

LTS SCALE

PRECISION MOBILE WEIGHING

Wireless, Base to Indicator (HRC-AIR)



Technical Manual

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WARRANTY POLICY

LTS SCALE COMPANY

WARRANTY POLICY

LTS Metrology, LLC dba LTS Scale Company ("LTS Scale") warrants the equipment that we manufacture—for a period of twelve (12) months from the date of shipment against manufacturer's defects in materials and/or workmanship. The warranty applies only to the original owner of the equipment. LTS Scale's obligation under this warranty is limited to the repair or replacement of defective parts, and the associated labor and travel costs for the repair. Replacement or repair of parts or products is at the sole discretion of LTS Scale. This warranty does not cover shipping and handling charges.

For electronic products, manufactured by other companies and, sold by LTS Scale, the warranty is limited to that offered by the electronic product's original manufacturer. Typical examples of such products include, but are not limited to, computers, printers, scanners and specialty indicators.

This warranty specifically excludes any repairs not necessitated by a manufacturer's defect. This includes, but is not limited to, failure to install, calibrate, and/or operate the product in accordance with the manufacturer's installation and/or technical manual. It also does not include intentional misuse of the product.

All warranty work must be pre-authorized by LTS Scale and performed by LTS Scale or a certified scale technician dispatched by LTS Scale at its sole discretion. *LTS Scale reserves the right to modify this warranty policy at any time.*

LTS SCALE MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY, AND/OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. IN NO EVENT WILL LTS SCALE BE LIABLE FOR PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, OR FOR AN AMOUNT IN EXCESS OF THE PURCHASE PRICE OF THE DEFECTIVE LTS SCALE PRODUCT OR PRODUCTS.

HRC AIR1.0 & HRC AIR1.0BT

CONTACT INFORMATION

Parts and Service: Email parts@LTSscale.com or call 844-425-0544 x219

Tech Support: Toll Free 844-425-0544 x502 or Direct 330-425-0575

RMA and Service Email: support@LTSscale.com

More information can be found at: www.LTSscale.com

- Click on Support tab.
- At the bottom of the page is a link to the Knowledge Base tab (no login required).
- Search based on keyword or use the drop-down menus by product ("Topic") or document (Keyword search).

OVERVIEW

The LTS HRC-AIR1.0 BT and HRC-AIR1.0 are wireless communication systems designed to replace the Home Run Cable between the Clino mounted on the scale base and the indicator. The wireless system can use either Bluetooth technology or XBEE 900 MHz technology to replace the RS-232 communication between the Clino and the indicator. Power for the system is supplied by a 7.4V 5000mAH LiPo battery pack. The battery pack will power the unit for a full 24 hours before requiring recharging. The charger is built into the indicator allowing for a full, robust, on truck, wireless system.

LITHIUM BATTERY WARNING



IMPORTANT!!! READ MANUAL in its entirety before use.
Take extra precautions when handling Lithium Polymer (LiPo) batteries, as they require different safety measures compared to NiMH or NiCd batteries!
Failure to follow these instructions can result in severe permanent damage to battery, cause serious personal injury, or lead to a fire.

HRC AIR1.0 & HRC AIR1.0BT

The LiPo batteries are intended to be used with the LTS HRC-AIR1.0 or HRC-AIR1.0 BT system only. Any damage caused by misuse or modifications will void your warranty and can cause serious injury.

By purchasing this product the buyer/user agrees that they have read and understood the safety precautions printed in this document and accepts full responsibilities of these risks. By agreeing, the user/buyer does not hold LTS Scale, or its distributors, responsible for any accidents, injury to persons, or property damage that may occur through misuse or modification of this product.

General Safety Guidelines

- 1) **NEVER** use a NiCd/NiMH charger to charge LiPo batteries. Only use the charger provided by LTS Scale for this product.
- 2) **NEVER** store LiPo batteries in any location that exceeds 14°F to 104°F.
- 3) **NEVER** leave charging batteries unattended. Keep watch on the charging process & react to any potential problems that may occur.
- 4) **NEVER** let the battery's positive and negative leads to touch. This can cause the battery to short and lead to a FIRE.
- 5) **NEVER** charge a **swollen** or **ballooned** battery. Continuing to charge a battery that has begun to swell will result in a fire. Follow these steps:
 - a. STOP the charging process and disconnect battery immediately
 - b. Disconnect battery from the device immediately.
 - c. Place it in an open non-flammable area.
 - d. Watch it for approx. 30 minutes from a safe distance.
 - e. Follow proper procedure to dispose of battery
- 6) **ALWAYS** inspect the battery to make sure there are no signs of damage, deformity, or swelling before charging. If there are, STOP charging the battery and follow the proper procedure to dispose of the battery.
- 7) **ALWAYS** charge batteries away from combustible material. Do NOT charge on surfaces that can catch fire – this includes: wood, cloth, or carpet.
- 8) **ALWAYS** store LiPo batteries in cool, dry places between 40°F to 80°F.
- 9) **Keep LIPO batteries out of reach of children or pets.**

Avoid Over-Discharging LiPo Batteries

The battery packs MUST BE ROTATED DAILY. Failure to rotate the battery packs every day may cause the working battery to over-discharge. Disconnect the battery if the system is idle for more than 24 hours.

Over-discharging will damage the battery pack requiring it to be replaced. This is NOT a warranty repair.

The LiPo Battery charger provided by LTS Scale will not allow a battery that has been over-discharged to be charged.

CHARGING BATTERIES

Caution – Read Before Charging

- 1) ALWAYS visually inspect LiPo battery for any damaged leads, connectors, shrink wrap, swelling of cells, or other irregularities before charging or using.
- 2) Do NOT use if you find any of the above issues with your pack.
- 3) There is a charging port built in to the top of the X-1 Indicator. Plug the battery pack into the charging port and tighten the locking ring.
- 4) Charging status lights are built into the bottom right corner of the X-1. Charging is indicated by status lights 1 & 2 turning red. *If the battery pack has been over-discharged the status lights will remain green and no charging will occur. You must replace the battery pack.*



- 5) The LTS Scale battery pack is designed to be charged with the included battery charger. This charger will provide a safe and balanced charge for the battery pack. No other charger can be used.

Charging LiPo Batteries

- 1) NEVER leave charging batteries unattended. Constantly watch the charging process and react to any potential problems that may occur.
- 2) ONLY charge batteries in a fireproof location. Never charge on wooden surfaces, cloth, carpet, or materials that can catch fire.
- 3) Allow the battery to cool down to ambient temperature before charging.

DISCHARGING BATTERIES & FIRST USES

The battery packs MUST BE ROTATED DAILY. Failure to rotate the battery packs every day may cause the working battery to over-discharge. Disconnect the battery if the system is idle for more than 24 hours.

Over-discharging will damage the battery pack requiring it to be replaced. This is NOT a warranty repair.

Operating Temperatures

- Charge: 32°F to 113°F.
- Discharge: 32°F to 140°F.
- Let battery cool down to ambient temperature before charging.
- During discharge and handling of batteries, do not exceed 160°F.

Storage & Transportation

- NEVER store batteries near an open flame or heater.
- Do NOT expose battery pack to direct sunlight (heat) for extended periods of time
- Storing battery at temperature greater than 170°F for extended periods of time (more than 2 hours) can cause damage to battery and a possible fire.
- For long term storage, do NOT store batteries fully charged; it is recommended to fully charge and then discharge it to 50-60% of their capacity before storing.
- Store battery at room temperature between 40°F and 80°F for best results.
- When transporting or temporarily storing in a vehicle, temperature range should be greater than 20°F but no more than 150°F.

BATTERY LIFE & DISPOSAL OF LiPo BATTERIES

Rechargeable LiPo batteries do NOT last forever. Batteries that have lost 20% of their initial capacity should be removed from service and disposed of properly.

If at any time you see any physical damage in a LiPo battery such as swollen cell, split, or tear in the cell's foil covering, STOP usage immediately and dispose of battery.

Proper Disposal Procedure of LiPo Batteries

Use the discharge function of your charger to discharge the battery to 1V/Cell or lower. Make sure the wire leads are fully insulated and soak battery in salt water (1/2 cup of salt per gallon of water) for 2-3 days. Then wrap battery in a bag for disposal.

PRODUCT WARRANTY – SPECIAL NOTICE

Product warranty is limited to original defects in material and workmanship. Warranty does not cover collateral damage. Due to the nature and use of this product, there is no term warranty. Misuse, abuse, incorrect charging, failure to comply with the above warnings and guidelines, and other inappropriate use of this product will not be covered under warranty.

HRC AIR1.0 & HRC AIR1.0BT

INSTALLATION

The “Clino” box is installed on the scale base in accordance with the scale base instructions. Once installed the clino must be powered and connected to the load cell. See Fig. 1 or Fig. 2 for connections.



Fig. 1 Back of Scale Mount

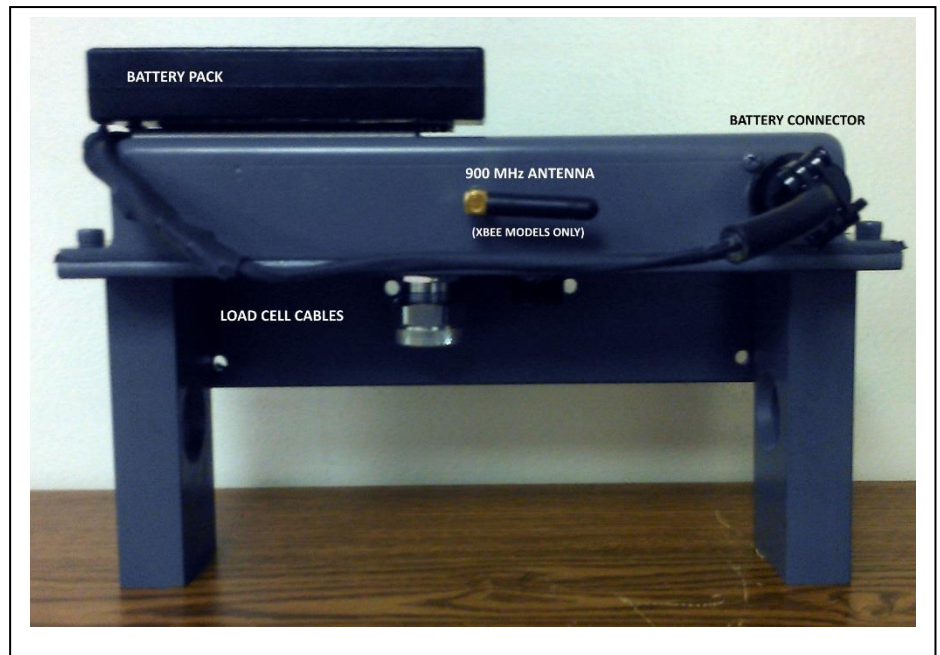


Fig. 2 Top of Scale Mount

Back of Scale Mount:

Attach the load cell connector to the upper 5 pin female connector. Connect the Battery Pack to the lower 5 pin male connector. Route the cable and battery pack as needed to place the battery pack on the hook and loop retainer strip on the top of the Clino. Press the battery pack into the retainer. This is NOT “Velcro” so you will feel the battery pack lock into place.

Top of Scale Mount:

Route the load cell cable (or cables if more than one load cell) through the two holes of the large silver strain relief connector and connect them to the trim board according to the scale base instructions. Connect the battery as shown in Fig. 2 and attach to the battery retainer as previously described.

HRC AIR1.0 & HRC AIR1.0BT

Indicator:

The indicator can be mounted in any convenient location in the cab. Power is supplied by a 3 pin female connector connected to the trucks power system. There is no other wired connection to the scale base.

OPERATION

The HRC-AIR1.0 & HRC-AIR1.0 BT have been paired for communication between one LTS Indicator (X-1, CN70, CK71) and one Clino. This is to prevent more than one wireless unit from interfering with another in operation in the same area. With the battery pack connected to the Clino; as soon as the indicator is powered up it will load the Weight Scale program and automatically establish a data connection with the Clino. No operator assistance is required. Once the data connection has been established the scale may be calibrated.

Calibration:

In “Legal for Trade” applications, may only be performed by technicians certified in the jurisdiction the scale will be operated in. See the appropriate Indicator manual or Weight Scale manual for the calibration procedure.

Battery Packs:

Each wireless system is supplied with 2 battery packs. The working battery pack is connected to the Clino. The working battery pack powers the Clino and scale operations. The charging battery pack is connected to the indicator which has a specially designed LiPO battery charger built in. These packs are designed for reliable 24 hour operation.

The battery packs MUST BE ROTATED DAILY. Failure to rotate the battery packs every day may cause the working battery to over-discharge. Disconnect the battery if the system is idle for more than 24 hours.

Over-discharging will damage the battery pack requiring it to be replaced. This is NOT a warranty repair.