



OPERATING MANUAL



**KINGFISHERS INTERNATIONAL
LTD**

TeleRein OPERATING MANUAL



TeleRein

The **purpose** of TeleRein is to measure the pressure, or the amount of contact, that the rider has on the horse's mouth and convey this information to the coach or spectator by means of a hand held radio receiver which displays this contact on a scale of 1 – 12 in two vertical columns of lights, for the left and right rein.

Setting up and using TeleRein, the transmitter.

TeleRein consists of two parts, a transmitter with associated rein tension sensors, and a receiver. The first step in using TeleRein is to set up the transmitter and sensors as is shown in the flowing text and photos. Note the orientation of the transmitter in particular.



FITTING TeleRein to the bridle

*Simply attach the transmitter to the centre of the head- piece of the bridle with the Velcro fastening so it is secure before you bridle the horse. The Logo is to the front. The switch on the transmitter should be on the NEAR side facing forward. Turn on before mounting to allow warm up time.

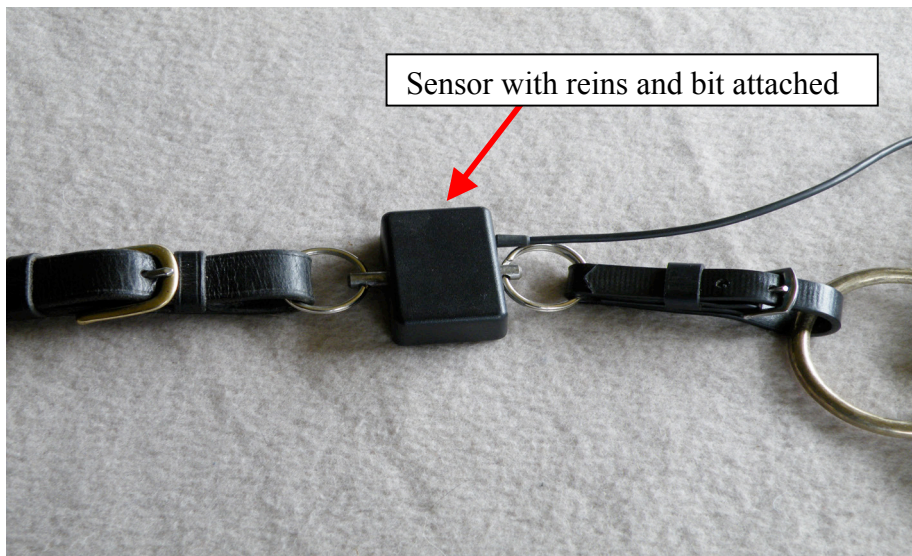




*Attach the Velcro sleeves round the cheeks pieces to secure the cable to the bridle.

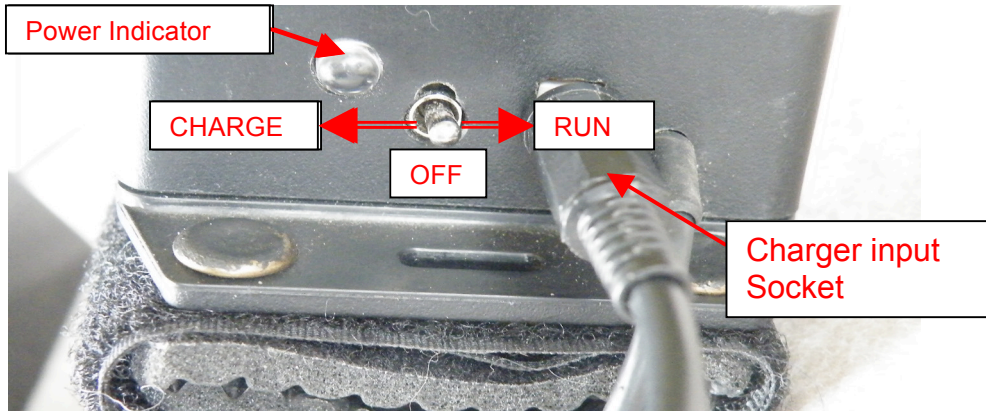
*Excess cable may be looped and secured under the Velcro on the cheek pieces.

*Attach the sensors to the bit with the small straps; attach the reins to the rings on the sensor.

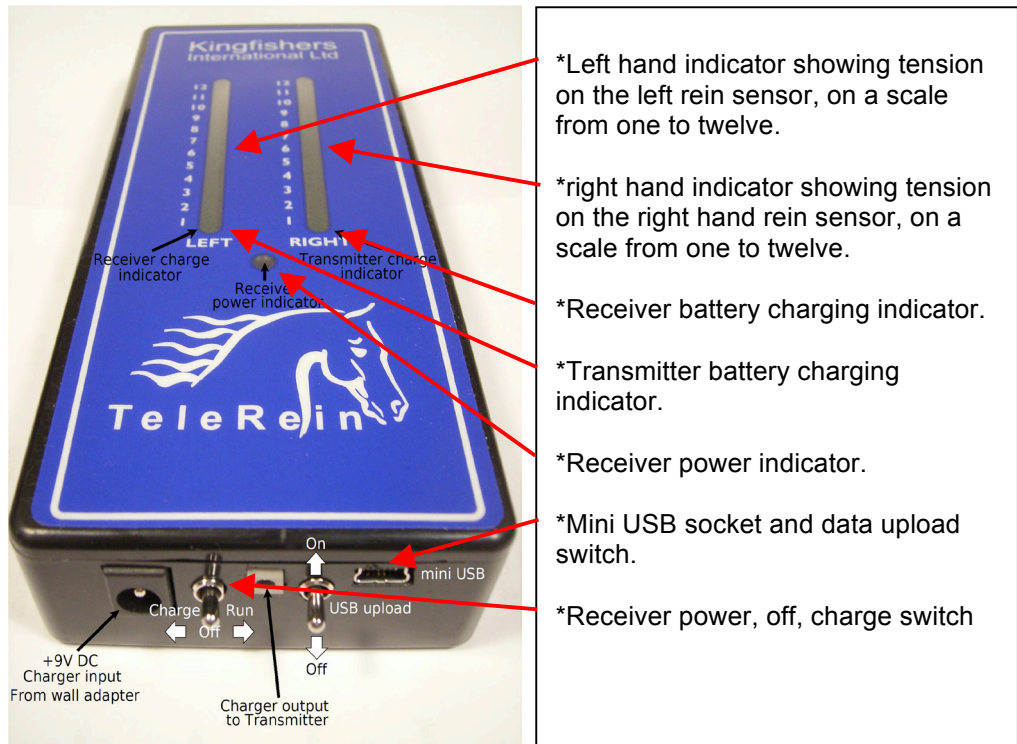


Once fitted, the Transmitter is ready for use. Before mounting, switch the power on; the power indicator will flash brightly, then flicker at a lower brightness. Prior to turning the power on, and while the power indicator is flashing brightly, make sure there is absolutely no tension on the reins. The transmitter is now sending to the receiver, and the reins may be used normally. See the comment in the section on use, particularly where TeleRein is being exposed to rapid temperature changes.

The Transmitter, showing the power switch, power indicator, and charging socket.



Setting up and using TeleRein, the Receiver.



The Receiver, to get the typical 40m to 60m operating range, should be held as close to horizontal as possible, keeping fingers away from the front of the unit, where the aerial/antenna is sited.

The left hand switch has three positions;

Left = Charge receiver battery, Centre = Turn Off, and Right = receiver power on (Run).

When power is turned on, the receiver power indicator turns on, and the left and right tension indicators illuminate in pairs, starting from one, and moving rapidly up to twelve. After which they will display the tension, or degree of contact that is being transmitted.

The right hand switch allows for data to be uploaded to a Personal Computer (PC), if appropriate software is installed on the PC, and a mini USB cable is plugged into both the socket on the receiver and a PC.

The Up position transfers data. The down position is Off. The switch may be toggled at any time to start and stop the data flow.

Full directions for using Charts are available by downloading from TeleRein web-site. Go to INFO tab, bottom of page, for downloading Full TeleRein Software Manual, then TeleRein software download.

Disregard any notice referring to 'Set-up not commonly downloaded and could be dangerous'. This is a generic warning and does not apply to the software available on this site.

After connecting to lap-top PC, TeleRein Charts can now be expressed in either;

- * TeleRein units, (below)
- * Imperial pounds
- * Metric grams to a maximum of 10 kg,
- * Metric grams enlarged to double size up to 5 kgs, to give more detail.

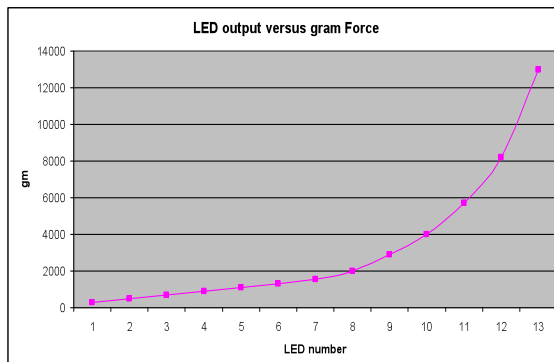
When saved in PC, Chart logs may be printed out as required.

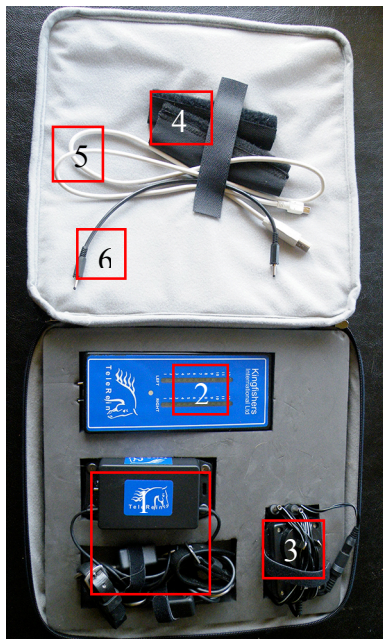
Interpreting the receiver rein tension indicators.

The rein tension indicators displays tension from 300gms to 13kg. The column lights are designed to show the lowest, most sensitive range in 200gm increments to 1.1kg, (1 – 5) then by increasingly larger increments, 250gm, 450gm, 900gm, and 1.1kg, to 4 kg (6 -9), and then by even larger increments, 1.7kg, 2.5 kg, 4.8kg (10 – 12) to 13kg. The information is sent at the rate of 0.1 second (10 samples per second). A median filter is used to give a steadier result, at the expense of a 0.5 second (half second) response delay.

Display	Range(gm)
1	300-500
2	500-700
3	700-900
4	900-1100
5	1100-1300
6	1300-1550
7	1550-2000
8	2000-2900
9	2900-4000
10	4000-5700
11	5700-8200
12	8200-13000

Table and Graph showing the relationship between the indicated numbers and rein tension.





The carrying case is lined with foam and contains:

1. The transmitter, connected to the rein tension sensors by cables.
2. The receiver.
3. A battery charger.
4. Two sleeves of Velcro for binding the cables to both the cheek pieces on the bridle.
5. The white cable is for down loading data to a PC, when connector to the receiver.
6. A small black cable is provided for charging both transmitter and receiver at the same time.

View of TeleRein in carrying case

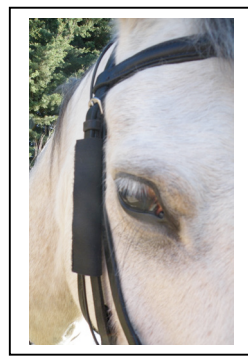
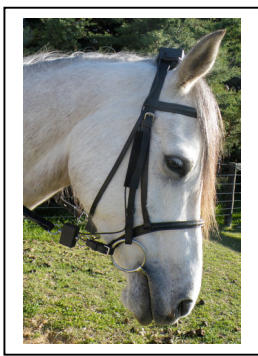
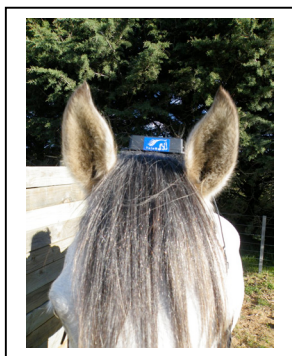
Care, Maintenance, and Use.

Treat the equipment with respect, in particular the rein tension sensors (load cells).

None of the elements are designed to be submerged in water or used in heavy rain.

Cleaning with a damp cloth and a little detergent is quite sufficient.

Extremes of temperature, such as when using TeleRein on a frosty morning, after removing it from a warm car, may mean that the turn on procedure may need to be done a few times over an hour. That is, turn the transmitter off, remove rein tension, and turn the transmitter back on again. This “zeros” the rein tension output, removing temperature induced drift.



Battery Charging.

The receiver contains the battery charging circuits. The receiver will generally run for over ten hours before needing recharging. The Transmitter may run for over fifty hours.

If the power indicators don't come on when the power switches are "on", or if during use, the single central LED on the receiver display starts blinking, the receiver needs recharging. Similarly, if the rein tension indicators start blinking, the transmitter needs recharging.

Charging is done via the supplied wall adapter, and less desirably using the mini USB cable connected to a PC. The wall adapter will charge the units in about four hours, the USB takes twice as long.

The wall adapter will work world wide, but will need an adapter to suit different wall socket pin configurations.

It is best to charge the batteries before they go flat.

The Receiver charge indicator (left) and Transmitter charge indicator (right) are the bottom lights on each of the rein tension columns. When charging, they illuminate to indicate charging is in progress, and go out once charging is complete.



CAUTION

ONLY use the wall adapter plug pack, and the charging cable supplied. Failing to do so may result in a fire or explosion. Kingfishers International Ltd. cannot be held responsible for damage or injury resulting from a failure to use the correct wall adapter and cable as supplied.

The batteries are not user replaceable, the units must be returned to source for replacement.



Wall plug adaptor charging method

The picture above shows the charging configuration using the supplied wall plug adaptor, which is plugged into the black left-hand socket on the receiver. The receiver's left-hand switch is in the left-most position if the receiver needs charging. If only the transmitter needs charging, it may be left off. If the receiver is charging, a light will be on just above the word 'left' on the receiver front panel. It will go out when the unit is charged. To charge the transmitter, connect the supplied charging cable between the grey sockets on the receiver and transmitter, and switch the transmitter switch to the left. If charging, a light will turn on just above the word 'right' on the receiver unit. It will go out when the transmitter is fully charged.

USB charging method

See the picture below. In this case, the mini USB cable is plugged into the right hand socket on the receiver, the other into a USB connector on a PC. In all other respects it operates in the same fashion as described in the previous section. It will, however, take twice as long to charge.



Further Information and News.

For news on progress and future developments visit the website
“www.Telerein.co.nz”

For further information or assistance, contact j.h.telerein@clear.net.nz.