

CE



OPERATING  
INSTRUCTIONS  
SPY® POCKET  
JEEPMETER  
MODEL PJM

**SPY**<sup>®</sup>  
PIPELINE INSPECTION COMPANY  
[www.spyinspect.com](http://www.spyinspect.com)

# WELCOME

Thank you for purchasing the SPY® Model PJM Pocket JeepMeter.

Pipeline Inspection Company and our SPY® brand of Coating Inspection, JeepMeter and Pig Tracking Equipment has been serving companies all over the world for over 60 years. With the purchase of this high precision instrument you can now enjoy access to worldwide service and support only SPY® and our vast Distributor network can offer.

For more information about SPY® brand equipment please visit our website at [spyinspect.com](http://spyinspect.com).



The SPY® Model PJM Pocket JeepMeter meets the Electromagnetic Compatibility and Low Voltage Directive. This product is a Class B, Group 1 ISM equipment according to CISPR 11. Group 1 ISM product: A product in which there is intentionally generated and/or used conductively coupled radio-frequency energy which is necessary for the internal functioning of the equipment itself. Class B products are suitable for use in domestic establishments and in establishments directly connected to a low voltage power supply network which supplies buildings used for domestic purpose.

**SPY** is a registered trademark of Pipeline Inspection Company, Houston, Texas 77055, United States.

A copy of this Operating Instructions Manual can be downloaded on our website at [spyinspect.com](http://spyinspect.com).

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# UNIT CALIBRATION

As the operator of this unit you require accurate, safe, and reliable equipment to perform coating inspections at the proper output voltage.

Prior to leaving our manufacturing facility Pipeline Inspection Co. certifies that SPY® Model PJM Pocket JeepMeter (voltmeter) has been calibrated and demonstrates an accuracy of (+/- 5%). Since output voltage is regulated, this tolerance is maintained regardless of load.

Your unit comes with a **Factory Calibration Certificate** and a **Factory Authorized Calibration Decal** applied to the bottom of the unit both with the date your unit was calibrated.

Our units do not tend to drift but it is recommended that this unit be calibrated at least once per year or more frequently based on heavy usage. **Recalibration of our equipment should be performed ONLY at a SPY® Authorized Service Center due to the unique calibration process, test equipment utilized and properly trained SPY® technicians.**

We DO NOT recommend using any other calibration service other than a SPY® Authorized Service Center; using an outside service with technicians not trained to work on SPY® brand equipment could damage the unit and if the enclosure is opened will void the warranty.

When calibration is needed please return your unit to a SPY® Authorized Service Center or SPY® manufacturing facility located at:

Pipeline Inspection Company  
Attention: Calibration  
1919 Antoine Drive  
Houston, Texas 77055

Please include: Company Name and Contact Information. For a complete list of Authorized Service Centers please visit our website at [spyinspect.com](http://spyinspect.com). If a copy of the Calibration Certificate on file is needed it may be obtained by emailing a request to [sales@spyinspect.com](mailto:sales@spyinspect.com).

# PRINCIPLES OF OPERATION

The SPY® Model PJM Pocket JeepMeter (voltmeter) is an instrument designed to provide accurate and reliable measuring of the crest value of high voltage non-sinusoidal waveforms. The output wave form of holiday detectors typically has this type of shape and therefore prevents the use of conventional RMS voltmeters.

The SPY® Model PJM enables the operator to measure pulse up to 20 kV.

The SPY® 785 and 790 holiday detectors have pulse only output used for inspecting tapes, extruded coatings, coal tar enamels and sometimes thin film epoxy coatings and has a voltage range of 1 to 15 kV (785) and 5 to 35 kV (790) respectively.

# POCKET JEEPMETER OVERVIEW

The Pocket JeepMeter is designed to accurately measure the high voltage output voltage of Pulse Only Holiday Detectors such as our model 785 & 790 Portable Holiday Detectors or our 125 & 135 In-Plant Holiday Detectors.

The SPY® Model PJM Pocket JeepMeter provides the ultimate in convenience and versatility.

The Pocket JeepMeter measures pulse only high voltage output and will measure up to 20 kV.



- 1 Output Voltage Analog Display
- 2 Power / Battery Indicator Light
- 3 Ground Input Terminal
- 4 High Voltage Pulse Input Terminal

- 5 On/Off Bat Switch
- 6 Quick Change 9 Volt Battery Compartment
- 7 Ground Cable
- 8 High Voltage Cable

# BATTERY INSTRUCTIONS

The SPY® Model PJM operates on one 9 volt alkaline battery. The battery compartment is located on the bottom side of the unit.

**STEP 1:** Make sure the detector power switch is in the off position.

**STEP 2:** The battery compartment is located on the bottom of the unit. Using the notch on the bottom of the battery compartment lift up and pull out to slide the battery tray out.

**STEP 3:** Insert a new 9 volt battery into the battery tray and push the battery tray firmly back into the unit making sure it locks into place.



**Low Battery**

If the battery discharges to a low level the Pocket JeepMeter display will begin to flicker or will not come on, at this point the Pocket JeepMeter is not properly measuring voltage and the battery should be changed with a new 9 volt battery.



# USER SAFETY



**CAUTION! THIS IS A NOT A HANDLE!** This is a High Voltage Pulse Input Terminal and the operator may be subject to electrical shock if held with hand.



**CAUTION!** This meter is used to measure low energy high voltage. The operator may be subject to electrical shock if the meter is not properly grounded and/or operated in accordance with the instructions and procedures described within these operating instructions.

# TO START POCKET JEEPMETER OPERATIONS



**CAUTION!** This meter is used to measure low energy high voltage. Operator may be subject to electrical shock if meter is not properly grounded and/or operated in accordance with the instructions and procedures prescribed below.

**STEP 1:** Test the battery by activating the power “ON” switch; the light indicates a good battery. If the light flickers or does not come on, replace the battery as described under Battery Instructions. Turn the power switch to the “OFF” position after battery condition is satisfactory.

**STEP 2:** Connect high voltage (red) test lead to input jack (red) on top of the High Voltage Pulse Input Terminal of the Pocket JeepMeter.

**STEP 3:** Connect the other end (alligator clip) of the high voltage (red) test lead to electrode or metal electrode wand connector on the holiday detector.

**STEP 4:** Connect ground (black) test lead to ground (black) input jack on base of meter.

**STEP 5:** The preferred method of grounding is to connect the other end (alligator clip) of the ground (black cable) test lead to the bare metal of the pipe. This takes into account all ground path losses which may vary due to soil or moisture conditions as it measures working voltage.

**NOTE:** The meter ground may be connected to the detector ground for measuring detector output voltage only. This does not take into consideration ground path losses.

**STEP 6:** After double checking that all connections in Steps 1 – 6 are proper, turn the Pocket JeepMeter power switch to “ON”.

**STEP 7:** Push the “ON” button on the detector and read voltage output.

**NOTE:** This unit has a 20 kV maximum.

**NOTE:** Hold the Pocket JeepMeter in hand or at least 12 inches away from pipe or any large metal object to obtain accurate readings.



**CAUTION! DO NOT TOUCH THE ELECTRODE OR HIGH VOLTAGE CABLE WHEN THE DETECTOR IS ON.**

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## TO STOP POCKET JEEPMETER OPERATIONS

**STEP 1:** Switch “OFF” the power on the holiday detector.

**STEP 2:** Turn the power “OFF” on the Pocket JeepMeter.

**STEP 3:** After steps 1 and 2 are complete, disconnect the test leads and secure the Pocket JeepMeter back in its case.

# TROUBLESHOOTING GUIDE

<b>PROBLEM</b>	<b>POSSIBLE SOLUTION</b>	<b>CORRECTION METHOD</b>
<b>NO VOLTAGE READING</b>	Low Battery	Replace the 9V battery on the bottom of the unit with a new battery.

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# TECHNICAL SPECIFICATIONS

<b>MODEL</b>	<b>POCKET JEEPMETER</b>
Measurement Type	Pulse
Voltage Range	1-20 kV
Measurement Accuracy	±5% @ 75 deg F
Display Type	Analog
Battery	9 Volt Battery
Unit Weight (w/ battery only)	0.8
Unit Dimensions (L x W x H)	9.75" x 3.25" x 2.25"
Factory Warranty	12 Month
Domestic/International Standards Unit Complies With	CE

# MAINTENANCE & REPAIR

If maintained the SPY® Model PJM Pocket JeepMeter will offer you years of dependable operation. Regular care and maintenance of the unit is a requirement of good quality preventative maintenance practices.



**WARNING!** This voltmeter does not contain any user-serviceable parts; your warranty will be voided if the SPY® unit is opened by anyone other than a SPY® Authorized Service Center or SPY® manufacturing facility.

In the event the unit fails to operate properly please return your unit to a SPY® Authorized Service Center or SPY® manufacturing facility located at:

Pipeline Inspection Company  
Attention: Repair  
1919 Antoine Drive  
Houston, Texas 77055

Please include: Company name, contact information and a short description of the problem with the unit. For a complete list of Authorized Service Centers please visit our website at [spyinspect.com](http://spyinspect.com).

# WARRANTY

Pipeline Inspection Company, hereafter referred to as (SPY®) warrants that SPY® Model PJM Pocket JeepMeter shall, under normal use and service, be free from defects in material and workmanship. SPY®'s entire warranty obligation shall be limited to, at SPY®'s option, the repair or replacement free of charge to the buyer of any defective equipment or parts thereof which prove to be defective in material and workmanship under normal use and service.

Claims for defective parts must be made in writing within three (3) months after shipment of the equipment from the works of SPY®. Fast wearing and consumable parts including, but not limited to, electrodes and ground cables, are expressly excluded from the warranty. SPY® shall have the option to require return of a claimed defective part to SPY®'s manufacturing facility in the U.S.A., freight prepaid by buyer for examination to establish buyer's claim.

Except with SPY®'s prior written approval, SPY® shall not be liable (a) for the cost of repairs, alterations or replacements or any expense connected therewith made or incurred by the buyer or its designers, or (b) for defects resulting from alterations or repairs made by others than SPY® or its approved representatives.

SPY® shall not be liable for damages, including but not limited to direct, special, indirect or consequential, resulting from the handling, or use, whether alone or in combination with other products, or any SPY® equipment or third party designed or manufactured equipment, including without limitation, any loss or damage sustained or caused by the operation and use of the equipment which is improperly operated or its successful operation is impaired by natural elements after its delivery to the buyer.

The foregoing warranty is exclusive and in lieu of all other warranties whether written, oral or implied (including without limitation, any warranty of merchantability or fitness for purpose).

# RELATED EQUIPMENT



SPY® MODEL JM  
JEEPMETER



SPY® MODEL DCPJM  
DC POCKET JEEPMETER

Please call our office at (713) 681-5837 or email us at [sales@spyinspect.com](mailto:sales@spyinspect.com) for more product details or to place an order.

The logo for SPY Pipeline Inspection Company features the letters 'SPY' in a bold, orange, sans-serif font. A registered trademark symbol (®) is positioned to the upper right of the 'Y'. The background of the entire page is dark gray with a faint, repeating pattern of a grid and stylized pipe lines.

PIPELINE INSPECTION COMPANY

[SPYINSPECT.COM](http://SPYINSPECT.COM)