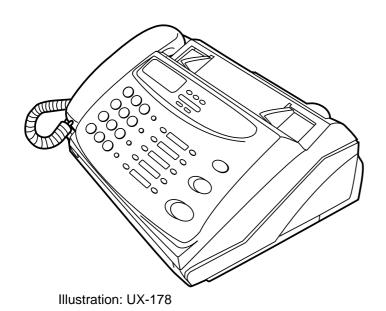
SERVICE MANUAL SHARP

No. 00ZUX178C/SME



FACSIMILE

MODEL

Non Cutter model	Cutter model
UX-108/118	UX-178/188
FO-175	FO-375

CONTENTS

CHAPTER 1. GENERAL DESCRIPTION	CHAPTER 5. CIRCUIT DESCRIPTION
[1] Specifications 1-1	[1] Circuit description 5-1
[2] Operation panel 1-2	[2] Circuit description of control PWB5-2
[3] Transmittable documents 1-3	[3] Circuit description of TEL/LIU PWB 5-8
[4] Installation 1-4	[4] Circuit description of
[5] Quick reference guide 1-7	power supply PWB5-11
CHAPTER 2. ADJUSTMENTS	[5] Circuit description of CIS unit5-11
[1] Adjustments 2-1	CHAPTER 6. CIRCUIT SCHEMATICS AND
[2] Diagnostics and service soft switch 2-2	PARTS LAYOUT
[3] Troubleshooting 2-17	[1] Control PWB circuit 6-1
[4] Error code table 2-18	[2] TEL/LIU PWB circuit 6-9
CHAPTER 3. MECHANISM BLOCKS	[3] Power supply PWB circuit 6-11
[1] General description	[4] Operation panel PWB circuit 6-13
[2] Disassembly and assembly	CHAPTER 7. OPERATION FLOWCHART
procedures 3-3	[1] Protocol 7-1
CHARTER 4 DIACRAMS	[2] Power on sequence 7-2
CHAPTER 4. DIAGRAMS	OUA DEED O OTHERO
[1] Block diagram4-1	CHAPTER 8. OTHERS
[2] Wiring diagram 4-2	[1] Service tools 8-1
[3] Point-to-point diagram 4-3	[2] IC signal name 8-3 PARTS GUIDE

Parts marked with "A" is important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

CAUTION FOR BATTERY REPLACEMENT -

(Danish) ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandoren.

(English) Caution!

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

(Finnish) VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

(French) ATTENTION

Il y a danger d'explosion s' il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rébut les batteries usagées conformément aux instructions du fabricant.

(Swedish) VARNING

Explosionsfare vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung

Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom Hersteller angegebenen Anweisungen.

CHAPTER 1. GENERAL DESCRIPTION

[1] Specifications

Automatic dialing: Rapid Key Dialing: 10 numbers

Speed Dialing: 20 numbers

Fax paper: Initial starter roll (included with fax

machine): 10 m (49 ft.) roll

Recommended replacement roll: FO-40PRw 50 m (164 ft.) roll

Automatic document feeder: 10 sheets max.

UX-108/118/FO-175: Tear off by hand Paper cutting method:

UX-178/188/FO-375: Automatic cutter

Modem speed: 9600 bps with automatic fallback to

7200, 4800, or 2400 bps

Transmission time*: Approx. 15 seconds (Sharp special mode)

Display: 16-digit LCD display

Reception modes: Auto/Manual/Answering machine

(for connecting answering machine)

Resolution: Horizontal:

8 dots/mm (203 pels/inch)

Vertical:

Standard: 3.85 lines/mm

(98 lines/inch)

Fine/Halftone: 7.7 lines/mm

(196 lines/inch)

Super fine: 15.4 lines/mm

(391 lines/inch)

Recording system: Thermal recording

Halftone (grayscale): 64 levels

Applicable telephone line: Public switched telephone network

Compatibility: ITU-T (CCITT) G3 mode

Configuration: Half-duplex, desktop transceiver

Compression scheme: MH, MR, Sharp

Scanning method: Sheet-feeder CIS (Contact Image Sensor)

Effective recording width: 210 mm (8.3") max.

Input document size: Automatic feeding:

Width — 148 to 216 mm

(5.8 to 8.5")

Length -- 140 to 279 mm

(5.5 to 11")

Manual feeding:

Width — 148 to 216 mm

(5.8 to 8.5")

Length -_ 140 to 600 mm (5.5 to 23.6")

Effective scanning width: 210 mm (8.3") max.

Contrast control: Automatic/Dark selectable

Copy function: Standard Telephone function: Standard

(cannot be used if power fails)

Power requirements: 120 V AC, 60 Hz

Operating environment: 5 to 35°C (41 to 95°F)

Humidity: Maximum: 85 % Stand-by: 6.0 W Power consumption:

Maximum: 100 W

Dimensions: Width: 308 mm (12.1")

> Depth: 256 mm (10.4") Height: 138 mm (5.4")

Weight: UX-108/118/FO-175:

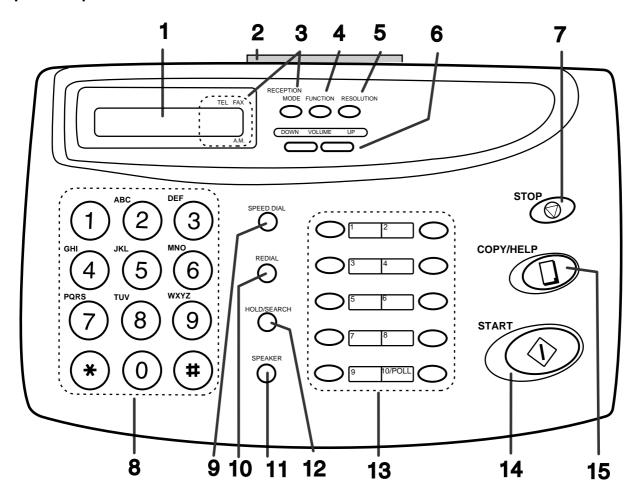
> Approx. 2.5 kg (5.5 lbs.) UX-178/UX-188/FO-375: Approx. 2.6 kg (5.7 lbs.)

Based on ITU-T (CCITT) Test Chart #1 at standard resolution in Sharp special mode, excluding time for protocol signals (i.e., ITU-T phase C

time only).

As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for procduct improvement without prior notice. The performance specifications figures indicated are nominal values of production units. There may be some deviation from these values in individual units.

[2] Operation panel



1. Display

This displays various messages and prompts during operation and programming.

2. PANEL RELEASE

Pull this release toward you to open the operation panel.

3. RECEPTION MODE key

Press this key to select the reception mode. An arrow in the display will point to the currently selected reception mode.

4. FUNCTION key

Press this key to select various special function.

5. RESOLUTION key

Press this key to adjust the resolution and contrast before sending or copying a document.

6. VOLUME keys

Press these keys to adjust the volume of the handset when the handset is lifted, the volume of the speaker when the SPEAKER key has been pressed, or the volume of the ringer at all other times.

7. STOP key

Press this key to stop operations before they are completed.

8. Number keys

Use these keys to dial numbers, and enter number and letters during number/name storing procedures.

9. SPEED DIAL key

Press this key to dial a 2-digit Speed Dial number.

10. REDIAL key

Press this key to automatically redial the last number dialed.

11. SPEAKER key

Press this key to hear the line and fax tones through the speaker when sending a document.

Note: **This is not a speakerphone.** You must pick up the handset to talk with the other party.

12. HOLD/SEARCH key

Press this key to search for an automatic dialing number, or, during a phone conversation, press this key to put the other party on hold.

13. Rapid Dial keys

Press one of these keys to dial a fax or voice number automatically. (Note that you must attach the Rapid Key labels.)

14. START key

Press this key to send or receive a document.

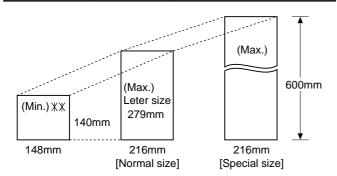
15. COPY/HELP kev

When a document is in the feeder, press this key to make a copy. At any other time, press this key to print out the Help List, a quick refernce guide to the operation of your fax.

[3] Transmittable documents

1. Document Sizes

Normal size	width	148 – 216 mm
	length	140 – 279 mm



XX Use document carrier sheet for smaller documents.

* With special sizes, only one sheet can be fed into the machine at a time. Insert next page into feeder as current page is being scanned.

2. Paper Thickness & Weight

i Normai size i	ADF 10 sheets	Thickness	2.4 x 10 ⁻³ -4.7 x 10 ⁻³ inch (0.06-0.12 mm)
		Weight	0.15 x 10 ⁻³ lbs/inch ² (52–104g/m ²) (14–28lbs)
Special size		Thickness	4.7 x 10 ⁻³ –7.9 x 10 ⁻³ inch (0.12–0.20 mm)
		Weight	$0.15 \times 10^{-3} - 0.20 \times 10^{-3} \text{ lbs/inch}^2$ (52–157 g/m ²)

3. Document Types

Normal paper

Documents handwritten in pencil (No. 2 lead or softer), fountain pen, ball-point pen, or felt-tipped pen can be transmitted.

Documents of normal contrast duplicated by a copying machine can also be transmitted.

Diazo copy (blue print)

Diazo copy documents of a normal contrast may be transmitted.

Carbon copy

A carbon copy may be transmitted if its contrast is normal.

4. Cautions on Transmitting Documents

- Documents written in yellow, greenish yellow, or light blue ink cannot be transmitted.
- Ink, glue, and correcting fluid on documents must be dry before the documents can be transmitted.
- All clips, staples and pins must be removed from documents be-fore transmission.
- Patched (taped) documents should be copied first on a copier and then the copies used for transmission.
- All documents should be fanned before insertion into the feeder to prevent possible double feeds.

5. Automatic Document Feeder Capacity

Number of pages that can be placed into the feeder at anytime is as follows:

Normal size: max. ADF 10 sheets

Special size: single sheet only (manual feed)

NOTES: • When you need to send or copy more pages than the feeder limit, place additional pages in feeder when last page in feeder is being scanned.

Place additional pages carefully and gently in feeder.
 If force is used, double-feeding or a document jam may result

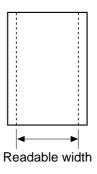
6. Readable Width & Length

The readable width and length of a document are slightly smaller than the actual document size.

Note that characters or graphics outside the effective document scanning range will not be read.

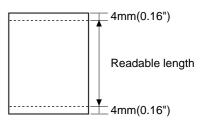
Readable width

210 mm, max.



• Readable length

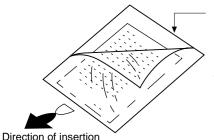
This is the length of the document sent minus 4 mm (0.16") from the top and bottom edges.



7. Use of Document Carrier Sheet

A document carrier sheet must be used for the following documents.

- Those with tears.
- Those smaller than size 140 mm (W) x 140 mm (L).
- Carbon-backed documents



Make print straight across paper E.G.

Place the document carrier in the document feeder with the clear film side down

NOTE: To transmit a carbon-backed document, insert a white sheet of paper between the carbon back of the document and the document carrier.

Those containing an easily separable writing substance (e.g., tracing paper written on with a soft, heavy lead pencil).

NOTES: • When using the document carrier, carefully read the instructions written on the back.

- If the document carrier is dirty, clean it with a soft, moist cloth, and then dry it before using for transmission.
- Do not place more than one document in the carrier at a time.

[4] Installation

1. Site selection

Take the following points into consideration when selecting a site for this model.

ENVIRONMENT

- The machine must be installed on a level surface.
- Keep the machine away from air conditioners, heaters, direct sunlight, and dust.
- Provide easy access to the front, back, and sides of the machine. In particular, keep the area in front of the machine clear, or the original document may jam as it comes out after scanning.
- The temperature should be between 5° and 35°C.
- The humidity should be between 30% and 85% (without condensation).

ELECTRICITY

120V, 60Hz, grounded (3-prong) AC outlet is required.

Caution!

- Connection to a power source other than that specified will cause damage to the equipment and is not covered under the warranty.
- If your area experiences a high incidence of lightning or power surges, we recommend that you install a surge protector for the power and telephone lines. Surge protectors can be purchased at most telephone specialty stores.

If the machine is moved from a cold to a warm place...

If the machine is moved from a cold to a warm place, it is possible that the reading glass may fog up, preventing proper scanning of documents for transmission. To remove the fog, turn on the power and wait approximately 2 hours before using the machine.

TELEPHONE JACK

A standard RJ11C telephone jack must be located near the machine. This is the telephone jack commonly used in most homes and offices.

 Plugging the fax machine into a jack which is not an RJ11C jack may result in damage to the machine or your telephone system. If you do not know what kind of jack you have, or needed to have one installed, contact the telephone company.

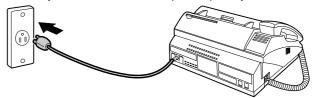
2. Connections

- ① Connect the handset as shown and place it on the handset rest.
 - Make sure the handset cord goes into the unmarked jack on the side of the machine!
 - Use the handset to make ordinary phone calls, or to transmit and receive documents manually.

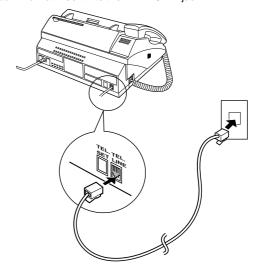


- ② Plug the power cord into a 120 V, 60 Hz, grounded (3-prong) AC outlet.
 - Caution: Do not plug the power cord into any other kind of outlet.
 This will damage the machine and is not covered under the warranty.
 - The machine does not have a power on/off switch, so the power is turned on and off by simply plugging or unplugging the power cord.

Note: If your area experiences a high incidence of lightning or power surges, we recommend that you install surge protectors for the power and telephone lines. Surge protectors can be purchased from your dealer or at most telephone specialty stores.

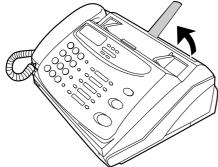


- ③ Insert one end of the telephone line cord into the "TEL. LINE" jack. Insert the other end into a standard (RJ11C) single-line telephone wall jack.
 - Be sure to insert the telephone line cord into the "TEL. LINE" jack. Do not insert into the "TEL. SET" jack.



3. Original document support

① Rotate the original document support so that it points straight out.

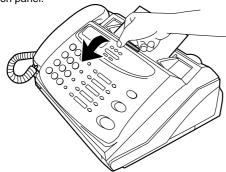


4. Loading the fax paper

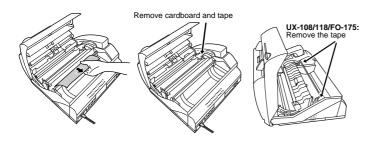
- Your fax machine prints incoming faxes on a special kind of paper called thermal paper.
- The fax's print head creates text and images by applying heat to the thermal paper.

Note: The power must be on (plug in the power cord) when loading fax paper in the fax machine.

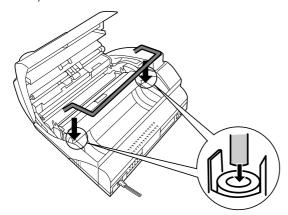
Pull the release marked PANEL RELEASE toward you and open the operation panel.



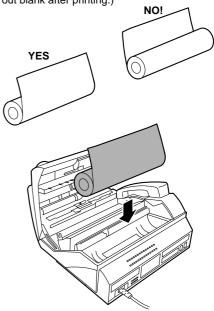
2 Remove the packing paper from the paper compartment.



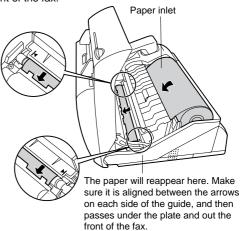
③ Make sure the ends of the guide wire are inserted in the holes. (If the guide wire is not inserted correctly, out-of-paper detection will not be possible.).



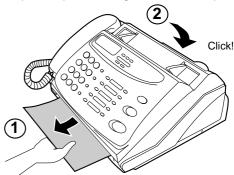
- 4 Unwrap the roll of fax paper and place it in the compartment.
 - Important: The roll must be placed so that the leading edge of the paper unrolls as shown. (The paper is only coated on one side for printing. If the roll is placed backwards, the paper will come out blank after printing.)



⑤ Insert the leading edge of the paper into the paper inlet. Continue to push the paper through the inlet until it comes out of the opening in the front of the fax.



6 Close the operation panel, making sure it clicks into place.



UX-108/118/FO-175: A short length of the fax paper will feed out. Grasp the paper by the edge and pull upward to tear it off.

UX-178/UX-188/FO-375: A short length of the fax paper will feed out and be cut off. (If this doesn't happen, repeat the loading procedure.)

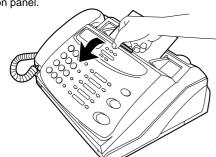
Note: The UX-178/UX-188/FO-375 has a built-in anti-curl mechanism that will help to reduce paper curling problems. The anti-curl mechanism is more effective at the beginning of the paper roll and less effective towards the end.

4. Clearing a jammed document

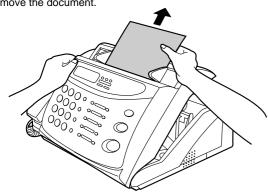
If the original document doesn't feed properly during transmission or copying, or DOCUMENT JAMMED appears in the display, first try pressing the **START** key. If the document doesn't feed out, open the operation panel and remove it.

Important: Do not try to remove a document without opening the operation panel. This may damage the feeder mechanism.

① Pull the release marked PANEL RELEASE toward you and open the operation panel.

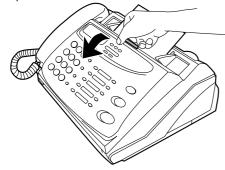


2 Remove the document.

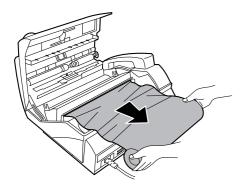


5. Clearing jammed fax paper

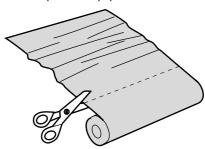
① Pull the release marked PANEL RELEASE toward you and open the operation panel.



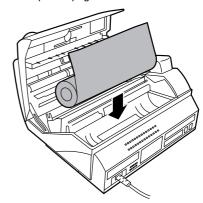
- 2 Remove the paper roll.
 - UX-178/188/FO-375: If any pieces of paper are stuck in the cutter, remove them with caution.
 - UX-178/188/FO-375: Press the START key to reset the cutter.



3 Cut off the wrinkled part of the paper.

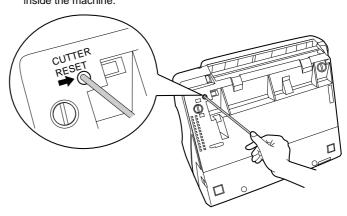


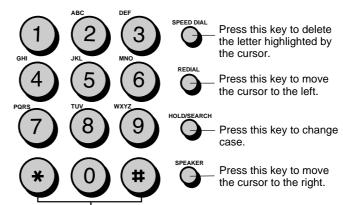
- 4 Reload the paper.
 - Jammed fax paper is often caused by improper loading. Be sure to carefully follow the instructions for paper loading given in "Loading the Fax Paper" in page 1-5.



⑤ If the display still shows PAPER JAMMED (UX-178/188/FO-375 only)

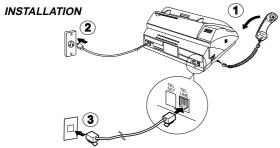
If the display still shows PAPER JAMMED after you press the START key in Step 2 above, the cutter is still engaged in the cutting position. To open the cutter, turn the fax up on its rear end and insert any long, rod-like object with a flat or blunt end into the hole marked CUTTER RESET. Continue to push the rod in until you feel it move a lever inside the machine.





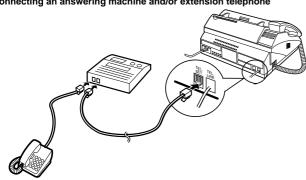
Press either key repeatedly to select one of the following symbols.

[5] Quick reference guide



- 1. Connect the handset as shown.
- 2. Plug the power cord into a grounded, 120 V outlet.
- Plug one end of the telephone line into the "TEL. LINE" jack on the rear of the fax, and the other end into your telephone wall jack.

Connecting an answering machine and/or extension telephone



- Remove the seal covering the "TEL. SET" jack on the rear of the fax. Connect an extension telephone or answering machine to the "TEL. SET" jack.
- 2. If desired, connect an extension phone to the answering machine

ENTERING YOUR NAME AND NUMBER

1. Press: 6

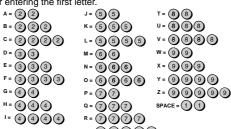


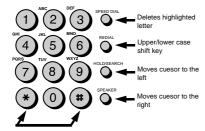


Display shows: OWN NUMBER SET

2. Press: START

- 3. Enter your fax number (max. of 20 digits) by pressing the number keys.
- If you make a mistake, press the HOLD/SEARCH key to move the cursor back to the mistake, then enter the correct number or letter.
- 4. Press: STARL
- Enter your name by pressing the appropriate number keys as shown below.
- To enter two letters in succession that require the same key, press the SPEAKER key after entering the first letter.





Press either key one or more times to select

6. When finished, press:



SETTING THE DATE AND TIME

Press: (3) (*) (*) (*)







Press the **START** key:



Enter two digits for the Month (01 through 12).

Enter two digits for the Day (01 through 31).

Enter four digits for the Year (EX: 1998).

Enter two digits for the Hour (01 through 12).

Enter two digits for the Minute (00 through 59).

Press the "×" key for A.M. or the "#" key for P.M. When finished, press: START STOP





STORING AND CLEARING NUMBERS FOR AUTO DIALING

1. Press: (3) #





Display shows: FAX/TEL # MODE

- 2. Press "1" to store a number or "2" to clear a number.
- 3. Enter a 2-digit Speed Dial number (from "01" to "10" for Rapid Key Dialing, or 11 to 30 for Speed Dialing). (If you are clearing a number, go to Step 7.)
- 4. Enter the full telephone/fax number.
- 6. Enter the name of the location by pressing number keys (max. of 20 characters). (Refer to the letter entry table in ENTERING YOUR NAME AND
- 7. Press:

SENDING DOCUMENTS

Place your document (up to 10 pages) face down in the document feeder.



Normal Dialing

1. Lift the handset or press



- 2. Dial the fax number.
- 3. Wait for the reception tone (if a person answers, ask them to press their Start
- 4. Press: (A)

Press the appropriate Rapid Key. Transmission will begin automatically.

Speed Dialing

1. Press:



2. Enter 2-digit Speed Dial number.

3. Press:

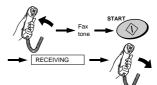


RECEIVING DOCUMENTS

FEB 1 1998

FAX mode: The fax automatically answers on four rings and receives the incoming document.

TEL mode:



A.M. mode: Select this mode when an answering machine is connected to the fax and the answering machine is turned on.