

muratec™

a product of **murata technology**

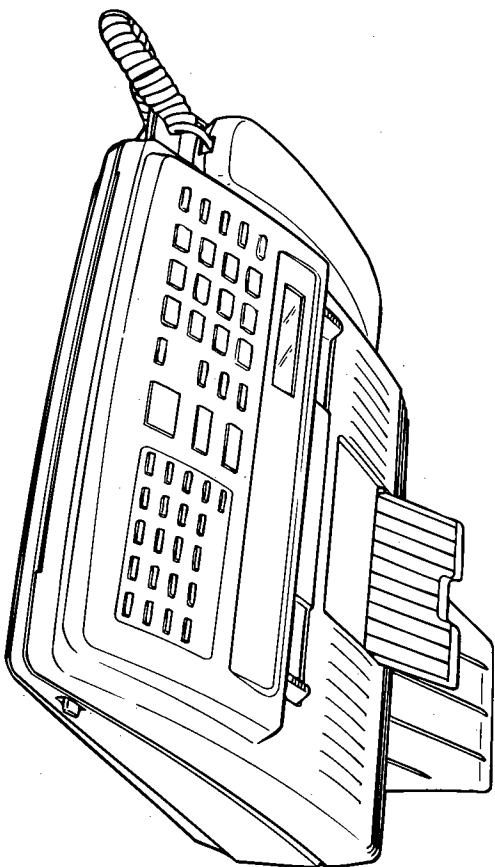
M1020 Operating Instructions

Table of Contents

Your Fax	2	Delayed Broadcast	18
Tips for Use	2	Relay Broadcast Initiation	19
Machine Layout	3	Error Correction Mode	20
Keypad Layout	4	Making Copies	21
Specifications	5	Autodialer	22
Setting Up Your Fax	6	One-Touch Keys	22
Phone and Electrical Requirements	6	Entering a one-touch number	22
Quick Set-up	6	Erasing a one-touch number	23
Attaching a Second Telephone or Answering Machine	7	Printing a one-touch list	23
Paper Roll Installation	8	Speed-Dial Numbers	23
Telephone Features	9	Entering a speed-dial number	23
User Settings	10	Erasing a speed-dial number	24
Set Date and Time	10	Dialing Options	24
Enter Your TTI	10	Special Communication Features	25
Set Fax Resolution	11	Set Fax Report	25
Set Number of Rings	11	Set Activity Journal	25
Block Junk Fax	11	Polling	26
Set Silent Mode	12	Call Request	26
Print Settings	12	Custom Settings	27
Clear All Settings	12	Add to Document Length for TTI	27
Reception	13	Unlimited Page Length: Transmission	27
Answering Calls Manually	13	Set Scanner Width	27
Tel Ready	13	Silent Detect	28
Fax Ready	13	Set Number of Rings	28
Ans Ready	14	Problem Solving	29
T/F Ready	14	Document Jams	29
"Being Called" Display	15	Troubleshooting	30
Low Paper Warning	15	Caring For Your Fax	32
Out-of-Paper Reception	15	Glossary	34
Sending a Fax	16	Common Questions	38
Inserting Pages	16	FCC/DOC Information	41
Resolution	16	Limited Warranty	43
Contrast	16	Index	44
Dialing Pauses	16	©Copyright 1993 by Murata/Muratec. All rights reserved.	
Transmission	17		
Memory Transmission	17		
Broadcast	17		
Delayed Transmission	18		

Your Fax

Your Muratec fax is a powerful addition to your small office. You now have fax, phone, and copier capabilities in one easy-to-use machine. Transmit business correspondence to your clients, fax catalog orders, or send resumes with the touch of a key. The copier feature lets you copy documents without making an extra trip to the copy machine. Communication was never so fast and easy.



Tips for Use

To keep your fax in perfect working order, be sure to install it away from:

- **Dust**—Dust build-up can damage your fax.
- **Splashes**—Keep your fax away from sinks, water fountains, and other sources of splash and spray.
- **Vibration**—Keep your fax on a level, vibration-free surface to improve performance and system life.
- **Overheating**—Allow at least 12 inches of clearance around your fax machine. Don't install your fax in direct sunlight and never cover your fax with a cloth or dust cover.

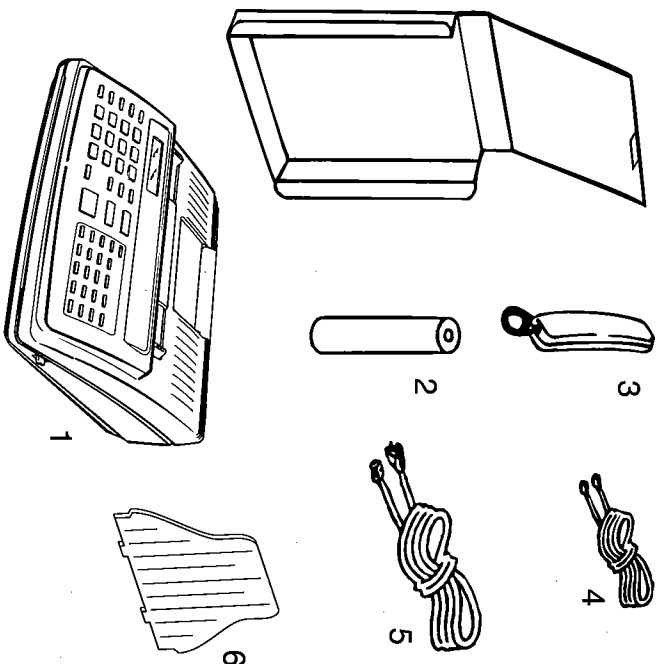
See page 40 for more information on how a fax machine works.

Unpacking

As you unpack your fax, check for the following items:

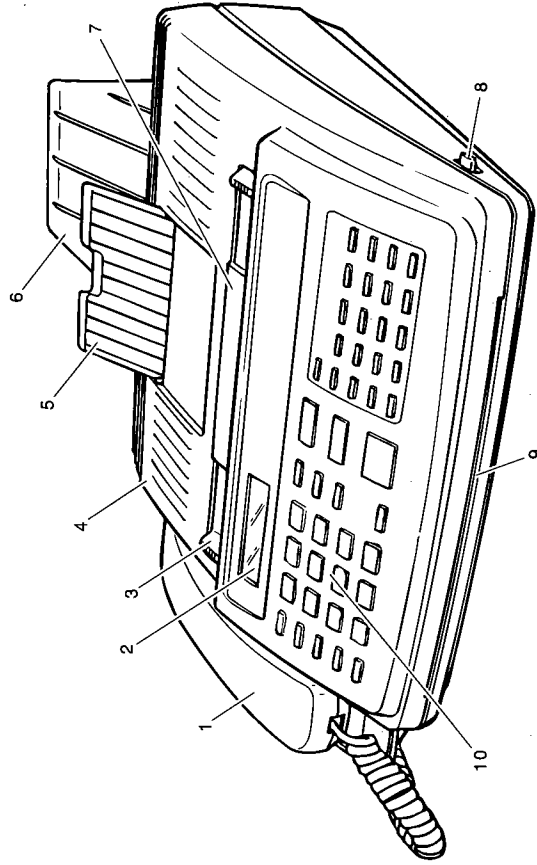
1. Fax machine
2. Starter paper roll
3. Handset and curl cord
4. Telephone line cord
5. Power cord
6. Copy tray

Be sure to save the box and packing materials for reshipment.

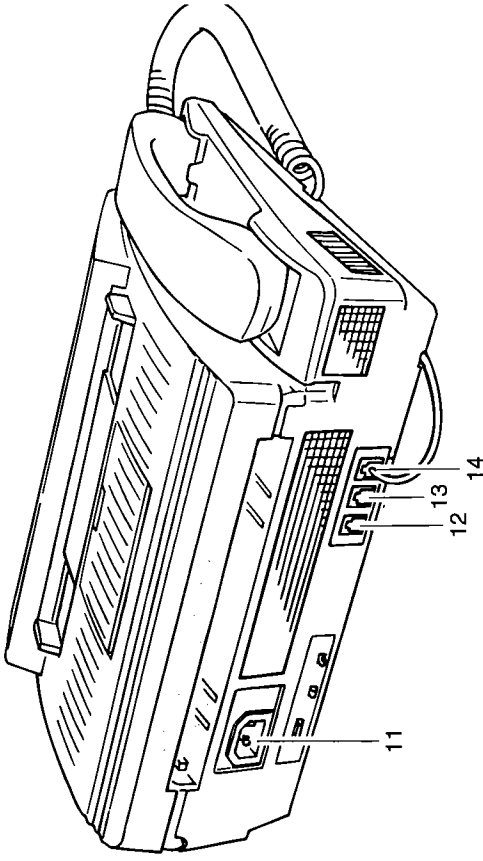


Machine Layout

1. **Handset**—Used for voice communication.
2. **LCD**—A one-line, 16-character display that shows the system status and fax operation.
3. **Document Guides**—Adjust to align your document in the feeder.
4. **Top Cover**—Allows access to paper jams within your fax.
5. **Document Hopper**—Supports documents to be fed into the fax.



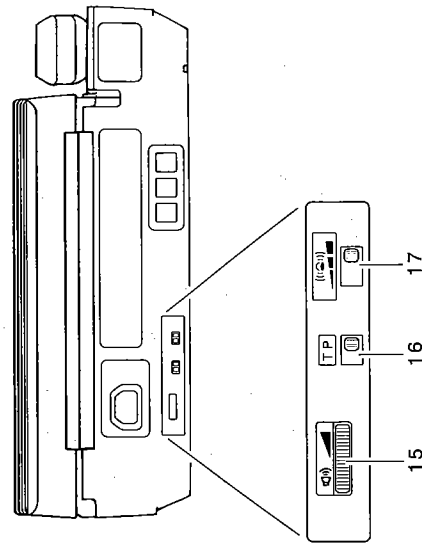
6. **Paper Tray**—Holds received faxes or copies.
7. **Document Feeder**—Holds up to 10 pages for transmission or copying.
8. **Top Cover Release**—Press to open the top cover of your fax.
9. **Original Document Exit**—Original pages exit from this slot.
10. **Keypad**—Use to program your fax or perform fax operations.



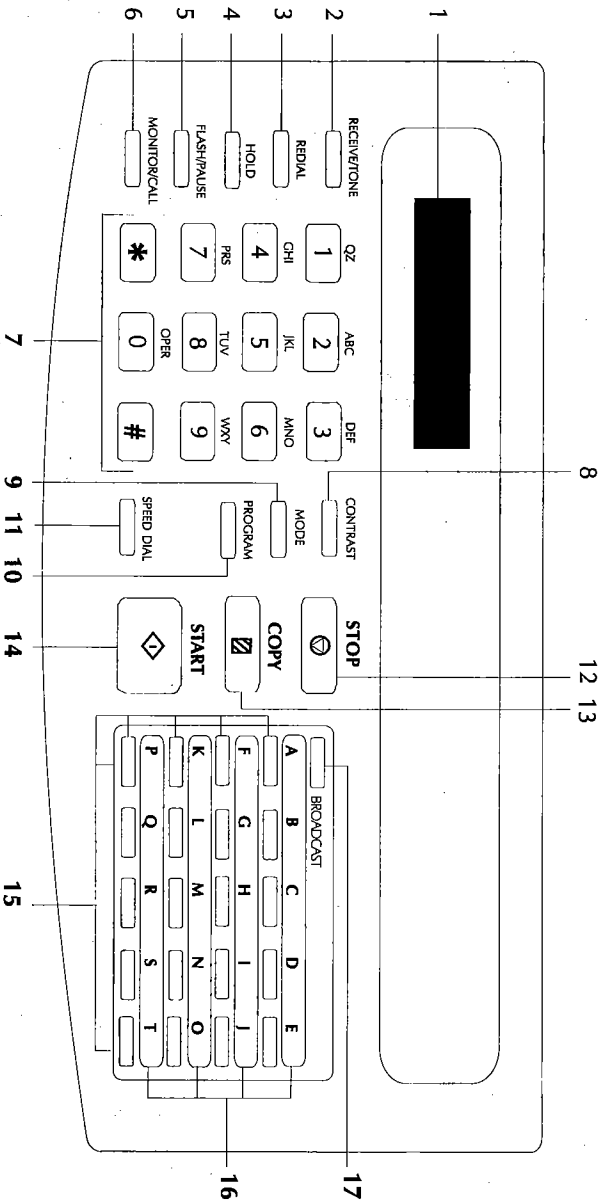
11. **AC Plug**—Connection for the power supply cord.
12. **Line**—A standard RJ-11C modular jack for telephone line connection.
13. **Phone2**—An RJ-11C modular jack for optional use of your telephone answering machine, cordless telephone, or other telephone device.
14. **Handset Plug**—Your handset cord is plugged in here.

15. **Monitor Volume Control**—Controls the volume of your fax's monitor speaker.
16. **Tone/Rotary Setting**—Sets the type dialing signals used by your telephone system.

17. **Ringer Volume Control**—Allows you to select from three ringer volume settings: high, medium, and off.



Keypad Layout



1. **LCD**—A one-line, 16-character display that shows the system status and fax operation.
2. **Receive/Tone**—Press to choose manual or automatic reception. Can be used for special dialing requirements on some rotary telephone systems.
3. **Redial**—Dials the last telephone number entered.
4. **Hold**—Press to place a caller on hold, or to return to the conversation.
5. **Flash/Pause**—Inserts hyphens and special dialing symbols into the telephone numbers you enter.
6. **Monitor/Call**—Press for hands-free dialing. During transmission, pressing this key activates call request (see page 26).
7. **Numeric Keypad**—Used to enter numbers for fax transmissions and customizing features.
8. **Contrast**—Press to adjust the darkness or lightness of your document.
9. **Mode**—Press to adjust the scanning resolution when transmitting or copying a document. Also used in programming your fax.
10. **Program**—Press to scroll through features and command options.
11. **Speed-Dial**—Press for speed-dial transmissions.
12. **Stop**—Stops the current operation or discharges a document from the document feeder. Stops alarms.
13. **Copy**—Press to copy a document.
14. **Start**—Starts a manual transmission or reception.
15. **One-Touch Keys**—Used for one-touch dialing and when entering TTI information and other alphabetic characters.
16. **One-Touch Labels**—Pencil-in labels for your one touch keys.
17. **Broadcast**—Used to send a fax from memory, or to more than one location at a time.

Specifications

Type: High-speed facsimile transmitter and receiver for home and office use.

Phone Line: Public Switched Telephone Network (PSTN) or equivalent.

Modem: 9600 bps with fallback to 7200, 4800, and 2400 bps.

Compatibility: CCITT Group 3.

Transmission Speed: 12 seconds per page.*

Document Feeder: 10 pages.

Memory: 28 pages**.

Resolution: Normal 203 H x 98 V lpi, Fine 203 H x 196 V lpi and Superfine 203 H x 392 V lpi.

Original Document Size: 8.5 (W) x 15.7 (L) inches maximum and 4.8 (W) x 4.0 (L) inches minimum.

Dimensions: 14.2 (W) x 18.8 (D) x 4.6 (H) inches.

Grayscale: 16 levels.

Printing Width: 8.5 inches.

Scanning Width: 8.5 inches.

Scanning Method: Solid-state CCD.

Recording Paper: 8.5 inches x 164 feet.

Power: 120 V \pm 10%, 50/60 Hz.

Weight: 11.4 lbs.

* Based on transmission of CCITT Test Chart 1 to a Muratec fax. Your transmission times will vary, but your fax will always provide the fastest transmission speeds possible under CCITT 9600 bps guidelines and phone line conditions.

** Based on CCITT Test Chart 1 stored at normal resolution. The number of pages stored in memory will vary based on the size of your documents and on the complexity of images on the pages scanned.

Do You Have A Comment?

Your comments and suggestions regarding this manual are welcome. Fax your comments to Muratec Marketing Department, (214) 403-3465.

Setting Up Your Fax

Phone and Electrical Requirements

Don't:

- Don't connect to a multi-line (PBX) office phone system.
- Don't plug your fax into an electrical outlet controlled with a wall switch; you'll risk missing fax messages.

Don't plug your fax into the same outlet as a large appliance such as a refrigerator or air conditioner. High-consumption appliances can cause electrical "draw-downs"—temporary drops in power available for other equipment on the circuit—and could damage your fax.

Do:

- Use an electrical surge protector. This will shield your fax from high-voltage electrical surges that may damage your fax. Many surge protectors guard both telephone and electrical lines.
- Plug your fax into a standard three-pronged 120 VAC electrical outlet.

Call-waiting signals

Fax transmission and reception can be stopped by telephone call-waiting signals. If you have requested call-waiting service for the line to which you will connect your unit, you may experience interruptions of facsimile service.

Voltage requirements and power consumption

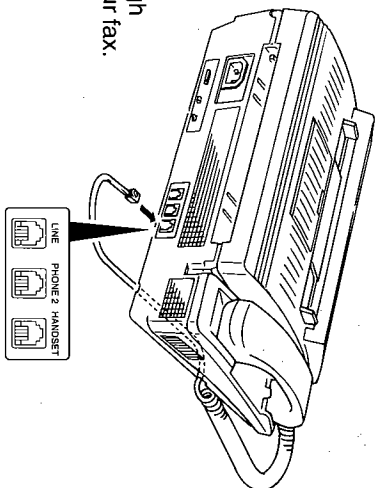
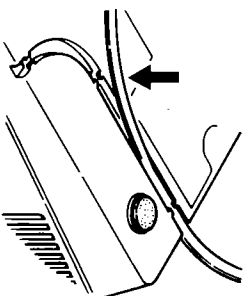
Voltage Requirements:	120 VAC \pm 10, 50-60 Hz		
Power Consumption:	Standby	8W	Transmission 18W
	Reception	26W	Maximum 100W

Leave your fax plugged in so you never miss an important fax. In standby, your fax uses about the same amount of electricity as a clock radio.

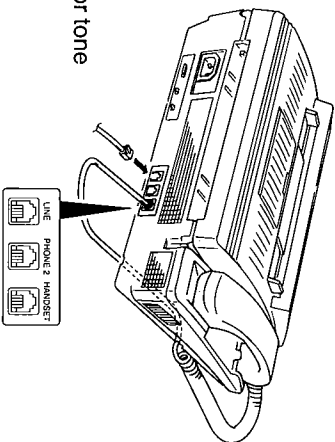
Quick Set-up

First, select a place within ten feet of a standard three-pronged, 120 VAC electrical outlet and a standard modular telephone jack (an RJ-11C).

1. Press the top cover release (see page 8) and remove the plastic strip in the document feeder. Close the top cover firmly.
2. Plug the loose end of the handset cord into the **Handset** connection on the back of your fax.
3. Thread the handset cord through the groove on the bottom of your fax.

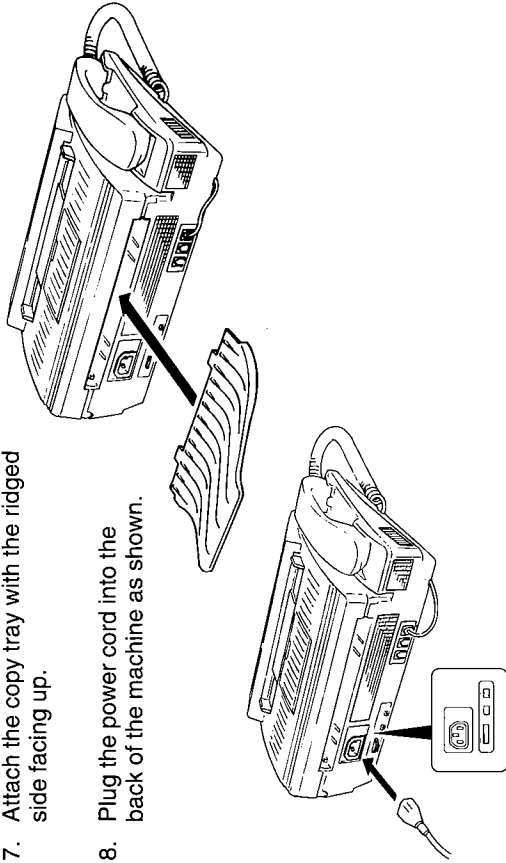


4. Place the telephone handset on the cradle. To connect an answering machine or second telephone, see page 7.
5. Plug one end of the uncurled telephone line into the **Line connector** on the back of the fax. Plug the other end into a standard telephone wall jack.
6. Check the **Tone/Rotary** setting on the back of your fax. Select **T** for tone or **P** for rotary or pulse dialing.



7. Attach the copy tray with the ridged side facing up.

8. Plug the power cord into the back of the machine as shown.



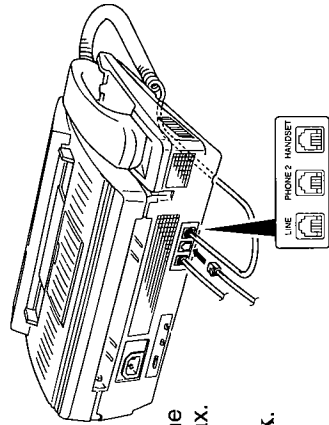
9. Plug the other end of the power cord into a standard three-pronged 120 VAC electrical wall outlet.

Adjusting monitor volume

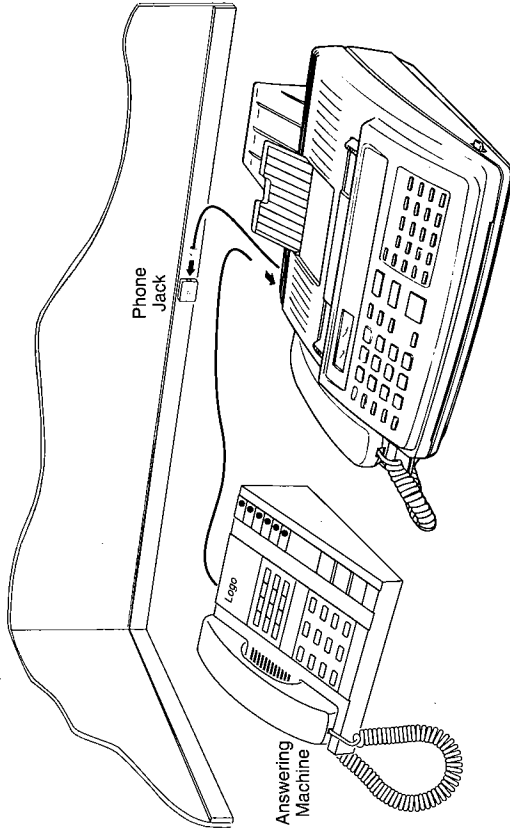
1. Press **Monitor/Call**. You should hear a dial tone. If not, go back and re-check your connections so far.
2. Adjust the volume with the monitor speaker dial on the back of your fax. Press **Monitor/Call** once more to turn the monitor off.

Attaching a Second Telephone or Answering Machine

1. Install your fax.
2. Plug the line of your second telephone or answering machine into the **Phone 2** jack on the back of your fax. **Do not plug your second phone or answering machine into the wall jack.**



In order for your fax and your answering machine to work together, the answering machine must be connected to the fax's **Phone2** jack as shown.



3. Plug your answering machine's power cord into a standard electrical outlet.

Using an Answering Machine With Your Fax

1. Connect your answering machine as described (left).
2. Install paper in your fax (see page 8).
3. Press **ReceiverTone** until "Ans Ready" is displayed.

Ans Ready	12:45
-----------	-------
4. Set your answering machine to answer calls after one or two rings. Consult your answering machine's operator manual for instructions. Set your fax to answer after six rings (see page 11).
6. Create an outgoing message for your answering machine. (See page 8.)

Modifying Your Outgoing Message

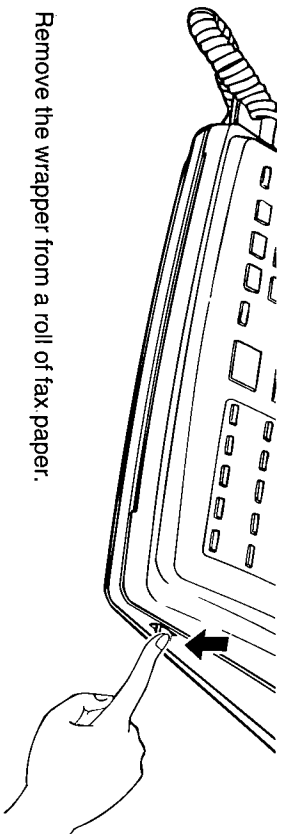
Here's a suggested outgoing message for your answering machine that you can modify to suit your needs:

*You have reached (your name or telephone number).
To leave a voice message, wait for the beep. To send
a fax now, press Start. Or leave a voice message then
press Start to send a fax. Thanks!*

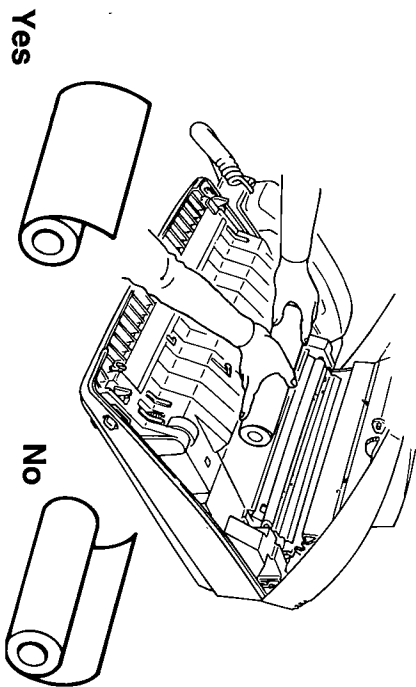
For best results, keep your message under ten seconds.

Paper Roll Installation

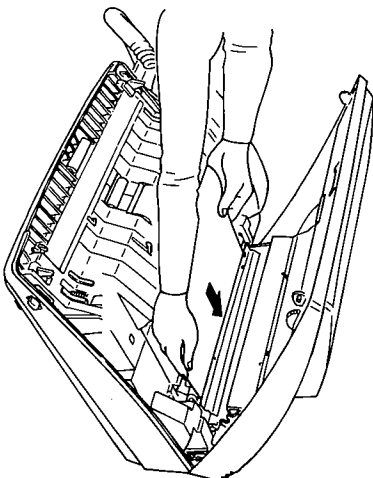
1. Press down on the cover release as shown. The cover will flip up.



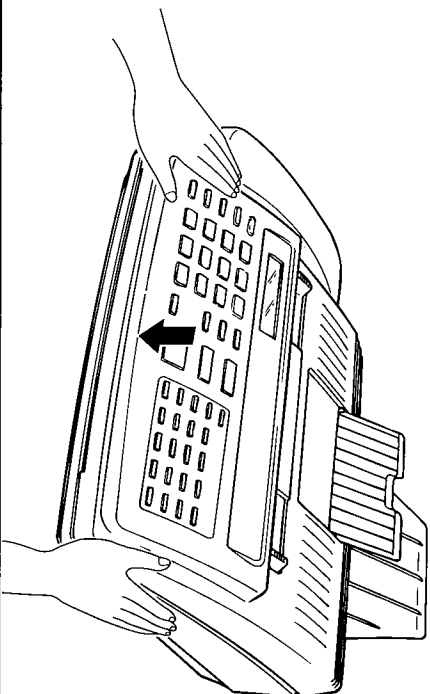
2. Remove the wrapper from a roll of fax paper.
3. Place the roll in the paper cradle so the paper unrolls **over** the top of the roll and out the back of the machine.



4. Pull the edge of the paper out a few inches.



5. Close the cover of your machine. The machine's cutter will automatically cut the page.



Muratec Fax Paper

For the best results and the longest life from your fax machine, use Muratec thermal recording paper. Ask for Muratec thermal paper when you purchase paper at your local facsimile dealer, or call 1-800-292-2492 for paper and other supplies.

Telephone Features

Your fax is a personal communications center designed to satisfy your fax and copier needs. You'll soon find that it is also a full-featured phone, equipped with many handy conveniences.

You can use the phone to make voice or fax calls. When calling a remote fax with the handset, wait until you hear fax reception tones, then press **Start** to transmit the document in the feeder.

Your fax machine's phone features include:

Redial

Pressing **Redial** automatically redials the last number you dialed.

If your fax encounters a busy signal when dialing a number you have entered with a one-touch key, a speed-dial number, or on the numeric keypad, your fax will automatically redial six times, at three-minute intervals.

If you encounter a busy signal on a call you have entered manually through the handset or by using the **Monitor/Call** feature, you will need to redial manually by pressing this key.

Hold

Put your callers on hold at any time during your telephone conversation by pressing **Hold** and hanging up the handset. To return to your call, pick up the handset and press **Hold** again.

Hold

Monitor/Call

Press **Monitor/Call** to get a dial tone for hands-free dialing. Dial the telephone number using the numeric keypad, a one-touch key, or a speed-dial number. If you're using the numeric keypad, press **Start** when the remote fax answers. When you use one-touch and speed-dial keys, your fax will attempt to transmit automatically; there's no need to press **Start**.

Telephone

Telephone Call Timer

You can monitor your outgoing long-distance usage with the fax's telephone call timer.

Tel 06:15

When you make a telephone call with the handset or the monitor, your fax's LCD displays in minutes and seconds the length of your phone call. In the example above, six minutes and 15 seconds has elapsed. If you're concerned about long distance usage on a particular call or calls, this can prove handy.

User Settings

You can enter the following settings at any time and in any order you want. However, you'll want to set your fax's date, time and Transmit Terminal Identifier (TTI) right away so that you can begin fax communications immediately. The other settings can be entered or ignored, depending on your needs.

Set Date and Time

Your fax's clock is protected from power failures for several days by an internal battery. The LCD displays time in 24-hour format. Two p.m., for instance, would be entered 1400.

To enter the date and time into your fax:

1. Press **Program** four times. Press **Mode**.

'93 05 19 11:22

2. Enter the date and time using the numeric keypad. If you want to change just one number in the date or time, use the one-touch **A** to move backward in the sequence. Use one-touch **B** to move forward.

'93 05 19 12:22

3. Press **Mode** to save, or press **Stop** to return to standby.

Fax Ready 12:22

Enter Your TTI

Your Subscriber ID and TTI appear on each page you send. The Subscriber ID is your fax's telephone number. The TTI can be your name or business name and can be up to 25 characters long.

In the United States, the Telephone Consumer Protection Act of 1991 requires that fax users add their name and telephone number to any fax message. Your Muratec fax enables you to satisfy these requirements.

Note: To enter or change just your telephone number, skip step 2.

To enter your name and telephone number:

1. Press **Program** five times. Press **Mode** twice.

ABCDEF 00

Your fax will display a group of characters. Press the one-touch **C** and another group will appear. Press **D** and the previous group will appear.

When the letter, number, or symbol you want appears on the display, use the one-touch **A** to move left and one-touch **B** to move right. Press **Mode** to select the character highlighted. If you make a mistake, pressing **Contrast** deletes the character.

2. Enter your name or your business name, up to 25 characters.

abcdef 02 Ka

The two-digit number displayed indicates the number of characters you have entered into your TTI so far.

3. Press **Program** to store your TTI. Your fax is now ready for your fax number.

Set Fax #?

4. Press **Mode**.

00

5. Enter your fax number using the numeric keypad. Press **Hold** to enter a hyphen and make your number easier to read. Enter up to 20 characters.

08 214-403-

6. Press **Program** then **Stop** to return to standby.

Fax Ready 11:28

Set Fax Resolution

Your fax offers two standard transmission resolutions, so every document arrives clear and sharp. With this option, you tell your fax which resolution—normal or fine—you use most often. See page 16 for more information on resolution.

1. Press **Program** six times. Press **Mode**.

Fax Resol. Fine

2. Press **Program** to choose Normal or Fine resolution.

Fax Resol. Norm

3. Press **Mode** to select your choice.

Fax Ready 11:30

Set Number of Rings

You can determine the number of times your fax will ring before it responds to a call. With this setting, you can choose between two and six rings.

1. Press **Program** eight times. Press **Mode**.

of Rings = 02

2. Press **Program** until the desired number of rings is displayed.

of Rings = 06

3. Press **Mode** to select your choice.

Fax Ready 11:35

If you prefer a different number of rings, your fax can accommodate you through a special software setting. To select from one to 15 rings, see page 28.

Block Junk Fax

Block junk fax guards your fax from unauthorized facsimile transmissions and eliminates "junk fax." Review how this feature works, however, to determine if it is right for you.

When you activate this feature, your fax reads and compares the last four digits of the remote fax's Subscriber ID to every entry in your autodialer.

If the last four digits of the remote Subscriber ID match those of any number in your autodialer, the call is accepted. If not, the call is disconnected.

Before activating this feature, consider:

- The faxes you communicate with must have their telephone numbers programmed as their Subscriber IDs. Not all fax owners enter this information.
- Some fax machines do not have a Subscriber ID. If your fax is set to block junk fax, your fax will not accept faxes from these units.
- If your long-distance service requires dialing access codes, do not use block junk fax. Any code included at the end of a number in your directory can block calls if block junk fax is activated.

1. Press **Program** nine times. Press **Mode**.

Block Junk OFF

2. Press **Program** to select between ON or OFF.

Block Junk ON

3. Press **Mode** to select the displayed setting.

Fax Ready 11:31

Set Silent Mode

You can turn off the beep that your fax makes after a transmitting, receiving, or making a copy. To change the silent mode setting:

1. Press **Program** 10 times. Press **Mode**.
2. Press **Program** to turn Silent Mode on or off.
3. Press **Mode** to confirm your choice.
4. Turn off the ringer volume at the back of your machine.

Print Settings

After customizing your user settings, print a list of settings for reference.

1. Press **Program**.
2. Press **Mode** twice.

Clear All Settings

This command **deletes all user information** from your fax and returns all dip switches (software settings) to their factory positions.

Do not use this command unless you want to delete all user information—TTI, Subscriber ID, speed-dial numbers, one-touch keys, journal information, and all other stored information—from your fax.

1. Press **Program**, *, **3**. Your fax offers a safeguard to protect your settings.
2. Press **Mode** to clear your settings, or **Stop** to return to standby.

Reception

Your fax offers several ways to respond to incoming calls:

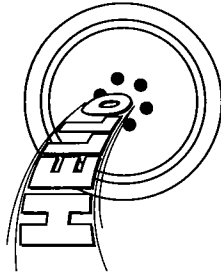
Reception Option	Operation
Tel Ready 12:45	Your fax ignores all calls. You answer each call manually using the fax's telephone handset or another telephone in your home or office.
Fax Ready 12:45	Your fax answers all calls automatically and begins fax reception.
Ans Ready 12:45	Your fax supports an answering device or second telephone attached to its Phone2 jack. In Ans Ready, the fax listens silently and comes onto the line only when it detects a remote fax machine attempting transmission.
T/F Ready 12:45	Your fax answers all calls automatically and alerts you with a special ring when you receive a voice call.

These options are more fully explored on the following pages.

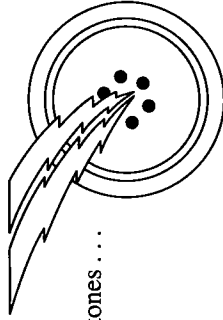
Answering calls manually—for all reception modes

In any reception mode, you can always answer calls manually:

1. Pick up the fax handset.



If the call is from a person . . . talk as you would normally.



2. If you hear distinctive fax tones . . . Press **Start**. Hang up. Reception will begin.

Tel Ready

Tel Ready is ideal if you have one telephone line that serves double duty for fax and business use. To select Tel Ready, press **Receive/Tone** until "Tel Ready" is displayed. In Tel Ready, your fax will never answer calls automatically. You must answer each call and handle it as described above.

Fax Ready

Use Fax Ready if you have a dedicated line for the fax and receive voice calls on a separate line. To change your reception mode to Fax Ready, simply press **Receive/Tone** until "Fax Ready" is displayed. In Fax Ready, your fax answers all calls after a number of rings you determine, exchanges standard fax tones with the transmitting unit, and then attempts reception.

Ans Ready

Choose the Ans Ready option if you are using an answering machine or a second telephone with your fax:

Using an answering machine with your fax

In Ans Ready, your fax listens silently while your answering machine's outgoing message plays. Callers making voice calls won't know the fax is there.

If your fax detects standard fax transmission tones at any time, it will disconnect your answering machine and begin reception.

Improper answering machine installation will interfere with fax operation, so see page 7-8 before proceeding.

To put your fax in Ans Ready:

1. Press **Receiver/Tone** until "Ans Ready" is displayed.
2. Modify your outgoing message (see page 8).

Using a second phone with your fax

Your Muratec fax enables you to enjoy the mobility offered by your cordless phone with the convenience of fax communication. To attach a cordless phone (or any other second telephone) to your fax:

1. Attach the phone cord from the second phone to the **Phone2** jack on the back of your fax.
2. Press **Receiver/Tone** until "Ans Ready" is displayed.

You can then conduct normal phone conversations on your second telephone. If you receive a fax call while on the second phone, simply hang up. Your fax will automatically attempt reception.

In Ans Ready, your fax always assumes a fax may be coming in. Each time you hang up, your fax listens for the tones signalling an incoming fax, so you may have to wait momentarily to dial out again. If your fax hears no tones, it will free the line. You may occasionally notice that when you answer the second telephone, the line will immediately go dead.

This means your fax recognized fax tones when you answered the phone and is now receiving the fax.

T/F Ready

T/F (Tel/Fax) Ready is ideal if you do not have a dedicated fax line and you receive an equal mix of fax and voice calls. In T/F Ready, your fax:

- Begins reception automatically on incoming fax calls
- Sounds a special ring for about 30 seconds for voice calls.

In T/F Ready, you can still answer calls manually before your fax answers (see page 13). To use the T/F Ready mode:

1. Press **Receiver/Tone** until "T/F Ready" is displayed.
2. Let your fax answer all your calls. Pick up the fax handset only when you hear the special ring telling you a person is calling.

Silent fax operation in T/F Ready

Use silent T/F Ready if you want your fax to receive faxes silently and alert you only when there's a voice caller. You won't hear the initial ring your phone makes. If a caller sends a fax, your fax will receive it silently unless there is an error.

If a person wants to speak with you, however, the fax sounds the special ring for about 30 seconds. If you hear this special ring, you know it's a voice caller.

1. Press **Receiver/Tone** until "T/F Ready" is displayed.
2. Turn off the ringer volume at the back of your machine (see page 3).
Note: Turning off your fax machine's ringer will not turn off the ringers on other telephones in your house or office. Other phones will not distinguish between fax and voice calls.

What if I answer a fax call in another room?

1. Put the telephone handset down, but don't hang up.
2. Walk to the fax machine. Pick up the fax handset and press **Start**.
4. Hang up the fax handset and the telephone handset.

You have about 10 seconds to walk to your fax, pick up the handset and press **Start** before the remote machine disconnects.

"Being Called" Display

When your fax machine answers a call, you will see the following display:

Being Called

If the call is from a fax, the LCD will display the remote fax's phone number.

2144033465

The next message tells you that you're receiving a fax message and shows the resolution at which it is being received.

Receive

Norm

Low Paper Warning

When your fax is almost out of paper, a red or black low-paper line will appear on the underside of the page as it feeds out of the machine. This means it's time to replace the paper roll. Your fax cannot print fax messages without paper.

Use only the 164-foot paper specifically designed for use in your fax machine. For best results, use Muratec's 164-foot paper rolls. Contact your Muratec dealer or call Muratec Customer Service at 1-800-292-2492 for more information on ordering supplies for your fax.

Out-of-Paper Reception

If your fax runs out of paper at night or while you are away, up to 28 pages of incoming documents will be stored in your fax machine's memory. These messages will be printed automatically when you replace the paper.

Silent fax detection

A few older faxes do not emit fax tones when transmitting. Logically, your answering machine would keep recording calls from such machines until the remote fax eventually disconnected. Your Muratec fax, however, can accommodate these silent fax units without disrupting your answering machine operation.

With silent fax detection activated in Ans Ready, your fax gives the caller six seconds to begin speaking after the answering machine starts recording. If there's no voice response, your fax will attempt reception. See page 28 for information on activating this capability in your Muratec fax.

Sending A Fax

Your fax will communicate with virtually any modern fax machine in the world. You can transmit a piece of normal-weight paper as small as a notepad or a little longer than a sheet of legal paper.

The exact minimum and maximum dimensions are:

Maximum: 8.5 inches x 15.7 inches

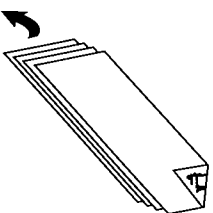
Minimum: 4.8 inches x 4.0 inches

Do not transmit:

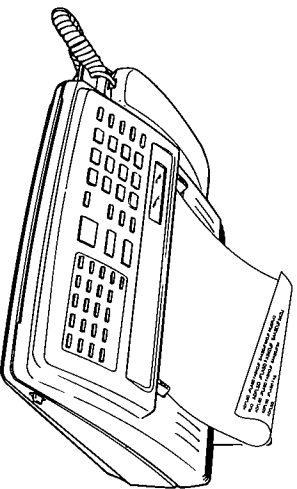
- Thin or wrinkled pages
- Folded, curled, or torn pages
- Cardboard, newspaper, or fabric
- Documents carrying staples, glue, tape, paper clips, or correction fluid
- Pages with duplicating carbon on either side.

Inserting Pages

1. Adjust the document guides to fit the pages you're transmitting. Your document feeder will accommodate up to 10 pages.
2. For multi-page documents, fan the pages slightly (right). The first page of the fax should extend just slightly from the rest.



3. Insert the document face down (left).



Resolution

Use **Mode** to select the proper transmission resolution for your document.

- **Normal** is suitable for most typed documents.
 - **Fine** is ideal for maps, floorplans, or handwritten documents.
 - **Superfine** reproduces the detail of extremely complicated drawings or line images.
 - **Grayscale** is used to capture halftones in photographs or drawings.
- Superfine** is available when transmitting to:
- Any Muratec machine with superfine capabilities
 - Any fax machine with Group 3 superfine

Other fax machines will receive a superfine transmission in fine mode.

Grayscale is available when transmitting to any Group 3 machine—even those without grayscale.

Contrast

Use **Contrast** to select the proper contrast.

- **Normal** is suited to most documents.
- **Light** lightens overly dark, muddy originals.
- **Dark** darkens weak, "washed-out" images.

Special Dialing Characters

Your fax machine provides special dialing characters for entering autodialer numbers and telephone numbers for transmission and polling, or when dialing through special telephone exchanges. Please see page 24 for more information on special dialing characters.

Transmission with the handset or monitor

1. Insert the document. Adjust the contrast and resolution as desired.

Fax Norm Norm

2. Pick up the handset or press **Monitor/Call** and listen for a dial tone.
3. Enter the telephone number you need using a one-touch key, speed-dial number, or the numeric keypad.
4. When you hear fax tones from the remote unit, press **Start** to begin transmission. If a person answers the phone, tell them you're trying to send a fax. When they're ready, press **Start**.
5. If you're using the handset, hang up. If you're using the monitor, your fax will do the rest.

Transmission

1. Insert the document. Adjust the contrast and resolution as desired.

Fax Norm Norm

2. Enter the remote fax number using a one-touch key, speed-dial number, or the numeric keypad.

403-3465

3. Press **Start**.
Note: If you are using a one-touch key, there's no need to press **Start**.

4. When a remote fax answers, your fax's LCD indicates that the fax is transmitting, as well as the contrast and resolution in use.

Tx Norm Norm

If the remote fax is busy, your fax will automatically attempt the call again. (See page 20.)

Memory Transmission

1. Insert the document.

2. Press **Broadcast**.

Memory Trans.

3. Enter the fax number.
4. Press **Start**.

Your fax will begin scanning the document into memory for immediate transmission. Memory transmission allows you to return to work immediately with your document. Memory transmission also provides faster transmission to Muratec memory-equipped fax machines.

Note: To cancel a memory transmission in progress, press **Stop**.

Broadcast

1. Insert the document into the feeder.

2. Press **Broadcast twice**.

Broadcast

3. Using a one-touch key, a speed-dial number, or the numeric keypad, enter the fax number. Press **Mode** between each number entered.
4. After you've entered the last broadcast fax number, press **Start**. Your document will begin scanning into memory, and the broadcast will begin immediately thereafter.

Delayed Commands

Take advantage of lower night-time long distance rates with delayed transmission. Your fax can store up to 5 delayed commands, programmed up to 31 days in advance. You program a delayed transmission as illustrated in the following LCD display.

Time: 02, 11:39

A built-in calendar is used when your fax plans execution of your delayed commands. In the example, "02" is the date for the delayed transmission, and 11:39 a.m. is the time scheduled. (The time 11:39 p.m. would be expressed 23:39.)

When you program a delayed command more than 24 hours in advance, your fax asks you to enter the date for the command, but not the month. Because the month for the delayed command is not programmed, pay special attention when you store a delayed command *for exactly one month in advance* (for example, from May 02 to June 02). If the time you enter for the delayed command is later than the current time shown on your fax machine's LCD, the transmission will actually occur the same day you enter the command.

For example, on May 02 at 11:00 you program a delayed command to take place on 02 at 11:39. In this special case, your fax would try to transmit in just 39 minutes rather than one month and 39 minutes.

Because you want the command to take place one month from the current date, you would instead program the command to occur at a time earlier than the present time, as shown below.

Time: 02, 9:00

Because 9:00 is earlier than the current time (11:00), your fax will hold the command in memory for 30 days, then execute it as instructed. Remember, this is a special case that applies to delayed commands occurring on a calendar day that's the same as the present calendar day.

Delayed Transmission

To store a fax in memory for transmission at a later time:

1. Insert the document. Press **Broadcast**.

Memory Trans.

2. Using a one-touch key, a speed-dial number, or the numeric keypad, enter the fax number.

3. Press **Mode**.

Command Stored

4. Press **Program**.

5. Enter the date and time for transmission.

Time: 02, 11:39

6. Press **Start**.

Fax Ready *11:39

An asterisk will appear in your LCD to indicate a delayed command is stored.

Delayed Broadcast

1. Insert document.

2. Press **Broadcast** twice.

Broadcast

3. Using a one-touch key, a speed-dial number, or the numeric keypad, enter the fax number. Press **Mode** between each fax number entered.

You may enter a total of five delayed commands. If you like, you may use any or all of these five commands to send a delayed transmission up to five different locations.

4. When you've entered all the destinations for the delayed transmission, press **Program**.

Time: 03, 12:00

5. Enter the delayed time.

6. Press **Start**.

Fax Ready *09:47

An asterisk will appear in your LCD to indicate a delayed command is stored.

Relay Broadcast Initiation

Relay broadcasting lets your fax team up with other high-volume Muratec units for rapid document distribution.

In relay broadcasting, your fax sends your document to another high-volume hub fax machine, like the Muratec F-56, F-73, F-80, and F-90. The hub fax, which contains pre-programmed call groups, will then send your document to each fax number programmed into the call group you selected.

Relay broadcasting can effectively reduce your telephone charges. Let's say three clients in another city request from you the same report. If you have a branch office in that city equipped with a Muratec hub fax machine, you can initiate a relay broadcast to that fax. The hub fax will then relay the fax to the three clients. In this way, you've eliminated two long-distance phone calls.

To begin a relay broadcast:

1. Insert your document into your fax's feeder.
2. Dial the number of the remote fax that will act as your hub machine for the relay broadcast.

1-214-403-3465
3. Press **Program**.

Group No. : 00
4. Enter the group number to receive the relay broadcast.
5. Press **Mode**.
6. Press **Start**.

Reviewing Delayed Commands

Your fax offers a handy way to glance through the commands you have stored in memory:

1. Press **Broadcast**. Press **Program**.

COM 1: 403-3465

Your fax will display the command number and the destination telephone number.

2. If you press **Program** again, the next command stored in memory will be displayed. By pressing **Program**, you'll scroll through all the commands stored.

COM 2: 555-1212

Cancelling Delayed Commands

1. Press **Broadcast**. Press **Program**.

COM 1: 403-3465
2. Press **Program** until the command you want to cancel is displayed. If you're not sure which command you want to cancel, see "Printing Stored Commands" on page 20. If the first command displayed is the command you want to cancel, do not press **Program** a second time.
3. Press **Contrast**.

COM 1: Erased
4. Press **Program** to scroll through the remaining stored commands, or press **Stop** to return to standby without cancelling any more commands. If you have no other commands saved, the LCD will read:

No Comm. Stored

Printing Documents Stored in Memory

Your fax can print a copy of the document you have stored as a delayed command. If you need a refresher on which document you're sending to what location, this can help.

1. Press **Broadcast**. Press **Program**.

COM1 : 403-3465

2. Press **Copy** to print the displayed command, or press **Contrast** to scroll through all delayed commands. When the command you want to print is displayed, press **Copy**.

Printing a List of Delayed Commands

Your fax can print a list of all the commands you have stored in memory. Included in this list is the remote location phone number, the time the command is scheduled to start, and a note stating whether the command is a memory transmission or a broadcast transmission. To print a list of delayed commands:

1. Press **Program**. Press **Mode**.

Print Setting

2. Press **Program** four times.

Print Command

3. Press **Mode**.

Erased Commands

Any document that is stored in your fax's memory will be lost in the event of a loss of power. Your fax will automatically print for you a list of commands that have been erased. This list includes the remote location, the time the command was scheduled to occur, and a note on whether the command is a memory transmission or a broadcast transmission.

Automatic Redial

When your fax encounters a busy signal, it will automatically attempt to redial the number if you tried to transmit using a one-touch key, a speed-dial number, or a number entered on the numeric keypad.

The fax will wait three minutes before automatically redialing. If unsuccessful, it will attempt a total of six automatic redials, one every three minutes.

Redial Key

If you have dialed a number manually—either with the handset or by pressing **Monitor/Call**—your fax will not automatically redial. You will have to redial manually.

To redial a fax, simply place the document in the feeder, press **Redial**, then **Start**.

To redial a voice number, pick up the handset or press **Monitor/Call** and press **Redial**. The number you last dialed will automatically be called again.

Dialing Pause

You can include short pauses in your dialing sequences to simplify long-distance dialing. Some long-distance systems require dialing pauses, and they are often useful when dialing through special telephone exchanges.

To enter a pause when dialing or in your autodialer, press **Flash/Pause** where you want your fax to pause in the dialing sequence. The first pause you enter lasts 3.5 seconds. Each pause thereafter adds another second to the pause.

Use as many pauses as you like, but remember that each pause uses one of the digits you're allocated in dialing.

Error Correction Mode (ECM)

Any telephone call may have occasional noise which makes communication difficult or even impossible. A fax call is no exception.

Your fax offers a safeguard against such communication problems. This safeguard is called Error Correction Mode, or ECM. When ECM is activated, your fax automatically confirms the transmission of blocks of data to remote machines similarly equipped with the ECM feature. If the remote machine cannot verify the transmission, your fax will retransmit the data.

When ECM is engaged, your transmission may be lengthened as your fax tries to retransmit your document. To change your current ECM setting:

1. Press **Program** 12 times. Press **Mode**.

ECM Mode ON

2. Press **Program** to display **ON** or **OFF**.

ECM Mode OFF

3. Press **Mode** to select the option displayed.

Making Copies

Your fax serves as a handy copier for your insurance forms, receipts and letters. It will print up to 99 copies of a page.

The copies you make on fax paper will last for about three years under ideal conditions; that is, stored in a dry, cool place.

To make copies:

1. Insert the pages to be copied.
2. Press **Copy**. The copy will feed out through the recording paper exit at the rear of the machine, and your original will exit through the original document exit at the front.

Multiple copies

To make more than one copy of a single page, follow the same directions as above. Before pressing **Copy**, use the numeric keypad to enter the number of copies you want.

Autodialer

Your fax stores a total of 100 fax and phone numbers. Twenty one-touch fax numbers and 80 speed-dial numbers put even the longest international calls just a few keystrokes away. Plus, there's the bonus of storing 20 one-touch phone numbers as well. The autodialer simplifies dialing wherever you call or fax most often.

One-Touch Keys

Your fax has 20 one-touch keys. Each key can store two numbers: one fax number and one telephone number. Let's say you store a client's phone and fax number on one-touch key **A**. If you insert a document in the machine and press **A**, the fax assumes you want to send a fax and will dial the fax number you have stored in one-touch **A**.

If the document feeder is empty when you press one-touch **A**, the fax assumes you want to make a voice call, and it will dial the telephone number you have stored for one-touch **A**.

Entering a one-touch number

1. Press **Program** twice. Press **Mode**.

Select A - J

2. Press the one-touch key you want to program.

Fax No. : F

3. To enter a fax number, press **Mode**. To enter a telephone number, press **Program, Mode**.

4. To enter a Location ID for this number, press **Mode**.

Location ID

Note: To enter a phone or fax number without entering a Location ID, go to step 8.

Your fax will display a group of characters. Press the one-touch **C** and another group will appear. Press **D** and the previous group will appear.

When the letter, number, or symbol you want appears on the display, use the one-touch **A** to move left and one-touch **B** to move right. Press **Mode** to select the character highlighted.

5. Enter a Location ID up to 12 digits long.

6. Press **Program**.

Tel Number

7. Press **Mode**.

Enter the number exactly as it should be dialed. Be sure to enter any long distance dialing codes needed. Please review "When entering an autodialer number" below.

8. When you have entered the number, press **Mode**.

9. Enter another one-touch, or press **Stop** to return to standby.

10. Label the one-touch lightly in pencil or with an erasable pen.

When entering an autodialer number:

- Press one-touch **A** to move the cursor left one character.
- Press one-touch **B** to move the cursor right one character.
- Press one-touch **C** to display the next group of characters.
- Press one-touch **D** to display the previous group of characters.
- Press **Contrast** to delete the character highlighted by the cursor.
- Enter up to 20 digits.
- Enter special dialing options, such as dialing pauses, as desired. See page 24 for more information on dialing options.

Erasing a one-touch number

1. Press **Program** twice. Press **Mode**.

Select A - J

2. Select the one-touch key you want to erase.

Fax No.: F

3. Press **Contrast**.

Directory Erased

To enter or erase another one-touch number, repeat steps 2 and 3 above. Or press **Stop** to return to standby.

Directory Full

When all one-touch and speed-dial numbers are occupied, your fax will briefly display before returning to standby:

Directory Full

Printing a one-touch list

Your fax will print a list of one-touch numbers anytime you need it. The list includes the one-touch letter, the type of number (telephone or fax), the Location ID, and the telephone number.

1. Press **Program**. Press **Mode**.

Print Setting

2. Press **Program**. Press **Mode**.

Speed-Dial Numbers

Your fax will store 80 speed-dial numbers. These are accessed by pressing **Speed-Dial**, then the two-digit number you've assigned as a speed-dial number.

Entering a speed-dial number

1. Press **Program** three times. Press **Mode**.

Select 1-80: 0

2. Enter a two-digit speed dial number, from 01 through 80.

Select 1-80: 08

3. Press **Mode**.

Location ID

4. To enter a Location ID for this number, press **Mode**. To enter a phone or fax number without giving it a Location ID, go to step 6.

5. Enter the Location ID, up to 12 characters, as described at the top of column 2 on page 22.

Tel. Number

Press **Program** after entering the Location ID.

6. Press **Mode**.

If a speed-dial number is already stored, that number will be displayed. Any new information you store will overwrite the old. To select another speed-dial number, press **Stop** and begin again from step 1.

Enter the number exactly as it should be dialed. Be sure to enter any long distance dialing codes needed (see page 24).

9!214-403-3465

7. When you have entered the number, press **Mode**.

Select 1-80: 09

8. Select another two-digit speed-dial number to enter, or press **Stop** to return to standby.

Erasing a speed-dial number

1. Press **Program** three times. Press **Mode**.
2. Select the speed-dial number you want to erase.
3. Press **Contrast**.
4. You can then enter or erase another speed-dial number, or press **Stop** to return to Standby.

Printing a speed-dial list

Your fax will print a list of speed-dial numbers for your reference. The list includes the speed-dial number, the location ID, and the telephone number.

1. Press **Program**. Press **Mode**.
2. Press **Program** twice. Press **Mode**.

Dialing Options

Your fax machine's special dialing characters are useful when entering autodialer numbers and telephone numbers for transmission and polling, or when dialing through special telephone exchanges. The following are special dialing characters available to you.

- To enter a dash, press **Hold**. The dash serves no purpose other than to make the number easier to read.
- To instruct your fax to pause until it hears a dial tone, press **Hold** twice. An exclamation point will appear.
- To enter dialing pauses of a specific length, press **Flash/Pause**. You'll see a dash/slash combination appear. One dialing pause lasts 3.5 seconds. Each subsequent pause adds another second to the length of the pause. Use as many pauses as you like, but remember that each pause uses one of the 20 digits you're allocated in dialing.
- A combination of the dash and exclamation point is necessary if your fax operates on a rotary line. Press **Receive/Tone** to enter this character. If your fax operates on a tone line, this character is not needed.

Note: Pressing **Hold** a third time will enter a slash. This character is designed for foreign telephone systems and will not work in the United States.

Special Communication Features

Set Fax Report

Your fax can print a report that lets you know:

- the date of each fax transmission
- the receiving location
- the number of pages transmitted.

The report can provide reassurance when you have vital information to transmit.

The "Location" listing may be different from the number you called, or it may be blank. This information is entered by the remote operator in his fax's user settings.

You will also see a "Result" listing. A successful transmission will appear in the Result column as "OK." If a transmission fails, the report will include an explanation of the error and a corresponding error code.

To turn the fax report feature on or off:

1. Press **Program** seven times. Press **Mode**.

Fax Report OFF

2. To change the setting, press **Program**.

Fax Report ON

3. Press **Mode** to return to standby.

Set Activity Journal

Your fax will automatically print a report on the last 20 transmissions and receptions. The activity journal includes:

- The remote location
- The resolution of the transaction
- The time the transaction began and its duration
- The number of pages
- The result of the call
- A number assigned to the transaction by your fax

To turn the activity journal on or off:

1. Press **Program** 11 times. Press **Mode**.

Auto Journal ON

2. Press **Program** to change the current setting.

Auto Journal OFF

3. Press **Mode**. The fax will return to standby.

Printing an activity journal

You can print an activity journal at any time:

1. Press **Program**.
2. Press **Mode**.
3. Press **Program** three times.
4. Press **Mode**.

Polling

Polling lets you automatically "pull" a page or document from another fax machine.

You can use polling anytime you need to retrieve information and don't want the source to pay for the phone call. With polling, you pay for the call and get the information you need.

To poll a document from a remote fax:

1. Make sure the remote fax operator has a document stored in their fax, ready to be retrieved.
Also, make sure there's no document in your fax's feeder.
2. Pick up the handset or press **Monitor/Call**.
3. Dial the remote fax.
4. When the remote fax answers and you hear fax tones, press **Start**. Return your fax handset to the cradle. If you're using the monitor speaker, your fax will do the rest.

Call Request

This feature allows you to conduct a fax transaction and voice conversation on the same call, whether you are sending or receiving a fax message.

To request a conversation after you receive or send a fax message:

1. While your machine is transmitting or receiving a fax message, press **Monitor/Call**.

Call Requested

2. The remote fax will ring after each page is printed, notifying the remote operator if he or she is near the machine. If someone responds, your machine will sound a prolonged ring.
3. Pick up the handset before the end of the prolonged ring and press **Stop**. In a few seconds, the line will open and you can begin your conversation.
4. To transmit after your conversation, insert your document in the feeder. Tell the remote operator to press **Start**. When you hear fax tones, press **Start** and hang up.

To respond to a remote operator's requested call:

If someone requests a call, you will hear a prolonged ring after each page is transmitted or received.

To answer the call request, pick up the machine's handset and press **Stop**.

When the person at the other end of the line answers, the phone line will open and you can begin your conversation.

Custom Settings

Your fax offers some special settings to customize the fax to your needs. Use care when making these settings, because it is possible to change or prevent proper fax operation with an incorrect switch setting.

If you think you have made an incorrect setting, call the Customer Support Center (see page 43).

You can also use the clear memory command (see page 12) to instantly return all dip switches to their factory settings, but this command deletes all user information—like your TTI, Subscriber ID and autodialer entries—from your unit's memory.

Add to Document Length for TTI

Your fax machine includes a special feature that serves as a courtesy to the owners of the plain-paper fax machines with which you communicate.

The TTI normally adds extra length to a transmitted page. This is not a concern for users of thermal fax machines that print on a roll. Many plain paper machines automatically reduce incoming fax pages to accommodate this. However, this feature may require some plain-paper units to print a second page instead.

To prevent this, your fax normally deletes a very small portion of the top of every page transmitted. The top 1/8 inch of your document is not transmitted and your TTI and Subscriber ID are sent in its place.

To cancel this feature, use the setting below. Remember that cancelling this feature may cause some plain-paper fax machines to print two pages for each page you send.

1. Press **Program**, *, 1.

dipsw-0 00010000

2. Press **Mode** three times.

dipsw-3 11010000

3. Press the **B** one-touch key once. Enter a zero.

dipsw-3 10010000

4. Press **Mode**, then **Stop** to return to standby. Or just press **Stop** to return to standby without changing the current setting.

Unlimited Page Length: Transmission

Your fax can transmit individual pages up to 15.7 inches long. If you must transmit very long unbroken pages, like medical strip charts or water well logs, use the setting below to disable your fax machine's paper-jam sensor.

1. Press **Program**, *, 1.

dipsw-0 00010000

2. Press **Mode** twice.

dipsw-2 01000000

3. Press the **B** one-touch key once. Enter a zero.

dipsw-2 00000000

4. Press **Mode**, then **Stop** to return to standby. Or just press **Stop** to return to standby without changing the current setting.

Note: Remember to return your fax to normal operation afterwards by repeating steps 1 through 4. In step 3, enter one in place of the zero.

Set Scanner Width

Your fax machine accepts original documents up to 8.5 inches wide and is initially set to scan the center 8.2 inches of these wide documents. You can increase this scanning width to the full 8.5 inches. Increasing the scan width can increase the time needed to send certain documents.

1. Press **Program**, *, 1.

dipsw-0 00010000

2. Press **Mode** seven times.

dipsw-7 00101100

3. Press the **B** one-touch key four times. Enter a zero.

dipsw-7 00100100

4. Press **Mode**, then **Stop** to return to standby. Or just press **Stop** to return to standby without changing the current setting.

Fax Ready 13:23

To return to 8.2-inch scanner width, repeat steps 1 through 4 above. In step 3, enter a one in place of the zero.

Silent Detect

Silent detect (see page 15) keeps the answering machine connected to your fax from recording silence when a nonstandard fax calls.

Use this feature only if you are using an answering machine with your fax and you're certain you will be communicating with a nonstandard fax that does not emit fax tones. **If you use this feature for normal fax operation, you may experience interruptions in your voice calls. Pauses in your conversation could trigger your fax to come on line and attempt reception.**

To turn this feature on:

1. Press **Program**, *****, **1**.

dipsw-0 00010000

2. Press **Mode** six times.

dipsw-6 10111101

3. Press one-touch **B** once. Enter numeric **1**.

dipsw-6 11111101

4. Press **Mode**, then **Stop** to return to standby. Or just press **Stop** to return to standby without changing the current setting.

To return to normal fax operation, repeat these steps, entering a zero in step 3.

Set Number of Rings

In the basic user setting (page 11), you can program your fax to answer after two or six rings. This software switch allows you to choose any number of rings between one and 15. The chart below displays the last four digits of the dipswitch setting.

Code	No. of Rings	Code	No. of Rings
0000	1	1000	8
0001	1	1001	9
0010	2	1010	10
0011	3	1011	11
0100	4	1100	12
0101	5	1101	13
0110	6	1110	14
0111	7	1111	15

1. Press **Program**, *****, **1**.

dipsw-0 00010000

2. Press **Mode** five times.

dipsw-5 01100110

3. Press the **B** one-touch key four times. To customize the number of rings, you will enter the last four digits of the software setting as described above.

4. Press **Mode**, then **Stop** to return to standby. Or just press **Stop** to return to standby without changing the current setting.

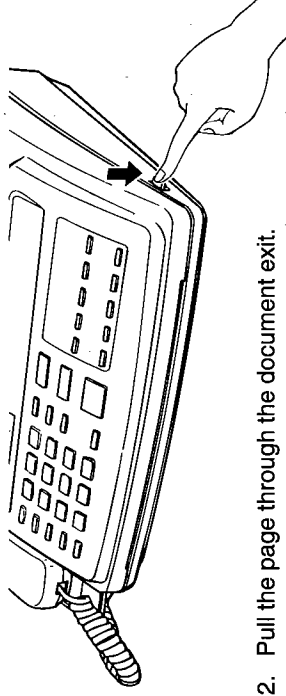
Fax Ready 13:23

Problem Solving

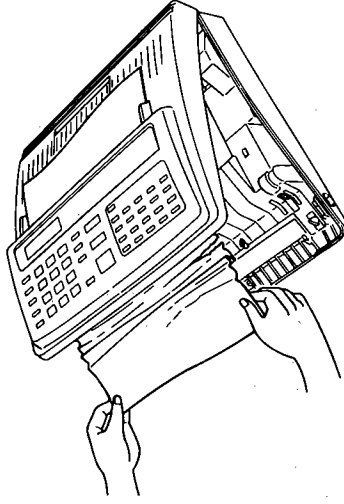
Original Document Jam

To clear an original document jam:

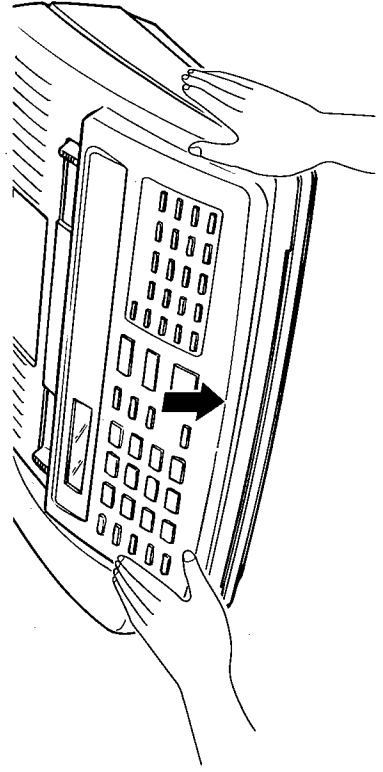
1. Press the top cover release on the right side of your fax.



2. Pull the page through the document exit.



3. Close the top cover, and then try the transmission again.

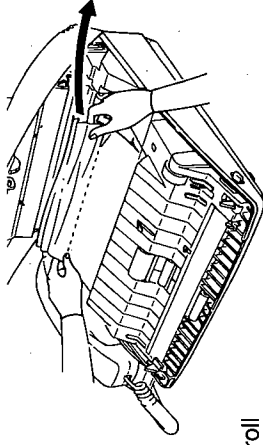


Remember, never try to retransmit a torn or wrinkled page.

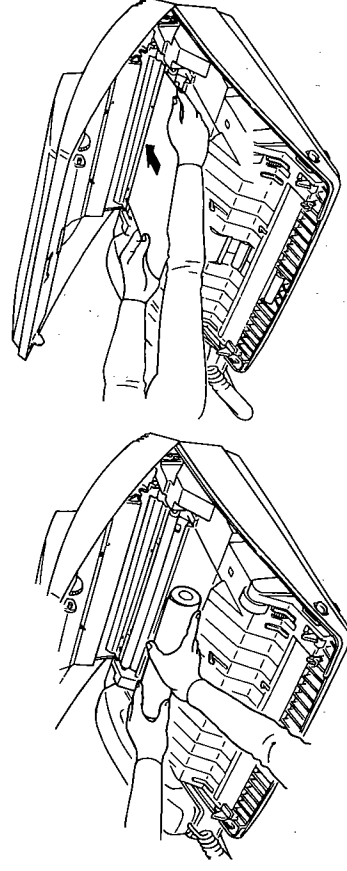
Recording Paper Jam

To clear a recording paper jam:

1. Press the top cover release on the right side of your fax (as shown, left).
2. Gently pull out the jammed paper.



3. Place the paper roll back into its cradle so that it unrolls from the top and feeds into the paper cutter (below).



4. Pull about four inches of paper out the back of the fax. Close cover (as shown, left).

Troubleshooting

Occasionally, your fax will detect a problem with the telephone line in use or encounter some trouble in transmission or reception. When it does, it will alert you with the lighted Alarm lamp and a beeping alarm tone.

You can further identify the problem with the LCD messages, Activity Journal check messages, and printed error codes. See the following sections for information about these troubleshooting methods.

LCD Error Messages

Your fax machine's display message can help you to easily spot problems that halt communications. If you receive one of the following messages, just follow the directions and then press **Stop** to return to standby.

- Set Page Again** Your page was not inserted properly or the machine you are sending to cannot accommodate the length of your page. Reset the page and try to transmit again.
- Close Cover** Your fax machine's cover is open. Close it firmly.
- Hang Up Phone** The telephone handset is not in its cradle. Hang it up.
- Check Rec. Paper** Replace the recording paper roll. The fax will not answer a call and all printing is suspended until the recording paper is replaced.
- Transmit Again** Poor telephone line conditions or conditions at the remote fax may have made the transmitted copy unreadable. Please transmit again.
- Check Remote Fax** Communication with the remote machine was not possible. This message can be caused by calling an older Group 2 or Group 1 machine that's not compatible with your fax, reaching a fax machine that is broken or out of paper, or dialing a wrong number. Use the fax telephone handset to call the number manually. Ask the remote operator to check the remote fax.

Error Codes

Your fax will occasionally experience errors, caused by anything from lightning to telephone line interference. These same factors cause the line noise you sometimes hear when talking on the telephone.

Often, simply trying your call again is all that's necessary. If the problem persists, call Muratec Customer Service (see page 43) or your local telephone company for help.

When an error occurs, your fax prints an error report. Each fax error report lists an error message that includes:

- The cause
- A possible solution
- Date of the transmission attempt
- Sending location
- Number of pages

The location listing may or may not be blank, depending on the remote fax.

You will also see a code listed in the Result column of the report. Result codes indicate the specific problem encountered:

- "T" errors occur during transmission
- "R" codes occur during reception
- "D" codes occur while dialing

Type A: Check the condition of the remote fax.

T.2.1, T.2.3,
and R.2.3

Your call was disconnected during transmission, or fax communication became impossible because of poor telephone line conditions. Try the call again.

T.2.2 and R.1.2

The machine you are trying to communicate with is not compatible with your fax.

T.5.1 and T.5.2

Line noise or other problems prevented ECM transmission.

R.1.1

The remote fax did not respond properly to your fax machine. This error can be caused by a wrong number or by a remote fax that restricts access using a passcode.

R.3.1

The transmitting fax detected too many errors from the receiving unit. This is often caused by an intermittently poor phone line.

R.3.2

The telephone line was disconnected after the fax "greeting," but before the first page was transmitted.

R.3.3

The fax attempting to transmit to you is not compatible with or had a document feeder problem.

R.3.4

Poor telephone line conditions may have prevented your fax from properly printing some or all of the pages it received.

- R.4.2 The telephone disconnected before the transmission was acknowledged, or the transmitting fax needs maintenance.
- R.5.1 and R.5.2 Line noise or other problems prevented ECM reception.

Type B: Check received documents.

- T.4.2 Poor line conditions developed after transmission started. Try the call again.
- R.4.1 Poor telephone line conditions may have prevented your fax from properly printing some or all of the pages it received.

Type C: Repeat transmission.

- T.1.1 The remote fax did not respond properly to your fax and may not be working. Call the remote unit's operator.
- T.3.1 Your fax detected a document feeder error when it tried to transmit. Carefully reinsert the page into the feeder and try the call again.
- T.4.1 The telephone line was disconnected during transmission. Try the call again.
- T.5.3 Line noise or other problems prevented ECM transmission.

Type D: Line is busy.

- D.0.0 The remote machine is busy.

Miscellaneous

- T.1.4 **Stop** was pressed during transmission.
- R.1.4 **Stop** was pressed during reception.
- R.4.4 Memory Overflow.

Caring For Your Fax

With proper installation and a little maintenance, your Muratec fax should provide dependable service for years to come.

Although little day-to-day care is required for your fax, you can take these simple precautions to keep it in top form.

Always...

- Make sure your fax machine is installed according to Muratec's specifications. Review the requirements on page 6 before installing.
- Use thermal facsimile paper labeled for use with your Muratec fax machine to insure a perfect fit.
- Clean your fax as needed.

Never...

- Never install your fax where it can overheat, gather dust, or get splashed by water or other liquids.

Cleaning Tips

Always...

- Unplug your unit first.
- For cleaning **external surfaces only**, such as the cover and handset, use a mild cleaning solution sprayed onto a lint-free towel or cloth.
- Use a lint-free cloth or lint-free swabs moistened with alcohol to gently wipe components inside your fax.
- Use dry, dust-free compressed air to gently blow dust and other material from areas you cannot reach with swabs.

Never...

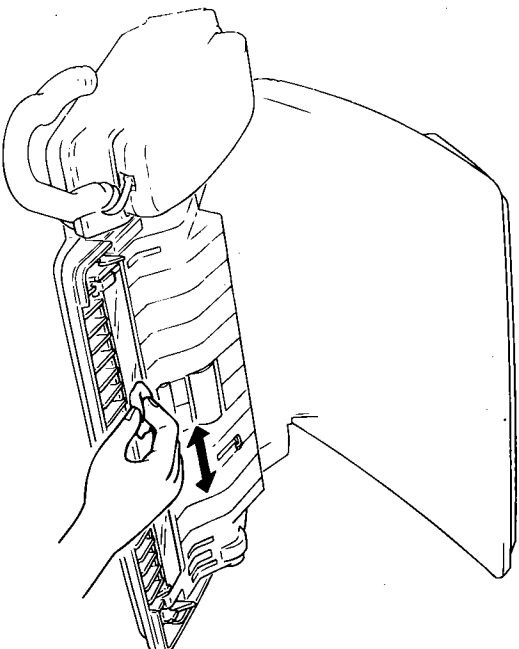
- Never spray cleaner directly on your fax. The drifting spray could damage components inside your fax.
- Never attempt to clean inside sealed areas of your unit and never spray cleaning solution directly onto your fax.

Corrective Cleaning

Following are some simple cleaning procedures for keeping your fax operating smoothly. Use them as the need arises for the problems described.

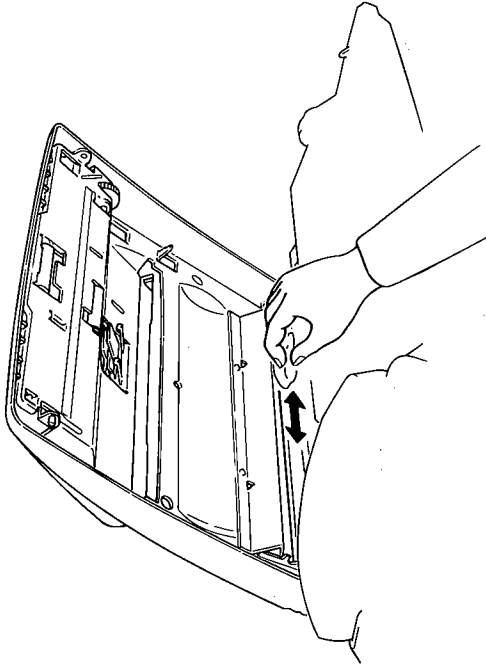
Poor quality of transmitted documents

If you find your fax recipients complaining frequently that the faxes you send are streaked, the glass surfaces of your fax's contact image sensor may be dirty. Unplug your fax. Use a soft, lint-free cloth moistened with isopropyl alcohol to clean the surface of the contact image sensor.



Recording paper misfeed

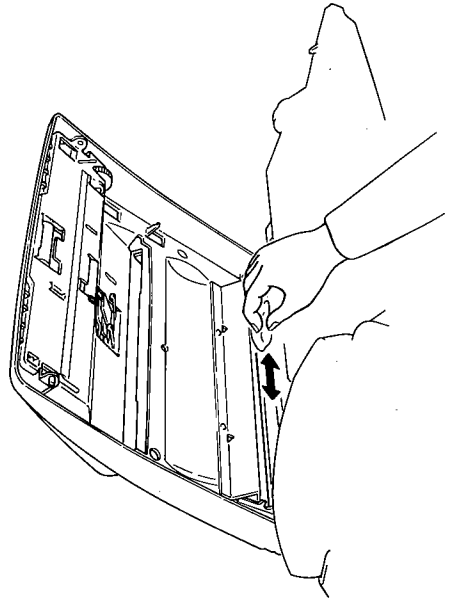
If the surface of your fax's paper feed roller becomes dirty, you may experience frequent recording paper jams. Unplug your fax. Clean the surface of the paper feed roller with a soft, lint-free cloth moistened with isopropyl alcohol.



Poor quality of received faxes or copies

If you notice poor copy quality of the faxes you receive or the copies you make, the thermal head may be dirty.

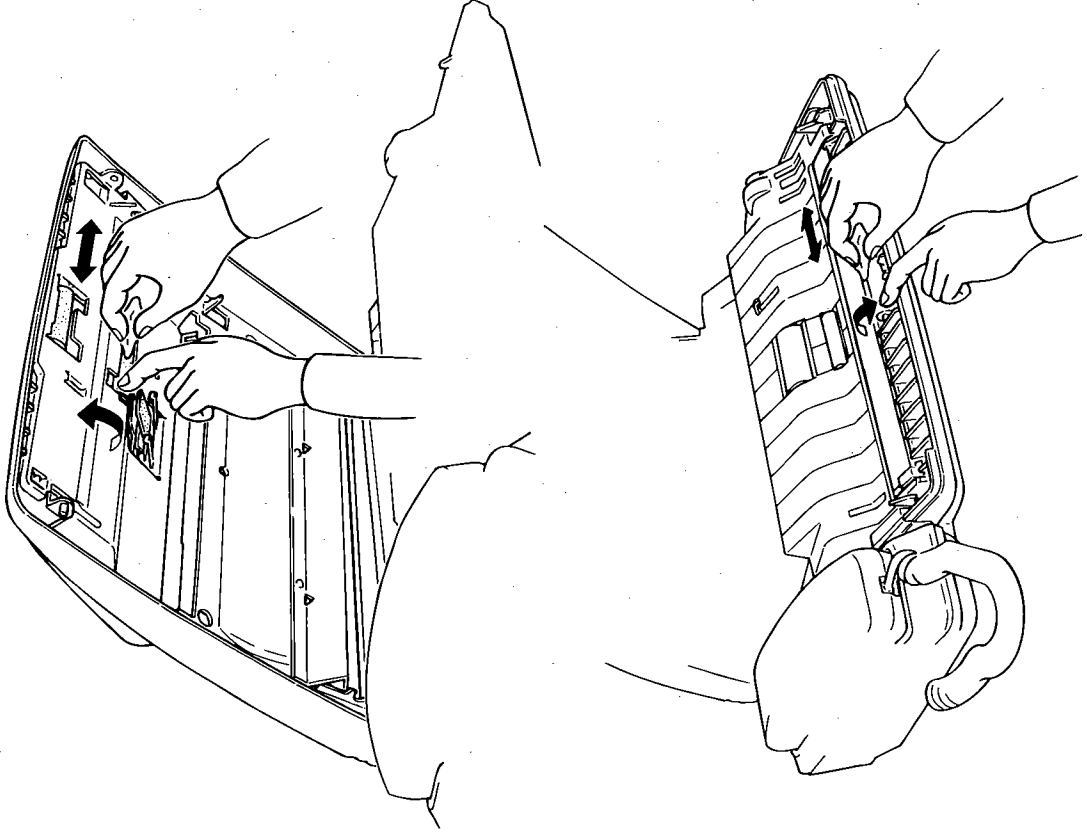
Unplug your fax. Use a soft, lint-free cloth moistened with isopropyl alcohol to clean the surface of the press roller.



Original document jam or misfeed

If your original document feeder frequently jams, the rollers which feed the document may be dirty.

Unplug your fax. Use a soft, lint-free cloth moistened with isopropyl alcohol to clean the surfaces of the document feeder rollers.



Glossary

The terms and words below are often used when discussing facsimile machines and fax communication. Use these definitions for your reference only. Specifications and technical information are subject to change, so call the Customer Support Center (see page 43) if you have any questions.

A4

Standard stationery sizes defined by the International Standards Organization, an agency of the United Nations. A4 paper is 8.5 inches wide.

Activity Journal

Muratec fax machines offer an Activity Journal to help track and account for your transactions. Made up of individual transmit and receive journals, the Activity Journal includes information on the transmission mode, number of pages sent, result and any errors encountered. You can set the Activity Journal to print automatically or on demand.

Analog Facsimile

An analog facsimile machine converts each picture element of black or white into an electrical signal. These signals in turn generate a constantly changing electrical signal that is transmitted to a receiving fax. Analog facsimile machines are characterized by extremely slow document transmission, three minutes per page or more, and are more susceptible to the signal "noise" encountered on standard telephone lines.

BPS

Bits per second. Used to express the speed of transmission. Because fax transmission treats a document as a graphic image rather than a series of alphabetic and numeric characters, bps does not correspond to the number of characters transmitted per second.

Broadcast

Some Muratec fax machines offer broadcasting, a feature that lets you transmit a single document to dozens of preprogrammed locations in another fax machine's call group.

CCD

Charged coupled device arrays. The scanning mechanism used in Muratec fax machines to convert a document image into digital facsimile information. Fluorescent light reflected off your document is received by the CCD array and is converted into a digital signal for transmission.

CCITT

Abbreviation for the Consultative Committee for the International Telegraph and Telephone, a telecommunications forum for member countries of the United Nations. CCITT Study Group XIV established the primary groups for facsimile equipment, covering communication protocol and transmission. Muratec's Group 3 machines offer the fastest transmission allowed by CCITT when communicating with other Group 3 units. Some Muratec fax machines offer compatibility with older Group 2 and North American FM systems, as well.

CCITT V.29 and V.27 ter.

A standard set of communication procedures allowing fax machines to talk to all other units adhering to those standards.

Call Group

A preprogrammed group of fax locations used by Muratec units with internal memory to speed broadcasting, polling and other functions.

Call-Waiting Service

Many telephone systems offer an optional call-waiting service that identifies when another party is calling while you are on the phone. Call-waiting signals may cause interruption of facsimile transmission or reception.

Compatibility

The term "compatible" describes the ability of separate things to work together. Your Muratec fax machine offers Group 3 compatibility, the modern standard for worldwide fax communication.

Copy

You can use your Muratec fax as a convenience copier. Many Muratec units can copy in two or more levels of resolution.

Data Compression

Used by digital fax machines to speed transmission. See Digital Facsimile, MH, MR, MMR, MSE, and SMSE.

Digital Facsimile

Unlike analog systems that scan every portion of a page, digital fax machines survey a page's overall picture content. Digital fax machines scan a line and convert the information into a binary code of zeros and ones. The fax machine can take this information and compress it, providing transmission speeds of less than one minute per page. Muratec units offer the standard Group 3 data compression method for rapid transmissions to any other Group 3 fax, and many Muratec

units offer proprietary transmission speeds for faster transmissions between Muratec units.

Dip Switches

Dual in-line package switch. A two-position on-off switch. Many Muratec fax machines include dip switches to control optional settings or features.

DTMF

For dual tone, multiple frequency. The dialing signals generated by push-button or "touch-tone" telephone systems. DTMF telephone service is an option in most North American telephone systems.

ECM

Error Correction Mode. A CCITT-approved feature for Group 3 fax machines. ECM transmission sends document image data in blocks and retransmits each block until received properly by the receiving unit.

Effective Printing Width

The widest image that can be printed on your fax. The effective width can be influenced by the CCITT group of the unit transmitting to your fax machine.

Effective Scan Width

The maximum width the scanner in your fax can scan during transmission.

Facsimile

Although business fax use has grown rapidly since the advent of fast, powerful Group 3 units, facsimile communication itself has a surprisingly long history. The first facsimile system was introduced in 1842, and wide-spread service was underway before 1910. In the United States, fax units attached to home radios provided facsimile newspaper service in several cities through the late 1940s. The growing success of fax for news transmission was halted, however, by the development of commercial television.

Fallback

Group 3 fax machines operate at the highest transmission speed possible on a given telephone line. Muratec systems offer automatic fallback, so if line quality drops during transmission your fax machine will reduce speed to the fastest possible level.

Fax Number

The Fax Number is your unit's telephone number. Part of the TTL, your Fax Number is printed at the top of each page received from your unit. Also called the Subscriber ID.

Fax Report

A fax report is your assurance that the document you transmitted was received. The report prints after your transmission. It identifies the receiving unit and records the date, time, number of pages sent, and result.

G3, Group 3

G3 stands for Group 3. Your machine is a Group 3 fax. Group 3 compatibility is the modern standard for worldwide communication as determined by the CCITT, an international communication group.

Group 4

A CCITT-standard for capturing, processing, communicating and outputting all forms of data. Group 4 will be used for extremely high-volume fax communication in coming years, but the expense of leased, dedicated digital telephone lines will continue to make Group 3 fax the best choice for millions of fax owners.

Grayscale

Not a level of resolution, but a method of scanning and transmitting halftone images. Muratec fax machines with grayscale abilities interpret photographs in levels of gray between white and black. The transmitting fax machine must have grayscale ability to send a photographic image accurately, but the receiving machine does not need it to print the image.

Handshaking

Used by telecommunications and computer equipment to "introduce" two systems to each other. Facsimiles use a handshaking protocol, for example, to identify the type of unit and to begin fax communication.

Hz

Or hertz. A measure of frequency equal to one cycle per second. Used in the specifications for your fax, it identifies the AC power your unit requires. Call your electrician if you don't know the specifications of your office outlets.

LCD

Liquid crystal display. Used on some Muratec units for status displays.

LED

Light emitting diode. Used on some Muratec units for displays and lamps.

Load Number

A number assigned to telecommunications equipment used in Canada and designed to prevent overloading on a telephone circuit. Read the Canadian Department of Communications information in your operating instructions or call your local telecommunications company for more information.

Location ID

An optional identifier used on Muratec fax machines. The Location ID lets you identify by name the telephone numbers programmed in your autodialer. Also known as the Transmit Terminal Identifier

MH

Modified Huffman, the CCITT Group 3 standard data compression method. A feature of all Muratec fax machines, MH assures better than one-page-per-

minute transmissions when communicating with other Group 3 units, regardless of manufacturer.

MR

Modified Read, the optional CCITT Group 3 data compression method. Used in some Muratec fax machines.

MSE, SMSE

Proprietary data compression methods, allowing transmissions faster than MH, MR, and MMR whenever you are communicating with a Muratec-manufactured unit. MSE and SMSE are features on many Muratec fax machines.

Modem

Originally an abbreviation for modulator-demodulator, but now a common word in fax and computer use. A modem is a digital device that converts digital data (like the information from your fax machine) into an analog signal for transmission over analog lines (like your ordinary telephone line). A modem is included in your fax machine and allows it to be connected directly to your PSTN telephone line.

Normal Resolution

The standard resolution mode for Group 3 units.

Normal: 203H x 98V lpi

Fine: 203H x 196V lpi

Superfine: 203H x 392V lpi

Original Document Size

Used when defining the largest (or smallest) page that can be fed safely through your fax machine. Check your unit's operating instructions for more information.

PBX

Private branch exchange. Often called PBX, PABX and others. Privately owned telephone equipment serving a particular building, business or area. Many PBX systems use digital transmission lines which, unlike more common PSTN lines, are not compatible with fax machine use. Do not connect your Muratec unit to a PBX without first checking with the system manufacturer or service representative.

PPS

Pulses per second. Used to identify rotary dialing requirements.

PSTN

Public switched telephone network. PSTNs are the most common type of telephone lines and service in use, and are in contrast to private or leased lines. Muratec units provide fast, reliable data transmission over PSTN lines. You do not need a special line or a dedicated telephone line for your Muratec unit.

Polling

Polling allows some fax users to set a document in their fax machine for automatic transmission to a remote unit when that unit calls, or to call a remote unit and receive a document set to be polled. Polling is convenient whenever a central unit must receive information from one or several remote units. By polling the remote units, the central facility bears all telephone charges and prevents several remote units from calling at the same time.

Private Line

Or Leased Line. A service offered by many telephone systems that provides an exclusive phone circuit between two geographic points. Your Muratec unit does not require a private line.

Pulse (Rotary), Tone Dialing

Most telephone systems in the United States offer pulse (rotary) and touch-tone dialing options. Muratec units are compatible with both rotary and tone dialing signal requirements. Check your operating instructions for information on setting your unit for pulse or touch-tone dialing. Check with your telephone company if you have pulse dialing service.

Resolution

The resolution of documents transmitted or copied by fax machines is measured by the number of horizontal (H) and vertical (V) lines per inch the unit can print. Your unit also offers grayscale transmissions for accurate reproduction of photographs.

RI-11C

A standard plug-in telephone jack. The RI-11C is commonly used in North America for telephone line connections, but call your telephone company if you are unsure of the type of jacks in your home or office.

SMSE

Proprietary data compression methods, allowing transmissions faster than with MH whenever you are communicating with a Muratec unit. SMSE is a feature on many Muratec fax machines.

SecureMail

A feature on many Muratec fax machines. SecureMail allows you to send a document to a memory "mail box" in a Muratec unit with internal memory. The transmission is protected by an access code created by the mail box holder.

Subscriber ID

The Subscriber ID is your unit's telephone number. Part of the TTI, the Subscriber ID is printed at the top of each page received from your unit. The Telephone Consumer Protection Act of 1991 requires all fax users to provide their name and phone number on each fax, along with the date the fax is sent.

Surge Protector

A device that protects your telephone or electrical lines. A telephone power surge protector can absorb and divert high-voltage surges caused by lightning or static electricity without interfering with normal telephone operation. An electrical surge protector protects you fax from high-voltage surges in the AC line that may cause damage to your fax and other appliances.

Touch-Tone

A push-button telephone or the characteristic tones made by such a phone. Also a registered trademark of Western Electric for a brand of telephones.

Transmit Terminal Identifier

Your TTI is sent automatically with every page you send, and appears at the top of each spage printed by the receiving unit. The TTI can be your personal or business name or any other identifier. The Telephone Consumer Protection Act of 1991 requires all fax users to provide their name and phone number on each fax, along with the date the fax is sent.

Common Questions

General Questions

- Q:** Where do I add ink or toner to make my fax print darker?
- A:** Your fax does not use ink or toner. Instead, it uses a special printing technique called thermal printing. You can adjust the darkness of the pages you transmit and copy—see notes on adjusting Contrast on page 16.
- Q:** When I unplug my machine, will I lose the information I've stored (TTI, autodialer numbers, time and date, etc.)?
- A:** No. Your fax's internal battery protects user settings for several days if power fails or you decide to move your fax.
- Q:** Can I use a dust cover on my fax?
- A:** No. A dust cover blocks air circulation and could cause your fax to overheat.

Error Alarm

- Q:** How do I turn off my machine's error message?
- A:** Press **Stop**. In some cases, your fax will print an error report for help in diagnosing the problem.

Transmitting

- Q:** I just tried to send a fax. I dialed a number and heard a horrible screeching sound, so I hung up.
- A:** Don't worry. You'll hear screeching sounds any time you call a fax machine that answers automatically. Fax machines use these special tones to signal a fax communication. Next time you hear the tones, press **Start** to send a fax.
- Q:** I just sent a fax, but the number that appeared in my machine's display while the fax was being sent was not the number I dialed. Why?
- A:** The number that appears in your display is the number programmed into the remote fax machine by the user. They can enter any number as their fax identifier, or Fax Number.
- Q:** Can I transmit and receive at the same time?
- A:** No, but use the call reserve feature (see page 26) to ask the remote operator

if he or she wants to transmit or receive after your fax transaction is complete.

- Q:** Do I have to dial a "1" for long distance?
- A:** Yes. Dialing a fax number is just like dialing any other phone number, so be sure to include any special long distance codes or dialing pauses when dialing. And remember to include them when you program your autodialer numbers.
- Q:** How do I send a fax to an overseas telephone number?
- A:** Dialing requirements for international calls may vary depending on your local telephone company's requirements. For most international calls, dial 011, then the appropriate country code, city code, and phone number. Country and city codes are often included in the front section of the telephone directory.
- Q:** Can I transmit if my fax is out of paper?
- A:** Yes; however, fax reports (see page 25) are not available when transmitting without recording paper in your fax.
- Q:** Can I transmit a document that's extra long?
- A:** You can if the receiving fax machine is equipped to handle long documents. Many fax machines have a special setting that allows them to receive documents that exceed the normal length.
- Q:** Can I transmit pages from a newspaper?
- A:** No. Newspaper can jam in your document feeder. First make a copy, then send the copy.
- Q:** Can I transmit a page with correction fluid on it?
- A:** Yes, as long as the fluid is completely dry before you begin transmission.
- Q:** How can I be sure my fax was received?
- A:** Your machine can print out a Fax Report to verify a transmission.
- Q:** I don't want to install a dedicated phone line for my fax, so I've connected my fax to a PBX phone system. When I get a fax call, all the phones ring. How do I prevent this?
- A:** Call your PBX manufacturer or telephone company for assistance. They may be able to convert one of the PBX lines for fax use only.
- Q:** When I dial a remote fax using my fax handset I don't hear fax receiving tones. Am I doing something wrong?

A: When this happens, try pressing **Start**, then hang up the handset as you normally would. If it's possible you're calling a fax that doesn't emit answering tones. A few Group 3 faxes on the market sound a sending tone but do not sound a receiving tone. After you transmit, call the remote operator to see if your document was received.

Q: I inserted a document in the feeder and dialed the remote fax, but my machine didn't transmit; however, "Reserved" appears on my LCD. What does this display mean?

A: The remote machine was busy. For more information on setting the number of redial attempts, see the section on User Settings.

Q: My manual says the average transmission speed for a page is 12 seconds, but when I transmit a page it can take much longer to transmit one page. Why?

A: The average transmission speed stated in your manual is based on transmission of the CCITT Test Chart 1. The test chart is a standardized letter used to test fax transmission times.

Some reasons for varying transmission speeds follow:

- The pages you transmit may contain more information to be scanned than the CCITT Test Chart.
- The transmission time measured for test documents does not include handshake time. The handshake is the protocol fax machines use to "introduce" themselves.
- Your transmissions that use fine, superfine or grayscale take longer to transmit than transmissions using normal mode.

Journals and Reports

Q: What does an asterisk in the Result column of my Activity Journal mean?

A: The fax transaction took place using Error Correction Mode. For more information, see the section on ECM.

Q: I called the number 011-555-555-1212, but not all of the digits appear on my Fax Report. Why didn't the whole number appear, and how can I be sure my document was transmitted to the right location?

A: The numbers you enter using the fax keypad are temporarily stored in a memory "buffer." That means the last part of the phone number is all that the fax machine's buffer remembers. An easy way to avoid getting incomplete telephone numbers on your printouts is to store your most frequently used numbers as one-touch keys or speed-dial numbers. Numbers stored in the autodialer will appear in their entirety on your reports.

Receiving Fax Messages

Q: My fax never answers. What's wrong?

A: Check and make sure your fax is properly connected to a working outlet and phone jack. (See page 6 for installation instructions.) If you are using a second device with your fax, make sure it is connected properly, and make sure your fax machine is set up for use with a second device. If you're using an answering machine with your fax, make sure the LCD displays **Ans Ready** (see page 7). Call your telephone company if you continue to have problems.

Q: Sometimes when I answer my fax I hear a beeping sound that repeats every few seconds. Is this a fax?

A: Yes. When you hear a beeping sound, someone is trying to send you a fax. Next time, press **Start** and hang up to receive the fax message.

Q: Does my fax have to be plugged in to receive a message?

A: Yes. Your phone will ring if the phone line is connected, but you can't receive a fax unless your fax machine is plugged in. Make sure your fax machine is plugged in all the time so you never miss an important reception.

Q: Can I receive a fax if I'm using the phone on my machine?

A: You can receive a fax from the person you're talking to. When they have a document ready in their machine's feeder, press **Start**. However, like your phone at home, your fax machine can only handle one call at a time.

Polling

Q: What's polling used for?

A: Polling lets you automatically "pull" a document from another fax machine's document feeder. You can poll anytime you need to retrieve information and don't want the source to pay for the phone call. With polling, you pay for the call and get the information you need.

Copies

Q: A black line is appearing on the back of my received pages and copies. What's wrong?

A: It's time to replace the paper roll. For best results, use Muratec-brand 164-foot paper.

Q: One of my fax copies has faded so much that it's unreadable. What happened?

A: The fax copy probably came in contact with window cleaner or some other solvent or its vapors. Your fax copies should be stored away from cleaners, solvents, and PVC vinyls.

Q: Remote operators have complained that they call my fax and hear my answering machine message, but are cut off before they can send a fax. What happened?

A: The outgoing message you have left on your answering machine is probably too long. The remote machine will only wait a few seconds to hear fax tones. To ensure that you receive fax transmissions, change your outgoing message so it is shorter than 10 seconds long.

Telephone Features

Q: My fax machine's speaker phone doesn't work.

A: The monitor on your fax is not a two-way monitor. The monitor is used for off-hook dialing and hands-free fax transmissions only, not for voice conversations. You can't talk to your callers using the monitor.

How Your Fax Works

Your fax works on ordinary telephone lines, so it's easy to understand fax operation if you compare it to the way a regular telephone works. Having a fax, in fact, is a lot like having a telephone with bonus features.

The way fax machines work is closely regulated by international standards. These standards ensure the compatibility of your fax machine with the millions of other fax machines worldwide, but they also limit the way your fax can be used with other telephones or answering machines.

The concept of how a fax works is simple:

When you insert a page into your fax machine's document feeder, a special scanner in your fax examines the information on the page. Then the fax translates that information into a numeric code. The fax then compresses this code so it can be sent rapidly over the telephone line. In this regard, the only difference between a fax call and a regular telephone call is the content of the transmission: an image is sent instead of your voice.

When you receive a fax call, your fax will ring in exactly the same way a voice call would. If your fax is operating in the T/F Ready mode and you have other telephone extensions on the same line, all the other phones will still ring. In fact, there is no way to tell if an incoming call is from a fax or from a person until you or your fax machine answers the line.

You'll know it's a fax call if you answer a call and hear a beeping sound that repeats every few seconds. This sound is the fax machine's way of identifying itself to other faxes. It's much like you making a voice call and identifying yourself, "Hello, this is Joe."

When you press **Start**, your fax responds to these signals using special receiving tones which are its way of responding to the other unit's "greeting." This acknowledgment—just like greetings exchanged between you and your friends—is called "handshaking."

FCC/DOC Information

FCC Regulations

Ringer Equivalence Number: 3.0B

Note: This equipment has been tested and found to comply with the limits for a Class A 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, 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 into 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.

Telephone Company Procedures

The goal of the telephone company is to provide you with the best service it can. In order to do this, it may occasionally be necessary for them to make changes in their equipment, operations, or procedures. If these changes might affect your service or the operation of your equipment, the telephone company will give you notice, in writing, to allow you to make any changes necessary to maintain uninterrupted service.

If you have any questions about your telephone line, such as how many pieces of equipment you can connect to it, the telephone company will provide this information upon request.

In certain circumstances, it may be necessary for the telephone company to request information from you about the equipment which you have connected to your telephone line. Upon request of the telephone company, provide the FCC registration number and the ringer equivalence number (REN) of the equipment which is connected to your line. Both of these numbers are listed on the equipment label attached to your fax machine.

The sum of all RENs on your telephone line should be fewer than five (5) in order to assure proper service from the telephone company. Sometimes, a sum of five (5) may not be usable on a given telephone line.

Note: This equipment is hearing aid compatible (HAC).

Notice: The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it was sent and an identification of the business or other identity, or other individual sending the message and the telephone number of the sending machine or such business, entity, or individual.

Type of Service

Your fax is designed for use on standard device telephone lines. Your fax connects to the telephone line with a standard jack called the USOC RJ-11C. Connection to telephone company-provided coin service (central office implemented systems) is prohibited. Connection to party line service is subject to State tariffs.

If Problems Arise

If any of your telephone equipment is not operating properly, you should immediately remove it from your telephone line, as it may cause harm to the telephone network. If the telephone company notes a problem, they may temporarily stop service. When practical, they will notify you before this disconnection. If advance notice is not feasible, you will be notified as soon as possible. When you are notified, you will be given the opportunity to correct the problem and will be informed of your right to file a complaint with the FCC.

In the event repairs are ever needed on your fax, they should be done by Muratec, or an authorized representative of Muratec. For information, contact the Customer Support Center (see page 43).

DOC Regulations

DOC Load Number: 20

This digital apparatus does not exceed Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Notice: The Canadian Department of Communications label identifies certified equipment. This certification means the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. Sometimes, the company's inside wiring associated with a single line individual service may be extended with a certified connector assembly (telephone extension cord). The customer should be aware that compliance with these conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any equipment malfunctions or repairs or alternations made by the user to this equipment may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority or electrician.

The Load Number assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the load numbers of all the devices does not exceed 100. The DOC Load Number for your fax is 20.

Limited Warranty

This warranty is made by Muratec ("Muratec"). This warranty is valid only on Muratec products purchased and used in the United States of America. This warranty applies to the product only while owned and used by the original purchaser (hereinafter referred to as the "Customer"). If ownership of the product is transferred, this warranty terminates. This warranty does not apply to any product in use for rental purposes.

This Muratec product is warranted against defects in material and workmanship for ninety (90) days commencing the date of original Customer purchase. If the product is defective in material and/or workmanship (normal wear and tear excepted) during the warranty period, Muratec or its authorized representative will, during Muratec's established service availability hours, make necessary adjustments and repairs, including at Muratec's option installation of replacement parts. Muratec's service availability hours are 8:30 a.m. to 6 p.m. Monday through Friday, excluding Muratec-recognized holidays. Muratec will complete the necessary adjustments and repairs within a reasonable time period, as dictated by the nature of the problem and by Muratec's service schedule. Replacement parts may have been used and/or reconditioned. Parts that have been replaced will remain the property of Muratec. This warranty is subject to the OBLIGATIONS and EXCLUSIONS set forth.

OBLIGATIONS

1. This warranty will be honored only on presentation of the original dated authorized Muratec bill of sale or Muratec dealer bill of sale or sales slip to an authorized Muratec service representative, authorized dealer or service center. For the name of your nearest authorized Muratec service center, contact Muratec, toll-free telephone number 1-800-347-3294.
2. During the warranty period, the Customer must notify Muratec by telephone of any defective product material and/or workmanship.
3. Transportation (including prepayment of freight and insurance charges) of the product to and from an authorized Muratec service center, designated by Muratec, is the responsibility of the Customer.
4. If Muratec provides maintenance or responds to a call which is outside the scope of this warranty, such maintenance shall be billed to the Customer at Muratec's then current rates for maintenance and parts and shall be due and payable in full upon receipt of invoice.

EXCLUSIONS

1. This warranty shall not cover a product with missing or altered original identification marks.
2. This warranty applies only to products that the purchaser has properly installed.

adjusted and operated in accordance with the instructions set forth in or provided with product literature. This warranty does not apply to any product which has been subjected to tampering, alteration, misuse, abuse, neglect, improper installation or transportation damage. Nor does it apply to costs for any service requested for demonstration or to confirm proper operation of this product.

3. This warranty shall not apply to adjustments, repairs or replacements necessitated by any cause beyond the control of Muratec (whether foreseeable or not) including, but not limited to, any malfunction, defects or failure caused by or resulting from any of the following: improper unpacking or installation, unauthorized service or parts, or improper maintenance or cleaning, modification or repair by the Customer, accident (including without limitation, unavoidable accidents), fire, flood or other acts of God, improper telephone or electrical power or surges thereof, interconnection with or use of non-compatible equipment or supplies (including paper), or placement of the product in an area which does not conform to Muratec space, electrical and/or environmental requirements.

4. Muratec will not be required to make adjustments, repairs or replacements if the product is installed or used at a location deemed by Muratec to be hazardous to health or safety, or if Muratec is not provided with free and reasonable access to the product and a telephone during service availability hours, or if the product location is not accessible by an authorized Muratec service vehicle.

EXCEPT AS EXPRESSLY SET FORTH ABOVE AND EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, MURATEC MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED (INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY ARISING FROM COURSE OF DEALING OR USAGE OF TRADE) AND MURATEC EXPRESSLY DISCLAIMS ALL WARRANTIES NOT STATED HEREIN. IN THE EVENT THE PRODUCT IS NOT FREE FROM DEFECTS AS WARRANTED ABOVE, THE CUSTOMER'S SOLE REMEDY SHALL BE REPAIR OR REPLACEMENT AS PROVIDED ABOVE. UNDER NO CIRCUMSTANCES SHALL MURATEC BE LIABLE TO THE CUSTOMER, OR TO ANY USER, FOR ANY DAMAGES, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, EXPENSES, LOST PROFITS, LOST SAVINGS OR ANY OTHER DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE MURATEC PRODUCT, EVEN IF MURATEC OR ITS REPRESENTATIVES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some States do not allow the exclusion or limitation of incidental or consequential damages and some States do not allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from State to State.

Index

A

AC Plug 3
 Activity journal 34
 setting 25
 Adding document length for TTI 27
 Adjusting monitor volume 7
 Ans Ready reception mode 13, 14
 Answering calls manually 13
 Answering machine
 modifying your outgoing message 8
 using with your fax 7, 14
 Autodialer 22
 entering speed-dial numbers 23
 scrolling through available characters 22
 speed-dial numbers 23
 tips on entering numbers 22

B

"Being Called" display message 15
 Block junk fax 11
 Broadcast transmission 4, 17 - 18, 34

C

Call request 26
 Call-waiting service 34
 Cancelling delayed commands 19
 Caring for your fax 32
 "Check Rec. Paper" message 30

"Check Remote Fax" message 30

Cleaning tips 32

Clearing all settings 12

Clock

 See Date and time

"Close Cover" message 30

Compatibility 5, 34

Contact image sensor, cleaning 32

Contrast 16

Copies 21

Copy key 4

Copy tray 2, 7

Corrective cleaning 32

Cover, top 3

Custom software settings 27

Customer service 43

D

Date and time 10

Delayed broadcast 18

Delayed commands 19

 cancelling 19

 entering 18

 reviewing 19

Delayed commands, printing a list of 20

Delayed transmission 18

Dialing access codes 11

 operation with junk fax barrier

Dialing options 24

Dialing pauses 20, 24

Dimensions

 original document 5, 16, 36

 machine 5

Dip switch settings 27, 35

"Directory Full" message 23

DOC Load Number 41
 DOC Regulations 41
 Document exit, original 3
 Document feeder 3, 5
 Document feeder rollers, cleaning 33
 Document guides 3
 Document hopper 3
 Document jams, clearing 29
 Documents
 printing of, stored in memory 20

E

ECM (Error correction mode) 20
 Electrical requirements 6
 Error alarm 38
 Error codes 30
 caused by the remote fax 30
 Error codes on an incoming fax 31

Group 3 35
 Group 3 superfine resolution 16

H

Halftones
 See Grayscale
 Handset
 connecting the 6
 transmission with the 17
 "Hang up phone" message 30
 Hearing aid compatibility 41
 Help line, toll-free Muratec 43
 Hold key 4, 9
 using to enter dashes in autodialer 24
 How a fax works 40

F

Fallback 5, 35
 Fax Ready reception mode 13
 Fax report 25, 35
 Fax, setting up your 6
 Fax, tips for using 2
 FCC regulations and digital device certification 41
 Fine resolution 16
 Flash/Pause key 4, 24

Inserting pages in document feeder 16
 Installation
 location of 6
 of answering machine 7
 of copy tray 7
 of paper roll 8
 of second telephone 7
 of power cord 7
 warnings 6
 International calls 38

G

Glossary 34
 Grayscale 5, 16, 35

J

Journals and reports 39
 Junk fax barrier 11

K

Keypad 3

Normal resolution 16
 Number of rings, setting 28
 Numeric keypad 4

L

Layout
 fax 3
 keypad 4
 LCD (Liquid Crystal Display) 3 - 4, 35
 LCD error messages 30
 Location ID 22, 35
 Long-distance calls, monitoring 9

O

One-touch keys 4
 entering 22
 erasing 23
 printing a list of 23
 programming 22
 using same key for fax and phone number 22
 One-touch labels 4
 Out-of-paper reception 15
 Outgoing message of your answering machine 8

M

Maintenance of your fax 32
 Memory 5
 clearing your fax's 12
 printing documents stored in, 20
 Memory reception when out of fax paper 15
 Memory transmission cancelling 17
 setting 17
 Mode key 4
 Modem 5
 Monitor, volume control 3, 7
 Monitor/Call key 4, 9
 Multiple copies 21

P

Paper 2, 5
 how to order 8
 low warning 15
 Paper feed roller, cleaning 33
 Paper jam sensor, disabling 27
 Paper tray 3
 PBX, operating your fax with a 36
 Phone 2 jack 3, 7
 Phone number, entering yours into fax
 See TTI
 Phone requirements 5 - 6
 Photograph
 See Grayscale
 Polling 26, 36
 Poor copy quality 39
 Power consumption 6
 Power cord 2
 Power loss
 printing erased commands after a 20
 Power requirements 5

N

Name, entering yours into fax
 See TTI

Printing a list of delayed commands 20
 Printing an activity journal 25
 Printing documents stored in memory 20
 Printing erased commands 12
 Printing user settings 29
 Printing width 5, 35
 Problem solving 4
 Program key 4

Q

Questions and answers 38
 Quick set-up 6

R

Receive/Tone Key 4
 Reception 13
 answering a fax call from another room 14
 answering a fax call from another room 14
 answering calls manually 13
 out-of-paper, into memory 15
 polling 26
 questions about 39
 silent detect 28
 silent fax detection 15
 Redial
 automatic 20
 manual 9
 Redial key 4, 20
 Relay broadcast initiation 19
 Resolution 5, 16, 36
 setting your 11
 Reviewing delayed commands 19
 Ring number, setting 11
 Ringer Equivalence Number 41
 Ringer Volume Control 3

S

Scanning method 5
 Scanning width 5, 27, 35
 Second telephone
 installation 7
 using with your fax 14
 Sending a fax 16
 Sending a fax document outside the U.S. 38
 Service 43
 "Set Page Again" message 30
 Setting

 clearing memory 12
 date and time 10
 ECM (Error Correction Mode) 20
 fax resolution 11
 number of rings 11, 28
 one-touch numbers 22
 printing your 12
 silent mode 12
 the activity journal 25
 the fax report 25
 your TTI 10
 Setting up your fax 6
 Silent fax detection 15, 28
 Silent fax operation in T/F Ready 14
 Silent mode 12
 Special communications features 25
 Specifications 5
 Speed-dial numbers 4, 23
 Standby power consumption 6
 Start key 4
 Stop key 4
 Subscriber ID
 of remote unit 11
 Superfine resolution 16

T

T/F (Tel/Fax) Ready Reception Mode 13, 14
 Tel Ready reception mode 13

Telephone call timer 9

Telephone company 41

Telephone Consumer Protection Act of 1991 41

requirements of fax users 10

Telephone features 9, 40

Telephone line, connection 3

Thermal head, cleaning 33

Time

See Date and time

Timing your telephone calls 9

Toll-free Muratec help line 43

Tone/Rotary setting 3, 6

Transferring a fax call from a second phone 14

Transmission 16 - 17

automatic redial 20

broadcast 17

cancelling of delayed commands 19

delayed 18

delayed commands 18

from memory 17

reasons for varying speeds 39

relay broadcast initiation 19

reviewing delayed commands 19

setting unlimited page length for 27

with the monitor 17

Transmission speed 5

"Transmit Again" message 30

Troubleshooting 30, 41

TTY (Transmit Terminal Identifier) 10, 37

U

User settings 10

V

Voltage requirements 6

Volume, adjusting monitor 7

W

Warranty 43

Weight 5

Order Number: OMM1020



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