

SPECIFICATIONS

ENGLISH (Original instructions)

Collet chuck capacity		1/4", 3/8"				
No load speed (RPM)		13,000-33,000/min.				
Overall length		208mm (7-7/8")				
Net weight		1.8 (3.9 lbs)				
Due to our continuing programme of research and development	nt, the spec	ifications herein are subject to change without notice.				
 Specifications may differ from country to country. 						
Weight according to EPTA-Procedure 01/2003						
General Power Tool Safety	8.	increase the risk of electric shock. When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of				

Warnings ⚠ WARNING Read all safety warnings and all instructions. Failure to follow the warnings and

instructions may result in electric shock, fire and/or serious injury. Save all warnings and

instructions for future reference. The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated

(cordless) power tool. Work area safety Keep work area clean and well lit. Cluttered or dark areas invite accidents. 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. Keep children and bystanders away while operating a power tool. Distractions can cause

- you to lose control. **Electrical Safety** Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will
- reduce risk of electric shock. Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded. Do not expose power tools to rain or wet conditions. Water entering a power tool will
- increase the risk of electric shock. Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords
- a cord suitable for outdoor use reduces the risk of electric shock. If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply. Use of an GFCI reduces the risk of electric shock. **Personal Safety** Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while
 - personal injury. Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries 12. Prevent unintentional starting. Ensure the switch is in the off-position befo

operating power tools may result in serious

- to power source and/or battery pack, picking up or carrying the tool. . Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents. Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may
- result in personal injury.

 Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations. Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing, and gloves away from moving parts. Loose clothes,
- jewellery or long hair can be caught in moving If devices are provided for the connection of dust extraction and collection facilities, ensure

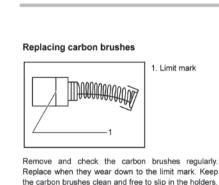
Templet guide Collet cone 1/4"

Collet cone 3/8"

Wrench 13

Wrench 22

2



Both carbon brushes should be replaced at the same time. Use only identical carbon brushes. Use a screwdriver to remove the brush holder caps. Take out the worn carbon brushes, insert the new ones and secure the brush holder caps. Screwdriver 2. Brush holder

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Authorized or Factory Service Centers, always using replacement parts **OPTIONAL ACCESSORIES**

\triangle CAUTION: These accessories or attachments recommended for use with your tool specified in this manual. The use of any other

accessories or attachments might present a risk of injury to persons. Only use accessory or attachment for its stated purpose. If you need any assistance for more details regarding these accessories, ask your local Service Center Straight & groove forming bits Edge forming bits Laminate trimming bits

Straight guide assembly Trimmer guide assembly Trimmer base assembly Tilt base assembly Plunge base assembly Offset base assembly

only when hand-held.

14

17. Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed. Do not use the power tool if the switch does

these are connected and properly used. Use of

dust collection can reduce dust-related hazards

- not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired. 19. Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such
 - preventive safety measures reduce the risk of starting the power tool accidentally. Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
 - Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents
 - are caused by poorly maintained power tools. Volts **Ampere Rating**

Not More Than

More Than

repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained. Follow instruction for lubricating and changing accessories. Keep handles dry, clean and free from oil and USE PROPER EXTENSION CORD. Make sure your

extension cord is in good condition. When using an

extension cord, be sure to use one heavy enough to

carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of

could result in a hazardous situation.

22. Keep cutting tools sharp and clean. Properly

maintained cutting tools with sharp cutting edges

are less likely to bind and are easier to control.

Use the power tool, accessories and tool bits

etc. in accordance with these instructions,

taking into account the working conditions

and the work to be performed. Use of the power

tool for operations different from those intended

Have your power tool serviced by a qualified

power and overheating. Table 1 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord Table 1: Minimum gage for cord Total length of cord in feet 50 ft. 100 ft. 150 ft. 25 ft.

0	6		18	16	16	14		
6	10]	18	16	14	12		
10	12		16	16	14	12		
12	16]	14	12	Not Reco	mmended		
TRIMMER SAFETY WARNINGS 1. Hold power tool by insulated gripping surfaces, because the cutter may contact its own cord. Cutting a "live" wire may make exposed metal parts of the power tool "live" and shock the operator.		urfaces, vn cord. etal parts	Check the bit carefully for cracks or damage before operation. Replace cracked o damaged bit immediately. Avoid cutting nails. Inspect for and remove al nails from the workpiece before operation. Hold the tool firmly. Keep hands away from rotating parts.					

Use clamps or another practical way to secure and support the workpiece to a stable to loss of control.

platform. Holding the work by your hand or against the body leaves it unstable and may lead Wear hearing protection during extended period of operation. Handle the bits very carefully.

Make sure the bit is not contacting the workpiece before the switch is turned on. Before using the tool on an actual workpiece, let it run for a while. Watch for vibration or wobbling that could indicate improperly installed bit. Be careful of the bit rotating direction and the

3

to a complete stop before removing the tool from workpiece. Do not touch the bit immediately after operation; it may be extremely hot and could

12. Do not leave the tool running. Operate the tool

Always switch off and wait for the bit to come

- burn your skin. Do not smear the tool base carelessly with thinner, gasoline, oil or the like. They may cause cracks in the tool base.
- Use bits of the correct shank diameter suitable for the speed of the tool. Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data. Always use the correct dust mask/respirator
- for the material and application you are working with. SAVE THESE INSTRUCTIONS. **∆WARNING**: DO NOT let comfort or familiarity with product

(gained from repeated use) replace strict adherence

- to safety rules for the subject product. MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal **Symbols**
- The followings show the symbols used for tool.
- alternating current
- no load speed Class II Construction

... /min

r/min

revolutions or reciprocation per minute

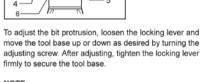
1. Bit protrusion Tool base
 Scale
 Locking lever Adjusting screw
 Hex nut

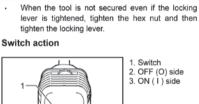
Always be sure that the tool is switched off and

unplugged before adjusting or checking function on

FUNCTIONAL DESCRIPTION

Adjusting bit protrusion







The tool equipped with electronic function are easy to operate because of the following features.

Electronic speed control for obtaining constant speed.

Possible to get fine finish, because the rotating speed is

Electronic function

Constant speed control

4

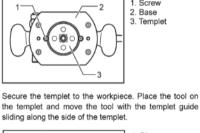
kept constant even under load condition.

Soft-start feature minimizes start-up shock, and makes the tool start smoothly

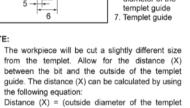
Guide bar

Straight guide

2. Wing bolt



NOTE:

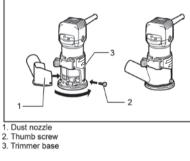


2. Base 3. Templet 4. Workpiece

5. Distance (X) 6. Outside

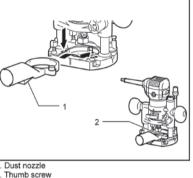
diameter of the







For the plunge base



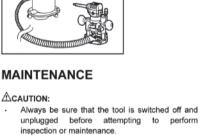
Use the dust nozzle for dust extraction. Install the dust

nozzle on the tool base using the thumb screw so that protrusion on the dust nozzle fit to the notch in the tool

Then connect a vacuum cleaner to the dust nozzle

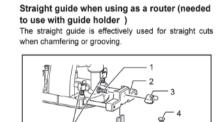
Never use gasoline, benzine, thinner, alcohol or

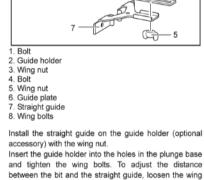
the like. Discoloration, deformation or cracks may



13

1. Speed adjusting





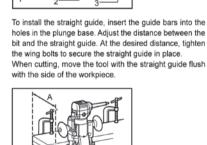
nut. At the desired distance, tighten the wing nut to

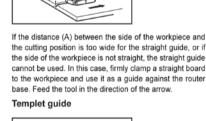
secure the straight guide in place.

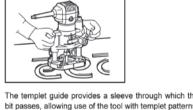
when chamfering or grooving.

Straight guide

The straight guide is effectively used for straight cuts







The templet guide provides a sleeve through which the bit passes, allowing use of the tool with templet patterns

To install the templet guide, loosen the screws on the

tool base, insert the templet guide and then tighten the



Speed adjusting dial

<u>िना</u>

adjusting dial to a given number setting from 1 to 6. Higher speed is obtained when the dial is turned in the direction of number 6. And lower speed is obtained when it is turned in the direction of number 1. This allows the ideal speed to be selected for optimum material processing, i.e. the speed can be correctly adjusted to suit the material and bit diameter. Refer to the table for the relationship between the number settings on the dial and the approximate tool speed.

13,000

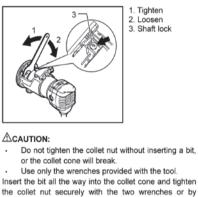
17,000

The tool speed can be changed by turning the speed

29.000 31000 33,000 **△CAUTION:** If the tool is operated continuously at low speeds for a long time, the motor will get overloaded, resulting in tool malfunction. The speed adjusting dial can be turned only as far as 6 and back to 1. Do not force it past 6 or 1, or

the speed adjusting function may no longer work.

ASSEMBLY Always be sure that the tool is switched off and unplugged before carrying out any work on the tool.



pressing the shaft lock and using the provided wrench.

To remove the bit, follow the installation procedure in

Installing or removing trimmer bit

5

Workpiece

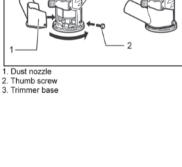
2. Bit revolving direction

3. View from the top of the tool

CAD

OPERATION

For the trimmer base



Adjusting the depth of cut when using the plunge Bit revolving direction Adjusting knob

until the bit attains full speed. Move the tool forward over the workpiece surface, keeping the tool base flush and

∆WARNING:

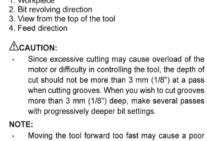
advancing smoothly until the cutting is complete. When doing edge cutting, the workpiece surface should be on the left side of the bit in the feed direction.

Before using the tool with the trimmer base, always

install the dust nozzle on the trimmer base.

Set the tool base on the workpiece to be cut without the

bit making any contact. Then turn the tool on and wait



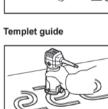
quality of cut, or damage to the bit or motor. Moving the tool forward too slowly may burn and mar the cut.

The proper feed rate will depend on the bit size, the kind of workpiece and depth of cut. Before beginning

the cut on the actual workpiece, it is advisable to

make a sample cut on a piece of scrap lumber. This

will show exactly how the cut will look as well as enable you to check dimensions. When using the trimmer shoe, the straight guide or the trimmer guide, be sure to keep it on the right side in the feed direction. This will help to keep it flush with the side of the workpiece.

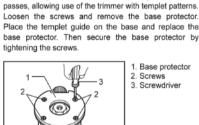


12

1. Base protector

Screws
 Screwdriver

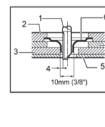
4. Straight guide



sliding along the side of the templet

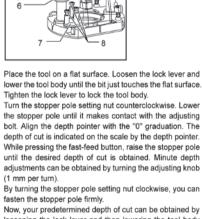
Secure the templet to the workpiece. Place the tool on the templet and move the tool with the templet guide

The templet guide provides a sleeve through which the bit



Workpiece

Straight bit Base 3. Templet 4. Distance (X) 6. Templet guide 7. Base protector



Lock lever
 Depth pointer

4. Stopper pole setting nut
5. Fast-feed button

6. Stopper pole

Always firmly hold the tool by both grip during operation Set the tool base on the workpiece to be cut without the bit making any contact. Then turn the tool on and wait until the bit attains full speed. Lower the tool body and move the tool forward over the workpiece surface, keeping the tool base flush and advancing smoothly until the cutting is complete. When doing edge cutting, the workpiece surface should be on the left side of the bit in the feed direction.

The workpiece will be cut a slightly different size

from the templet. Allow for the distance (X)

between the router bit and the outside of the templet guide. The distance (X) can be calculated

by using the following equation:
Distance (X) = (outside diameter of the templet guide

The straight guide is effectively used for straight cuts

Attach the guide plate to the straight guide with the bolt

Attach the straight guide with the clamp screw (A). Loosen the wing nut on the straight guide and adjust the

distance between the bit and the straight guide. At the

When cutting, move the tool with the straight guide flush

If the distance (A) between the side of the workpiece and

the cutting position is too wide for the straight guide, or if

the side of the workpiece is not straight, the straight guide

cannot be used. In this case, firmly clamp a straight board

to the workpiece and use it as a guide against the trimmer base. Feed the tool in the direction of the arrow

with the side of the workpiece.

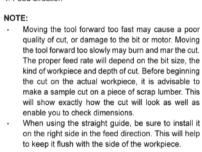
Offset base

desired distance, tighten the wing nut securely

Guide plate
 Straight guide
 Wing nut

. Clamp screw (A) Straight guide
 Wing nut
 Base

7



1. Feed direction

2. Bit revolving

direction

4. Straight guide

3. Workpiece



6

Loosen the screws and remove the upper section from the offset base. Put aside the upper section of the offset base. 1. Bar type grip (optional accessory)

(2) Offset base (optional accessory) can also be

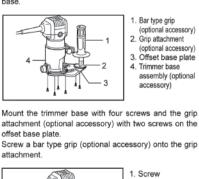
stability

used with a trimmer base and a grip

attachment (optional accessory) for more

Screws
 Offset base

plate 3. Upper section of



In another way of use, the knob type grip which is removed from a plunge base (optional accessory) can be installed on the grip attachment. To install the knob type grip, place it on the grip attachment and secure it

Trimmer guide

like can be done easily with the trimmer guide. The

Install the trimmer guide on the tool base with the clamp

screw (A). Loosen the clamp screw (B) and adjust the

distance between the bit and the trimmer guide by

turning the adjusting screw (1 mm (3/64") per turn). At

the desired distance, tighten the clamp screw (B) to

When cutting, move the tool with the guide roller riding

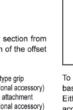
1. Clamp screw (A) Adjusting screw (A)
 Clamp screw (B)

4. Trimmer guide

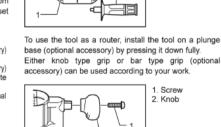
guide roller rides the curve and assures a fine cut.

secure the trimmer guide in place.

the side of the workpiece.



Knob type grip
 Offset base plate



∆CAUTION:

both hands.

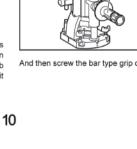
To use the bar type grip (optional accessory), loosen the screw and remove the knob type grip. 1. Bar type grip

When using as a router only with a plunge

When using as a router, hold the tool firmly with

Plunge base
 Grip

1. Screw

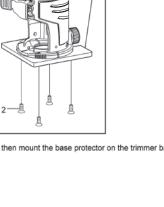


And then screw the bar type grip on the base.

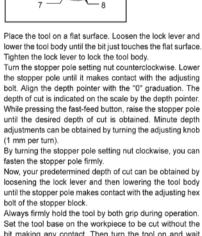
Tilt base Tilt base is convenient for chamfering.

Place the tool onto the tilt base and close the locking lever at the desired protrusion of the bit. For desired angle, tighten the clamping screws on its sides

Base protector removed from the tilt base Mounting the base protector which has been removed from the tilt base on the trimmer base allows the change of the trimmer base from the round base to a square For another application, remove the base protector from the tilt base by loosening and removing four screws 1. Base protector Screw



8. Adjusting bolt



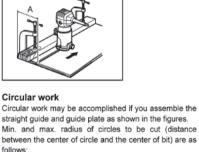
NOTE:

Straight guide

when chamfering or grooving.

and the wing nut.

11



For cutting circles between 70 mm (2-3/4") and 121 mm

Wing nut 2. Guide plate Straight guide
 Center hole
 Bolt For cutting circles between 121 mm (4-3/4") and 221

Min.: 70 mm (2-3/4")

Max.: 221 mm (8-11/16")

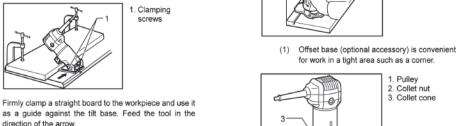


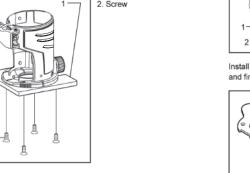
2. Belt

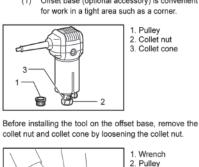
Locking lever
 Offset base



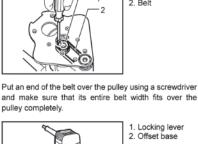
2. Center hole







Wrench 3. Shaft lock Install the pulley on the tool by pressing the shaft lock



Mount the tool on the offset base

Secure it with a locking lever on the offset base 2. Hex wrench 3. Bit

To install the bit, fall the tool with the offset base on its side. Insert the hex wrench into the hole in the offset base. With the hex wrench held in that position, insert the bit into the collet cone on the shaft of the offset base from the opposite side and tighten the collet nut firmly with a

 Workpiece 3. Guide roller And then mount the base protector on the trimmer base 8

and firmly tightening the pulley with a wrench •

To remove the bit at replacement, follow the installation procedure in reverse. 9

Place the collet cone and screw the collet nut on the offset base as shown in the figure

1. Collet nut