

## MST IV FC

### Compact Thermal Printer with Fast Charge

### Lightweight, compact, battery operated thermal printer

Offers high reliability, low power consumption, and outstanding durability in a small package for mobile computing environments. NiMH model charges in only 90 minutes.



*MCR Option*



### Features

- High specification printer driving the new Advanced Printing Systems MP 205 fixed thermal printhead
- Compact and lightweight. Easily worn on a belt
- Full range of communication interface versions including standard RS-232 Serial and Infrared (IrDA) and optional Magnetic Card Reader with simultaneous read of three tracks
- Powerful integrated micro-controller managing all the features supported by the MST IV FC
- Flash based Waferscale PROM contains 128K bytes for firmware, resident fonts, optional rotated fonts, downloadable fonts, graphics, logos, and bar codes
- Operates from a four cell 1400 mAh nickel metal hydride battery pack
- AC power adapter powers the internal fast charge circuit, charging the battery in 2 hours
- Side panel membrane provides user input,
- LEDs provide user feedback
- Graphics emulation mode and Windows® 95, 98, and 2000 compatible driver. Windows CE print application and Palm print driver are available
- Enclosed paper supply

Information provided is provisional and subject to change.

# Extech MST IV FC Portable Printer

## Microcomputer-based printer controller:

Powerful Phillips CPU on highly integrated circuit boards manages all the features supported by the printer

## 16 Bit Controller - CPU Block:

**Standard:** Low power precision regulator circuits; 128K bytes of flash memory for program, and printer dot tables, forms, and logos; 8 bit 2 channel A/D circuit to measure system and printer mechanism voltage levels, battery and thermal printhead temperature; Fail safe and CPU watchdog circuits; 32K SRAM print buffer

## Controller - Printer Block:

**Standard:** APS MP 205 thermal printhead (1" per second at 5.2V); Automatic thermal print contrast control (voltage and temperature dependent); High speed, high resolution print; Built-in detectors to monitor head temperature, voltage, and paper-out

## Controller - Power Block:

**Standard:** Precision, low power 5V regulator, Printer mechanism power ON/OFF circuit; Auto shut-off; Fast charge circuit with auto switch to trickle charge; Low power and charging LED indicators; Power adapter option, auto switch to AC power when adapter is used; rechargeable NiMH 4-cell battery pack (1500 mA/H); Hardware and software power management

## Controller - Data Interface Block:

**Standard:** 2400 to 19.2K communication speed; Communication Interfaces: Serial RS-232 with RJ type connector (6 pin), Infra-Red (IrDA) with ambient light filter, optional Magnetic Card Reader (3 track, simultaneous read) MS-DOS and Windows compatible with full-speed handshake; 1 inch diameter paper roll (24 feet single ply, 0.4 inch core); Windows 95®, 98®, and 2000® printer driver; Windows CE print application; Palm O/S printer driver

## Operator Interface:

**Standard:** Membrane switch for user input; Power ON switch; Power OFF switch; Paper feed momentary switch; Printer <on-line>, <low battery>, <charge>, <AC-on> and <fault> LED indicators; Built-in self-test.

## Special Features:

**Standard:** Graphics emulation; Resident fonts to enable printing from 12 to 24 characters per inch; Protective case; Flash based Waferscale PROM contains 128K bytes for firmware, resident fonts, optional rotated fonts, downloadable fonts, graphics, logos, and bar codes.

## Ordering Information:

**7782811** MST IV FC with Standard Serial and IrDA Interface (117V Adapter)

**7781811** MST IV with Standard Serial and IrDA Interface (117V Adapter)  
[ ] add R for 3 track MCR

**151129** Power Adapter, 12VDC

**756993** Belt Pouch Case (Rigid)

**756995** MSP Soft Case (with Clic-on-belt clip)

**757057** Spare paper, pkg. of 5 rolls

**767900** External Multi-port battery charger (4 battery packs)

**7A100004** Spare NiMH battery

**778181A1** MST IV with Alkaline batteries and IrDA interface  
(220V and 240V adapters available)

## Specifications:

### Print Mechanism

Printing Method:	Thermal dot line printing
Dots per line:	384
Number of heat elements:	2 heater/dot, 142 ohms/dot
Printing Width:	48mm
Resolution:	8 dots/mm
Paper feed pitch:	0.125mm
Printing speed:	25mm/sec @ 5.2 Volts, 4 to 6 lines/sec
Head Temperature detection:	By thermistor, hardware protection against overheating
Paper-out/TOF detection:	By photo interrupter
Operating Voltage:	4.8V ±0.7V
Current Consumption:	3.8A @ 192 dots, 0.123W/dot
Reliability:	50 million MCTF (mean characters until fail)@25% pulse

### Standard Operating Features

Character set:	ASCII International, IBM graphic, and 1 downloadable set
Graphic print:	Bit addressable graphic command set; Bar codes 39,128, 2 of 5, UPC; Graphic logo store and print
Supervised operation:	Supervisory command set to read battery voltage, buffer status, power management, and data transfer with checksum using Xmodem
Line Buffering:	32k standard
Characters per line:	24      32      38, 40, 42,      48 (s/w command)
Character Size:	3x2      3x1.5      3x1.15      3x1.5 (HxW mm)
Print contrast:	Auto and user selectable
Print output:	Double high, double wide, and bold print

### Communication

Interface:	RS232C and IrDA standard
Baud Rate:	2400, 4800, 9600, 19,200 baud, dip switch select
IrDA Transfer Speed:	9600 connect and transfer
Handshaking:	CTS/RTS and/or XON/XOFF

### Print Media

Paper Width:	57mm (2.24 inches)
Lines of Print/roll:	2200 (1" diameter roll, 23 feet long)
Paper Rolls per Charge:	-9
Lines Per Charge	-20,000

### Power

Power:	Internal rechargeable battery & wall mount DC power pack
Battery:	4 cell NiMH 1500mAH rechargeable
DC Power Pack:	10vdc/1 A DC/AC adapter standard
Battery Recharge:	Internal Fast 90-120 min fast charge with auto switch to trickle charge; Over current and overheat protection
Power ON/OFF:	Via switch or by raising RTS (ON) or lowering RTS (OFF); Auto power down timer

### User Interface

Status indicators:	5 LEDs - Power on, Low power, Charging, Fault, & Ready
User switches:	3 membrane switches - On, Feed, Off,
Connection:	RJ type (6 pin) for Data I/O; DC input Power Jack for wall mount adapter; Infra-Red (IrDA) with Ambient Light Filter

### Mechanical

Dimensions:	92x106x54mm (3.6x4.2x2.1") WxLxH
Weight:	385g (13.5oz) with paper and battery pack
Warranty:	One year standard (3 years available at extra charge)
OEM Products:	Design services available

### Environmental Specifications

Operating Temperature:	-10° to 50°C
Storage Temperature:	-20° to 60°C
Humidity:	Up to 90% RH (noncondensing)
Exceeds industry standard for drop	
Agency approvals	FCC Part 15J Part B; CE EN55022 Part B, EN50082-1