

# CRANE MONITORING SYSTEMS



**RaycoWylie**  
SYSTEMS



# A HISTORY OF RELIABLE MONITORING SYSTEMS

## The Evolution of Crane Monitoring Systems

B&A Engineering was founded on the release of the first Factorate Inspectorate Approval Certificate for Cranes in 1933. A year later, in 1934, they bought their competitor, Wylie Systems. Using their combined knowledge, the amalgamated companies produced the first mechanical overload warning systems and load indicators. Revolutionising crane safety, these mechanical systems continued to lead the way into the 1970's.

With the introduction of hydraulic machines, starting in the 1960s, there became a need for higher capacity, microprocessor based monitoring systems. This technology was in its infancy during the 1960s, and was therefore not commercially adopted until the 1980s.

## The Dawn of Microprocessor Systems

1982 saw the B & A Engineering Company, (by now known as Wylie), purchase another competitor, Weighload Ltd. The resulting collection of experience allowed the development of more reliable microprocessor systems, leading to the production of the WW225, WW230 and the WW250 systems, some of which remain in service today.

## Today's RaycoWylie

In 1994, the Rayco Technology Group purchased the B & A Engineering Company forming RaycoWylie Systems as we know it today. Through joint experience, shared passion and combined expertise, the company has been able to develop the W2245, i3000, i3500, i4000, i4300, R147, R180 and the latest RaycoWylie i4500 Series.

2016 saw the opening of an office in Singapore further establishing RaycoWylie in the area and ensuring our customers can receive service and support all over the world.

Early 2017 saw a new RaycoWylie office, based in Cairo which can now offer systems and support within the region, further extending our sales and support network.

## 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.

## 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.

# i4500 SERIES



**i 4500**

- 4.3" display
- 480x272 pixels resolution screen



**i 4507**

- 7" display
- 800x480 pixels resolution screen



camera display



**i 4510**

- 10.4" display
- 800x600 pixels resolution screen



winch line display

The i4500 series of systems (i4500, i4507 and i4510) were first brought into production in 2013. These systems have been developed to meet the ever demanding regulations and standards of the crane and lifting industry while maintaining simple, clear information for the operator.

Utilising a full colour display in 4.3", 7" and 10.4" models mean there is always an option to suit your requirements. This coupled with self-diagnostics, operator usability, and ease of calibration keeps the i4500 series ahead of the competition. The systems use the CANbus J1939 protocol to communicate with each interface, constantly monitoring all the cranes sensors to give clear accurate information to the operator, the CANbus network also allows

huge amounts of flexibility allowing you to add or remove sensors when required at any time throughout the life of the equipment.

The i4500 series has been developed with your crane in mind, whether it's a 5te telescopic mobile, 100te crawler, 80m luffing tower, 10te flat top tower, swan-neck tower, port crane, barge crane, rail crane or even a complete bespoke machine the i4500 series from RaycoWylie will have the solution for your machine.

Application specifics are detailed on the coming pages, however, as our team in R&D are constantly developing the systems if there is anything not shown in the brochure please contact us to discuss your requirements as we may be able to help.

## TECHNICAL DATA

	<b>i 4500</b>	<b>i 4507</b>	<b>i 4510</b>
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		
CANbus Protocol	J1939 [CANOpen also available]		

## 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 canbus sensors

## DESIGNED FOR SERVICEABILITY

- Load chart, software and calibration file with transfer via USB stick
- Canbus 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

# 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 CANbus 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.

# 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.



Install of i4500 to a Broderson carry deck crane carried out by RaycoWylie UK - 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

More options available upon request, please contact RaycoWylie.

## 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

More options available upon request, please contact RaycoWylie.



Install of i4500 to an American 9310 carried out by RaycoWylie UK - Mexico

# i4500 FLAT TOP TOWER



**i 4507**

- 7" display
- 800x480 pixels resolution screen

RaycoWylie have worked extensively with tower crane specialist and invested heavily to develop a truly flexible and versatile system that is perfectly suited to flat top tower cranes and their markets.

The software has been developed to work with a variety of sensors, integrating trolley position, 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 and 3D work area limitation. Remote control interfacing, available on custom applications.

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 CANbus 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, CANbus communication, USB connectivity and industry competitive pricing, the i4500 tower crane series is the choice of operators and cranes owners worldwide.

# i4500 LUFFING TOWER



**i 4507**

- 7" display
- 800x480 pixels resolution screen

The i4500 luffing tower crane system has been designed with all types of luffing tower cranes in mind, working with industry specialists to develop a flexible and versatile system which meets the needs of luffing tower cranes, owners and engineers.

The software has been developed to work with a large variety of sensors, 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 and 3D work area

limitation. Remote control interfacing, available on custom applications.

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 CANbus sensors the i4500 tower crane series can handle it all.

Our R&D department are constantly developing both software and hardware meaning the capability of the i4500 continues to grow.

With clear, easy to read display, intuitive system controls, step by step calibration procedures, state of the art diagnostics, CANbus 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. You get one zone to determine the job site and up to ten zones (3D) to determine obstacles inside the jobsite.

### OPTIONS

- Load
- Trolley position
- Relay controller
- Wind speed
- Slew encoder
- Camera input
- Data logger
- 3D work area limitation
- Travel monitoring
- Hook height
- Anti-collision interface

More options available upon request, please contact RaycoWylie.

## SWAN NECK TOWER CRANE

### OPTIONS

- Load
- Angle
- Relay controller
- Wind speed
- Slew encoder
- Camera input
- Data logger
- 3D work area limitation
- Travel monitoring
- Hook height
- Anti-collision interface

More options available upon request, please contact RaycoWylie.



One of the latest tower crane software developments is the swan neck tower crane software. The software uses both unladen and laden radius calibrations to ensure the readings are always accurate. This coupled with load, angle and wind speed monitoring gives the i4500 a full view of the cranes safe working parameters. For more information please contact RaycoWylie.

# 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.

# i4500 BARGE/PORT



## i 4507

- 7" display
- 800x480 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 CANbus 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 (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

More options available upon request, 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



Install on Devon Samson barge mounted crane carried out by Raycowylie UK – United Kingdom

# i4300 SERIES



## i 4300

- 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 CANbus 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 system is perfectly suited to pre year 2004 cranes requiring a simple load monitoring solution.

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.



## i 4300 CRAWLER CRANE

- Lattice hoist sensing application



## i 4300 DECK CRANE

- Telescopic hoist sensing application



## i 4300 SIDE BOOM CRANE

- Lattice hoist sensing application

## TECHNICAL DATA

i 4300	
Display Size	4.3" (16/9 ratio)
Screen Resolution (pixels)	480x272
Display Rating	IP67
Accuracy (of rated capacity)	In accordance with SAE J159
Operating Temperature	-20°C to 70°C [-4°F to 158°F]
Supply Voltage	11 to 36 vdc
CANbus Protocol	J1939

## 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: English, Spanish, French
- Selectable units
- Upgradable to the i4500 LMI Series

## 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 (English, French and Spanish)
- Tactile button interface with simple intuitive icons

## DESIGNED FOR SERVICEABILITY

- Load chart, software and calibration file with transfer via USB stick
- Canbus 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

- Self-diagnostic mode
- Fault log
- Inbuilt operator audible and visual alarms

# i4000 MULTIPURPOSE INDICATOR RANGE LIMITING DEVICE



slew and height limit displayed

## i 4000

- 3.5" display
- 320x240 pixels resolution screen

The i4000 is a multi-application indicator for use with different sensors, monitored independently. The range of sensors currently include, load, angle, extension, X/Y angle, slew and wind speed. The range of sensors compatible with the i4000 is continually developing. Unlike the i4300 and i4500 series, the i4000 has no programmed load charts.

It is best suited to fixed capacity machines. Still boasting the latest CANbus communication, high quality components and colour screen the i4000 is ready to meet the needs of your indicator system.



Install of i4000 to a Manitou telehandler carried out by RaycoWylie - Quebec

## TECHNICAL DATA

### i 4000

Display Size	6.15" x 3.56" x 2.36" (15.61cmx9.03x5.99cm)
Screen Size	3.5" LCD Colour Screen
Screen Resolution	320x240
Display Rating	IP67
Supply Voltage	10 to 30 Vdc
Operating Temperature	-20°C to 70°C [-4°F to 158°F]
CANbus Protocol	J1939
Relay Output	1 [500mA]

## FEATURES

- Diagnostic menu and continuous error detection and recording
- Inbuilt audible and visual alarms indicating two-block, load limit conditions and range limit conditions
- Easy calibration via keypad. No additional programming hardware necessary
- Quick and easy installation
- USB file transfers
- Multi-language: English, Spanish, French
- Selectable units
- Upgradable to the i4500 LMI Series

# i4000 WIRELESS MULTIPURPOSE INDICATOR



## i 4000

- 3.5" display
- 320x240 pixels resolution screen

The i4000 wireless system is to boast a dipole aerial for the display/controller for increased signal strength and range, 3.5" colour screen, constant battery monitoring of all wireless sensors adjustable limits and even the possibility to combine wireless and wired sensors.

The i4000 wireless will be a fully versatile system which can be supplemented with new sensors as the system grows with your equipment.

For more information on the i4000 please contact RaycoWylie.

## FEATURES

### DISPLAY/CONTROLLER

- Diagnostic menu and continuous error detection and recording
- User friendly intuitive display with inbuilt audible and visual alarms
- Easy calibration via keypad. No additional programming hardware necessary
- Quick and easy installation
- USB file transfers
- Multi-language: English, Spanish, French
- Selectable units
- Using 915Mhz or 868Mhz for increased range and signal reliability
- Dipole antenna
- Easy installation and sensor replacement

Appearance and specification subject to change during development

## FEATURES

### ANTI-TWO BLOCK

- Uses lithium 'AA' Battery
- Estimated battery life; up to 1 year
- Monitor multiple switch inputs for cranes with multiple hoists

### WIND SPEED

- Uses lithium 'D' Battery
- Estimated battery life; up to 2 years
- Operator selectable units (MPH, KM/H, M/S, KNOTS)

## TECHNICAL DATA

### i 4000

Display Size	6.15" x 3.56" x 2.36" (15.61cmx9.03x5.99cm)
Screen Size	3.5" LCD Colour Screen
Screen Resolution	320x240
Display Rating	IP67
Supply Voltage	10 to 30 Vdc
Operating Temperature	-20°C to 70°C [-4°F to 158°F]
CANbus Protocol	J1939
Relay Output	1 [500mA]
Accuracy (wind speed)	+/- 2% [11mph-55mph]
Operating Range	300m (environment dependent)

# 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.

# 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.

## 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 mpg 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 both the display and 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 2 years ( low battery warning)
- User friendly display
- Pre-set limits with audible and visual warning
- CE compliant

## 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	300m (environment dependent)

## W 880 LOAD LINKS & SHACKLES



### 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.



### 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.

## W 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.

### TECHNICAL DATA

Display Size	7.9" x 3.75" x 1.2" [20cm x 9.5cm x 3cm]
Screen Size	8 Digit LCD 2.6" x 0.6" [65mm x 15mm]
Display Rating	IP66
Sensor Rating	IP66
Display Estimated Battery Life	50 hours continues use
Display Battery Type	3 x AA
Operating Temperature	-10°C to 40°C
Safety Factor	5:1

### FEATURES

- Internal antenna on display, lowering susceptibility to damage
- Zero, Tare and peak hold controls on display
- Available in 433MHz and 900MHz
- User friendly display
- Operating range: 300m
- Display and sensor pre-calibrated
- Wireless load cells use standard AA batteries

### FEATURES

- Internal antenna on display, lowering susceptibility to damage
- Zero, Tare and peak hold controls on display
- User friendly display
- Operating range: 200m
- Display and sensor pre-calibrated
- Wireless load cells use standard batteries

### TECHNICAL DATA

Display Size	6" x 3.5" x 1.2" [15cm x 9cm x 3cm]
Screen Size	8 Digit LCD 2.6" x 0.6" [65mm x 15mm]
Display Rating	IP66
Sensor Rating	IP66
Display Estimated Battery Life	50 hours continues use
Display Battery Type	2 x AA
Operating Temperature	-10°C to 40°C
Safety Factor	5:1

# 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 up to 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

# 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 CANbus. Transducers can be supplied with a range of different hydraulic fittings to suit your machine.



### WINDSPEED SENSORS

Knowing an accurate windspeed is considered essential information for many crane manufactures, owners, customers and operators and maybe 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 CANbus load interfaces and can be mounted vertically or horizontally on either fixed or pantograph mountings which are all available from RaycoWylie.



### CANBUS ENCODERS

Used to monitor any rotation based input the CANbus 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.



### CANBUS ANGLE SENSOR

CANbus 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.



### 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 CANbus version can house boom angle sensor, boom extension pot and up to 4 slirings.



### 33R6000 SERIES

This is the medium sized reel and has an extension capacity of up to 24m. Available with either CANbus or voltage based sensors and the ability to house up to 4 slirings 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 CANbus through a CAN interface and up to 4 slip rings. The 33R2000 series is ready for the bigger machine in your fleet.



### 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.



### CANBUS LOAD INTERFACES

CANbus load interfaces can now be used to convert either mV or mA signals into CANbus. 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 CANbus the GPIO is as flexible as they come.



### 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.



### DATALOGGER

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.



### 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.

# GLOBAL CONTACTS

At Rayco Wylie Systems we pride ourselves on the knowledge we have acquired through time, this has allowed us to focus on product reliability and strengthen relationships with our customers and partners. With locations across the globe, customer care and support is our primary focus. We strive to find the right solution for customers needs and are always happy to discuss any requirements you may have. Rayco Wylie Systems have a team of dedicated engineers available to ensure our customers remain supported wherever they may be in the world.

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