRN	RXD	3
2	YEL	TXD	2
1	BLUE	RTS	7
		CTS	8
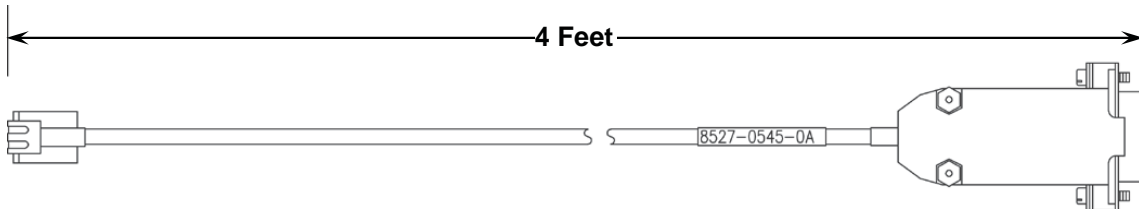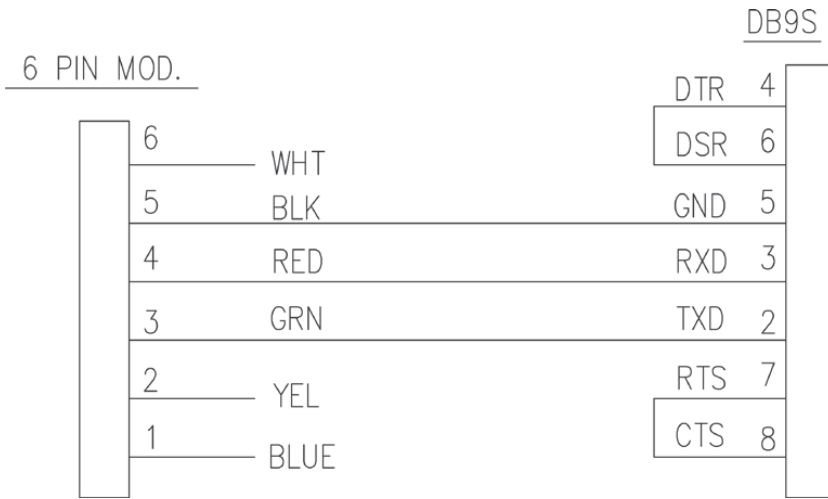
(Wiring Diagram, Serial Data Cable, 8527-0545-0A)

KEYPAD FUNCTIONS
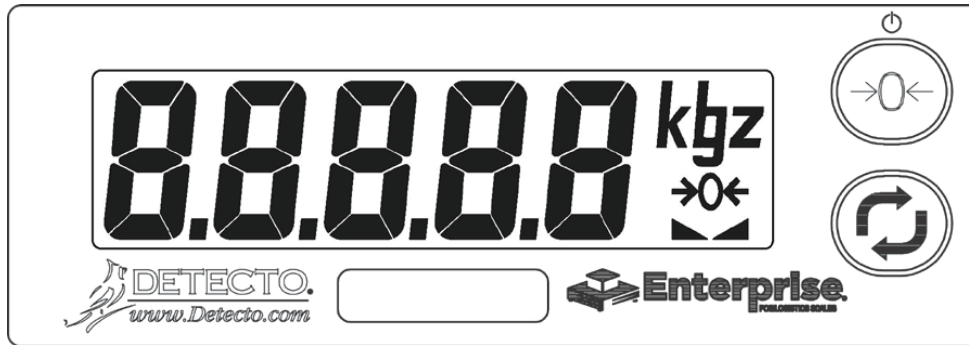
⚠ **DO NOT operate the keypad with pointed objects (pencils, pens, etc.). Damage to keypad resulting from this practice is NOT covered under warranty.**

The keypad of the APS Enterprise Scale has two keys, **ZERO (ON/OFF)** and **UNITS** which have the following functions:

This is the **ZERO (ON/OFF)** key. It serves several purposes. First, when the scale is off, pressing it will turn the scale ON. If the scale is already on, pressing and holding it for approximately 3 seconds will turn the scale OFF.

Pressing this key when the scale is on will zero the scale.

This is the **UNITS** key. This key is used to change the weighing units to the alternate units of measurement. For example, with pounds displayed, pressing this key will change the weighting units to kilograms.

ANNUNCIATORS

The annunciators are turned on to indicate that the display is in the mode corresponding to the annunciator label or that the status indicated by the label is active.

OZ
This annunciator is turned on to indicate the weight displayed is in ounces.

lb
This annunciator is turned on to indicate that the displayed weight is in pounds.

kg
This annunciator is turned on to indicate the weight displayed is in kilograms.

◣◢ (STABLE)
This annunciator is turned on when the weight display is stable. When off, it means that the change in successive weight samples is greater than the motion limits selected during setup.

→0← (ZERO)
The (→**0**←) annunciator is turned on to indicate that the weight is within +/- 1/4 division of the center of zero.

SETUP AND CONFIGURATION

The keypad of the Enterprise has two keys, **ZERO** and **UNITS** which have the following functionality when in setup mode:

ZERO – When a prompt is currently being shown (not the value of the prompt), pressing the **ZERO** key will skip to the next prompt. If the value of a prompt is being shown, pressing the **ZERO** key will toggle between the acceptable values for the current prompt.

UNITS – When a prompt is currently being shown (not the value of the prompt), pressing the **UNITS** key will display the value for that prompt. If the value of a prompt is being shown, then pressing the **UNITS** key will save the current value and advance to the next setup prompt.

To Enter Setup

1. Remove the Calibration Switch Access screw located on the bottom of the scale base.

2. With the scale ON, use a 1/8" or 3 mm Hex Key Wrench or other small tool and press the Calibration Switch.

3. The display will change to show ᴛ ᵞᴾᴱ.

Calibration Switch Access ⎯⎯

ᴛ ᵞᴾᴱ (Scale Type)

This will determine the capacity, interval, decimal, and converted units (if applicable).

Press the **UNITS** key to show current setting. If value displayed is acceptable, press the **UNITS** key again to save it. Otherwise, press the **ZERO** key to step through selections for a new value and then press the **UNITS** key to save it. The following types are selectable for the Enterprise scale:

10	= APS10	30 lb x 0.01 lb (15 kg x 0.005 kg)
15	= APS15	15 lb x 0.01 lb (7.5 kg x 0.005 kg)
30	= APS30	30 lb x 0.01 lb (15 kg x 0.005 kg)
150	= APS150	150 lb x 0.05 lb (60 kg x 0.02 kg)
250	= APS250	250 lb x 0.1 lb (125 kg x 0.05 kg)
160	= APS160	160 oz x 0.1 oz
70	= APS70	70 lb x 0.02 lb (31 kg x 0.01 kg)
20	= APS20	30 lb x 0.01 lb (15 kg x 0.005 kg)
8	= APS8	15 lb x 0.01 lb (7.5 kg x 0.005 kg)
12	= APS12	160 oz x 0.1 oz
ᴛᴱ5ᴛ		FACTORY TEST SETTINGS

SETUP AND CONFIGURATION, CONT.

$Un5$ (Motion Range)

This is the motion range of the scale, or the number of divisions that the scale weight can change without setting the motion indicator.

Press the **UNITS** key to show current setting. If value displayed is acceptable, press the **UNITS** key again to save it. Otherwise, press the **ZERO** key to step through selections for a new value and then press the **UNITS** key to save it.

Allowable values are 0 through 9.

$FILtr$ (Adjustable Digital Filtering)

This is the adjustable digital weight filtering that is applied to the weight in order to help filter out vibrations or other noise that might make the weight unstable.

Press the **UNITS** key to show current setting. If value displayed is acceptable, press the **UNITS** key again to save it. Otherwise, press the **ZERO** key to step through selections for a new value and then press the **UNITS** key to save it.

Allowable values are Off, 1, 2 or 3.

OFF	= No weight filtering
1	= Minimal weight filtering
2	= Moderate weight filtering
3	= Maximum weight filtering

$CALib$ (Calibration)

This is the calibration routine for the scale.

With display showing $CALib$, press the **UNITS** key. The display will change to show current setting no. If scale has been previously calibrated and you wish to skip calibration and proceed to $POrt1$, press the **UNITS** key again and internal calibration factor will be retained.

To begin calibration, press the **ZERO** key to select yes and then press the **UNITS** key. After pressing the **UNITS** key, the display will change to $LOAd$.

1. With $LOAd$ displayed, press the **UNITS** key. The display will change to show the currently selected scale type's capacity. **NOTE:** For convenience, you can press the **ZERO** key and change this to half of capacity.

2. Once the test load weight is selected, placed the test load weight on the scale platform and then press the **UNITS** key.

3. Starting at the right and proceeding left, a series of dashes will appear on the display and then starting at the left and proceeding right disappear. Next, the display will change to the $UnLOd$ prompt.

4. Remove all weight from the scale platform and then press the **UNITS** key.

5. Starting at the right and proceeding left, a series of dashes will appear on the display and then starting at the left and proceeding right disappear. Next, the display will change to the $POrt1$ prompt. Calibration is complete. Proceed to $POrt1$.

SETUP AND CONFIGURATION, CONT.

Port 1 (RS-232 Serial Port 1)

This is the output format for the first serial port. It should default to "SnnA" in order to be used with the Enterprise display.

The serial port parameters for this port are fixed at 9600 baud, 8 data bits, 1 stop bit and No parity.

Press the **UNITS** key to show current setting. If value displayed is acceptable, press the **UNITS** key again to save it. Otherwise, press the **ZERO** key to step through selections for a new value and then press the **UNITS** key to save it.

Options for Port 1 output format are as follows:

SnnA   This selection allows the port to respond to the following commands and will output Weight on Demand in the appropriate format.
              Cardinal ENQ (hex 05)
              Detecto AS-410D ~ (tilde, hex 7E), Pounds ONLY Mode
              SMA (W)

nci   NCI output format
nntPS   Mettler Toledo PS output format
nntSi   Mettler Toledo SICS output format
LPL   Lone Peak Labeling

⚠ **IMPORTANT! Selecting** LPL **(Lone Peak Labeling) for the port output format will change the behavior of the scale. When the scale settles on "any" positive weight above zero, the display will lock on that weight until the scale returns to zero.**

Port2 (RS-232 Serial Port 2)

This is the second serial port output format selection. It is identical to Port 1. The serial port parameters for this port are fixed at 9600 baud, 8 data bits, 1 stop bit and No parity.

Press the **UNITS** key to show current setting. If value displayed is acceptable, press the **UNITS** key again to save it. Otherwise, press the **ZERO** key to step through selections for a new value and then press the **UNITS** key to save it.

Options for Port2 output format are as follows:

SnnA   This selection allows the port to respond to the following commands and will output Weight on Demand in the appropriate format.
              Cardinal ENQ (hex 05)
              Detecto AS-410D ~ (tilde, hex 7E), Pounds ONLY Mode
              SMA (W)

nci   NCI output format
nntPS   Mettler Toledo PS output format
nntSi   Mettler Toledo SICS output format
LPL   Lone Peak Labeling

⚠ **IMPORTANT! Selecting** LPL **(Lone Peak Labeling) for the port output format will change the behavior of the scale. When the scale settles on "any" positive weight above zero, the display will lock on that weight until the scale returns to zero.**

SETUP AND CONFIGURATION, CONT.

$POrt3$ (POS Serial Port 3 – OPOS Compatible)

This is the third serial port output format selection. The default format for this port is NCI in order to work with most POS systems that require NCI format.

The serial port parameters for this port are fixed at 9600 baud, 7 data bits, 1 stop bit and Even parity for any output format selected EXCEPT the UPS WorldShip output format.

NOTE: When UPS WorldShip output format is selected for POS Serial Port 3, the serial port parameters are set to 4800 baud, 7 data bits, 1 stop bit and Even parity.

Press the **UNITS** key to show current setting. If value displayed is acceptable, press the **UNITS** key again to save it. Otherwise, press the **ZERO** key to step through selections for a new value and then press the **UNITS** key to save it.

Options for $POrt3$ output format are as follows:

$SnnA$	This selection allows the port to respond to the following commands and will output Weight on Demand in the appropriate format.
	Cardinal ENQ (hex 05)
	Detecto AS-410D ~ (tilde, hex 7E), Pounds ONLY Mode
	SMA (W)
nci	NCI output format
$nntPS$	Mettler Toledo PS output format
$nntSi$	Mettler Toledo SICS output format
LPL	Lone Peak Labeling
UPS	UPS WorldShip output format

IMPORTANT! Selecting LPL **(Lone Peak Labeling) for the port output format will change the behavior of the scale. When the scale settles on "any" positive weight above zero, the display will lock on that weight until the scale returns to zero.**

USb (USB Port)

The USB port output format selections are similar to the serial port settings. When connected to a PC, this should appear as a virtual com port and can transmit weight using any of the formats listed below.

Press the **UNITS** key to show current setting. If value displayed is acceptable, press the **UNITS** key again to save it. Otherwise, press the **ZERO** key to step through selections for a new value and then press the **UNITS** key to save it.

Options for USb port output format are as follows:

$SnnA$	This selection allows the port to respond to the following commands and will output Weight on Demand in the appropriate format.
	Cardinal ENQ (hex 05)
	Detecto AS-410D ~ (tilde, hex 7E), Pounds ONLY Mode
	SMA (W)
nci	NCI output format
$nntPS$	Mettler Toledo PS output format
$nntSi$	Mettler Toledo SICS output format
LPL	Lone Peak Labeling

IMPORTANT! Selecting LPL **(Lone Peak Labeling) for the port output format will change the behavior of the scale. When the scale settles on "any" positive weight above zero, the display will lock on that weight until the scale returns to zero.**

SETUP AND CONFIGURATION, CONT.

H irES (High Resolution Weight Mode)

The High Resolution Weight Mode feature will display the weight at 10 times the standard resolution. For example, an APS configured for 250 lb x 0.1 lb will display weight in high resolution mode at 250 lb x 0.01 lb.

Press the **UNITS** key to show current setting. If value displayed is acceptable, press the **UNITS** key again to save it. Otherwise, press the **ZERO** key to step through selections for a new value and then press the **UNITS** key to save it.

Allowable values are YES or no.

YES = If High Resolution Weight   no = High Resolution Weight mode <u>is</u>
    mode <u>is</u> desired   <u>not</u> desired

NOTE: If YES is selected, the scale will exit Setup and Calibration, reset and then display weight in the High Resolution Weight mode.

IMPORTANT! When the scale is in the High Resolution Weight mode, no Units will be displayed and the scale **is <u>not</u>** Legal For Trade.

To exit the High Resolution Mode, press and hold the **ZERO (ON/OFF)** key to turn the scale off and then press the **ZERO (ON/OFF)** to the scale back on

bEdiS (Button Disable)

This setting allows the keypad buttons to be disabled for use by the operator "*during normal operation*". During normal operation, when the operator presses a disabled button, the button will be ignored.

NOTE: The Button Disable setting only disables the buttons for use during normal operation, <u>not</u> setup and calibration.

Press the **UNITS** key to show current setting. If value displayed is acceptable, press the **UNITS** key again to save it. Otherwise, press the **ZERO** key to step through selections for a new value and then press the **UNITS** key to save it.

Allowable values are 0, 1, 2 or 3.

    0 = No buttons disabled
    1 = Zero button disabled
    2 = Units button disabled
    3 = Both buttons disabled

NOTE: Disabling the buttons also disables the SMA zero and SMA toggle units commands so this setting may affect Serial/USB port operation if using the SMA commands.

ERROR AND STATUS DISPLAYS

Display	Meaning
-Err-	Displayed when the **ZERO** key is pressed and the scale could not zero.
- - - -	Displayed when scale weight exceeds scale capacity, or if there is an analog high/low error.

CARE AND CLEANING

NOTE: The APS Enterprise scale contains no user-serviceable parts and maintenance should be limited to an occasional cleaning as required.

- Do not submerge the scale in water, pour or spray water directly on it to clean. The scale is not waterproof and covering it with water will damage it and void the warranty.

- Always remove power before cleaning.

- Do not use wire brushes, abrasives, or cleaning tools such as steel pads and scrapers, which will scratch the surface. Instead, use soft cloths or plastic scouring pads for cleaning.

- When possible use treated water. Hard water can leave behind deposits. Soft water is much gentler on the stainless steel and painted surfaces.

- Avoid the use of acetone, thinner or other volatile solvents and abrasive type cleaners for cleaning. If required, a mild solvent such as mineral spirits can be used to remove oil, grease, tars, wax, and similar substances. Use a cloth dampened with mineral spirits and only apply to areas that are contaminated. Follow up the use of this mild solvent with detergent cleaning and rinsing.

SECURITY SEAL INSTALLATION

If your metrology laws require the use of physical sealing, a category 1 physical seal consisting of a self-destructive adhesive label, can be placed over the calibration switch access screw on the bottom of the APS Enterprise scale. The seal will cover the threaded hole and access screw that is installed. The seal would need to be removed, as well as the calibration switch access screw to gain access to the calibration switch.

Alternately, a lead and wire security seal can be installed on the APS Enterprise scale to prevent the calibration switch access screw (located on the bottom of the scale base) from being removed to gain access to the calibration switch thereby preventing unauthorized access to the calibration adjustments.

> **NOTE:** In order to install the lead and wire security seal, two screws must be replaced with two drilled screws. They are available from the Cardinal/Detecto Parts Department. The part numbers are:
>
> 6021-0605 (SCW FILLISTER. MACHINE-SCW 06-32X.375)
>
> 6024-0126 (WASHER FLAT)
>
> 6021-1108 (SCW FILLISTER. MACHINE-SCW 10-32X.375)

To install a lead and wire security seal, follow the steps provided below:

1. Remove the calibration switch access screw and replace it with the drilled 10-32 screw. Make certain it is securely tighten before proceeding.

2. Remove the PCB Cover screw as shown and replace it with the drilled 6-32 screw and flat washer. Make certain it is securely tighten before proceeding.

3. Thread the sealing wire through the hole in the drilled screws.

4. Pull the wire tight and install the lead seal.

5. The screws cannot be removed without damaging the seal.

PCB Cover Screw

Calibration Switch Access Screw

6-32 Screw and Flat Washer

10-32 Screw

APSRD (REMOTE DISPLAY)

The APSRD (Remote Display) can be mounted using three (3) methods.

- The bracket can be attached to the wall using the appropriate hardware for the type of wall construction.

- The remote display can be removed from the bracket and mounted on the wall using the included Velcro® strips.
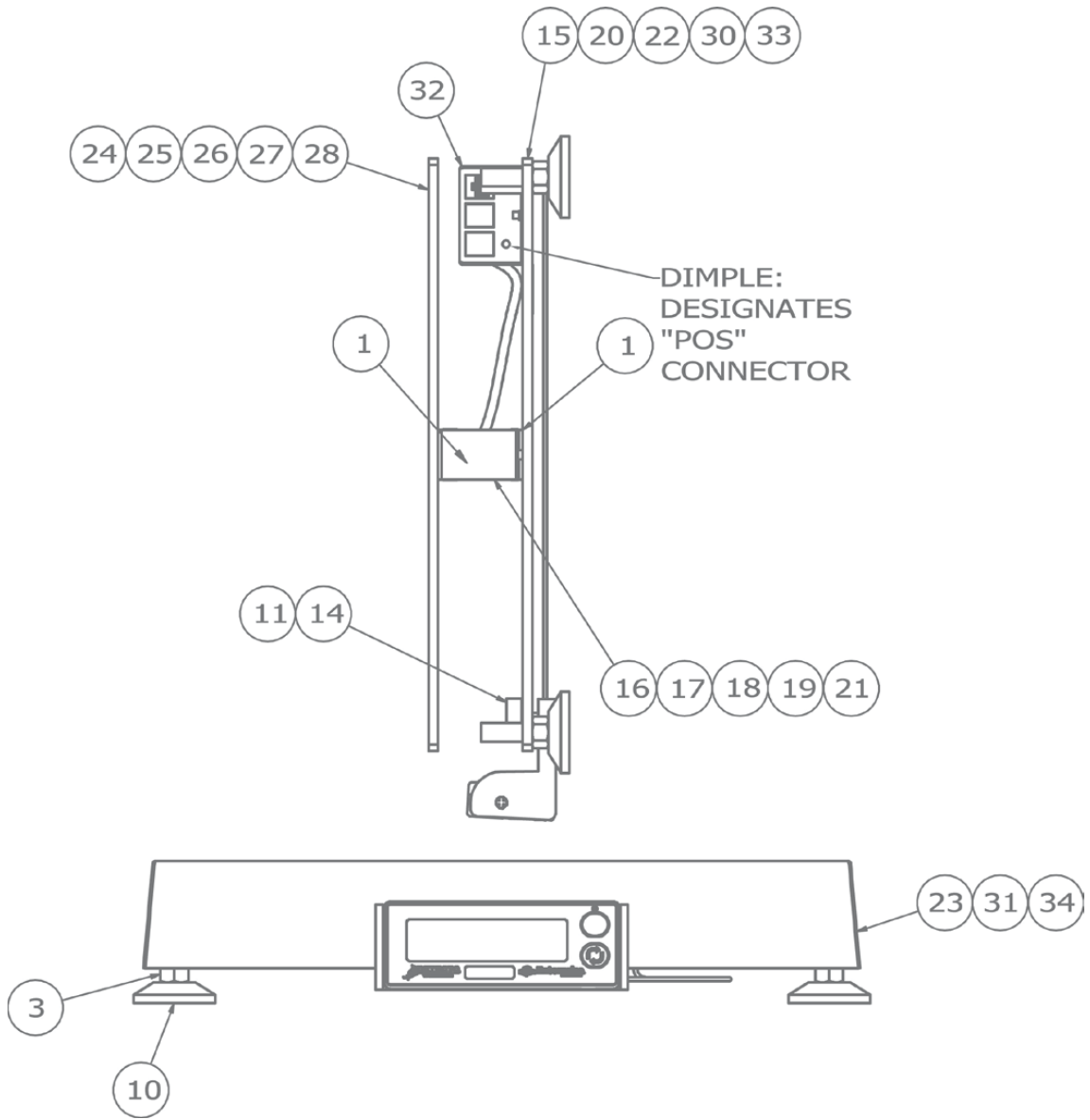
- Using the remote display post, it can be mounted to a table, bench or in a retail environment, the check stand.

PARTS IDENTIFICATION

(ALL MODEL EXCEPT APS250)

DIMPLE:
DESIGNATES
"POS"
CONNECTOR

PARTS IDENTIFICATION, CONT.

(ALL MODEL EXCEPT APS250)

ITEM	PART NO.	QTY	DESCRIPTION
1	1960-B465-08	2	SPACER FOR EB-XXX-XXXX
3	6013-0077	4	HEX NUT
10	6540-1165	4	LEVELLING FOOT, 1.63 BASE X 3/8"-16 X 1.3 STUD, BLK PU
11	6560-1072	A/R	ADHESIVE, LOCTITE 49
14	6690-0001	1	BULLSEYE BUBBLE LEVEL
15	8527-0519-08	1	BASE PLATE, 30
16	8527-0520-0A	1	LOAD CELL ASSY, 10KG (APS160, APS15, APS8, APS12)
17	8527-0521-0A	1	LOAD CELL ASSY, 15KG (APS10, APS20)
18	8527-0521-1A	1	LOAD CELL ASSY, 15KG (APS30)
19	8527-0522-0A	1	LOAD CELL ASSY, 30KG (APS70)
20	8527-0523-08	1	BASE PLATE, 150
21	8527-0524-0A	1	LOAD CELL ASSY, 100KG (APS150)
22	8527-0527-08	1	BASE PLATE, 70
23	8527-0528-08	1	COVER, 12X14
24	8527-0529-08	1	TOP PLATE, 8/10/12
25	8527-0530-08	1	TOP PLATE, 160/15/20
26	8527-0531-08	1	TOP PLATE, 30
27	8527-0532-08	1	TOP PLATE, 70
28	8527-0533-08	1	TOP PLATE, 150
30	8527-C503-08	1	BASE PLATE, 8/10/12
31	8527-C504-08	1	COVER, 6X10
32	8527-C505-08	1	PCB COVER
33	8527-C513-08	1	BASE PLATE, 160/15/20
34	8527-C514-08	1	COVER, 10X10

A/R = AS REQUIRED

PARTS IDENTIFICATION, CONT.
(ALL MODEL EXCEPT APS250)
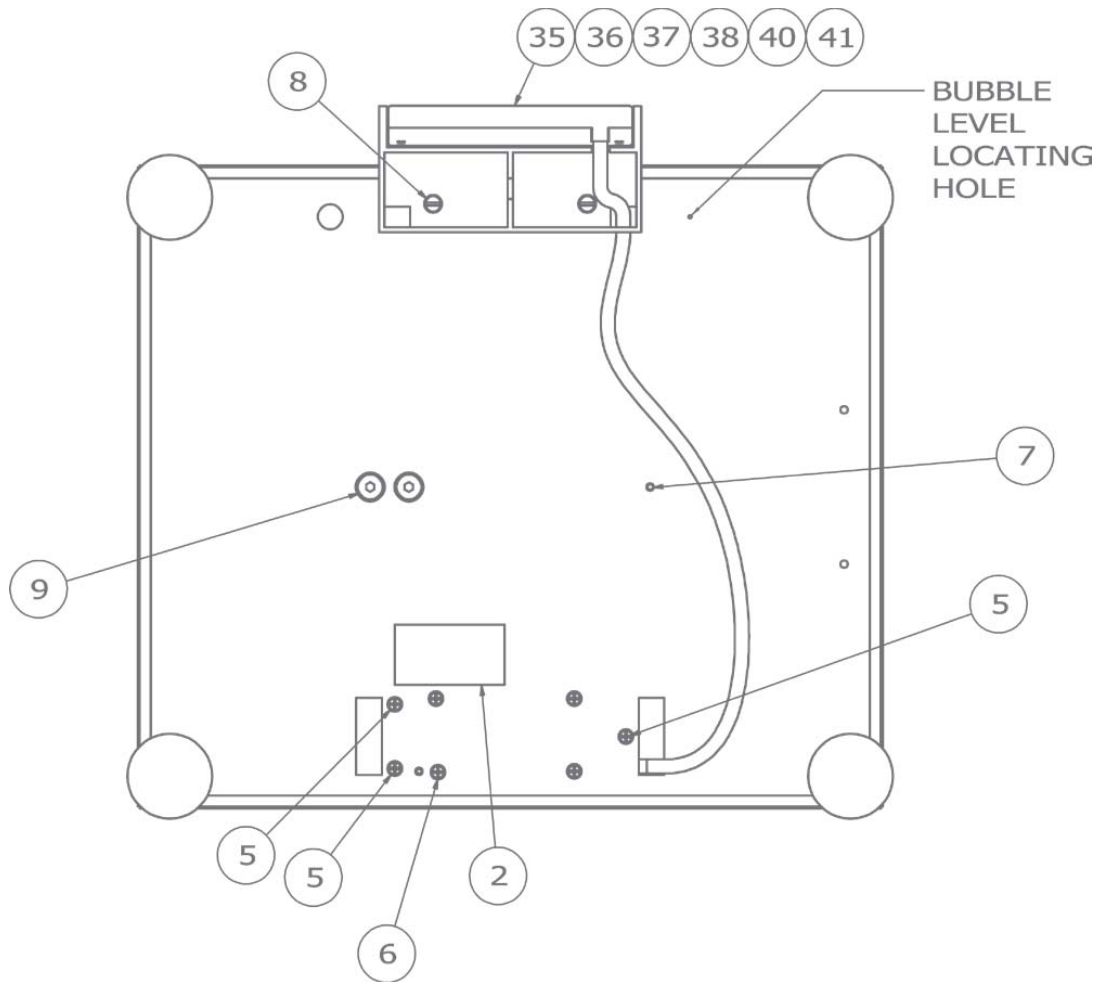
ITEM	PART NO.	QTY	DESCRIPTION
2	593GR986	1	SERIAL TAG ASSY
5	6021-0625	3	SCW FLAT-HEAD. MACHINE-SCW 06-32X.375
6	6021-0659	4	SCW FLAT-HEAD. MACHINE-SCW 06-32X1.00
7	6021-1069	2	SCW CUP-POINT. SET-SCREW.. 10-32X.25 NYLON PATCH
8	6021-1108	2	SCW FILLISTER. MACHINE-SCW 10-32X.375
9	6021-1706	4	SCW FLAT-HEAD. CAP-SCREW.. .25-20X.625
35	8527-D510-0A	1	DISPLAY SUB-ASSY, 10
36	8527-D510-1A	1	DISPLAY SUB-ASSY, 160
37	8527-D510-2A	1	DISPLAY SUB-ASSY, 15
38	8527-D510-3A	1	DISPLAY SUB-ASSY, 30
40	8527-D510-5A	1	DISPLAY SUB-ASSY, 70
41	8527-D510-6A	1	DISPLAY SUB-ASSY, 150
42	8527-D510-9A	1	DISPLAY SUB-ASSY, 8
43	8527-D510-AA	1	DISPLAY SUB-ASSY, 12
44	8527-D510-BA	1	DISPLAY SUB-ASSY, 12
45	593R1007	2	FACTORY SET LABEL

PARTS IDENTIFICATION, CONT.
(ALL MODEL EXCEPT APS250)
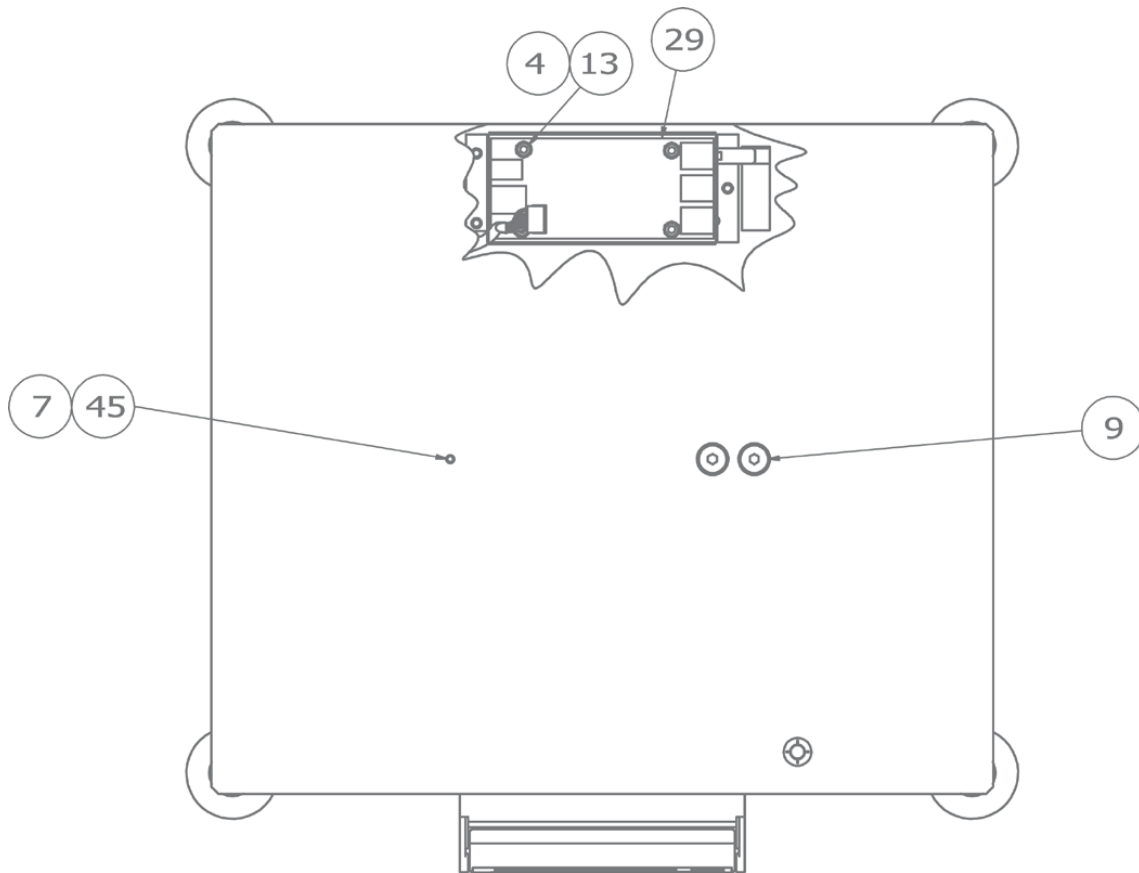
VIEW SHOWN WITHOUT COVER
(COMMODITY TRAY)

ITEM	PART NO.	QTY	DESCRIPTION
4	6021-0623	4	SCW PAN-HEAD.. MACHINE-SCW 06-32X.750
7	6021-1069	2	SCW CUP-POINT. SET-SCREW.. 10-32X.25 NYLON PATCH
9	6021-1706	4	SCW FLAT-HEAD. CAP-SCREW.. .25-20X.625
13	6680-0004	4	WASHER LOCK INT TOOTH #6 TYPE A Z-PL
29	8527-C500-0A	1	ANALOG PCB
45	593R1007	2	FACTORY SET LABEL

PARTS IDENTIFICATION, CONT.
(APS250 ONLY)

DIMPLE:
DESIGNATES
"POS"
CONNECTOR
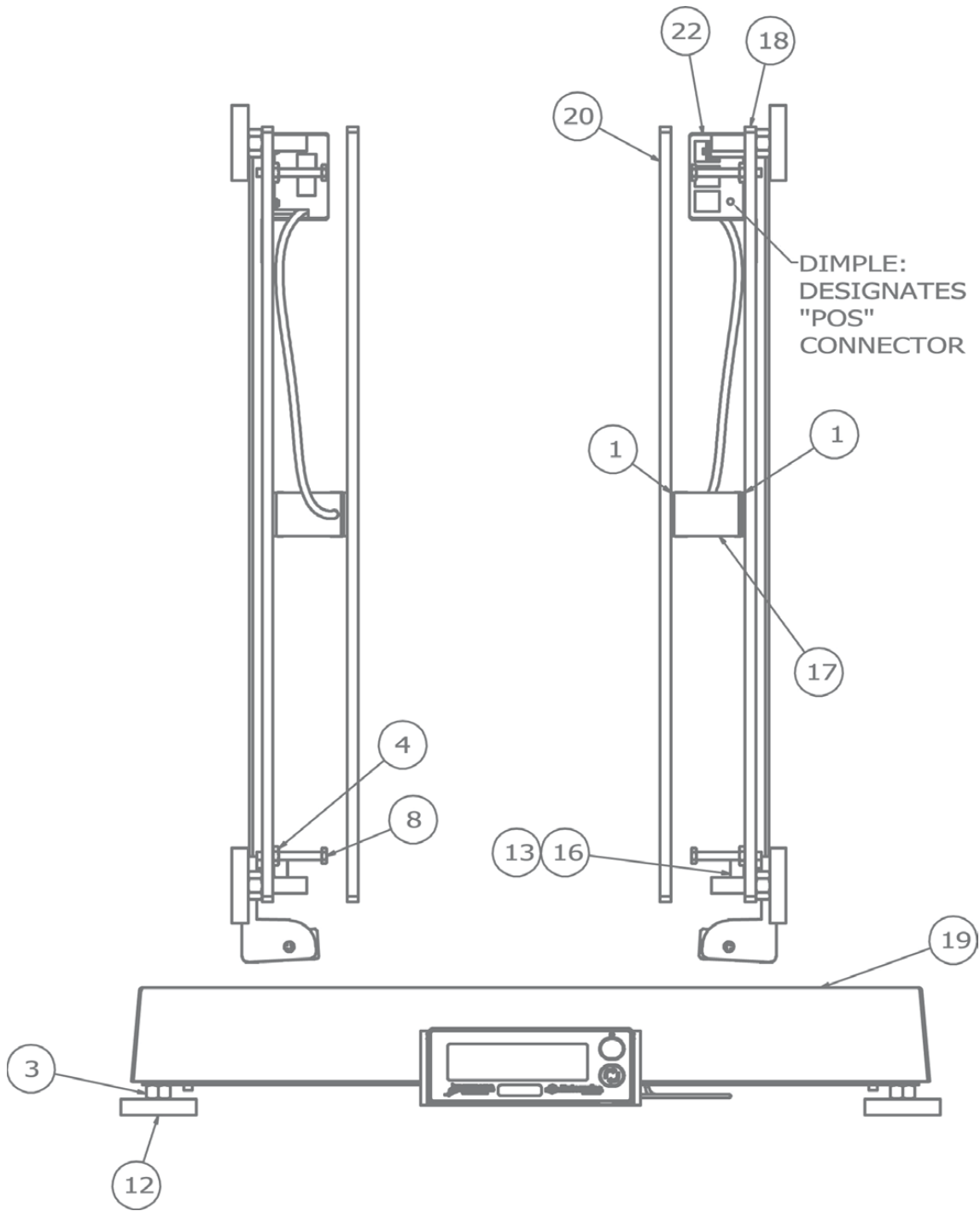
PARTS IDENTIFICATION, CONT.

(APS250 ONLY)

ITEM	PART NO.	QTY	DESCRIPTION
1	1960-B465-08	2	SPACER FOR EB-XXX-XXXX
3	6013-0077	4	HEX NUT
4	6013-0295	4	NUT #10-32 HEX Z/P
8	6021-0950	4	SCW HEX-HEAD.. MACHINE-SCW 10-32X1.50 Z/P
10	6021-1108	2	SCW FILLISTER. MACHINE-SCW 10-32X.375
12	6540-1123	4	LEVELLER SCREW, 3/8-16 X 1 1/4", BLACK
13	6560-1072	A/R	ADHESIVE, LOCTITE 49
16	6690-0001	1	BULLSEYE BUBBLE LEVEL
17	8527-0524-1A	1	LOAD CELL ASSY, 100KG
18	8527-0525-08	1	BASE PLATE, 250
19	8527-0526-08	1	COVER, 18X18
20	8527-0534-08	1	TOP PLATE, 250
22	8527-C505-08	1	PCB COVER

A/R = AS REQUIRED

PARTS IDENTIFICATION, CONT.
(APS250 ONLY)

BUBBLE LEVEL LOCATING HOLE
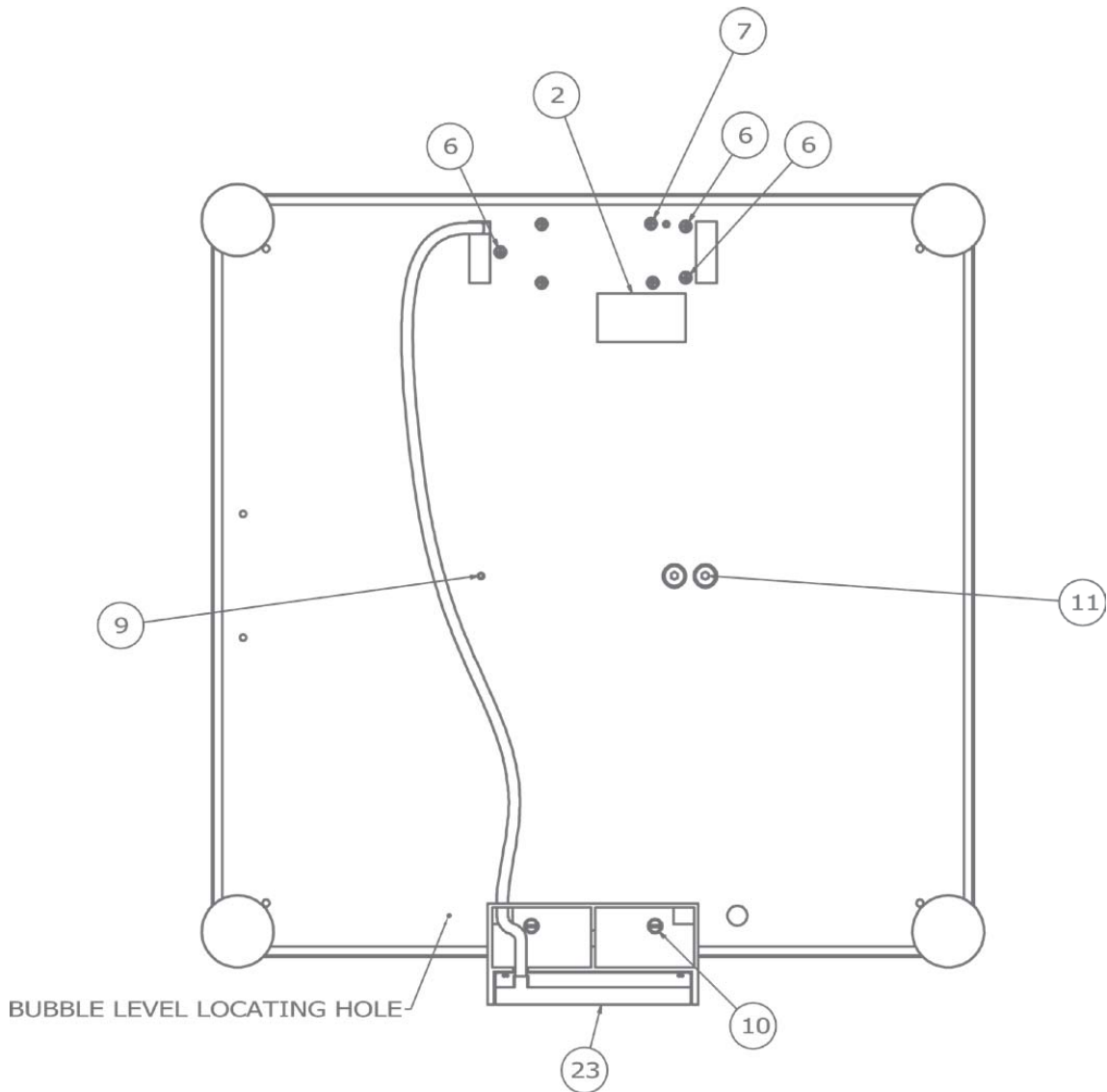
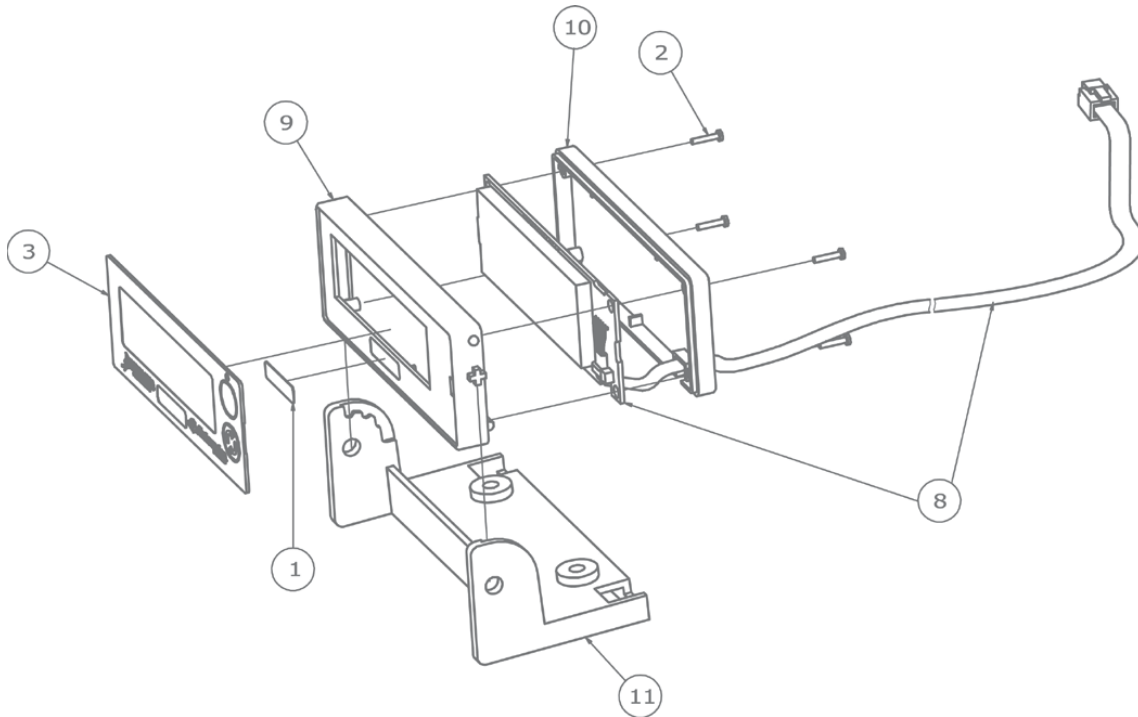| ITEM	PART NO.	QTY	DESCRIPTION
2	593GR986	1	SERIAL TAG ASSY
6	6021-0625	3	SCW FLAT-HEAD. MACHINE-SCW 06-32X.375
7	6021-0659	4	SCW FLAT-HEAD. MACHINE-SCW 06-32X1.00
9	6021-1069	1	SCW CUP-POINT. SET-SCREW.. 10-32X.25 NYLON PATCH
10	6021-1108	2	SCW FILLISTER. MACHINE-SCW 10-32X.375
11	6021-1706	4	SCW FLAT-HEAD. CAP-SCREW.. .25-20X.625
23	8527-D510-7A	1	DISPLAY SUB-ASSY, 250

PARTS IDENTIFICATION, CONT.

(APS250 ONLY)
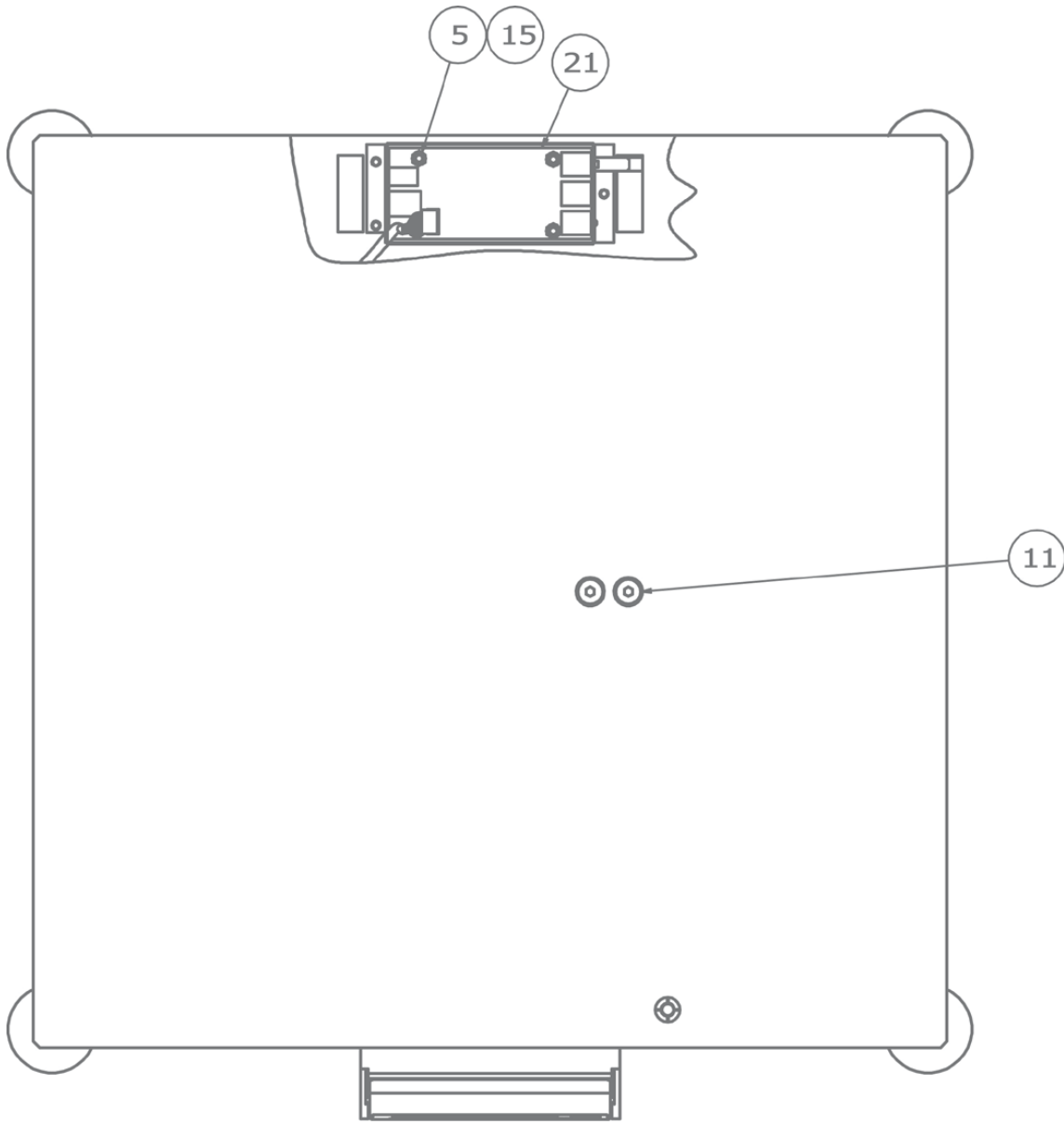
VIEW SHOWN WITHOUT COVER
(COMMODITY TRAY)

ITEM	PART NO.	QTY	DESCRIPTION
5	6013-0315	4	NUT #6-32 HEX SMALL PATTERN Z/P
11	6021-1706	4	SCW FLAT-HEAD. CAP-SCREW.. .25-20X.625
15	6680-0004	4	WASHER LOCK INT TOOTH #6 TYPE A Z-PL
21	8527-C500-0A	1	ANALOG PCB

PARTS IDENTIFICATION, CONT.
SCALE DISPLAY and APSRD (REMOTE DISPLAY)

ITEM	PART NO.	QTY	DESCRIPTION
1	5930-0146-08	1	CAPACITY LABEL
2	6021-2078	4	SCW PAN-HEAD PHILLIPS #1-32X3/8" THD FORM, SS
3	8527-0515-08	1	APS KEYPAD
4	8527-C502-0A	1	PCB ASSY APS10 DISPLAY
5	8527-C502-1A	1	PCB ASSY APS15/160 DISPLAY
6	8527-C502-2A	1	PCB ASSY APS30/70/150 DISPLAY
7	8527-C502-3A	1	PCB ASSY APS250 DISPLAY
8	8527-C502-4A	1	PCB ASSY APSRD DISPLAY
9	8527-D506-08	1	ENCLOSURE FRONT
10	8527-D507-08	1	ENCLOSURE BACK
11	8527-D508-08	1	ENCLOSURE MOUNT

DISPLAY EXTENSION CABLE

ITEM	PART NO.	QTY	DESCRIPTION
∗	6600-2007	1	CABLE 7FT APS DISPLAY EXTENSION

∗ Not Shown

STATEMENT OF LIMITED WARRANTY

DETECTO warrants its equipment to be free from defects in material and workmanship as follows: DETECTO warrants to the original purchaser only that it will repair or replace any part of equipment which is defective in material or workmanship for a period of **two (2) years from date of shipment**. Detecto shall be the sole judge of what constitutes a defect.

During the **first ninety (90) days** DETECTO may choose to replace the product at no charge to the buyer upon inspection of the returned item.

After the first ninety (90) days, upon inspection of the returned item, DETECTO will repair or replace it with a remanufactured product. The customer is responsible for paying for the freight both ways.

This warranty does not apply to peripheral equipment not manufactured by DETECTO; this equipment will be covered by certain manufacturer's warranty only.

This warranty does not include replacement of expendable or consumable parts. This does not apply to any item which has deteriorated or damaged due to wear, accident, misuse, abuse, improper line voltage, overloading, theft, lightning, fire, water or acts of God, or due to extended storage or exposure while in purchaser's possession. This warranty does not apply to maintenance service. Purchased parts will have a ninety (90) day repair or replacement warranty only.

DETECTO may require the product to be returned to the factory; item(s) must be properly packed and shipping charges prepaid. A return authorization number must be obtained for all returns and marked on the outside of all returned packages. DETECTO accepts no responsibility for items lost or damaged in transit.

Conditions Which Void Limited Warranty

This warranty shall not apply to equipment which:
A.) Has been tampered with, defaced, mishandled or has had repairs and modifications not authorized by DETECTO.
B.) Has had serial number altered, defaced, or removed.
C.) Has not been properly grounded according to Detecto's recommended procedure.

Freight Carrier Damage

Claims for equipment damaged in transit must be referred to the freight carrier in accordance with freight carrier regulations.

This warranty sets forth the extent of our liability for breach of any warranty or deficiency in connection with the sale or use of the product. DETECTO will not be liable for consequential damages of any nature, including but not limited to, loss of profit, delays or expenses, whether based on tort or contract. Detecto reserves the right to incorporate improvements in material and design without notice and is not obligated to incorporate improvements in equipment previously manufactured.

The foregoing is in lieu of all other warranties, express or implied including any warranty that extends beyond the description of the product including any warranty of merchantability or fitness for a particular purpose. This warranty covers only those DETECTO products installed in the forty-eight (48) contiguous continental United States.

DETECTO