



www.lodar.com
Catalogue Vol. 14

WHY LODAR?

Welcome to Lodar®.

Probably the best Radio Control System at an affordable price.

Twenty-five years ago Electric winches were operated by hard wired controls. All Hydraulic winches were controlled by levers. Television was now being operated remotely, so why not winches? "Infra red" was not suitable but "radio" proved to be a successful option. **A market was born.**

Europe immediately embraced this technology and soon most commercial vehicles were fitted with electro-hydraulic valves, to accommodate this remote radio switching option. America stayed with hydraulic simplicity. However, the persistence of a few radio control manufacturers slowly convinced the market to embrace this concept. US builders now regularly provide radio control as an option and, in many cases, as standard equipment. Today, the radio control industry is sophisticated and diverse, providing remote switching systems for a wide variety of applications.

Lodar® is an industry leader, focused on safety with new product being constantly developed to maintain a competitive edge. Lodar® has a dedicated service team. We recognize that customers demand prompt attention when something is not right – Lodar® provides that total support.

Go with your imagination - allow Lodar® to take control.

1. SAFETY

Is your team working in a safe environment? Stay away from danger zones – have control at 60 or 300 metre distance, depending on the model. Lodar® is made to the highest safety standards, with the ability to perform in the harshest of environments.

2. COST EFFECTIVE

Long wiring runs are expensive and incur labour costs. Lodar® can eliminate these costs by wiring the Receiver close to the valve controls. Lodar® pays for itself by decreasing manpower – two or three man jobs can be completed by one operator.

3. FAST AND KNOWLEDGEABLE SERVICE

Lodar's® dedicated Distributors will assist customers with installation, troubleshooting and warranty issues, and they will, if possible, resolve any issues over the phone. If necessary, they will ship a replacement system within 24 hours, allowing you to return the faulty system within / days.

4. WARRANTY

Our 5-year pro-rated warranty is exceptional.

For the first 2 years, the warranty is unlimited. Your Distributor will repair or replace free of charge, at our discretion, any product that is proved to be faulty due to poor manufacturing.

For the following 3 years, the warranty is pro-rated. We will replace faulty product with new product at an attractive discounted price.

5. CORPORATE LONGEVITY

Lodar®, the brand name, was created in the UK in 1988 by Skidmore 4WD Ltd. Martin Skidmore, a three-time National Land Rover Champion and Tim Halford, the main Superwinch distributor, found a need in the market for radio switching systems.

Over the years these two friends have built a global brand with an impressive list of Distributors, supplying a wide variety of industries. These Distributors are able to help customers find the best system for their individual needs.

In 2013 Skidmore 4WD Ltd changed its name to Lodar® Ltd., to better reflect the direction of the company. In the US, after 20 years of trading as Lodar®, the name was changed to Lodar® USA.

6. ALLOW LODAR® TO TAKE CONTROL

Lodar® allows you to control, move, ramp up, start, switch, activate, deactivate or operate multiple functions at any given time.

Visit www.lodar.com and call your local Distributor for more information. Allow them to explain how Lodar® can improve your company's performance. **Lodar® Ltd is a registered ISO9001 and ISO14001 company.**



TRANSMITTERS



Mini
Functions: 2 / 4



Standard
Functions: 1 / 2 / 4 / 6



IP
Functions: 2 / 4 / 6 / 10 / 16 / 20



Stainless
Functions: 2 / 4 / 6

Shift
Functions: 40

RECEIVERS DC



Mini FETS
Functions: 2



Standard Relays
Functions: 2 / 4*



Standard FETS
Functions: 1 / 2* / 4 / 6



Deep FETS
Functions: 10 / 16 / 20*



NEW **Standard FETS Keypad**
Functions: 2* / 4* / 6*

RECEIVER AC



Standard Relays
Functions: 2* / 4*

PRODUCT OVERVIEW

* As Illustrated.

The Locator, shown holding the Transmitter, is an optional accessory. See page 11 for more information.

TRANSMITTERS

Choosing the right Transmitter is the first step to finding your Lodar® system. With up to 20 functions available (40 functions with Shift), Lodar® can satisfy operators across a broad range of industries.

FEATURES COMMON TO ALL TRANSMITTERS

- RED BUTTON – turns Receiver off
- LOW BATTERY – fast flashing LED
- GREEN BUTTON – turns Receiver on
- EASY CODING – over 16 million codes for safety



Mini

- Suitable for light industrial applications.
- IP 67 waterproof rating.
- Fits nicely in the palm of your hand.
- Facia Customisation Available.

SPECIFICATIONS

SWITCH

- Rubber membrane with carbon contact

BATTERY

- 2 x AAA alkaline (long-life)

CURRENT DRAW

- Quiescent: 4 mA (typical)
- Operating: 20 mA (typical)

PROTECTION

- Reverse Polarity: Protected
- IP Rating: 67
- Registration Codes: Over 16 million

PERFORMANCE

- Temp. Range: -20°C to +55°C (-4°F to +131°F)
- Range: 45 m (150 ft) from the Receiver when fitting a momentary output, without signal drop out. 200 m (650 ft) opt on available.
- Transmitted Power: 1 mW Typical

COMPLIANCE

See page 7 for more information.



Standard

- Established in the Lodar® range for over 10 years.
- IP 67 water resistant rating.
- Large membrane buttons on a wipe clean surface.
- Enclosed with PVC iCover, fits firmly in the hand.
- Function Button Customisation. – see page 9

SPECIFICATIONS

SWITCH

- Tactile Dome

BATTERY

- 2 x AAA alkaline (long-life)

CURRENT DRAW

- Quiescent: 4 mA (typical)
- Operating: 20 mA (typical)

PROTECTION

- Reverse Polarity: Protected
- IP Rating: 67
- Registration Codes: Over 16 million

PERFORMANCE

- Temp. Range: -20°C to +55°C (-4°F to +131°F)
- Range: 60 m (200 ft) from the Receiver when fitting a momentary output, without signal drop out. 200 m (650 ft) opt on available.
- Transmitted Power: 1 mW Typical

COMPLIANCE

See page 7 for more information.



IP

- A robust Transmitter with IP67 waterproof rating.
- Large membrane buttons on a wipe clean surface.
- Function Button Customisation. – see page 9

SPECIFICATIONS

SWITCH

- Tactile Dome

BATTERY

- 4 x AAA alkaline (long-life)

CURRENT DRAW

- Quiescent: 15 mA (typical)
- Operating: 40 mA (typical)

PROTECTION

- Reverse Polarity: Protected
- IP Rating: 67
- Registration Codes: Over 16 million

PERFORMANCE

- Temp. Range: -20°C to +55°C (-4°F to +131°F)
- Range: 60 m (200 ft) from the Receiver when fitting a momentary output, without signal drop out. 200 m (650 ft) opt on available.
- Transmitted Power: 1 mW Typical

COMPLIANCE

See page 7 for more information.



NEW! One Function Transmitter

Lodar now offers a One Function wireless option. Turn the power ON/OFF to generators, water pumps, lights etc. The special One Function Receiver has two outputs, one momentary and one latching – take your pick.

See Standard Transmitter for full specification on page 4.



NEW! Stainless Transmitter

The Stainless Steel faceplate, with vandal proof security buttons, is designed to work in the harshest of environments. Ideal where the function buttons are in use 24/7.

This 6 function IP enclosure can either be used for 2 or 4 function operations or modified with "SHIFT" to give up to 12 functions. All with the relevant Receiver.

See IP Transmitter for full specification on page 4.



21-40 Function with SHIFT Option

The "SHIFT" option on this robust Transmitter allows a mode change by simply depressing the Green Restart Button. Different LEDs on the Transmitter indicate the relevant mode, which will be matched with the required Receiver(s).

Fewer functions can also be operated this way when using smaller Transmitters with relevant Receivers. For example, if you feel a single 20 function Transmitter is too large then you can choose to have a 10 function Transmitter in mode format – 2 x 10 functions.

See IP Transmitter for full specification on page 4.

The Locator is an optional accessory. See page 12 for more information.

RECEIVERS

MASTER OUTPUT - WHAT IS THAT?

Most models are fitted with a Master Output, giving an extra independent control from the Transmitter. Examples of use:

- An electro hydraulic power pack
- A clutch pump
- A dump valve

The Master Output is factory configured in a continuous mode, allowing the Receiver to be active all the time after pressing the Start button on the Transmitter. This Master Output can also be configured in a parallel mode, where it will turn on/off as the function buttons are operated (refer to Instructions). The Master Output can also be removed from operation on a function by function basis, if required. It is totally flexible in its application.

Mini RX 3 amp FET's

Compact Receiver for small spaces.



- Functions: 2
- Material: Black PVC Base & Clear Lid
- IP Rating: 67
- Switching: 3 amp - H1's
- Master: Optional
- Size: 4.7 x 3.5 x 1.6 in.
- Transmitters: Mini / Standard
- Range: 45 m (150 ft) with Mini Transmitter
150 m (500 ft) opt on available
60 m (200 ft) with Standard Transmitter
300 m (1000 ft) opt on available



Standard Receiver – 15 amp FET's

Clear Lid allows sight of LEDs for fault finding.

- Functions: 2 / 4 / 6
- Material: Black PVC Base & Clear Lid
- IP Rating: 67
- Switching: 15 amp FET's
- Master: Optional
- Size: 5.9 x 4.7 x 2.1 in
- Transmitters: Mini/Standard/IP
- Range: 45 m (150 ft) with Mini Transmitter
150 m (500 ft) option available
60 m (200 ft) with Standard Transmitter
300 m (1000 ft) option available

Deep Receiver – 15 amp FET's

Clear Lid allows sight of LEDs for fault finding. 2 cm deeper base to allow for extra wiring. Same footprint as Standard Receiver.

- Functions: 10 / 16 / 20
- Material: Black PVC Base & Clear Lid
- IP Rating: 67
- Switching: 15 amp FET's
- Master: Optional
- Size: 5.9 x 4.7 x 2.75 in.
- Transmitters: Mini/Standard/IP
- Range: 45 m (150 ft) with Mini Transmitter
150 m (500 ft) option available
60 m (200 ft) with Standard Transmitter
300 m (1000 ft) option available

Standard Receiver 5 amp Relays

Cost effective version of the 15 amp system.



- Functions: 2 / 4
- Material: Black PVC Base & Lid
- IP Rating: 67
- Switching: 5 amp Relays
- Master: Optional
- Size: 5.9 x 4.7 x 2.1 in
- Transmitters: Mini/Standard
- Range: 45 m (150 ft) with Mini Transmitter
150 m (500 ft) option available
60 m (200 ft) with Standard Transmitter
300 m (1000 ft) option available

NEW Keypad Receiver – 15 amp FET's

Clear Lid allows sight of LEDs for fault finding. Back up keypad in the event of a lost Transmitter. Security Code option available.

- Functions: 2 / 4 / 6
- Material: Black PVC Base & Clear Lid
- IP Rating: 67
- Switching: 15 amp FET's
- Master: Optional
- Size: 5.9 x 4.7 x 2.1 in.
- Transmitters: Mini/Standard/IP
- Range: 45 m (150 ft) with Mini Transmitter
150 m (500 ft) option available
60 m (200 ft) with Standard Transmitter
300 m (1000 ft) option available

Lodar® meets the following safety standards.

Lodar® is built in the UK and complies with all relevant safety and operational standards.

- EN 301 489-3 (1999/5/EC)
- R&TTE Low Voltage Directive 300.683
- SAFETY EN ISO 13849-1 2008 to Category 4 - replaces BS EN 954-1
- EMC BS EN 60204-1 2004/104/EEC ETSI 300-220 v1.1.1 Approval Mark e11 037601
- FCC
- Spectrum Approval Granted 433.92 MHz F1D CEI
- CEI 418.00 MHz F1D CEI
- CEI
- Lodar® Ltd. is an ISO9001 and 14001 approved company.

Warranty

Our 5-year pro-rated warranty is exceptional and rare.

For the first 2 years, warranty is unlimited. During that period our Service Department will repair or replace, free of charge and at their discretion, any product that is proved to be faulty due to poor manufacturing. The warranty period is taken from the date the goods leave our factory, although we will accept a later date if the Distributor can confirm date of purchase.

For the following 3 years, the warranty is pro-rated. During that period, they will replace faulty product with new product at an attractive discounted price. Each Distributor sets these prices.

Limited Warranty.

Lodar® warrants to the original buyer (you) all parts and components to be free of faulty materials/workmanship for a period of two (2) years from probable date of purchase. Any Lodar® product that is faulty will be repaired or replaced without charge to you, upon confirmation with these procedures. The Warranty set forth here does not constitute or imply any other warranty, whether oral or written, express or implied.

Limited Warranty Performance Procedure

If you discover a fault in your Lodar® product, you shall notify the Seller in writing at its factory or at any authorized distributor. Details of the said fault and mail or electronic photos shall be supplied to your Logistics or other contact person at the Seller's factory. It is the Seller's policy to repair or replace the product free of charge if the fault is confirmed by the Seller's factory. The Seller's policy is to repair or replace the product free of charge if the fault is confirmed by the Seller's factory. The Seller's policy is to repair or replace the product free of charge if the fault is confirmed by the Seller's factory.

Warranty and Remedies Limitations and Exclusions

The following exclusions or limitations of Warranties and Remedies shall be expressly applicable:

Express Warranties: Seller warrants that the Lodar® product described in the "Lodar® Owners Manual" provided herewith, with no other express Warranties made in respect to the "Lodar®" product, shall conform to the specifications set forth in the "Lodar® Owners Manual" and shall conform to the specifications set forth in the "Lodar® Owners Manual". The Lodar® product shall conform to the specifications set forth in the "Lodar® Owners Manual". The Lodar® product shall conform to the specifications set forth in the "Lodar® Owners Manual".

Implied Warranties: The Seller warrants that the Lodar® product shall conform to the specifications set forth in the "Lodar® Owners Manual". The Seller warrants that the Lodar® product shall conform to the specifications set forth in the "Lodar® Owners Manual". The Seller warrants that the Lodar® product shall conform to the specifications set forth in the "Lodar® Owners Manual".

Incidental and Consequential Damages: Subject to the Seller's Limited Warranty obligations set forth herein, the Seller shall not be responsible for incidental damages of any sort, nor for consequential damages. Expressly, loss of profits, loss of business, or loss of data, shall not be recoverable from the Seller. The Seller's policy is to repair or replace the product free of charge if the fault is confirmed by the Seller's factory. The Seller's policy is to repair or replace the product free of charge if the fault is confirmed by the Seller's factory.

Condition of Warranty: The Seller shall not be required to honor its Warranty duties provided herein if the fault, malfunction or failure of the Lodar® was caused by damage resulting from faulty or malfunctioning component or mechanical use by you. Unreasonable use shall include, but not be limited to, the failure to provide necessary and necessary maintenance or installation or use of the Lodar® with unauthorized components or accessories. The Seller's policy is to repair or replace the product free of charge if the fault is confirmed by the Seller's factory. The Seller's policy is to repair or replace the product free of charge if the fault is confirmed by the Seller's factory.

Legal Remedies of the Buyer

The Seller warrants that the Lodar® product shall conform to the specifications set forth in the "Lodar® Owners Manual". The Seller warrants that the Lodar® product shall conform to the specifications set forth in the "Lodar® Owners Manual". The Seller warrants that the Lodar® product shall conform to the specifications set forth in the "Lodar® Owners Manual".

Inquiries

Any inquiries regarding compliance with Warranties provided herein may be addressed in writing to: Lodar® Limited, 60 Sandwell Street, Walsall WS1 3EB, England.

TRANSMITTER CUSTOMISING

Since Lodar is used in many different applications, our Transmitters can be customised to fit your needs. The following customisations are possible:



MAGNETS
Lodar Standard and IP Transmitters can be fitted with magnets to enable you to place the transmitter on a metal surface.

For OEMs buying in volume, we can private label the Transmitter with your brand. Tooling charges apply.

CONFIGURE LEGENDS
Choose the right legend to fit your applications. We have hundreds of options possible. Service is complementary.

Go to: www.lodar.com/inserts.htm



WATCH THE VIDEO

Learn how to choose your legends by watching the video!
www.youtube.com/lodarsales

RECEIVER CUSTOMISING

All Lodar is set up in the factory with momentary functions, horizontal interlocks and a 30 minute automatic timeout.

Lodar's sophisticated software can be modified for a wide variety of applications providing endless possibilities.



SWITCHES
Add switches to the side of the Receiver to cut off power and control the system.

LATCHING
Where a function is being operated for an extended period it may be wise to consider a latching option – once pressed, the button will stay on until it is pressed again to turn it off. Latching is great for long winch lines or cycle times but you need to consider safety – you must be able to turn it off!

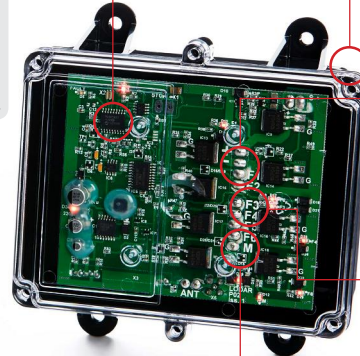
REMOVE INTERLOCKING
All Lodar units are factory set with horizontal interlocking, that is to say you cannot activate an output on function two when function one is operational. A bad idea for a motor – it would not like to go both ways at the same time! A software change would allow either the removal of any interlocks, the establishment of vertical interlocks as opposed to horizontal interlocks or, in fact, any sequences that you might want.

TIMED LIMITS

Using software modifications, Receivers can be set to operate with a variety of timings. An example might be where a delay is required for a function to activate AFTER the Transmitter function button has been pressed.

REMOVE THE MASTER OUTPUT

You may wish to have the Master operational on certain functions and not on others – modified software can achieve this.



+ WIRING HARNESS

Lodar 2 / 4 / 6 function systems come with a 10 foot wiring harness. We can make up any harness you wish, from your own wiring diagrams, to speed up installation in a production line. The use of surface seal connections, shown above, can also provide a waterproof connection in the harness.

+ CONTROL MULTIPLE RECEIVER

Lodar can be programmed to control multiple Receivers from the same Transmitter (e.g. to open a number of doors simultaneously). Alternatively, there may be a number of Receivers required in different locations - one Transmitter can be set up to operate each of them individually.

+ POTTING / RUGGEDISATION

Push conductors? Potting protects the Receiver PCB board from extreme vibration. A silicone gel covers all the electronic components.

HOW DO I KNOW WHAT LODAR PART NUMBER TO ORDER?

There are dozens of Lodar systems available and the part numbers can be overwhelming. By answering the following questions, you will help your distributor pinpoint the Lodar that fits your needs.

1. RANGE
What distance do you want to work to?
 60 m (200 ft.) 300 m (1,000 ft.)

2. FUNCTIONS
How many functions do you want?
For example, a winch will have 2 functions (IN/OUT)
 2 6 10 14 18 20+
 4 8 12 16 20

3. TRANSMITTER
What Transmitter style do you like? *Check page 3-5 of the catalogue.*

<input type="radio"/> Mini	2-4 Functions	Waterproof
<input type="radio"/> Standard	2-6 Functions	Water Resistant
<input type="radio"/> Stainless	2-6 Functions	Waterproof
<input type="radio"/> IP	2-20 Functions	Waterproof
<input type="radio"/> Shift	20+ Functions	Waterproof

4. AMPERAGE
What amperage are you switching? *Don't know - then the default is 15 amps.*

3 amps 5 amps 15 amps

5. ADDITIONAL QUESTIONS
Here are some additional questions:

YES	NO	If you are ordering more than one system will they be working in close proximity to each other?
YES	NO	Are you mounting the Receiver in a confined space or in a tool locker, or something similar?
YES	NO	Are you going to need an additional function output, to maybe work a power pack?
YES	NO	Is there likely to be extreme vibration?
YES	NO	Will any of the functions need to be latching?

AIR

Why do I need an Actuator System?
Why can't I use a normal radio remote control system?

There are many trucks in the market where, historically, the only means of controlling the vehicle functions are by hydraulic valves with levers – and they continue to build these vehicles.

Working these functions by a radio remote control is becoming more and more popular. The obvious safety benefits, as well as the flexibility to manage the recovery with just a single operator, are together proving to be a necessity, not just an option.

With only hydraulic controls, however, there is nothing to switch; no electrical control at all. The only choice available, for those that want to convert to radio control, is to change to electro-hydraulic valves. This would provide an electrical switching option but at a cost that most operators would not consider.

The Air Actuator System by Lodar will now allow your vehicle to be easily and inexpensively converted to the radio remote control option, by providing electrically operated air valves. These control the Air Actuator. The Actuator itself is fitted above the lever control rod, with one end attached to the rod itself and the other end to the chassis. The air supply is controlled through the air valves (see fitting drawing) which, in turn, are switched by the Lodar Radio Remote Transmitter/Receiver system.

Can you have more than one valve operated by this system?

Yes. We offer up to 16 functions (8 Actuators) for the ultimate vehicle control. Discuss your requirements with your local Distributor.

What if I do not have an air supply on the vehicle?

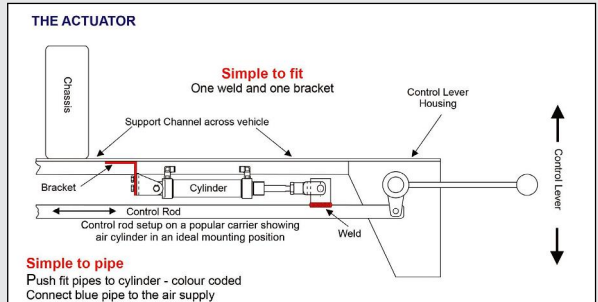
The purchase of a small, inexpensive air compressor will resolve this problem. It is always a good idea, anyway, to have an air supply available.

Can I operate the levers, even though there is an Actuator fitted?

Yes, you can override the Actuator control at any time.

Can I fit this system to any vehicle?

As long as there is a control rod for the Actuator to be fitted to then this system is universal.



* For more detailed specification information about the actuators, go to www.lodar.com.



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