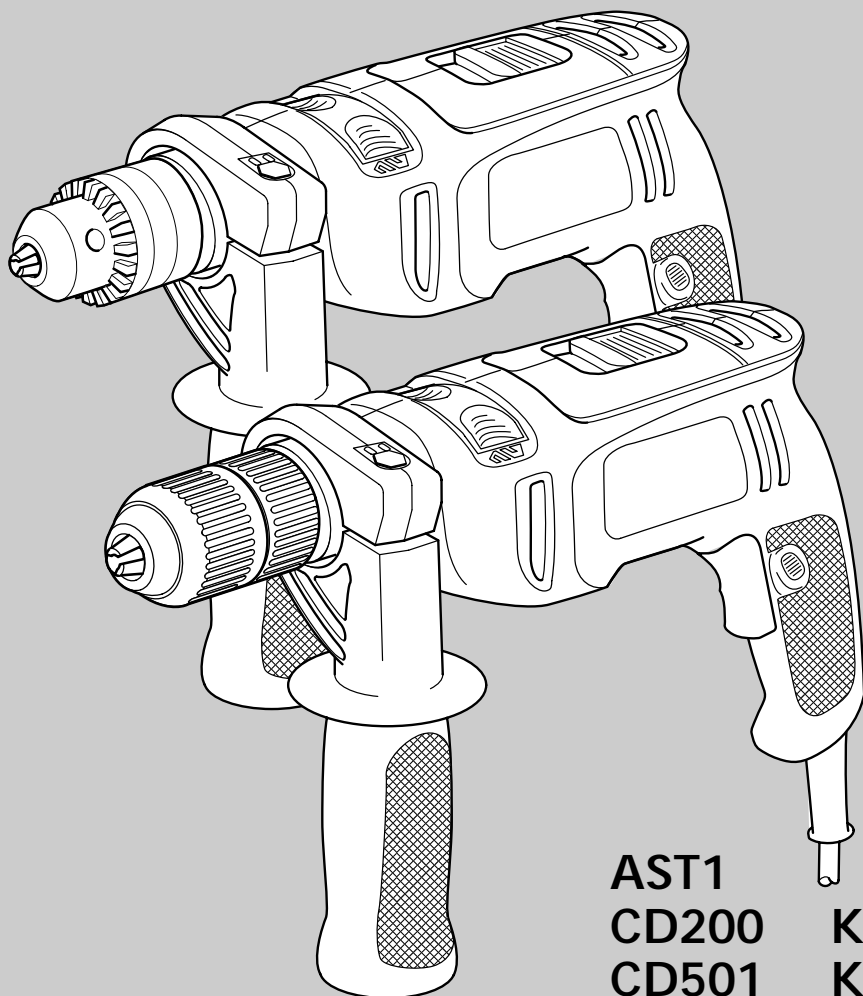
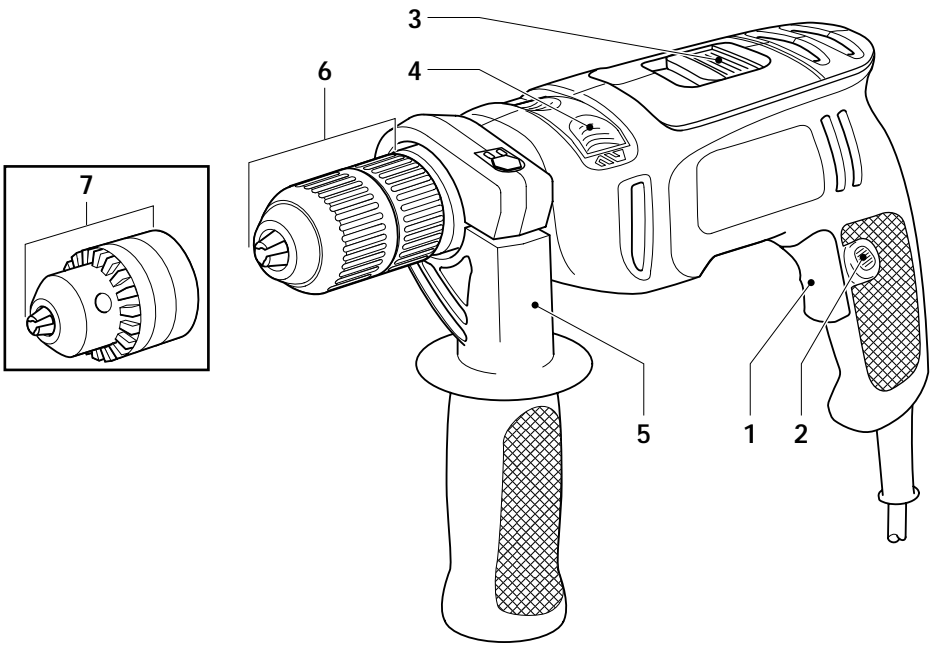


 **BLACK &  
DECKER®**

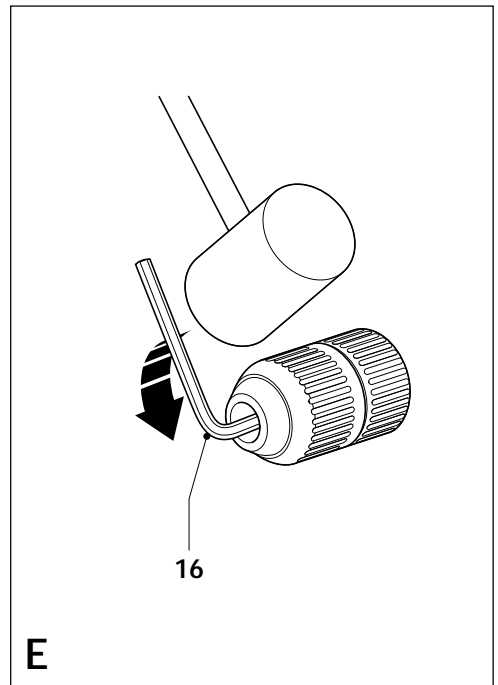
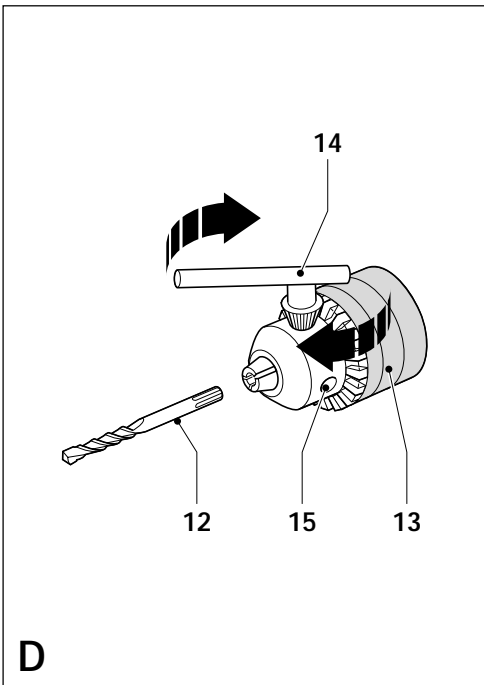
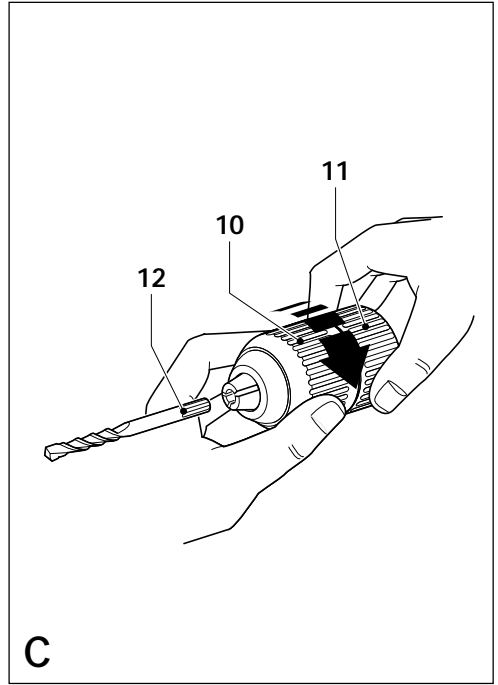
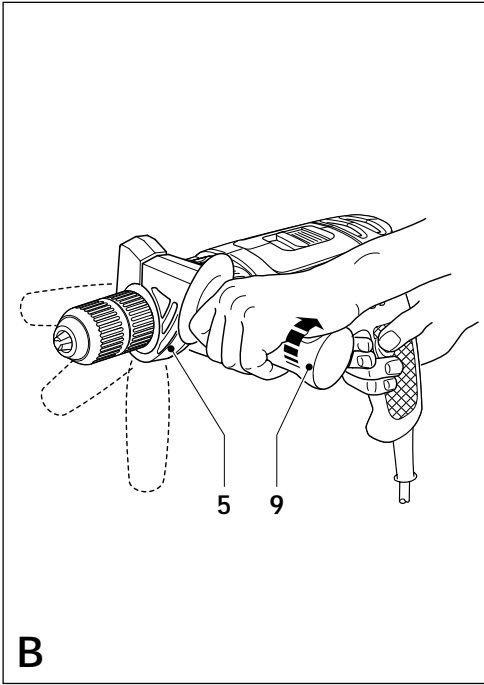


AST1	
CD200	KR500
CD501	KR502
KR400	KR510
KR420	KR531
KR450	KR532





A



# DRILL AST1/CD200/CD501/KR400/KR420/ KR450/KR500/KR502/KR510/KR531/KR532

## CONGRATULATIONS!


You have chosen a Black & Decker tool. Our aim is to provide quality tools at an affordable price. We hope that you will enjoy using this tool for many years.

## EC DECLARATION OF CONFORMITY

**CE** AST1/CD200/CD501/KR400/KR420/  
KR450/KR500/KR502/KR510/KR531/KR532  
Black & Decker declares that these products conform to:  
98/37/EC, 89/336/EEC, 73/23/EEC,  
EN 50144, EN 55014, EN 61000

Level of sound pressure, measured according to EN 50144:

$L_{pA}$	(sound pressure)	dB(A)	91
$L_{WA}$	(acoustic power)	dB(A)	104

 Always wear ear protection if the sound pressure exceeds 85 dB(A).

Hand/arm weighted vibration value according to EN 50144:

5.2 m/s<sup>2</sup>



Kevin Hewitt  
Director of Consumer Engineering  
Spennymoor, County Durham DL16 6JG,  
United Kingdom

## INTENDED USE

Your Black & Decker drill has been designed for drilling in wood, metal, plastics and masonry as well as for screwdriving purposes. This tool is intended for consumer use only.

## SAFETY INSTRUCTIONS

### Warning symbols

The following symbols are used in this manual:



Denotes risk of personal injury, loss of life or damage to the tool in case of non-observance of the instructions in this manual.



Denotes risk of electric shock.



Read the manual prior to operation.

### Know your tool



- ◆ **Warning!** When using mains-powered tools, basic safety precautions, including the following, should always be followed to reduce the risk of fire, electric shock, personal injury and material damage.
  - ◆ Read all of this manual carefully before operating the tool.
  - ◆ Before operating the tool, make sure that you know how to switch the tool off in an emergency.
  - ◆ Retain this manual for future reference.

## General

### 1. Keep work area clean

Cluttered areas and benches can cause accidents.

### 2. Consider work area environment

Do not expose the tool to rain. Do not use the tool in damp or wet conditions. Keep the work area well lit. Do not use the tool where there is a risk of causing fire or explosion, e.g. in the presence of flammable liquids and gases.

### 3. Keep children away

Do not allow children, visitors or animals to come near the work area or to touch the tool or mains cable.

### 4. Dress properly

Do not wear loose clothing or jewellery, as these can be caught in moving parts. Preferably wear rubber gloves and non-slip footwear when working outdoors. Wear protective hair covering to keep long hair out of the way.

### 5. Personal protection

Always use safety glasses. Use a face or dust mask whenever the operations may produce dust or flying particles. Wear ear protection whenever the sound level seems uncomfortable.

### 6. Guard against electric shock

Prevent body contact with earthed or grounded surfaces (e.g. pipes, radiators, cookers and refrigerators). Electric safety can be further improved by using a high-sensitivity (30 mA / 30 mS) residual current device (RCD).

### 7. Do not overreach

Keep proper footing and balance at all times.

### 8. Stay alert

Watch what you are doing. Use common sense. Do not operate the tool when you are tired.

### 9. Secure workpiece

Use clamps or a vice to hold the workpiece. It is safer and it frees both hands to operate the tool.

### 10. Connect dust extraction equipment

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

### 11. Remove keys and adjusting wrenches

Always check that keys and adjusting wrenches are removed from the tool before operating the tool.

### 12. Extension cables

Before use, inspect the extension cable and replace if damaged. When using the tool outdoors, only use extension cables intended for outdoor use.

### 13. Use appropriate tool

The intended use is described in this instruction manual. Do not force small tools or attachments to do the job of a heavy-duty tool. The tool will do the job better and safer at the rate for which it was intended. Do not force the tool.

**Warning!** The use of any accessory or attachment or performance of any operation with this tool other than those recommended in this instruction manual may present a risk of personal injury.

### 14. Check for damaged parts

Before use, carefully check the tool and mains cable for damage. Check for misalignment and seizure of moving parts, breakage of parts, damage to guards and switches and any other conditions that may affect its operation. Ensure that the tool will operate properly and perform its intended function. Do not use the tool if any part is damaged or defective. Do not use the tool if the switch does not turn it on and off. Have any damaged or defective parts repaired or replaced by an authorised repair agent. Never attempt any repairs yourself.

### 15. Unplug the tool

Unplug the tool when it is not in use, before changing any parts of the tool, accessories or attachments and before servicing.

### 16. Avoid unintentional starting

Do not carry the tool with a finger on the on/off switch. Be sure that the tool is switched off when plugging in.

### 17. Do not abuse cord

Never carry the tool by its cord or pull it to disconnect from the socket. Keep the cord away from heat, oil and sharp edges.

### 18. Store idle tools

When not in use, tools should be stored in a dry, locked up or high place, out of reach of children.

### 19. Maintain tools with care

Keep cutting tools sharp and clean for better and safer performance.

Follow the instructions for maintenance and changing accessories. Keep handles and switches dry, clean and free from oil and grease.

## 20. Repairs

This tool complies with 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 instructions for Australia and New Zealand**

- ◆ This appliance is not intended for use by young or infirm persons without supervision. Children must be supervised to ensure they do not play with the appliance.
- ◆ If the supply cord is damaged, it must be replaced by the manufacturer or an authorised Black & Decker Service Centre in order to avoid a hazard.

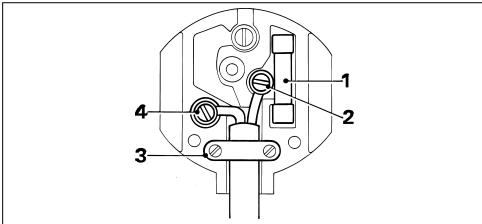
### **ELECTRICAL SAFETY**

The electric motor has been designed for one voltage only. Always check that the power supply corresponds to the voltage on the rating plate.



This tool is double insulated in accordance with EN 50144; therefore no earth wire is required.

### **Mains plug replacement (U.K. & Ireland only)**



- ◆ Should your mains plug need replacing and you are competent to do this, proceed as instructed below. If you are in doubt, contact an authorised repair agent or a qualified electrician.
- ◆ Disconnect the plug from the supply and remove the fuse from the plug.
- ◆ Cut off the plug and dispose of it safely; a plug with bared copper conductors is dangerous if engaged in a live socket outlet.

- ◆ Only fit 13 Amperes BS1363A approved plugs fitted with the correctly rated fuse (1).
- ◆ The cable wire colours, or a letter, will be marked at the connection points of most good quality plugs. Attach the wires to their respective points in the plug (see above). Brown is for Live (L) (2), blue is for Neutral (N) (4).
- ◆ Before replacing the top cover of the mains plug ensure that the cable restraint (3) is holding the outer sheath of the cable firmly and that the leads are correctly fixed at the terminal screws.
- ◆ If the plug has a fuse cover, make sure that the fuse cover is fitted. Do not use the plug if the fuse cover is missing or damaged.



Never use a light socket.

### **Using an extension cable**

Always use an approved extension cable suitable for the power input of this tool (see technical data). Before use, inspect the extension cable for signs of damage, wear and ageing. Replace the extension cable if damaged or defective. When using a cable reel, always unwind the cable completely. Use of an extension cable not suitable for the power input of the tool or which is damaged or defective may result in a risk of fire and electric shock.

### **OVERVIEW (fig. A)**

This tool includes some or all of the following features.

1. Variable speed switch (AST1, CD501, KR450RE, KR500(C)RE, KR510)
1. On/off switch (other models)
2. Lock-on button
3. Two-speed selector (KR502, KR532)
3. Forward/reverse switch (other models)
4. Drilling mode selector
5. Side handle
6. Keyless chuck
7. Keyed chuck

## ASSEMBLY



Before attempting any of the following operations, make sure that the tool is switched off and unplugged.

### Fitting the side handle (fig. B)

- ◆ Turn the grip (9) counterclockwise until you can slide the side handle (5) onto the front of the tool as shown.
- ◆ Rotate the side handle into the desired position.
- ◆ Tighten the side handle by turning the grip clockwise.

### Fitting a drill bit or screwdriver bit

#### Keyless chuck (fig. C)

- ◆ Open the chuck by turning the front part (10) with one hand while holding the rear part (11) with the other.
- ◆ Insert the bit shaft (12) into the chuck and firmly tighten the chuck.

#### Keyed chuck (fig. D)

- ◆ Open the chuck by turning the sleeve (13).
- ◆ Insert the bit shaft (12) into the chuck.
- ◆ Insert the chuck key (14) into each hole (15) in the side of the chuck and turn until tight.

### Removing and refitting the chuck (fig. E)

- ◆ Open the chuck as far as possible.
- ◆ Remove the chuck retaining screw by turning it clockwise using a screwdriver.
- ◆ Tighten an Allen key (16) into the chuck and strike it with a hammer as shown.
- ◆ Remove the Allen key.
- ◆ Remove the chuck by turning it counterclockwise.
- ◆ To refit the chuck, screw it onto the spindle and secure it with the chuck retaining screw.

## USE



- ◆ Let the tool work at its own pace. Do not overload.
- ◆ Before drilling into walls, floors or ceilings, check for the location of wiring and pipes.

### Selecting the direction of rotation (fig. A)

- ◆ For drilling and for tightening screws, slide the forward/reverse switch (7) forward.
- ◆ For loosening screws or removing a jammed drill bit, slide the forward/reverse switch (7) backward.



Never change the direction of rotation while the motor is running.

### Selecting the drilling mode (fig. A)

- ◆ For drilling in masonry, set the drilling mode selector (4) to the **T** position.
- ◆ For drilling in other materials and for screwdriving, set the drilling mode selector (4) to the **1** position.

### Switching on and off (fig. A)

#### Variable speed switch

- ◆ To switch the tool on, press the variable speed switch (1). The tool speed depends on how far you press the switch. As a general rule, use low speeds for large diameter drill bits and high speeds for smaller diameter drill bits.
- ◆ For continuous operation, press the lock-on button (2) and release the variable speed switch. This option is available only at full speed.
- ◆ To switch the tool off, release the variable speed switch. To switch the tool off when in continuous operation, press the variable speed switch once more and release it.

#### On/off switch

- ◆ To switch the tool on, press the on/off switch (1). If the tool has a two-speed selector (3), set it to the required speed range. As a general rule, use low speeds for large diameter drill bits and high speeds for smaller diameter drill bits.
- ◆ For continuous operation, press the lock-on button (2) and release the on/off switch.
- ◆ To switch the tool off, release the on/off switch. To switch the tool off when in continuous operation, press the on/off switch once more and release it.



### Accessories

The performance of your tool depends on the accessory used. Black & Decker and Piranha accessories are engineered to high quality standards and designed to enhance the performance of your tool. By using these accessories you will get the very best from your tool.

### MAINTENANCE

Your Black & Decker tool has been designed to operate over a long period of time with a minimum of maintenance. Continuous satisfactory operation depends upon proper tool care and regular cleaning.



Before performing any maintenance, switch off and unplug the tool.

### PROTECTING THE ENVIRONMENT



Black & Decker provides a facility for recycling Black & Decker products once they have reached the end of their working life. This service is provided free of charge. To take advantage of this service please return your product to any authorised repair agent who will collect them on our behalf.

You can check the location of your nearest authorised repair agent by contacting your local Black & Decker office at the address indicated in this manual. Alternatively, a list of authorised Black & Decker repair agents and full details of our after-sales service and contacts are available on the Internet at: [www.2helpU.com](http://www.2helpU.com).

### GUARANTEE

Black & Decker is confident of the quality of its products and offers an outstanding guarantee. This guarantee statement is in addition to and in no way prejudices your statutory rights. The guarantee is valid within the territories of the Member States of the European Union and the European Free Trade Area.

If a Black & Decker product becomes defective due to faulty materials, workmanship or lack of conformity, within 24 months from the date of purchase, Black & Decker guarantees to replace defective parts, repair products subjected to fair wear and tear or replace such products to ensure minimum inconvenience to the customer unless:

- ◆ The product has been used for trade, professional or hire purposes;
- ◆ The product has been subjected to misuse or neglect;

### Technical data

		CD200 KR400	KR420	KR450	KR450RE	KR510
Voltage	$V_{AC}$	230	230	230	230	230
Power input	W	400	420	450	450	500
No-load speed	$\text{min}^{-1}$	2,800	2,800	2,800	0-2,800	0-2,800

		CD501 AST1	KR500RE KR500CRE	KR500	KR502 KR532	KR531
Voltage	$V_{AC}$	230	230	230	230	230
Power input	W	500	500	500	500	500
No-load speed	$\text{min}^{-1}$	0-2,800	0-2,800	2,800	2,400/2,800	2,800

### Max. drilling capacity

		AST1 CD501CRE KR500(C)RE	KR510XC KR531 KR532	other models
Steel/concrete	mm	13	13	10
Wood	mm	20	20	20

- ◆ The product has sustained damage through foreign objects, substances or accidents;
- ◆ Repairs have been attempted by persons other than authorised repair agents or Black & Decker service staff.

To claim on the guarantee, you will need to submit proof of purchase to the seller or an authorised repair agent. You can check the location of your nearest authorised repair agent by contacting your local Black & Decker office at the address indicated in this manual. Alternatively, a list of authorised Black & Decker repair agents and full details of our after-sales service and contacts are available on the Internet at: [www.2helpU.com](http://www.2helpU.com).

## OTHER DIY TOOLS

Black & Decker has a full range of tools that make DIY jobs easy. If you would like further information on the following products, please contact our Service and Information Centre (see the address page towards the end of this manual) or your local Black & Decker retailer.

Drills  
Cordless screwdrivers  
Cordless drills/screwdrivers  
Sanders  
Jigsaws  
Circular saws  
Mitre saws  
Angle grinders  
Planers  
Routers  
Corded and cordless multi-purpose tools  
Paint strippers  
Workbenches

We also have a wide range of accessories for the above tools.

Not all products are available in all countries.







<b>Australia</b>	DeWALT Industrial Power Tool Company 7 Clarice Road Box Hill, Victoria 3128	Tel. 03 9895 9200 Fax 03 9899 7465
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<b>New Zealand</b>	Black & Decker 81 Hugo Johnson Drive Penrose, Auckland, New Zealand	Tel. 09 579 7600 Fax 09 579 8200
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<b>South Africa</b>	Black & Decker South Africa (Pty) Ltd Physical address: 39 Commerce Crescent Eastgate, ext. 12, Sandton, Kramerville 2148 Postal address: Postnet Suite 107, Private Bag X65 Halfway House 1685	Tel. (011) 653-1400 Fax (011) 653-1499
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<b>United Kingdom</b>	Black & Decker 210 Bath Road Slough, Berkshire SL1 3YD	Tel. 01753 511234 Fax 01753 551155 Helpline 01753 574277
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Dealer address

Date of purchase

Name: .....

Address: .....

Town: .....

Postal code: .....

Was this tool a gift?

- Yes
- No

Was this tool your first purchase?

- Yes
- No

Was this tool bought as a replacement?

- Yes
- No

Dealer address: .....

.....

- Data protection act:  
Tick the box if you prefer not to receive further information.



