iWire ROAM Wireless Manual

Expand your iWorx TA or RA system with wireless recordings. The iWire ROAM Wireless is a versatile, wireless system designed to provide long-term recording and unrestricted movement. The recording device easily attaches to the subject with standard electrodes. The protective case doubles as a charging station. The system works with iWorx Recorders with an iWire interface. Data can be quickly analyzed with the included LabScribe analysis software or exported directly for other processing. The iWire ROAM Wireless allows for hours of continuous recording with an untethered reach of 20 feet.

Equipment

The list below indicates all the products included. If you find any missing items please notify iWorx Systems as soon as possible.

iWire ROAM Wireless Peripheral

Charger Box

iWire Receiver Dongle

USB charging cable

Disposable Electrodes

*Headband – included with the EEG recording system only

Specifications

Device	Channels
iWireR-ECG	1 ECG channel, 1 Respiration Channel
iWireR-ECGA	1 ECG channel, 1 Respiration Channel, 3-axis Accelerometer
iWireR-B1	2 ECG/EMG channels
iWireR-B1A	2 ECG/EMG channels 3-axis Accelerometer
iWireR-B2	2 ECG/EMG channels
iWireR-B2A	2 ECG/EMG channels 3-axis Accelerometer

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Specifications for all Roam Wireless Devices	
Battery capacity	110 mAhr
Battery life	> 8hrs
Charging case power requirements	Provided USB cable to computer
Range	Up to 20ft
Sampling Speed	5k samples per sec. aggregate
Resolution	< 6 µV
Weight	16.8g
Dimensions	44.2mm x 42.7mm
Protection against electric shock (IEC 60601-1)	Charging Case – Class II, continuous operation ROAM peripheral – Internally powered, continuous operation, type BF applied part

Charging the Device

1. The ROAM case is designed to charge the device. Be sure that the iWire ROAM Wireless device (the part with the iWorx logo and serial number) is secure in the case.
2. Take the provided charger cable and connect one end to the USB port of your computer.
3. Connect the other side of the charger cable to the port located on the front of the case.
4. If done correctly, a light will illuminate on the iWire ROAM Wireless device. A red light indicates that the unit is charging. A green light indicates a full battery. It takes approximately two hours for complete charging.
5. Please charge the device before each use. In storage, the device goes to sleep to conserve energy, but it is still using power to monitor the accelerometer, so that it can be woken up when needed.

Device Set Up

1. Remove the iWire ROAM Wireless device from the charging box. Plug the iWire receiver dongle into your iWorx TA or RA.
    - The LED on the receiver will blink green while it looks for the transmitter. Once the transmitter is found, the light will stay solid green to show that the connection has been made. Move the iWire ROAM device transmitter or tap the transmitter if receiver dongle doesn’t convert to solid green light.

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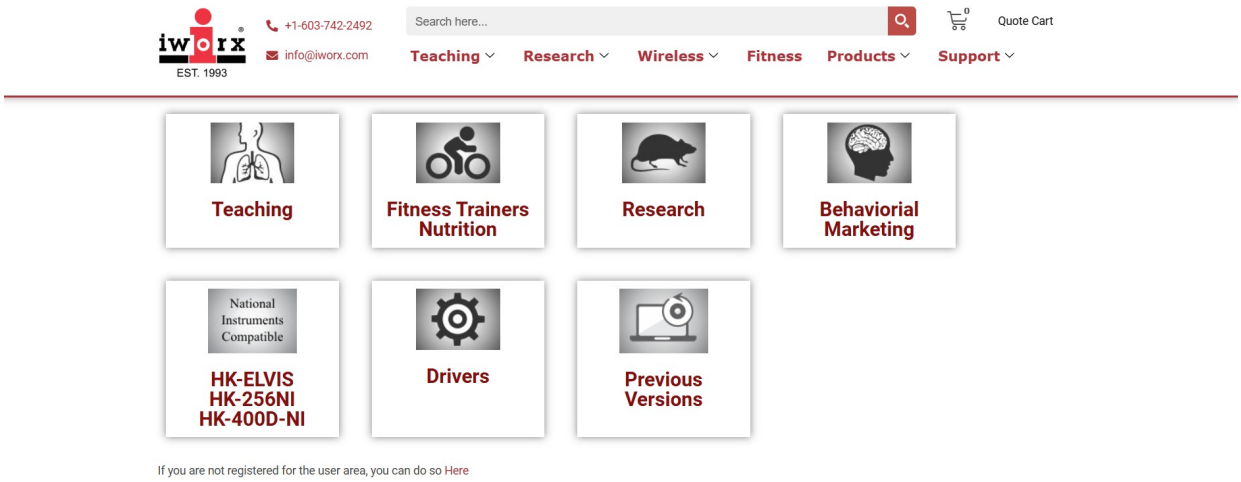
Registration and Software Installation

Downloading Software

1. The equipment comes with a Temporary User Name and Password, so that you can immediately get started with your system by downloading and installing the software. It is strongly encouraged that you register as a User on the iworx.com website with your own UN (user name) and PW (password).
2. Go to iworx.com – click on the "Support" tab, then "Registration" all the way to the left under "User Area".
3. Complete the registration form making sure to enter information in all the required fields.
4. You will receive an email from iWorx when your registration is complete, which may take up to 24 hours. Until then use the temporary username and password.
5. Log on as an iWorx user on the website and download LabScribe Software.
   a. Go to www.iworx.com – then click the "Support" tab from the top menu selections.
   b. Click "Software Download" and enter your username and password.
   c. Click "Research".



d. Select the correct "Complete Installer" for your operating system.

e. Follow the directions for saving to your hard drive. **Double-click** for saving directly to your computer; **right-click** to save to another location.

f. For Mac Users, download the "Package" and follow the prompts to install.

**You need Administrative Access to your lab computers to install the software. If you do not have Administrative Access, please contact your IT department.

Note for IT Depts. doing the installation: Users must be able to save to the local drive. They will need permissions to write to C:\Users\USERNAME\AppData\Local\LabScribe

Loading Setting Group

1. Once installed you should see a LabScribe shortcut on your desktop.
2. Click the shortcut and open LabScribe.
3. Load Settings Group if necessary (you only have to do this the first time you start LabScribe).
4. Click Settings → Load Group.

   If using the TA – Choose **Complete Settings** → scroll to the bottom and select IPLMv7Complete.iwxgrp and click "Open".

   If using the RA - Choose **Research Settings** → Choose your equipment from the list. Choose the group you wish to load and click "Open".
5. Choose the group you wish to load. And click "Open".
6. The window will close and you will be back to the original LabScribe recording window.

Choosing the Settings

1. On the LabScribe Recording window – Click "Settings".

2. You should now see a list of Experiments. They may be in folders.
3. When you click on any lab exercise two windows will open –
   1) a PDF of the lab exercise setup for that experiment
   2) a LabScribe recording window with the settings needed to run the experiment
4. All Experiments will include specific instructions for connections to the subject.

General Safety Tips for using the peripheral

WARNING: Do not attempt to service. Any repair will be made by iWorx Systems, Inc.
Do not use if there are any signs of damage.
Do not touch the charging base and the subject simultaneously.
Only use provided charging cable with a computer.

Learning to use Labscribe

Various tutorial videos for using LabScribe are available on the iWorx website,

at https://www.iworx.com/tutorials

Consumables

The silver-silver chloride electrodes are the part of the instrument that is in contact with the skin by making electrical contact between the skin and the sensor. Silver-silver chloride electrodes are the best electrodes for recording EMG signals. The electrodes are disposable and should be replaced after each use.

iWorx offers three types of silver-silver chloride electrodes differing based on the width of the adhesive material and position of the electrode in it.

Picture	Description (click part number to go to website)
	A-GC-7165 Foam solid gel electrodes 50 x 54 mm 150 per package
	A-GC-7165P Pediatric foam solid gel electrodes 30 mm 150 per package
	A-ELEC-E-x Foam solid gel electrodes 35 / 53 mm Latex and PVC free Diaphoretic / Hypoallergenic

Proper skin preparation is important to get a good signal and avoid artifacts.

- Before applying electrodes, make sure the skin surface is clean and dry:
- Abrade the skin with an abrasive cream, such as NuPrep, to remove dead skin.
- Alternatively, you can also clean skin with an alcohol wipe and let it dry, but this is not as efficient as the abrasive cream.

Tip: It is easier to connect the electrodes to the snap cable before placing the electrode on the subject.

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Warranty Information:

No modification of this equipment is allowed. The unit contains no customer serviceable parts. If a problem occurs, contact your iWorx representative. Repair, if required, will be completed at iWorx Systems, Inc. The unit is protected by a 3-year warranty, and if the product is opened by any one other than iWorx personnel the warranty will be void.

Cleaning

The ROAM unit may be wiped down with a dry lint free cloth.
*If using the EEG system the headband may be cleaned with an alcohol wipe.

Intended Usage

iWorx Systems Inc. instruments, components, and accessories are designed for educational and research oriented life science applications and investigations. iWorx Systems Inc. does not condone the use of its instruments for clinical medical applications. Instruments, components, and accessories provided by iWorx Systems Inc. are not intended for the diagnosis, cure, mitigation, treatment, or prevention of disease.

Furthermore, the unit is intended for research and teaching applications. The fact the this product is IEC 60601-1 compliant in no way means that it is to be used for medical purposes. It was tested to the 60601-1 standard because it's a more rigorous form of testing.

Intended Environment:

The unit should only be used in a classroom or laboratory setting.

Storage Conditions:

- Temperature – 0°C to 40°C
- Humidity – 0 to 70%

Operating Conditions:

- Temperature – 10°C to 30°C.
- Humidity – 0 to 60%

Disposal:

The user has two options, either send it back to the manufacturer or send to a recycling center.

Explanation of Symbols:

Class II Electrical Equipment
Additional safety measures against electric shock have been implemented.

Type BF Applied Part
Input connectors are suitable for connection to humans provided there is no direct electrical connection to the heart and provides additional protection against electric shock.

CE Mark
The equipment meets the appropriate EU directives.

Company Information:

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iWire ROAM Wireless

Supplier's Declaration of Conformity for FCC

47 CFR § 2.1077 Compliance Information

Unique Identifier: IXR-ECG, IXR-ECGA, IXR-B1, IXR-B1A, IXR-B2, IXR-B2A, iWireR-ECG, iWireR-ECGA, iWireR-B1, iWireR-B1A, iWireR-B2, iWireR-B2A

Responsible Party – U.S. Contact Information

iWorx Systems Inc
62 Littleworth Road
Dover, NH 03820

Telephone number : +1-603-742-2492
Internet contact information : https://iworx.com

FCC Compliance Statement (e.g., products subject to Part 15)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.