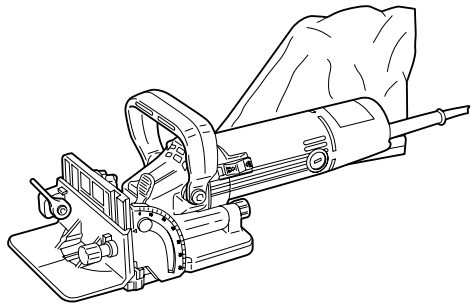




Plate Joiner

MODEL 3901



004573



I N S T R U C T I O N M A N U A L

⚠ WARNING:

For your personal safety, READ and UNDERSTAND before using.
SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

SPECIFICATIONS

Model		3901
Blade size	Cutter blade (Outer dia. x Width x Arbor dia.)	100 x 4 x 22 mm
	Circular saw blade (Outer dia. x Arbor dia.)	110 x 20 mm
Max. Cutting depth	Cutter blade	20 mm
	Circular saw blade	25 mm
No load speed (min ⁻¹)		11,000
Overall length		307 mm
Net weight		2.8 kg
Safety class		□ /II

- Due to our continuing programme of research and development, the specifications herein are subject to change without notice.
- Note: Specifications may differ from country to country.

SYMBOLS

END201-2

The following show the symbols used for the tool. Be sure that you understand their meaning before use.



.....Read instruction manual.



.....DOUBLE INSULATION



.....Only for EU countries

Do not dispose of electric equipment together with household waste material!

In observance of European Directive 2002/96/EC on waste electric and electronic equipment and its implementation in accordance with national law, electric equipment that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

Intended use

The tool is intended for cutting crescent shaped slots for the placement of flat wooden dowels or biscuit by a plunging action.

Power supply

The tool should be connected only to a power supply of the same voltage as indicated on the nameplate, and can only be operated on single-phase AC supply. They are double-insulated in accordance with European Standard and can, therefore, also be used from sockets without earth wire.

For European countries only

Noise and Vibration

The typical A-weighted noise levels are
sound pressure level: 86 dB (A)
sound power level: 99 dB (A)

– Wear ear protection. –

The typical weighted root mean square acceleration value is not more than 2.5 m/s².

EC-DECLARATION OF CONFORMITY

We declare under our sole responsibility that this product is in compliance with the following standards of standardized documents, HD400, EN50144, EN55014, EN61000 in accordance with Council Directives, 73/23/EEC, 89/336/EEC, 98/37/EC.

Yasuhiko Kanzaki **CE 2003**

Director

MAKITA INTERNATIONAL EUROPE LTD.

Michigan Drive, Tongwell, Milton Keynes, Bucks MK15 8JD, ENGLAND

SAFETY INSTRUCTIONS

ENA001-2

WARNING:

When using electric tools, basic safety precautions, including the following, should always be followed to reduce the risk of fire, electric shock and personal injury. Read all these instructions before operating this product and save these instructions.

For safe operations:

- 1. Keep work area clean.**
Cluttered areas and benches invite injuries.
- 2. Consider work area environment.**
Do not expose power tools to rain. Do not use power tools in damp or wet locations. Keep work area well lit. Do not use power tools where there is risk to cause fire or explosion.
- 3. Guard against electric shock.**
Avoid body contact with earthed or grounded surfaces (e.g. pipes, radiators, ranges, refrigerators).
- 4. Keep children away.**
Do not let visitors touch the tool or extension cord. All visitors should be kept away from work area.
- 5. Store idle tools.**
When not in use, tools should be stored in a dry, high or locked up place, out of reach of children.
- 6. Do not force the tool.**
It will do the job better and safer at the rate for which it was intended.
- 7. Use the right tool.**
Do not force small tools or attachments to do the job of a heavy duty tool. Do not use tools for purposes not intended; for example, do not use circular saws to cut tree limbs or logs.
- 8. Dress properly.**
Do not wear loose clothing or jewellery, they can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protecting hair covering to contain long hair.
- 9. Use safety glasses and hearing protection.**
Also use face or dust mask if the cutting operation is dusty.
- 10. Connect dust extraction equipment.**
If devices are provided for the connection of dust extraction and collection facilities ensure these are connected and properly used.
- 11. Do not abuse the cord.**
Never carry the tool by the cord or yank it to disconnect it from the socket. Keep the cord away from heat, oil and sharp edges.
- 12. Secure work.**
Use clamps or a vice to hold the work. It is safer than using your hand and it frees both hands to operate the tool.
- 13. Do not overreach.**
Keep proper footing and balance at all times.
- 14. Maintain tools with care.**
Keep cutting tools sharp and clean for better and safer performance. Follow instructions for lubrication and changing accessories. Inspect tool cord periodically and if damaged have it repaired by an authorized service facility. Inspect extension cords periodically and replace, if damaged. Keep handles dry, clean and free from oil and grease.
- 15. Disconnect tools.**
When not in use, before servicing and when changing accessories such as blades, bits and cutters.
- 16. Remove adjusting keys and wrenches.**
Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
- 17. Avoid unintentional starting.**
Do not carry a plugged-in tool with a finger on the switch. Ensure switch is off when plugging in.
- 18. Use outdoor extension leads.**
When tool is used outdoors, use only extension cords intended for outdoor use.
- 19. Stay alert.**
Watch what you are doing. Use common sense. Do not operate tool when you are tired.
- 20. Check damaged parts.**
Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, free running of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated in this instruction manual. Have defective switches replaced by an authorized service facility. Do not use the tool if the switch does not turn it on and off.
- 21. Warning.**
The use of any accessory or attachment, other than those recommended in this instruction manual or the catalog, may present a risk of personal injury.
- 22. Have your tool repaired by a qualified person.**
This electric tool is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.

ADDITIONAL SAFETY RULES

ENB060-2

1. Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
2. Use only the blades specified for this tool.
3. Never operate the tool with the blade locked in exposed position or without the blade cover secured properly in place.
4. Make sure that the blade slides smoothly before operation.
5. Check the blade for cracks or damage before operation. Replace cracked or damaged blade immediately.
6. Make sure that the flange fits in the arbor hole when installing the blade.
7. Inspect for and remove all nails or foreign matter from the workpieces before operation.
8. Always place the workpieces on a stable workbench.
9. Secure the workpieces firmly with clamp or vise.
10. Never wear gloves during operation.
11. Hold the tool firmly with both hands.
12. Keep your hands and body away from the cutting area.
13. Run the tool for a while without the blade pointing toward anybody. Watch for vibration or wobbling that could indicate poor installation or a poorly balanced blade.
14. Never reach your hands underneath the workpieces while the blade is rotating.
15. Do not leave the tool running unattended.
16. Always be sure that the tool is switched off and unplugged before making any adjustments or replacing the blade.
17. Do not use blunt or damaged disk cutters.
18. Do not use the tool with damaged guards.

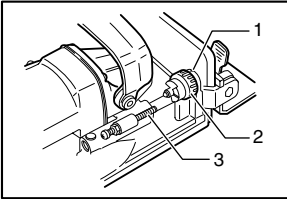
SAVE THESE INSTRUCTIONS

FUNCTIONAL DESCRIPTION

⚠ CAUTION:

- Always be sure that the tool is switched off and unplugged before adjusting or checking function on the tool.

004574



1. Pointer
2. Stopper
3. Adjusting screw

Adjusting the depth of cut

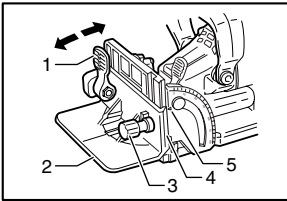
6 cutting depths can be preset according to the size of biscuit to be used or if trimming the wall or ceiling panels as explained later. Rotate the stopper until the pointer points to the appropriate size marked on the stopper.

Refer to the table below for the correspondence between the sizes marked on the stopper and the biscuit size. Fine adjustments to the cutting depth can be made by turning the adjusting screw after loosening the hex nut. This may become necessary after the blade has been resharpened a few times.

C00084

Size on stopper	0	10	20	S	D	MAX
Biscuit size	0	10	20	-	-	-
Depth of cut	8 mm	10 mm	12.3 mm	13 mm	14.7 mm	20 mm

004575



1. Lock lever
2. Angle guide
3. Knob
4. Scale
5. Pointer

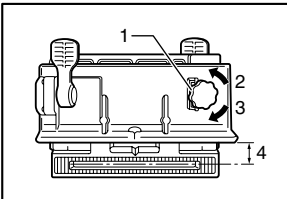
Angle guide

The angle guide can be moved up and down to adjust the position of the blade in relation to the top of the workpiece.

To adjust the angle guide height, loosen the lock lever down and rotate the knob until the pointer points to the desired scale graduation marked on the angle guide. Then tighten the lock lever up to secure the angle guide.

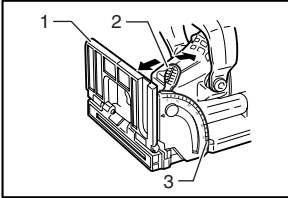
The scale on the angle guide indicates the distance from the top of the workpiece to the center of the blade thickness.

004576



1. Knob
2. Down
3. Up
4. Center of blade thickness

004577



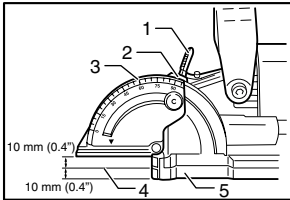
1. Fence
2. Lock lever
3. Angle scale

Fence

The angle of the fence can be adjusted between 0° and 90° (positive stops at 0° , 45° and 90°). To adjust the angle, loosen the lock lever and tilt the fence until the pointer points to the desired graduation on the angle scale. Then tighten the lock lever to secure the fence.

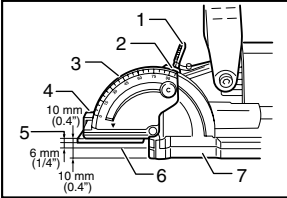
When the fence is set at 90° , both the distance from the center of the blade thickness to the fence and the distance from the center of the blade thickness to the bottom of the base are 10 mm.

004578



1. Lock lever
2. Pointer
3. Angle scale
4. Center of blade thickness
5. Base

004579

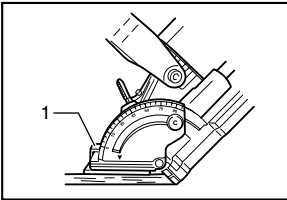


1. Lock lever
2. Pointer
3. Angle scale
4. Set plate
5. Thickness of set plate
6. Center of blade thickness
7. Base

Set plate

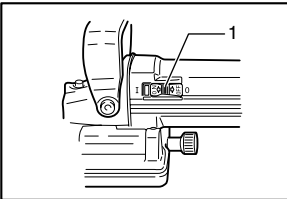
Use the set plate as shown in the figures when cutting slots in thin workpieces.

004580



1. Set plate

004581



1. Slide switch

Switch action

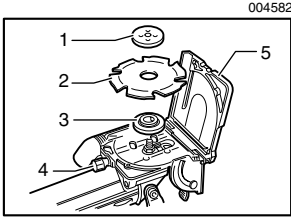
⚠ CAUTION:

- Before plugging in the tool, always check to see that the slide switch actuates properly and returns to the "OFF" position when the rear of the slide switch is depressed.

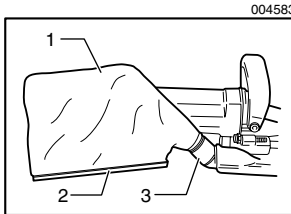
To start the tool, slide the slide switch toward the "I (ON)" position. For continuous operation, press the front of the slide switch to lock it.

To stop the tool, press the rear of the slide switch, then slide it toward the "O (OFF)" position.

ASSEMBLY



1. Lock nut
2. Cutter blade
3. Inner flange
4. Clamp screw
5. Blade cover



1. Dust bag
2. Fastener
3. Dust nozzle

CAUTION:

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

Removing or installing the blade

CAUTION:

- When installing the cutter blade, mount the inner flange with the side marked "22" facing toward you.
- When installing the circular saw blade, mount the inner flange with the side marked "22" facing toward the tool.

To remove the blade, loosen the clamp screw and open the blade cover. Push the shaft lock and loosen the lock nut using the lock nut wrench. To install the blade, first mount the inner flange.

Then mount the blade and the lock nut. Securely tighten the lock nut using the lock nut wrench. Close the blade cover and tighten the clamp screw to secure the blade cover.

CAUTION:

- Use only Makita lock nut wrench provided to remove or install the blade.
- Always check the depth of cut after replacing the blade. Readjust it if necessary.

Dust bag

To attach the dust bag, fit it onto the dust nozzle. If the dust bag becomes an obstacle to your work, turn the dust nozzle to change the dust bag position.

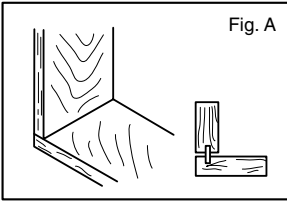
When the dust bag is about half full, switch off and unplug the tool. Remove the dust bag from the tool and pull the bag's fastener out. Empty the dust bag by tapping it lightly to remove as much of the dust as possible.

NOTE:

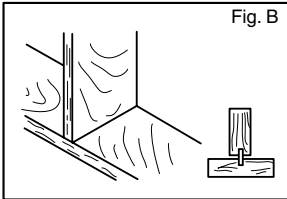
- If you connect a Makita vacuum cleaner to your plate joiner, more efficient and cleaner operations can be performed.

OPERATION

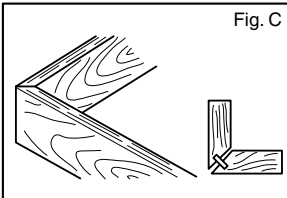
004584



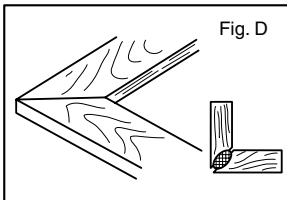
004585



004586



004587



How to make joints

To make joints, proceed as follows:

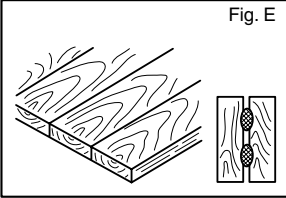
1. Fit the two workpieces together as they will appear in the finished joint position.
 - Corner Joint (Fig. A)
 - T-Butt Joint (Fig. B)
 - Miter Joint (Fig. C)
 - Frame Joint (Fig. D)
 - Edge-To-Edge Joint (Fig. E)
2. Mark the center of the intended biscuit slots on the workpiece using a pencil.

NOTE:

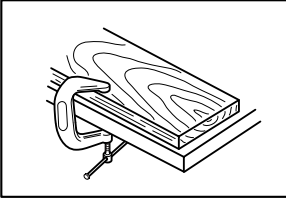
- The center of slots should be at least 50 mm from the outer edge of the workpieces.
- Allow 100 mm - 150 mm between slots in multiple biscuit application.

004588

Fig. E



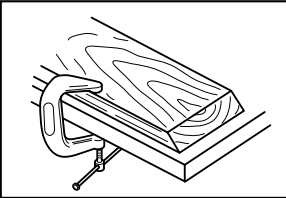
004589



3. For Corner Joint and T-Butt Joint only

Clamp the vertical workpiece to the workbench.

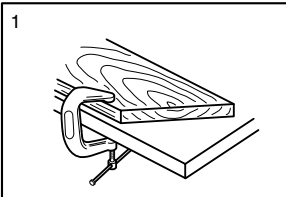
004590



For Miter Joint only

Clamp one workpiece to the workbench with the mitered edge facing up.

004591



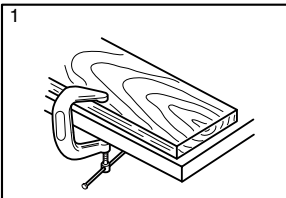
For Frame Joint and Edge-To-Edge Joint only

Clamp one workpiece to the workbench.

4. Set the depth of cut according to the size of biscuit to be used. Refer to the table in the "Adjusting the depth of cut" section.
5. Adjust the angle guide height so that the blade is centered in the board thickness.

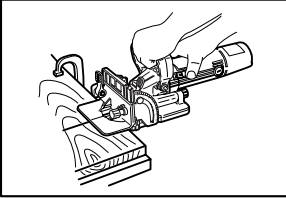
1. For Frame Joint

004592



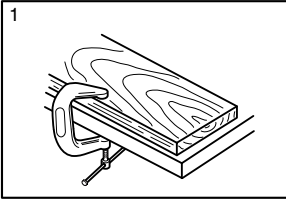
1. For Edge-To-Edge Joint

004593



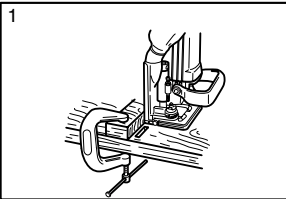
6. Align the center mark on the base with the pencil line on the workpiece.
7. Switch on the tool and gently push it forward to extend the blade into the workpiece.
8. Gently return the tool to the original position after the adjusting screw reaches the stopper.

004594



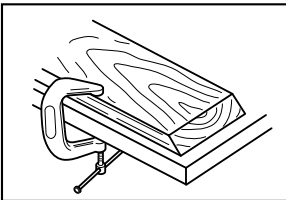
1. For Corner Joint

004595



1. For T-Butt Joint

004596



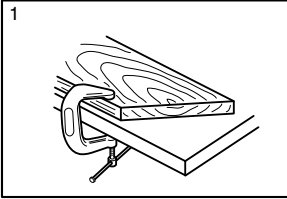
9. **For Corner Joint and T-Butt Joint only**

Clamp the horizontal workpiece to the workbench.

For Miter Joint only

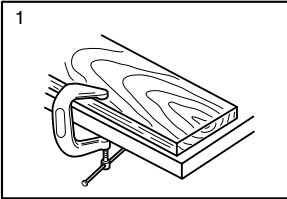
Clamp the other workpiece to the workbench with the mitered edge facing up.

004597



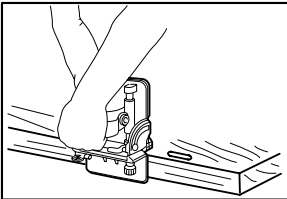
1. For Frame Joint

004598



1. For Edge-To-Edge Joint

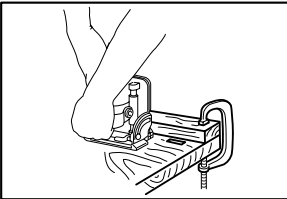
004599



10. For Corner Joint only

Place the tool on the workpiece so that the blade is facing down.

004600



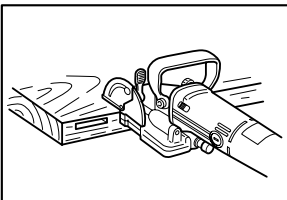
For T-Butt Joint only

Remove the angle guide from the tool. Place the tool on the workpiece so that the blade is facing down.

11. Repeat the steps 6 - 8 to cut the slots in the horizontal or the other workpiece.

If you do not need to center the blade in the board thickness, proceed as follows:

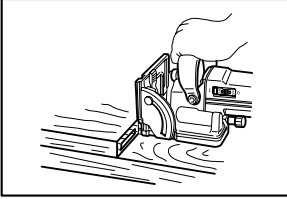
004601



For Corner Joint, Miter Joint, Frame Joint and Edge-To-Edge Joint only

- Remove the angle guide from the tool. Set the fence at 90° for Corner Joint, Frame Joint and Edge-To-Edge Joint or at 45° for Miter Joint.
- Follow steps 1 - 11 excluding steps 5 and 10 described above.

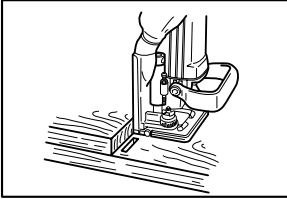
004602



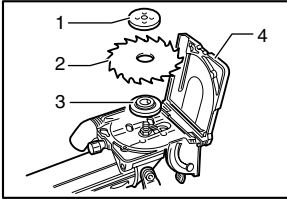
For T-Butt Joint only

- Fit the two workpieces together as they will appear in the finished joint position.
- Lay the vertical workpiece on the horizontal one. Clamp both workpieces to the workbench.
- Remove the angle guide from the tool.
- Follow the steps 2, 4, 6, 7, 8 and 11 described above.

004603



004604



1. Lock nut
2. Circular saw blade
3. Inner flange
4. Blade cover

How to trim wall or ceiling panels

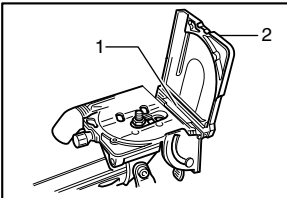
First unplug the tool. Open the blade cover and replace the existing cutter blade with an optional circular saw blade 110 mm in diameter.

Refer to the "Removing or installing the blade" section which was described previously. Remove the rubber facing from the base. Then close and secure the blade cover. Now the max. depth of cut is 25 mm.

⚠ CAUTION:

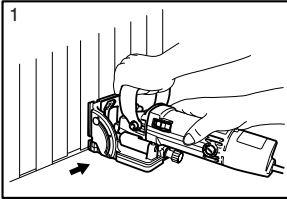
- Be very careful that the blade has been properly mounted on the tool spindle between the inner flange and the lock nut. Be sure to securely tighten the lock nut.

004605



1. Rubber facing
2. Blade cover

004606



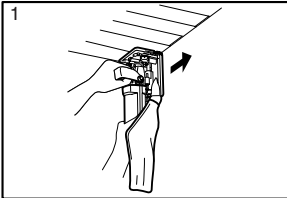
1. When trimming the wall panels

Set the depth of cut to "MAX". Rest the base on the floor (when trimming the wall panels) or the wall (when trimming the ceiling panels). Using the floor or wall as a guide, trim wall or ceiling panels. Feed in the direction of the arrow.

⚠ CAUTION:

- Before trimming the panels, check the wall or ceiling carefully to avoid cutting the electrical wires, nails or other foreign materials.
- Always reinstall the rubber facing after trimming the panels. If cutting slots for biscuits without the rubber facing installed properly on the tool, the tool might slip unexpectedly on the workpiece, causing dangerous loss of control of the tool. When installing the rubber facing, always hook it onto the inside of the front opening.

004607



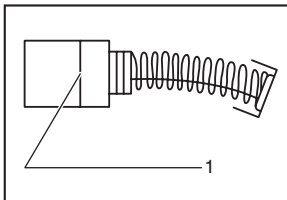
1. When trimming the ceiling panels

MAINTENANCE

⚠ CAUTION:

- Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.

001145

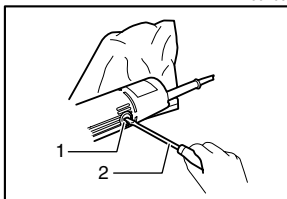


1. Limit mark

Replacing carbon brushes

Remove and check the carbon brushes regularly. Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.

004608



1. Brush holder cap
2. Screwdriver

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.

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

ACCESSORIES

 **CAUTION:**

- These accessories or attachments are recommended for use with your Makita 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 Makita service center.

- Angle guide
- Dust bag
- Set plate 4
- Lock nut wrench 20
- Cutter blade 100-4
- Cross-cut saw blade
- Combination saw blade
- Carbide-tipped saw blade

Makita Corporation Anjo, Aichi, Japan