

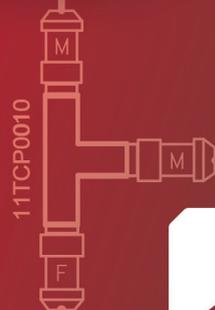
# RAYCO

Rayco Electronic System LTD

# CRANE MONITORING SYSTEMS

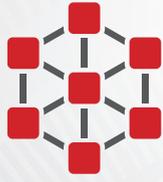


i4500 DISPLAY	
Part No	33D4507
Frame	SC126002
Data logger	No
Connector	3 x DT
End jumper	Yes



SWITCH  
0002  
CLICK DOWN





# RAYCOconnect



ENGINEERING DATA



CRANE HOURS



DATA LOGGING



AND MORE...

# OUR SALES PROMISE

- Available products and parts at all times
- Fast and simple installation and calibration
- Reliability and quality you can count on
- Advice and support, when you need it the most
- Fast delivery, when time counts
- Adaptable, versatile systems and products
- All systems are designed to be user-friendly
- All RaycoWylie products are certified to meet your requirements.
- Priced right for tremendous value

## SYSTEMS TO SUIT YOUR EQUIPMENT



Swan Neck  
Crane



Overhead  
Crane



Crawler  
Crane



Rough Terrain  
Crane



Flat Top  
Tower Crane



Boom Truck  
Crane



Port  
Crane



Spider/Deck  
Crane



Mobile  
Crane



Knuckle  
Boom Crane



Offshore  
Crane



Special  
Applications



Winch  
Systems



Wind Speed  
Systems



Telehandler



Anti-Collision  
Systems



Luffing Tower  
Crane



Camera  
Systems



Data-  
Loggers



Spares



Other Heavy  
Machinery

# i4500 SERIES



The i4500 series has been developed to meet global regulations and standards. Whether used for a simple or complex application, it maintains simple display of information with user-intuitive menus for easy operation.

The i4500 series is one of the first systems in the world capable of utilizing both wired and wireless sensors in the same network.

The i4500 is flexible with unlimited ways to display the information with customized graphics. Ideal for classic or special applications, we would love to hear from you to discuss your project!

## i4500

- 4.3" display
- 480x272 pixels resolution screen

## USER FRIENDLY

- Centralised information on one screen
- Colour screen
- High resolution LCD Screen readable in direct sunlight
- Night mode images
- Operator selected units  
m/te, m/kg, ft/klbs, ft/tons, ft/long tons, ft/lbs
- Camera input ready (only available on 4507 & 4510)

## FLEXIBILITY

- Engineered to fit all applications
- Multilingual interface for international use
- Choice of 10 languages
- Tactile button interface with simple intuitive icons
- Compatible with many CAN bus sensors
- Compatible with both wireless and wired sensors



## 4507

- 7" display
- 800x480 pixels resolution screen



camera display



## 4510

- 10.4" display
- 800x600 pixels resolution screen



winch line display

## TECHNICAL DATA

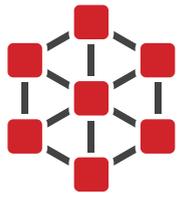
	4500	4507	4510
Display Size	4.3" [16/9 ratio]	7" [16/9 ratio]	10.4" [4/3 ratio]
Screen Resolution [pixels]	480x272	800x480	800x600
Display Rating	IP67		
Accuracy (of rated capacity)	In accordance with SAE J159		
Operating Temperature	-20°C to 70°C [-4°F to 158°F]		
Extended Temperature	-40°C to 70°C [-40°F to 158°F]		
Supply Voltage	11 to 36 vdc		
CAN bus Protocol	J1939 [CAN Open also available]		

## DESIGNED FOR SERVICEABILITY

- Load chart, software and calibration file with transfer via USB stick
- CAN bus communication link
- Utilising top quality Deutsch connectors and industry standard M12 5 pin connections
- Quick and easy to install and calibrate
- Ultra fast calibration using pre-entered weight data for all attachments

## PERFORMANCE

- Compliant with current international standards
- Self diagnostic mode
- Fault log
- Event recorder
- Optional Datalogger
- Inbuilt operator audible and visual warnings



# RAYCOconnect

## REMOTE ACCESS SE

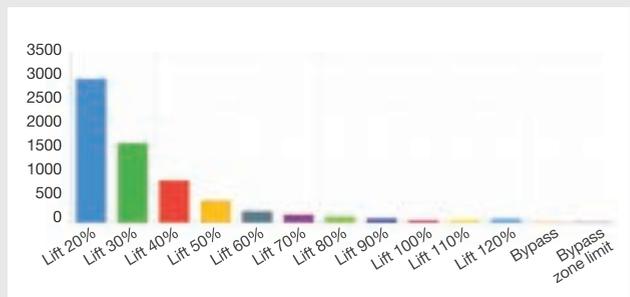
**RAYCOconnect** provides relevant and accurate information to optimize maintenance and operation of your equipment. **RAYCOconnect's** customizable dashboard presents critical information to different types of organisations and users to facilitate management and efficiency. **RAYCOconnect** is available with all RaycoWylie Systems products.



Load	1.9 t	A2B	OK	Parts	4	Duty	1
Max load	2.0 t	Slew	107.4 °	Last start	107.4 °		
Radius	1.1 m	Length	3.4 m	Last activity	20/01/2020,		
Wind speed	20.8 km/h	Height	4.4 m	14:20:19			
System hour indicator	293h 7m 45s	Hour A	0h 0m 47s	Hour B	293h 7m 45s		

- Crane running hours
- Safe working load
- Load
- Angle
- Radius
- Digital I/O
- Extension
- Over hoist input (ATB)
- Boom tip wind speed
- XY chassis angle
- Slew encoder
- Data logger
- Range limiting data
- Outrigger position
- Hook height
- Rope payout

**RAYCOconnect** event recorder provides a simple overview of the crane lift usage. Allowing you to quickly identify if the crane is overused, avoiding future unnecessary maintenance costs.





AVAILABLE ON ALL DEVICES

# SERVICE FEATURES



ALARM NOTIFICATION

- Increase safety
- Reduce downtime
- Schedule or event based maintenance notifications
- Safety critical alarm notifications



PREVENTIVE MAINTENANCE



GPS LOCATION



SOFTWARE UPDATE

- Continuous maintenance and web application upgrades
- Remote software updates
- Upgrade loadcharts and calibrations



DIAGNOSTIC

- Remote Diagnostics
- Improved Response Time and Service Cost Reduction

System information (software, OIL, tests load chart, S/N)

Software:	RaycoWyl	Detected CAN addresses on canbus network 1:	B0, E1, 02, D4, 03, 05, A0, A1, 91, 00
LPC:	3.08	Detected CAN addresses on canbus network 2:	
Tests:	SC145006v0006	4507 S/N:	18-50-414
Chart:	190218 21LC1050	Crane S/N:	11111
File:	SC4R DC8R		



ENGINEERING DATA

Engineering Data is critical for the crane manufacturer for long-term product improvement; It also provides sensitive information for long term reliability, analysis and preventive maintenance planning.



AND MORE...

- Crane information and engine data
- Remote derating
- User management can be done by the OEM or fleet owner
- Branded login page and web application
- API available for fleet management and other management software (CRM, ERP)



DATA LOGGING

- Data logger and crane hours
- Time stamp event
- Crane power on time



CRANE HOURS

- Lift information
- A2B, overload and by pass record

# i4500 MOBILE



## i 4500

- 4.3" display
- 480x272 pixels resolution screen

i4500 mobile crane applications can vary massively depending on your specific requirements. From basic kits utilising CAN bus sensors to monitor load, boom angle and boom extension to more complex systems including multiple reeling drums, hydraulic luffing jibs and more. The i4500 series and its software are perfectly suited to mobile cranes and the needs of their owners and operators.

The software has been developed to make operation, calibration and fault finding as fast and simple as practically possible. This is done through listening to the needs and recommendations of our customers, from flexible calibration points, Centre of Gravity calculations for attachments, USB connectivity, the ability to add extra sensors when and if required mean the clean, intuitive software is easy and simple for both operators and engineers to use.



Install of i4500 to a carry deck crane – USA

## OPTIONS

- Load
- Angle
- Relay controller
- Extension
- Over hoist input (ATB)
- Boom tip wind speed
- XY chassis angle
- Slew encoder
- Camera inputs
- Data logger
- Virtual wall range limiting
- Outrigger position monitoring
- Travel monitoring
- Hook height monitoring
- Rope pay-out monitoring
- CAN bus wireless gateway (868Mhz or 915Mhz)

More options available upon request, please contact RaycoWylie.

# i4500 CRAWLER



## i 4507

- 7" display
- 800x480 pixels resolution screen

Crawler cranes, similar to mobiles, come in all shapes and sizes, whether it is a 5te telescopic, 120te lattice or 50te telescopic with outriggers the i4500 series has a solution. The ability to recondition and reuse existing load sensors to minimise the financial impact of needing a new system coupled with intuitive controls, simple calibration procedures, outstanding functionality and excellent customer support mean the i4500 series is the unit for your crane. From a basic system comprising of display, relay controller, boom angle sensor, load interface and load cell to roped luffing fly jibs and more. This leaves the

i4500 series the perfect choice for your machine.

Using centre of gravity calculations for attachments has removed the need to calibrate every attachment and reduce the calibration time required on site. With load calibration interpolation between boom lengths of up to 15m, new easy to use deflection, load and friction compensation calibrations means the i4500 series calibration can be completed faster and with more accurate results than ever before.

The software has been developed to make operation, calibration and

fault finding as fast and simple as practically possible. This is done through listening to the needs and recommendations of our customers, from flexible calibration points, Centre of Gravity calculations for attachments, USB connectivity, the ability to add extra sensors when and if required mean the clean, intuitive software is easy and simple for both operators and engineers to use.

## OPTIONS

- Load
- Angle
- Relay controller
- Extension
- Over hoist input (ATB)
- Boom tip wind speed
- XY chassis angle
- Slew encoder
- Camera inputs
- Data logger
- Virtual wall range limiting
- Outrigger position monitoring
- Travel monitoring
- Hook height monitoring
- Rope pay-out monitoring
- CAN bus wireless gateway (868Mhz or 915Mhz)

More options available upon request, please contact RaycoWylie.



Install of i4507 to lattice crawler crane – Malta

# i4500 TOWER



## i 4507

- 7" display
- 800x480 pixels resolution screen

RaycoWylie have worked extensively with tower crane specialists and invested heavily to develop a truly flexible and versatile system that is perfectly suited to all types of tower cranes and their markets.

The software has been developed to work with a variety of sensors, integrating trolley position, jib angle, hook height, hoisting speed, actual load, working radius, wind speed, data-logging, anti-collision, travel monitoring (rail mounted cranes),

boom tip/winch/hook view camera systems, 3D work area limitation and remote control interfacing.

The systems have multiple input and output configurations allowing separate wind speed and overload alarms/warnings, inputs from existing moment sensors, 2/4 parts of line selection, free slew conditions and more.

Systems can be customised to suit your budget and requirements from

utilising existing sensors to upgrading with CAN bus sensors the i4500 tower crane series can handle it all.

With clear, easy to read display, intuitive system controls, step-by-step calibration procedures, state of the art diagnostics, CAN bus communication, USB connectivity and industry competitive pricing, the i4500 tower crane series is the choice of operators and cranes owners worldwide.

## 3D WORK AREA LIMITATION



The prohibited zone function allows to limit access of the jib or trolley and lifted load to different zones without losing sight of the critical load information. With one zone to determine the job site and up to ten adjustable 3D zones internally.

## OPTIONS

- Load
- Angle
- Trolley position
- Relay controller
- Wind speed
- Slew encoder
- Camera input
- Data logger
- 3D work area limitation
- Travel monitoring
- Hook height
- Anti-collision interface
- CAN bus wireless gateway (868Mhz or 915Mhz)

More options available upon request, please contact RaycoWylie.

# i4508 ANTI COLLISION



PC and tablet view

## i 4508

- 10" display resolution screen

The i4508 RaycoWylie tower crane anti-collision system utilises the latest technology and cutting edge innovation in order to assist in the prevention of on-site crane collisions (crane to crane and crane to structure).

Working with industry experts RaycoWylie have produced one of the simplest, most detailed and versatile anti-collision systems on the market, the system is designed to be intuitive for both the operator and installer to use.

The system can simultaneously monitor up to twenty one cranes on the jobsite as well as site obstructions and prohibited working areas.

The RaycoWylie i4508 anti-collision system is fully compatible with the RaycoWylie i4507 load indicator

systems, this removes the need for a second set of sensors being installed on the crane and reduces installation and setup time significantly. Both the i4507 and i4508 systems are suitable for new and retrofit installations.

When used with the i4507 the anti-collision and load indicator information are displayed via the i4507 display, this reduces hardware in the crane cabin and provides the operator with all the information on one clear screen.

The i4508 anti-collision system is also available as a standalone unit (without the need for an existing i4507 system) this system utilises a 10" colour touch screen display and associated sensors.

The i4508 system boasts wireless service capability offering users

the ability to exchange service data wirelessly, this can be used to remotely override the AC system of a crane, locate other cranes on the same jobsite, edit settings and share crane configurations.

The i4508 anti-collision system is also viewable on tablet and PC for management and site personnel to view. This feature assists with lift planning and associated site works, as well as highlighting high-risk work areas and possible project choke points.

The RaycoWylie i4508 is the latest top of the range, cost effective, user friendly tower crane anti-collision system available. Get in touch with one of our tower crane specialists for more information.

## FEATURES

- Supports up to 21 cranes on the same jobsite
- Crane to crane and crane to structure collision compatible
- User friendly display and controls
- Wireless service capability
- Wind speed sensor options
- Multi language
- Data recording
- Wireless remote viewing capability



# i4500 KNUCKLE BOOM



## i 4507

- 7" display
- 800x480 pixels resolution screen

The i4500 knuckle boom system is one of the newest applications to the range. The knuckle boom components and software have been designed specifically for the offshore marine and other harsh environments.

The system is designed to be as flexible as possible incorporating X/Y (list/trim) sensors, pressure transducers, hoist load sensors, multiple angle sensors, boom extension sensors, slew position sensors, audible and visual warnings

and wireless connectivity (custom applications).

By using the for mentioned range of sensors the i4500 knuckle boom series is not just limited to being a load indicator system, it can also work as a full virtual wall range limiting system, height limit system and X/Y limit system.

Our R&D department are constantly developing both software and hardware meaning the capability of

the i4500 continues to increase.

The software has been developed to make operation, calibration and fault finding as fast and simple as practically possible. This is done through listening to the needs and recommendations of our customers. From flexible calibration points, USB connectivity, the ability to add extra sensors when and if required mean the clean, intuitive software is easy and simple for both operators and engineers to use.



## OPTIONS

- Load
- Angle (multiple)
- Relay controller
- Extension
- Over hoist input (ATB)
- Wind speed
- XY (List/Trim) angle
- Slew encoder
- Camera input
- Data logger
- Virtual wall range limiting
- Rope pay-out monitoring
- CAN bus wireless gateway (868Mhz or 915Mhz)

More options available upon request, please contact RaycoWylie.

# i4500 BARGE/PORT



## i 4510

- 10.4" display
- 800x600 pixels resolution screen

Port and barge mounted cranes come in a variety of shapes and sizes, the i4500 has been designed with the flexibility to suit almost every application. From the smallest single hoist material handling cranes to multi hoist heavy lift barges the i4500 has the capability. Using the latest in sensor technology and CAN bus communication the systems can be quickly installed and calibrated.

Supporting numerous sensors the i4500 system can be used to monitor load, safe working load, radii, boom angle, over hoist

conditions (anti-two blocks), X/Y (list/trim angles), camera inputs, data logging, wind speed, slew position, virtual wall range limiting, hook height and hoist rope pay out monitoring to mention a few.

RaycoWylie also have the ability to customise systems to your exact requirements, with a team of dedicated experienced personnel we are always happy to work to find the perfect solution for your crane.

For more information on the i4500 series please contact RaycoWylie.

## OPTIONS

- Load
- Angle
- Relay controller
- Extension
- Over hoist input (ATB)
- Wind speed
- X/Y (List/Trim) Angle
- Slew encoder
- Camera inputs
- Data Logger
- Virtual wall range limiting
- Hook height monitoring
- Rope pay-out monitoring
- Travel monitoring
- CAN bus wireless gateway (868Mhz or 915Mhz)



# i4300 SERIES



## i4300

- 4.3" display
- 480x272 pixels resolution screen
- Telescopic pressure sensing application

RaycoWylie are proud to introduce the successor to the W2245. Brought specifically to the market as a cost effective solution the i4300 boasts a 4.3" full colour screen, USB connectivity, on screen calibration and CAN bus J1939 communication.

The i4300 will bring your machine up to date with a simple clear display, easy to follow calibration procedures and state of the art diagnostics. Fully calibrated via the display itself helps reduce the cost of expensive laptops or specialist programming tools. The calibration is quick and simple, using the centre of gravity data to calibrate attachments saving time and lengthy

calibration procedures. Although the i4300 is the cost effective solution, RaycoWylie do not hold back on its quality, with all sensors and the display itself being a minimum of IP67 the i4300 is built to last.

The i4300 crane system supports multiple sensors including boom angle / length sensor, two load sensors and relay controller. The i4300 system is available for single reel telescopic cranes (hoist or total moment sensing) and Lattice boom cranes (hoist sensing).

For more information on the i4300 please contact RaycoWylie.

## USER FRIENDLY

- Centralised information on one screen
- Colour screen
- High resolution LCD Screen readable in direct sunlight
- Night mode images
- Operator selected units
- m/te, m/kg, ft/klbs, ft/tons, ft/long tons, ft/lbs

## FLEXIBILITY

- Engineered to fit standard applications
- Multilingual
- Tactile button interface with simple intuitive icons



## **i4300** CRAWLER CRANE

- Hoist sensing application



## **i4300** SIDE BOOM CRANE

- Hoist sensing application



## **i4300** DECK CRANE

- Telescopic hoist sensing application



## FEATURES

- Continuous display of Load, Hoist, Parts of line, Radius, boom length, boom angle and % of maximum capacity.
- Diagnostic menu and continuous error detection and recording
- Audible and visual alarms indicating two-block, load limit conditions
- Operator adjustable low, high angle, length, height and radius limits
- Optional lock-out for load, A2B
- Easy calibration via keypad. No additional programming hardware necessary
- Quick and easy installation
- USB file transfers
- Multi-language
- Selectable units
- Upgradable to the i4500 LMI Series

# i4000 WIRELESS/HYBRID/ WIRED MULTI-PURPOSE INDICATOR



**TELESCOPIC CRANE MULTI-INDICATOR**



**LOAD AND A2B**



**WIND AND GUST**



**WIND SPEED DATALOGGER**

The i400 is a multi-application indicator using different sensors to monitor desired options such as load, angle, length, radius, wind, slew, a2b, X and Y angles. The i4000 system boasts the flexibility of using either wired or wireless sensors or a combination of both!

## FEATURES

- Diagnostic menu and continuous error detection and recording
- Inbuilt audible and visual alarms indicating two-block, load limit, wind speed conditions and range limit conditions
- Easy calibration via keypad. No additional programming hardware necessary
- Quick and easy installation
- USB file transfers
- Multi-language, selectable units
- Upgradable to the i4500 LMI Series
- Wireless option specification:
  - Using 915Mhz or 868Mhz for increased range and signal reliability
  - Dipole antenna
  - Easy installation and sensor replacement
  - One-year plus battery life for wireless sensors
  - Wind speed data-logger



OTHER  
HEAVY  
MACHINERY



**RANGE LIMITING AVAILABLE  
FOR ALL CRANE MODELS**



**X AND Y ANGLE**



**TELEHANDLER INSTABILITY INDICATOR**



Wireless  
wind  
speed sensor



Wireless  
anti-two  
block switch



Wireless  
Load link

# R180 WIRELESS WIND SPEED INDICATOR



wireless wind speed sensor

The R180 is the cost effective, easy to install and simple to use wireless wind speed indicator.

With an inbuilt relay output to trigger an external alarm, internal audible and visual operator warnings, clear LCD display, low battery warning and the ability to display the speed in various units of measurement. The RaycoWylie R180 is the answer to your wind speed indication needs.

## TECHNICAL DATA

R180	
Display Size	4.69"x3.13"x2.13" (11.95cmx 7.90cmx5.55cm)
Display & Sensor Rating	IP67
Supply Voltage	10.2 to 30vdc
Operating Temperature	-30°C to 70°C [-22°F to 158°F]
Relay Output	1 (500mA)
Accuracy	<0.2 mph for the range 11mph to 55mph
Operating range	100m (environment dependent)

## FEATURES

- Direct Sequence spread spectrum transmission technology for an enhanced range of operation and better RFI resistance (2.4 GHz transceivers)
- Internal antenna on sensor, which means low susceptibility to damage
- Selectable units MPH, KM/H, M/S
- Display and sensor pre-calibrated
- Easy installation and sensor replacement
- Uses lithium 'D' Battery
- Battery life : up to 1 years (low battery warning)
- User friendly display
- Pre-set limits with audible and visual warning
- CE compliant

# R147 WIRELESS ANTI-TWO BLOCK INDICATOR



wireless anti-two block switch

The R147 wireless over hoist limit system is an easy to install cost effective solution to monitor an over-hoist situation.

With an inbuilt relay output to trigger a motion cut function, internal audible and visual operator warnings, clear LCD display and low battery warning.

The R147 is suited to those applications where running cables is not desired.

## FEATURES

- Direct Sequence spread spectrum transmission technology for an enhanced range of operation and better RFI resistance (2.4 GHz transceivers)
- Internal antenna on both the display and sensor, which lowers susceptibility to damage
- Easy installation and sensor replacement
- Uses lithium 'AA' Battery
- Battery life : up to 1 year (low battery warning)
- User friendly display
- Pre-set limits with audible and visual warning
- One display can be used with two sensors for multi hoist applications

## TECHNICAL DATA

R147	
Display Size	4.69"x3.13"x2.13" [11.95cmx 7.90cmx5.55cm]
Display & Sensor Rating	IP67
Supply Voltage	10.2 to 30vdc
Operating Temperature	-30°C to 70°C [-22°F to 158°F]
Relay Output	1 [500mA]
Operating range	100m [environment dependent]

# CAMERA SYSTEMS



Camera systems are fast becoming a standard sight in crane cabs. Cameras are used for many different reasons, RaycoWylie have developed the i4507 and i4510 systems to accept multiple camera inputs. This reduces the amount of cab space taken up by screens and allows the operator to view load critical data on the same screen as his camera.

The i4500 systems have the ability to function with numerous camera system manufacturers, whether you're

looking for a hook view, load view, rear view, or winch view camera RaycoWylie are ready to help.

RaycoWylie also offer stand-alone camera systems to suit your requirements.

For more information on the available camera systems please contact RaycoWylie.

## WINCH VIEW CAMERA



## HOOK VIEW CAMERA



## BOOM TIP LOAD VIEW CAMERA



## HC-180 HOOK VIEW CAMERA

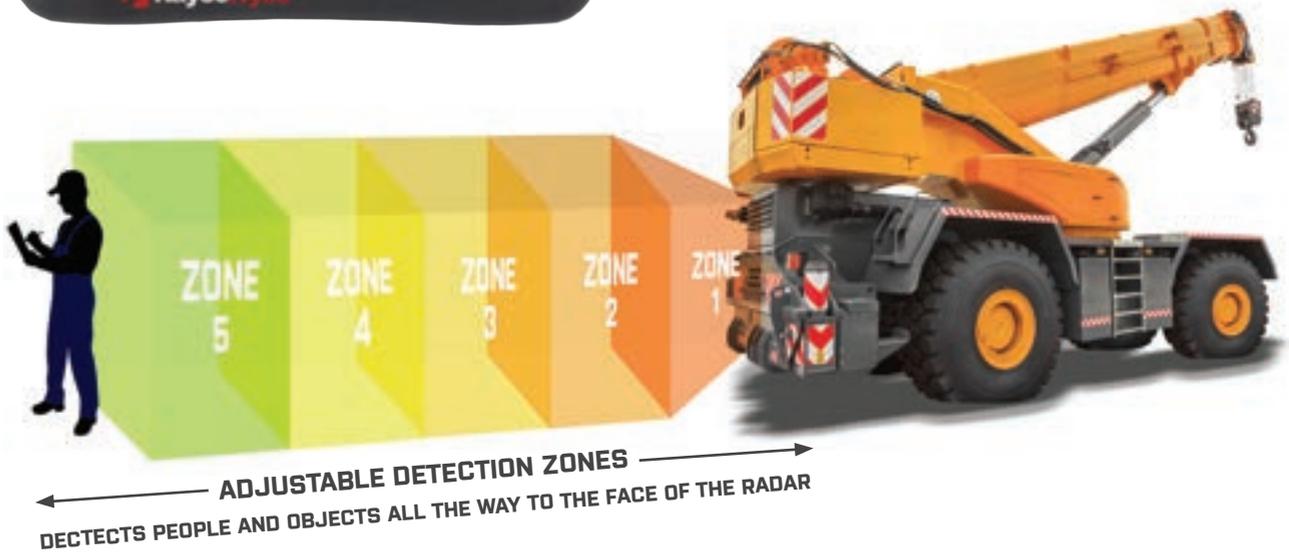


- IP65 enclosure with impact resistant camera housing, magnetic mount, safety lanyard and wireless transmitter
- 2.4Ghz directional antenna
- Supplied with 9.7" display with heavy duty suction cup mounting
- Supplied in heavy duty transport/storage case
- One of the fastest camera systems to install and remove
- Full installation and setup instructions included
- 700 TVL camera for reliable, flicker free, minimal delay feedback
- Rechargeable battery: Estimated battery life 12-20 hours conditions depending
- Battery recharge time: Estimated 3-4 hours conditions depending (additional battery packs available)
- Wireless range 300-450m (1000-1500ft) (line of sight / directional antenna dependent)
- Storage temperatures -40°C to +50°C (-40°F to 122°F)
- Operating temperatures -10°C to +50°C (14°F to 122°F)
- Camera/enclosure size 230x205x180mm (9"x8"x7")
- Approximate camera/enclosure weight 6kg (13lbs)
- CE Compliant

# RADAR BLIND SPOT MONITORING



PreView radar combined with a RaycoWylie system provides audible and visual alarms to actively warn equipment operators of people or objects in the equipment blind zones, enabling them to safely react and mitigate potential accidents.



The PreView® Sentry™ is a Frequency Modulated Continuous Waveform radar object detection system designed to alert equipment (vehicle, truck, machine) operators to the presence of obstacles. The sensor detects both moving and stationary objects in a pre-defined coverage area and can report the distance of the closest object via visual range indicators (display) and an audible signal (display or buzzer) to the equipment operator.



# 880/890 LOAD LINKS & SHACKLES



## 880 LOAD LINKS

At RaycoWylie we have a variety of load links. Both wired and wireless models are available in a range of capacities 6.5te to 500te. All load links are manufactured from high grade aluminium and designed for ease of installation and transportation.

Heavy duty transport cases are available for all load links.



## 880 HD LOAD SHACKLES

RaycoWylie now offer a variety of heavy duty load shackles. Both wired and wireless models are available in a range of capacities from 25te to 2000te. Load shackle pins are constructed from 17-4 stainless steel, for strength and reliability.

Heavy duty transport cases are available for shackles up to 55.0te capacity.



## 890 LOAD SHACKLES

RaycoWylie offer the W890 range of load shackles, ranging in capacity from 6.5te to 35.0te. The load pins are manufactured from 17-4 stainless steel for strength and reliability, these shackles should be used with the appropriate bobbin to ensure the load is directly applied to the centre of the load pin therefore giving the most accurate results.

All load shackles are available with heavy duty transport cases.

For more information on the W890 load shackles please contact RaycoWylie.

# SENSORS & SPARES



Sensor options and system configurations are becoming a never ending list for RaycoWylie. Our R&D departments are constantly looking ahead to meet the requirements of the next project whilst ensuring price and quality remain at the forefront of RaycoWylie values.

If you have a bespoke project or specific sensor option you require please contact RaycoWylie.

## SENSORS



### LOAD PINS

Load pins come in all sizes to suit a full range of applications, from a tiny 1k pin installed to a 4" dynamometer to 100te+ pins custom made to fit your machines existing dimensions.



### LOAD LINKS

A full range of load links are also available and again our engineers are ready to find the load link which best suits your machines requirements. From 1te links up to 50+te our engineers are ready to help, we can also supply load tested side plates and pins to ensure your installation goes to plan.



### PRESSURE TRANSDUCERS

Pressure transducers are available with a variety of outputs, mV, 4-20 mA or J1939 CAN bus. Transducers can be supplied with a range of different hydraulic fittings to suit your machine.



### WIND SPEED SENSORS

Knowing an accurate windspeed is considered essential information for many crane manufactures, owners, customers and operators and can be required for the safe use of the crane. RaycoWylie offer a range of windspeed sensors, from the R180 wireless stand alone unit to fully integrated windspeed into the latest of systems, windspeed is now an option on all i4500 series systems.



### 3 SHEAVE DYNAMOMETERS

The 33Y series are available in three sizes 4", 6" and 8", to suit rope sizes from 12-38mm as standard and are available in either mild or Stainless Steel. Dynos can be supplied with amplifiers, junction boxes or CAN bus load interfaces and can be mounted vertically or horizontally on either fixed or pantograph mountings which are all available from RaycoWylie.



### CAN BUS ENCODERS

Used to monitor any rotation based input the CAN bus encoders consistently provide an accurate measurement. Whether used to monitor slew angle for slew specific load charts, range limiting, work area limitation, hook height and direction, trolley position or hoist rope pay out this new range of encoders is perfect for your application.



### ANGLE SENSOR

The voltage based 33A0001 angle sensor is a tried and tested 0-5v non potentiometric angle sensor, this means your old worn out pot can now be replaced by this robust angle sensor.



### CAN BUS ANGLE SENSOR

CAN bus angle sensors housed in a IP66 cast aluminium enclosure this means the new angle sensor is ready for anything. Simply set which side of the boom the sensor is fitted and set the zero point and you're ready to work. Sensor calibration has never been easier.



### X/Y ANGLE SENSOR

Used for a variety of applications to monitor chassis tilt of the machine, the RaycoWylie X/Y sensor is sturdy yet simple to install.



### A2B SWITCH

Available in both aluminium and stainless steel the latest anti-two block / over hoist switches are built to last. Exposed to the harshest of weathers, RaycoWylie switches have been manufactured to the highest of standards and are perfect for new and retrofit applications.



### CAN BUS LOAD INTERFACES

CAN bus load interfaces can now be used to convert either mV or mA signals into CAN bus. This has opened the opportunity to reuse sensors and therefore minimise the cost to upgrade or renew your system.



### GPIO 33M0106

The general purpose input/output interface is used for a variety of applications. From switch inputs to converting analog signals to CAN bus the GPIO is as flexible as they come.



### 33R4000 SERIES

With an extension range of up to 12m the 33R4000 series is a high quality compact reeling drum perfectly suited to smaller machines. The CAN bus version can house boom angle sensor, boom extension pot and up to 4 sliprings.



### 33R6000 SERIES

This is the medium sized reel and has an extension capacity of up to 24m. Available with either CAN bus or voltage based sensors and the ability to house up to 4 sliprings the 33R6000 series is perfect for most applications.



### 33R2000 SERIES

The 33R2000 drums are the largest of the range, servicing machines with a boom extension of up to 46m and available with voltage based sensors which can be easily converted to CAN bus through a CAN interface and up to 4 slip rings. The 33R2000 series is ready for the bigger machine in your fleet.



### RADIO REMOTES

Remote controls are rapidly becoming a popular option offered by both crane manufacturers and retrofit suppliers, to meet the need for operators to constantly monitor safety critical information. RaycoWylie has collaborated with several of the top radio remote manufactures in the industry and are always happy to collaborate with new companies and your chosen remote control supplier.



### CAMERAS

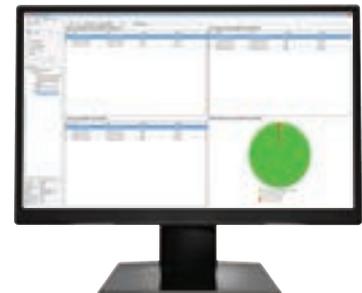
Cameras, whether winch view, rear view, boom tip or even hook view are becoming a popular tool to aid in the operation of cranes. This is why RaycoWylie now offer an integrated camera option on the i4507 and i4510 systems. On these larger screens it is possible to clearly view the camera and all critical load information on one screen. Take the chance to save money and cab space by adding the camera option to your new RaycoWylie system.

For boom tip and hook block cameras RaycoWylie have collaborated with some of the biggest names in the industry and are always happy to work with your chosen camera supplier.



### LIGHTS AND ALARMS

Warning lights and alarms are some of the most important components to any system. RaycoWylie utilise a full range of both audible and visual alarms. Taking advantage of the latest LED technology means lights are not only brighter but also last longer than ever before.



### DATA LOGGER

Dataloggers are rapidly becoming a standard requirement for all working in the crane industry. RaycoWylie have developed the i4500 series logger and its software to be more user friendly than ever before. From the USB download procedure which removes the need for heavy or specialist equipment to the user friendly software supplied to all who purchase the datalogger option. RaycoWylie are always happy to help interpret any datalogger information.



### WIRELESS GATEWAY

The CAN bus wireless gateway is available in 868Mhz and 915Mhz versions and can be added to the i4500 series of systems to enable wireless communication between the system and external sensors. This makes the i4500 series one of the world's first hybrid crane monitoring systems with almost endless possibilities.



### ANTI-COLLISION SYSTEM

The tower crane anti-collision system can be added to existing i4507 tower crane system or can be provided as a standalone i4508 anti-collision system. Both systems are suitable for new and retrofit applications, talk to RaycoWylie today to find out more.

# A HISTORY OF RELIABLE MONITORING SYSTEMS

## EARLY BEGINNINGS

Rayco Electronic System Limited was founded in 1979 (40 years) following the registration of the newly patented Range Limiting Device (Work area definition or zone access control) for lifting equipment such as lattice and telescopic cranes and excavators.

In 1933, The B&A Engineering Company Limited was founded on the release of the first UK – Factorate Inspectorate Approval Certificate for Cranes in order to commercialize the newly patented Load Moment Indicator (Rated Capacity Indicator/Limiter) invented by Major Hamilton Neil Wylie.

## COMING TOGETHER

In 1994, Rayco increased its presence in the Heavy machinery Instrumentation Market by Acquiring B&A. Through the combined expertise, experience and passion of the employees, the Company was able to enhance its state-of-the-art technologies in line with the evolution of the machines and the market expectation.

## RESEARCH & DEVELOPMENT

RaycoWylie are driven by innovation, with product and software development an unceasing priority. Whether designing or improving systems for a specific bespoke machine, fully integrated systems with leading manufacturers or focusing on refining the current technology ranges, our R&D engineers work constantly to help improve reliability, reduce cost, and incorporate developments in international standards.

Our development engineers constantly review and evolve the current range, incorporating the best of innovative technologies into each; further driving the high standards RaycoWylie upholds. From mini-cranes to some of the world's largest heavy lift barges, our engineers have developed monitoring systems which have revolutionised them all. This approach has left us with an ever increasing pool of knowledge to help us to continue driving crane systems into the future.

## TODAY'S RAYCOWYLIE

RaycoWylie's corporate headquarters are located in Québec City, Canada where you will find administration, manufacturing, engineering and research & development. All the offices including the head-office and the branch offices in the United Kingdom, United-States and new ones opened in Singapore in 2016 and Cairo, Egypt in 2017, have inventory and offer sales, services and technical support.

RaycoWylie is a world leader in heavy equipment monitoring systems. Its key areas of expertise lie in the development and installation of simple indicators or complex devices, easy to use and made to help our customers get their jobs done safely, efficiently and on time.

Among numerous applications, the company boasts state of the art rated capacity indicators specifically designed for offshore platforms, in compliance with classified zones. RaycoWylie excels in providing custom solutions for the ever demanding offshore industry, a field where they have been a major global provider for decades.

## OUR PRODUCTS

Providing holistic monitoring systems for all categories of cranes, the current product range includes the i4000, R180, R147, i4300 and i4500 series of systems. At the heart of all the current systems are simple, intuitive controls and straight-forward, precise procedures to operate and calibrate systems. Integrating advances in technology, the i4000, i4300 and i4500 series also utilise USB connectivity to make the transfer of calibration files, load charts, software and more, easier than ever before.

The complete range of systems is designed for practical use, without the need for specialist hardware or software, with calibration and operation performed through the display itself.

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