Specifications

DRIVE CONTROLLER

Enclosure	IP65 Stainless Steel 600 x 600 x 300 mm, (24" x 24" 12")
Switching Frequency	2- 16 KHz
Power Requirement	0.8 KW, 110 VAC / 220 VAC (2 separate models) (1000 Watt Generator or Mains Power)
Overload Capacity	150% for 60 S
Maximum Span	Up to 400 metres typical. For longer spans, please contact our engineering department for technical advice
Interlock	Ultrasonic proximity set to 0.5m
Inclinometer	± 45° measurement

ELECTRIC MOTOR

Motor Body	IP65, Geared Motor
Speed	Up to 1 m/s (3.2 ft/s)
Distance Measurement	0.01m/0.01ft resolution
Output Torque	32 Nm
Safety Factor	1.8
Power Requirement	0.75 KW 110 VAC / 220 VAC

HOIST

Lifting Capacity:	100 Kg/220 lbs (135Kg/300 lbs also available)
Power Requirement	- 2 x 12 VDC Batteries, 38Ah - 2 x 40 Amp Fuses - 2 x Safety Cut off Switch
Cable	40m, 1/8" Stainless Steel Cable

REMOTE CONTROL **(WIRELESS)**

Controls	- Raise / Lower Control+ Battery Voltage monitoring Forward/Reverse + Speed control
LCD	16 char x 2 line with backlighting
Radio Frequency	- Frequencies available * USA 902.5-914.5 MHz * AUS 915.5-927.5 MHz (26 channels @ 1 MHz spacing) - Operating Range * 1 Km (0.62 miles)
Indicators	- LED for Comms and fault indication
Outputs (Not Implemented)	Current Meter Output – OC Sounder for current meter pulses
Power Source	3xNiMh 2.5Ah AA batteries with built-in charger

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HORNET

CABLEWAY GAUGING SYSTEM

Designed & Manufactured By Hydrological Services Pty Ltd

- Fully Controlled System
- Portable 12 VDC powered Hoist can be used on multiple cableways
- No Maintenance Required
- Used with Acoustic Doppler Current Profilers and Mechanical Current Meters
- Maximum Span 400 Metres Typical
- Radio Controlled Hoist, up to 1 Km (0.62 miles) range.
- Wireless Remote Control

Description

WHAT IS THE HORNET?

The Hornet has been developed to perform river and stream discharge measurements from fixed cableways using an Acoustic Doppler Current Profiler (ADCP). The Hornet is an ideal solution for retro fitting to an existing manned cableway system, thus minimising the personal injury risk associated with this type of gauging.

HOW DOES THE HORNET OPERATES?

The Hornet is operated from the bank of the stream. Using a wireless remote control (see Figure 1), which incorporates the latest state of art electronics and Radio Controlled Systems, the operator can manoeuvre the ADCP by the push of a switch to traverse across the span to be measured. Once into position, the meter is lowered to commence measurement.

The Control System operates an electric motor fitted with incremental encoder to drive the carriage and hoist from the operating side to the far side of the river and back to the start point (see Figure 2-3). The operator uses the Remote Controlled Hoist to raise and lower the ADCP to and out of the water. (See Figure 2-3).

Prior to Discharge Measurements:

The Hornet takes a few minutes to set up and become operational.

The operator needs to do the following:

a) Attach the Hoist to the Carriage
b) Attach the Stabilising Weight and the ADCP to the Hoist
c) Switch power on to operate the Hoist
d) Connect to 1000Watt Generator or Mains to power Control System

To Commence Discharge Measurements:

Once the system is ready to use, the operator can lower the ADCP in the water, and carry out accurate measurements.

Figure 1: Wireless Remote Control

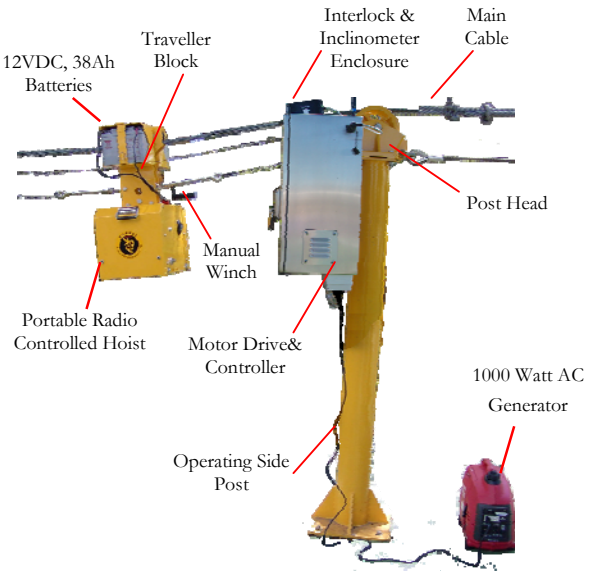

Figure 2: Operating Side

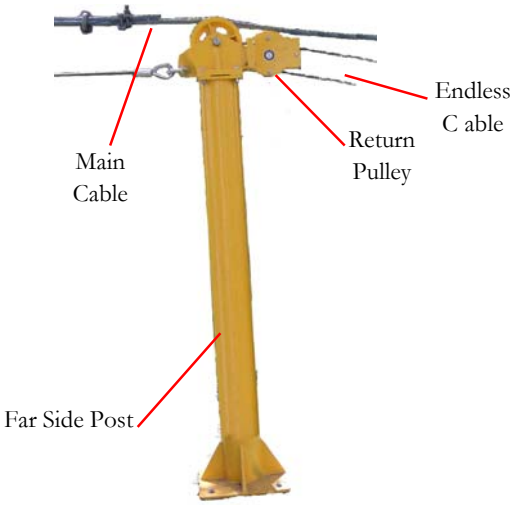

Figure 3: Far Side