

This guide covers:

the Wizard years 1983-1990

the Wiz and Wizling years 1983-84

# owner's manual

WIZARD™ / WIZ™ / WIZLING™

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# Introduction

Inland routers are engineered to be simple to operate and highly durable. Years of experience with diamond tool technology have gone into the development of the finest glass routers available.

Please take time to read all of the instructions and helpful hints listed. By following them you will enjoy hundreds of hours of trouble-free use from your router.

## Safety Precautions- Read Carefully

Any grinding operation can cause a hazard to your eyes. Small particles of glass can be a nuisance or damaging to your eyes. Therefore, it is essential that you wear adequate safety glasses while using your router. **There is absolutely no reason not to wear eye protection. You should wear full eye goggles when using your router.** Do not rely on eye shield or face shield devices only. They do not provide adequate protection.

Great care was taken to manufacture your router as an electrically grounded machine. When used as designed, it is safe. Under no circumstances should the three prong electrical plug system be overridden. **Only use your router with a properly grounded electrical outlet that accepts the three prong electrical plug.**

## Setting Up Your Router

Your router comes ready to operate. The unit should be used on a flat, rigid surface. A desirable surface table height is 42". Set up your router in an area that would normally be used as a work area. After the unit is in place, remove the pink shipping tube from the motor shaft. Install the bit by securing the set screw against the flat side of the motor shaft with the allen wrench provided. (Note: to avoid damage which could result in making the bit difficult to remove, make sure the set screw is secured to the flat side of the motor shaft only.) Make sure the glass to be ground touches only the diamond band and not the brass core.

Next, install the "Bit-Sert™" into the "open grid" work surface. (See Fig III.) To do this, insert the back tabs first, then snap in the side tabs one at a time. To remove, grasp the "Bit-Sert™," then **gently** pry upwards against a side tab with a small screwdriver or the allen wrench that is supplied with the grinding bit

The Wizard is supplied with 5 different Bit-Serts. The Wiz is supplied with two, and the Wizling is supplied with one. On Wizard and Wiz models, use the Invisible Sponge Bit-Sert with the special grinding bit. For further information on your machine, refer to the Wizard, Wiz and Wizling sections of this manual.

After the reservoir has been filled, install the work surface by placing it over the locating posts. On the Wizling model, place the sponge behind the grinding bit, then install the splash guard behind the sponge by plugging it into the holes provided in the Bit-Sert. (The Wizard and Wiz models may not require a sponge when the Invisible Sponge bit-sets are used. Refer to the Wizard and Wiz sections of the this manual for more specific information.)

Before the unit is plugged into an electrical outlet, add water to the reservoir. The reservoir should be about 1/3 to 1/2 full. We highly recommend the use of a water soluble coolant. Inland "Router Coolant™" has been designed specifically for use with your router. It is available from your Inland Dealer.

Your router is unmanufactured with a three prong grounded electrical system. **Under no circumstances should you remove the third (ground) prong from the electrical cord. The unit should only be used with a properly grounded 110 volt electrical outlet. The grounded electrical system was established for your protection; under no circumstances should it be overridden or eliminated.**

## Operating Your Router

Now that the grinder is properly set up, you are ready to grind. If you have never used a diamond router, grind slowly at first. Develop speed after you feel comfortable using your router.

Start with a scrap piece of glass to test the cutting action of the diamond bit. Before grinding, lightly push the sponge into the grinding head to insure that it is adequately flooded with water and coolant. (Repeat this procedure whenever you begin to grind after the machine has been shut off or at any time that you notice a white build-up of ground glass on bit.)

The Wizard and Wiz model routers utilize a device known as the Invisible Sponge (patent pending) which eliminates the need for a sponge by automatically "pumping" coolant to the grinding bit. Refer to the Invisible Sponge section of this manual for further information.

As you begin to grind, use light pressure at first. Gradually increase pressure until you get a feel for the grinding action. Generally speaking, stock removal will be much faster and easier if the glass being ground is moved back and forth across the face of the grinding head.

If you have to make a deep cut into the glass in one specific area, it is best to use intermittent pressure. By using this technique, you will allow the sponge to clean the glass swarf from the diamond section and allow it to cut efficiently. This technique is also use on machines equipped with the "Invisible Sponge™".

Each WB-1 or WB-9 style grind bit supplied with your router has 5/8 of an inch of usable diamond surface. This is the greatest amount of usable diamond provided with any grinder available on the market today. Most stained glass is approximately 1/8 inch thick. Since the bit grinding surface is five times larger than the average thickness of your glass you should, by adjusting the bit up and down the shaft, be able to get five usable grinding surfaces out of each bit.

Ground glass can, under certain circumstances, dry to almost the consistency of concrete. It is important to keep your router free of ground glass, especially if it is not going to be used for several days.

Cleaning is very simple, the work surface has been designed to simply lift off for cleaning. After removing the work surface, use paper towels or a rag to clean the reservoir.

When installing a bit, lay a piece of glass on the work surface to use as an adjustment guide. Make sure the glass is fully in contact with the diamond band and not the brass core.

Be sure to use only the bits that have been designed for use with your router. It is important that the top of the plastic tube which surrounds the motor shaft is never exposed while the machine is in use.

The inland bit WB-8 should only be used when a WB-1 or WB-9 style bit is in place on the motor shaft. To install the WB-8, loosening the set screw, push the bit down to its lowest position, then install the WB-8.

## Your Router and Coolants

As indicated earlier, we highly recommend that a water soluble coolant be used in your router. Inland "Router Coolant™" is a high concentrate material with a high lubricity factor.

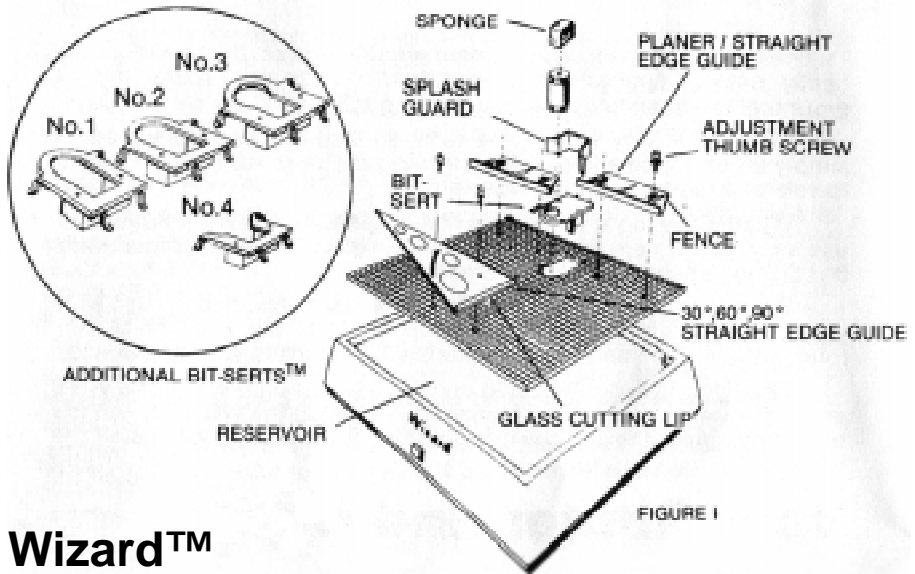
- 1) By using this coolant you will:
- 2) Make the bit cut freely and more efficiently by reducing friction
- 3) This will increase the life of your diamond bit.
- 4) The use of coolant will make clean up easier.
- 5) By using coolant you will further insure against the seizure of the bit to the motor shaft because the coolant will act as a corrosion inhibitor.

## Maintenance Of Your Router

A great deal of consideration was given the simplicity of maintenance of these units.

Since all Inland routers have permanently sealed and lubricated sleeve bearings, maintenance of these machines is limited to cleaning the sponge (Wizling model) and the unit itself.

When cleaning the router reservoir, be sure not to allow water to flow down between the motor shaft tube and the motor shaft. Water or coolant in that area can cause damage to the motor. It is recommended that the sponge be washed out frequently to remove ground glass particles. When the sponge is frayed and no longer contacts the bit it should be replaced.



## Wizard™

Your new "Wizard Router" is the most versatile glass router available today.

The new "Wizard Worksurface™" comes complete with planer/straight edge guides which allow the user to smooth the edge of irregular or rough pieces of glass easily and efficiently.

To use the planer attachment, adjust the fence on the left side of the work surface so that it is in line with the face of the bit. (See Figure II.) Next, adjust the guide on the right side so that it is behind the face of the bit. The ideal distance will depend on the roughness of the glass and the speed at which you wish to grind. As a general rule, a distance of about 1/16" should be sufficient.

To grind the glass, place the piece against the guide on the right then push it along the guide as it makes contact with the bit. (See Figure II.) When the edge of the glass being ground touches the guide on the left, start to transfer pressure to this area, then follow through until piece is fully ground. If further grinding is necessary, repeat procedure until the piece is edged to your satisfaction.

If a piece of glass has been cut too large, the excess can be ground away using this attachment. For example, if a strip of glass was cut 1/16" too large, mark the proper size on the piece, then run it through the planer/straight edge attachment until the proper size has been obtained.

The Inland "Bit-Serts™" were designed to maintain 1/16" between the face of the bit and the work surface. This feature supports the glass near the face of the bit thus eliminating the possibility of small pieces of glass getting caught between the bit and the work surface.

The "Bit-Sets™" are easily installed by snapping them into the work surface. (See Figure III.) Insert back tabs first, then snap in side tabs one at a time. Remove, reverse procedure.

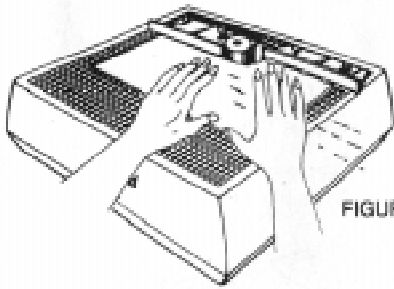


FIGURE II.

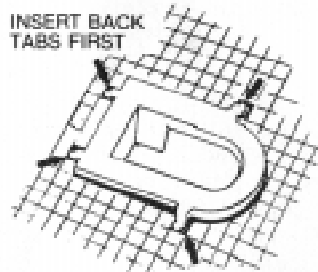


FIGURE IIb. THEN INSERT SIDES ONE AT A TIME

The “Bit-Serts™” come in 4 sizes and are marked 1 thru 4. Use “Bit-Sert™” #1 for 5/8” diameter bit, #2 for 3/4” bit and so on through #4 for a 1 1/4” diameter bit.

To adjust the bit up or down on the shaft, simply loosen the set screw in the bit with the allen wrench provided with the unit. The bit should slide freely on the shaft.

When grinding with a WB-6 or WB-8 diamond bit that has a 1/4 inch upper diamond section, follow these suggestions: The 1/4 inch bit portion can be used either for delicate grinding or for hole drilling. In either case it is important to keep the diamond cooled. Do this by dabbing the bit with a sponge or actually holding a sponge against the bit while you grind.

To drill a hole, present the glass to the upper edge of the 1/4” bit at a 45° angle. Continually dab the bit with a water soaked sponge during the hole drilling operation. As the bit begins to cut into the glass, slowly bring the glass into a horizontal position. When the hole nears completion, ease up on the pressure until the hole is finished.

The 30°, 60°, 90° combination square can be used as a “straight edge guide” fence. When installed on the work surface (See Fig.1) it can be used to grind pieces to exact widths.

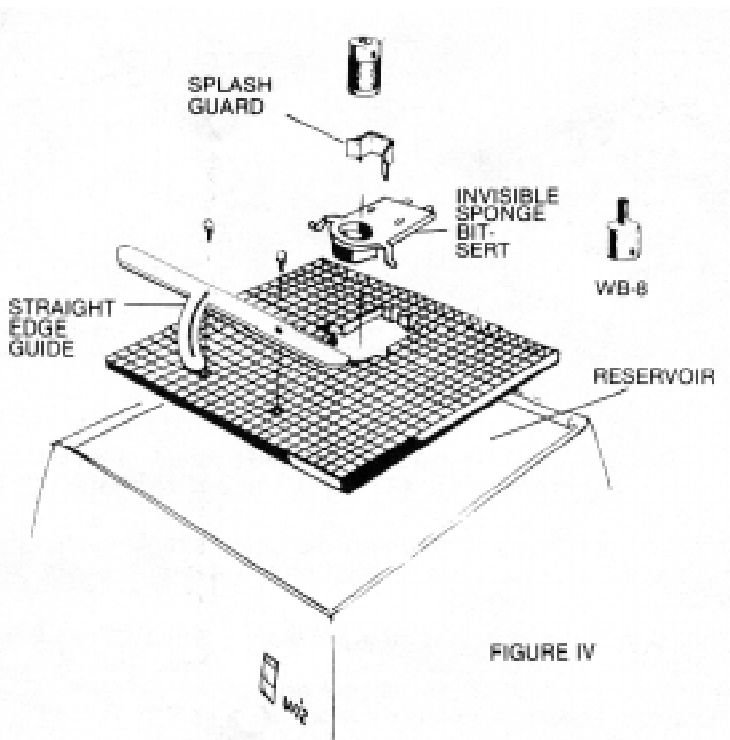
This tool is also used as a glass cutting square by placing the “lip” (See Fig. 1) of the “square” on the top or bottom edge of the glass being cut. Pull or push the cutter along the long side of the square.

The tool can be used for pattern layout by using the 30°, 60°, or 90° angles, the circle templates, and the ruled edge.

Each Wizard router is constructed of high impact ABS plastic. The fan-cooled motor is a 3550 RPM, 115 volt, 60 cycle (U.S. and Canada) split capacitor unit. It has permanently sealed sleeve bearings and a precision ground stainless steel shaft.

The Wizard is also provided with the following parts:

- |  |                                    |
|--|------------------------------------|
| (1) “Open Grid worksurface.            | (1) Invisible Sponge Bits-Sert.    |
| (2) “Planter Guides” with hardware.    | (1) Invisible Sponge User’s Guide. |
| (1) 30°, 60°, 90° straight edge guide. | (1) Wb-8 (1/4”) bit. 100/200 grit. |
| (1) WB-9 / 1S bit 100/120 grit.        | (1) Allen wrench.                  |
| (1) Splash Guard.                      | (2) Sponges with each bit          |
| (4) Bit-Serts                          | (1) Owners Manual                  |
| (4) Thumb Screws.                      | (1) Warranty registration form.    |
| (4) Nuts.                              |                                    |



## WIZ

Each "Wiz" router is constructed of high impact polypropylene plastic. The fan-cooled motor is a 3500 RPM, 115 volt, 60 cycle shaded pole unit. It has permanently sealed and lubricated sleeve bearings.

The "Wiz" router is provided with the following parts:

- |  |  |
|--|--|
| (1) "Open Grid worksurface.            | (1) Standard bitsert for use with WB-1, WB-4, WB-6, WB-18, and WB-23 grinding bits |
| (2) "Invisible Sponge™" bit-sert.      | (1) Invisible Sponge "How to use" guide.   |
| (1) Straight edge guide with hardware. | (2) Nuts   |
| (1) WB-1 / 1S 3/4" bit 100/120 grit.   | (1) Machine warranty form.   |
| (1) WB-8 (1/4") bit. 100/120 grit.     |  |
| (1) Allen wrench.                      |  |
| (2) Sponges.                           |  |
| (1) Owners Manual.                     |  |
| (1) Splash Guard.                      |  |

The new "Wiz™" (Fig IV) router features as standard equipment the invisible sponge, one of the more revolutionary attachments available on any router.

For installation, instructions and other information regarding the invisible Sponge see Invisible Sponge instructions on page 11.

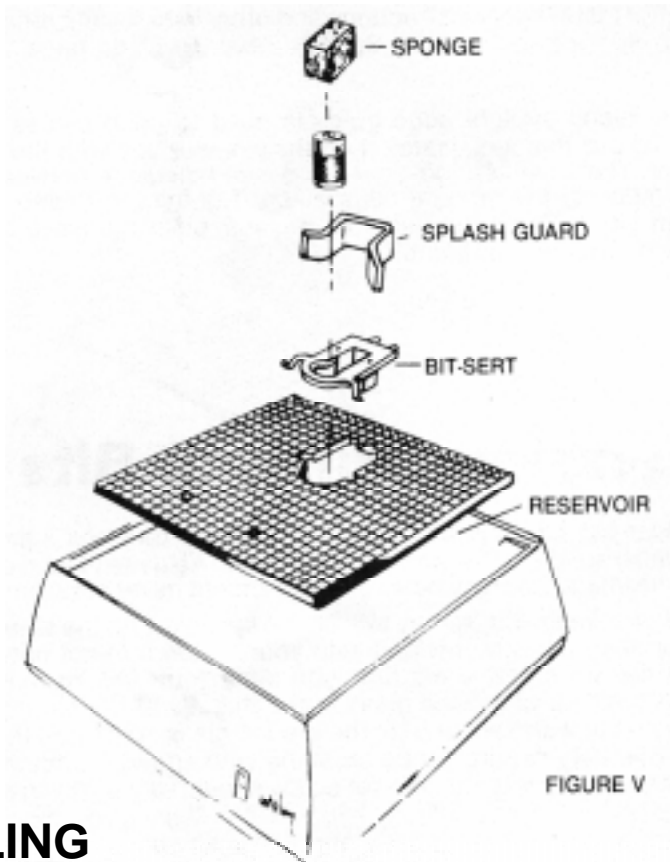
The Inland straight edge guide is used to grind pieces to exact widths. To use this tool, install it on the worksurface with the supplied hardware. Then, using the ruler, set the desired distance between the bit and the edge of the straight edge guide. Tighten the thumb screws to lock it in place. When the guide is in place, push the glass along the guide and into the grinding bit.

## Changing Grinding Bits

Changing bits is a fast, simple procedure. Your router motor shaft is stainless steel and the bits are pure brass. As a result (and especially if you use Inland Router Coolant) the bit should never seize on the shaft.

To remove the bit, simply loosen the set screw on the side of the bit with the allen wrench provided with your router. It is not necessary to remove the set screw every time you remove the bit. However, if you notice a build-up of ground glass in the treads of the set screw hole, soak the bit in warm water until the ground glass comes off the threads easily. This may require gently brushing with an old toothbrush. When this operation is complete, the set screw should turn easily in and out of the hole

Before putting on a new bit or using the original bit, we recommend the you grease both the motor shaft and the inside diameter of the bit where it makes contact with the shaft. )Note; Never allow the bottom-most part of the grinding bit to touch any part of the machine reservoir as this may result in irreparable damage.)



## WIZLING

The "Wizling™" router was the first quality router of its class. In an effort to improve a winner, Inland has completely redesigned the Wizling to make it easier to use and maintain. We've also include as standard equipment items available on machines costing twice as much and more.

Each "Wizling™" router is made of high-impact polypropylene plastic. The fan-cooled motor is a 3500 RPM, 115 volt, 60 cycle shaded pole unit. It has permanently sealed and lubricated sleeve bearings.

Each "Wizling™" is supplied with the following parts:

- (1) "Open Grid" worksurface.
- (1) 3/4" "Bit-Sert™".
- (1) WB-1 (3/4") bit. 100/120 grit.
- (1) Allen wrench.
- (1) Sponge.
- (1) Splash guard.
- (1) Warranty registration form.
- (1) Owner's manual.

# INVISIBLE SPONGE™

The "Invisible Sponge™" (patent pending) is an exclusive product which is available on from Inland and its distributors. The "Invisible Sponge™" works by utilizing in part, centrifugal force and surface tension to "pump" water to the grinding bit. This "pumping" action is directed around the bit only, which can eliminate the need for a splash guard to confine the grinding overspray. To use the Invisible Sponge, remove the open grid worksurface from the machine. Install the Invisible Sponge insert by snapping it into the open grid worksurface, install the special Invisible Sponge bit by following these simple instructions; First, loosen the set screw in the side of the bit with the supplied allen wrench, then slide it over and onto the motor shaft. The bit is then adjusted to the desired height and lock into place by tightening the set screw against the flat side of the motor shaft. Caution: If the set screw is tightened against the round part of the motor shaft, it can leave a burr in the shaft that will result in making the bit difficult to remove or replace.

Replace the worksurface and adjust the bit so that you are using the topmost section of the diamond bit first. As the bit wears, loosen the set screw and slide the bit up on the shaft so that the glass makes contact with a fresh section.

Since most stained glass is approximately 1/8" thick, you should be able to get five full grinding surfaces out of an Invisible Sponge bit.

When the Invisible Sponge is first installed, the bit may rub against the inside of the bit insert. This is no cause for alarm, as the bit will naturally wear into place during the first few uses.

On some of the early models of the Wiz and Wizling, the open grid worksurface itself may need a slight adjustment. If the bit will not rotate freely when the worksurface with the Invisible Sponge insert is installed on the machine, follow this procedure. Remove the worksurface and lay it upside down your work table or other suitable surface. Using a lead knife, razor knife, lead nippers or other suitable blade, cut away completely the small tab of plastic which protrudes into the locating square on the two rear corners of the worksurface.

Because the Invisible Sponge bit is a special type bit, do not attempt to use it with a conventional Bit-Sert and sponge as this may cause damage to machine and possibly injure you.

Do not touch any part of the bit while the motor is engaged, as this can present a laceration hazard.

If, while grinding, you notice white build-up of ground glass on the bit or if the bit is grinding the glass to a white powder at the contact point of the bit, add more water to the reservoir to keep this from occurring. Dry grinding will cause the diamond bit to wear unusually fast and possibly fracture the glass, due to the increased friction and heat.

The amount of water which is "pumped" to the bit can be regulated by raising or lowering the grinding bit in the water filled reservoir.

The Invisible Sponge bit insert can only be used with the WB-1S and the WB-9-IS diamond grinding bits. When using one of the many other Inland bits, you must use the conventional Bit-Sert and sponge arrangement.

To use the Inland Face Shield accessory on the new Wiz and Wizling, install the Bit, then the Worksurface with Invisible Sponge Bit-Sert on the location posts. Turn the machine on, and lightly push the end of the Face Shield post into the rectangular hole in the rear of the Worksurface. This action will grind a small amount of the Bit-Set away allowing the bit to rotate freely. After completing the above steps, install the Face Shield lens on the locating post.

For further information about your machine, refer to your Owners Manual

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