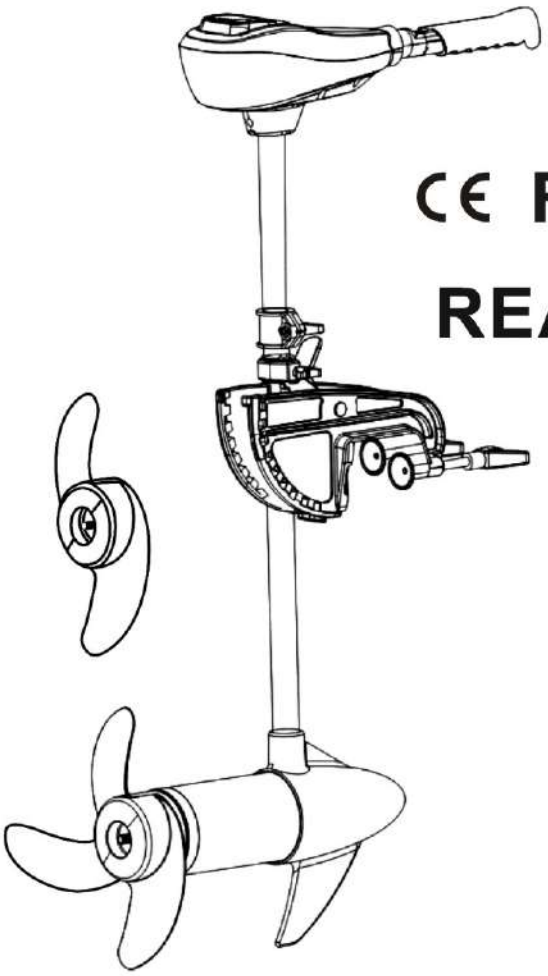
TROLLING MOTOR
Owner's Manual



CE RoHS

REACH

TROLLING MOTOR

WARNING INFORMATION

- This is not a life saving device.
- Do not leave children unattended while device is in use.
- The user must wear life saving coat.
- Please read the user's manual carefully.
- Never put the control box in water, if it falls into water. You must send it to professional people to clean it before use.
- Never unfix any part of this motor.
- Only use this product beween -20°C to + 45°C (-4°F to 113°F)
- Never replace any parts with the parts from unauthorised suppliers.
- Ensure sufficient battery, when there are only 3 lights shown on the voltage meter, the motor must be unconnected with the batteries immediately, to prolong the life of the batteries, after 30 minutes continuous working with high speed, please leave the battery a rest for 10 minutes.
- To prevent accidental damage of fibre glass shaft don't tense mounting bracket small screw too tight.
- Never stick body parts, clothing or other objects in the vicinity of the propeller. Do not wear loose or flowing clothing or equipment that could be drawn into the propeller.
- Particular attentions should be paid when using this item near anybody with long hair. Users with long hair should tie it up or wear swimming caps when using the boat.
- Always inspect the water area to ensure it is free of hazards or danger such as boats and swimmers before using the boat.
- Always wear a coast guard approved personal flotation device when using the boat with this motor.
- A child under 16 years old or end-user cannot swim should NEVER operate the boat independently. A child under 14 years old should NEVER operate this product.
- Never use when the wave is over 1m high.
- Never unfix the product in water or when it is wet.
- Never put the upper part with handle in water, if it got wet, the user must disconnect the battery and try to clean and dry it.
- Keep lead wire connection tight and solid to battery terminals.
- Use 6-gauge wire to extend power lead.
- Locate battery in a ventilated compartment.

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TROLLING MOTOR

GENERAL INFORMATION

Dear Customer

Thank you for choosing our product and wish you enjoy it .
HK™ trolling motors are designed and developed by professional engineering working teams. With years of efforts the power of HK™ trolling motor has widely covered 32LBS, 36LBS, 40LBS, 46LBS, 50LBS, 55LBS, 60LBS and 86LBS in order to fit various costumers requirements and provide different experiences.

Please read this manual carefully before assembling or using the product .The manual contains information that describes the procedure for safe operation and daily maintenance of your electrical motor. Please pay special attention to the safety instructions, to avoid damage caused by improper use. If the product is passed on to third parties, this manual has to be passed on along with the product.

SPECIFICATION OF ELECTRIC TROLLING MOTOR

Items No.	Mount	Control	Thrust in LBS	Thrust in KGS	Battery required (input)	Output power	Speeds
TRM-32	level lock	tiller twist	32 LBS	14.9 KG	12 V	318 W	5 Forward /3 Reverse
TRM-36			36 LBS	16.9 KG	12 V	354 W	
TRM-40			40 LBS	18.7 KG	12 V	414 W	
TRM-46			46 LBS	20.9 KG	12 V	492 W	
TRM-50			50 LBS	22.7 KG	12 V	564 W	
TRM-55			55 LBS	25.0 KG	12 V	638 W	
TRM-60			60 LBS	27.3 KG	12 V	684 W	
TRM-86			86 LBS	39.4 KG	24 V	1164 W	

* Since speed depends on many factors, such as loading, water condition and wind speed etc., it would be difficult to give an accurate speed rating, we give the speed for reference purposes: Boat size, 2.3m\ Loading, 90kg\ Quiet water.

WIRING AND BATTERY RECOMMENDATIONS

Battery Type

Recommended battery(s): 12-volt Deep Cycle battery or Marine battery, battery should has at least 50-ampere hour rating or higher. To extend running time an additional battery can be used. See section on battery connection method.

Circuit Protection

It is recommended to installing a 50 amp manual reset circuit breaker in the electric outboard motor leads within 1.8m (72 Inches) of the battery(s).

Cable Size

If extending the standard battery cable supplied with the product HK™ recommends the use of 13mm²wire (6-gauge wire, AWG).

⚠ WARNING

Batteries contain sulphuric acid, which can cause severe burns. Avoid contact with skin, eyes and clothing. The battery also produces hydrogen and oxygen gases when being charged. This potentially explosive mixture escapes through the fill vent cell caps and may form an explosive atmosphere around the battery for several hours after it has been charged. Electrical arcing or flames can ignite the gas and cause an explosion, which may shatter the battery and could cause blindness or other serious injury.

WARNING

Be sure all switches are in the OFF position before connecting to battery or batteries. Electrical arcing near the battery could ignite hydrogen gas and cause the battery to explode.

SAFETY INFORMATION

SAFETY INFORMATION

Do not allow children to operate the electric outboard motor.

Do not modify the unit in any way or add accessories not intended for this product.

Never fully submerse the unit, if unit is accidentally submersed disconnect battery and leave to dry.

WARNING

Always disconnect power from the motor when replacing propeller, removing debris around the prop, charging batteries, transporting boat or when the motor is not in use.

To prevent accidental damage of the fiberglass shaft, do not over tighten the mounting bracket. Only use this product between the temperatures of -20C to +45C (-4F to +113F).

User(s) should always wear approved Life Jackets.

FIRST TIME RUNNING

1. Place Electric Outboard onto the back of the vessel in Stow away position.

2. Loosely tighten Transom Mounting Screws till they grip the Transom Mount.

3. Press the Tilt Lever and slowly let the motor enter the water.

4. Use the Depth Adjuster Collar to adjust the height of motor (Recommend running depth 150mm and 300mm below the waterline).

5. When you are satisfied that the motor is at a safe depth and isn't too close or in danger of hitting the bottom of the lake, river or other water ways you may proceed to tighten the Transom Mounting Screws.

6. Once this is done it should be safe to connect the battery to the motor. Ensure that the twist grip is in the neutral position and that the nuts are tight on the terminals to prevent a poor connection.

7. Select the desired speed and direction using twist grip on the tiller arm.

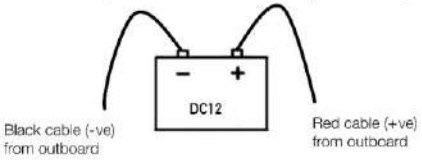
8. Do not go from full forward speed to full reverse speed without letting the propeller stop turning first or motor damage may occur.

MOTOR USAGE

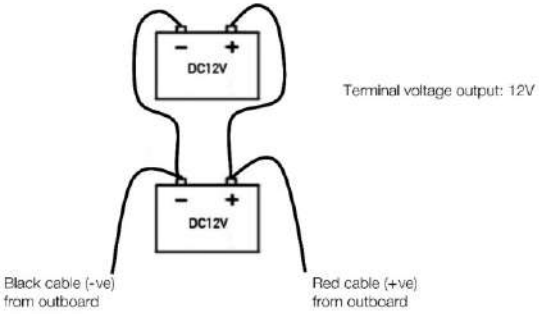
The motors package does not include batteries; please choose battery with 12V (24V for 86LBS motor) output to fit this motor, the recommended type of battery is deep cycle battery or marine battery, as they will last much longer and hard to break.

Battery Connection Method

Connect with one battery (DC12V)
The red wire should connect to anode; the black wire should connect to cathode.
(It is recommended install 50 amp circuit breaker in line with positive lead.)



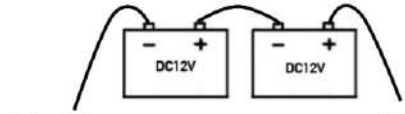
Connect with two batteries in parallel (DC12V)
The red wire should connect to anode; the black wire should connect to cathode.
(It is recommended install 50 amp circuit breaker in line with positive lead.)



Connect with two batteries in series (DC12V)

The red wire should connect to anode; the black wire should connect to cathode.
(It is recommended install 50 amp circuit breaker in line with positive lead.)

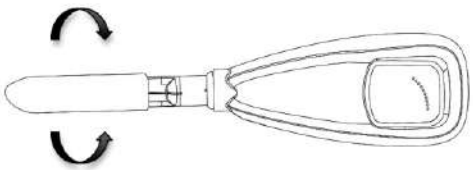
Terminal voltage output: 24V



Black cable (-ve)
from outboard

Red cable (+ve)
from outboard

How To Control The Motor



WARNING

Remember always disconnect from batteries once the motor leaves water as a rotating propeller can cause personal injury.

On/Off Speed Control

Rotate handle clockwise to obtain any of the 5 forward speeds. Rotate handle anticlockwise for any of the 3 reverse speeds. To stop the motor from running, position the handle following the arrow marker and position on level 0.

Battery Level Indicator

There are 10 LED lights on the top cover. When seven (7) LED's are out, the meter is indicating that the input voltage is less than 9.5V (normal voltage draw, 12V). It is advised to disconnect the motor from the battery to prevent damage to the battery and recharge.

Adjusting Motor Depth

Position the depth adjustment collar so the propeller blades will be submerged 150mm - 300mm (6inches - 12inches) below the waters surface.

Raising The Motor

It is recommended to disconnect the battery before carrying out this procedure to prevent accidental running of the motor. To raise the motor out of the water, push and hold the tilt lever with the other hand, push down on the end of the handle to bring the motor up and off the water. Then release the tilt lever to lock in place.

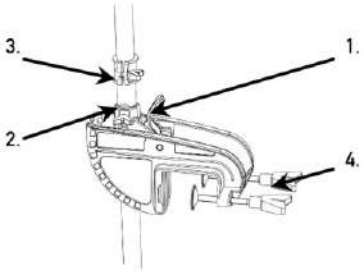
Lowering The Motor

It is recommended to disconnect the battery before carrying out this procedure to prevent accidental running of the motor. Press the tilt lever while with the other hand; hold onto the end of the handle to steady the motor into the water. Once lowered release the tilt lever to lock into position.

CAUTION

Remember to wash the motor by using fresh water after used it in salt water as it can greatly reduce the possibility of corrosions.

TRANSOM MOUNT INSTALLATION



CAUTION

Before the installation, Make sure the area between column and bracket is clear.

1. Tilt Position Lever - The lever allows the user to adjust the tilt (angle) of the motor. Push tilt position lever, adjust tilt of motor, release lever.

2. Steering Tension Adjustment -To adjust the steering resistance, simply tighten or loosen the tension knob located on front of the mount.

3. Depth Adjustment Collar -The depth of the motor can be adjusted up and down by loosening the depth collar tension knob located on the column directly above the mount. The column can be adjusted and the motor can be positioned at the desired depth by retightening the tension knob.

4. Transom Screws -The transom clamp screws allow for easy motor removal and installation. Mount your motor on the transom then tighten the transom clamp screws securely.

⚠ CAUTION

The motor can only be used in water that deeper than 0.7m.

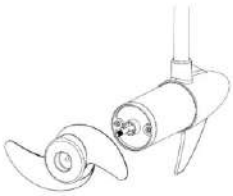
HOW TO REPLACE THE PROPELLER

⚠ CAUTION

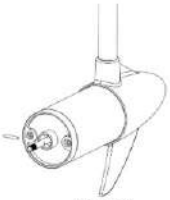
Make sure that the motor has been disconnected from batteries.

Hold the propeller blade and loosen the propeller nut using the prop spanner supplied or a set of needle nose pliers. Remove the propeller nut. Pull the propeller straight off. If prop is stuck, grasp one blade with one hand and tap on the backside of the opposite blade lightly with a rubber mallet, until the propeller comes off. If the propeller pin is bent, replace it. Align the new propeller with the propeller pin. Reinstall the propeller nut and tighten firmly by hand, tighten with spanner another 1/4 turn.

Step 1



Step 2



Step 3

⚠ CAUTION

Do not strike bent prop pin with hammer to remove pin. Damage to motor armature may occur that would not be covered by warranty.

DAILY MAINTAINANCE

1. Check behind the propeller after each day for weeds, fishing line or other debris that may get wrapped behind the propeller.

2. Lubricate all the pivot points with a **non-aerosol** lubricant. Never use aerosol lubricants to grease or oil any part of the unit. Many spray lubricants contain harmful propellants that can cause damage to various parts of your fishing motor.

3. Check tightness of the battery lead connections.

4. Visually check condition of main battery cables.

5. Inspect for loose or corroded wiring connections.

6. Always thoroughly rinse your electric outboard motor with fresh water after every use in salt water. Only rinse the areas that have been in contact with salt water, avoid getting the top cover wet as this may damage the circuitry inside.

7. Make visuals inspections for tightness of all nuts, bolts and screws.

8. Recharge batteries after each use. Follow the battery manufacture's recommendations for battery maintenance.

9. During freezing temperatures, when your electric motor is not being used, it should be stored in an area where it will not freeze.

10. Never connect the wire with wrong electrode. Must disconnect with battery during maintenance.

TROUBLE SHOOTING

Loss Of Power

Propeller may be fouled. Remove propeller, clean and replace.

Battery connections may be corroded.

Battery has low voltage. Recharge.

Battery may be faulty, recharge and check.

Insufficient cable size from battery to motor wiring, 13mm^2 thickness / 6 gauge wire (AWG) recommended.

Bad or faulty connection in boat wiring or electric motor wiring

Permanent magnet cracked or chipped. Motor will whine or grind.

Motor Makes Excessive Noise Or Vibration

Propeller may be fouled.

Propeller may be damaged or unbalanced.

Check to see if propeller is secured.

Bent armature. Remove propeller, set at medium speed, turn unit on and watch armature wobble.

Turn propeller by hand. It should turn freely with a slight magnetic drag.

Bearing\bushes may be worn out.

Motor Fails To Run

Check fuse\circuit breaker on boat for electric motor.

Check for loose or corroded connections.

Check plug for loose or bad connection.

Test main rotary switch.

Turn prop by hand. It should turn freely with a slight magnetic drag.

Total battery failure. Recharge and check voltage.

Propeller Fouled.

Motor Loses One Or More Speeds

Lose wire on rotary switch. Check wiring diagram.

Lose connection in top housing.

Rotary switch damaged.

Speed coils in lower unit may be burned.

LIABILITY FREE CLAUSE

The damage caused by falling down, crash, cut, pierce or other man-made behaviors;

The end-user did not follow the instruction manual;

The end-user ignored our warning information;

Placed or changed the motors under wet circumstance may damage the batteries, the circuit or other electric parts.

Used the parts or accessories that are not from us