PRINTREX
920
by **TRANS**ACT

Operators Guide

TRANSACT
Technologies Incorporated

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Change History

Rev A   Initial version   October 2012

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Radio Frequency Interference Statement

This device complies with Part 15 of the FCC Rules and Industry Canada licence-exempt RSS standard(s) . Operation of the device is subject to the following two conditions: (1) The device may not cause harmful interference, and (2) The devices must accept any interference that may cause undesired operation.

This unit has been tested and complies with limits for a Class A digital device under Part 15 of the FCC Rules and Industry of Canada ICES-003. 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..

Changes or modifications not expressly approved by TransAct Technologies, Inc. could void the user's authority to operate the equipment.

The manufacturer declares that this product conforms to the following standards or other normative documents:

EN 300 330-2 V1.5.1 (2010-02) Electomagnetic compatibility and Radio spectrum Maters (ERM); Short-Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz inductive loop system in the frequency range 9 kHz and 30 MHz

EN 301 489-1 V1.9.2 (2011-09) Electomagnetic compatibility and Radio spectrum Maters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

EN 301 489-3 V1.4.1 (2002-08) Electomagnetic compatibility and Radio spectrum Maters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz

Safety: EN 60950-1:2006 Safety of information technology equipment including electrical business equipment, including amendments A12:2011

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Table of Contents

Chapter 1

Introducing your Printrex® 920 Printer

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About your Printrex® 920 Printer

The Printrex® 920 printer by TransAct® represents the very latest technology for rack-mountable continuous form plotting, specifically designed to perform in adverse environments such as logging trucks or offshore platforms. It builds upon the experience of the Printrex® line of printers with a host of features specifically designed to improve the performance of your plotting applications in the field, including:

- Prints in full color without ink cartridges or ribbons using ZINK® (Zero Ink)
- Capable of printing black and white on standard thermal paper
- Designed and built with rugged reliability
- Available in both desktop and rack-mount configurations
- Easy path to upgrade existing logging systems to full color
- Print drivers for Windows ® and CUPS configurations for Linux™/Unix™
- Low total cost of ownership

These features and more let you quickly and easily integrate the Printrex® 920 with your plotting applications, while giving you the quality, durability and uptime you have come to expect from Printrex® by TransAct® printers.

Who Should Read This Guide?

This document provides information useful for end users who will install, configure, and operate the Printrex® 920 printer in their operations.

What Is Included in This Guide?

This Operators Guide includes information on the installation, specifications, and operation of the Printrex® 920 printer. It provides the following information to support your installation and operational efforts:

- Warranty and technical support information
- Specifications and functionality description
- Installation and operational procedures
- Configuration, testing, and troubleshooting procedures

We want you to have a trouble-free implementation with your TransAct® printer. For any issues not covered in this guide, quality technical support is available on-line at www.printrex.com, or by telephone or fax – consult the following pages for more details about our support services.

Technical and Sales Support

Your printer is backed by the resources of Printrex, a division of TransAct Technologies, a global technology firm with dedicated technical support and sales assistance. Here is how we can help you:

On-line Technical Support

Our web site at www.printrex.com is your on-line portal to obtaining technical assistance with your Printrex® printer. Click on the Support link to find support information for your Printrex® 920 printer, including online access to drivers and documentation, or contact us via e-mail at support@printrex.com.

Telephone Technical Support

Live telephone support is available by contacting Printrex or one of its regional affiliates via the contact information listed in this section. To help us serve you faster, please have the following information ready when you call:

- The Model Number and Serial Number of the printer.
- A list of any other peripheral devices attached to the same port as the printer.
- What application software, operating system, and network (if any) you are using.
- What happened and what you were doing when the problem occurred.
- How you tried to solve the problem.

Warranty Information

Printrex® 920 Printers come with a standard warranty that commences upon shipment from factory, and covers parts and labor. An optional warranty, covering both parts and labor, may be purchased separately.

Return Materials Authorization and Return Policies

If a support technician determines that the printer should be serviced at a Printrex facility, and you want to return the printer for repair, we will issue you the Returned Materials Authorization (RMA) number that is required before returning the printer. Please prepare the printer being returned for repair as follows:

- Pack the printer to be returned in the original packing material.
- Do not return any accessories unless asked to do so by a support technician.
- Write the RMA number clearly on the outside of the box.

Sales Support

To order supplies, receive information about other Printrex products, or obtain information about your warranty, contact our Sales Department at the contact telephone or fax numbers listed below or visit our web site at www.printrex.com.

Contact Information

USA
Printrex Inc.
276 East Gish Road
San Jose, CA 95112-4703, USA
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Fax   408.573.1600
Web Site: www.printrex.com

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Houston, Texas 77066 USA
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Fax   713.598.8311
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Fax   780.348.5731
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Beijing 100015 China
Telephone   86-10-51305677
Fax   86-10-51305658

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Singapore 557320
Telephone   65-967 32002 or 65 816 32322
Fax   65-234 3158
Email: habsindustries@gmail.com

Chapter 2

Safety Precautions

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Important Safety Precautions

General Precautions

- Use this equipment only for the intended use described in this guide.
- Do not use power supplies outside the specified voltage/hertz range.
- Do not block any openings on the equipment.
- Do not use corrosive chemicals or vapors on or near the equipment.
- Do not expose equipment to rain, spills, or moisture.

Grounding

- This equipment must be grounded to conform with legal and safety standards. Connect only to a properly grounded outlet.

Power Supply and Power Cord

To avoid the risk of fire, electrical shock, personal injury, or damage to the printer:

- Always use the power cord provided with this printer. The power cord supplied with the equipment is rated and approved for service to this equipment.
- Make sure that the power plug is securely and completely inserted into the power source.
- Do not cut, damage, or otherwise alter the power cord. Never place a heavy object on the power cord, never expose it to heat, and never pull the cord to disconnect it. If the power cord is damaged in any way (condensation on exposed wires, broken wires, etc.) contact customer service where you purchased the printer.
- Do not immerse the power cord or plug in water. Never handle the power cord or plug when your hands are wet.
- Never knot the power cord or wrap it around itself.
- Turn off the main power before removing the power plug from the outlet.
- Check the power plug and cord for any problem (abnormal heat, rust, bend, cracks, scratches, etc.) at least once a month.
- If any problem is found with the power plug or cord, contact customer service regarding a replacement cord/
- Never pull on the power cord to unplug the cord from the power supply. Always grip the plug to remove it from the power supply.
- Always keep the area around the power plug free of obstacles so that you can unplug it easily. This allows you to unplug the power cord quickly in an emergency.

- Never use any power source other than the one rated for the printer. This printer is designed to be used in the region where you purchased. Also, make sure that the power source can supply sufficient power for the printer.

Supply Voltage:
AC 100-240 V, 50/60 Hz
Power Consumption:250 W (max.)
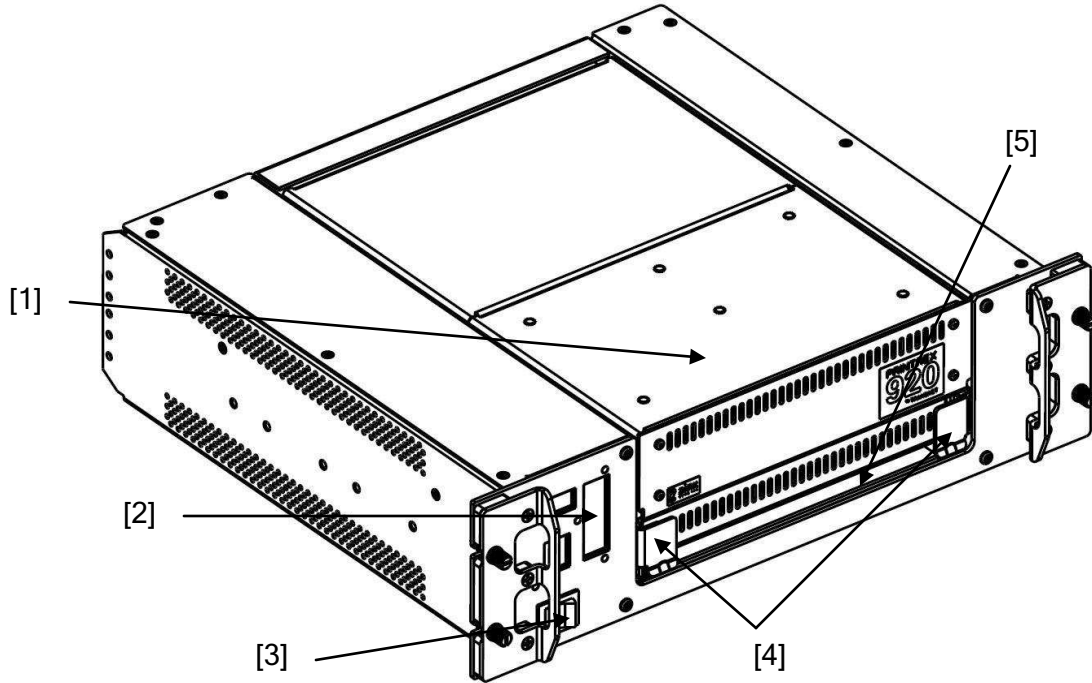
Chapter 3

Step-by-Step Installation Procedures

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Unpack the Printer

Be sure to save the box and packing materials in case you need to send the printer in for service. TransAct Technologies is not responsible for damaged return items that are not packaged in original shipping material. Refer to "Return Materials Authorization and Return Policies", on page 6 for information on what to do if you have to return your printer for repair.

Printer Part Names and Function

Front View

[1] Upper unit
Open this unit when set paper or removing the paper jammed in the paper feed path or cleaning inside of the machine.

[2] Operation panel
This panel has the key switches necessary for printer operation and the lamps that indicate printer status.

[3] Power switch
Use this switch when the printer is scheduled to be unused for a long period of time or it is relocated.

[4] Front latches
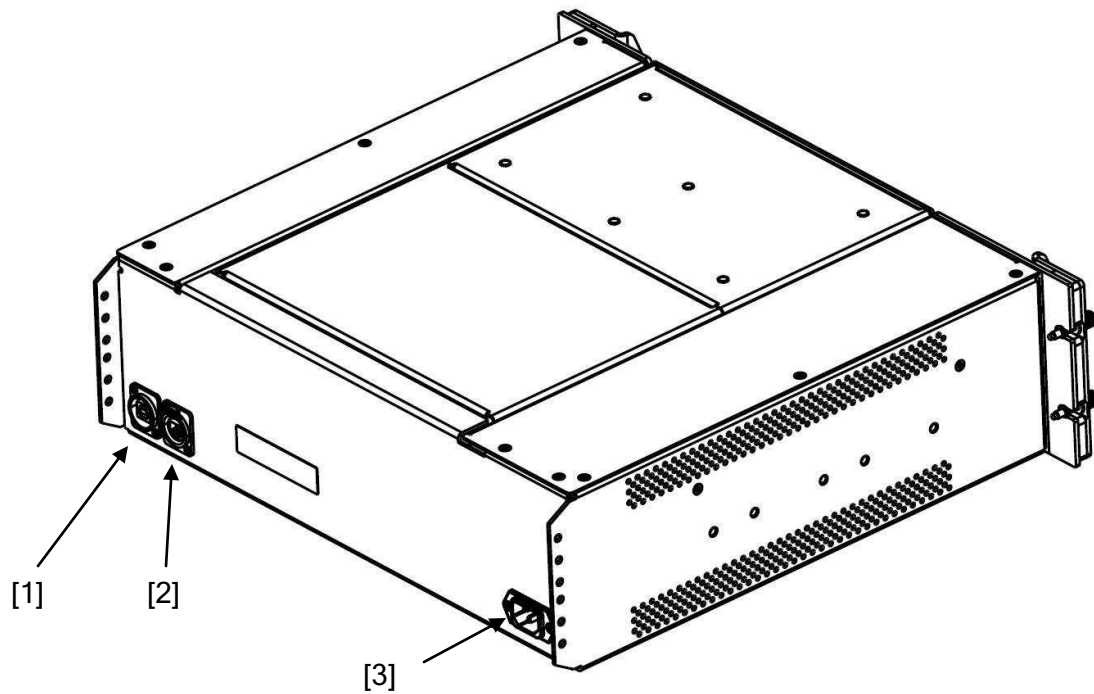These must both be flipped up to rotate open the upper unit to load paper or for maintenance.

 [5] Paper delivery slot
Paper is ejected through this slot.

Note: Never attempt to open the Upper unit by force or hit the door. This could damage the printer or result in poor print quality. Always open and close the Upper unit slowly.
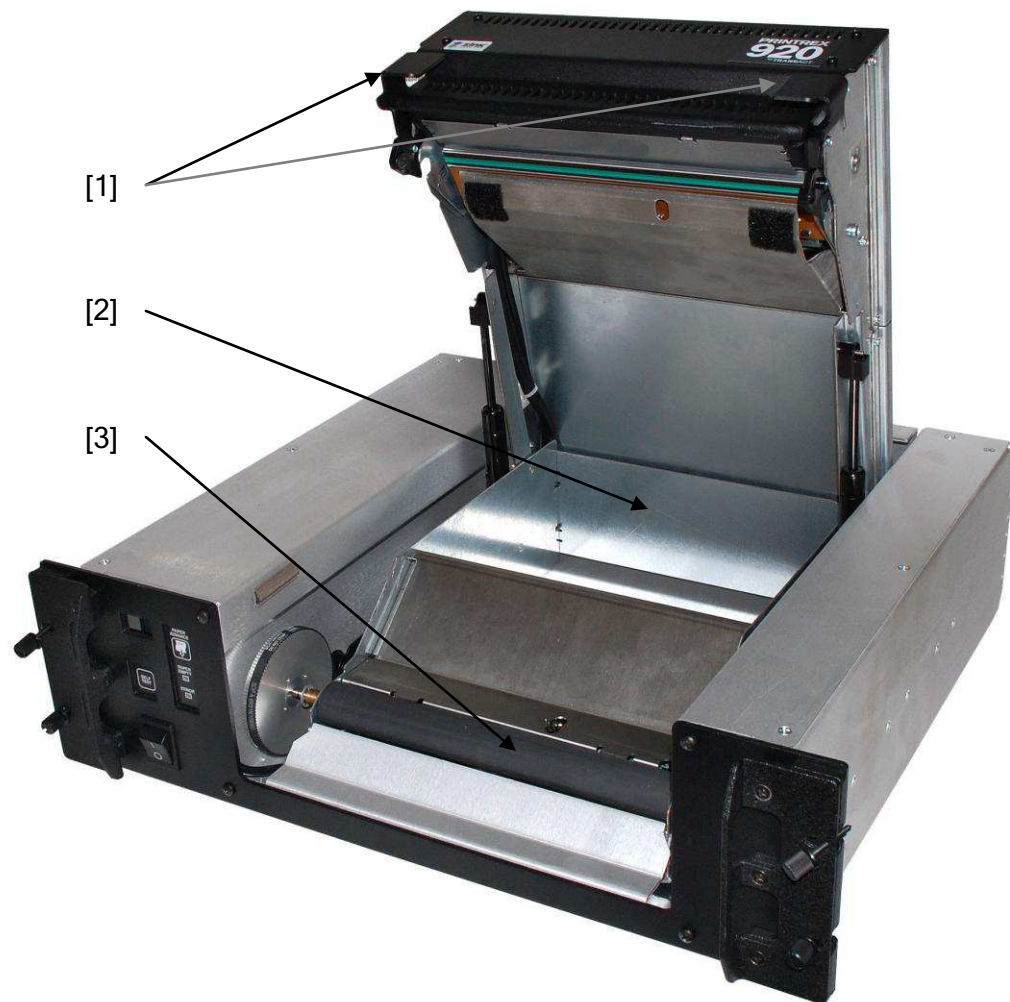
Back View

[1] LAN port
Connect a LAN cable here to connect to the computer.

[2] USB port
Connect a USB cable here to connect to the computer.

[3] Power connector
Connect the power cord here.

Inside the Printer

[1] Upper unit release levers
Push these levers up to release the upper unit.

[2] Paper tray
Load paper in this tray.

Note: Color thermal paper is loaded with a surrounding cartridge box, while black and white paper is loaded directly as a fanfold stack of paper.

 [3] Transport unit
Paper is fed by this unit. Clean it if soiled by paper dust or other foreign material.

Operation Panel

[1] Power switch
Rocker switch that turns power on and off.

[2] SELF TEST key
Pressing this key down for about 1 second initiates an automated status check.

[3] Status display
Displays error message codes (TBD) when the ERROR lamp is lit.

[4] PAPER ADVANCE key
Pressing this key in the offline mode feeds paper.

[5] PAPER EMPTY lamp
This lamp displays if the printer is out of paper.

[6] ERROR lamp
This lamp displays when there is an error within the printer.

Connecting the Communication Cable

The Printrex® 920 is equipped with two interface ports. These interfaces are:

- USB 2.0 High Speed
- Ethernet 10/100 Base TX

Connect the appropriate communications cable to the corresponding port on the printer as shown in the following figure. Cables are provided by your dealer, the system installer or are available through Printrex.

Connect the cable to the printer first, as shown in the figure, and then to the computer.

Note: You can disconnect the USB cable even while the printer and computer are on, but do not disconnect the USB cable in the cases described below. This could prevent the printer from operating normally.
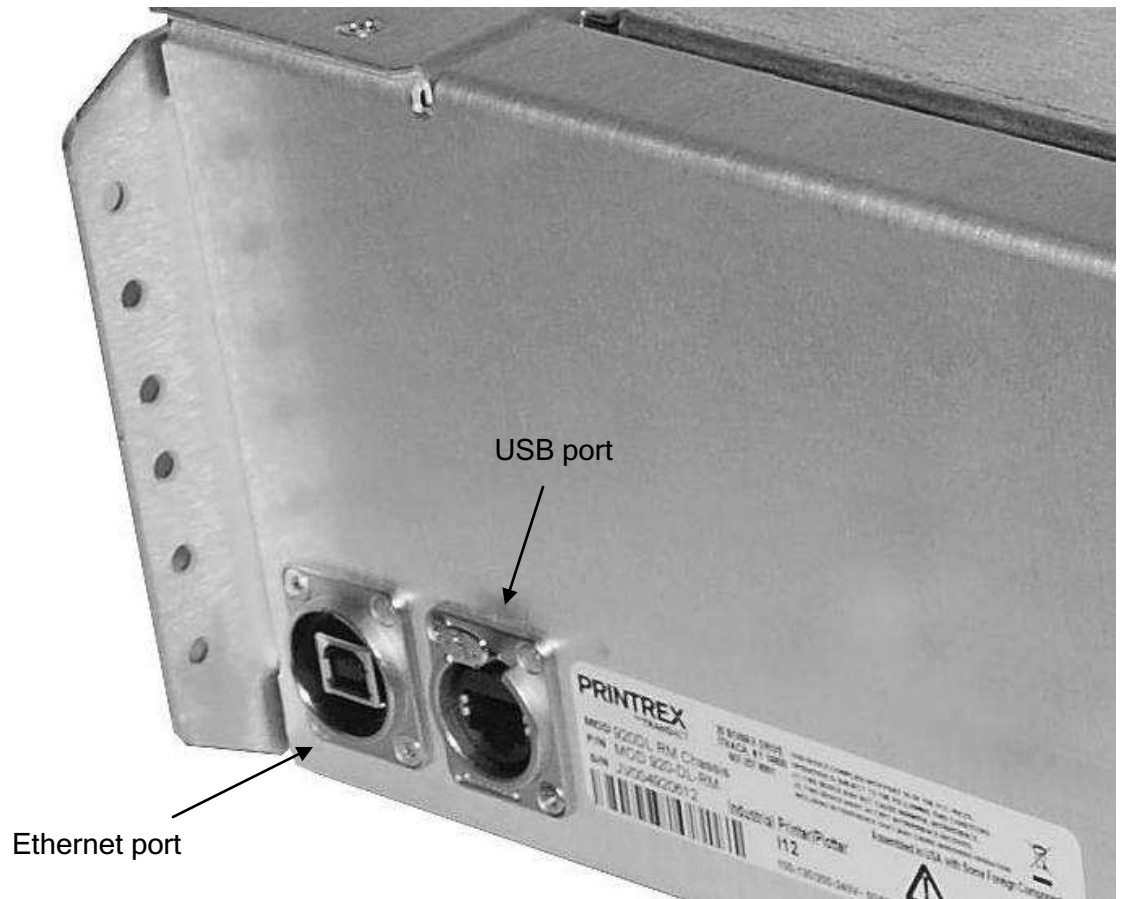- While the computer is starting up (until the desktop display appears).
- While the printer is printing.
- While you install the printer driver.
To disconnect the USB cable while the computer and the printer are on, disconnect it at the computer or the USB hub. To reconnect the USB cable, wait at least 5 seconds before you connect it again. If you reconnect it immediately, the printer may not operate correctly.

Note: A USB cable is not provided with the printer. Please prepare a cable that matches the port on your computer.

Note: Please consult your network administrator when connecting to an office LAN using an Ethernet cable.

Note: If a printer driver has not been installed in the computer to which you want to connect your printer, install it before connecting the USB cable or LAN cable.

Paper Loading Procedure

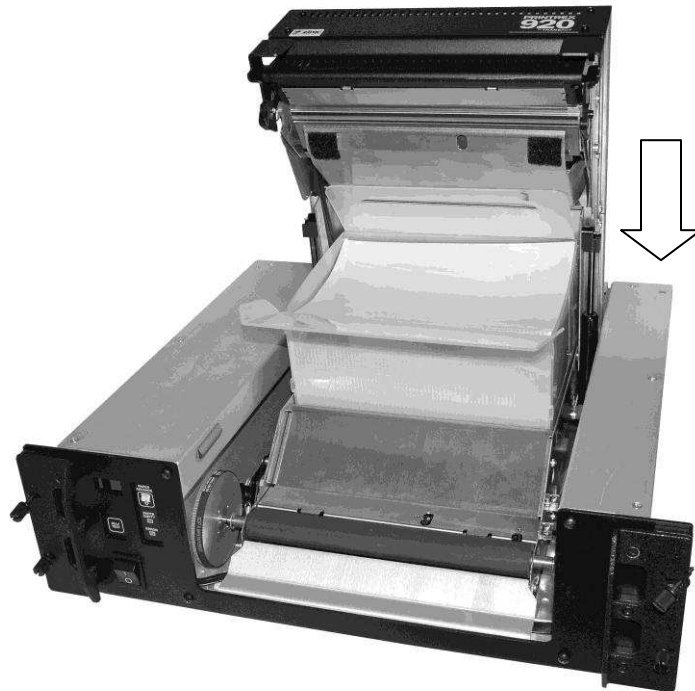This section describes how to load paper.

1. If the printer is installed in a rack-mounted configuration, slide the printer out forward from the rack. Paper is loaded from the top of the printer.

2. Flip the two front latches upward to release the upper unit.

3. Rotate the upper unit upward to open the printer.

4a. Color thermal paper stock is loaded from a plastic cartridge container. Lower the container into the paper tray as shown. Ensure that the top of the container is open and paper can feed out of it.

4b. Black and white thermal paper stock is loaded as a fanfold stack of paper. Lower the stack into the paper tray as shown.

Note: Load paper with the black mark located on the tip right side of the back of the printing surface.

5. Unfold the top sheet of paper and lay it across the platen as shown in the figure.

8. After loading paper, push the upper unit down until it clicks into place. Press the PAPER ADVANCE button on the front console to advance the first sheet. Slide the printer back into the rack if appropriate.

Note: Load paper in printer immediately after unpacking it. Paper remaining after completion of printing may be held loaded in printer or stored in the paper storage box. If printer is not used for an extended period of time, be sure to store paper in the paper storage box.

Chapter 4

Printrex® 920 Specifications and Requirements

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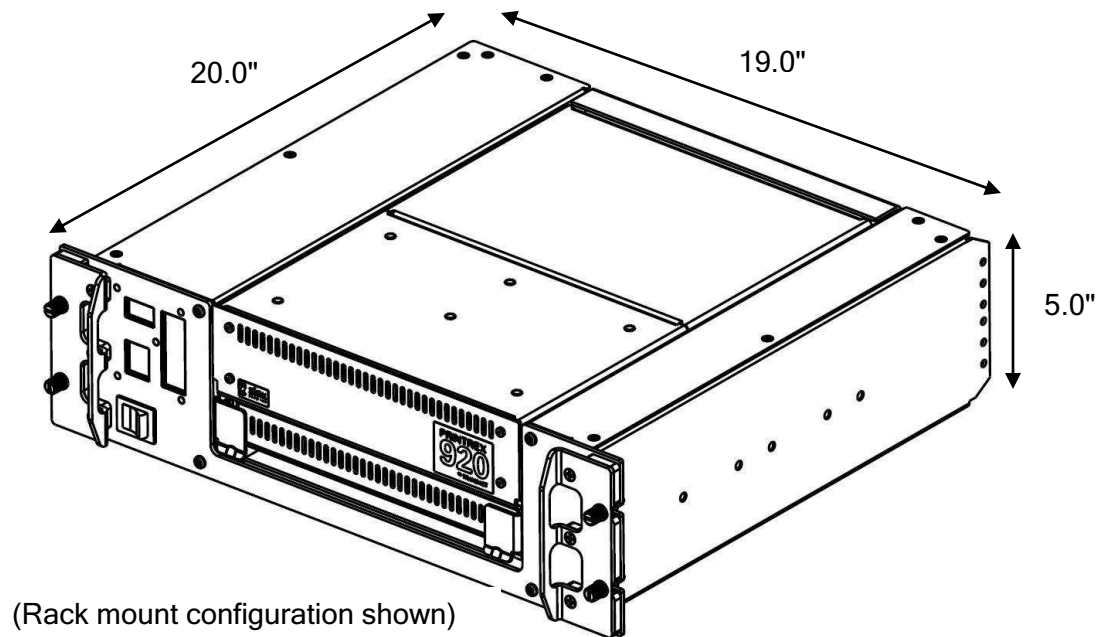# Printrex® 920 Specifications and Requirements

Standard Features

The following features are standard for Printrex® 920 printers:

- Prints in full color without ink cartridges or ribbons using ZINK® (Zero Ink)
- Capable of printing black and white on standard thermal paper
- Color Printing: 18 inches per minute
- Black & White Printing: 120 inches per minute
- Resolution of 300 dots per inch horizontal/200 dots per inch vertical
- Extended operating and storage temperature ranges
- Available in both desktop and rack-mount (3U space) configurations
- Easy path to upgrade existing logging systems to full color
- USB 2.0 High Speed and Ethernet 10/100 Base TX
- Low total cost of ownership

Optional features:
- Output stacker for rack-mount configuration
- Combination input tray/output stacker for desktop configuration

Physical Printer Specifications

20.0"   19.0"   5.0"

(Rack mount configuration shown)

Max Dimensions			
	W	D	H
Desktop	19.0	20.0	5.0
Rack mount	12.0	20.0	5.0

Weight: approx. 18 lbs. (8.2 kg) desktop, 24 lbs. (10.9 kg) rack mount

Interface
USB 2.0 High Speed and Ethernet 10/100 Base TX

Environmental Conditions

The Printrex® 920 printer is designed for use in rugged environments, within the temperature and humidity conditions described below.

Operating temperature (printing):   -15°C to 40°C / 5°F to 104°F
Operating temperature (non-printing):   -40°C to 70°C / -40°F to 158°F
Storage temperature: -55°C to 85°C / -67°F to 185°F

Electrical Specifications

Universal input (100/230 volts, 50/60 Hz)
250 watts maximum

Media Specifications

Paper

ZINK ® Color Fan Fold Paper
Printrex p/n 2316-0027
Width: 8.5 inches (216 mm)
640 sheets/box

Black & White Fan Fold Paper
Printrex p/n 2316-0011
Width: 8.75 inches (222 mm)
800 sheets/box

USB Interface

The USB interface is a Version 2.0 interface card is implemented through a standard Series "B" receptacle as defined in the USB Specification. The printer is self-powered and does not draw power from the standard Type B USB interface cable.

The standard USB Type B connector has the following pin functions:

Pin Signal

1 Vbus (+5 V dc)
2 Minus data
3 Plus data
4 Ground

Note: The standard USB interface does not have sufficient power to run the printer.

Chapter 5

Printer Maintenance

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Cleaning the Printer

There is no regular cleaning required for proper operation of the printer, however the printer surfaces are designed and manufactured to permit cleaning with the following cleaning agents:

- Isopropyl alcohol
- Ammonia
- Chlorine bleach (1:10 concentration with water)
- Hexachlorophene (PhisoHex)
- Glutaraldehyde (Cidex)

Use a soft cloth dampened with the cleaning agent to clean the surfaces of the printer. Do NOT submerse the printer or allow spills onto or into it.

Note:
- Before cleaning the printer, switch it off and disconnect the power plug from the power source. This can prevent personal injury or damage to the printer if you make a mistake during cleaning.

Protecting the Thermal Head

The thermal head incorporates a protective glaze coating and is generally resistant to harsh environments, but follow these guidelines to protect it:

- Do not allow the thermal head to come into contact with sharp or hard objects.
- Do not allow thermal paper debris to accumulate on the thermal head. See below.
- Do not allow condensation to accumulate on the thermal head.
- Use only Printrex approved thermal paper.
- Do not use abrasive cleaning substances on the thermal head. See below.

Cleaning the Thermal Head

Paper dust or other foreign material may occasionally accumulate on the thermal print head. This will be indicated by light printing or no printing in a narrow band down the length of the paper. In order to eliminate the thermal paper debris buildup, use a soft cloth moistened with one of the following cleaning agents:

- Isopropyl alcohol
- Ethanol

A light wiping along the length of the print head is adequate. Allow the print head to dry before resuming printing. It can be wiped dry with a soft, clean cloth. Do NOT submerse the print head or allow spills onto it.

Cleaning the Form

Sensor paper dust or other foreign material may occasionally accumulate on the form sensor. This will be indicated by paper advances missing the top of form position (some time after it has been correctly stopping at the top of form). The form sensor can be cleaned with an aerosol air spray or soft bristled brush. It is located just under the form sensor window.

Clearing Paper Jams

If paper has been loaded askew, has been torn off forcefully, or is damp, the paper may feed abnormally and wrap around the platen roller. These occurrences are extremely rare, but it is important to know how to clear the jam:

1. Turn off power to the printer.
2. Open the printer door and remove the paper holder.
3. Tear off the incoming paper (either from the roll, or fanfold supply).
4. Pull on the free end of paper with one hand, while turning the platen roller with the other hand to unroll paper from the platen.
5. Do not use a razor, knife or sharp object of any kind to cut the paper off of the platen roller. Nicking or cutting the roller surface will result in progressive damage to the platen with continued use of the printer.
6. Be very careful not to damage the print head exposed on the underside of the door. Use bare hands to free the paper to avoid accidental contact with metal or hard surfaces

Chapter 6

Troubleshooting

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This section lists a few common questions that are received by Printrex support staff and the answers most likely to fix the problem. For further information, see the Printrex System Administrator's Guide.

The printer seems to be working, but nothing is printed.
The thermal paper has one side that has a thermal sensitive coating while the other side is not coated. Be sure the thermally coated side is facing upward (as the paper is exiting the printer).

I'm using fanfold paper with form markers, but the printer stops in the wrong place. What driver settings should I use?
Be sure to set Paper Size to the actual size of the paper (e.g., 8.75" x 6.25"), and enable End-of-Job Form Feed.

Also, see that the Form Marker setting (in the Windows XP/Vista driver) matches the actual printed location of the marker.

Check that the paper is loaded correctly: looking at the front of the printer, the marker should be on the right side, on the bottom of the paper.

I'm trying to print TIFF files, but the printed output is clipped off. How do I print the whole log?
Commonly, users view TIFF logs in Windows Imaging, the free viewer provided in the Accessories folder. Unfortunately, this is a single-page application. It is designed for simple photograph-size viewing and printing.

In addition, the Windows printing subsystem formerly limited printer pages to 32,766 raster lines (approximately 163 inches long for 200 dpi Printrex printers, or 109 inches for 300 dpi Printrex printers), so the longest log that could be printed from Windows Imaging was just 13 feet long.

In Windows XP, the Imaging applet was replaced by a new Paint applet that uses multiple printer pages. In this case, set the printer page size to the paper's page size (e.g., 8.75" x 6.25" half page), and Paint will generate as many printer pages as needed to print the log.

In most of the larger geotechnical organizations, proprietary viewers have been written for internal use by staff and customers. There are very few options for users of TIFF log files who are not using Windows XP, or who find the XP Paint application too primitive.

Printrex welcomes comments regarding requirements and features for log viewing tools, to help us evaluate customer viewer application needs.

Every time I start my program, I have to change printer settings. How do I change the default driver settings?
Changes to the printer settings done from within an application are generally not saved unless some unusual program coding is done.

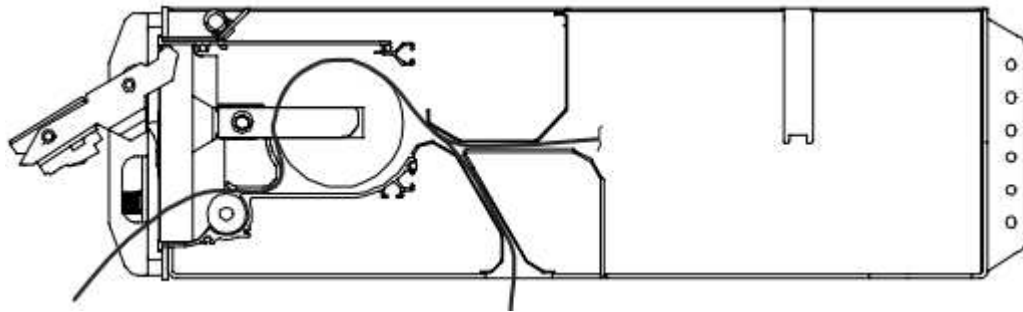**Self test prints out OK but when I print from the computer I get garbage.**
The most common culprits for this symptom are the printer cable or printer driver. Be sure the cable is appropriately connected (see "Connecting the USB

Cable"). Also, be sure the printer driver is for the specific model of printer in use.

Sometimes the fan-fold paper skews to one side or the other. How do I correct this?
The Printrex printers work with a wide variety of media. A paper skewing problem is normally corrected by realigning the paper manually, by opening the door, straightening the paper, and closing the door.

In some cases (generally with very thin paper) the problem may persist. If this is the case, thread the paper over a full internal roll of paper (as shown) to remedy the situation.

Appendix A: Ordering Supplies

Printrex® 920 supplies can be ordered easily direct from the Printrex website (www.printrex.com) or our telephone number within the US: 408.573.1200. When calling by phone, please ask for the Sales Department. See "Contact Information" in the first section of this document for more details.

Drivers Available

(TBD)

Index

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EN 301 489-3 V1.4.1 (2002-08) Electomagnetic compatibility and Radio spectrum Maters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz

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