



## Monitoring Workers In Hazardous Environments



**A New Security Monitoring Feature**

**Man-Down Systems by: HALL RYAN LABORATORIES, INC.**

- » Proprietary technology originally used for monitoring patients in medical settings.
- » No software required - IP Based
- » Continuously monitors SP02 (oxygen saturation and heart rate) in mobile and remote settings
- » Ideal for remote settings connected via the Internet with WIFI or satellite link
- » State of the art technology to help comply with OSHA's requirement for monitoring workers in hazardous environments



### How it works:

A wireless forehead sensor (the size of a quarter) is mounted inside the worker's helmet.

A small transmitter on the back of the helmet sends a wireless stream of vital sign information to our node.

Our proprietary Intelligent Network Node (INN) acts as the interface for your present monitoring service to provide this seamless monitoring feature.

## Turn-key Industrial Security Monitoring Services

### SPECIFICATIONS

#### EFFECTIVE MEASURING RANGE

Saturation: 40 - 99%

Heart Pulse Rate: 40 - 250 bpm

Resolution: 1 digit

#### ACCURACY (*including motion artifacts & low perfusion*)

Saturation (70-99%):  $\pm 2\%$  or  $\pm 2$  digits

Heart Pulse Rate:  $\pm 3\%$  or  $\pm 3$  digits

#### UNIT

Input Power Requirements: 3.5v, 2 milliamp consumption

**COMMUNICATION INTERFACE:** RS-232 or RS-422 interface converted and streamed via Internet Protocol (IP) to central monitoring station

**DISPLAY SATURATION:** 2 characters

**HEART PULSE RATE:** 3 characters

#### VIDEO / DATA RECORDING FEATURES:

Web Cam seamless connectivity

Scaleable compression, 4:1 to 20:1

#### HELMET TRANSMITTER DIMENSIONS: 4" x 2" x 1"

Weight: 0.3 lb.

INN DIMENSIONS: 10" x 2.5" x 1" w/5" diameter base

Weight: 1 lb.

### SYSTEM ENVIRONMENTAL

Operating Temperature: 0° - 70°C

Storage Temperature: -20° - 70°C

Operating Shock: Up to 15 G/ms<sup>2</sup>

Humidity: 90% relative humidity with no condensation

**Security:** Storage Data Compliancy:

U.S. DoD, NSA, Air Force, Army & Navy



|                  |    |                  |     |                  |     |
|------------------|----|------------------|-----|------------------|-----|
| SpO <sub>2</sub> | 97 | SpO <sub>2</sub> | 88  | SpO <sub>2</sub> | 77  |
| ♥                | 66 | ♥                | 100 | ♥                | 140 |



### FEATURES

- Multiple sensors, continuously and seamlessly monitored by your own trusted monitoring services
- Accurate and fast wellness measurements
- Low power consumption
- Robust and attractive design
- Optional wireless video transmission
- Installation in less than a day and you're up and running

Distributed By:

tel 818-787-6161  
fax 818-787-6166

**MANUFACTURED BY:**  
**HALL RYAN LABORATORIES, INC.**  
15850 Strathern Street, Van Nuys, CA 91406  
hallryan.com sales@hallryan.com