RAD AV Flex Series

Remote Angle Display for Sound Engineers

The RAD is a portable remote angle display monitoring system for line array alignment, capable of coordinating multiple sensors from one LCD reader.

Photo A: RAD-AV dual line display

Features

- Hand Held LCD Display
- Rugged Aluminum Housing
- Single or Dual Line LCD
- Angle Displayed in Degrees
- 0.1° LCD Resolution
- XLR Cord Plug Connectors
- Battery Powered
- ON/OFF Switch
- Low Battery Warning
- Relative Zero Function
- Min/Max Angle Function

Semi-Custom Options

- Customer Specified Ranges
- Relative Difference Function
- Remote Sensor Choice

Applications

- Sound System Remote Alignment
- Line Array/Speaker Positioning/Installation
- Remote Platform Leveling

Description

The (RAD) Remote Angle Display System is a precision instrument designed for the Pro Sound Engineer to accurately position line array speaker stacks – allowing the engineer on the floor to quickly establish optimum position of the PA system being flown, regardless of how high.

Available as a single line LCD (RAS) or a dual line LCD (RAD), which reads two sensors at the same time, multiple sensors can be used interchangeably with one display box to coordinate multiple stacks.

For maximum flexibility, the remote sensor options can be permanently installed onto various bumpers or rigs, while maintaining a smaller number of readers on the shelf - no more worrying about cross compatibility issues, especially when setting up multiple venues.

The RAD system has two sensor options (*see Figures 2 & 3*). A typical configuration includes one LCD Reader box with a number of sensors; typically 2 or 4 sensors. Both sensor and reader use standard type XLR connectors.

Customer specified angle range scaling available. For example, a sensor can be scaled to read +50° to -90°. (Typical V-DOSC configuration).

Rieker Rugged. Rieker Reliable.™

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LCD Reader Box Technical Specifications

INPUT PARAMETERS	
Sensor Measuring Range	±180°
Power Supply	9 VDC Battery
LCD DISPLAY PARAMETERS	
Output Units	Degrees
LCD Display RAD	Dual Line
LCD Display RAS	Single Line
LCD Resolution	0.1°
Min / Max Readings	Stored in Volatile Memory
Relative Zero	Stored in Volatile Memory
SEMI-CUSTOM OPTIONS	
Relative Difference - Optional	Stored in Volatile Memory
Customer Specified Range	Anywhere along the range of the sensor
MECHANICAL	
Display Housing	Die Cast Aluminum – Painted Black
Mounting Holes	Two M4 x 0.7 or Two #8-32
Outline Dimensions	4.53” x 3.54” x 2.21” (115 x 90 x 56mm)
Electrical Connection	Female XLR Cord Plug Receptacle (Switchcraft PN D3F)
Display Box Weight	16 ounces
Operating Temperature	-20℃ to +70℃
Storage Temperature	-40℃ to +85℃
CONNECTOR WIRING	
Pin 1	Sensor Ground
Pin 2	Sensor Signal Output
Pin 3	Sensor Supply Voltage

FIGURE 1A: **RAD LCD Display "Reader" Box Dimensions (inches [mm])**
Dual Line LCD Display Box - battery operated, hand-held, reads two (2) sensors simultaneously

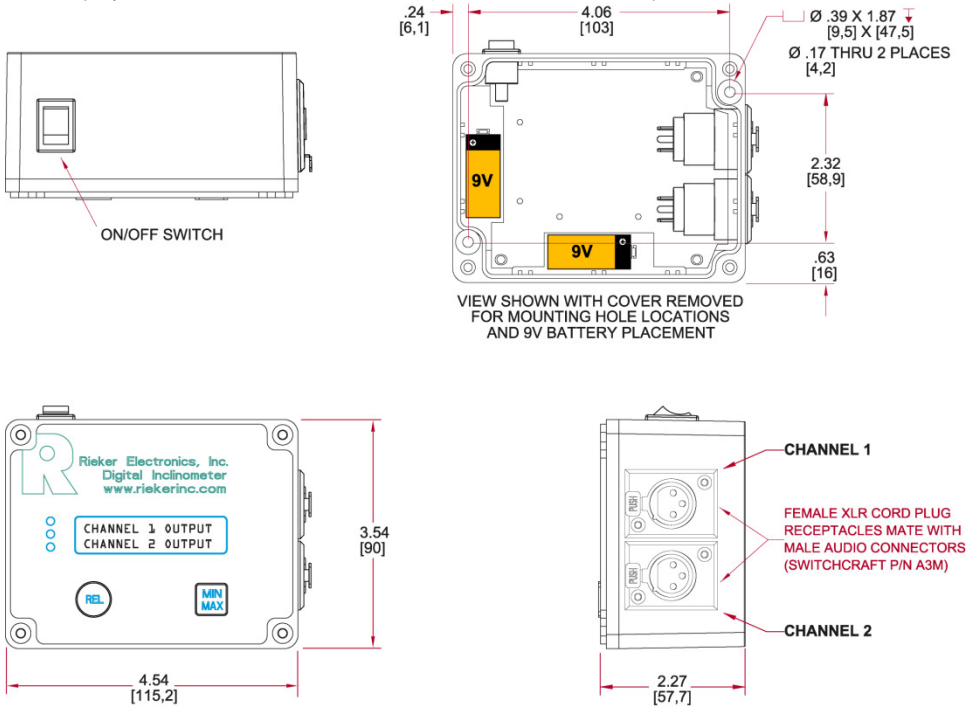
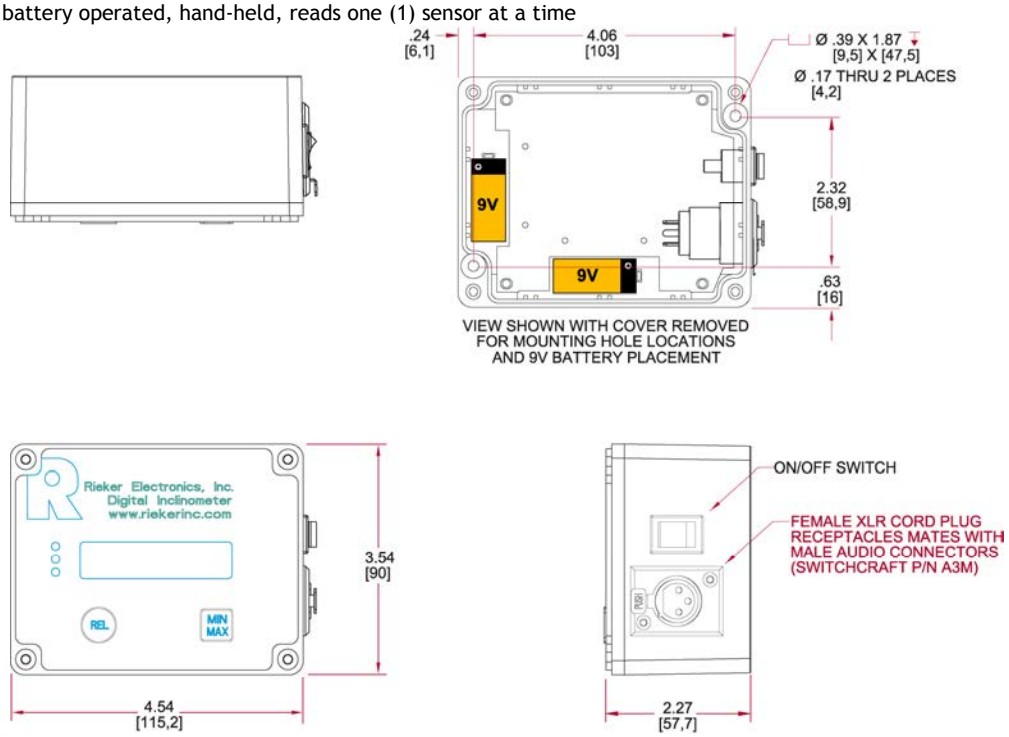


FIGURE 1B: **RAS LCD Display "Reader" Box Dimensions (inches [mm])**
Single Line LCD Box - battery operated, hand-held, reads one (1) sensor at a time



RAD/RAS Button Functions

MIN/MAX Button

The MIN/MAX function provides the smallest and largest angle the device has sensed since it was last reset.

Relative Zero (REL) Button

Standard on all display models: The REL button allows the user to set a new zero position after the RDI is mounted. Press the REL button and release and the display will read REL ON * for 1 sec then 0.00° *. The (*) indicates the measurement is not referenced to the true calibrated 0, but a referenced zero. The MIN/MAX angles are now referenced to the new referenced zero. Press the REL button again and the display will read REL OFF for 1 second then return to the true calibrated zero. The MIN/MAX angles are now again referenced to the true calibrated zero.

Relative Difference (REL) Button

Available for RAD2 only: The REL button is programmed to give the difference between the TOP and BOTTOM sensors. A RAD2 with this feature would display the following: SENSOR 1/SENSOR 2: SENSOR 1 would be placed on top of the speaker array = TOP LINE OF DISPLAY = TOP CONNECTOR on side of box; SENSOR 2 will be placed on the bottom of the speaker array = BOTTOM LINE OF DISPLAY = BOTTOM CONNECTOR on side of box.

REMOTE SENSOR OPTION A: Flex H6

Description

±180° precision dual axis tilt angle sensor in a rugged all-weather IP68 rated housing, which protects the electronics and provides cable strain relief. Since the RAD dual line LCD Box reads 2 single axis units simultaneously, the dual axis H6 allows the end user to select which axis (X or Y) for measuring orientation depending on installation.

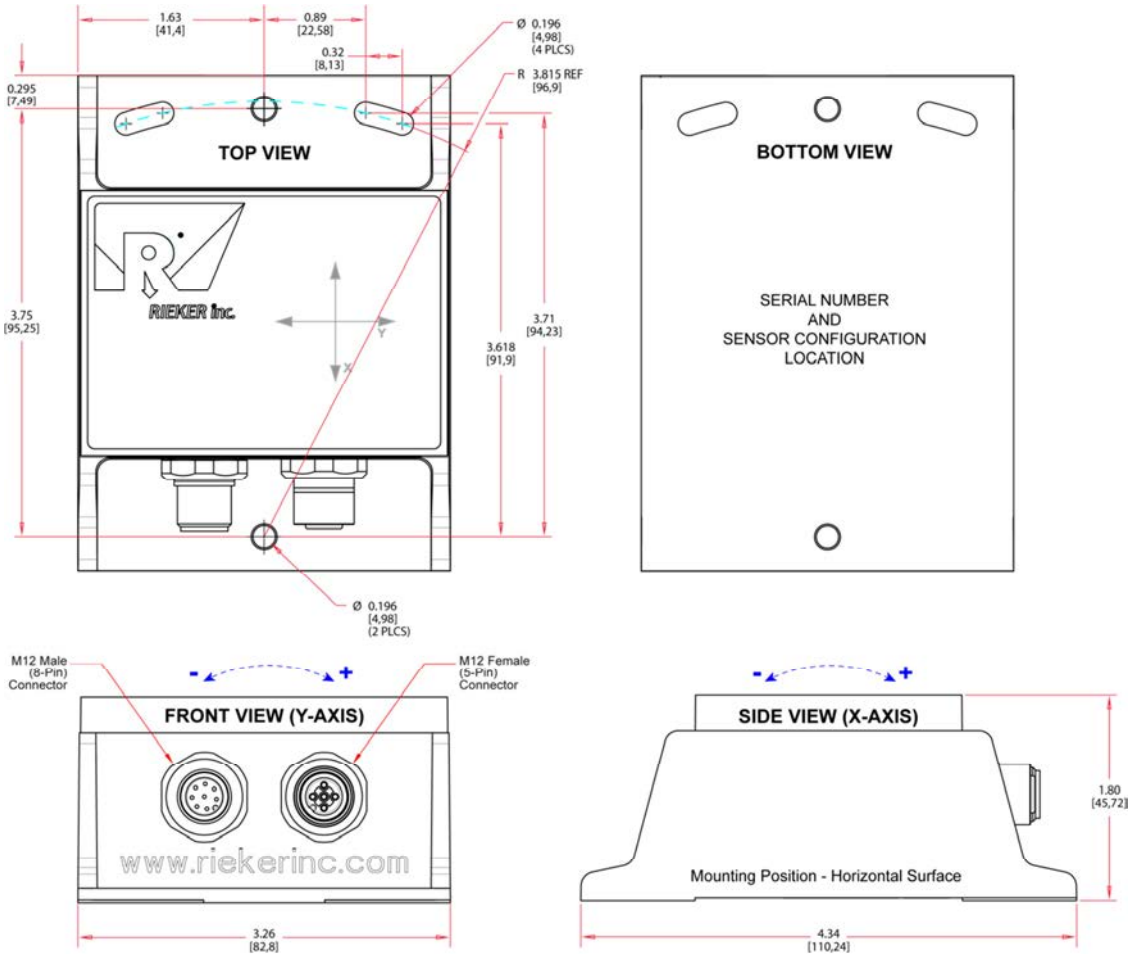
Connection

M12 connector is built into box for easy connection.

Mounting

Bolt or screw on for permanent mounting onto the frame or mount with gaff tap, heavy Velcro, or magnet for easy removal for transport and storage. Mounts on a flat horizontal surface.

FIGURE 2: **Remote Inclinometer Dimensions** (inches [mm]) - Horizontal Mount



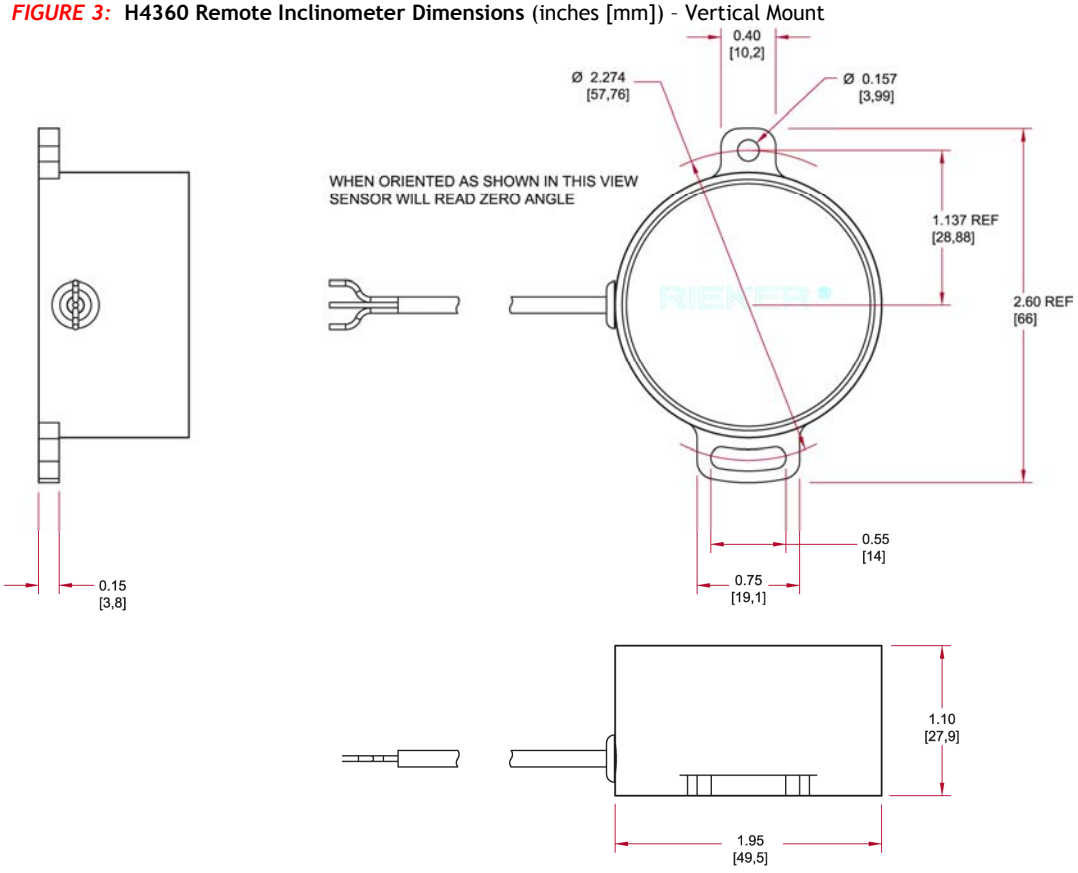
REMOTE SENSOR OPTION B: Flex H4360

Description
±180° tilt angle sensor has a rugged potted all-weather Die-Cast metal housing, which protects the electronics in a space saving small footprint.

Connection
XLR connector attached to the robust built-in 3" cable for easy connection.

Mounting
Bolt or screw on for permanent mounting onto the frame. Mounts on a flat vertical surface, like a clock on the wall.

FIGURE 3: **H4360 Remote Inclinometer Dimensions** (inches [mm]) - Vertical Mount



H4360 MECHANICAL CHARACTERISTICS	
HOUSING	Die Cast Zinc
MOUNTING HOLES	Two #6-32
MOUNTING PLANE	Vertical Surface
OUTLINE DIMENSIONS	Ø1.95" x 1.1" (Ø49.5 x 28mm) See Drawing
ELECTRICAL CONNECTION	1ft. Teflon Cable with 3 pigtail leads
WEIGHT	8 ounces (227 grams)

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