

*Easy Rooter Junior*TM

Operating Instructions

For 2" through 4" lines
(50mm – 100mm)



Your Easy Rooter Junior is designed to give you years of trouble-free, profitable service. However, no machine is better than its operator. We therefore suggest you read these instructions through carefully before using your machine on the job. This will enable you to operate the Easy Rooter Junior more efficiently and more profitably.

Failure to follow these instructions may cause personal injury to operator or damage to equipment.

SAVE THESE INSTRUCTIONS!

General
PIPE CLEANERS

Safety Instructions



WARNING



Machine must be plugged into properly grounded outlet. Failure to follow instructions may result in serious injury or death.



Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.



Wear leather gloves provided with the machine. Never grasp a rotating cable with a rag or cloth glove.



Use safety equipment. Always wear safety glasses and rubber soled, non-slip shoes.



Never operate machine with belt guard removed. Fingers can get caught between belt and pulley.



Do not overstress cables. Overstressing cables may cause twisting, kinking, or breaking of the cable and may result in serious injury.

READ AND UNDERSTAND ALL INSTRUCTIONS!

Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

Call General's customer service department at 412-771-6300 if you have any questions.

SAVE THESE INSTRUCTIONS!

Work Area Safety

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

Electrical Safety

1. **Grounded tools must be plugged into an outlet, properly installed and grounded in accordance with all codes and ordinances.** Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with UL approved tester or a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
2. **Machine must have a properly functioning ground fault circuit interrupter on the power cord.** Before using, test the Ground Fault Circuit Interrupter (GFCI) provided with the power cord to insure it is operating correctly. GFCI reduces the risk of electric shock.
3. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
4. **Don't expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
5. **Do not abuse the cord.** Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. **Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.
6. **When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W".** These cords are rated for outdoor use and reduce the risk of electric shock.
7. **Use only three-wire extension cords which have three-prong grounding plugs and three-pole receptacles which accept the**

tool's plug. Use of other extension cords will not ground the tool and increase the risk of electric shock.

8. **Use proper extension cords.** Insufficient conductor size will cause excessive voltage drop and loss of power.
9. **Extension cords are not recommended unless they are plugged into a Ground Fault Circuit Interrupter (GFCI) found in circuit boxes or outlet receptacles.** The GFCI on the machine power cord will not prevent electric shock from the extension cords.
10. **Keep all electric connections dry and off the ground. Do not touch plugs or tools with wet hands.** Reduces the risk of electric shock.

Personal Safety

1. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
2. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
3. **Avoid accidental starting. Be sure switch is off before plugging in.** Plugging in tools that have the switch on invites accidents.
4. **Remove adjusting keys or switches before turning the tool on.** A wrench or key that is left attached to a rotating part of the tool may result in personal injury.
5. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
6. **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Tool Use and Care

1. **Use clamp or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
2. **Do not force tool. Use the correct tool for your application.** The correct tool will do the

job better and safer at the rate for which it is designed.

3. **Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
4. **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventative safety measures reduce the risk of starting the tool accidentally.
5. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
6. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control.
7. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
8. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may become hazardous when used on another tool.
9. **Keep handles dry and clean; free from oil and grease.** Allows for better control of the tool.

Tool Service

1. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified repair personnel could result in injury.
2. **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.

Specific Safety Information

1. **Wear leather gloves provided with the machine. Never grasp a rotating cable with a rag or cloth glove.** Could become wrapped around cable and cause serious injury.
2. **Never operate machine with belt guard removed.** Fingers can get caught between belt and pulley.

3. **Do not overstress cables. Keep gloved hand on the cable for control when machine is running.** Overstressing cables because of an obstruction may cause twisting, kinking, or breaking of the cable and may result in serious injury.
4. **Position machine within two feet of drain opening.** Greater distances can result in cable twisting or kinking.
5. **Machine is designed for one-person operation.** Operator must control foot switch and cable.
6. **Do not operate machine in reverse (REV).** Operating machine in reverse can result in cable damage and is used only to back cutting tool out of an obstruction.
7. **Keep hands away from rotating drum and distributor tube. Do not reach into drum unless machine is unplugged.** Hand may be caught in the moving parts resulting in serious injury.
8. **Be careful when cleaning drains where cleaning chemicals have been used. Avoid direct contact with skin and eyes.** Drain cleaning chemicals can cause serious burns as well as damage the cable.
9. **Do not operate machine if operator or machine is standing in water.** Will increase risk of electrical shock.
10. **Wear safety glasses and rubber soled, non-slip shoes.** Use of this safety equipment may prevent serious injury.
11. **Before starting each job, check that the cable in the drum is not broken or kinked, by pulling the cable out and checking for wear or breakage.** Always replace worn out (kinked or broken) cables with genuine GENERAL replacement cables.
12. **Only use this tool in the application for which it was designed. Follow the instructions on the proper use of the machine.** Other uses or modifying the drain cleaner for other applications may increase risk of injury.

Ground Fault Circuit Interrupter (GFCI)

Your machine is equipped with a ground fault circuit interrupter, which protects you against shock if a short circuit should occur. Check that receptacle is properly grounded. Test the GFCI before each use.

1. Plug into 120-volt receptacle.
2. Push test button. Indicator light will go out and power to machine should cut off.

3. If light does not go out when test button is pushed, equipment should not be used until proper repairs can be made.
4. To restore power after test, push reset button. With the reset button depressed, if the machine doesn't start, stops while running, or if the operator experiences a mild shock, **do not use the machine!** Take it to a motor repair center or return it to the factory for repairs.



Note: The section of cord between the wall plug and the GFCI is not in the protected circuit.

Cable Application Chart (Table 1)

Cable Size	Pipe Size	Typical Applications
1/2"	2" to 4"	Laundry Tubs, Roof Vents, Stacks (No Roots).

Cutter Application Chart (Table 2)

Cutter	Cat. #	Typical Applications
Arrow Head 	AH	Starting tool, ideal for cutting and scraping.
1-1/2" U-Cutter 	1-1/2UC	Starting tool, to remove loose objects.
2" Side Cutter Blade 	2SCB	Finishing tool, for scraping inside edges of pipe.
Boring Gimlet 	BG	To remove loose objects and broken cables.

Note: There are no fixed rules for what cutter to use. If one tool doesn't take care of a stoppage, simply try another.

Operating Instructions

1. Place machine within approximately two feet of drain opening. If you cannot get the machine this close to the opening, run the cable through a hose or pipe to prevent cable whipping.
2. Insert cutting tool in female connector at the front of the cable and tighten in place **firmly** with the connecting screw **and** lock washer. A good tool to start with is the Arrow Head or 1-1/2" U-Cutter. After the line is opened, follow with larger blades which scrape the inside edges of the pipe, assuring a real cleaning job.
3. Pull the cable out of the cage and put it into the drain until it will not go any farther. Then pull another foot of cable out of the cage so that an arc is formed between the machine and drain. Tighten the thumb screw on the front of the cage firmly against the cable.

- Put the motor switch in the **Forward** position. Then, with both gloved hands on the cable, step on the foot pedal. Guide the cable into the line with a firm, even pressure.



**DO NOT USE TOO MUCH FORCE –
LET THE CUTTER DO THE WORK.**

- Do not leave too much slack in the cable since this will cause whipping. If the cable starts to bend or build up too much twist, release pressure on the foot pedal and rotate the cage in the opposite direction to relieve the twist on the cable. Push any excess cable back into the cage and then continue.
- When the slack cable has been fed into the drain, stop the machine by taking your foot off the pedal. Loosen the thumb screw and pull another foot of cable from the cage. Tighten the thumb screw and continue feeding. Repeat the procedure until the drain line has been cleared.
- If you are having trouble getting around bends, try putting the machine in reverse while applying steady pressure. Do not do this for more than a few seconds at a time since this could cause tangling in the cage or kinking.
- If you still cannot get around the bend, you are probably using too large a cable. You may need to switch to a smaller machine (See Cable Application Chart).
- After the line is opened, return the cable to the cage with the motor turning **Forward**. This is important to prevent tangling the cable in the cage or in the line.

Hint: It's often helpful to have a small stream of water running in the line to wash the cuttings away while the machine is in operation and after.

! CAUTION

Do not use reverse to pull the cable out of the drain. Always run the machine in **Forward**, whether you are feeding the cable into the line or pulling it out.

Special Operations

IF CABLE GETS CAUGHT IN LINE

The motor can be reversed to free cable if it gets caught in the line. Use the following procedure:

- Tighten thumb screw at front of cage firmly against cable.
- Move toggle switch on motor to reverse position.
- Pull on cable while the cage is turning in reverse.
- When the cable is freed, loosen thumb screw.
- Move the toggle switch to the forward position again.

! CAUTION

Do not run motor in reverse for more than a few seconds at a time since this could cause tangling in the cage or kinking.

IF CABLE TANGLES IN CAGE

This is almost always caused by using too much pressure when feeding the cable or by feeding the cable while running the machine in reverse. To untangle, rotate cage in opposite direction.

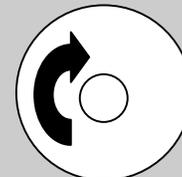
If cable has become badly tangled, which will not happen when machine is used properly, it may be necessary to pull the entire cable out of the cage and re-install it (See "How to Install Cable").

HOW TO INSTALL CABLE IN CAGE

- Push male end of cable through tube in front of cage. The end of the cable should be turned in cage so that it is pointing to your left (see diagram). Continue to push cable in until a full loop is in cage.



Note: The cable should lay in the cage in a clockwise direction.



2. Grasp end of cable and bend it toward the front of the cage so that the connector will slide onto bolt.
3. Put nut onto bolt and tighten firmly against connector.
4. Remove V-Belt and turn cage clockwise with one hand while pushing cable into cage with other hand. Replace V-Belt after cable is installed.

HOW TO EXCHANGE CAGES

1. Unscrew ring bolt in center of cage.
2. Lift belt guard off motor.
3. Push motor down far enough to slip V-Belt off.
4. Tilt Easy Rooter Junior on its back and lift cage off of shaft.
5. Reverse procedure to install cage.

Maintenance

To keep your machine operating smoothly, it is essential that all bearings and distributor tube bushings be lubricated. Oiling moving parts is particularly important where machine comes in contact with sand, grit and other abrasive material.

CABLE MAINTENANCE

To get maximum service from your cables, be sure that they are clean and well oiled. This not only provides running lubrication but greatly extends the life of the cables as well. Some users periodically pour oil directly into the cage. Then, as the cage turns, the cables get complete lubrication. Our SNAKE OIL is ideally suited for this purpose, since it not only lubricates the cables, it disinfects and deodorizes them as well.

TANGLED CABLE: If a cable loops over itself in the cage, it will not feed properly. Remove and reload the cable to restore function. If the cable kinks, it is evidence of abuse and results from the use of too much pressure or use of the wrong size cable for the line. Do not force the cable — Let the cutter do the work.

TROUBLE SHOOTING GUIDE (Table 3)

Problem	Probable Cause	Solution
Cable kinking, tangling breaking.	Cable is being forced.	Do not force the cable! Let the cutter do the work.
	Cable used in incorrect pipe diameter.	Use 1/2" cables in 2" to 4" lines (Do not use 1/2" cables on roots).
	Motor switched to reverse.	Use reverse only if cable gets caught in pipe – only for a few seconds at a time.
	Cable exposed to acid.	Clean and oil cables regularly.
	Cable worn out.	Cable can be repaired using "Quick Fix" of "Repair Sleeve." If cable has broken several times, replace it.
Cage stops while foot pedal depressed. Restarts when pedal is re-depressed.	Hole in pedal or hose.	Replace damaged component.
	Hole in diaphragm switch.	If no problem found with pedal or hose, replace diaphragm switch.
Cage turns in one direction but not other.	Faulty reverse switch.	Replace switch.

TROUBLE SHOOTING GUIDE (Table 3) Continued

Ground Fault Circuit Interrupter trips when machine is plugged in or when foot pedal is depressed.	Frayed power cord.	Replace cord set.
	Excess moisture in area.	Remove excess moisture from area.
	Short circuit in motor.	Take motor to authorized service center (Call General for Details).
	Faulty Ground Fault Circuit Interrupter.	Replace Ground Fault Circuit Interrupter.
Motor turns but cage does not.	Slip clutch slipping because cable is being forced.	Do not force cable. Do not allow too much slack between cable and machine.
	Slip clutch is worn.	Replace slip clutch.

**EASY ROOTER JUNIOR
Parts List**

CAT. NO.	DESCRIPTION	CAT. NO.	DESCRIPTION
EJ-100	Frame Complete	ER-204-F	Thrust Bearing
EJ-101	Frame Only	ER-204-G	Retaining Ring
EJ-102	8" Rubber Wheel (1)	EJ-205	20 ft. Power Cord with Plug & Ground Fault Circuit Interrupter
EJ-103	Axle	EJ-207	Air Foot Switch and Reverse Switch Assembly
EJ-103-A	Wheel Caps (2)	EJ-207-A	Box Only with Cover & Screws
EJ-103-B	Spacer Washers (2)	EJ-207-B	Foot Pedal and Hose
EJ-105	Handle with Knobs	EJ-207-C	Hose Clamp (2)
EJ-105-A	Handle Locking Knob (2)	EJ-207-D	Foot Pedal
EJ-106	Brake Rod	EJ-207-E	Power Switch Diaphragm
EJ-106-A	Roll Pin (1/8" x 1")	EJ-207-F	Air Hose
EJ-107	Brake Rod Handle with Knob	EJ-207-G	Reverse Switch Only (3-Way)
EJ-107-A	Plastic Knob	EJ-207-H	Rubber Switch Boot
EJ-107-B	Axle Retaining Pin (1/8" x 5/8")	EJ-208	V-Belt (47")
EJ-107-C	Brake Rod Latch with Screws	EJ-209	V-Belt Tension Spring
EJ-108	Drum Support Shaft	EJ-211	Belt Guard with Velcro
EJ-109	Bronze Thrust Washer	EJ-211-2	Belt Guard with Slot for Stud
EJ-110	Felt Washer	EJ-212	Motor Support Bracket with Bolts
EJ-111	Drum Hub Retaining Washer	EJ-212-A	Guide Screws (2)
EJ-112	Drum Shaft Retaining Bolt	EJ-213	Nuts, Bolts, Washers (4)
EJ-201	1/3 hp Capacitor Motor Comp. w/ Air Foot Switch, Reverse Switch Assembly & Ground Fault Circuit Interrupter	EJ-300	Cage with Hub and Bearings
EJ-201-C	Knob	EJ-302	Cage Hub with Bearings
EJ-204-1	Slip Clutch	EJ-302-A	Cage Hub Bearings (Set)
ER-204-A	Fixed Pulley Half	EJ-302-C	Bolts & Lock Washers (12)
ER-204-B	Spacer	EJ-303	Cable Locking Thumb Screw
ER-204-C	Moveable Pulley Half	GFI-EJ	Ground Fault Circuit Interrupter w/ Cord for Easy Rooter Junior
ER-204-D	Spring	EJ-DECAL	Set of Safety Decals
ER-204-E	Thrust Washer	EJ-VIDEO	Instructional Video

See back cover for Easy Rooter Junior Schematic Diagram