



Operators Manual

Radio Transcorder

Recorder Radio Interface

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Available Stock Codes:			
915 V02	915-EU V02		

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Radio Information

FCC and IC Notices

United States of America and Canada

Contains FCC ID: OUR-XBEEPRO

Contains Model XBee-PRO Radio, IC: 4214A-XBEEPRO

The/XBee-PRO® RF Module has been certified by the FCC for use with other products without any further certification (as per FCC section 2.1091). Modifications not expressly approved by Digi could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Re-orient or relocate the receiving antenna, Increase the separation between the equipment and receiver, Connect equipment and receiver to outlets on different circuits, or Consult the dealer or an experienced radio/TV technician for help.

Overview

The Radio Transcorder is designed to communicate with overhead Varcorders or Amcorders, while installed on an overhead line. The Radio Transcorder is compatible with previous version recorders and easily attaches and communicates directly to a computer running SensorLink's Softlink software via a USB Radio Adapter.

The Radio Transcorder provides utility engineers with the ability to drive by installed recorders and setup or download data without requiring a line crew to remove the units from the line. This capability improves the speed to gather and analyze the data. Line crews can then be scheduled to retrieve and relocate the recorders for further studies. Softlink identifies each recorder by its user definable name and the serial number of the Radio Transcorder. Softlink enables the user to setup and download up to nine individual recorders from one location.

Safety



The SensorLink Recorders are designed for use with a suitable hotstick. All precautions appropriate for the line voltage should be taken. The hotstick should be considered the sole voltage isolation device when applying the units to the conductor.



For safety purposes, the cover plate, chuck, Recorder and Radio Transcorder should be considered to be at the same potential as the conductor where they are attached. Putting the cover plate, chuck or other parts of the Recorder within the air gap of adjacent phases or ground may cause a phase-to-phase or phase-to-ground fault.



The Radio Transcorder adds an additional 2.25" to the Recorder. The total height of the Recorder with the Radio Transcorder is 12.38". Make certain it is installed so it cannot reach the air gap of adjacent phases or ground.

Specifications

Kit Number	6-915-3
Type	For use with SensorLink Amcorder or Varcorder *Amcorder or Varcorder not included
Kit Includes	3 ea Transcorder Modules, 915 1 ea USB Radio, 7-023 V02 1 ea Softlink Software, S580-001-002
Radio	
Frequency	ISM 2.4 GHz
Power	63 mW (18dBm)
Range	300 ft, Line of Site
Range of Operation	
Voltage	69kV
Mechanical	
Weight	7.2 oz, 0.203 kg, without batteries
Dimensions	2.75 in x 3.09 in x 3.46 in 6.98 cm x 7.84 cm, x 8.79 cm
Operating Temperature	-22° to +140°F, -30° to +60° C Use Lithium batteries for usage down to -4°F and -20°C
Housing	Shock & water resistant molded urethane
Battery	
Type	2 ea, 9V Alkaline or Lithium
Life	90 days, downloading once per week
Software Requirements	Softlink by SensorLink
RAM	32 MB, 64 Recommended
Processor	100 MHz or Higher, 200 MHz or higher recommended
Drive Space	15 MB to load software, 10 MB of operating space
Xbee/Pro Agency Approvals	FCC part 15.247 (USA) IC (Industry Canada) CE (European Union) R201WW08215111 (Japan)

Hardware Setup Instructions

1. Unscrew the thumb screw from the front panel assembly and remove from the Recorder.



2. Screw the male end of the standoff assembly into the threaded hole.



3. Adjust the hexnut, located on the bottom of the standoff assembly shaft, as needed, to set the overall height of the standoff to approximately 1-1/2".
4. Using a small 1/4" open end wrench, tighten the nut against the bracket in the Recorder so the standoff assembly does not come loose. The screw and wire tie may need to be moved out of the way to tighten the nut. Put the screw and the tie back when finished.
5. Install the batteries into the pocket of the molded assembly. If only one battery is used, be sure to cap the unused battery connector. Failure to do so could cause a fault on the battery board if contact is made.

Note: The Radio Transcoder has provision for two 9 volt batteries in parallel. The Radio Transcoder will operate with one battery, but this will cut battery life in half.

Hardware Setup Instructions...continued

6. Place the Recorder Radio Module into the bottom of the recorder.



7. Place the front panel assembly onto the the Radio Transcorder and turn the thumb screw to tighten. Do not over tighten.



Battery Life

The Radio Transcorder is designed to run on two 9 volt alkaline batteries. For the majority of the unit's deployment, the radio and the micro-processor are in sleep mode. When a connected USB Radio Adaptor comes into radio range, the Radio Transcorder awakens so the two radios can communicate. In order to achieve 90 days of run time from the Radio Transcorder, the user may only make contact between the two radios once per week. For every additional connection of the two radios, it will reduce the predicted run time by one week.

Softlink for Transcorder

SoftLink is a program application that allows the user to download, view, graph and import data from their Recorder. In order for a PC running SoftLink to communicate with a Recorder, the Recorder must be powered on.

System Requirements

SoftLink installs on all computers running Windows 98, Windows 2000, XP, XP-Pro, VISTA and Windows 7, Windows 8, and Windows 10. Softlink requires Microsoft .NET 3.5; if it is not already installed, the following installation process will install it.

Installation

Step 1: Place the Softlink Install CD in your computer's CD Drive.

Step 2: Softlink Installation Wizard will automatically load and display on your PC. If you need to launch the install manually, go to the Start Menu, select RUN, and type `:\SETUP.EXE`, OR - Click on browse, open the drive that your CD is located, and double click on file titled SETUP

Step 3: You must agree to the licensing agreement to proceed with the download

Step 4: A dialog box will appear to let you know when the download is complete
Shortcut paths will automatically load during the install.

Under programs in the Start Menu, select SensorLink and then Softlink.

Communicating with a Recorder

To communicate with a Recorder, follow these steps:

Step 1: Insert the USB Radio Dongle into the Computer's USB port

Step 2: Open Softlink from either the Desktop or Start Menu

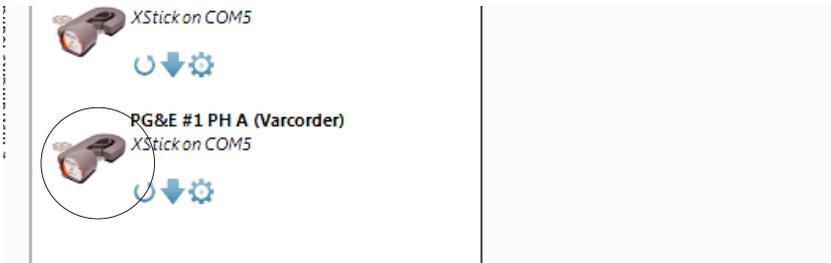
Softlink will automatically discover the USB Radio and display the communication device in the upper left corner of the program.



Discover

Softlink will automatically discover an available Recorder within 20-30 seconds.

Clicking the discover button instructs the USB Radio to immediately find the Recorder and expedite communication to the Recorder.

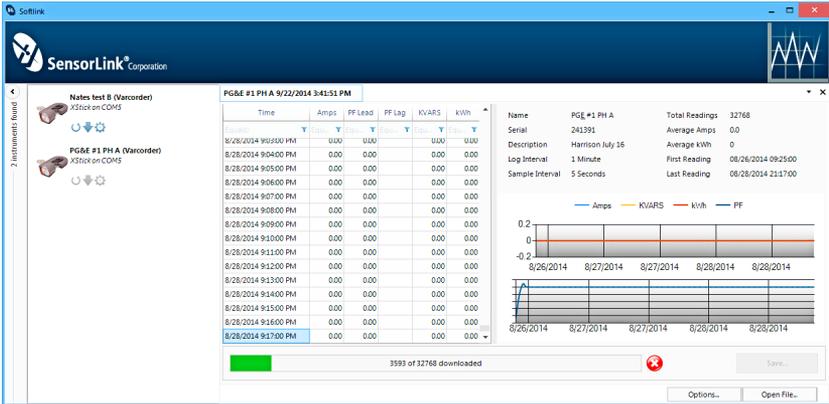


The description and photo displayed will change from the communication device to the unit when the Recorder has been discovered.

Download

Clicking the Download button instructs Softlink to begin downloading data from the Recorder.

The user is able to view the Recorder's configuration, data, and progress as it is downloading in both a chart view and graph view.



The download can be stopped at any time by selecting the red button.

Configure

Select the Configure button to setup Recorder preferences.

Varcorder Configuration

Varcorder Information

Serial Number: 241391

Firmware: 910-3.00.0014 1 Feb 2004

Name (16 Characters):
PG&E #1 PH A

Description (46 Characters):
Harrison July 16

Log Interval

1 minute

Sample Interval

5 seconds

Clear all logged data from your instrument and synchronize logging with the hour

Cancel Upload

Name: Identify the Recorder with up to 16 characters.

Description: Enter a description of up to 46 characters. For example, you may want to note the Recorder's service location and the date range for the recordings.

Log Interval: Select how often to log data. The Recorder averages all samples taken since the previous logging and records the result. Typical sample and log interval synchronization are one minute and 15 minutes, respectively. The log interval must exceed the sample interval.

How many Log intervals are available in the Amcorder? 64,000

How many Log intervals are available in the Varcorder? 32,000

Sample Interval: Select how often the Recorder will sample current by sliding the cursor on the scroll bar. Battery life depends on this setting; see page four.

Synchronization: Selecting the "Clear all logged data from the Recorder... and synchronize logging to the hour" box will allow the Recorder to synchronize itself to the computer's clock. When multiple Recorders are setup and synchronized using the same log interval and the same computer, they will all log at the same time.

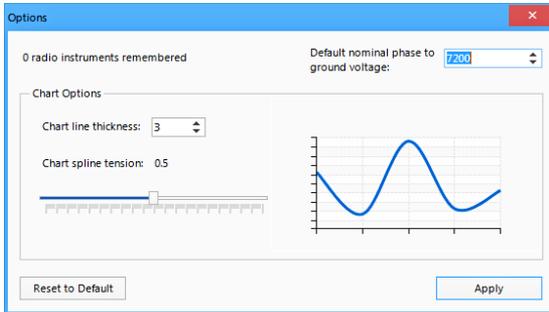
Clock is Set: If the Recorder is not synchronized before hanging on the line, the log times will be set, even though not evenly aligned to the hour.

Clock is Unset: If the Recorder's battery fails prior to any Softlink communication.

Legacy: Older version Recorders cannot be synchronized. To achieve log-time accuracy with these units, take them down before the battery fails, and download all data before re-hanging the unit. All log times prior to the first download are accurate to within a log interval, as long as the battery has not failed.

Options

The options button on the Download Screen allows the user to change certain preferences.



Radio instruments remembered: Softlink remembers Radio Transcoders that were used in previous downloads. Select "Reset to Default" for Softlink to forget the radios. See the Radio Transcoder User's Manual for further details.

Note: If the Radio Transcoder is swapped with different Recorders, it is recommended to select "CLEAR ALL REMEMBERED RADIOS".

Chart line thickness: The thickness of the graph lines can be changed by the user. Thickness is numbered 1 - 10, and defaults at three. The software will show a preview to the user as the value is changed.

Chart spline tension: The chart spline tension is used to smooth graph lines. The spline tension range is 0 - 1. Slide the scroll bar to change the spline tension. The software will show a preview to the user as the value is changed.

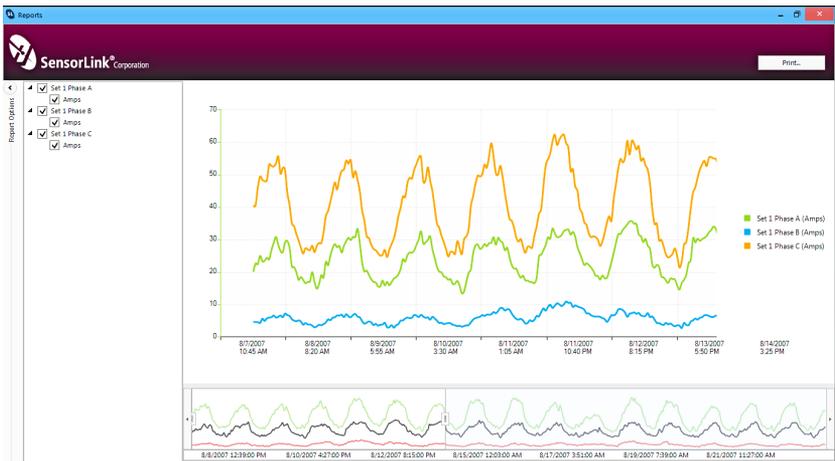
Default nominal phase to ground voltage: This option is for Varcorders and has no effect on the operation of an Amcorder.

Graphing

To graph the downloaded data, click the Graph Icon on the download screen.



A second screen will open and display the data in graphical format.



Report Options

Select the units and measurement parameters to graph by clicking in the selection boxes. Only selected measurement parameters will display on the graph.

Hide and Show Report Options

Click the left arrow to hide Report Options. Click the right arrow to show the hidden Report options.

Zoom Window

The bottom graph displays the entire time series. To view a section of time, adjust the left and right sliders. The upper graph will display the values between the slides.

Cursor Tool

Placing the cursor over the graph will display the date and time values of the measurements.

Part Numbers and Accessories



Radio Transcoder
Model 915 V02



Standoff Assembly
Model 7-018



USB Radio Adapter
Model 7-023 V02



Model 915 V02 Transcoder with
Model 920 Amcorder
*Amcorder sold separate



Model 915 V02 Transcoder with
Model 910 Varcorder
*Varcorder sold separate

SensorLink Corporation Warranty

SensorLink warrants each instrument it manufactures to be free from defects in materials and workmanship under normal use and service for the period of one year after date of shipment. Within this period, SensorLink agrees to repair or replace, at SensorLink's option, any instrument that fails to perform as specified. This Warranty shall not apply to any instrument that has been:

- 1 Repaired, worked on, or altered, including removal of the front panel, by persons unauthorized by SensorLink in such a manner as to injure, in SensorLink's sole judgment, the performance, stability, or reliability of the instrument;
- 2 Subjected to misuse, negligence, or accident; or
- 3 Connected, installed, adjusted, or used otherwise than in accordance with the instructions furnished by SensorLink.

This Warranty is in lieu of any other warranty, expressed or implied. SensorLink reserves the right to make any changes in the design or construction of its instruments at any time, without incurring any obligation to make any change whatever in units previously delivered.

If a failure occurs, contact the manufacturer for a Return Authorization and instructions for return shipment. This warranty constitutes the full understanding of the manufacturer and buyer, and no terms, conditions, understanding, or agreement purporting to modify or vary the terms hereof shall be binding unless hereafter made in writing and signed by an authorized official of SensorLink.

Quality Assurance Certification

Radio Transcorder Model 915

SensorLink certifies that its calibration measurements are traceable to the National Institute of Standards and Technology (NIST), to the extent allowed by the Institute's calibration facility, and to the calibration facilities of other International Standards Organization members.

This document certifies the following Radio Transcorder was tested at the SensorLink High Voltage Laboratory, Ferndale, WA, USA to the appropriate standard and comply with the requirements of that standard.

Serial Number _____

Model Number _____

I hereby certify that the Radio Transcorder listed above has passed all tests defined in the SensorLink standard. I also certify that I have reviewed the standard and test procedure and that they are sufficient in determining compliance with the standard.

Signed _____

Date _____

Form No: SALE-Manual Template TRANSCORDER-013 REV: V04
Date: 03/2017
Manual Stock Code No: M050-080-001



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