EPSON

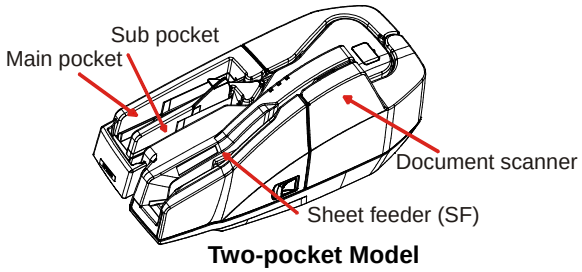
P R O D U C T I N F O R M A T I O N G U I D E

UPDATE FOR BUSINESS SYSTEM PRODUCTS

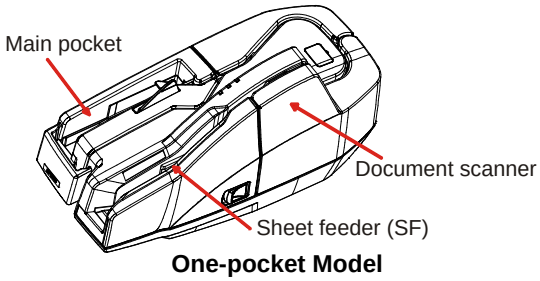
7/09

This package provides a scanner product section to be added to the *Epson Business System Product Information Guide*. The table of contents of this section is listed below.

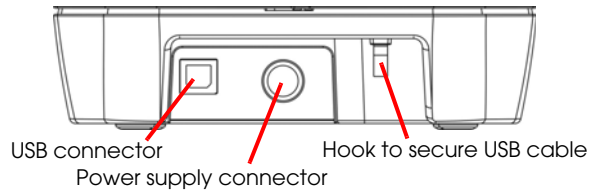
Epson CaptureOne Single Feed



Two-pocket Model



One-pocket Model



Accessories

Franking cartridge	
EFC-01 franking cartridge Ink color: red Expiration: 18 months from production (at room temperature) Ink life: 18,000 prints* * Using Epson's standard print pattern.	

Contents of the Utility & Documents CD
TM-S1000 Single Feed Driver TM-S1000 Single Feed Utility TM-S1000 Single Feed Utility User's Manual TM-S1000 Single Feed User's Manual

Connections

Connector	Description
USB 2.0	High-speed transmission at 480 Mbps (bps: bits per second)
Power	AC Adapter C, 24 V ± 10%, supplied with CaptureOne

Specifications

Computer requirements

CPU Pentium 4 1.2 GHz or above

Memory ≥ 256MB above minimum OS system requirements

HDD space ≥ 30MB free space with driver installed

Interface USB 2.0 high-speed

Windows version 2000 Professional SP4
XP Home Edition/ Professional SP2/SP3
Vista (32-bit, 64-bit) Home Basic/ Home Premium/ Ultimate/ Business
Vista (32-bit, 64-bit) Home Basic/ Home Premium/ Ultimate/ Business with SP1

.NET framework 1.1, 2.0, 3.0, or 3.5

Supported development languages
Win32 Visual C ++ 6.0, Visual Basic 6.0
.NET Visual C ++ .NET 2003, Visual C ++ 2005, Visual C # .NET 2003, Visual C # 2005, Visual Basic .NET 2003, Visual Basic 2005

Scanning specifications

Single pass Scans both sides of check, reads MICR, and performs franking in same pass.

Scanner type CIS (contact image scanner)

Resolution (dpi) 200 x 200, 120 x 120, 100 x 100

Graduation Grayscale: 256 levels
Black & white: 2 values

Data formats Grayscale: TIFF, JPEG, BMP, RAW
Black & white: TIFF (CCITT Group 4), BMP

Image size 4.04 (W) x 10.59" (L) (maximum) {102.6 x 269 mm}

Image quality Complies with IQA (Image Quality Assurance) by FSTC (Financial Services Technology Consortium)

Scanning speed 19.69 "/s {500 mm/s}

Font recognition OCR A and OCR B

OCR recognition ≥ 98% at 77° F (ANSI, excluding O and 0)

Paper specifications

Type Normal, single-ply only

Size (H x L) 2.68 ~ 4.72" x 4.72 ~ 9.25" {68 ~ 120 mm x 120 ~ 235 mm}

Thickness 0.003 ~ 0.008" {0.075 ~ 0.2 mm}

Weight 16 ~ 32 lb {60 ~ 120 g/m^2}

SF capacity Holds 1 sheet

Main pocket capacity (both 1- and 2-pocket models)
Holds up to 100 sheets

Sub pocket capacity (2-pocket model only)
Holds up to 50 sheets

Installation Must be horizontal (within a tilt of ± 5°)

MICR specifications

Magnetic character types
E13B, CMC7 (Alphabetic not supported)

MICR recognition rate
≥ 98% at 77° F (E13B: ANSI)
Errors of ≤ 1% (E13B: ANSI)

Electronic endorsement

Can paste recorded image data on the back image of a check.

Reliability

Franking cartridge life
18,000 in Epson standard print pattern
Franking cartridge expiration date
18 months after production
Scanner life span 1 million sheets
MTBF 180,000 hours
MCBF 2,470,000 cycles

Electrical Characteristics

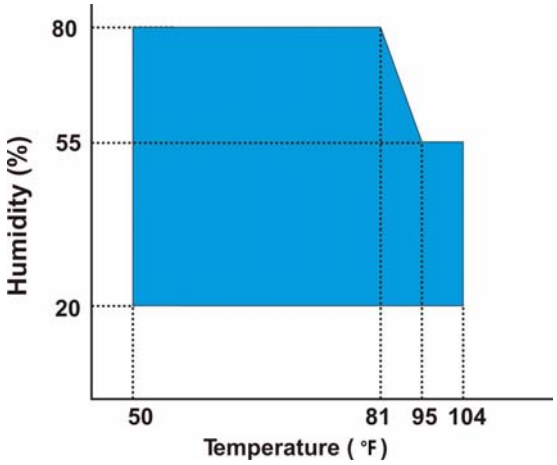
Power supply Epson AC Adapter C supplied with scanner
Supply voltage 24 V ± 10%
Current consumption
Operation 1.0 A, approximate
Standby 0.2 A, approximate

Safety

EMI FCC/ICES-003 Class A
Safety standards UL60950-1/
CSA C22.2 No. 60950-1
(Tested using Epson AC Adapter C.)

Environmental Conditions

Temperature Operating 50 to 104° F {10 to 40° C}
Storage
Packed –4 to 140° F {–20 to 60° C}
(≤ 120 hours at –4 or 140° F)
Humidity (no condensation)
Operating 20 to 80% RH
Storage 5 to 85% RH



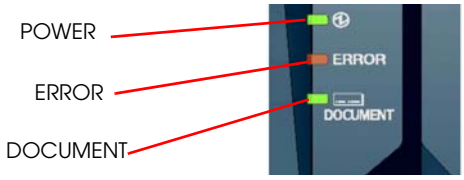
DIP Switches

Two fixed DIP switches are located on the main board inside the bottom cover of the CaptureOne SF.

SW	Function	ON	OFF
1	Internal use. Do not change.	—	Fixed to OFF
2	Internal use. Do not change.	Fixed to ON	—

Lights and Switches

LEDs



POWER
On when CaptureOne SF power is on.

ERROR
Off when CaptureOne SF is online.

On when scanner is offline (and when scanner cover or franker cover are open)

Flashes during an error, during initialization, or while waiting for document removal. (See "Error LED Codes" below.)

DOCUMENT
On when scanner is ready to process the document in the SF or during document processing.

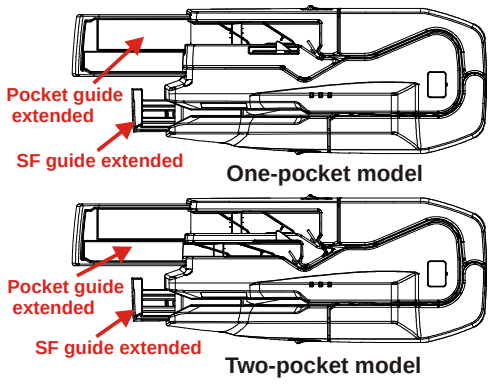
Flashes when the scanner is waiting for document insertion.

Switches

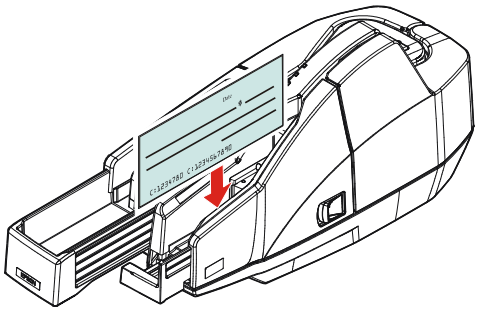
POWER
Turns the CaptureOne on or off. A power switch cover is provided to prevent accidental turn off. If installed and a failure occurs, unplug scanner immediately.

Inserting a Check

1. Fully extend the pocket guide. Extend the SF guide fully, if needed. See the illustration below.

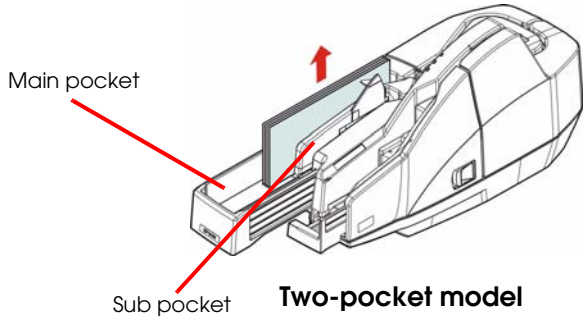


2. You can insert 1 check into the SF to be fed automatically.
3. Insert the check straight facing the outside, as shown below.



Ejecting Checks

1. When the checks are ejected, remove them.

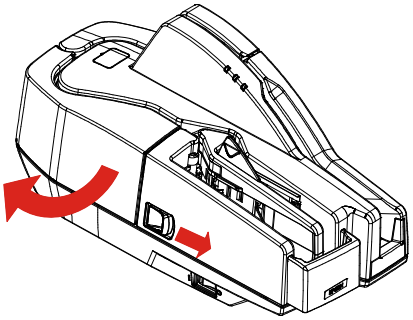


CAUTION: Do not overfill pockets with checks. Otherwise, a paper jam may occur.
2-pocket model = main pocket: 100; sub pocket: 50.
1-pocket model = main pocket: 100.

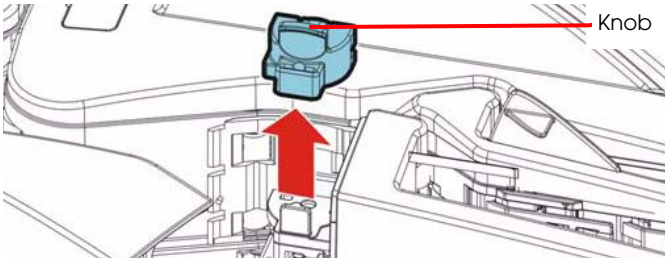
Installing the Franking Cartridge

CAUTION: Keep the franking cartridge out of reach of children.
Do not disassemble the franking cartridge.
Handle carefully because ink stains permanently.
Use only genuine Epson cartridges.
Do not remove cartridge from packing until ready to use.
Use cartridge before expiration date printed on the box.
Dispose of cartridge according to applicable regulations.

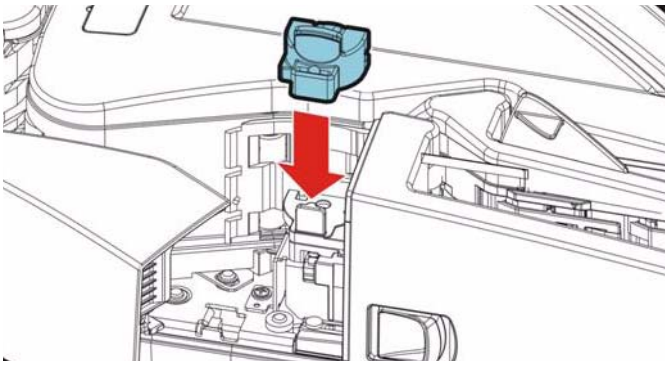
1. Open the franker cover by pulling the lever forward.



2. Remove used franking cartridge, if installed, as shown below. by holding the knob at the top of the cartridge.



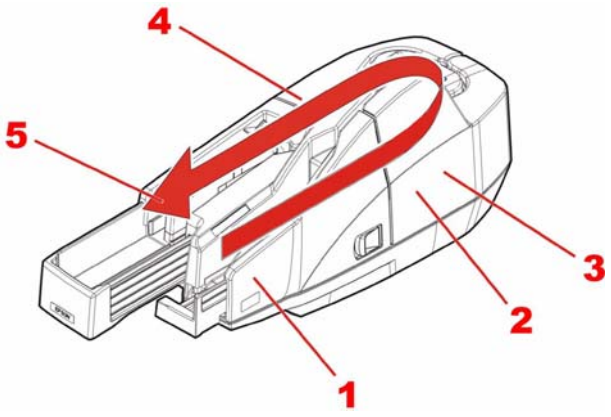
3. Carefully insert the new franking cartridge from the top, and push it firmly but gently until it clicks into place.



4. Close the franker cover until it clicks into place.

Single Pass Check Flow

The CaptureOne can perform 4 actions on a document in a single pass: scanning the image of both the face and back, reading magnetic characters, and franking.

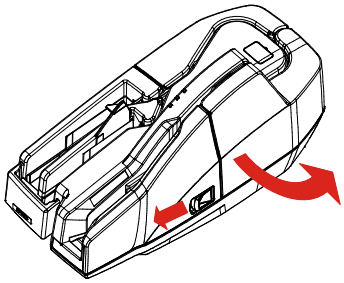


1. Insert a document into the feeder section.
2. The scanner scans the images of the face and back.
3. The scanner reads the magnetic characters on the document.
4. The franking section prints a pattern.
5. The document is fed to the outlet.

Cleaning the Scanner Glass

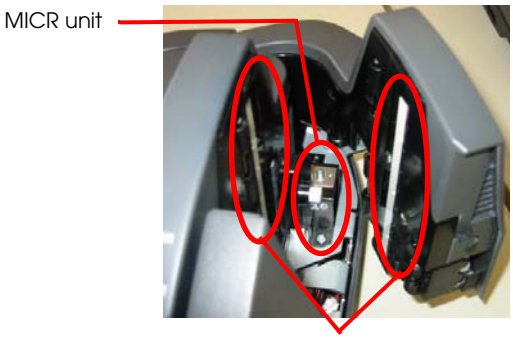
Clean the scanner glass if it gets dirty from ink or paper dust, or at least once every 6 months or 100,000 passes.

1. Open the scanner cover as shown below.



2. Lightly wipe the glass areas shown in the picture below with a soft dry cloth.

CAUTION: To prevent spots or stains, do not use synthetic detergent, benzine, water, or other liquids to clean. Never apply any liquid directly to the scanner glass.



3. If the scanner glass is smeared with grease, oil, ink, etc., wipe the glass with a cloth lightly dipped in alcohol.
4. Close the scanner cover firmly until it clicks into place.

Cleaning the MICR Unit

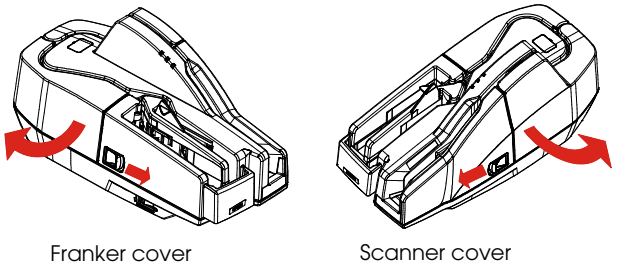
Dirt or dust on the MICR unit can increase errors in reading magnetic characters. Clean the MICR unit every 6 months or 100,000 passes. Use the TM-S1000 Utility in the Utility & Documents CD or your application to clean the MICR unit.

Use KICTeam Waffletechnology® cleaning cards or an equivalent commercial cleaning sheet.

Note: For cleaning steps, see the TM-S1000 Utility User's Manual. Do not use sticky cleaning sheets. They may cause a jam or machine failure.
Dispose of used cleaning sheets properly. Do not reuse.

Clearing a Paper Jam

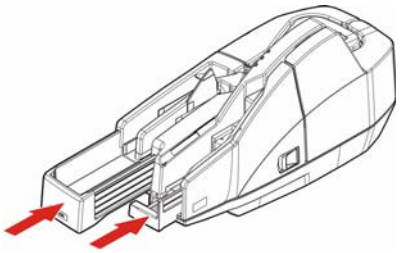
Open the scanner cover or franker cover to remove the jammed paper. See the illustration below.



Transporting the Scanner

Follow the steps below to transport the scanner.

1. Turn off the scanner.
2. Confirm that the ⏻ *POWER* LED is off.
3. Remove the power supply connector.
4. Store the pocket guide and the SF guide inside the scanner.



5. Pack the scanner upright.

Self-test

The self-test checks the following scanner functions:

- ❏ Model name
- ❏ Serial number
- ❏ Control firmware version
- ❏ Presence of franking cartridge

The self-test is performed with Epson TM-S1000 Utility. See TM-S1000 Utility User's Manual for details.

Scanner Dimensions and Weight

6.93 x 13.98 x 6.30" (H x W x D) {176 x 355 x 160 mm}

8.6 lb {3.9 kg}

Error and Information Codes

Status messages

DOCUMENT LED (Green)	Cause and Solution
Waiting for paper insertion  160 ms intervals	The scanner is waiting for a check to be inserted. Insert a sheet for scanning.
ERROR LED (Orange)	**Cause and Solution**
Waiting for paper removal  160 ms intervals	This occurs when paper is sensed by the paper length, middle, franking, or ejection sensor during initialization of the scanner. Remove paper from pocket.

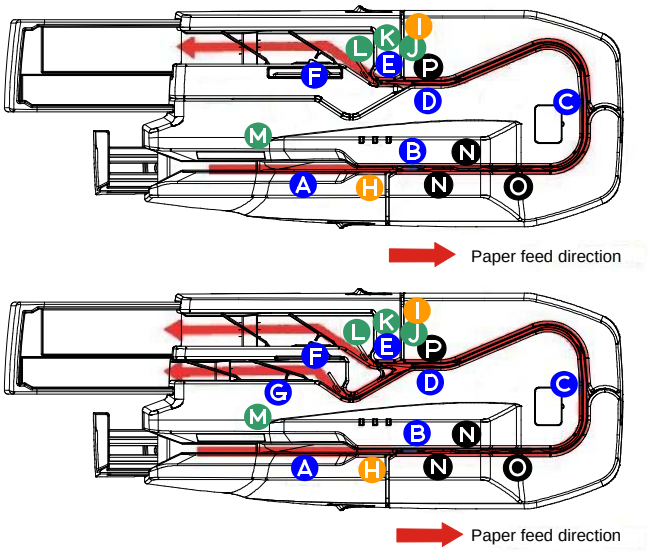
Recoverable errors

ERROR LED (Orange)	Cause and Solution
Mechanism position error Approx. 320 ms 	This occurs when the SF, franking, or pocket switch board sensor detect an error during initialization of the scanner. The scanner can recover from this error if an instruction is sent from the driver or if the scanner is turned off, the error is cleared, and the scanner is turned back on.
Paper jam error  320 ms intervals	One of 5 things has happened: 1. Paper has been detected during initialization. 2. The paper length, middle, franking, or ejection sensor detected a paper-feed error. 3. The SF failed to feed the sheet. 4. The check was too short or too long. 5. The cover was open during check feeding. Remove the jammed sheet, be sure the cover is closed, and send an instruction from the driver or turn the scanner off and back on again.
Document read error  320 ms intervals	For this error to occur, the user must select that this error stop reading under any of the following circumstances: 1. Double-feeding was detected. 2. Incorrect check paper insertion was detected. 3. The scanner detected external noise. After the cause of the error is fixed, the scanner can recover from the error if it receives an instruction from the driver, if the scanner is turned off and back on, or if the franker cover is opened and the check is removed.

Unrecoverable errors

ERROR LED (Orange)	Cause and Required Action
CPU execution error Approx. 320 ms 	The CPU is trying to execute an order to an invalid address. Turn off power as soon as possible.
Read/write or Memory overwrite error  Approx. 5120 ms	A read/write check did not end normally or an error occured during a memory overwrite. Turn off power as soon as possible.
High voltage error 	Power supply voltage is too high. Turn off power as soon as possible.
Low voltage error 	Power supply voltage is too low. Turn off power as soon as possible.
Communication device error 	An error has occured with a communication device. Turn off power as soon as possible.
Drive circuit error 	An image scanner error has occurred. Turn off power as soon as possible.

Sensors



(A) SF sensor
(B) Paper length sensor
(C) Middle sensor
(D) Franking sensor
(E) Eject sensor
(F) Main pocket nearly full sensor
(G) Sub pocket nearly full sensor
(H) Scanner cover open sensor
(I) Franker cover open sensor
(J) Franking cartridge sensor
(K) Franking cartridge position sensor
(L) Pocket switching board sensor
(M) Hopper position sensor
(N) Image scanner unit
(O) MICR unit
(P) Franking unit

Related Documentation

Epson TM-S1000 Single Feed Specification

Epson TM-S1000 Single Feed Service Manual

Epson TM-S1000 Single Feed Parts Price List

Epson TM-S1000 Single Feed Technical Reference Guide

Epson Franking Cartridge EFC-01 Specification