



## - Range In A Box (RIAB) -

The RIAB from Strategic Systems, Inc. is a total target and target controls package. The system features 24 Target Lifting Devices (TLD's), a battery charging system, as well as a control Tablet PC preloaded with custom designed Human Machine Interface (HMI) software. All communication is wireless Ethernet TCP/IP – TCP/UDP protocol which allows for rapid deployment and setup. The system also incorporates wireless WEP 128 encryption software for security.

### Target Lifting Device Specifications

#### -Housing-

TLD's housing is constructed of a rugged aluminum alloy. TLD's housing provides protection against corrosion, windblown dust and rain, and splashing water. The housing is powder coated, and will not be damaged by the formation of ice. All internal parts are accessible by removing only one knob for ease of maintenance.

#### -Motor/Gear head-

TLD mechanism is operated by a 12VDC hi-torque motor. The non-reversing mechanism is capable of lifting up to 20 pounds at 24" from pivot arm. Lift speed/presentation is < 0.75 seconds

#### -Power Source-

TLD is powered by a rechargeable 12 volt battery. Battery is totally internal to the TLD housing footprint. The battery allows TLD to maintain wireless communication for up to 8 hours. Additional hours are achieved by plugging in another battery on the rear of the TLD. **Note: Only UDP and TCP protocol is accepted.**

#### -Controls-

TLD devices communicate with one another as well with the PC based HMI program via wireless Ethernet protocol. Control board and wireless transmitter housings are sealed for water resistance. Wireless transmitting range is a minimum of 100 open meters.

#### -Connections-

Triggers: Each TLD has a quick disconnect input for triggering local or remote TLDs.

Hit Sensors: Each TLD has one quick disconnect input for a hit sensor, thumper type or miles. Please specify with order

Battery Charging: Each TLD has one quick disconnect plug for charging local battery.

External Power Source: Each TLD has one quick disconnect for external batteries to be hooked up for longer usage time.



## Target Lifting Device Specs (cont.)

### -Hardware Specs-

#### Size

Footprint size: 7" W X 23" L

Total size with motor: 8.5"H X 10"W X 23"L.

#### Weight

40 Lbs

#### Housing

Aluminum Alloy, Splash/Dust Resistant.

Powder coated

#### Motor/Gear head

12 VDC Hi-Torque on non-reversing mechanism.

#### Controls

Ethernet TCP/IP Protocol & 802.11

#### Wireless Unit

Housed in a water tight case.

Range: 100 LOS meters Minimum.

#### Power Source

COTS 12 VDC rechargeable battery, 7.5 AH

Dimensions: 6"L X 2.5"W X 3.75"H

## Environmental Specifications

#### TLD

Operating temp -10°C to 45°C (14°F to 113°F)

Humidity (condensing) 0%~100% Typical

#### Battery

Discharged over a temperature range of -40°C to +60 °C (-40°F to +140°F), and charged at temperatures ranging from -20°C to +50°C (4°F to +122°F)

#### Processor

Operating temp -40°C --70°C (-40°F to 158°F)

Humidity (non-condensing) 5%~95% Typical

#### Wireless Radio

Temperature Range -10°C to 45°C (14°F to 113°F) – O perating temp

-40°C to 70°C (-40°F to 158°F) – Storage temp

Humidity (non-condensing) 5%~95% Typical



### **Motor/Gearbox**

Ambient Operating Temperature -10 – 40 °C

Working Temperature - 10 – 90 °C

Output Torque: 7.84 N·m

### **Stress Specifications**

#### **TLD Cycles**

30000 - with only Preventive Maintenance (Chain Adjustment, Lubrication of Components)

100500 - with minimum part replacement (Fasteners, Baseboard Relays, Motor Gear Box)

### **Overall Structure Durability/Testing**

2ft vertical drop

Water Splash/Dust Proof

2" Standing Water

## **Charging System Specifications**

### **Power Source**

#### **Included in this system is 3 10 bank units**

This Multiple Charging Station Shop Charger uses 10 independent Battery Tender Plus battery charger circuits in a single enclosure. Each circuit is a linear power converter that has a true DC output at a maximum power level of approximately 29 watts. It has a maximum output charging current of 2.0 amps. This is a higher current output than the stand-alone Battery Tender Plus battery charger circuits because each shop charger has an internal fan to provide forced air cooling of all active, semiconductor components.

- **Includes 10 six foot Clamp Harnesses**
- Will correctly charge and maintain any type of lead acid battery - AGM (absorbed glass mat), sealed calcium or Gel batteries
- To avoid dangerous dead-short sparking, microchip circuitry will not activate output voltage until clips are correctly connected to battery
- Simultaneously charges and/ or maintains up to 10 batteries or any combination from 1 to 10
- Maintains batteries at full charge
- Temperature compensated to ensure optimum charge voltage according to ambient temperature.
- Automatically switches from full charge to float charging mode.
- Reverse Polarity Protection to ensure user safety.
- Complete 4-step charging program (Qualification, Bulk Charge, Absorption Mode, Float Mode).
- BTP microchip technology virtually eliminates battery destroying sulfation
- Built in 72 hour timer will protect a marginal battery from over charging



- 2 amps per output charging current
- Input Power: 115VAC @ 60Hz
- Temperature Range: -20F to 120F
- 3 year manufacturers warranty

## Control Tablet PC Specs

### Wireless Access

The Panasonic Toughbook CF19 Ruggedized Tablet PC is standard with wireless access capabilities, allowing users to communicate directly with RIAB Systems with maintaining mobility. The Ruggedized Tablet PC Convertibles is of supporting WEP 64 and 128 bit, WPA, and WPA2 AES Encryption and Authentication security, allowing for secure communications on the RIAB's Private LAN.

### Structure and Overall Dimensions

10.7" W x 8.5" H x 1.9" D

Full magnesium alloy case; Moisture- and dust-resistant LCD, keyboard and touchpad; Sealed port and connector covers; Shock-mounted HDD; Rugged hinge

### Display Type

Touchscreen PC version: 10.4" 1024 x 768 (XGA) transmissive, anti-reflective, outdoor-readable TFT Active Matrix Colour LCD; Tablet PC version: 10.4" 1024 x 768 (XGA) transmissive, anti-reflective, outdoor-readable TFT Active Matrix Colour LCD with Digitizer; External video support up to 1280 x 1024 at 16 million colours (24 bit colour depth); Intel® 945GM graphic controller, DVMT up to 128MB

### Operating System

Microsoft® Windows® XP Professional / Microsoft® Windows® Vista Home Premium

### System Processor

Intel Core Duo U2400 1.06GHz

### System Memory

1GB Microsoft® Windows® XP Professional / 2GB Microsoft® Windows® Vista Home Premium

### System Hard Disk Drive

80GB HDD shock-mounted and removable

### Network Interface Controller (NIC)

WLAN NIC: 54 Mbit/s 802.11g, 802.11b, 802.11a Industry Standards

LAN NIC: 10Base-T, 100Base-TX, 1000Base-T 802.3, 802.3u, 802.3ab Industry Standards

### System Diagnostics

Battery status LEDs, HDD activity LED, External Power LED

### Power

Battery: Li-ion (10.65V, 5.7Ah)

Battery Life (Mobile Mark™ 2007, 60cd/m<sup>2</sup>): Approx. 9 hours (Vista model), approx. 10 hours (XP model)



Charging Time: Power off: approx. 4.5 hours; Power on: approx. 6.5 hours  
Power Consumption: Approx. 60W (maximum when recharging)

#### **Environmental**

Innovative heat dissipation system based on heat pipe technology  
Manufactures independent test report results

#### **Operating Temperature**

-25 to 60°C (-13°F to 140°F); (MIL-STD-810F, Method 501.4 & 502 .4, Procedure II)

#### **Storage Temperature**

-50 to 70°C (-58°F to 158°F); (MIL-STD-810F, Method 501.4 & 502 .4, Procedure I)

#### **Operating Humidity**

0 to 95% non-condensing humidity (MIL-STD-810F, Method 507.4)

#### **Operating Shock**

36" drop height onto 2" of plywood; (MIL-STD-810F, Method 516.5, Proc. IV) (Transit Drop Test)

#### **Water/Dust**

IP54 – (MIL-STD-810F, Method Dust to 501.4 Proc I and Water to 506.4 Proc III)

#### **Altitude**

15,000 ft (MIL-STD-810F, Method 500.4, Proc I & II)

#### **Operating Vibration**

MIL-STD-810F, Method 514.5, Procedure I, Category 4 (Truck) & 24

#### **Safety Standards**

EUROPE CE  
U.S.A./Canada UL/CUL

#### **Standards**

EUROPE EMC Directive 89/336/EEC  
U.S.A./ Canada FCC Part 15 Class B, Canada ICES-003 Class B  
EUROPE EMC Directive 89/336/EEC

## **HMI Software Specs**

#### **User Friendly**

The controls package must interface with the Ruggedized Tablet PC Convertible and WIFI communication standards, and must control all aspects of the RIAB system. TLD's and Scenarios must be identified and programmed with Ruggedized Tablet PC Convertible touch screen. The design must intuitive for new users to learn and use the system very quickly, even with little PC experience.

#### **Functionality**

The GUI package will allow users to custom program a number of TLD devices. Users must be able to individually assign parameters such as Delay Time, Active Time, and Kill Hit Counts, among other Input / Outputs (See TLD Software Manual).

**User can program TLD presentation in two ways (See additional Data Below)**



1. Using the Input trigger (Input) on each TLD, Programming up to six "Child" TLDs into for each TLD in Scenario
2. Manual triggering of TLDs, to start a programmed Scenario, Programming up to six "Child" TLDs into for each TLD in Scenario

**Additional Data for Programming Scenarios (See TLD Software Manual for Full Capabilities)**

Child TLDs are TLDs that are activated when the "Master" TLD is either killed (On Down), activated (On Up), or has timed out due to insufficient hits (On Down). This triggering of Child TLDs is from TLD to TLD, allowing Child TLDs to be activated virtually instantaneously.

Once all TLDs are programmed, the user has the option to save the scenario and recall them later, or start the programmed scenario at that time and save later (Before the TLD Control GUI Software is Powered Down). This eliminates the need to program each TLD when the TLD Control GUI is powered down and reactivated.

While a scenario is running, the user will be able to track the progress of the scenario, as well as the real-time status of each TLD. The TLD Control GUI software will also generate an After Action Report (AAR). This report will provide information such as: Hit Count, Time Stamps, Percentage Killed, etc., after the scenario is finished. The AAR report can be saved for future reference and printed if the user so desires (See TLD Control Software Manual for Full Scenario Capabilities).

**RIAB Supplied Products:**

- 1. charging system for 24 TLD's.**
- 2. 24 TLD Units with all controls.**
- 3. 3 Wireless Infrastructure boxes**
- 4. 3 Wireless Infrastructure Antennas and Stands**
- 5. 1 Control Tablet PC**
- 6. Optional trailer to house previous equipment plus workbench and storage.**