

1

BEFORE YOU START

- The Receiver is designed to carry a maximum of 15 Amps. That is, for example, 15 Amps through one output or 5 Amps each through 3 outputs.
- Master Output. This can be configured to Continuous or Parallel operation, see below right for more details.
- If Receiver outputs are connected in parallel with an external switching device (wired remote) the Receiver will instantly switch off when the wired remote is operated
- Lodar Receivers **MUST** have an **isolation switch** for safety, to allow for registering a replacement Transmitter.
- Safety Feature. Both the Transmitter and the Receiver will "time out" after 30 minutes of inactivity. This can be altered, ask your dealer.

2

IDENTIFY POWER CONNECTION POINT AND ISOLATE SUPPLY

Remove fuse

or Disconnect Battery

WARNING
Vehicle batteries contain gasses which are flammable and explosive. Wear eye protection and do not lean over battery while disconnecting. Do not wear metal jewellery.

3

MOUNT RECEIVER

CAUTION

TAKE TIME TO LOCATE THE BEST POSITION

If necessary, power the Receiver and move it around the vehicle until the required performance is achieved. Operate the Transmitter and observe the Receiver internal LED's.

Mount as **HIGH** as possible
AVOID surfaces with **HEAVY VIBRATION**
AVOID DIRECT SPRAY from wheels
 In a **HOT CLIMATE** fit in a **SHADED** position
 Cable gland should face **DOWN** or **BACK**

Receiver 92 20 RX and 93 20 RX shown,

Secure using 5mm (3/16") bolts (not supplied) through the 4 mounting feet

4

What is the MASTER Output for ?

It is used to operate the pump of an electro-hydraulic power pack or maybe a clutch pump. It can also be used for powering a dump valve, master valve etc.

It can be configured to work **continuously**, that is ON when SET is pressed and OFF when STOP is pressed;

or in **parallel** with any output, that is, it is active only a function is operated. If it is needed with certain functions only, this can easily be configured.

5

CONNECTION DETAIL

IMPORTANT TAKE CARE NOT TO SHORT OUT THE MOSFET'S WHEN MAKING CONNECTIONS

IMPORTANT

ENSURE THAT THE GAUGE OF WIRE USED CAN CARRY 15 AMPS (THIS IS THE MAXIMUM TOTAL CURRENT THAT LODAR CAN SWITCH) OVER THE DISTANCE FROM THE BATTERY WITH NO SIGNIFICANT VOLTS DROP!

NOTE

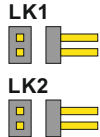
The STOP input can be used for OVERLOAD or OVER-TEMPERATURE etc. If the chassis is GROUND, then a return wire is not required.

SAFETY FEATURE

The Receiver switches itself off after 30 minutes of inactivity.

OPTIONAL AERIAL CONNECTION

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JUMPER may be RED or BLUE

LK1, when bridged causes the Master Output to be **Parallel**

LK2, when bridged causes the Master Output to be **Continuous**

JUMPER MUST BE FITTED FOR LODAR TO WORK

POWER DOWN RECEIVER BEFORE MAKING CHANGES

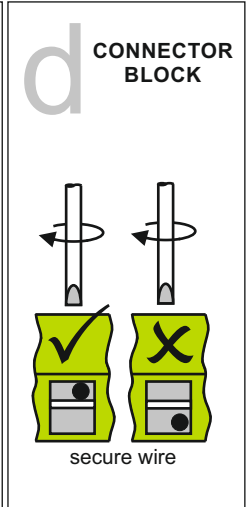
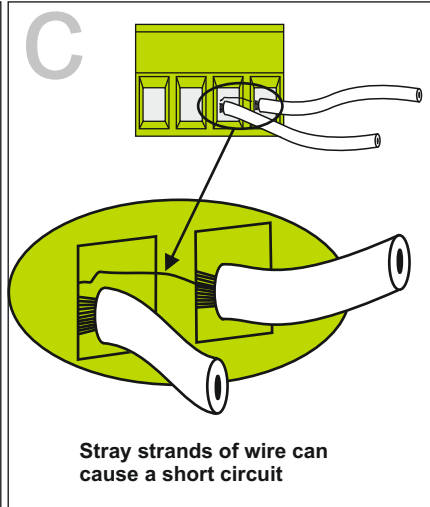
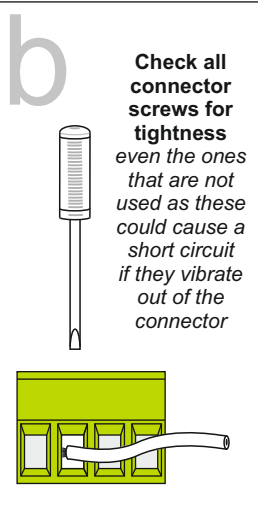
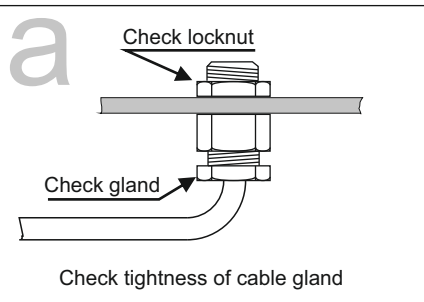
Make connections as detailed below and record wire colours in the boxes

	+ 12 / 24 VOLT COMMON		FUNCTION 11	
	- GROUND		FUNCTION 12	
	S+ (Safety Solenoid etc.)		FUNCTION 13	
	MASTER		FUNCTION 14	
	FUNCTION 1		FUNCTION 15	
	FUNCTION 2		FUNCTION 16	
	FUNCTION 3		FUNCTION 17	
	FUNCTION 4		FUNCTION 18	
	FUNCTION 5		FUNCTION 19	
	FUNCTION 6		FUNCTION 20	
	FUNCTION 7		STOP	STOP Connections
FUNCTION 8	0 Volts			
	FUNCTION 9		L1 = LIMIT 1	LIMIT INPUTS
	FUNCTION 10		- GROUND	
			L2 = LIMIT 2	
			SPECIAL ORDER ONLY	

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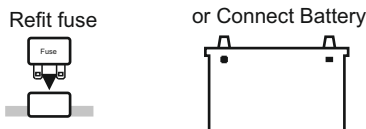
FINAL CHECK

ALL ITEMS IMPORTANT



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IT IS NOW SAFE TO RECONNECT THE POWER SUPPLY

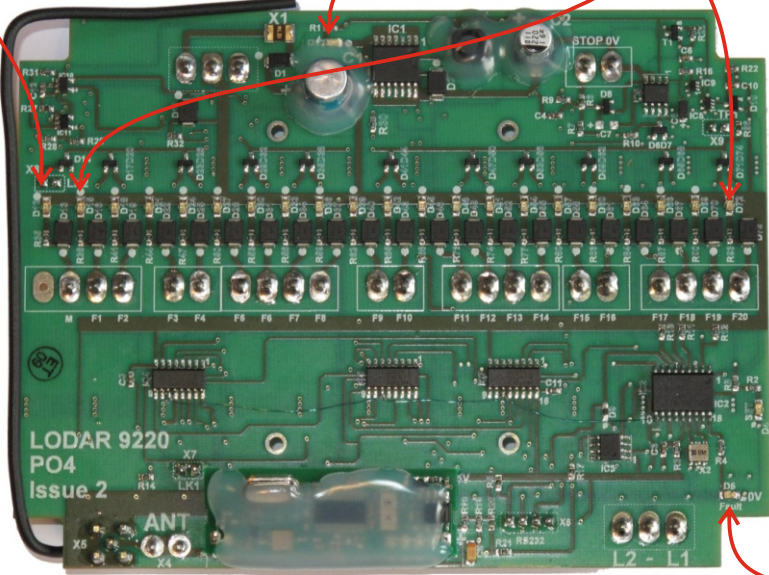


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Indicator LED - Master

5 Volts LED

Indicator LED's 1 through 20



LED's indicate the following

LED marked "5V" indicates power supply for control circuits is OK

LED marked "SET" indicates the system active.

LED marked "Fault" indicates an overload is present; the system cannot be reset until overload is removed.

This LED blinks for 20 seconds when the system is initially powered. A replacement Transmitter (or Keypad or Wired Remote) has to be registered during this 20 second period.

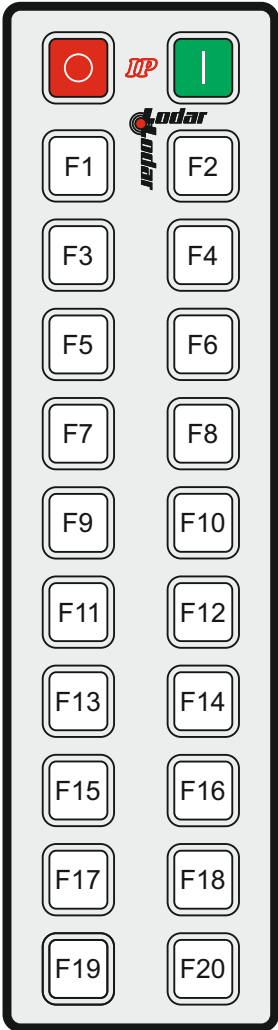
LED's marked F1 to F16 and M (and optional MC) when ON indicate an output to that function

(MC is an extra Continuous Master output)

Set LED

Fault LED

COMPONENT DETAIL



Numbering convention of Transmitter Keypad showing the Receiver output function number for that key.

LIMITS - What are these?

The new compact 20 function Receiver has an input for limit functions. The circuits between L1 and ground (-) or L2 and ground, which when the circuit is made, or broken, will allow a function to start or cause a function to stop. This requires special programming. We also have available an add-on PCB, Part No. 9220 that has a further 8 Limits. We have successfully used this feature on a number of projects to introduce a degree of logic using the on board Programmable IC or PIC. It may not be economical to program the Receiver PIC for a small batch, please ask.



Your product is marked with this symbol. It means that used electrical and electronic products should not be mixed with general household waste. There is a separate collection system for these products.

In the EEC - Please contact your National Distributor (see www.lodar.com for this information) who will inform you about the take-back of the product. You might be charged for the costs arising from the take-back and recycling. Small products might be taken back by your local collection facilities.

Outside the EEC - If you wish to discard this product please contact your local authorities and ask for the correct method of disposal

Lodar 9100 Series is guaranteed for a period of 24 months from the date of purchase, as long as it is wired in accordance with our instructions, and that the equipment is fitted with an isolation system to shut off all power in event of an emergency.