



The Most Reliable Portable Printers®

# MICROFLASH 4T

## User's Guide





<b>microFlash 4t Printer: Top View</b> .....	1
<b>Using Batteries: General Guidelines</b> .....	2
Installing and/or Replacing Batteries .....	2
<b>Charging the Battery</b> .....	3
<b>Determining Battery Condition</b> .....	3
<b>Installing Paper</b> .....	5
<b>Printing a Self-Test</b> .....	7
<b>Configuring the Printer</b> .....	7
<b>Using Printer Data Cables</b> .....	7
<b>Using 802.11b/Bluetooth</b> .....	8
802.11b Parameters .....	8
Bluetooth Parameters .....	8
<b>Using Buttons, LEDs, and Audio Indicators</b> .....	9
Button Functions .....	9
LED Indicators .....	9
Blue RF Power LED Indicators .....	9
Charge LED Indicators .....	10
CardReader LED Indicators .....	10
Audio Indicators .....	11
CardReader Audio Indicators .....	11
<b>Using a CardReader</b> .....	12
General Guidelines .....	12
<b>Using External Charging</b> .....	13
Overview .....	13
<b>Supplies</b> .....	17
<b>Media Supplies</b> .....	17

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## microFlash 4t Printer: Top View



**Figure 1**

## Using Batteries: General Guidelines

- If your printer came with batteries already installed, remove the red, battery isolator labels. If your printer did not come with batteries installed, see *Installing and/or Replacing Batteries on this page*.
- If you are storing your printer for a long period of time, reinstall the battery isolator labels.
- Both batteries must be installed for your printer to operate properly.

## Installing and/or Replacing Batteries

1. Open the printer's cover (Figure 1).
2. If applicable, remove the batteries by pressing the retainer clip outward with your thumb (Figure 2).



Figure 1



Figure 2

3. While pressing the retainer clip, lift the outside end of the battery past the retainer clip.
4. Insert or replace the new batteries. Verify the battery contacts are facing down and are on the outside edge of the printer (Figure 3).



Figure 3

## Charging the Battery

To charge the battery, you must first remove the red, battery isolator labels.

If the battery is low when the printer “wakes up,” the printer sounds three short beeps. Plug the AC Adapter into an appropriate power source. The Charge LED turns red when charging and turns green when fully charged. (For more information on the Charge LED, see *Using Buttons, LEDs, and Audio Indicators on page 9*.) A complete charge takes approximately 2 to 4 hours.

**Caution:** To obtain full battery capacity, a new battery must cycle through two to three charges. To restart a charge, unplug the power cord. Wait 30 seconds, then replug the power cord.

If your printer is installed with external charge capabilities, you can also charge your printer using O'Neil approved accessories. For more information, see *Using External Charging on page 13*.

## Determining Battery Condition

To determine the battery's condition, print a self-test. For more information, see *Printing a Self-Test on page 7*. The battery voltage varies between 6.2 and 8.4 volts.

**Caution:** There is a risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

**Caution:** The operating temperature of this portable printer is 50° C. However, the operating temperature when used with O'Neil power supply for charging the portable printer is limited to 40° C. Please charge the printer in a suitable location that meets this temperature requirement.

**Caution:** (For US/Canada) Please only use the O'Neil part number 220240-100 power supply with this product.

## Installing Paper

1. Insert a roll of paper with the end of the roll exiting from the bottom of the paper cavity (Figure 4).
2. Open the print head by raising the gray, print head release lever until it is fully open. Do not stop at the partial open position (Figure 5).



Figure 4



Figure 5

3. Wake up the printer by briefly pressing the red, self-test button (Figure 6).
4. Feed the end of the paper under the roller. The paper automatically feeds under the roller and exits the top of the print head. Verify the paper exits the print head straight (Figure 7).

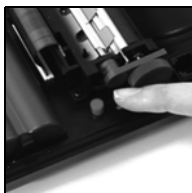


Figure 6

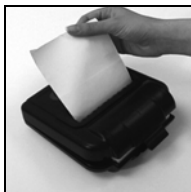


Figure 7

5. Lower the gray, print head release lever (Figure 8).
6. Feed the paper through the printer's cover (Figure 9).



**Figure 8**



**Figure 9**

7. Close and latch the printer's cover.

## Printing a Self-Test

1. After installing the paper, open the printer's cover.

**Caution:** If the red, battery isolator labels are installed, remove them.

2. Press and hold the red, self-test button for approximately five seconds until printing begins.
3. After printing begins, release the red, self-test button.

## Configuring the Printer

The printer has many configurable settings. To configure or upgrade firmware, download the Windows configuration program at [www.oneilprinters.com](http://www.oneilprinters.com).

## Using Printer Data Cables

1. Select the appropriate cable for use with the host and/or device you are using.
2. Insert the plug into the printer's data port (Figure 10).



**Figure 10**

3. Lead the cable through the notch on the outside of the printer's cover.
4. With the cable exiting the front of the printer, close and latch the printer's cover.

## Using 802.11b/Bluetooth

**Note:** The following information applies to printers with 802.11b/Bluetooth capabilities.

Radio printers are configured with default factory settings. To determine your printer's radio configuration, print a self-test. (For more information, see *Printing a Self-Test on page 7*.) If you have multiple printers, configure them specifically for use in your environment.

For proper system operation, set the following parameters on your printer and host computer:

### 802.11b Parameters

- ESS ID
- IP Address (if not DHCP)
- DHCP
- Sub Net Mask
- WEP Encryption
- Port
- Network Type

### Bluetooth Parameters

- Device Name
- Authentication
- Bondable
- Discoverable
- Connectable
- Encryption

For information on setting parameters, see *Configuring the Printer on page 7*. Contact your network administrator to verify the proper radio settings for your environment.

## Using Buttons, LEDs, and Audio Indicators

### Button Functions

#### Red Self-Test Button

Short press	If printer is asleep; printer wakes up. If printer is awake; paper feeds.
Long press (press and hold for five seconds)	Prints a self-test.

#### Blue RF (Radio-frequency) Power Button

Short press	If printer is asleep and RF power is off; printer wakes up and RF power is turned on.  If printer is asleep and RF power is on; printer wakes up and RF power is turned off.  If printer is awake and RF power is off; RF power is turned on.  If printer is awake and RF power is on; RF power is turned off.
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### LED Indicators

#### Blue RF Power LED Indicators

LED	Description
Blue flash - fast	RF power is on and printer is awake.
Blue flash - slow	RF power is on and printer is asleep.
Off	RF power is off.

## Charge LED Indicators

LED	State of Charge	Action
Solid Red	Charge in progress.	Wait for the charge LED to turn green.
Green	Charge complete.	None.
Red flash - slow	Battery is disconnected. Battery is too cold.	Connect battery. Change environment.
Red flash - fast	High temperature.	Change environment.
Red to orange - slow	Battery voltage is very low.	Wait for solid red. Restart charge.
Red to orange flash - fast	Battery voltage is too high.	Replace battery.
Orange flash - slow	Charge timeout.	Restart battery charge.
Orange flash - fast	Internal error.	Reset printer.

## CardReader LED Indicators

### *Magnetic*

LED	Description
Green flash	Good read.
Red flash	Bad read.

### *Smart CardReader*

LED	Description
Red flash	Smart CardReader power on.
No LED	Smart CardReader power off.

## Audio Indicators

Beep(s)	Description	Action
1	Printer wakes up.	None.
2	Out of paper.	Install paper.
3	Low battery.	Charge battery.
1 short	RF power is on (when blue, RF power button is pressed and power was turned off).	None.
2 short	RF power is off (when blue, RF power button is pressed and power was turned on).	None.
1 long	Boot code is starting or restarting (when downloading new firmware).	Redownload firmware.
8 short	CRC error in firmware.	Redownload firmware.

## CardReader Audio Indicators

### *Magnetic*

Beep(s)	Description	Action
1 long	Bad read.	None.
2 short	Good read.	None.

## Using a CardReader

**Note:** The following information applies to printers installed with the CardReader option.

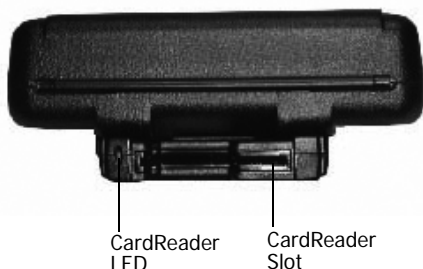


Figure 11

### General Guidelines

- To wake up the CardReader, insert a card into the CardReader slot. One short beep indicates the CardReader/printer is awake.
- If you are using a Smart CardReader, insert a card with the gold contacts facing away from the printer and leave the card in CardReader slot.
- If you are using a Magnetic CardReader, insert a card with the stripe facing toward the printer, then slowly remove the card from the CardReader slot.
- For information on CardReader LED indicators and audio indicators, see *Using Buttons, LEDs, and Audio Indicators on page 9*.

## Using External Charging

**Note:** The following information applies to printers installed with external charge capabilities.



(2) Charging contact points

Figure 12

### Overview

External charge-capable printers have two charging contact points located on the back of the printer's case (Figure 12). External charge-capable printers can be used with various O'Neil accessories such as the swivel lock bracket and the external swivel lock depot charger. When an external charge-capable printer is mounted to one of these accessories, the printer's batteries are automatically charged. For more information, see the instruction sheet(s) included with the accessories.

**Warning:** Use of any product not approved by O'Neil Product Development, Inc. for use with their printers could cause damage to the batteries and/or printer and will void the warranty.

Failure to observe the instructions and/or warnings specified in the documentation may result in damage to your printer. O'Neil Product Development, Inc. does not accept liability for resulting damages or injuries.

## Agency Approvals

### **FC** FCC Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



Applicable Directive

- 89/336/EEC, 73/23/EEC

Applicable Standards

- EN55022 (1998)
- EN55024 (1998)
- EN60950 (1992)



## DECLARATION OF CONFORMITY

(According to ISO/IEC Guide 22 and EN 45014)

THE PRODUCT HEREWITH COMPLIES WITH THE REQUIREMENTS OF:

THE LOW-VOLTAGE DIRECTIVE 73/23/EEC.

THE EMC DIRECTIVE 89/336/EEC.

Manufacturer's Name:  
O'Neil Product Development Inc.  
8 Mason, Irvine, CA, 92618, USA

European Representative:  
O'Neil Product Development Ltd  
Witan Court 285-287, Upper Fourth Street,  
Central Milton Keynes, UK MK9 1EH

Declares that the product listed below:

Product Type: ITE/Residential, Commercial, and Light Industrial  
Product Name: Portable Thermal Printers  
Model Number: MF4t-L  
Beginning Serial Number: All  
Options: All  
Date Issued: 7-28-2006

Conform: to the following product specifications:

Safety: EN60950-1:2001

EMC: EN 55022 : 1998 / CISPR Publication 22 : 1997, Class B Limits and Methods  
EN 55024 : 1998 +A1:2001 +A2:2003 (CISPR 24) ITE - Immunity Characteristics -  
Limits and Methods of Measurement  
EN 61000-4-2 : 1995+A1:1998 - Electrostatic Discharge  
EN 61000-4-3 : 1995 - Radiated RF Field  
EN 61000-4-4 : 1995 - Electrical Fast Transients  
EN 61000-4-5 : 1995 - Voltage Surge  
EN 61000-4-6 : 1996 - Conducted RF Field  
EN 61000-4-8 : 1993 - Magnetic Field  
EN 61000-4-11 : 1994 - Voltage Dips, Short Interruptions, And Variations  
EN 61000-3-2 : 2000 - Harmonic Current Emissions  
EN 61000-3-3 : 1995 +A1:2001 - Voltage Fluctuation and Flicker

I, the undersigned, hereby declare that the equipment specified above conform: to the above Directives(s) and Standards(s).

Company Official: Ken Carlson

Position: Director of Electrical Engineering

Signature: Signed Copy on File

Date: August 31, 2006

European Contact: O'Neil Product Development Ltd. Witan Court 285-287, Upper Fourth Street, Central Milton Keynes, UK MK9 1EH; Phone INT +44-1908-393300; Fax INT +44-1908-393400 [www.oneilprinters.com](http://www.oneilprinters.com)

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## Supplies

Use only supplies certified by the Original Equipment Manufacturer (OEM). For OEM supplies, please contact O'Neil at (949) 458-0500.

## Media Supplies

O'Neil Product Development, Inc. offers seven certified grades of paper for use in the printers. Our certified supplies are guaranteed compatible — this important qualification means that rigorous performance and image life testing have been performed. Quality supplies are key to obtaining optimal image quality and print performance. Quality supplies are also the key to extending the life of the printer. O'Neil Product Development strongly recommends using O'Neil Certified Supplies only.

For more information, contact O'Neil Printer Supplies Group at (949) 458-6400.

## Maintenance Supplies

We recommend that you follow a regular maintenance schedule using our cleaning card (or cleaning kit when using linerless labels). O'Neil's cleaning cards are designed to effectively remove dirt and other contaminants from the thermal printhead, rollers, and paper path...resulting in a clean, crisp image output — every time. Our cleaning kits remove any adhesive residue (when using linerless labels) in addition to dirt and other contaminants.

For more information, contact O'Neil Printer Supplies Group at (949) 458-6400.

## For more information

For information about using the printer, contact O'Neil at (949) 458-0500, or visit [www.oneilprinters.com](http://www.oneilprinters.com).





**The Most Reliable Portable Printers.**

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