



TL8000 Tension Link Users Manual

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Declaration of Conformity



We, Intercomp Company
3839 County Road 116
Medina, Minnesota 55340 USA

Declare under sole responsibility that the TL8000 to which this declaration relates meets the essential health and safety requirements and is in conformity with the relevant EC Directives listed below using the relevant section of the following standards and other normative documents.

2004/108/EC - relating to electromagnetic compatibility and replacing Directive 89/336/EEC
EN 55011:2009, Class B - Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement
EN61000-6-1:2007 - Generic standards, Residential, commercial and light industry environment
EN 61000-6-2:2005 - Immunity for industrial environments
EN 62311:2008 - Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)
2006/42/EC - on machinery, and amending Directive 95/16/EC (recast)
1999/5/EC - on radio equipment and telecommunications terminal equipment
EN 301 489-1 V1.9.2 (2011-09) - Common Technical requirements
EN 300 328 V1.7.1 (2006-10) - Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive
EN60950-1:2006/A12:2011 - Information technology equipment. Safety. General requirements
2012/19/EU - on waste electrical and electronic equipment (WEEE) (Directive 20/96/EC Recast)
2013/56/EU amending Directive 2006/66/EC on batteries and accumulators

This product complies with all safety-relevant provision referring to protection against electrical hazards and other hazards, such as mechanical hazards, fire hazards, noise and vibration. The safety issues of this measurement equipment have been evaluated under the self-certification provisions of the relevant directives.

The related technical construction files are held for inspection in the U.K. at Intercomp Europe Limited.

The CE mark, Red M and WEEE marks must be affixed as required in the directives.

A handwritten signature in black ink that reads 'Mark Browne'.

Mark Browne / Quality Manager
June 26, 2014

Introduction

This manual contains operation instructions, specifications, and maintenance instructions for Intercomp's model TL8000 tension link.

Specifications

Controls

General:	On/Off
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Electrical

Batteries:	IP65 rated: 1 or 2 standard alkaline or Lithium 9V cells
Battery life:	Standard: Approximately 400 hours battery life on (2) lithium cells, 200 hours on (2) alkaline cells. Optional external power input.
Stand-by mode:	Low power stand-by mode automatically entered when host indicator is off. In this mode battery life is 90 days (2200 hours) with lithium cells, or 45 days with alkaline cells.
Filtering:	Adjustable digital averaging set via host indicator.
Auto Zero (AZT):	Adjustable via host indicator (off, 0.5div, 0.6div, 1.0div, 3.0div)
lb/kg units:	Adjustable via host indicator.
Graduations:	Adjustable via host indicator (0.02lb/0.01kg up to 100lb/50kg).
Zero Range:	Adjustable via host indicator (off, 1%, 2%, 3%).

Performance

Accuracy:	For capacities 500lb to 100,000lb: $\pm 0.1\%$ of capacity. For capacities 160,000lb and above: $\pm 0.5\%$ of capacity.
Safe overload:	200% of capacity.
Ultimate Physical overload:	700% of capacity for 10,000 lb and below 500% of capacity for 25,000 lb and higher

Environmental

Humidity:	10 to 95% Non-Condensing.
Temperature:	Operating: -30 C to +60 C / -22 F to +140 F. Storage: -40 C to +75 C / -40 F to +170 F.
Ingress Protection	IP65

Radio

Radio frequency	ISM 2.4GHz, 802.15.4 DSSS*
License requirements	None. Pre-approved US/FCC, CAN/IC, EUR/CE
Range	200' / 60m indoor, 300' / 90m line of sight



WARNING: This equipment has been approved for mobile applications where the equipment should be used at distances greater than 20cm from the human body (with the exception of hands, wrists, feet, and ankles). Operation at distances less than 20cm is strictly prohibited.

* Radio notes: Frequency: ISM 2.4GHz (2.400GHz - 2.483GHz), with 12 channels (CH 1-12) within that range with each center frequency = 2405MHz + (CH * 5) MHz. Power output 63mW (18dBm), 10mW (10dBm) for international variant. Antenna is internal surface mount with -1.5dbi gain, omni-directional.

Options

Direct Power Option (150213)

Metal circular connector is added to the backplate so that DC power can be applied directly to the TL8000 scale.

120V/240V Direct Power Cable (101055)

100 – 240VAC universal wall power supply with international plug adapters US, EU, UK, and China. 10 foot retracting cord.

Operations

Operating Practices

Warning: The crane scale will be operated by qualified designated persons, trainees under the direct supervision of designated persons, maintenance and test personnel when in performance of their assigned duties, or lifting device inspectors.

Warning: Do not exceed the rated load limit of the crane scale.

Warning: The crane scale shall be applied to the load in accordance with the instruction manual.

Warning: Prior to lifting the operator shall make sure that all ropes or chains are not kinked and if multiple lines are used they are not twisted around each other.

Warning: Ensure that the load is correctly distributed for crane scale use.

Warning: Ensure the temperature of the load does not exceed the maximum temperature limits of the crane scale.

Warning: Ensure that swinging of the crane scale is minimized when positioning it over the load.

Warning: Avoid any sudden acceleration or deceleration when moving the load.

Warning: Do not allow the crane scale or the lifter to come into contact with any obstruction when moving the load.

Warning: Do not operate the crane scale if it has damaged, malfunctioning or missing parts.

Warning: Do not lift people with the crane scale.

Warning: Do not lift suspended loads over people.

Warning: Do not use the crane scale to pull side loads or to slide loads unless specifically authorized by a qualified person.

Warning: Do not leave suspended loads unattended.

Warning: Do not remove or obscure warning labels.

Warning: Do not operate the crane scale without having read and understood the operating manual.

Warning: Stay clear of suspended loads.

Warning: Do not lift loads higher than necessary.

Warning: Do not make alterations or modifications to the crane scale.

Warning: Ensure all portions of the human body are kept clear of all device involved with the rigging during the lift.

Controls

Note The TL8000 will have the radio settings set to communicate with the indicator that the unit comes with. If you are adding an additional TL8000 to the system or you need to change the radio settings follow the “Set-up” section that follows.

ON/OFF

To activate the TL8000, press the ON/OFF button. The button will blink indicating that the unit is active. Press the button once more to turn the unit off.

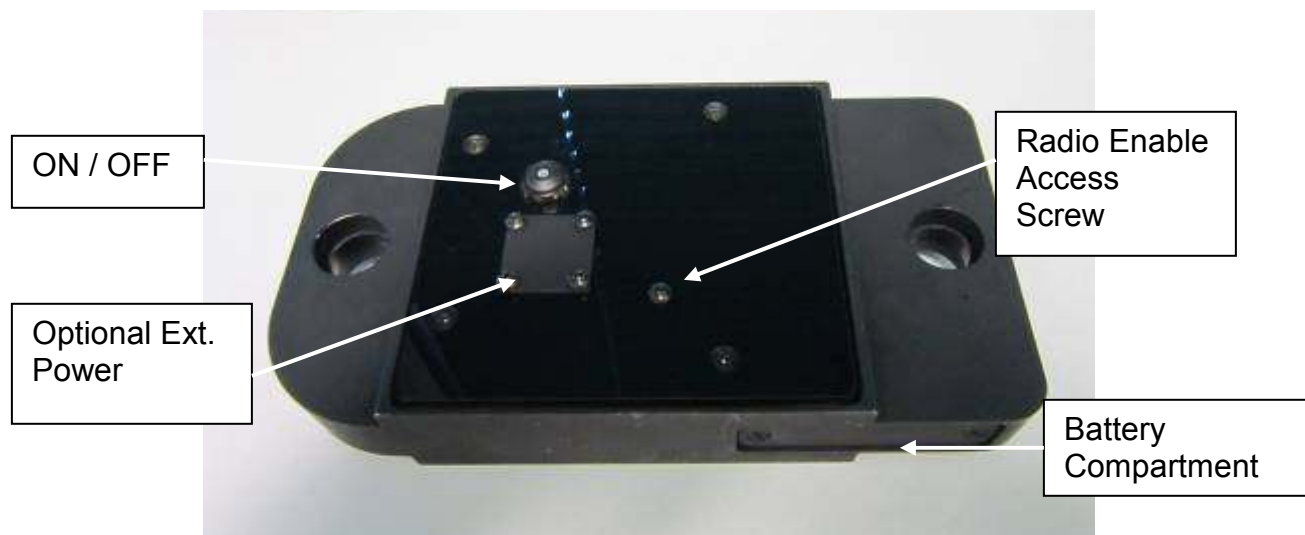
Standby Mode

The TL8000 features a standby mode to conserve battery power. If the host indicator is turned off or goes out of range, the scale will enter standby mode to conserve battery life. When in standby mode the LED will blink once every 6 seconds, indicating the scale is waking up to check if a host indicator has turned back on or come back in range. Once the scale detects the indicator, it turns itself back on and begins normal weighing.

Set-up (Radio)

To prepare the TL8000 to accept new radio settings complete the following steps.

1. Remove the “Radio Enable Access Screw” from the back of the unit. (see picture below)



2. Set the indicator to the radio settings section in the indicator program.
3. Turn the TL8000 on. (The LED on the button will be blinking)
4. Remove the Radio Enable Access screw.

5. Use an object that is small enough to go through the Radio Enable Access hole and press and hold the switch for approximately 5 seconds until the LED on the ON/OFF button is lit solid. (you will feel the spring of the button if you are properly pushing straight in through the access hole and top of the switch)
6. Set the radio setting desired on the host indicator and “Write” the radio settings to the TL8000. See your host indicator’s manual for details.
7. The LED on the ON/OFF button will blink 3 times and return to normal operation.
8. Communication set-up complete.

Power/Batteries

Remove the two screws on each side of the unit. Replace the 9V batteries.
Replace the cover.

You may use lithium 9V cells or standard alkaline 9V cells in the TL8000. Note: Only one 9V battery is required to run the TL8000, but then the battery life will be half of what it would be with two batteries.

Optional external connector for direct power:

C: Ground
E: Power (4-15VDC)

Maintenance

Periodic Inspection

The crane scale and all associated adaptive devices require periodic inspection and maintenance. The frequency and recording of the inspection requirements are found in service categories below and are dependant on the type of service that the equipment is used in as described below.

Service Categories

Normal Service – Crane scale is operated at less than 85% of it's capacity except for isolated instances. Complete the frequent service inspection monthly and record the periodic service inspection annually.

Heavy Service – Crane scale is operated at 85% - 100% of it's capacity as part of normal usage. Complete the frequent service inspection weekly to monthly and record the periodic service inspection semi-annually.

Severe Service – Crane scale is operated at 85% - 100% of it's capacity and used in environmental conditions that are unfavorable, harmful or detrimental to the use of the crane scale. Complete the frequent service inspection daily to weekly and record the periodic service inspection quarterly.

Inspection Requirements

Frequent Service Inspection (records not required)

A frequent visual inspection is completed at intervals indicated by the service category above by the operator or designated person of the following.

1. Inspect for structural deformation, cracks or excessive wear of any part of the crane scale or associated adaptive devices.
2. Inspect for loose or missing guards, fasteners, covers, stops, or nameplates.
3. Inspect all functional operating mechanisms and automatic hold and release mechanisms for improper adjustments interfering with operation of the crane scale or associated adaptive devices.
4. Inspect for distortion such as bending, twisting, or increased throat opening (if applicable)

Periodic Service Inspection (records required)

A periodic visual inspection is completed at intervals indicated by the service category above by the operator or designated person and documented to provide the basis for continuing evaluation. The periodic inspection will cover areas in the frequent service inspection above and the following.

1. Inspect for loose bolts or fasteners.
2. Inspect for cracked or worn gears, pulleys, sheaves, sprockets, bearings, chains, and belts.
3. Inspect for excessive wear of linkages and other mechanical parts.

4. Inspect for excessive wear at hoist hooking points and load support clevises or pins.
5. Inspect for any visible bends or twists of all used rigging devices.
6. Inspect all latches and locks for proper operation (if applicable)

Removal from Service Criteria

Note: Replacement parts of any device or parts of any device used in any aspect of rigging to lift a load shall be at least equal to the original manufacture's specifications

Hooks

Hooks shall be removed from service if damage such as the following is found and shall only be returned to service if a qualified person approves their continued use and initiates corrective action.

1. Hooks show cracks, nicks, or gouges.
2. Hook has wear exceeding 10% of the original sectional dimension.
3. Hook has any visible bend or twist from the plane of the unbent hook.
4. Hook has an increase in throat opening of 5% not to exceed $\frac{1}{4}$ of an inch.
5. If self-locking hooks have the inability to lock.
6. A hook latch that is inoperable (if applicable)

Shackles

Shackles shall be removed from service if damage such as the following is visible and shall only be returned to service when approved by a qualified person.

1. If the manufacturers name or trademark and / or the rated load identification is missing or illegible.
2. The device shows signs of heat damage including weld spatter or arc strikes.
3. The device shows excessive pitting or corrosion.
4. The device is bent, twisted, distorted, stretched, elongated, cracked, or has broken load-bearing components.
5. The device has excessive nicks or gouges.
6. The device has a 10% reduction of the original or catalog dimension at any point around the body or pin.
7. The device has incomplete pin engagement.
8. The device has excessive thread damage.
9. The device shows evidence of unauthorized welding.
10. Any other condition including visible damage that causes doubt to the continued use of the shackle.

Calibration

Refer to the "Calibration" section of the system indicator that came with the unit to calibrate the TL8000.

Troubleshooting

Problem:	Solution:
Scale will not communicate	Check the 9V batteries. The LED on the ON/OFF switch should be blinking if power is OK.

LED diagnostics: The LED on the power switch indicates the scale status by the blink rate:

- Rapid blink: Scale is trying to acquire a host controller remote.
- Medium blink (one blink per second): Scale has acquired a host controller and is communicating normally.
- Slow blink (one blink every 6 seconds): Scale is in standby mode for reduced power consumption. Each blink indicates the scale is waking up to check if a host indicator has turned back on or come back in range. Once the scale detects the indicator, it turns itself back on and begins normal weighing.
- LED on solid: Scale is in a special 'radio programming' mode. See: Set-up (Radio).

How to reach Intercomp Service

Things to know:

When did you purchase your TL8000 tension link?

What is your serial number?

Whom did you purchase the TL8000 tension link through?

For Intercomp Service call or fax:

FAX # (763)-476-2613

(763)-476-2531

1-800-328-3336

or fill out Service Support from at :

www.intercompcompany.com