TOTAL

One-Stop Tools Station

BATTERY CHARGER

TBC1601

EN

12/24V

Security instructions

Caution

Read all safety warnings and all instructions. Failure to follow all warnings and instructions can result in electric shock, fire, and / or serious injury.

The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Note: Save all warnings and instructions for future reference.

1) **Work area safety**
    a. Explosive gases: avoid flames and sparks, make sure the workplace is well ventilated during charging.
    b. The load contains components such as the switch and the fuse that can cause arcing and sparks. Make sure the garage or room is well ventilated.
    c. For indoor use, do not expose to rain or moisture.
    d. Do not place the charger on a hot surface.
    e. There is an acute risk of explosion if there is a gas odor. Disconnect the charging clamps, ventilate the room immediately and completely, have a dealer inspect the charger.
2) **Electrical safety**
    a. The charger is designed for 12V and 24V lead acid batteries.
    b. Never use the device to charge non-rechargeable batteries or defective batteries.
    c. Do not charge multiple batteries simultaneously.
    d. Do not short-circuit the charging clamps.
    e. This charger is not suitable for maintenance-free batteries.
    f. Never use the cord for any other purpose than its intended use.
    g. Indicate the polarity correctly, the anode is red / sign (+), the cathode is black / sign (-).
    h. Voltage spikes can damage electronic components. Therefore, it is advisable to disconnect the battery from the system during charging.
3) **Personal security**
    a. Wear goggles and gloves when charging the battery. There is a high risk of injury from corrosive acid.
    b. To avoid sparks due to electrostatic discharge, never wear clothing made of synthetic materials when charging the battery.
    c. Keep children and pets away from the battery and charger.
    d. Battery acid is corrosive. If acid is splashed on your skin or clothing, wash it off immediately and consult a doctor if necessary.
    e. Wear acid-proof gloves and safety glasses whenever you connect the battery, charge it, and whenever you add acid or refill with distilled water.
4) **Use and care**
    a. The power cable and the charging cables must be in perfect condition.
    b. Keep the ventilation slots free of dirt.
    c. Do not carry the appliance by its cord and never pull the cord to remove the plug from the socket. Protect the cord from heat, oil, and sharp edges.
    d. Keep the terminals clean and protect them from corrosion.
    e. If the fuse next to the charge current indicator blows, replace it with a fuse of the same amperage.

5) **Service**
   a. Have your tool repaired by a qualified person and use replacement parts recommended by the manufacturer. This will ensure that the safety of the tool is maintained.

Other safety rules

- Disposal of unwanted batteries should be done only through auto shops, special battery collection stations, or special waste collection centers. Ask your local authorities for more details
- Disconnect supply before making or breaking connections to battery. If the power cord is damaged, it must be replaced by the manufacturer or its dealer to avoid a hazard.
- The cathode of the battery charger that is not connected to the chassis of the vehicle must be connected first. The anode must be corrected to that of the battery. And then connected to the main source. After charging, disconnect the battery charger from the mains.
- Motor vehicle manufacturers recommend disconnecting the battery from the vehicle's electrical system before charging.

	Read the instruction manual before use.
	CE conformity.
	Wear safety glasses, hearing protection and a mask.
	Waste electrical products must not be disposed of with household waste. Please recycle at the appropriate facilities. Check with your local authority or retailer for recycling advice.
	Security alert. Use only accessories approved by the manufacturer.

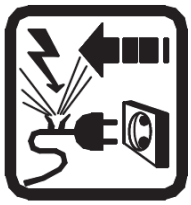
Other risks

Even when the power tool is used as prescribed, it is not possible to eliminate all residual risk factors:

a. Health defects resulting from the emission of vibrations if the power tool is used for a longer period of time or if it is not properly managed and maintained.
b. Injury and property damage from broken accessories suddenly breaking.

Caution

This power tool produces an electromagnetic field during operation. This field can, in some circumstances, interfere with active or passive medical implants.



To reduce the risk of serious injury, we recommend that individuals with medical implants consult their physician before using this power tool.

If the cord is damaged or cut during work, do not touch the cord, immediately unplug the tool. Never use the machine with a damaged cord.

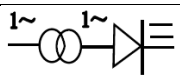
The machine must not be damp and must not be used in a humid environment.

Attention

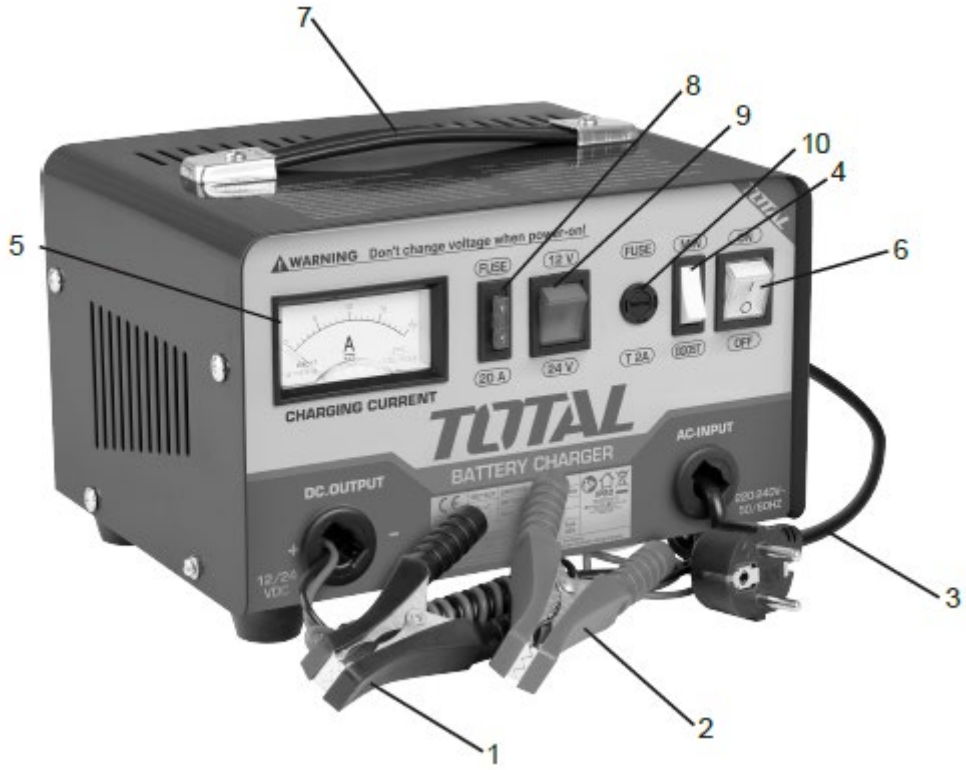
Safe working with this machine is only possible when the operating or safety information is fully read and the instructions contained therein are strictly followed.

Technical data

CE		**TBC1601**		EN60335-2-29		
1~ 1~				BATTERY MAX180Ah MIN28Ah		
				I_{BOOST} 12A I_{min} 4A		
		NOMINAL INPUT			NOMINAL OUTPUT	
		Voltage	Current	Fuse	Voltage	Current	Fuse
	IP20C	220-240V~ 50/60Hz	0.9A	2A	12/24V	9/4A	20A
Disconnect supply before making or breaking connections to battery. Warning: Explosive gases. Avoid flames and sparks. Provide adequate ventilation during charging.							

EN60335-2-29	EU standard norm
	Single-phase transformer - Rectifier
	Please read the instruction manual carefully before use
	Use only indoors
IP20C	Protection level
	The anode and cathode of the battery.

Product description



1. Negative pole output

3. Power cord
4. Power output switch
5. Current meter
6. Power switch
7. Handle
8. Output fuse
9. Voltage switch
10. Input fuse

Note: Not all accessories illustrated or described have to be included in the standard delivery.

Functioning

Battery charge

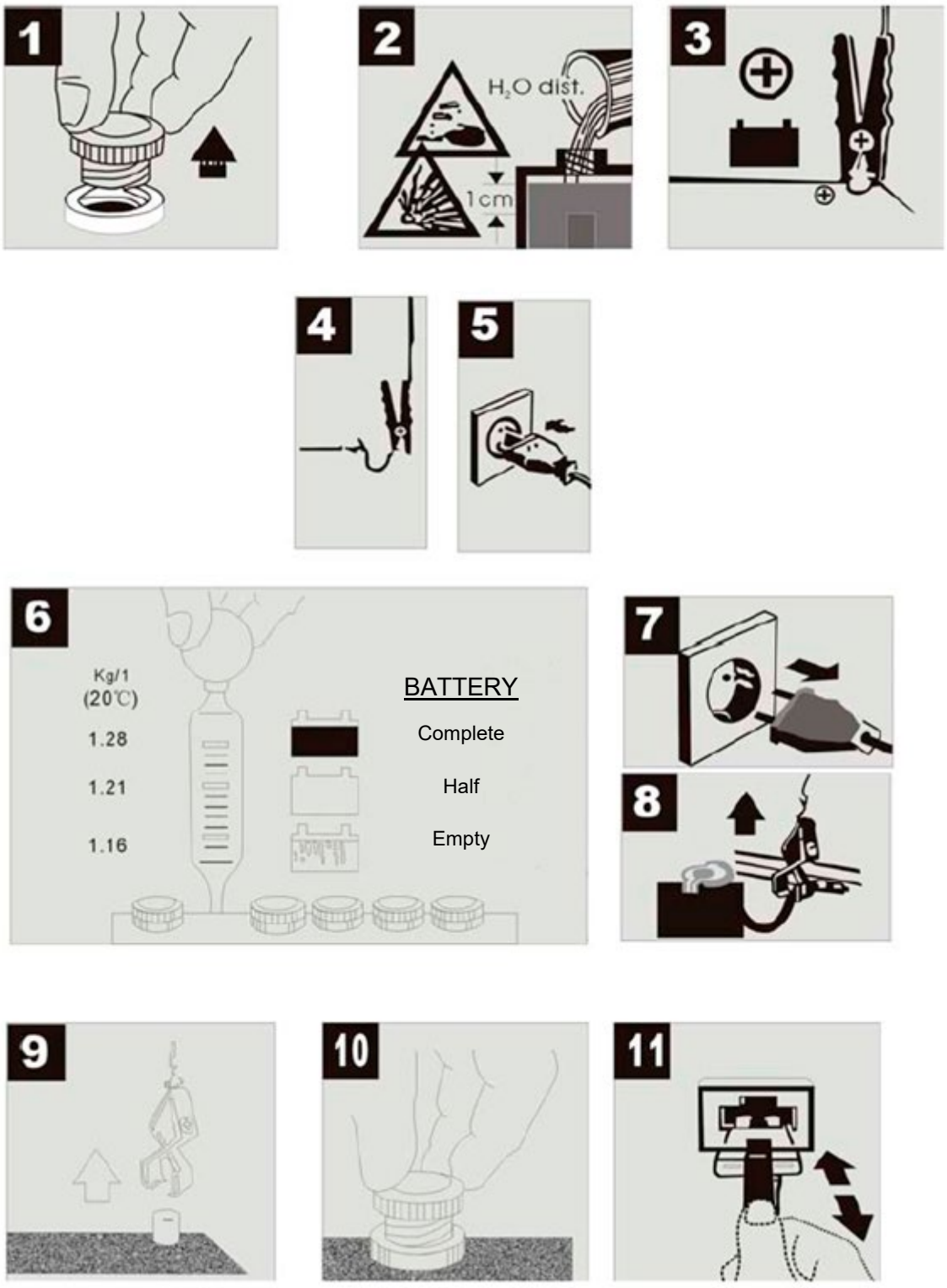


Figure 1
Unplug or remove the battery cap.

Figure 2
Check the acid level in your battery. Fill with distilled water if necessary.

Remember that battery acid is corrosive, so you should wash acid splashes immediately and thoroughly with plenty of water and consult a doctor if necessary.

Dangerous electrolytic gases can arise during charging. Therefore, you must avoid sparks and open flames during charging. Risk of explosion.

Figure 3
First connect the red charging cable to the positive pole of the battery.

Figure 4
Then connect the black charging cable to the negative pole of the battery.

Figure 5
Once the battery is connected to the charger, you can connect the charger to a 220-240V ~ 50 / 60Hz and 110-120V ~ 60Hz outlet. It is forbidden to connect the charger to a socket with any other supply voltage.

Figure 6
The only way to determine the exact state of the battery (charge level) is to measure the density of the acid with an acid meter.

Note that gases are released during charging.

Using as follows:

Acid density values (kg / at 20)

1.28 battery charged

1.21 battery half charged

1.16 empty battery

Figure 7
Disconnect the power plug or outlet.

Figure 8
First disconnect the black charging cable from the negative pole of the battery.

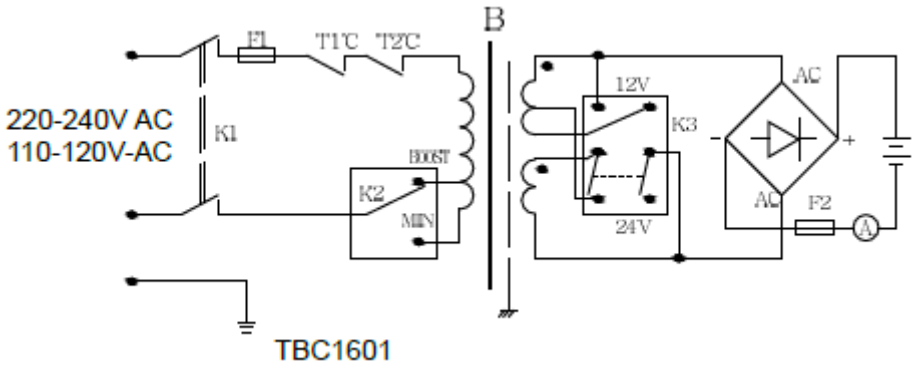
Figure 9
Then disconnect the charging cable from the positive pole of the battery.

Figure 10
Screw or press the battery plug into place.

Figure 11: Overload protection
The flat fuse provides protection against polarity reversal and short circuits. A defective fuse must be replaced with an identical one.

Note: In the automatic circuit breaker it interrupts the load in case of thermal overload. The circuit breaker turns on again automatically after a cool-down interval.

Electric diagram



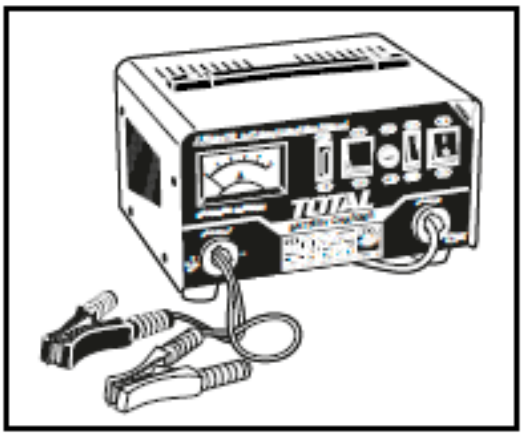
Maintenance

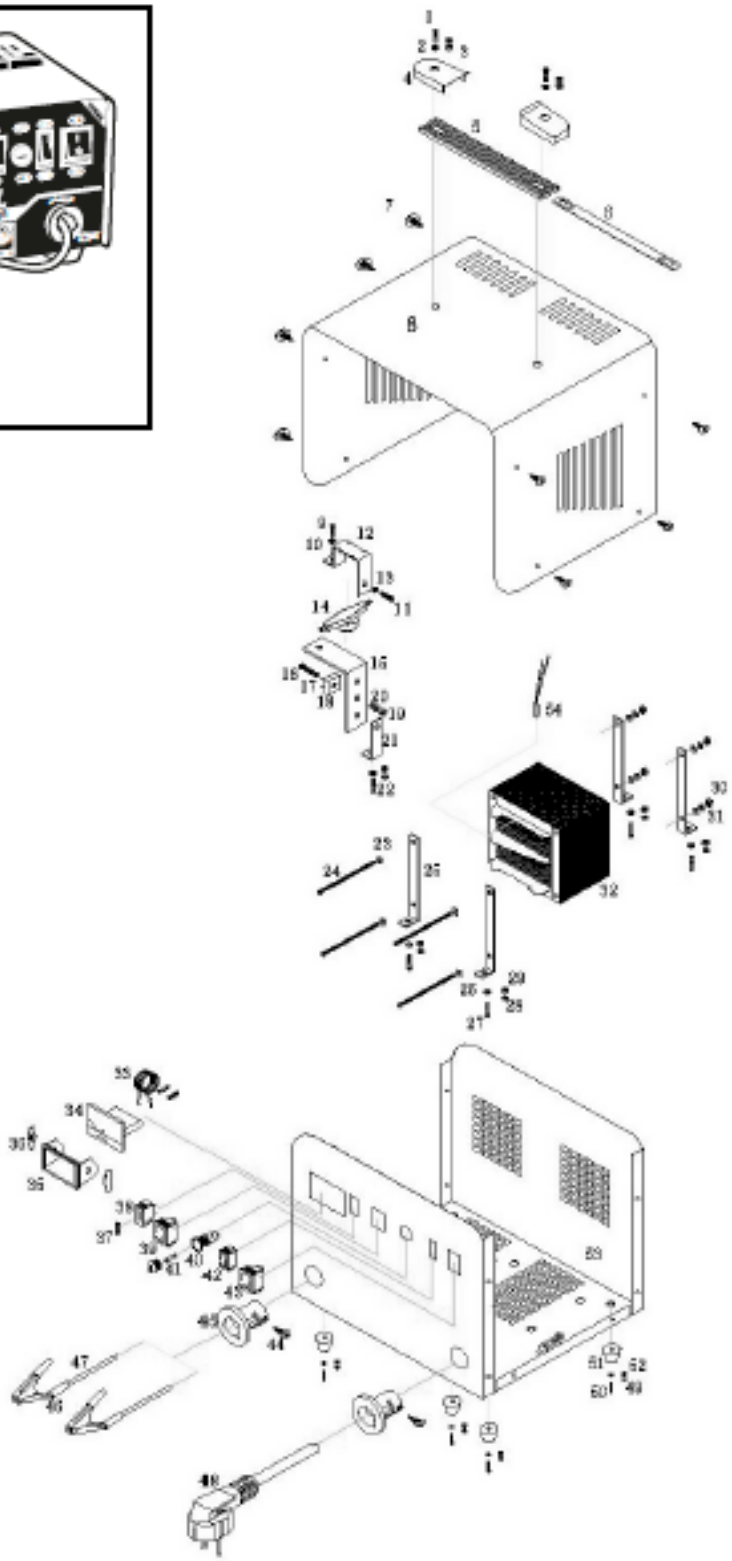
- Make sure your battery is always securely placed in the vehicle.
- Check that the battery is properly connected to the vehicle's electrical system.
- Keep the battery clean and dry. Apply some acid-free, acid-resistant grease (petroleum jelly) to the terminals.
- The acid level in maintenance-free batteries should be checked approximately every 4 weeks. Fill with distilled water as needed.
- Keep the charger in a dry room. Remove any trace of corrosion from the charging terminals.

Environment

- Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.
- Contact your local authority for information on available collection systems.
- If electrical appliances are disposed of in landfills, hazardous substances can seep into groundwater and enter the food chain, damaging your health and well-being.
- Recycle raw materials instead of disposing of them as waste.
- The machine, accessories and packaging must be classified for environmentally friendly recycling.

Exploded view





TOTAL

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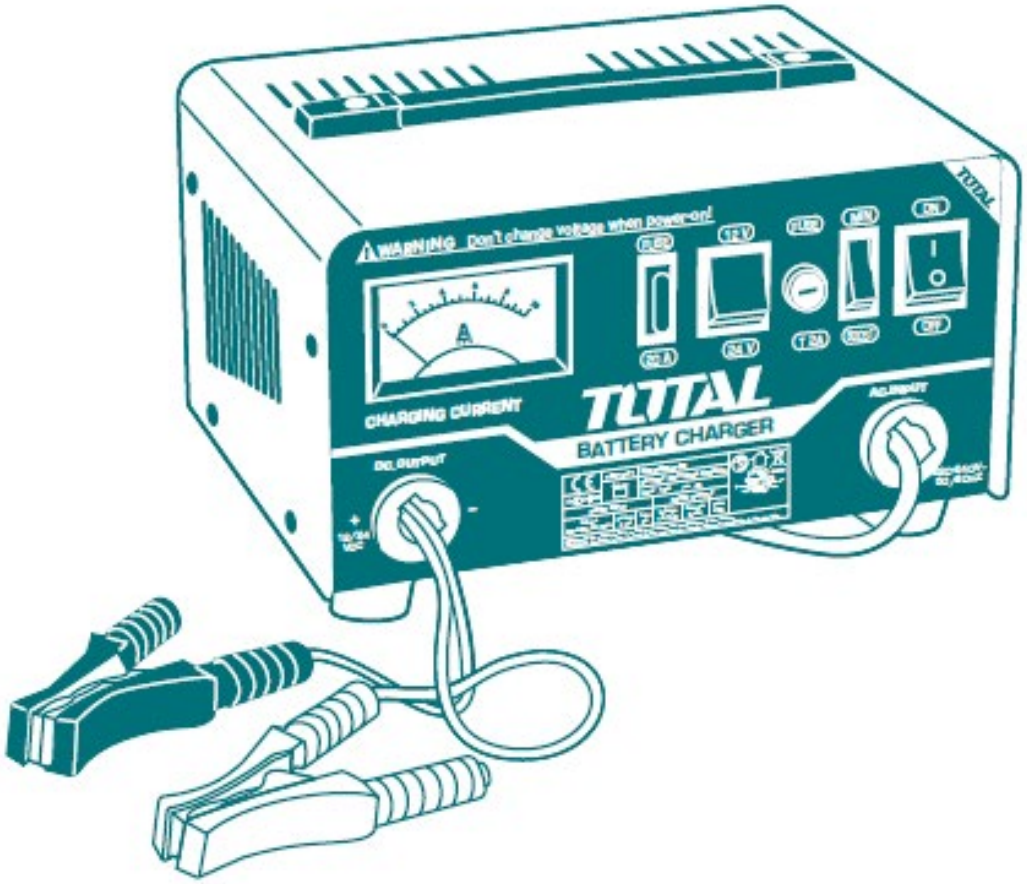

BATTERY CHARGER

12/24V