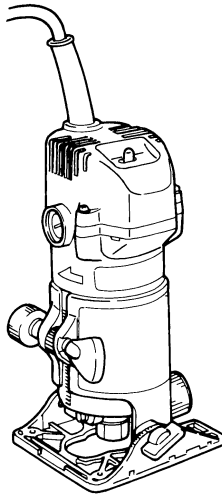


HITACHI

Trimmer Model M 6SB

Handling instructions



Note:

Before using this Electric Power Tool, carefully read through these HANDLING INSTRUCTIONS to ensure efficient, safe operation. It is recommended that these INSTRUCTIONS be kept readily available as an important reference when using this power tool.



Hitachi Koki

GENERAL SAFETY RULES

WARNING!

Read all instructions

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

The term "power tool" in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

1) Work area

- a) **Keep work area clean and well lit.**
Cluttered and dark areas invite accidents.
- b) **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 of fumes.
- c) **Keep children and bystanders away while operating a power tool.**
Distractions can cause you to lose control.

2) Electrical safety

- a) **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.
- b) **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.
- c) **Do not expose power tools to rain or wet conditions.**
Water entering a power tool will increase the risk of electric shock.
- d) **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 increase the risk of electric shock.
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.**
Use of a cord suitable for outdoor use reduces the risk of electric shock.
- f) **Recommendation for the use of residual current device with a rated residual current of 30mA or less.**

3) Personal safety

- a) **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 operating power tools may result in serious personal injury.
- b) **Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.**

- c) **Avoid accidental starting. Ensure the switch is in the off position before plugging in.**

Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.

- d) **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.

- e) **Do not overreach. Keep proper footing and balance at all times.**

This enables better control of the power tool in unexpected situations.

- f) **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 parts.

- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.**

Use of these devices can reduce dust related hazards.

4) Power tool use and care

- a) **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.

- b) **Do not use the power tool if the switch does not turn it on and off.**

Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

- c) **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.**

Such preventive safety measures reduce the risk of starting the power tool accidentally.

- d) **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.

- e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools' operation.**

If damaged, have the power tool repaired before use.

Many accidents are caused by poorly maintained power tools.

- f) **Keep cutting tools sharp and clean.**

Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

- g) **Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.**

Use of the power tool for operations different from intended could result in a hazardous situation.

5) Service

- a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.**

This will ensure that the safety of the power tool is maintained.

PRECAUTION

Keep children and infirm persons away.

When not in use, tools should be stored out of reach of children and infirm persons.

PRECAUTIONS ON USING TRIMMER

1. Always use the bit of correct shank diameter suitable for the speed of the tool.

SPECIFICATIONS

Voltage (by areas)*	(110 V, 230 V, 240 V) \sim
Power Input*	440 W
No-load speed	30000/min
Collet Chuck Capacity	6 mm or 6.35 mm (1/4")
Weight (Only main body)	1.4 kg

*Be sure to check the nameplate on product as it is subject to change by areas.

STANDARD ACCESSORIES

- (1) Trimmer guide ass'y 1
 - (2) Straight Guide 1
 - (3) Template Guide (with two M4 screws) 1
 - (4) Wrench 17/19 mm 1
- Standard accessories are subject to change without notice.

APPLICATIONS

- Plywood trimming
- Various beveling
- Various grooving
- Engraving
- Cut offs

PRIOR TO OPERATION

- 1. Power source**
Ensure that the power source to be utilized conforms to the power requirements specified on the product nameplate.
- 2. Power switch**
Ensure that the power switch is in the OFF position. If the plug is connected to a receptacle while the power switch is in the ON position, the power tool will start operating immediately, which could cause a serious accident.
- 3. Extension cord**
When the work area is removed from the power source, use an extension cord of sufficient thickness and rated capacity. The extension cord should be kept as short as practicable.
- 4. Fitting the bit**
Refer to "Fitting and removal of the bit" section given in the following. It is dangerous if the bit is not fitted to the collet chuck securely. Check if the collet chuck is sufficiently tightened.

2. Hold the body firmly during operation. Otherwise, injuries can result.
3. The bit is very hot immediately after operation. Avoid bare hand contact with the bit for any reason.
4. Avoid bringing your hand, face, etc., close to the bit and rotary parts during operation.
5. Exercise caution as the bit remains rotating even after the switch is turned off. Contact of your hand, etc., with the rotating bit can result in injuries.

5. Cutting using the workpiece edge as a base line (Fig. 1)

Note that the distance between the machine center and the hollow differs from the other three distances.

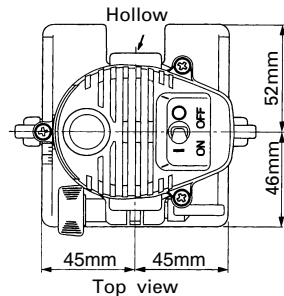


Fig. 1

6. Confirm the spindle lock mechanism.

Confirm that the spindle lock is disengaged by pushing the push button two or three times before switching the power tool on. (See Fig. 2)

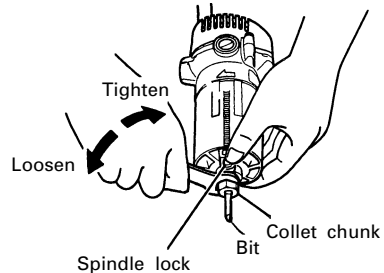


Fig. 2

FITTING AND REMOVAL OF THE BIT

1. Fitting the bit

- (1) Remove the base ass'y from the body. When loosening the wing nut (See Fig. 3), the base ass'y can be removed.

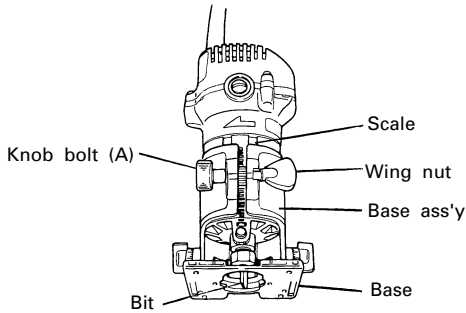


Fig. 3

- (2) Deeply inset the bit into the collet chuck hole. (The distance is 15 mm or more from side of collet chuck.)
- (3) Depress spindle lock (Fig. 2) and rotate collet nut clockwise by hand until lock engages hole in motor spindle.
- (4) While holding spindle lock engaged, tighten collet nut securely by turning clockwise using wrench provided.

CAUTIONS

- Make sure to tighten the collet chuck after inserting the bit. Collet chuck may be damaged if it is tightened without inserting the bit.
 - Avoid depressing the lock pin while the bit is still in rotation. Because, there is a fear that doing so may result in an abnormal noise or damage in the fixed section of the rotating shaft.
- (5) Fit the removed base assembly to the rack provided on the body's outer housing after adjusting the pinion of the base assembly thereto. Then tighten the wing nut and fix the assembly securely.

2. Removal of the bit

- Loosen the collet chuck in the reverse manner as described for the fitting the bit.

CAUTION

- Bit is heated after the cutting work. Do not touch it directly.

HOW TO USE

1. Adjustment of cutting depth

- (1) Loosen the wing nut on the base ass'y.
- (2) Move the base ass'y up and down by turning knob bolt (A) and fit the front end of base with the pointed end of the bit. (Fig. 3)
- (3) Read the value indicated by the top of the base ass'y. (A in Fig. 4)
- (4) Move the base ass'y to the cutting depth.
- (5) After moving the base ass'y to the cutting depth, tighten wing nut securely. (Fig. 4)

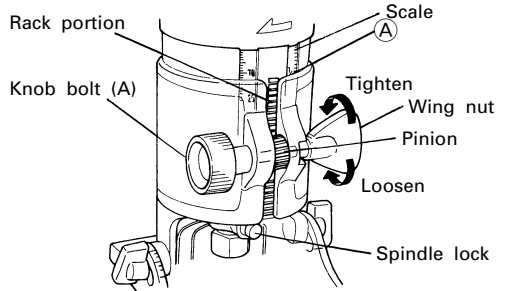


Fig. 4

2. Cutting

It is recommended that the most appropriate guide be used which is suitable to the type of the work in order to carry out the work exactly without failure. (Refer to "How to use guide".) The material to be processed should be firmly fixed.

- (1) Keep the bit separated from the material and hold the body firmly before switch is turned on. (Fig. 5)

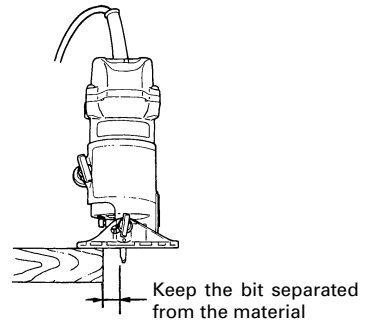


Fig. 5

(2) Feeding direction

The bit rotates clockwise as seen from above. Use the unit by feeding the trimmer in the direction shown in Fig. 6. If the trimmer is fed in the reverse direction as shown in the figure, you will receive reaction of the bit and finishing of the plane to be cut becomes coarse.

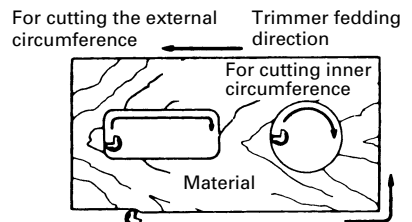


Fig. 6

3. Base angle adjustment

Loosen the right and left wing bolts and adjust the base angle. (Fig. 7)

The interval of the embossed graduations is 5°. Lay a ruler, etc., along the side of the base for use in chamfering work.

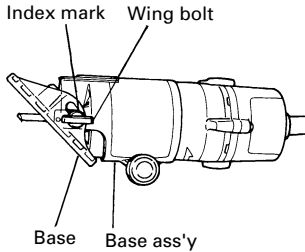


Fig. 7

HOW TO USE GUIDE

NOTE:

Avoid tilting the base when the guide is used.

1. Trimmer guide

Application:

The guide is handy when used in processing of materials such as trimming and beveling of plywood.

- (1) Fit the trimmer guide on the base with knob bolt (B).
- (2) Loosen knob bolt (B) to move the trimmer guide up and down.
- (3) Loosen knob bolt (C) and turn the stop screw to move the guide pin. (Fig. 8)

After moving the guide pin, tighten knob bolt (C) to secure it.

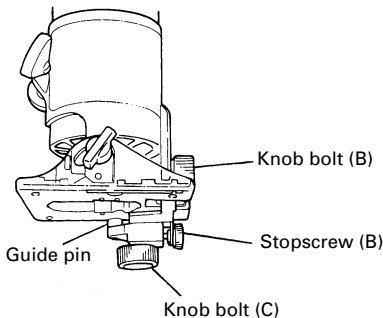


Fig. 8

- (4) When cutting refer to term "Feeding direction" in "How to use". (Fig. 9)

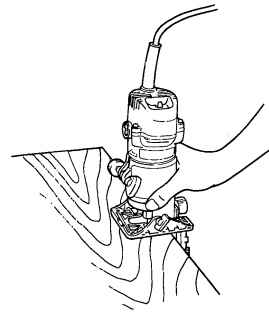


Fig. 9

2. Straight guide

Application:

It is handy when used for linear processing work such as beveling, grooving and the like.

- (1) Fit the straight guide with knob bolt (B) on the base and fix it.
- (2) Adjust the length "B" from the bit to the surface of straight guide by loosening the knob bolt (D) and moving the straight guide as necessary (Fig. 10)

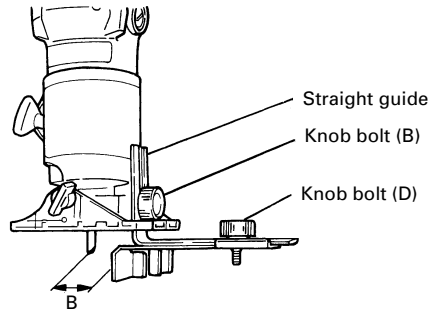


Fig. 10

- (3) When cutting refer to term "Feeding direction" in "How to use". (Fig. 11)

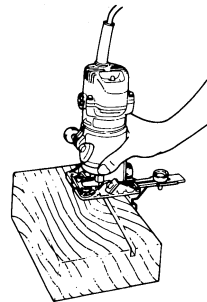


Fig. 11

3. Template guide

Application:

It is handy to process with a template a number of materials in one same shape. (In this case 6×6 mm or 6.35×6.35 mm ($1/4" \times 1/4"$) straight bit is usable.)

- (1) Remove the base ass'y from the main unit.
- (2) Loosen the right and left wing bolts and secure the base horizontally.
- (3) Install the template in the recessed part of the base and secure it with two screws.

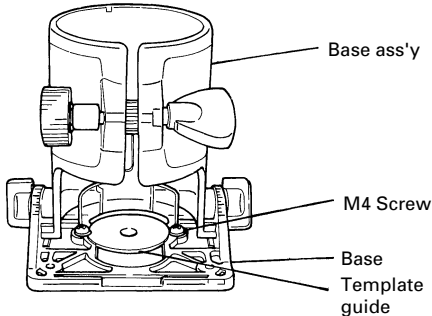


Fig. 12

NOTE:

Tighten the two screws moderately. Optimum tightening torque is 10-15 kg-cm.

- (4) Install the base ass'y in the main unit. (Fig. 13)

CAUTION

When fit the template guide, the upper part of the template guide must not touch the collet chuck.

- (5) Securely fix the template to the workpiece. Feed the trimmer following the template. (Fig. 13)

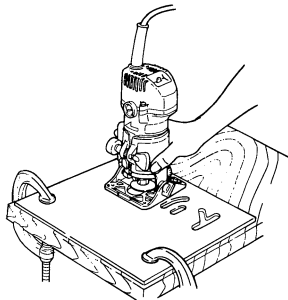


Fig. 13

Template

Template is referred to also as profiling mold and is made from a plywood or a thin wooden plate. Be careful of the following in producing a template:

When putting following the inner edge of the template, the workpiece is cut smaller because of the distance between the template guide and bit edge (with a 6×6 mm straight bit: 2.0 mm or 6.35×6.35 mm ($1/4" \times 1/4"$): 1.8 mm). By following the outer edge of the template, the workpiece is cut larger. (Figs. 14 and 15) The thickness of the template should be 5 mm or more.

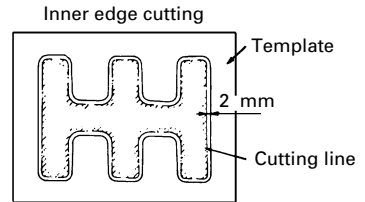


Fig. 14

Outer edge cutting

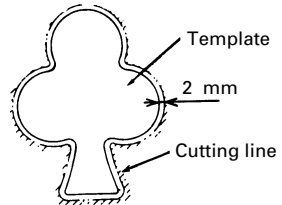


Fig. 15

MAINTENANCE AND INSPECTION

1. Inspecting the bit

Continued use of a dull or damaged bit will result in reduced cutting efficiency and may cause overloading of the motor. Replace the bit with a new one as soon as excessive abrasion is noted.

2. Inspecting the mounting screws

Regularly inspect all mounting screws and ensure that they are properly tightened. Should any of the screws be loose, retighten them immediately. Failure to do so could result in serious hazard.

3. Maintenance of the motor

The motor unit winding is the very "heart" of the power tool. Exercise due care to ensure the winding does not become damaged and/or wet with oil or water.

4. Inspecting the carbon brushes (Fig. 16)

The motor employs carbon brushes which are consumable parts. Since an excessively worn carbon brush can result in motor trouble, replace the carbon brush with new ones having the same carbon brush No. shown in the figure when they become worn to or near the "wear limit". In addition, always keep carbon brushes clean and ensure that they slide freely within the brush holders.

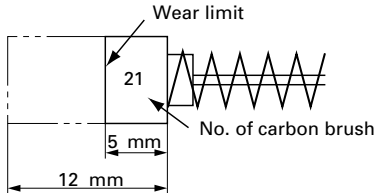


Fig. 16

5. Replacing carbon brushes

Disassemble the brush caps with a slotted-head screwdriver. The carbon brushes can then be easily removed.

6. Replacing supply cord

If the supply cord of Tool is damaged, the Tool must be returned to Hitachi Authorized Service Center for the cord to be replaced.

7. Service parts list

- A: Item No.
- B: Code No.
- C: No. Used
- D: Remarks

CAUTION

Repair, modification and inspection of Hitachi Power Tools must be carried out by an Hitachi Authorized Service Center.

This Parts List will be helpful if presented with the tool to the Hitachi Authorized Service Center when requesting repair or other maintenance.

In the operation and maintenance of power tools, the safety regulations and standards prescribed in each country must be observed.

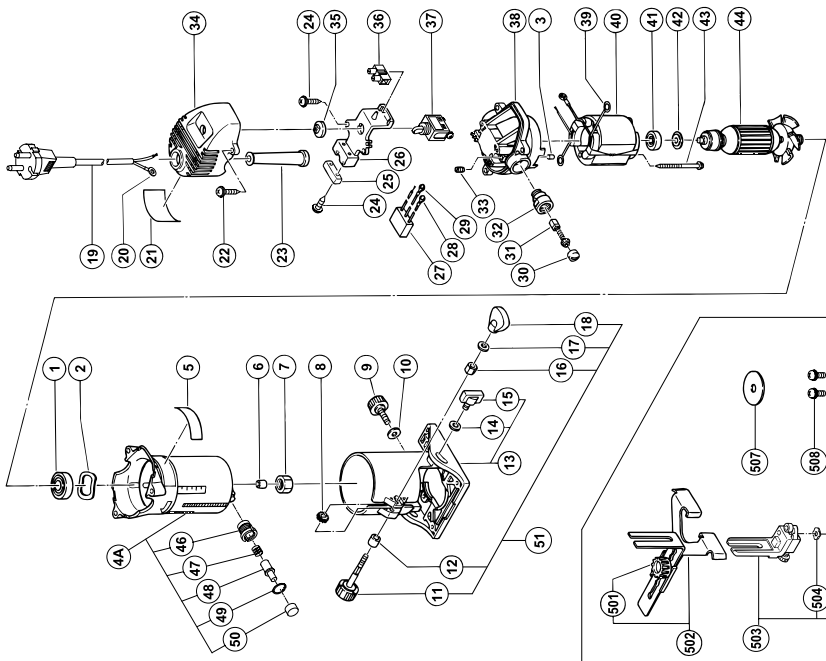
MODIFICATIONS

Hitachi Power Tools are constantly being improved and modified to incorporate the latest technological advancements.

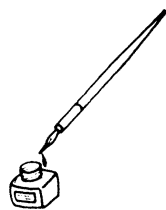
Accordingly, some parts (i.e. code numbers and/or design) may be changed without prior notice.

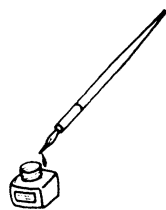
NOTE

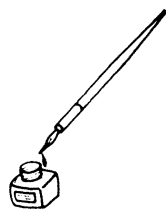
Due to HITACHI's continuing program of research and development, the specifications herein are subject to change without prior notice.



A	B	C	D	A	B	C	D
1	600-2DD	1	6002DDUCMPS2S	37-2	314-603	1	"GBR, ITA, FRG, FRA, HOL, AUT, SUJ"
2	961-489	1		38	314-027	1	"32, 33"
3	931-701	1	"46-50"	39	930-630	2	110V "39" "GBR
4A	314-026	1	6MM	40-1	340-374M	1	(110V)"
5		1	6.35MM	40-2	340-374L	1	220V-230V "39"
6-1	960-095	1		40-3	340-374G	1	230V "N.ZL"
6-2	960-114	1		40-4	340-374H	1	240V "39"
7	960-096	1	M6 x 11	41	627-VVM	1	627VVMC3EPS2S
8	314-019	1		42	960-111	1	D4 x 60
9	993-609	1		43	963-388	2	110V
10	961-482	1	"14, 15"	44-1	360-428C	1	110V
11	314-018	1	M6	44-2	360-428E	1	220V-230V
12	961-469	1	M5 x 15	44-3	360-428F	1	240V
13	314-017	1	M5.5	46	321-207	1	M8
14	949-432	2	M5	47	321-206	1	
15	308-364	2		48	321-204	1	
16	314-029	1		49	321-205	1	
17	310-386	1		50	321-203	1	
18	314-020	1		51	325-506	1	"11, 12, 16-18"
19		1		501	960-058	1	M6 x 16
20	980-063	1		502	960-104	1	"501"
21		3	D4 x 25	503	314-613	1	"504, 505"
22	307-028	3	D808	504	960-092	1	
23-1	953-327	1	D10.1	505	960-058	1	D10.1
23-2	938-051	1	D4 x 16	507	961-478	1	M4 x 8
24	984-750	4		508	976-815	2	17/19MM
25	937-631	1		509	931-161	1	
26	314-021	1					
27	994-273	1					
28	980-063	2	M5 x 8				
29	959-144	1					
30	937-847	2					
31	999-021	2					
32	937-846	2					
33	938-477	2					
34	314-028	1					
35	314-016	1					
36	938-307	1					
37-1	955-509	1					







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