



## Electric Boat Winch

### User Manual



**RETAIN THIS MANUAL FOR FUTURE REFERENCE**

**PLEASE READ THIS MANUAL CAREFULLY BEFORE USE**

# Table of Contents

<b>INTRODUCTION.....</b>	<b>1</b>
<b>GENERAL DESCRIPTION.....</b>	<b>2</b>
<b>SAFETY PRECAUTIONS.....</b>	<b>3</b>
<b>WINCH OPERATION WARNINGS .....</b>	<b>5</b>
<b>WINCH INSTALLATION .....</b>	<b>7</b>
Mounting Your Winch .....	7
Lubrication Installation .....	8
Cable Installation .....	8
Electrical Connection .....	8
Please Note .....	9
Suggestion .....	9
<b>OPERATING YOUR WINCH.....</b>	<b>10</b>
<b>MAINTENANCE.....</b>	<b>11</b>
Spare Parts .....	11
<b>WINCH CAPACITY.....</b>	<b>12</b>
<b>WINCH SPECIFICATIONS.....</b>	<b>13</b>
<b>EXPLODED DIAGRAM AND PARTS LIST.....</b>	<b>14</b>

# Introduction

Thank you for purchasing the Electric Boat Winch from us. Please read and understand this winch manual instruction before installing and using your winch.

## General Description

Each winch is equipped with a series wound motor and is designed for intermittent duty general use. Please note that your winch is not designed to be used in industrial or hoisting applications, the winch manufacturer does not warrant it to be suitable for such usage. Free spool clutch is operated by a sliding ring gear, which the winch disengages from the gear box to allow the steel cable to be pulled out without using electricity. Two pieces of suspension bars could reduce backlash and snarling when pulling out the wire rope.

# Safety Precautions



## WARNING!

Observe safety precautions for your personal safety and the safety of others. Improper equipment operation may cause personal injury and equipment damage.

Read the following precautions carefully before attempting to operate your winch and keep the instructions for future reference.

### Dress Properly

- Don't wear loose clothing or jewellery. They can get caught in moving parts. Wear leather gloves when handling the winch cable.
- Do not handle the cable with bare hands, as frayed wires can cause injuries. Non-skid footwear and protective hair covering to contain long hair are recommended.

### Keep a Safe Distance

- Ensure that all persons stand well clear of the winch cable and load during the winch's operation. The recommended length for cable length is 1.5 times the current length.
- If a cable pulls loose or breaks under the load, it can lash back and cause serious personal injury or death. Don't step over the cable.
- All visitors and onlookers should be kept away from the work area. Keep proper footing and balance at all times.

### Don't Pull the Cord

- Never carry your winch by the cord or yank it to disconnect it from the receptacle. Keep the cord away from heat, oil and sharp edges.

### Don't Overwork the Winch

- If the motor becomes too hot, turn it off and let it cool down for a few minutes. Don't maintain power to the winch if the motor stalls. Don't exceed maximum line pull ratings shown in the tables. Shock loads must exceed these ratings.

### Avoid Unintentional Starting

- Winch clutch should be disengaged when not in use and fully engaged when in use.

### Check Damaged Parts

- Before using the winch, you should check your winch and its spare parts carefully. Any part that is damaged should be properly repaired or replaced by an authorized service centre.

### Repairing Your Winch

- When repairing, use only identical replacement parts or it may cause considerable danger for the user.

**Re-Spooling the Cable**

- Leather gloves must be worn while re-spooling. To re-spool correctly, it is necessary to keep a slight load on the cable. Hold the cable with one hand and the remote control switch with the other. Start as far back and in the centre as you can. Walk up, keeping load on the cable as the winch is powered in. Do not allow the cable to lop through your hand and do not approach the winch too closely. Turn off the winch and repeat the procedure until all the cable has been re-spoiled. Disconnect the remote control switch and finish spooling in the cable by rotating the drum by hand with the clutch disengaged. On hidden winches, spool in the cable under power but keep your hands dear.

**WARNING:** The use of any other accessory or attachment other than those recommended in the instruction manual may present a risk of personal injury.

# Winch Operation Warnings

Read the following warnings carefully before attempting to operate your winch. Keep the instructions for future reference.

The uneven spooling of cable, while pulling a load, is not a problem, unless there is a cable pile-up on the end of the drum. If this happens, reverse the winch to relieve the load and move your anchor point further to the centre of the vehicle. After the job is done, you can un-spool and rewind for a neat lay of the cable. Store the remote control switch inside your vehicle where it will not become damage. Inspect it before you plug it in. When you are ready to begin spooling in, plug in the remote control switch. With the clutch disengaged, do not engage the clutch while the motor is still running. Never connect the hook back to the cable. This causes cable damage.

Always use a sling or chain of suitable strength. Observe your winch while winching, if possible while standing at a safe distance. Stop the winching process every meter or so to make sure that the cable is not pulling up in one corner. Jamming the cable can break your winch. Do not attach tow hooks to the winch mounting apparatus. They must be attached to the vehicle frame. The use of a snatch block will aid recovery operations by providing a doubling of the winch capacity and a halving of the winching speed, and the means to maintain a direct line pull to the centre of the rollers.

When double loading during stationary winching, the winch hook should be attached to the chassis of the vehicle. Ensure that it is rated "D" or that the bow shackles are used in conjunction with an approved tree trunk protector to provide a safe anchor point.

When extending the winch cable, ensure that at least five wraps of cable remain on the drum at all times. Failure to do this could result in the cable parting from the drum under load. Serious personal injury or property damage may result. All winches are provided with a red cable marking to identify that 5 cable wraps remain on the winch drum when this mark appears at the rollers. No recovery should be attempted beyond this marking. Since the greatest pulling power is achieved on the innermost layer of your winch, it is desirable to pull off as much line as you can for heavy pulls (you must leave at least 5 wraps minimum on the drum-red cable). If this is not practical, use a snatch block and double line arrangement.

Draping a heavy blanket or similar object over the extended winch cable is recommended as it will dampen any backlash should a failure occur. Neat, tight spooling avoids cable binding, which is caused when a load is applied and the cable is pinched between the others. If this happens, alternatively power the winch in and out. Do not attempt to work bound the cable under load, free by hand.

Apply blocks to wheels when vehicles are on an incline.

**Battery:** Be sure that the battery is in good condition. Avoid contact with the battery acid or other contaminants. Always wear eye protection when around a battery. Have the engines running when using the winch to avoid flattening the battery.

**Winch Cable:** Be sure that the cable is in good condition and is attached properly. Do not use the winch if the cable is frayed. Do not move the vehicle to pull a load. Do not replace the cable with a cable of lesser strength. The life of the cable is directly related to its usage quality and care it receives. Following its first and subsequent uses, a cable must be wound on to the drum under a load of at least 500 lbs. /226 kg or the wraps will draw into the inner wraps and severely damage the cable during winching.

The first time that a winch is used should be a familiarisation run while in a relaxed, non-recovery situation. Spool out the cable until the red cable mark appears about five wraps on the drum,

## Electric Boat Winch

---

then rewind the cable on to the drum under a load of 500 lbs. / 226 kg or more. This will slightly increase tension, stretch the new cable and create a tight cable wrap around the drum. Failure to do so may result in cable damage and reduced cable life. When the cable is replaced, be sure to apply Loctite, or an equal compound, to the cable clamp thread.

Tighten the clamp screw properly but do not over tighten. The Loctite will prevent loosening of the screw in arduous conditions. Loctite 7471 primer and 222 thread locker are recommended. Do not attempt to exceed the pulling limits of this winch. Do not drive your vehicle to assist the winch in any way.

Vehicle movement in combination with winch operation may overload the cable, the winch itself will cause damaging shock loads. Shock loads while winching is dangerous! A shock load occurs when an increased force is suddenly applied to the cable. A vehicle rolling back on a slack cable may induce a damaging shock load. The winches shown in this manual are solely for vehicle and boat mounted, non-industrial applications. Do not use the winch in hoisting applications due to required hoist safety factors and features. Do not use the winch to lift, support and transport personnel.

**NOTE:** When the steel cable turns out to be rusty, we hereby suggest you to stop using that. When one of the steel cables is broken, we also advise you not to use it as well.

# Winch Installation

## Mounting Your Winch

### *How to Mount the Electric Boat Winch on Your Vehicle?*

1. The winch is to be mounted onto a suitable steel mounting frame using the 4-point foot mounting system in either a horizontal or vertical plane.
2. It's very important that the winch should be mounted on a flat surface so that the three sections (motor, drum and gear housings) are properly aligned.
3. Before commencing installation, you should ensure that the mounting facility being used is capable of withstanding the winch's rated capacity.

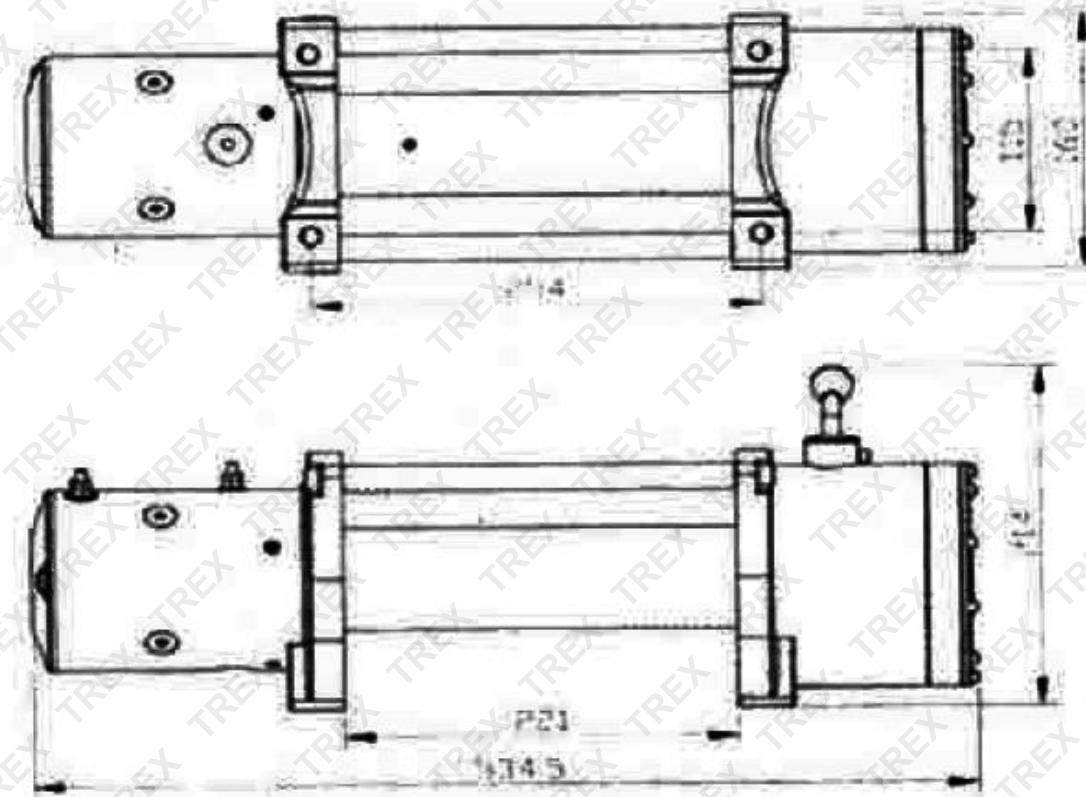
The fitting of the winch and a frontal protection system may affect the triggering of SRS air bags. Check that the mounting system has been tested and approved for winch fitting in airbag equipped vehicle. Winch mounting frames and frontal protection systems are recommended to suit most popular vehicles.

Winch frames are packaged with detailed-fitting instructions. Should you wish to manufacture your own mounting plate, refer to the dimensions below. A steel mount plate that is 6mm thick is recommended.

Fasteners should be steel, with a high-tensile grade of 5 or better. A poorly-designed mount may void warranty.

The winch should be secured to the mounting with 3/8" UNC X 1-14/" stainless steel bolts and spring washers that are provided.

The roller fairlead is to be mounted so as to guide the rope onto the drum evenly.



## Lubrication Installation

All moving parts in the winch are permanently lubricated with temperature-sensitive lithium grease at the time of assembly. Under normal conditions, the factory lubrication will suffice. Lubricate the cable periodically using light penetrating oil. Inspect for broken strands and replace if necessary. If the cable becomes worn or damaged, it must be replaced.

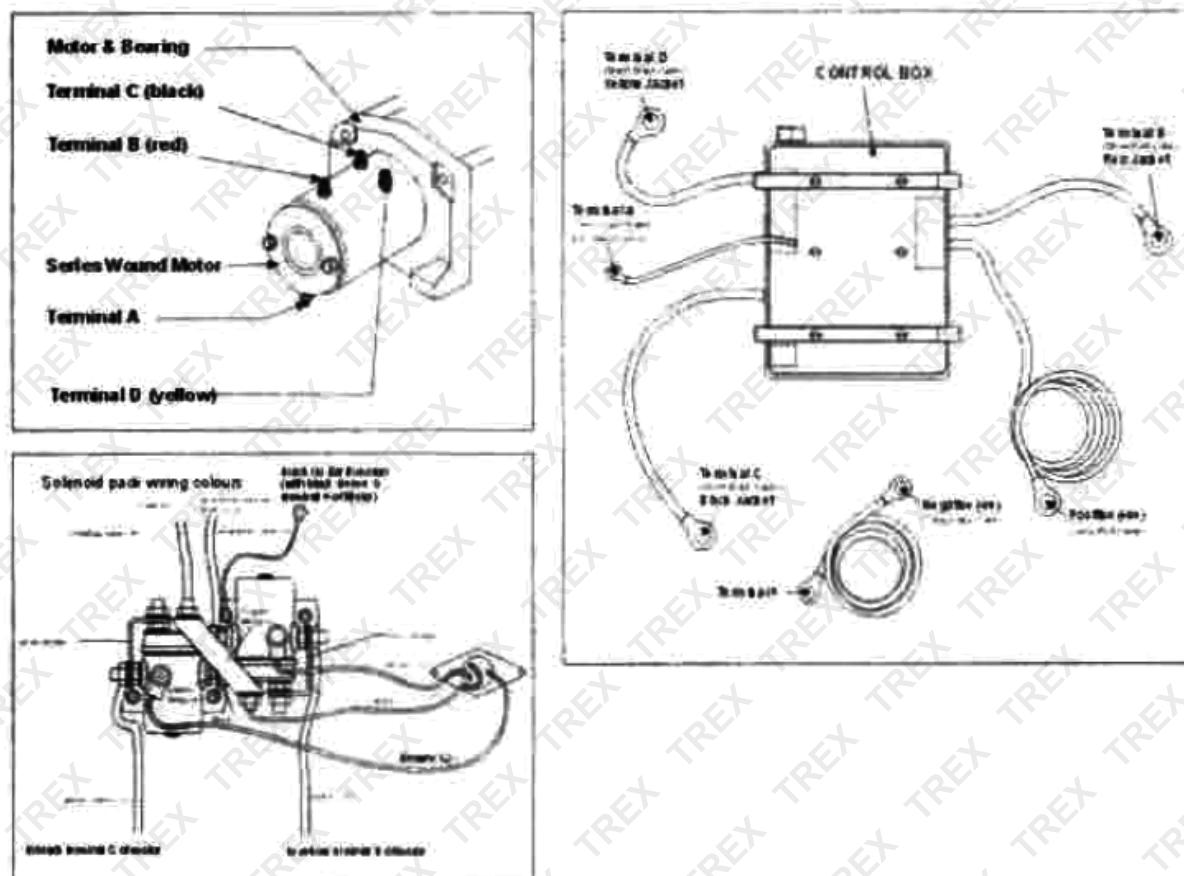
## Cable Installation

Unwind the cable by rolling it along the ground to prevent tangling. Remove the old cable and observe the manner in which it is attached to the cable drum flange.

## Electrical Connection

For normal self-recovery work, your existing electrical system is adequate. A fully-charged battery and proper connections are essential. Run the vehicle engine during winching operations to keep the battery charged.

Pay close attention to proper electrical cable connections as follows (refer to Figure 1). Short red cable (B') connecting to the red terminal (B) of the motor. Short black cable with yellow jacket (C') connecting to the yellow terminal (C) of the motor. Thin black cable (A') connecting to the bottom terminal (A) of the motor. Long black cable (1.8m), one terminal (A') connecting to the bottom terminal (A) of the motor, and the other terminal negative (-) connecting to the negative (-) terminal of the battery. Long red cable positive (+) to positive (+) terminal of the battery.



*Figure 1*

## **Please Note**

Your battery must be kept in good condition. Be sure that the battery cables are not drawn taught across any surfaces, which could possibly damage them. Corrosions on electrical connections will reduce performance or may cause an electrical shortage. Clean all connections, especially in the remote control switch and receptacle. In salty environments, use a silicone sealer to protect the winch from corrosion. Insert the heads of the plate studs into the keyhole slots on the back of the winch. Attach the winch/adaptor plate assembly to your trailer hitch, by inserting the trailer hitch ball through the hole in the adaptor plate.

## **Suggestion**

The best way to get acquainted with how your winch operates is to make a few test runs before you actually need to use it. Plan your tests in advance. Remember, you can hear your winch as well as you can see it operate. Get to recognize the sound of a light steady pull, a heavy pull, and sounds caused by load jerking or shifting. Soon you will gain confidence in operating your winch and its use will become second nature to you.

## Operating Your Winch

Ensure that the vehicle is secured by applying the parking brake or chocking the wheels. Pull out from the inch cable the desired length and connect it to an anchor point. The winch clutch allows rapid uncoiling of the cable for hooking into the load or anchor point. The shifter tab located on the gear housing of the winch operates the clutch as follows:

- To disengage the clutch, move the clutch shifter tab to the “OUT” position. The cable may not be free-spoiled off of the drum.
- To engage the clutch, move the clutch shifter tab into the “IN” position. The winch is now ready for pulling. Re-check all cable riggings before proceeding. Plug in the winch hand control. It is recommended that the winching operation takes place from the driver's position to ensure a safe operation. To commence winching operation, start the vehicle's engine, select neutral in transmission, maintaining engine speed at idle. Operate the remote control switch to IN or OUT until the vehicle has been retrieved. Check the winch regularly to ensure that cable is winding onto the drum evenly.

### NOTE:

Never operate the winch with your vehicle in gear or in park modes, which would damage your vehicle's transmission. Never wrap the cable around the object and hook onto the cable itself. This can cause damage to the object being pulled, and tangles or frays the cable. Keep hands, clothing, hair and jewellery clear of the drum area and cable when winching. Never use the winch if the cable is frayed, tangled or damaged. Never allow anyone to stand near the cable, or in line with the cable behind the winch while it is under power. If the cable should slip or brake, it can suddenly whip back towards the winch, causing a hazard for anyone in the area. Always stand well to the side while winching. Don't leave the switch plugged in when the winch is not being used. Check the winch carefully and thoroughly before operating.

# Maintenance

It is highly recommended that the winch be used regularly (once a month). Simply unwind the cable out to 15m, free the spool to 5m and then wind it back in. This will keep all components in good working condition so that the winch can be relied on when needed.

Contact your authorized outlet for technical assistance and repairs.

## Spare Parts

A comprehensive range of spare parts is available. Please contact your local distributor or retailer.

# Winch Capacity

This winch has a capacity of 5,000 lbs. rated line pull, single line.

Pulling capacity is reduced as the weight increases. Recommended safe loads for various inclines are listed in the table below:

Rated Line Pull	10%	20%	40%	60%	80%	100%
JH5000E	17,588	11,905	7,543	5,824	4,979	4,499

**NOTE:**

1. This guide is recommended for average vehicle-rolling loads. Some applications may require a larger winch than indicated.
2. The weight of the winch could be pull perpendicularly to the ground with a single winch on the first layer of the cable on the drum.
3. A 10% grade is a rise of one meter in ten meters.
4. The winch is not intended as a load-securing device.

**NOTE:**

**THE SAFETY PRECAUTIONS AND INSTRUCTIONS DISCUSSED IN THIS MANUAL CAN'T COVER ALL POSSIBLE CONDITIONS AND SITUATIONS THAT MAY OCCUR. IT MUST BE UNDERSTOOD BY THE OPERATOR THAT COMMON SENSE AND CAUTION ARE FACTORS, WHICH CANNOT BE BUILT INTO THIS PRODUCT, BUT MUST BE APPLIED BY THE OPERATOR.**

# Winch Specifications

**5,000 lbs. rated line pull, single line**

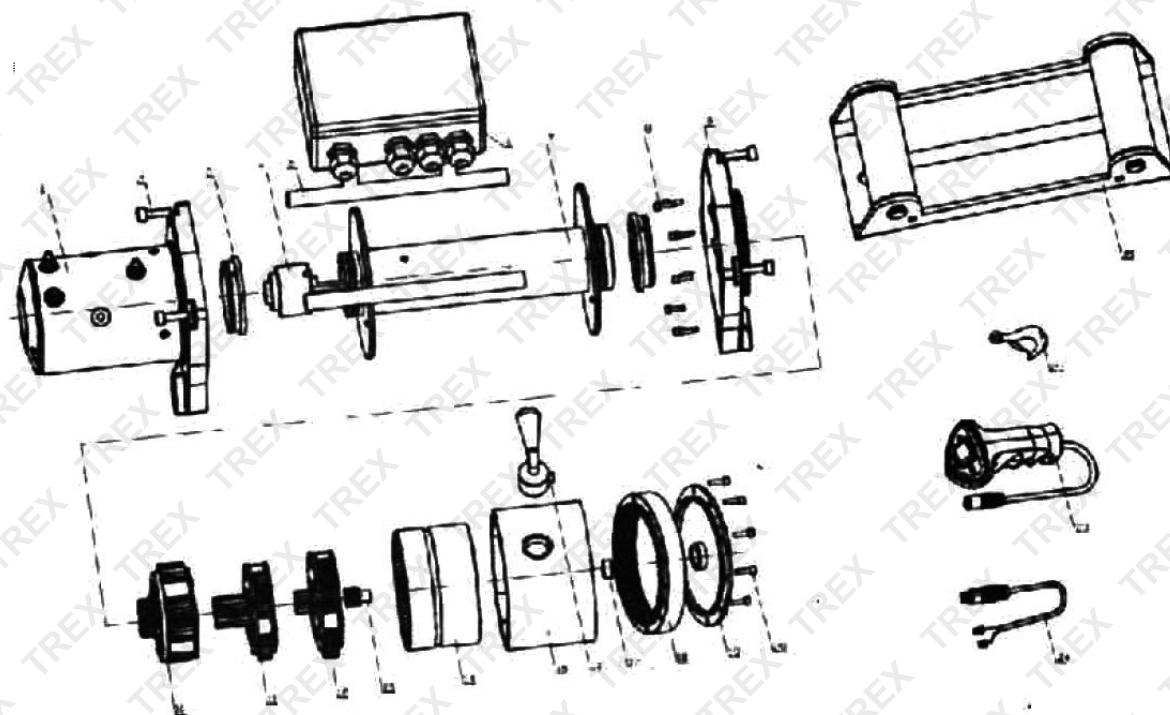
**3 stage planetary gear train**

**Sealed Solenoid**

<b>Drum Diameter &amp; Length</b>	33mm x 90mm
<b>Steel Wire Rope</b>	7.2mm(D) x 10m (L)
<b>Battery/Remote Cable Length</b>	3m
<b>Gear Ratio</b>	717:1
<b>Mounting Plate Dimension</b>	225mm x 125mm
<b>Voltage</b>	DC 12V
<b>Loading Capacity</b>	Rolling: 15000 lbs. Marine: 12500 lbs. Pulling: 5000 lbs.
<b>Package Size (L x W x H)</b>	220 x 260 x 260mm
<b>Weight</b>	15kg

**NOTE:** Please be advised that this winch does not contain free spool. It uses a direct drive in/out motor to feed the cable.

# Exploded Diagram and Parts List



Part #	Description	Quantity
1	Tandem motor	1
2	Screws with six angles inside m8*25	4
3	Winch bearing	2
4	Brake equipment	1
5	Fixed connected pole	2
6	Electrical control box	1
7	Winch	1
8	Screws with six angles inside m4*15	10
9	Gear box	1
10	Planetary gear – 1 general equipment	1
11	Planetary gear – 2 general equipment	1
12	Planetary gear – 3 general equipment	1
13	Connected gear 4	1
14	Inside gear	1
15	Packing of gear box	1

**Electric Boat Winch**

Part #	Description	Quantity
16	Handle equipment	1
17	Oiled bearing	1
18	Steel cap	1
19	Flat behind the gear box	1
20	Screws with six angles inside m4*30	10
21	Block-rope stent of general equipment	1
22	Sheep hook	1
23	Switch equipment	1
24	Power line	1



**Some experts believe the incorrect or prolonged use of almost any product could cause serious injury or death. For information that may reduce your risk of serious injury or death consult the points below and additionally, the information available at [www.datastreamserver.com/safety](http://www.datastreamserver.com/safety)**

- Consult all documentation, packaging and product labelling before use. Note that some products feature online documentation which should be printed and kept with the product.
- Check product for loose / broken / damaged / missing parts, wear or leaks (if applicable) before each use. Never use a product with loose / broken / damaged / missing parts, wear or leaks (if applicable).
- Products must be inspected and serviced (if applicable) by a qualified specialist every 6 months assuming average residential use by a person of average weight and strength, above average technical aptitude, on a property matching average metropolitan specification. Intended use outside these guidelines could indicate the product is not suitable for intended use or may require more regular inspection or servicing.
- Ensure all possible users of the product have completed an industry recognised training course before being given access to the product.

- The product has been supplied by a general merchandise retailer that may not be familiar with your specific application or your description of the application. Be sure to attain third party approval for your application from a qualified specialist before use regardless of prior assurances by the retailer or its representatives.
- This product is not intended for use where fail-safe operation is required. As with any product (take an automobile, aircraft, computer or ball point pen for example) there is always a small chance of a technical issue that needs to be repaired or may require replacement of the product or a part. If the possibility of such failure and the associated time it takes to rectify could in any situation inconvenience the user, business or employee or could financially affect the user, business or employee then the product is not suitable for your requirements. This product is not for use where incorrect operation or a failure of any kind, including but not limited to a condition requiring product return, replacement, service by a technician or replacement of parts could cause a financial loss, loss of employee time or an inconvenience requiring compensation.
- If this item has been purchased in error considering the points above simply contact the retailer directly for details of their returns policies if required.