

EQUIPMANAGER™



The ShockWatch® EquipManager™ is a wireless monitoring system that ensures OSHA compliance, controls access, detects impacts, and monitors equipment operation. Combining powerful functionality with a fully customizable and intuitive user interface, EquipManager provides the information you need to reduce costs associated with maintenance, repair, and damage to your facility, equipment, and products. Ensure OSHA compliance with EquipManager's "safety checklist" for all authorized operators. Improve your operating efficiencies with automatic alerts regarding operator training and maintenance needs. Locate your equipment with the enhanced tracking capabilities. With its extensive array of sensor inputs and state-of-the-art wireless networking capabilities, EquipManager is a powerful tool to help you improve your workplace safety and reduce damage-related costs.



Use EquipManager on:
Electric forklifts
Internal combustion forklifts
Narrow aisle (reach) forklifts
Rough terrain forklifts
Electric pallet forklifts
Walkie/rider forklifts
Order picker forklifts
Turret forklifts
Double reach forklifts
Construction equipment
...and much more

■ Benefits

- Ensures OSHA compliance with the pre-shift safety checklist
- Increases safety in operations by tracking operator training schedules and operator certification
- Reduces costs associated with damage and worker injury
- Reduces operator, facility, equipment, and product damage due to impacts
- Provides real-time impact detection for timely repairs to facility, racks, and products
- Increases operator accountability, improves driving behavior, and reduces worker injury
- Allows only certified users to operate specific equipment
- Provides accurate and timely usage data, minimizing downtime through optimal maintenance scheduling and fleet rotation
- Improves equipment utilization through more efficient planning
- Saves time in locating equipment

■ Features

- Fully configurable 40-item pre-shift safety checklist through audio/visual display — with ability to designate questions as critical or noncritical
- Real-time dual-threshold impact detection and recording through patented, user-adjustable sensor
- Vehicle access control via multiple user-defined interfaces (iButtons, barcode, proximity cards, and user-defined pin numbers)
- Multi-parameter monitoring through customizable inputs, such as fluid pressure, speed, temperature, lift count, travel time, key-on time, and reverse count (8 digital inputs and 2 analog inputs)
- Equipment location services
- Customizable events and event processing for more than 60 standard events
- Notification of impact sensor detachment
- Lock-out/tag-out capability/inactivity log-off
- Usage monitoring (time, cycles, repetitions, etc.)
- Multiple wireless data transmission options (802.11b/g and 900MHz)
- Support for WEP, WPA, and LEAP security modes
- User-definable maintenance alert
- Full user menu with two-way text messaging
- Remote updating and configuration of device settings, firmware, and iButton key configuration
- Flexible mounting locations and orientations
- UL rating — Type E, EE, G, GS, LP, LPS, D, and DS

■ Sample Reports

Utilization Report			
Date Range: 2006-09-01 thru 2006-09-01			
Sites: All Sites			
Units: All Units			
Grouped By: Operator			
Operator	Time (hh:mm)	Activity (hh:mm)	Active %
Clint Albright	8:00	5:22	67
Cole Hicks	8:10	7:26	91
Dennis Williams	7:56	1:12	15
Jeff Irwin	7:54	4:59	63
Jim Nash	6:57	4:57	71
John Obrowski	8:05	6:04	75
Mac Smith	6:39	4:00	60
Shawn Cash	7:45	5:02	64

Potential problem;
need to explore

Operator Utilization Report

■ Software

The management software for EquipManager gives you easy access to the vital information you need to develop quick, efficient plans for reducing costs and improving safety. Easily control every aspect of the system's configuration: what to monitor, who can access the information, and when and how to receive the data. And once the system is configured, the powerful reporting and graphing options allow you to compile the data for analysis so that you can make changes to your operations where needed, as well as build on procedures that are clearly working well.

The software for EquipManager utilizes the widely accepted MySQL database, but is fully compatible with most other databases. Alerts and notifications can be easily programmed to wirelessly notify users via e-mail, text messaging, and phone.

Additional software features include:

- Multi-user Internet access to application
- Automatic data archiving and retrieval
- Customizable reporting and charting capabilities
- Management software operation in local workstation, LAN, and WAN, with export capabilities
- User-configurable events and event processing for customization beyond the standard 60+ events
- Ability to remotely update unit settings and firmware
- Database access to JDB SQL client and many others

Impact Frequency Report			
Date Range: 2006-09-01 thru 2006-09-01			
Sites: All Sites			
Units: All Units			
Grouped By: Operator			
Operator	Time (hh:mm)	Hits	Hours / Hit
Clint Albright	8:00	0	No Hits
Cole Hicks	8:10	0	No Hits
Dennis Williams	7:56	2	3.58
Jeff Irwin	7:54	5	1.34
Jim Nash	6:57	1	6.57
John Obrowski	8:05	1	8.05
Mac Smith	6:39	0	No Hits
Shawn Cash	7:45	0	No Hits

Potential problem;
need to explore

Impact Frequency Report

■ User Interface

Included:

Audio / Visual Display



The audio/visual display is used for a variety of functions, including: completing the safety checklist, accessing the EquipManager menu, setting up inputs, and sending/receiving text messages. The iButton reader is also included on the display.

iButtons



Green iButtons are used for access control, ensuring that only properly trained and certified operators use equipment. Other iButtons are used for initial programming and configuration of the EquipManager.

Options:

Proximity Card Reader



Ideal for both indoor and outdoor applications. The proximity card reader is housed in a weatherproof enclosure with flexible mounting options. Can be used as an alternative to iButtons.

Infrared Barcode Reader



Uses an infrared beam to read encoded information on barcode media. Can be used as an alternative to iButtons.

Specifications

Operating Temperature

-4°F/-20°C to 140°F/60°C

Operating Humidity

0–100% noncondensing

Impact Detection Range

User-adjustable threshold 0.3G to 7G

Operating Shock

10G (nondestructive)/100G (destructive)

Output Alarm

Piezoelectric 98dB

Case Size

Main Unit: 4.33"/109.98mm x 4.33"/109.98mm x
2.8"/71.12mm
Control Head: 6.25"/172.72mm x 3.5"/88.9mm x
2.75"/69.85mm

Case Material

Main Unit: Polystyrene
Control Head: Polycarbonate

Case Rating

NEMA 4X

Power Source

10 to 60VDC

Relay Output

Normally open contact fused @ 5amps
Normally closed contact fused @ 10amps

Data Storage Capacity

1,300 events (operator log-on/off) (impact time/date)
1,000 authorized operators

Data Retrieval

RF data transmission

Radio Specifications

802.11 Wi-Fi:

IEEE 802.11b/g Direct Sequence Compliance Protocol
FCC Part 15 Class B, ETS 300.339
Compliance Bandwidth: 2.4 to 2.5GHz
Receiver Sensitivity: -81dB

900MHz:

Power Output: 1 mW–1Watt (0–30 dBm)

RF Data Rate: 115.2Kbps

Interface Data Rate: up to 230.4Kbps

Receiver Sensitivity: -110dBm (@ 9,600bps)

Spread Spectrum Type: FHSS (Frequency Hopping
Spread Spectrum)

Channel Capacity: 10 hop sequences share
50 frequencies

Encryption: 256-bit AES

Frequency Band: 902–928MHz

Certifications:

United States (FCC): OUR-9XTEND

Canada (IC): 4214A-9XTEND

Australia: Approved (XTH9)

Class 1 Division 2: Approved

Inputs

8 Digital: max voltage 64VDC

Modes: change of state, counter, timer, interrupt

High-Transition Voltage \leq 7VDC

Low-Transition Voltage \geq 2VDC

Minimum Hysteresis: 0.8V

2 Analog: max voltage 64VDC

Modes: high/low levels, change of state, counter, timer

Full scale approximately 64VDC

10-bit resolution

Control Head Display

2 x 20 transmissive, green LED, black/white LCD

5 x 8 character format

For more information on ShockWatch's position on RoHS, EU Directive 2002/95/EC, Amendment Commission Decision 2005/618/EC and our certificates of compliance, please visit www.shockwatch.com.

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