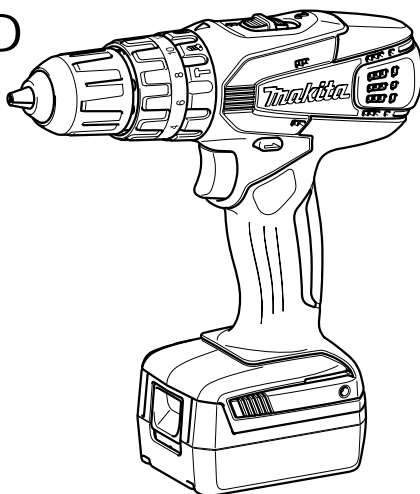


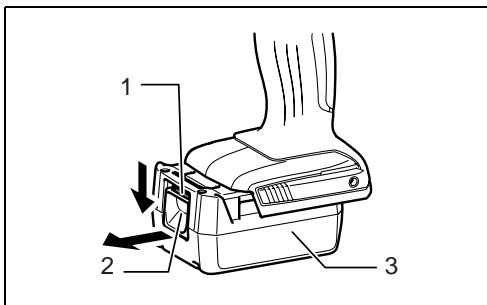


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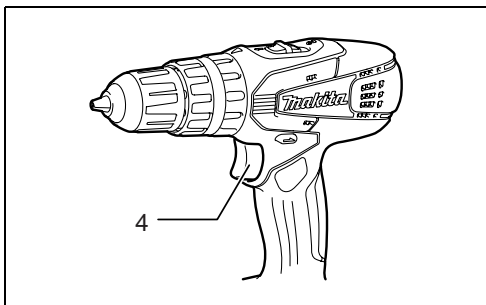
Cordless Hammer Driver Drill Instruction manual

HP347D
HP457D

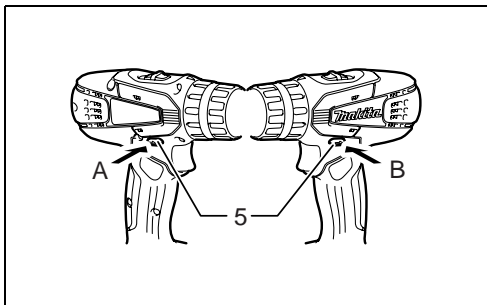




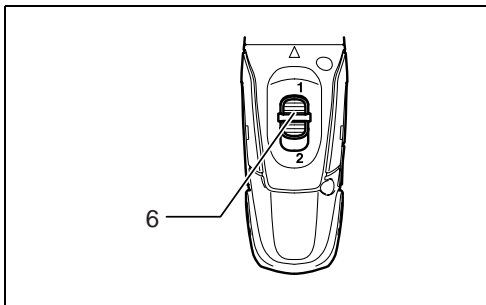
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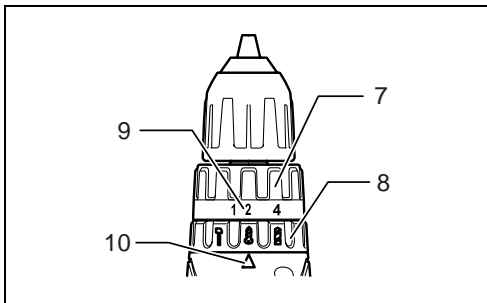
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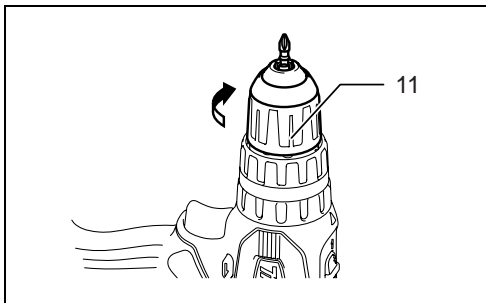
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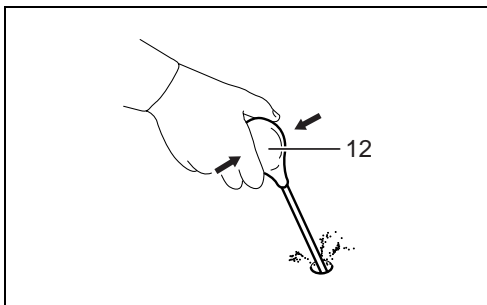
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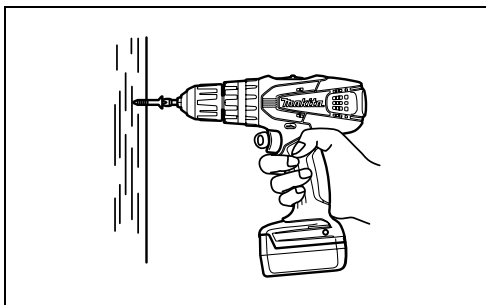
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8

ENGLISH (Original instructions)

Explanation of general view

- | | | |
|----------------------|------------------------------|-------------------|
| 1. Red indicator | 5. Reversing switch lever | 9. Graduation |
| 2. Button | 6. Speed change lever | 10. Arrow |
| 3. Battery cartridge | 7. Adjusting ring | 11. Sleeve |
| 4. Switch trigger | 8. Action mode changing ring | 12. Blow-out bulb |

SPECIFICATIONS

Model		HP347D	HP457D
Capacities	Concrete	10 mm	13 mm
	Steel	10 mm	13 mm
	Wood	25 mm	36 mm
	Wood screw	5.1 mm x 63 mm	6 mm x 75 mm
	Machine screw	6 mm	
No load speed (min ⁻¹)	High (2)	0 - 1,400	
	Low (1)	0 - 400	
Blows per minute (min ⁻¹)	High (2)	0 - 21,000	
	Low (1)	0 - 6,000	
Overall length	North/South America	216 mm	246 mm
	Other countries		239 mm
Net weight		1.5 kg	1.7 kg
Rated voltage		D.C. 14.4 V	D.C. 18 V

- Due to our continuing programme of research and development, the specifications herein are subject to change without notice.
- Specifications and battery cartridge may differ from country to country.
- Weight, with battery cartridge, according to EPTA-Procedure 01/2003


Intended use

ENE039-1

The tool is intended for impact drilling in brick, concrete and stone as well as for drilling without impact in wood, metal, ceramic and plastic.

General Power Tool Safety Warnings

GEA010-1

 **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.

CORDLESS HAMMER DRILL SAFETY WARNINGS

GEB056-3

1. **Wear ear protectors when impact drilling.**
Exposure to noise can cause hearing loss.
2. **Use auxiliary handle(s), if supplied with the tool.**
Loss of control can cause personal injury.
3. **Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

4. **Always be sure you have a firm footing.**

Be sure no one is below when using the tool in high locations.

5. **Hold the tool firmly.**
6. **Keep hands away from rotating parts.**
7. **Do not leave the tool running. Operate the tool only when hand-held.**
8. **Do not touch the bit or the workpiece immediately after operation; they may be extremely hot and could burn your skin.**
9. **Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.**

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 injury.

IMPORTANT SAFETY INSTRUCTIONS

ENC009-1

FOR BATTERY CARTRIDGE

1. Before using battery cartridge, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.
2. Do not disassemble battery cartridge.
3. If operating time has become excessively shorter, stop operating immediately. It may result in a risk of overheating, possible burns and even an explosion.
4. If electrolyte gets into your eyes, rinse them out with clear water and seek medical attention right away. It may result in loss of your eyesight.
5. Do not short the battery cartridge:
 - (1) Do not touch the terminals with any conductive material.
 - (2) Avoid storing battery cartridge in a container with other metal objects such as nails, coins, etc.
 - (3) Do not expose battery cartridge to water or rain.

A battery short can cause a large current flow, overheating, possible burns and even a breakdown.
6. Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 50°C (122°F).
7. Do not incinerate the battery cartridge even if it is severely damaged or is completely worn out. The battery cartridge can explode in a fire.
8. Be careful not to drop or strike battery.
9. Do not use a damaged battery.

SAVE THESE INSTRUCTIONS.

Tips for maintaining maximum battery life

1. Charge the battery cartridge before completely discharged.
Always stop tool operation and charge the battery cartridge when you notice less tool power.
2. Never recharge a fully charged battery cartridge. Overcharging shortens the battery service life.
3. Charge the battery cartridge with room temperature at 10°C - 40°C (50°F - 104°F). Let a hot battery cartridge cool down before charging it.

FUNCTIONAL DESCRIPTION

⚠ CAUTION:

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

Installing or removing battery cartridge (Fig. 1)

- Always switch off the tool before installing or removing of the battery cartridge.
- To remove the battery cartridge, slide it from the tool while sliding the button on the front of the cartridge.

- To install the battery cartridge, align the tongue on the battery cartridge with the groove in the housing and slip it into place. Always insert it all the way until it locks in place with a little click. If you can see the red indicator on the upper side of the button, it is not locked completely. Install it fully until the red indicator cannot be seen. If not, it may accidentally fall out of the tool, causing injury to you or someone around you.
- Do not use force when installing the battery cartridge. If the cartridge does not slide in easily, it is not being inserted correctly.

Battery protection system

The battery cartridge is equipped with the protection system, which automatically cuts off the output power for its long service life.

The tool stops during operation when the tool and/or battery are placed under the following situation. This is caused by the activation of protection system and does not show the tool trouble.

- When the tool is overloaded:
At this time, release the switch trigger, remove the battery cartridge and remove causes of overload and then pull the switch trigger again to restart.
- When battery cells get hot:
If any operation of the switch trigger, the motor will remain stopped. At this time, stop use of the tool and cool the battery cartridge.
- When the remaining battery capacity gets low:
If you pull the switch trigger, the motor runs again but stops soon. In this case, to prevent over discharge, remove the battery cartridge from the tool and charge it.

Switch action (Fig. 2)

⚠ CAUTION:

- Before inserting the battery cartridge into the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

To start the tool, simply pull the switch trigger. Tool speed is increased by increasing pressure on the switch trigger. Release the switch trigger to stop.

Reversing switch action (Fig. 3)

This tool has a reversing switch to change the direction of rotation. Depress the reversing switch lever from the A side for clockwise rotation or from the B side for counterclockwise rotation.

When the reversing switch lever is in the neutral position, the switch trigger cannot be pulled.

⚠ CAUTION:

- Always check the direction of rotation before operation.
- Use the reversing switch only after the tool comes to a complete stop. Changing the direction of rotation before the tool stops may damage the tool.
- When not operating the tool, always set the reversing switch lever to the neutral position.

Speed change (Fig. 4)




To change the speed, first switch off the tool and then slide the speed change lever to the "2" side for high speed

or “1” side for low speed. Be sure that the speed change lever is set to the correct position before operation. Use the right speed for your job.

⚠ CAUTION:

- Always set the speed change lever fully to the correct position. If you operate the tool with the speed change lever positioned halfway between the “1” side and “2” side, the tool may be damaged.
- Do not use the speed change lever while the tool is running. The tool may be damaged.

Selecting the action mode (Fig. 5)

This tool employs an action mode changing ring. Select one of the three modes suitable for your work needs by using this ring.
For rotation only, turn the ring so that the arrow on the tool body points toward the  mark on the ring.
For rotation with hammering, turn the ring so that the arrow points toward the  mark on the ring.
For rotation with clutch, turn the ring so that the arrow points toward the  mark on the ring.

⚠ CAUTION:

- Always set the ring correctly to your desired mode mark. If you operate the tool with the ring positioned halfway between the mode marks, the tool may be damaged.

Adjusting the fastening torque (Fig. 5)

The fastening torque can be adjusted in 16 steps by turning the adjusting ring so that its graduations are aligned with the arrow on the tool body. The fastening torque is minimum when the number 1 is aligned with the arrow, and maximum when the number 16 is aligned with the arrow.
Before actual operation, drive a trial screw into your material or a piece of duplicate material to determine which torque level is required for a particular application.

ASSEMBLY

⚠ CAUTION:

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

Installing or removing driver bit or drill bit (Fig. 6)


Turn the sleeve counterclockwise to open the chuck jaws. Place the bit in the chuck as far as it will go. Turn the sleeve clockwise to tighten the chuck.
To remove the bit, turn the sleeve counterclockwise.

OPERATION

Hammer drilling operation

⚠ CAUTION:


- There is a tremendous and sudden twisting force exerted on the tool/bit at the time of hole break-through, when the hole becomes clogged with chips and particles, or when striking reinforcing rods embedded in the concrete.

First, turn the action mode changing ring so that the arrow on the tool body points to the  marking. The adjusting ring can be aligned in any torque levels for this operation. Be sure to use a tungsten-carbide tipped bit.
Position the bit at the desired location for the hole, then pull the switch trigger. Do not force the tool. Light pressure gives best results. Keep the tool in position and prevent it from slipping away from the hole.
Do not apply more pressure when the hole becomes clogged with chips or particles. Instead, run the tool at an idle, then remove the bit partially from the hole. By repeating this several times, the hole will be cleaned out and normal drilling may be resumed.

Blow-out bulb (optional accessory) (Fig. 7)

After drilling the hole, use the blow-out bulb to clean the dust out of the hole.

Screwdriving operation (Fig. 8)


First, turn the action mode changing ring so that the arrow on the tool body points to the  marking. Adjust the adjusting ring to the proper torque level for your work. Then proceed as follows.
Place the point of the driver bit in the screw head and apply pressure to the tool. Start the tool slowly and then increase the speed gradually. Release the switch trigger as soon as the clutch cuts in.

⚠ CAUTION:

- Make sure that the driver bit is inserted straight in the screw head, or the screw and/or bit may be damaged.
- NOTE:**
- When driving wood screws, predrill pilot holes to make driving easier and to prevent splitting of the workpiece. See the chart.

Nominal diameter of wood screw (mm)	Recommended size of pilot hole (mm)
3.1	2.0 - 2.2
3.5	2.2 - 2.5
3.8	2.5 - 2.8
4.5	2.9 - 3.2
4.8	3.1 - 3.4
5.1	3.3 - 3.6
5.5	3.7 - 3.9
5.8	4.0 - 4.2
6.1	4.2 - 4.4

Drilling operation

First, turn the adjusting ring so that the pointer points to the  marking. Then proceed as follows.

⚠ CAUTION:

- Pressing excessively on the tool will not speed up the drilling. In fact, this excessive pressure will only serve to damage the tip of your bit, decrease the tool performance and shorten the service life of the tool.
- There is a tremendous force exerted on the tool/bit at the time of hole break through. Hold the tool firmly and

exert care when the bit begins to break through the workpiece.

- A stuck bit can be removed simply by setting the reversing switch to reverse rotation in order to back out. However, the tool may back out abruptly if you do not hold it firmly.
- Always secure small workpieces in a vise or similar hold-down device.
- If the tool is operated continuously until the battery cartridge has discharged, allow the tool to rest for 15 minutes before proceeding with a fresh battery.

Drilling in wood

When drilling in wood, the best results are obtained with wood drills equipped with a guide screw. The guide screw makes drilling easier by pulling the bit into the workpiece.

Drilling in metal

To prevent the bit from slipping when starting a hole, make an indentation with a center-punch and hammer at the point to be drilled. Place the point of the bit in the indentation and start drilling.

Use a cutting lubricant when drilling metals. The exceptions are iron and brass which should be drilled dry.

MAINTENANCE

CAUTION:

- Always be sure that the tool is switched off and the battery cartridge is removed before attempting to perform inspection or maintenance.
 - Never use gasoline, benzine, thinner, alcohol or the like. Discoloration, deformation or cracks may result.
- To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized Service Centers, always using Makita replacement parts.

OPTIONAL 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.

- Drill bits
- Tungsten-carbide tipped hammer bit
- Phillips bit
- Slotted bit
- Socket bit
- Blow-out bulb
- Safety goggles
- Various type of Makita genuine batteries and chargers
- Rubber pad assembly
- Wool bonnet
- Foam polishing pad
- Plastic carrying case

NOTE:

- Some items in the list may be included in the tool package as standard accessories. They may differ from country to country.

Noise

ENG905-1

The typical A-weighted noise level determined according to EN60745:

Model HP347D

Sound pressure level (L_{pA}): 82 dB (A)
Sound power level (L_{WA}): 93 dB (A)
Uncertainty (K): 3 dB (A)

Model HP457D

Sound pressure level (L_{pA}): 81 dB (A)
Sound power level (L_{WA}): 92 dB (A)
Uncertainty (K): 3 dB (A)

Wear ear protection.

Vibration

ENG900-1

The vibration total value (tri-axial vector sum) determined according to EN60745:

Model HP347D

Work mode: impact drilling into concrete
Vibration emission (a_{hID}): 9.0 m/s²
Uncertainty (K): 2.0 m/s²

Work mode: drilling into metal
Vibration emission (a_{hD}): 2.5 m/s² or less
Uncertainty (K): 1.5 m/s²

Model HP457D

Work mode: impact drilling into concrete
Vibration emission (a_{hID}): 7.0 m/s²
Uncertainty (K): 1.5 m/s²

Work mode: drilling into metal
Vibration emission (a_{hD}): 2.5 m/s² or less
Uncertainty (K): 1.5 m/s²

ENG901-1

- The declared vibration emission value has been measured in accordance with the standard test method and may be used for comparing one tool with another.
- The declared vibration emission value may also be used in a preliminary assessment of exposure.

WARNING:

- The vibration emission during actual use of the power tool can differ from the declared emission value depending on the ways in which the tool is used.
- Be sure to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).

For European countries only

ENH101-15

EC Declaration of Conformity

We Makita Corporation as the responsible manufacturer declare that the following Makita machine(s):

Designation of Machine:
Cordless Hammer Driver Drill
Model No./ Type: HP347D, HP457D
are of series production and

Conforms to the following European Directives:

2006/42/EC

And are manufactured in accordance with the following standards or standardised documents:

EN60745

The technical documentation is kept by our authorised
representative in Europe who is:

Makita International Europe Ltd.
Michigan Drive, Tongwell,
Milton Keynes, Bucks MK15 8JD, England

23. 8. 2010



Tomoyasu Kato
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