

Product imported by :

HTC Equipements
10 rue Jean Bourgois – 59147 Gondecourt - France

DC TO AC POWER INVERTER WITH USB PORT 2A

REF. 433000 12/220V 150W – 433001 24/220V 150W
433010 12/220V 300W – 433011 24/220V 300W
433020 12/220V 600W -433021 24/220V 600W

INSTRUCTION MANUAL

WARNING ! Please read the warnings below carefully before using this inverter.

- Any use outside the recommendations of the latter leads to the invalidity of any warranty on this product.
- If you give this device to a third party, please provide this manual.
- Failure to observe the safety instructions may result in risks for you and those around you, as well as for all materials in the vicinity of the product.
- Keep out of reach of children.
- This is an electrical appliance, please keep it away from any water source.
- Do not immerse the converter in water or any other liquid.
- Use the inverter only with devices compatible with it (Please pay special attention to the power and voltage of your device)
- Any repair or modification of the product by you will invalidate the warranty of the device and exonerate HTC Equipements and your reseller from any liability. In case of breakdown, please consult your dealer.



1. INTRODUCTION

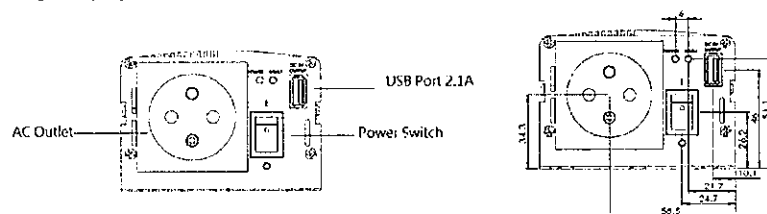
Thank you for purchasing our DC to AC power inverter. Properly used, this product will provide years of reliable service. Please read this manual carefully, understand and comply with all instructions before use.

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3. OVERVIEW

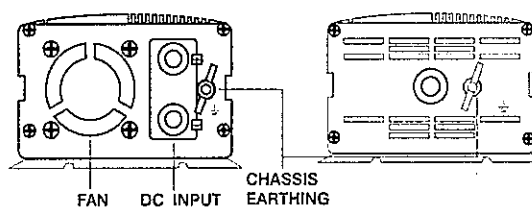
Front Panel:



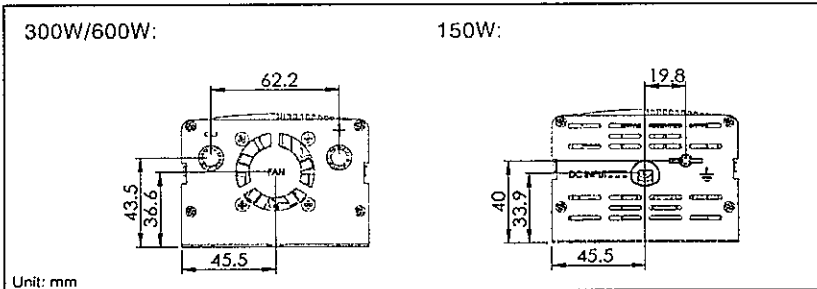
Rear Panel:

300W/600W:

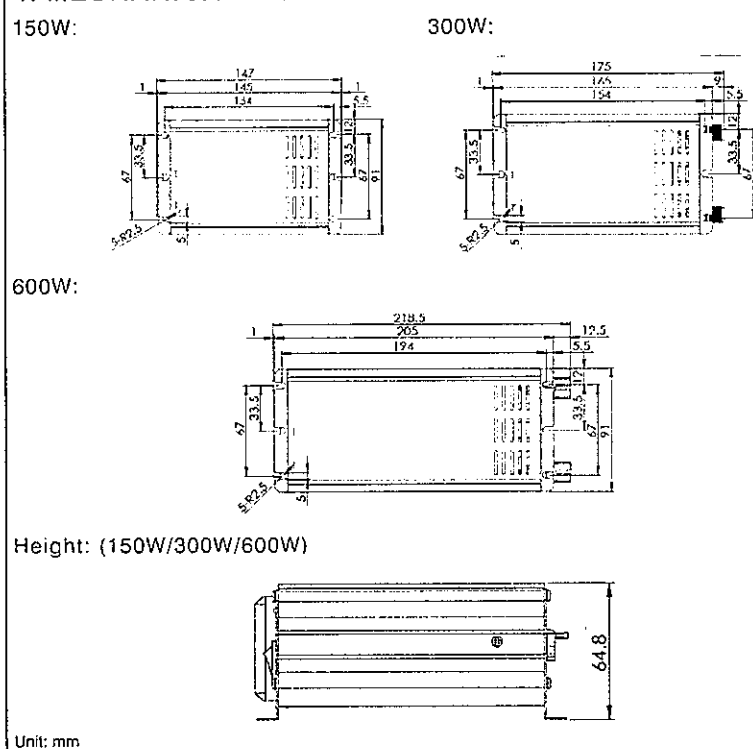
150W:



Unit: mm



4. MECHANICAL DRAWINGS:



5. APPLICATION

Power Tools-Circular saws, drills, grinders, sanders, buffers, weed and hedge trimmers, air compressors.

Office equipment-computers, printers, monitors, facsimile machines, scanner.

Household items-vacuum cleaners, fans, fluorescent and incandescent lights, shavers, sewing machines.

Kitchen appliances-coffee makers, blenders, ice makers, toasters.

Industrial equipment-metal halide lamp, high-pressure sodium lamp.

Home entertainment electronics-television VCRs, video games, stereos, musical instruments, satellite equipment.



Warning!

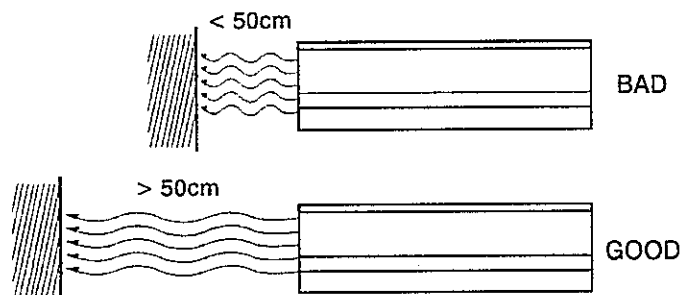
To avoid over discharging the battery, it is advisable to let your engine run for 10 to 20 minutes after every 2-3 hours of using the AC inverter. This allows your vehicle's battery to recharge.

6. INSTALLATION:

6-1 Environment Requirement:

6-1-1 Ventilate

Make sure the fan is not blocked in order to avoid poor ventilation.



6-1-2 Dry

Do not place in an area where water can drip or splash on/into the inverter.

6-1-3 Safe

Do not install the inverter in the same compartment as a battery or in any compartment that contains flammable liquids such as gasoline .

6-1-4 Dust

Do not install the inverter in a dusty environments where are dust, wood particles or other filings/shavings are present. The dust can be pulled into the unit when the cooling fan is operating.

6-1-5 Close to batteries

Avoid excessive cable lengths but do not install the inverter in the same compartment as batteries. Also do not mount the Inverter where it will be exposed to the gases produced by the battery.

These gases are very corrosive and prolonged exposure also will damage the inverter.



WARNING:

Not exposed to direct sunlight or any other heat source.
Inaccessible to children.

6-2 Battery Capacity Recommend:

Model Number	Recommended battery
TE-12-150	22Ah
TE-24-150	11Ah
TE-12-300	43Ah
TE-24-300	22Ah
TE-12-600	86Ah
TE-24-600	43Ah

*Remark: The capacity in this table could supply the full load for 1 hour

6-3 Battery Cable Requirement:

Model Number	Required Cable
	Guage/ Diameter/Cross Section
TE-12-150	16AWG /1.29mm/1.318mm ² / 1m
TE-24-150	16AWG /1.29mm/1.318mm ² / 1m
TE-12-300	12AWG /2.05mm/3.332mm ² / 1m
TE-24-300	12AWG /2.05mm/3.332mm ² / 1m
TE-12-600	8AWG/3.26mm/8.37mm ² / 1m
TE-24-600	8AWG/3.26mm/8.37mm ² / 1m

6-4 Connection to the battery:

Connect the cables with the power input positive(+) and negative(-) on the rear panel in the inverter. The red terminal is positive(+) and black is negative(-). Please insert the cables into the terminals and fasten the binding post properly.



WARNING!!

Connect the wires to incorrect terminals, the polarity will be reversed and the fuse will be damaged.

Reversed polarity should be avoided. Loose connections could result in overheating in a potential hazard.



WARNING!!

Please note to disconnect the inverter before charging the batteries. Failure to disconnect the inverter prior to connecting a charger may result in an input spike which will damage the inverter.

CONNECTING THE INPUT OF THE INVERTER TO A BATTERY CHARGER WILL VOID THE WARRANTY AND MAY DAMAGE THE INVERTER.

7-1 How to operate inverter

7-1-1 Plug in electrical appliance to AC socket on the inverter.

7-1-2 Turn on the power switch of inverter first, then check if the "POWER" LED (green) light up

7-1-3 If "POWER" LED light up, it means inverter start to operate normally.

Then you can turn on the electrical appliance for use.

**The cooler fan will start working once the inverter needs heat radiation.

7-2 How to operate after use

7-2.1 Turn off the electrical appliance, and unplug it from the AC socket on the inverter.

7-2.2 Turn off the power/main switch of the inverter.

7-2.3 Disconnect the cable of batteries.

7-3 To use USB charging

7-3.1 Make sure USB port is without connecting any electrical appliance.

7-3.2 Turn on the power switch of inverter, then check if the "POWER" LED (green) light up

7-3.3 If "POWER" LED light up, it means USB start to operate normally.

7-3.4 Plug in the USB device to USB port of inverter, then it start to charge.

8. PROTECTIONS:

8-1 Low Voltage Protection -

The alarm will turn on once the voltage is lower than a certain level.

The users need to replace a new battery or charge the battery to keep on use the inverter. If the user did not notice the low battery condition when it is beeping, the inverter will be shutdown and cut off the AC output automatically once the battery voltage is reduced to a lower level. At this moment, the fault(red) LED on the panel will be lighten.

	Alarm Voltage	Shutdown Voltage
DC 12V	DC $10.5 \pm 0.5V$	DC $9.5 \pm 0.5V$
DC 24V	DC $21 \pm 1V$	DC $19 \pm 1V$

8-2 High Voltage Protection-

The inverter will cut off the output once the battery voltage is higher than a certain level and the fault/red LED will be lighten. To restore normal operation, return the DC input voltage to less than 15V. The inverter will automatically return to normal operation.

	Shutdown Voltage
DC 12V	> DC15V
DC 24V	> DC30V

8-3 Output Overload Protection-

The inverter will shutdown automatically if the load is over the rated output for a certain level. The fault/red LED will be lighten.

Model Number	Overload level
TE-12-150	> 165W
TE-24-150	> 165W
TE-12-300	> 330W
TE-24-300	> 330W
TE-12-600	> 660W
TE-24-600	> 660W

8-4 Short Circuit Protection-

If the AC outlet of the inverter is shortcircuited, the inverter will stop working until the shortcircuit is removed.

8-5 Reverse Polarity

Protected by fuses against reverse battery connection.

Fuses must be replaced to resume normal operation.

Model Number	FUSE Specification	FUSE Position
TE-12-150	15A	Cigarette Plug
TE-24-150	10A	Cigarette Plug
TE-12-300	30A	PCB
	15A	Cigarette Plug
TE-24-300	15A	PCB
	15A	Cigarette Plug
TE-12-600	30A * 2pcs	PCB
TE-24-600	15A * 2pcs	PCB

8-6 Over Temp. Protection-

The inverter will be shutdown once the temp. is too high and the fault/red LED will be lighten.

9. TROUBLE SHOOTING

Problem: GREEN LED is not lighten after turn on the main switch

Possible Cause	Solution
Battery Defective	Change to the correct battery
Incorrect Battery Connection	Check the cables
Fault Fuse	Check and replace the fuses

Problem: RED LED is lighten after connect to the load

Possible Cause	Solution
	Reduce the load.
The appliance is overload	Check if the appliance is more than the rated output capacity of the inverter
The appliance is short circuit	Check if the appliance is workable

Problem: GREEN LED is lighten but Buzzer sounds after connect to the load

Possible Cause	Solution
Low Battery Voltage	Replace or recharge the batteries
Low Battery Capacity	Replace to a larger battery
Battery cable is too long or too thin	Replace the battery cable to suggested specifications.
	Reduce the load.
The appliance is overload	Check if the appliance is more than the rated output capacity of the inverter
	Use a larger inverter for the appliance

Problem: GREEN and RED LED are both lighten and Buzzer sounds when turned on the switch

Possible Cause	Solution
Low Battery Voltage	Replace or recharge the batteries
Battery Defected	Replace to a correct battery

Problem: The inverter shutdown after normal use for a while and RED LED lighten		
	Possible Cause	Solution
	Over-temp. Protection	Please check if the environment temp. is too high.
Problem: AC Voltage is too low		
	Possible Cause	Solution
	Use the incorrect meter	Please use RMS meter to measure the voltage.

10. MAINTENANCE

Very little maintenance is required to keep your inverter operating properly you should clean the exterior of the unit periodically with a damp cloth to prevent accumulation of dust and dirt. At the same time, tighten the screws on the DC input terminals.

11. SPECIFICATION

Model No.	TE-12-150	TE-24-150
DC input voltage	10-15V	20-30V
Output power	150W	150W
Output Power Surge	450W	450W
USB output	5V/2A	5V/2A
Low battery alarm	10.5±0.5V	21±1V
Low battery shut down	10±0.5V	20±1V
High battery shut down	15.5±0.5V	30±1V
Short-circuit protection	YES	YES
No load current	<0.3A	<0.3A
Alarm and Thermal Shut down	60°C±5°C	60°C±5°C
DC input fuse	15A	10A
Dimensions(L*W*H)	157*91*66mm	157*91*66mm
Net Weight	0.62KGS	0.62KGS

Model No.	TE-12-300	TE-24-300
DC input voltage	10-15V	20-30V
Output power	300W	300W
Output Power Surge	1000W	1000W
USB output	5V/2A	5V/2A
Low battery alarm	10.5±0.5V	21±1V
Low battery shut down	10±0.5V	20±1V
High battery shut down	15.5±0.5V	30±1V
Short-circuit protection	YES	YES
No load current	<0.5A	<0.3A
Alarm and Thermal Shut down	60°C±5°C	60°C±5°C

DC input fuse	30A	15A
Cigarette plug fuse	15A	15A
Dimensions(L*W*H)	176*91*66mm	176*91*66mm
Net Weight	0.85KGS	0.85KGS

Model No.	TE-12-600	TE-24-600
DC input voltage	10-15V	20-30V
Output power	600W	600W
Output Power Surge	1500W	1500W
USB output	5V/2A	5V/2A
Low battery alarm	10.5±0.5V	21±1V
Low battery shut down	10±0.5V	20±1V
High battery shut down	15.5±0.5V	30±1V
Short-circuit protection	YES	YES
No load current	<0.6A	<0.4A
Alarm and Thermal Shut down	60℃±5℃	60℃±5℃
DC input fuse	30A*2	15A*2
Dimensions(L*W*H)	220*91*66mm	220*91*66mm
Net Weight	1.1KGS	1.1KGS

1. Operating Temperature: -10~40℃










2. Storage Temperature: -20~85℃

3. Housing Temperature: <65℃

Remark: Environment Temperature: 25℃ / Humidity: 60%

Ac output voltage : 100V ☐ 110V ☐ 115V ☐ 120V ☒ 220V ☐ 230V ☐ 240V

Ac output socket :

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Type 1 Type 2 Type 3 Type 4 Type 5 Type 6 Type 7 Type 8 Type 9

Frequency±2 % : ☒ 50Hz ☐ 55Hz ☐ 60Hz