



Lotek GPS Tag

GPS Tag Family Models & Specific Differences

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GPS Tag Family Models & Specific Differences

1. Lotek GPS Tag Family Models

The following models of the Lotek GPS tag family are currently available:

- a)GPS2000L ("L" stands for large battery pack)
- b)GPS2200R ("R" stands for reduced or small battery pack)
- c)GPS2200LR ("LR" stands for large rechargeable battery pack)
(This model is also known as GPS2200 for Livestock)
- d)GPS2200LR-BP ("LR-BP" stands for large-rechargeable back-pack)
- e)GPS3000

All GPS tags are using the very same VHF beacon board which is powered by the same 3.6 V voltage. Also, the very same frequency range is used: 140-174 MHz. So, from this prospective there is no difference between the models. If new models will be added to the family in the future, the VHF beacon circuitry and the voltage which is used to power it, will not change.

2. Differences between models:

Basically, the differences between the models are related to the size, weight, capacity, and type of the battery packs. Other differences may be related to the power management & monitoring unit which needs to operate with the different battery packs, to the GPS engine which is used, and also to the data processing and storage unit. For more specific information see the brochures available for the models. See also the block diagram where the blocks which may be different are marked with "****".

See a table below with the size and weight information for all models including the battery packs:

<u>Model</u>	<u>Size of housing with battery pack [cm]</u> (Length x Width x Height)	<u>Weight [g]</u>
-GPS2200L	12.0 x 8.6 x 12.6	<950
-GPS2200R	12.0 x 8.6 x 10.5	< 850
-GPS2200LR	12.0 8.6 14.6	<1000
-GPS2200LR-BP	12 x12 x 5.5	<1000
-GPS3000	68 x 48 x 58	< 300

As noticeable from the table above, the smallest member of the family is the GPS3000. Generically, all models except the GPS2200LR-BP (which is designed to be carried on the back of an animal by the means of a harness) are manufactured as collars (which will be attached to the neck of different animals. At the models using rechargeable batteries (the ones having the "LR" acronym in the model name), the main battery can be recharged or replaced within the battery pack.

At non-rechargeable models, the user cannot replace the batteries. The battery pack as a whole needs to be replaced. See below a table with the voltages provided by the battery packs used in different models:

<u>Model</u>	<u>Type of batteries and pack voltages</u>
GPS 3000:	Lithium /7 V and 3.6 V
GPS2200R:	Lithium/10.5 V, 7 V, 3.6 V
GPS2200L:	Lithium/3.6 V, 3.6V, 3,6V
GPS 2200LR & GPS2200LR-BP	Lithium/7V rechargeable, Alkaline /3.6 V

All packs provide the very same voltage, (3.6 V) for the VHF beacon.

There are two types of GPS OEM receivers used by the Lotek GPS family:

The GPS 3000 model uses the *GPS-MSI-E GPS* receiver manufactured by u-blox AG (www.u-blox.com) All other models are using the *Lassen PL GPS* manufactured by Trimble Navigation (www.trimble.com). More detailed information about these receivers used in the GPS tag is available from the web-site of the two OEM manufacturers.