

# PRODUCT OVERVIEW

## LODAR REMOTES

### TRANSMITTERS



Mini  
Functions: 2 / 4



Standard  
Functions: 1 / 2 / 4 / 6



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



**NEW**  
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\*



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

**NEW**

### RECEIVER AC



Standard Relays  
Functions: 2\* / 4\*



# TRANSMITTERS

## LODAR REMOTES

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**

**GREEN BUTTON** – turns Receiver **on**

**LOW BATTERY** – fast flashing LED

**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 manganese (3 Volts)
- CURRENT DRAW**
- Quiescent: 4 micro amps
  - Operating: 20 milliamps
- 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 driving a momentary output, without signal drop out. 150 m (500 ft.) option available.
  - Transmitted Power: 1 mW Typical



**Standard**

- Established in the Lodar® range for over 10 years.
- IP 55 water resistant rating.
- Large membrane buttons on a wipe clean surface.
- Enclosed with PVC LoCover, fits firmly in the hand.
- Function Button Customisation.

#### SPECIFICATIONS

- Tactile Dome
- BATTERY**
- 1xPP9 alkaline manganese (9 Volts)
- CURRENT DRAW**
- Quiescent: 4 micro amps
  - Operating: 20 milliamps
- PROTECTION**
- Reverse Polarity: Protected
  - IP Rating: 55
  - 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 driving a momentary output, without signal drop out. 300 m (1,000 ft.) option available.
  - Transmitted Power: 1 mW Typical



**IP**

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

#### SPECIFICATIONS

- Tactile Dome
- BATTERY**
- 4 x AAA alkaline manganese (6 Volts)
- CURRENT DRAW**
- Quiescent: 15 micro amps
  - Operating: 24 milliamps
- 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 driving a momentary output, without signal drop out. 300 m (1,000 ft.) option available.
  - Transmitted Power: 1 mW Typical



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# TRANSMITTERS

## LODAR REMOTES



### **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.



### **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 to 4 function operations or modified with "SHIFT" to give up to 12 functions. All with the relevant Receiver.



### **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 LED's 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 smaller Transmitters with relevant Receivers. For example, if you feel a single 20 function Transmitter is too large then you can chose to have a 10 function Transmitter in mode format – 2 x10 functions.

# RECEIVERS

## LODAR REMOTES



### 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 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 FET's
- Master: Optional
- Size: 4.7 x 3.5 x 1.6 in.
- Transmitters: Mini / Standard
- Range: 45m (150 ft.) with Mini Transmitter  
150m (500 ft.) option available  
60m (200 ft.) with Standard Transmitter  
300m (1,000 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 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 (1,000 ft.) option available



STANDARD



DEEP



KEYPAD

#### Standard Receiver – 15 amp FET's

Clear Lid allows sight of LED's 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 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 (1,000 ft.) option available

#### Deep Receiver – 15 amp FET's

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

- Functions: 10 / 16 / 2
- 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 (1,000 ft.) option available

#### **NEW** Keypad Receiver – 15 amp FET's

Clear Lid allows sight of LED's 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 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 (1,000 ft.) option available



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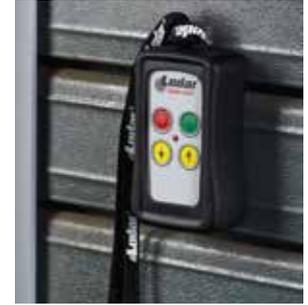
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# CUSTOMISING LODAR REMOTES

## 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 to fit your applications. We have hundreds of options possible. Service is complementary.



**Learn how to choose your legends by watching the video!**

**[www.youtube.com/lodarsales](http://www.youtube.com/lodarsales)**



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# CUSTOMISING LODAR REMOTES

## 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.



### 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.

### SWITCHES

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

### LATCHING

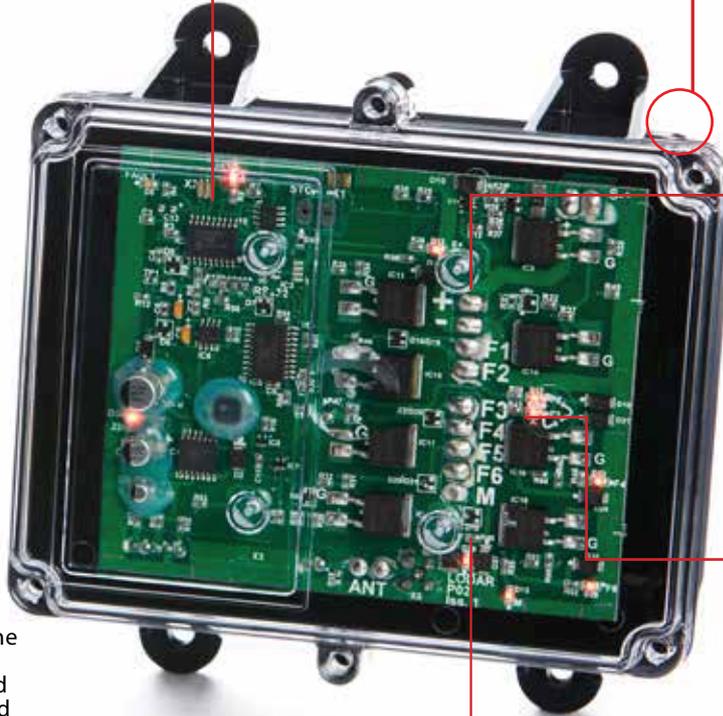
Where a function is being operated for an extended period it may be wise to consider a latching option – once pressed, the button will stay on until it is pressed again to turn it off. Latching is great for long winch lines or cycle times but you need to consider safety – you must be able to turn it 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 as opposed to horizontal interlocks or, in fact, any sequences that you might want.

### 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 SureSeal 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

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



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# ORDERING LODAR REMOTES

## 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 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?

- |                                    |                  |                 |
|------------------------------------|------------------|-----------------|
| <input type="checkbox"/> Mini      | 2 - 4 Functions  | Waterproof      |
| <input type="checkbox"/> Standard  | 2 - 6 Functions  | Water Resistant |
| <input type="checkbox"/> Stainless | 2 - 6 Functions  | Waterproof      |
| <input type="checkbox"/> IP        | 2 - 20 Functions | Waterproof      |
| <input type="checkbox"/> 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 out put, 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?



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# ACTUATOR SYSTEMS

## LODAR REMOTES

### 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 lever 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 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?**

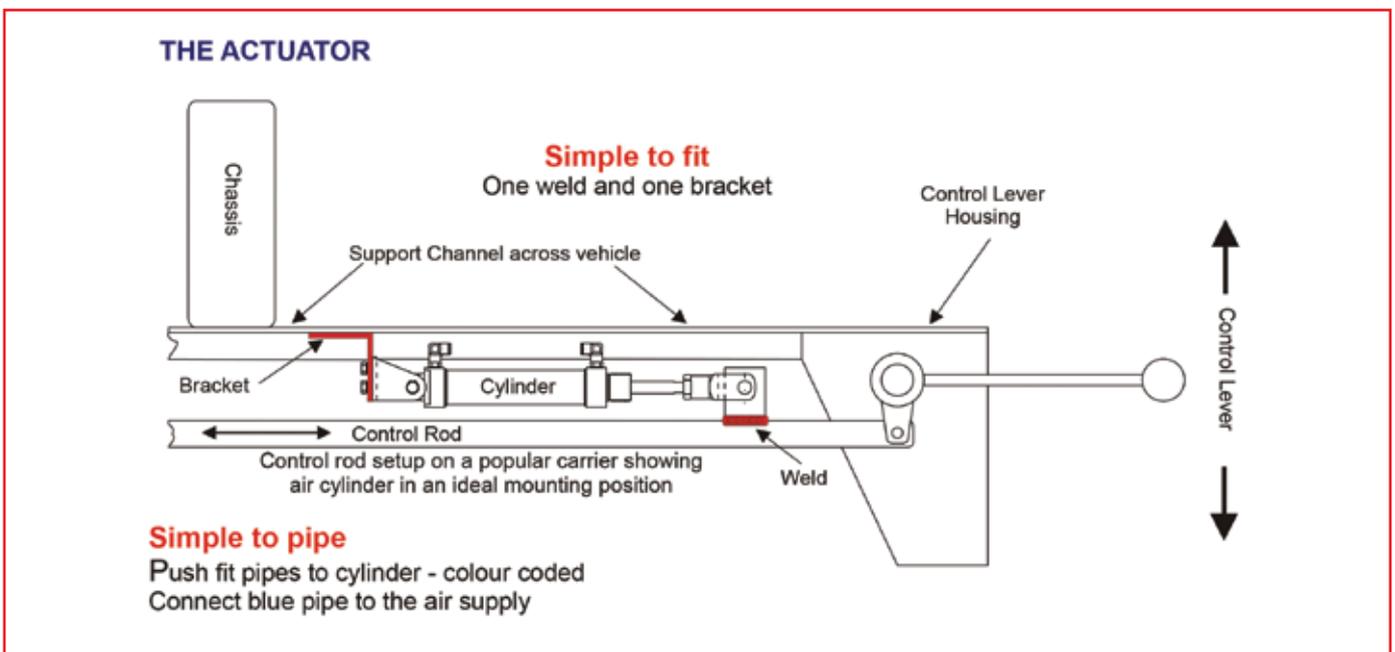
The purchase of a small, inexpensive air compressor will resolve this problem. It is always a good idea, anyway, to have an air supply available.

#### **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.



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# ACCESSORIES

## LODAR REMOTES



### LOCATORS

Lodar offers two style of LoCator housing the Transmitter when it's not in use. Choose between a basic LoCator or one with a buzzer and light, used to warn that the Transmitter is missing from its' holder. Alert settings are chosen on the back of the LoCator and can be customised.



9812 LoCator for Standard & IP Transmitters

9813 LoCator for Standard & IP Transmitters with Buzzer/LED

**Learn about our LoCators by watching the video!**  
[www.youtube.com/lodarsales](http://www.youtube.com/lodarsales)

### LOCOVERS

If the Transmitters are used in dusty or very dirty environments a LoCover might help prolong the life of the keypad. A lanyard is included. Standard Transmitters are supplied with Part 9801.



- 9801 Silicone – supplied with all Standard Transmitters
- 9802 Clear Plastic IP67 - all Standard Transmitters
- 9804 Fabric/Clear Face - 2-6 Function Standard Transmitters
- 9805 Fabric/Clear Face - 2-6 Function IP Transmitters
- 9806 Fabric/Clear Face - 10 Function IP Transmitter
- 9807 Fabric/Clear Face - 16 Function IP Transmitter
- 9808 Fabric/Clear Face - 20 Function IP Transmitter



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# ACCESSORIES

## LODAR REMOTES



### BACK UP SYSTEM

Lodar has a range of hard wired remote controls that connect directly to the Receiver, ideal if the Transmitter is mislaid or damaged. These controls use the same enclosure as the IP Transmitters but have a high quality "curly" cable attached, stretching out from .45m to 4.5m. The cable will not lose its shape if used continuously.

- 9602 2 Function Wired Remote
- 9604 4 Function Wired Remote
- 9606 6 Function Wired Remote
- 9610 10 Function Wired Remote
- 9616 16 Function Wired Remote
- 9620 20 Function Wired Remote



### EXTERNAL AERIALS

Lodar performance may be compromised if the Receiver is mounted in a position that causes the reception to be reduced, such as in a toolbox or deep in the chassis. Adding an external aerial maintains full operating range of 60/300 metres (200/1,000 ft.) in these adverse conditions. An external aerial is simply added to the SMA fitting on the PCB. An aerial will NOT increase the stated range.

*Please note: you will need to request an SMA connector, if ordering a 2 function in the 90 or 91 series. It does not come as standard and will have to be soldered to the Receiver PCB.*

- 9010 SMA Aerial Connector for 90 & 91 Series
- 9860 Aerial mast only
- 9861 Aerial with 1 m (3.3 ft.) of Cable & Aerial Mast
- 9862 Aerial with 1.6 m (5.3 ft.) of Cable & Aerial Mast
- 9863 Aerial with 3 m (10 ft.) of Cable & Aerial Mast
- 9869 Aerial with 9 m (30 ft.) of Cable & Aerial Mast



### SOLENOIDS

Lodar has a range of high quality solenoids, to carry loads that are well in excess of the 15 amp relays in the Receivers. Ask your local Distributor for more information.

- 9820 Solenoid 12 V, Motor Isolation (Continuously Rated)
- 9821 Solenoid 24 V, Motor Isolation (Continuously Rated)
- 9822 Solenoid 12 V, DC Motor Forward/Reverse Standard
- 9823 Solenoid 24 V, DC Motor Forward/Reverse Standard
- 9824 Solenoid 12 V, DC Motor Forward/Reverse Heavy Duty
- 9825 Solenoid 24 V, DC Motor Forward/Reverse Heavy Duty
- 9826 Relay 12 V Changeover
- 9827 Relay 24 V Changeover



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