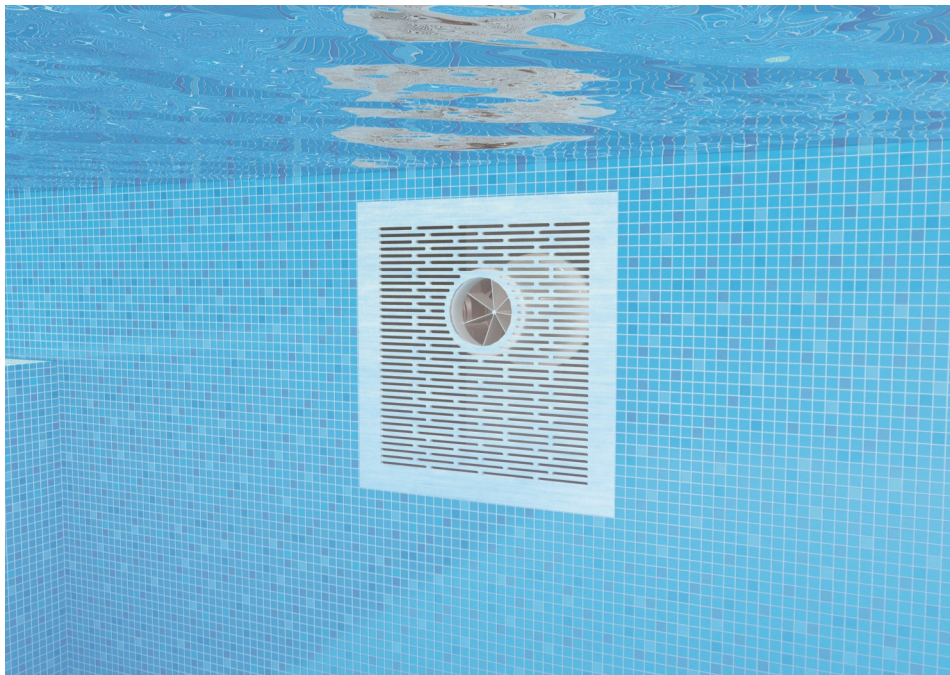


Remco SwimJet



COUNTER CURRENT TURBINE UNIT

160m³, 320m³, 275m³, 550m³

Operating Instructions

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Manufacturer's address

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Mitcham, Victoria 3132
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Mail: info@remco.com.au

www.remco.com.au

2 General

2.1 Important information

Operation	Observance of these operating instructions is essential to ensure trouble-free operation and in order for any warranty entitlements to be honoured. Therefore, please carefully read through the operating instructions before working with the counter current unit.
Guarantee	
Intended use	The pool counter current unit is designed for use in private swimming pools.
Note	Remco SwimJet Systems must to be integrated as per detailed Remco construction specifications.

2.2 Technical data

	160m3	320m3
Supply voltage	230 VAC	230 VAC
Frequency range	47 – 63 Hz	47 – 63 Hz
Rated current	6 A	12 A
Starting current (typical)	60 A	60 A
Rated power	1350 VA	2700 VA
Motor		
Motor type	1 Brushless DC motor (BLDC)	2 Brushless DC motors (BLDC)
Rated voltage	24 VDC	24 VDC
Rated current	40A	2 x 40A
Rated rotational speed	2400 min ⁻¹	2400 min ⁻¹
Turbine		
Discharge rate	50 – 160 m ³ /h	100 – 320 m ³ /h
Speed (turbine outlet)	1.0 – 3.2 m/s	1.0 – 3.2 m/s
Water temperature	+5° C to +40° C	+5° C to +40° C

	275m3	550m3
Supply voltage	230 VAC	230 VAC
Frequency range	47 – 63 Hz	47 – 63 Hz
Rated current	8 A	16 A
Starting current (typical)	60 A	60 A
Rated power	1700 VA	3400 VA
Motor		
Motor type	1 Brushless DC motor (BLDC)	2 Brushless DC motors (BLDC)
Rated voltage	24 VDC	24 VDC
Rated current	55A	2 x 55A
Rated rotational speed	2400 min ⁻¹	2400 min ⁻¹
Turbine		
Discharge rate	80 – 275 m ³ /h	160 – 550 m ³ /h
Speed (turbine outlet)	1.0 – 3.2 m/s	1.0 – 3.2 m/s
Water temperature	+5° C to +40° C	+5° C to +40° C

2.3 Operating conditions

Control box:

Ambient temperature: 0° C to +50° C

Site altitude: up to 1000 m above sea level

Turbine:

Water temperature: +5° C to +40° C

Immersion depth: 0.30m to 1.00m below the surface of the water

2.4 General safety and application notes

The counter current unit can pose a risk to persons, the machine itself and other property belonging to the operator

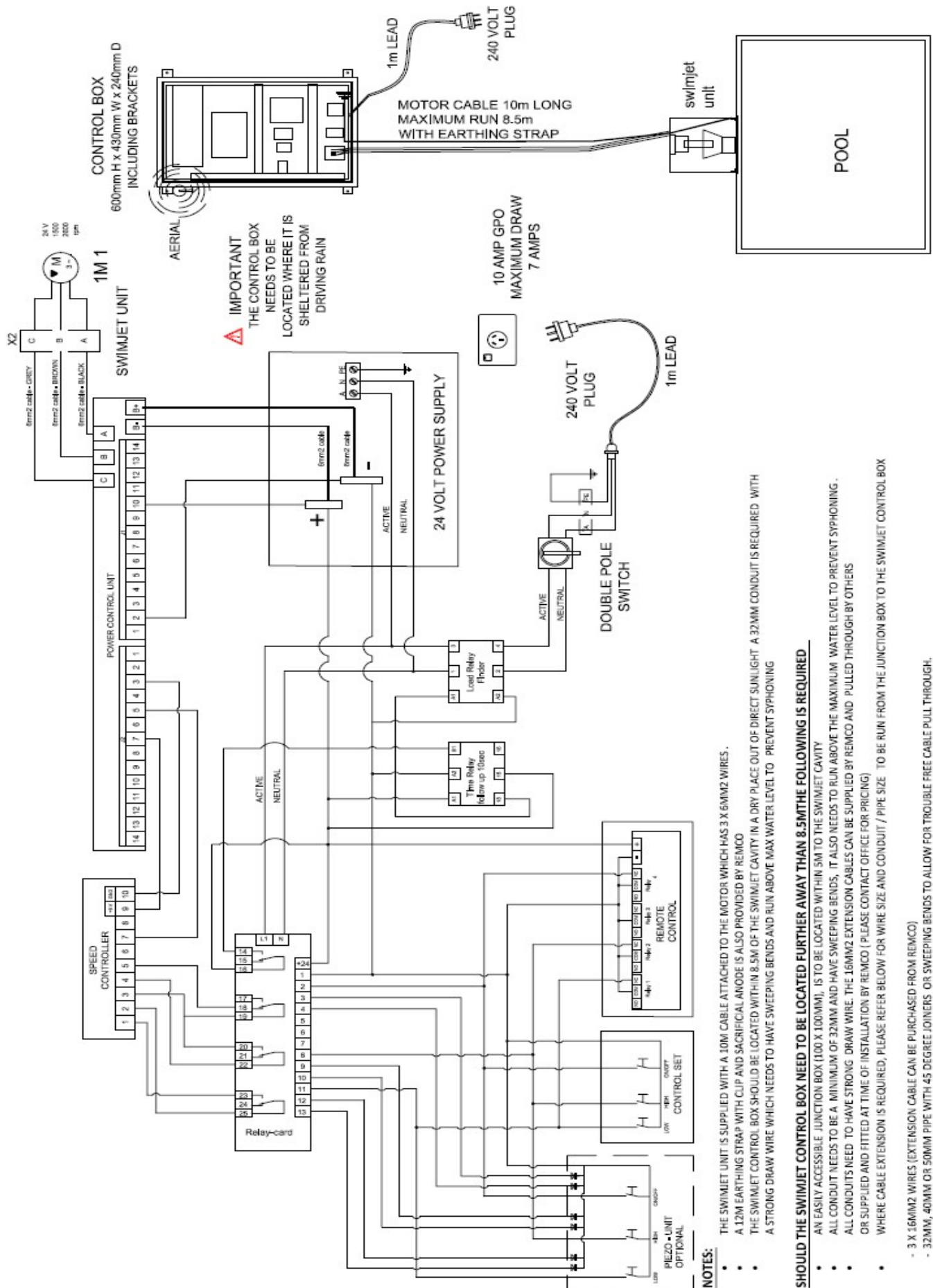
- ... if unqualified personnel work on or with the drive system.
- ... if the drive system is used improperly.
- ... if the drive system is installed and operated incorrectly.
- ... if the following notes are disregarded:
 - o Only operate the counter flow unit if it is in perfect working order.
 - o As a general rule, any retrofitting, changes or reconstruction of the drive system is prohibited. The above work may only be performed after consultation with the manufacturer.
 - o During operation and for an extended period afterwards, the components may have live parts, moving parts and hot surfaces.

Should you have any questions or problems, please contact your representative.



Remco SwimJet Turbines

275m3



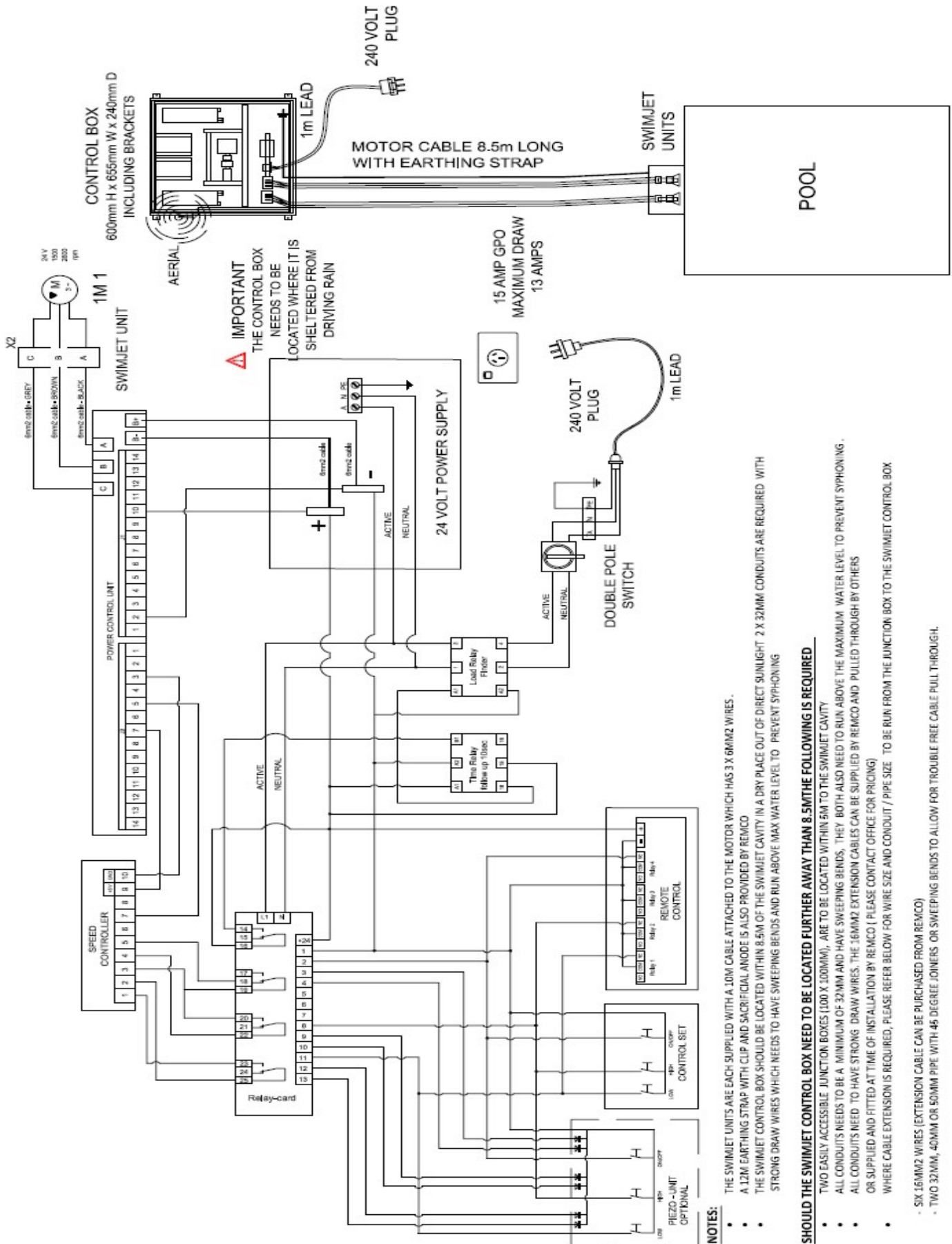
NOTE: Please also observe the circuit diagrams included in delivery!



Remco SwimJet Turbines

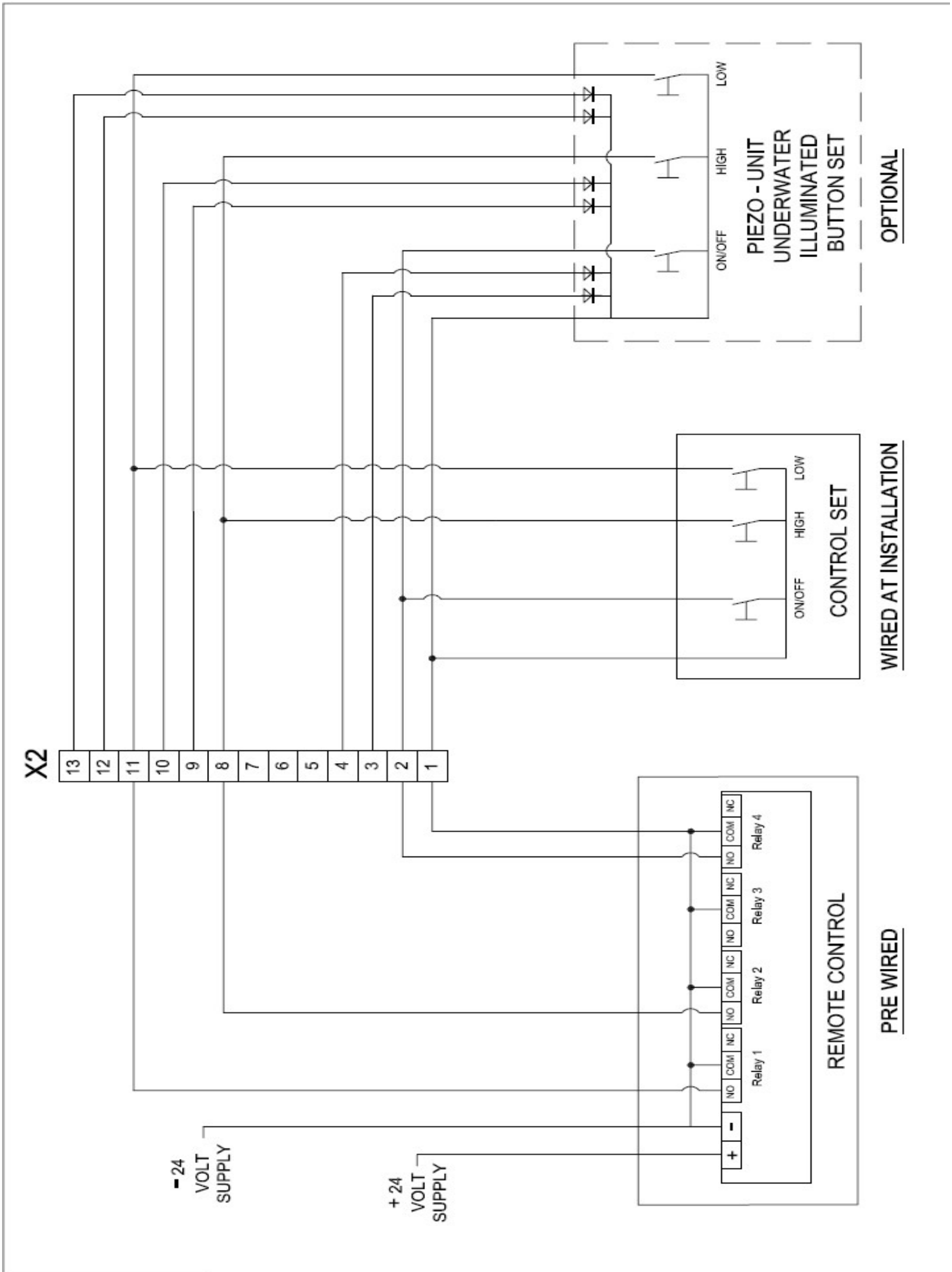
2.5 Wiring Diagrams — continued

550m3



NOTE: Please also observe the circuit diagrams included in delivery!

Piezo Wiring Diagrams



4. Start-up

Turn the unit on using the rotary switch on the front side of the control unit.

ELECTRICAL HAZARD

Before starting the machine up, check the operation of the residual current device (RCD) on the machine side. Check all wiring for damage and make sure the electrical connections are secure.

NOTE

Do not perform any trial runs unless the turbine is completely under water! Operating it above water or only partly in water will cause the drive motor to fail!

4.1 Remote control operation

DANGER



The radio transmitter and receiver are pre-set to match at the factory and programmed for the operation of the Remco SwimJet unit. Any reprogramming or using a second or third-party radio transmitter may damage the machine or harm people.

Before starting the turbine, make sure that no one is in the flow out area of the turbine. The sudden flow of water may be disorientating.

The range of the radio transmitter is 50 m under ideal conditions. The range may be severely limited because of local conditions. If the range is insufficient, the radio receiver can be moved to a better location and re installed.

WARNING!

The transmitter has a dust-proof and splash proof. Immersing the transmitter in water can cause malfunctions!

ON 
OFF 



▲ HIGH
▼ LOW

NOTE

When the turbine is switched on, there is an 8 second delay prior to start-up. The turbine will always start up at the lowest speed.

Hand-held transmitter

4.2 Switching the turbine on and off

- **Turn the unit on** by briefly pressing the **ON** button. After a delay of approximately 8 seconds, the turbine starts running at the minimum motor speed.
- **Turn the unit off** by briefly pressing the **OFF** button.

4.3 SwimJet flow control


By pressing the **buttons HIGH or LOW**, the flow rate can be changed between the minimum and maximum speed.

5. Optional operation by PIEZO underwater switch set



If the SwimJet unit has a PIEZO Tri switch, the SwimJet unit can be operated by remote control and via the PIEZO Tri switch.

If the unit is ready for operation, all three LED rings will light up. By pressing the

On/Off button , the unit is switched on and the rings change colour. By pressing the ↑ or ↓ button, the water flow can be adjusted. When the button has been actuated, the LED light changes colour briefly. By pressing the On/Off button once again, the unit is switched off and the ring changes.

NOTE

The unit can be switched on with the remote control, and switched back off by using the PIEZO Tri switch. Actuating by remote control is also indicated on the PIEZO Tri.

6. End of operation

At the end of operation and overnight, the machine should be switched off using the power switch on the control unit.

7. Shutdown / Hibernation

- Turn off the control unit
- Attach a sign.
- Drain the water from the pool far enough that the turbine is completely above water.
- Protect the turbine against frost getting in with suitable material

After the frost period:

- Remove insulating material from the turbine completely.
- Make sure that there is no residual material in the propeller or in the flow straightener.
- Refill the pool completely with water.
- Start again as described in section 8. Start-up.

8. Maintenance and repair

8.1 General

All work on the SwimJet unit must be carried out by trained personnel. Before working on the control unit, disconnect it from the mains and secure **using approved lock out procedures**.

8.2 Maintenance

- **The SwimJet unit is maintenance-free.**
- The underwater motor has no seals that have to be maintained or replaced.
- Make sure that no objects or pieces of clothing are caught on any protective equipment in the intake area. Remove those items when the turbine is switched off.
- Have a specialist inspect the counter current unit every two years.

The control unit can be cleaned with a damp cloth. Do not spray!

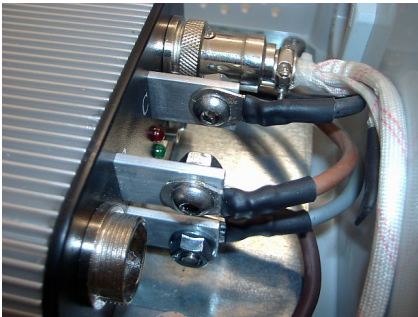
8.3 Repair

- Repairs are only to be performed by suitably trained specialists or in the manufacturer's factory.
- Only use original Remco spare parts for repairs.

8.4 Troubleshooting

DANGER

Repairs to the SwimJet may only be carried out by qualified technicians. Otherwise there is danger for people and equipment!

Malfunction	Possible cause	Resolution
Turbine does not start	Residual current device switched off	Switch on residual current device
	Building fuse has tripped	Replace building fuse Switch on automatic circuit breaker
	Range of radio transmitter insufficient	Go closer to the control unit with the radio transmitter
		Remove and reinstall the receiver in a better location
Turbine pumps in the wrong direction	Motor connection incorrect	Check and correct the control unit's motor connection (see 7.3 Motor connection)
The fuse in the building distributor box trips when switching on	Incorrect or fast-acting fuse	Use 16A slow-blow fuse
Turbine cannot be operated with the radio transmitter	Battery in the transmitter is weak or inserted incorrectly	Check the battery according to the operating instructions and replace if necessary
	Transmitter was under water	Remove the battery and let the transmitter dry for 48 hours at room temperature with the battery compartment open. Use a new transmitter if it continues to malfunction.
Motor won't start		
Red LED on motor control unit is flashing 	Motor is blocked by material in the turbine	Remove cover plate and remove all material caught in the turbine.
	Motor supply line is disconnected	Check motor supply line and repair if disconnected
	Corrosion on the contact points	Check all screw and soldered connections on the motor cable. Clean and re-connect contact points
	NOTE The copper wires are encased in a thin, transparent paper casing. Ensure that the casing is removed! (7.2)	

9. Recommended water properties:

- ✓ pH value: 6.8 – 7.8
 - ✓ chloramine: ≤ 0.5 mg/litre (preferably around 0.0 mg/litre)
 - ✓ free chlorine: 0.3 – 2.0 mg/l (3000 – 20000 ppm)
 - ✓ cyanuric acid: ≤ 100 mg/litre
 - ✓ salt concentration: $\leq 0.4\%$ (4000 ppm) (4 g/litre)
 - ✓ Metals: ≈ 0 mg/litre
 - ✓ carbonate hardness: $\geq 2^{\circ}\text{dH}$ ($^{\circ}\text{dH} = \text{mmol/litre} \times 2.8$);($^{\circ}\text{eH} = \text{mmol/litre} \times 3.5$);($^{\circ}\text{fH} = \text{mmol/litre} \times 5.0$)
 - ✓ ozone: 0 mg/litre
 - ✓ Σ chlorite + chlorate: ≤ 30 mg/litre
 - ✓ Redox potential: ≥ 700 mV
-
- Please note that a sufficient quantity of fresh water must be fed into the pool in order to prevent excessive salinity. This is best achieved by sufficient filter backwashing at regular intervals.
 - Your swimming pool dealer will be glad to assist you with questions regarding water treatment and care.
 - We use only premium quality materials that are optimally suited for swimming pool applications under the aforementioned conditions. However, in the event that one or more of the aforementioned parameters are not adhered to over an extended time period, or insufficient quantities of fresh water/no fresh water are/is fed into the pool, we will **not accept liability** for any damage incurred.

Remco Terms and Conditions of Sale & Warranty

Warranty Version VJ0118

Subject to the following terms and conditions, Remco Australia warrant that all goods supplied and installed by the aforementioned shall be of merchantable quality and reasonably fit for the purpose for which they were designed and the services shall be skilfully performed.

Remco Australia does not warrant that the goods supplied will last indefinitely. Furthermore the system will require regular inspection, maintenance, and eventual repair or replacement.

This warranty covers the repair or replacement of any faulty Swimroll component and Remco Australia may, at their sole discretion, elect to either repair or replace any such faulty components

All claims must be accompanied by proof of purchase and made direct to:

Remco Australia Pty Ltd
12 Monomeeth Drive
MITCHAM VIC 3132
AUSTRALIA

Ph: + 61 03 8833 3800
Fax: + 61 03 8833 3801
Email: info@remco.com.au

Warranty Period

The Turbine – 5 years

Hardware – 5 years

Electrical Components - 5 years

Warranty Exclusions

- 1) Warranty subject to Remco Australia receiving payment in full
- 2) The warranties hereby conferred do not extend to, and exclude any costs associated with labour, travel and unit transportation.
- 3) To repair damage resulting from attempts by person/s other than Remco Australia or their authorised representatives to install, repair or service the product. Ordinary wear and tear.
- 4) To repair damage, malfunction or degradation of performance resulting from:
 - a) Tea Staining, corrosion, or calcification due to water chemistry outside the recommended parameters for water properties (see manual).
 - b) Physical damage to remote control caused by dropping the unit or other forms of impact
 - c) Water damage to remote due to immersion in the water
 - d) Storm damage. Damage caused by lightning strike, power surges and spikes
 - e) Damage due to improper usage of the turbine. Damage caused by blocking the movement of the impeller with a physical object
 - f) Damage caused by failure to maintain specified water levels for reliable operation

Any service identified in 'Warranty Exclusions' and provided by Remco Australia at the request of the customer will be invoiced to the customer at the then current rates for parts, labour and travel.

