

USER MANUAL  
Model 700 Transmitter

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OVERVIEW

The value of monitoring your horse's heart rate during exercise and training is widely recognized. The Model 700 Transmitter, together with a display unit, enables you to monitor and record your horse's heart rate from a distance. This is useful for situations where there is no rider (such as while longeing) or where the rider cannot monitor the horse's heart rate.

This document covers only the Model 700 Transmitter. The display unit is described in another document provided with it.

DESCRIPTION

The Model 700 consists of a transmitter unit, a special surcingle, an antenna, two rubber electrodes and two electrode wires. The surcingle contains a pocket to hold the transmitter, and various Velcro (TM) straps to mount the electrodes and to hold the wires in position. The radio link has a maximum range of about 1000 feet, provided that there are no obstructions between the transmitter and receiver.

DURABILITY

In order to keep the transmitter repairable and its cost moderate, it has certain limitations. For one, it CANNOT support much weight or survive severe abuse. If the horse rolls over on it, it will probably be damaged, and may be destroyed. Therefore, the horse must be kept under control while wearing it.

Also, the transmitter is not waterproof. It will survive and work properly in a light rain, but it should not be used while swimming.

BATTERY INSTALLATION

The transmitter is powered by a standard 9-volt battery, which is installed in a compartment within the transmitter. To open the compartment, turn the unit over and grip it with both hands, placing both thumbs on the battery compartment cover. Then, simultaneously press down and back to unlatch the cover and slide it off. Sometimes this is difficult to do, especially when the unit is new.

Either rechargeable or non-rechargeable batteries may be used. A new battery should provide 8 to 10 hours of operation.

The battery and its connector fit tightly in the compartment. Thus, it may be difficult to close and latch the cover.

If the transmitter will not be used for an extended period (such as, during the winter), the batteries should be removed.

#### ASSEMBLY OF THE SURCINGLE

Slide the transmitter into the pocket on the surcingle, oriented so that the battery compartment is toward the belt, that is, not visible. Be sure that the power switch is not accidentally turned on during this process. The hole for the antenna should be visible between the straps. Next, insert the base of the antenna into the hole and gently screw it clockwise onto the connector, finger-tight ONLY! It would be a good idea to seal the gap between the antenna and the transmitter box with two turns of 1/2" wide plastic electrical tape, in order to keep out dust and rain.

Attach the electrodes to the Velcro (TM) strips located inside of the belt, and run the wires to the transmitter box. Be sure that the wire from the upper electrode runs to the white connector on the transmitter, and the wire from the lower electrode runs to the red connector. IF THESE WIRES ARE REVERSED, THE UNIT WILL NOT WORK!

The surcingle need not be disassembled between uses, except to change the battery or for cleaning.

#### USING THE TRANSMITTER

As mentioned above, the transmitter uses the small voltages generated by the horse's heart. However, dry horse hair is a good insulator, and won't allow these voltages to reach the electrodes. To overcome this, the horse's coat must be thoroughly dampened in the vicinity of the electrodes with an electrically conductive fluid. One such fluid is the horse's own sweat. Another is body wash, applied liberally to the left front quadrant of the torso. Coat conditioner worked for us too, but not as well as body wash. Conductive gels can also be used, but large quantities are required and they must be well worked into the horse's coat. Finally, if the horse has been kept outdoors and it hasn't rained recently, just wetting the horse with fresh water can sometimes work.

Strap the surcingle onto the horse and tighten it. Check that both electrodes are firmly pressed against the horse's body, and that they are likely to remain in contact as the horse runs. If this is doubtful, the position of the electrodes, the tightness of the strap, or both, need to be adjusted. Confirm that the electrode wires are properly connected on both ends.

Finally, turn on the transmitter while closely observing the red light on the end of the case. If the battery voltage is sufficient, the light will flash twice. If the battery voltage is too low, the light will not flash at all. If a good battery has been installed and the light still doesn't flash, the unit needs repair.

To avoid possible damage to receiver or display units, do not operate this transmitter within 6 feet of those devices.

When not in use, store the transmitter in a warm, dry location. If moisture has gotten into the transmitter, dry it out at room temperature.

#### TRANSMITTER LICENSE

The transmitter has been licensed for operation in the United States by the Federal Communications Commission, and has been assigned FCC ID ABC123. The FCC requires that users of this equipment receive the following notice:

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The transmitter operates on one of eight frequencies in the 900 MHz band, depending on the setting of an internal switch. This band is also used by cordless telephones and various other devices. If the Transmitter causes interference to another user, it may be appropriate to change the operating frequency. If this is desired, please contact the manufacturer for assistance.

Please be advised that any modification to this transmitter, including the use of a different antenna, will void the operating license.

**WARNING!** It is the responsibility of the user of this product to keep it at least 0.017 inches (or 0.045 cm) from any person while in operation. This is necessary to insure that the product is operated in accordance with the RF Guidelines for Human Exposure which have been adopted by the Federal Communications Commission.

CLEANING

The transmitter, surcingle and electrodes may be cleaned with a damp rag and mild soap. Do not use alcohol or other solvents to clean the unit, or immerse the transmitter in water or other solvents.

REPAIRS

Repairs may be obtained by returning the unit to the factory, shipment pre-paid. Enclose a note describing the nature of the problem. You will be contacted and advised of the cost of repair. No work will be performed without your authorization.

WARRANTY

Serena Medical Electronics Co., Inc. warrants that the goods sold will be free from defects in material and workmanship for a period of one year, and that this warranty will be limited to the repair and replacement of parts and the necessary labor and services required to repair the goods. IT IS EXPRESSLY AGREED THAT THIS WARRANTY WILL BE IN LIEU OF ALL WARRANTIES OF FITNESS AND IN LIEU OF THE WARRANTY OF MERCHANTABILITY. This warranty does not cover defects that arise due to mishandling, abuse, modification or unauthorized repairs.

Repair or replacement under this warranty shall be the exclusive remedy of the original purchaser. Serena Medical Electronics Co., Inc. shall not be liable for any incidental or consequential damage or for any express or implied warranty on its equipment.