

Mac Rescue™

Installation Manual

Precautions:

Your Mac can be damaged by static discharges. To minimize the risk of giving your computer an accidental shock, precautions must be taken. A grounding wrist strap should be used. Working on an anti static mat will also reduce the risk of damage to the computers' circuits. Avoid working in carpeted rooms, or in a low humidity environment, as this increases the static risk.

Just as you can shock the circuitry inside your Mac, it can give you a shock, too. The analog board inside your Mac contains dangerous voltage levels long after you shut the computer down. To protect yourself, wait at least three hours after you last power up your Mac before opening the case.

Tools needed:

Mac Opener Tool
Grounding Wrist Strap
Small Flat Blade Screwdriver

Opening up your Classic Macintosh:

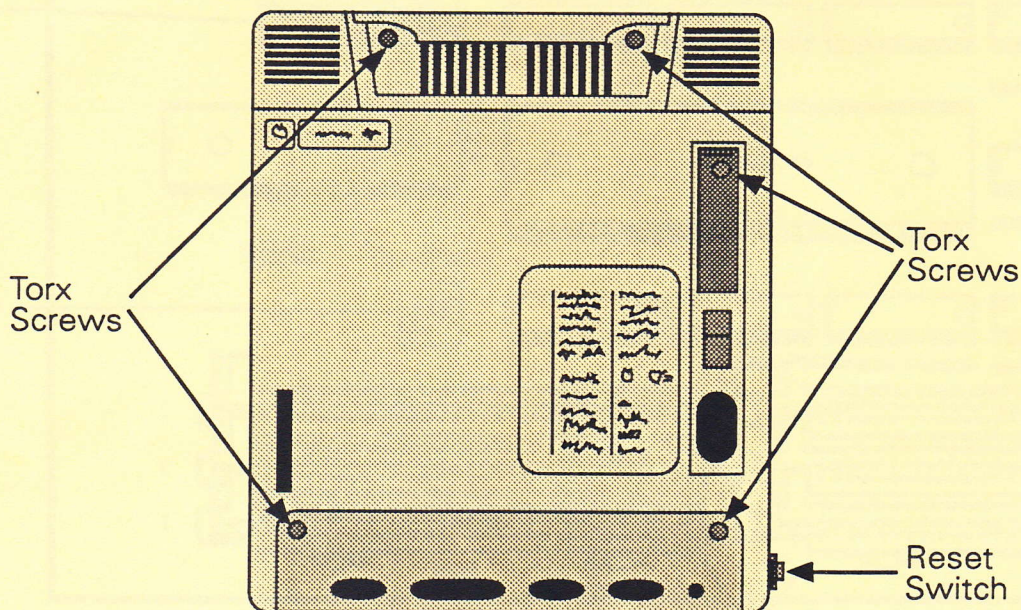
1) Remove the battery door on the back of the computer. Set your Mac screen side down on a soft flat surface. Use the TORX end of a Mac Opener Tool to remove the five screws holding the back of the case in place.

2) If one is installed, remove the reset switch with the screwdriver. Use the disc end of your Mac Opener Tool to loosen the Mac case. Lift the case up and off the Mac. Remove the foil shield from the bottom of the frame.

3) Unplug the disk drive cable and the power connector from the motherboard. Be very careful not to bump the yoke of the CRT tube as it is very fragile.

4) Slide the motherboard up and out of the frame.

"Classic Mac" Case



To Install the 128K Enhanced ROMs (512KE owners skip this step):

1) Locate the two socketed ROM chips on your motherboard (labeled ROM HI and ROM LO). To remove them from the sockets, work the blade of your small flat blade screwdriver between the ROM chip and its' socket. Rotating the screwdriver will then push the ROMs out of their sockets.

2) Insert the 128K ROMs into the sockets with the notch in the chip (indicating pin #1) facing toward the 68000 CPU. Be extremely careful that the ROMs' leads are not bent in the process. It is best to first insert one side of the ROM, then guide the other side in with a small, flat object (a SIMM works great for this).

NOTE) If your 128K ROMs are not labeled HI and LOW, here are the corresponding Apple part numbers:

ROM HI: 342-0341

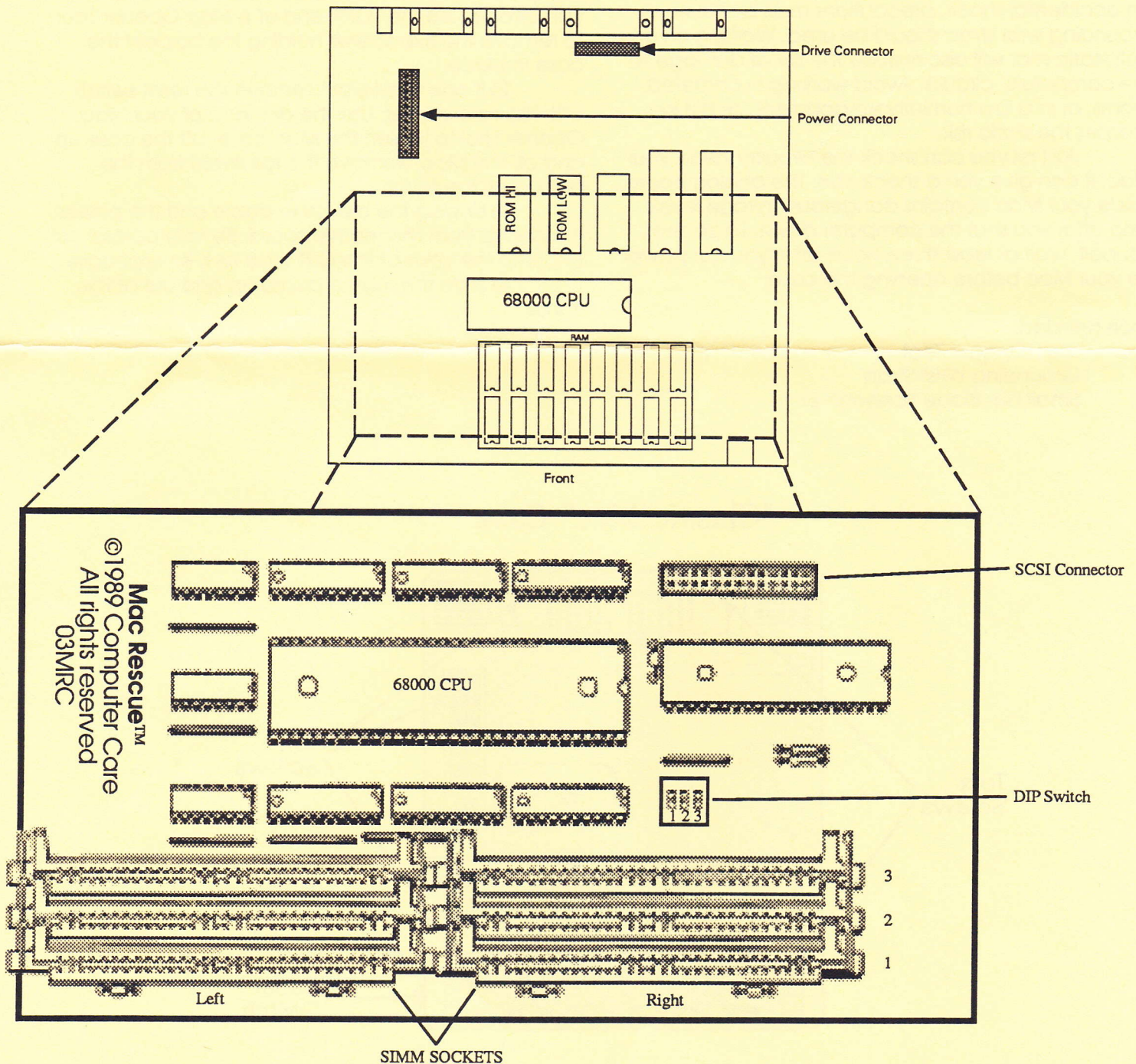
ROM LOW: 342-0342

3) If you are also installing an 800K Disk Drive, now is the time to do this. The installation is very simple, unscrew the old drive and discard it, then attach the new 800K drive in its' place. Use the new ribbon cable that comes with your drive, as the old cable will cause drive malfunctions.

Install the KILLY Clip on the 68000 CPU:

(Instructions for this procedure are found on a separate page)

"Classic Mac" Motherboard



To Configure your Mac Rescue™:

1) See TABLE 1 for the proper DIP switch settings for your particular memory upgrade. Improper settings of this switch will cause either memory errors or only part of the installed memory to be recognized.

2) Now install the SIMMs on your Mac Rescue™ board. See TABLE 2 for the proper placement of SIMMs for your particular upgrade. Insert the SIMMs into the sockets at a 75° angle and rotate downwards until they snap into place. Make sure the plastic locking tabs engage around both sides of each SIMM.

To Plug your Mac Rescue™ onto your motherboard:

1) Align the pins of the KILLY Clip with the 64 pin socket on the underside of the Mac Rescue™ board. Sight between your motherboard and the Mac Rescue™ board to make sure the pins align correctly.

2) Set the motherboard on a flat surface. Apply downward pressure to both sides of the 68000 CPU on the Mac Rescue™ board. The pins on the KILLY Clip should insert all the way into the socket of the Mac Rescue™ board. It is necessary to press down quite hard to get the board to seat properly (approximately 50 pounds of force is required).

TABLE 1

COMPUTER TYPE	TOTAL MEMORY	S1	S2	S3
128K	1 MEG	OFF	OFF	OFF
128K	2 MEG	OFF	OFF	ON
128K	4 MEG	OFF	ON	ON
512K	1 MEG	ON	OFF	OFF
512K	2 MEG	ON	OFF	ON
512K	2.5 MEG	ON	ON	OFF
512K	4 MEG	ON	ON	ON

TABLE 2

(See diagram on Page 2 for SIMM slot locations)

COMPUTER TYPE	TOTAL MEMORY	SIMM SLOTS 1 LEFT & 1 RIGHT	SIMM SLOTS 2 LEFT & 2 RIGHT	SIMM SLOTS 3 LEFT & 3 RIGHT
128K	1 MEG	256K SIMMs	256K SIMMs	(EMPTY)
128K	2 MEG	1Meg SIMMs	(EMPTY)	(EMPTY)
128K	4 MEG	1Meg SIMMs	1Meg SIMMs	(EMPTY)
512K	1 MEG	256K SIMMs	(EMPTY)	(EMPTY)
512K	2 MEG	256K SIMMs	256K SIMMs	256K SIMMs
512K	2.5 MEG	1Meg SIMMs	(EMPTY)	(EMPTY)
512K	4 MEG	1Meg SIMMs	1Meg SIMMs	(EMPTY)

To Install the motherboard back into your computer:

1) The "Classic" Macintosh motherboard will not simply slide back in to the frame with our Mac Rescue™ attached. To do this, set your Mac screen-side-down with the bottom of the case facing you. Insert the right side of the motherboard into the slotted flange of the frame. With the flat blade screwdriver, pry the left side of the frame around the motherboard until it fits into the left slotted flange.

2) Next, the SCSI cable should be plugged into the header on the Mac Rescue™ board. The center polarizing tab on the connector fits into the slot on the header (this faces toward the front of the computer). There is a hole in the frame directly under the back end of the floppy disk drive where you can access the header.

3) The power supply cable and the floppy drive cable can now be plugged into their respective headers. As with Mac Rescue's™ SCSI connector, it is impossible to plug these in backwards (the connectors are polarized and simply will not fit if it is attempted).

At this point, you should turn the computer upright again, plug the power cord and the mouse in, and turn on your Mac. If it behaves normally (ie. the familiar "beep" sound is heard and the screen image shows a disk icon with a "?" inside) proceed to shut the computer off and continue reassembling the case. See Troubleshooting Tips if there are problems.

Troubleshooting Tips:

If you do not hear the familiar "beep" when you turn the power switch on, examine the screen image that appears. A black screen with a "sad Mac" icon in the center is an indication of a memory problem. If this appears, write down the code number that is under the icon (if it is legible), and shut down your machine.

Inspect your work carefully. Make sure the Mac Rescue™ board is plugged firmly into the KILLY Clip. If this appears correct, remove the motherboard (in reverse order that you installed it) and double-check the DIP switch settings and SIMM placement. Correct if necessary. Occasionally, a memory error is caused by corrosion on the SIMM edge connector. Remove the SIMMs and shine the edge connector fingers with a pencil eraser, then re-install the SIMMs.

Re-insert the motherboard, connect the cables, and try to power the computer up once more. Again, write down the code number under the "sad Mac" icon, if it appears.

If all this fails to get your "Classic" Macintosh up and running, call Computer Care at (800) 950-2273 and ask for tech support. We have a staff of knowledgeable people to help you with any problems you may encounter.

To Reinstall the back cover of your Mac:

1) Holding the back of the case directly over the frame with one hand, feed the new battery door with its' SCSI connector through the opening in the back cover. Lower the case over the frame. Before pushing the case into place, feed the ribbon cable into the computer until the new battery door is in place. Once this is accomplished, you can fit the back cover into its' correct position.

2) Secure the back cover with the TORX head screws. The screw that originally went inside the battery compartment should be inserted through the screw hole in the new battery door. Be careful not to overtighten the screws.

Congratulations! You have now "Rescued" your Classic Mac!

Killy Clip Installation and Removal

Precautions:

A grounding wrist strap should be used. Read these instructions before attempting this procedure. The Killy Clip can be damaged by incorrect installation.

Tools Needed:

Flat blade screwdriver (which should ideally have a blade which is 3/8" wide by 1/32" thick).

About the Killy Clip:

Examine your Killy Clip. The pins should extend vertically from the top of the clip. If necessary, straighten any pins that are bent.

Examine the underside of the Killy Clip. At both ends of the clip are securing flanges that fit under the ends of the CPU chip, once the clip is installed. These flanges keep the Killy Clip from coming loose.

A note on 68000 CPU chips:

The 68000 CPU chip comes in two basic packages: the plastic DIP and the ceramic DIP (DIP stands for Dual In-line Package). A ceramic chip is identified by its' grey color.

If your "Classic" Mac has the ceramic CPU chip, there may be U-shaped plastic spacers on both ends of the chip. These must be removed before installing the Killy Clip. Simply push them off with your fingers or a screwdriver.

To install the clip:

1) Place the clip over the CPU chip with the flange on one end of the clip centered on the body of the CPU chip. Do not hook the flange under the CPU chip at this point. Holding the Killy Clip firmly, push the clip towards the other end of the CPU. The end of the clip that is resting on the CPU should bend outward slightly.

2) While maintaining pressure on the clip, insert the flat-blade screwdriver into the slot on the opposite end of the clip. Use the screwdriver as a lever to gently bend the end wall of the clip outwards while sliding the clip down over the CPU chip. As you do this, the handle of the screwdriver should be angled toward the opposite end of the clip. Remove the screwdriver once the flange is resting on the body of the CPU chip.

3) At this point, apply downward pressure to one side of the Killy Clip (either above the word "KILLY" or below). The clip should snap into position on one side of the CPU chip, with the side of the Killy Clip resting on the circuit board.

4) Now push the other side down. There should be an audible "snap" as the flanges fit under the CPU chip. It may take quite a bit of force to completely seat the Killy Clip. When the clip is installed correctly, both sides of the Killy Clip should touch the circuit board.

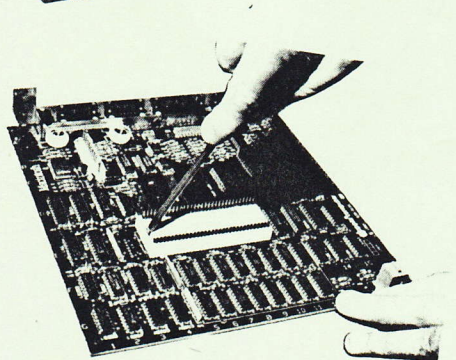
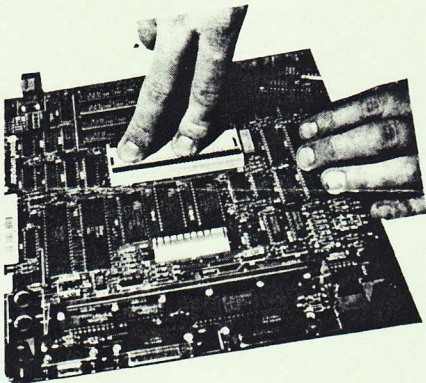
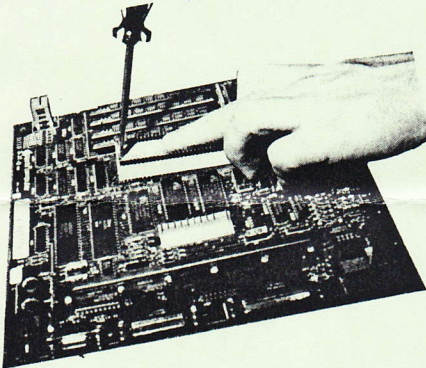
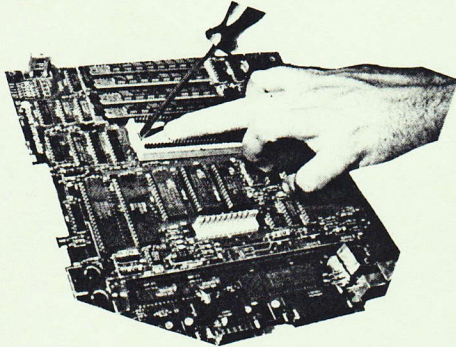
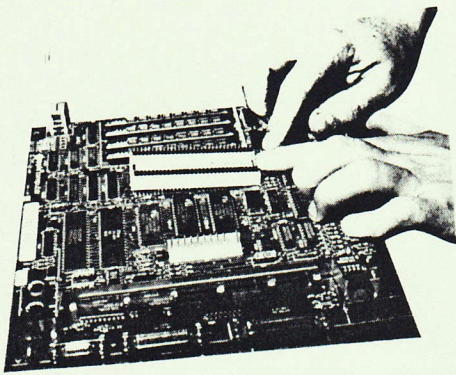
To Remove the clip:

1) Locate one of the slots in the top of the clip next to the word "KILLY". Place the blade of the screwdriver into the slot and angle it towards the opposite end of the clip. The handle of the screwdriver should be over the opposite end of the Killy Clip in angled correctly.

2) At this point, simply push down on the screwdriver. The side of the clip will be released as the screwdriver slides down between the inside edge of the clip and the CPU chip.

3) Now pull up on the screwdriver until the end of the clip just clears the CPU chip.

4) Insert the screwdriver blade in the opposite end of the clip and use the same method to release this end. The Killy clip should be easy to remove now by gently pulling it up and off the CPU chip.



SOFTSTEP™ I (SSI), an upgrade to 2 megs for the Mac Plus / SE, contains a kit of four SSI modules with 256K of memory and a SIMM socket on board. Your four standard SIMMs are removed from the computer, and snapped into the sockets on board the SSI modules. This upgrades each low-profile 256K SIMM to 512K. To install, simply snap the assembled SSI modules into the original sockets in the computer. The computer recognizes the full 2 megabytes of memory with no hardware or software modifications to the computer. SSI is E-machine certified.

SOFTSTEP™ III (SSIII), allows you to build a one meg SIMM for the Mac II or IIX from four low-profile 256K SIMMs. Each SSIII module has four sockets (1 for each 256K SIMM) and control circuitry to complete the upgrade. Each SSIII becomes a one meg SIMM, working side by side with other SSIII's and SIMMs. To install, simply snap the assembled SSIII modules into the original sockets in the computer. Any number of SSIII's can be used in the Mac II(x), as long as the standard memory configuration requirements are satisfied. The SSIII upgrades the MacII/IIX to 4,5, or 8 megs without any modifications needed to the computer.

SOFTSTEP™ IV (SSIV), allows you to upgrade the Mac Plus to 2 megs, similar to the SSI, except that you supply all memory for the upgrade. Each SSIV module contains two sockets (1 for each low-profile 256K SIMM) and control circuitry which complete the upgrade. To install, simply snap the assembled SSIV modules into the original sockets in the computer. All four original sockets in your computer must contain a Softstep module with your two 256K SIMMS, in order to achieve a 2 megabyte memory configuration. There are no modifications needed to the computer to complete the 2 meg upgrade.

SOFTSTEP™ V (SSV), allows you to upgrade the Mac SE to 2 megs, similar to the SSI, except that you supply all memory for the upgrade. Each SSV module contains two sockets (1 for each low-profile 256K SIMM) and control circuitry which complete the upgrade. To install, simply snap the assembled SSV modules into the original sockets in the computer. All four original sockets in your computer must contain a Softstep module with your two 256K SIMMS, in order to achieve a 2 megabyte memory configuration. There are no modifications needed to the computer to complete the 2 meg upgrade.

MAC RESCUE™ upgrades enhanced 128K, 512K and 512KE Macs to the functionality of a Mac Plus. The Mac Rescue daughterboard snaps onto the motherboard of the enhanced Macs, there is no modification needed. Mac Rescue contains 6 SIMM sockets which build 1, 2, 2.5, and 4 megs of RAM. Standard 256K SIMMS and low-profile 1 meg SIMMS build the amount of RAM you need. A SCSI port is included on the Mac Rescue. All hardware connectors are included.

MAC OPENER TOOL, for opening Mac Plus and SE computers. Combination torx screwdriver and splitter tool for opening the case.

SIMMS:

- 1 MEG HIGH PROFILE (DIP)
- 1 MEG LOW PROFILE (SOJ)
- 256K LOW PROFILE SIMM

WARRANTY AND PRODUCT SUPPORT

All Computer Care products feature a money-back return policy and a one-year warranty. You may return products for any reason up to 10 days after you receive the merchandise. A five year warranty on 1 meg SIMMS and a one year warranty on all other products protects you against defects in material and workmanship. Installation assistance is available on our toll free number, 1-800-950-CARE (2273).

INSTALLATION

Computer Care includes an illustrated, step-by-step installation guide with every product. Diagrams show exploded views and different perspectives of the work areas to aid you, the installer. All of our products can be installed in about 30 minutes. Macintosh opening tools for Mac Plus and Mac SE computers are also available from Computer Care.

AVAILABILITY

Computer Care products are usually in stock and ready to deliver. A representative can advise you of any exceptions to this.

PAYMENT

Computer Care accepts VISA and MASTERCARD credit cards. For COD orders the UPS driver may be paid with cash, money order, certified check, or a cashier's check. Prepayments with check or money order are also acceptable.