

Setup Instructions for ER-4000 Energizer/Receivers

VitalView® data acquisition software running on a Windows® PC is used to communicate with up to 32 ER-4000 Energizer/Receivers. The first ER-4000 in the series connects to the host PC through an RS-232 serial port or USB port with a USB/Serial adapter. Up to 31 additional units can be daisy chained together. See illustration below.

WARNING!

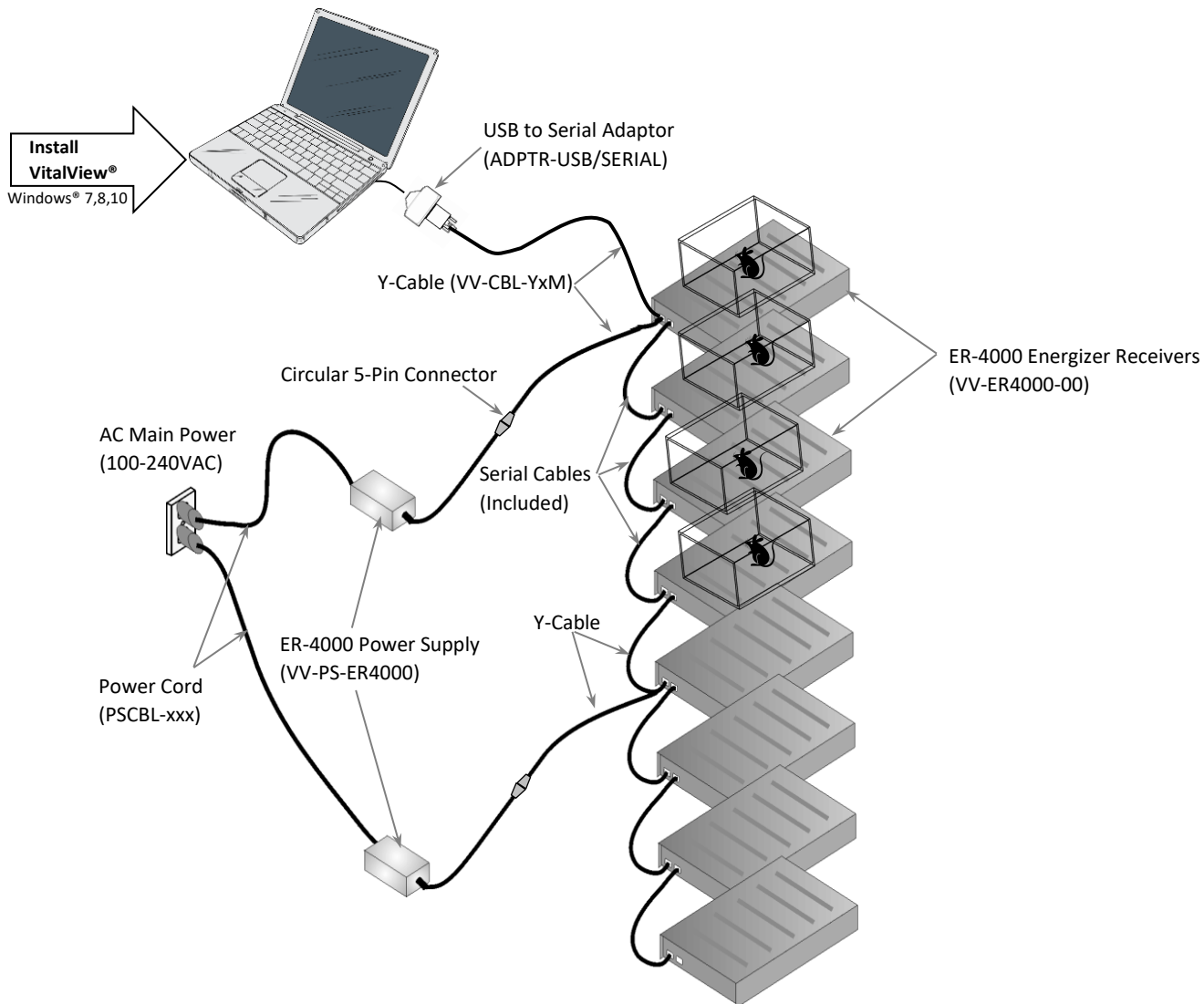
When setting up 1 or multiple ER-4000s,
ATTACH POWER CORDS LAST

Whether you are setting up VitalView Telemetry monitoring for the first time or adding ER-4000s to an existing installation, each individual ER-4000 must initially be set up and assigned a unique ID# using the "ER-4000 Utility" in the VitalView software.

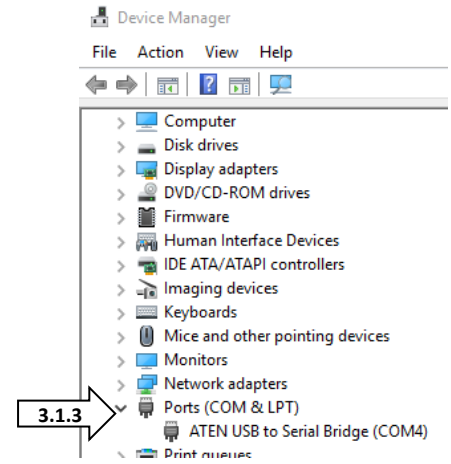
WARNING!

Unplug all power cords from wall power before connecting/disconnecting any Serial/Y-Cables

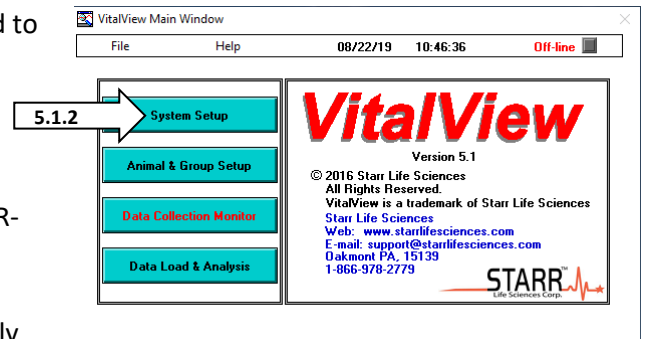
IF ADDING ER-4000s TO AN EXISTING INSTALLATION DISCONNECT ALL POWER CORDS FROM CURRENT SETUP, DISCONNECT Y-CABLE FROM 1ST ER-4000 AND PROCEED TO STEP 4 BELOW



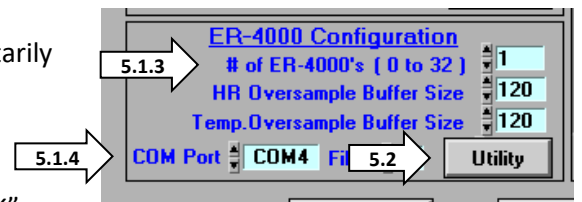
1. Insert the VitalView software CD into computer.
 - 1.1. If the software installation does not run automatically, use Windows to open the CD drive, copy the file "vitalviewwebversion 5.x" onto your computer then double click the file to run the installation program.
 - 1.2. Follow the on-screen prompts.
2. Plug a USB/Serial Adapter (ADPTR-USB/SERIAL) into a USB port on the computer (Install drivers if necessary)
3. Identify COM Port #
 - 3.1. Run Windows "Device Manager" on your computer
 - 3.1.1. Device Manager can be found through Windows Control Panel > System and Security > System
 - 3.1.2. -Or- by typing Device Manager into the Windows search box
 - 3.1.3. Find Ports (COM & LPT) and make note of COM# assigned to USB Serial Bridge (COM4 shown)



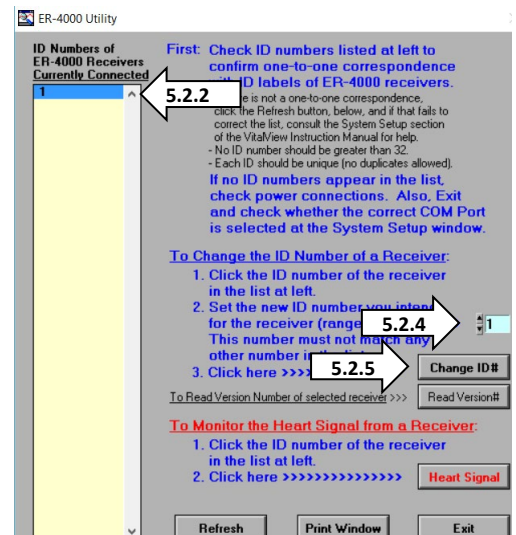
- 3.2. Close Device Manager
4. Attach first ER-4000(See Illustration)
 - 4.1. Connect the first ER4000 using a Y-Cable.
 - 4.1.1. Male 9-Pin connector attaches to "From Computer" on ER-4000
 - 4.1.2. Female 9-Pin connector attaches to USB/Serial Adapter
 - 4.1.3. Circular 5-Pin connector attaches to ER-4000 power supply
 - 4.2. Plug the appropriate power cord into the power supply then into a wall power outlet.
 - 4.2.1. Note: The green LED on the ER-4000 should light momentarily then turn off. The red LED should continue to blink.



5. Assign unique ID Numbers to each ER-4000
 - 5.1. Run VitalView® software
 - 5.1.1. If "Initialization error number 2" appears, ignore -Click "OK"
 - 5.1.2. Click "System Setup" button
 - 5.1.3. Set ER-4000 Configuration, # of ER-4000s = 1
 - 5.1.4. Set COM Port to value obtained through Device Manager in previous step



- 5.2. Click "Utility" button, "ER-4000 Utility" screen should appear
 - 5.2.1. Wait ~10 seconds until communication is established
 - 5.2.2. A single ID# should appear in the left column
 - 5.2.3. Use the mouse cursor to Select the ID#
 - 5.2.4. Enter the desired ID# in the small box on the right
 - 5.2.5. Click the "Change ID#" button
 - 5.2.6. The ID# in the left column should update to the new ID#
- 5.3. Attach an adhesive backed label indicating the ID# to the front panel of the ER-4000.



5.4. Assign next ID#

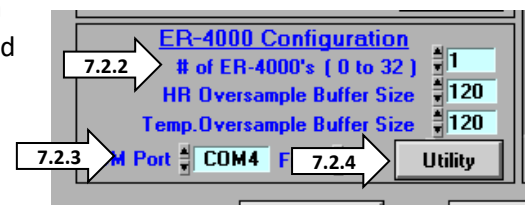
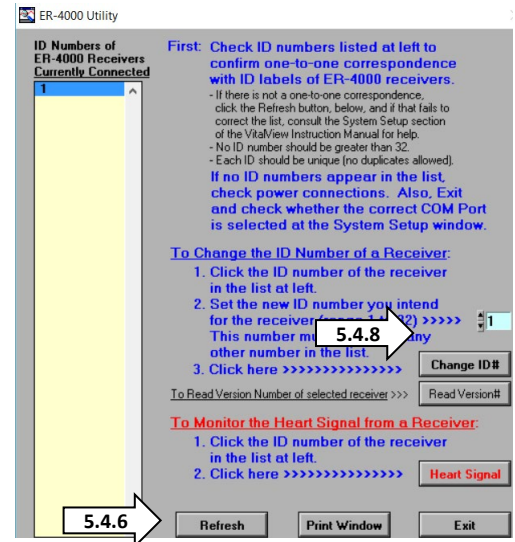
- 5.4.1. Unplug power cord from wall or ER-4000 Power Supply
- 5.4.2. Unplug Y-Cable from ER-4000
- 5.4.3. Plug Y-Cable into next ER-4000 to assign ID#
- 5.4.4. Plug Power Cord back into wall or Power Supply
- 5.4.5. Green LED on ER-4000 to turn on momentarily then off, red LED should continue blinking
- 5.4.6. Click "Refresh" button
- 5.4.7. Select the ID# from the list in the left column
- 5.4.8. Enter the desired ID# and Click "Change ID"
- 5.4.9. Repeat with all ER-4000s to be attached in series

6. Attach all ER-4000s to PC

- 6.1. Make sure all ER-4000s have a unique ID# assigned and all power cables are disconnected from wall power
- 6.2. Attach all ER-4000s in series using Y-Cables and Serial Cables (See Illustration)
 - 6.2.1. It is recommended to arrange ER-4000s in order of ascending ID# to avoid later confusion but it is not necessary for system to function
 - 6.2.2. Use a Y-Cable between the computer and the 1st ER-4000 (secure connections with captive screws)
 - 6.2.3. Connect the next 3 ER-4000s in series using the included Serial Cable (secure with captive screws)
 - 6.2.4. One ER-4000 Power Supply can power 4 ER-4000s so you need to use additional Y-Cables between ER-4000 #s 4 & 5, 8 & 9, 12 & 13, 16 & 17, 20 & 21, 24 & 25, 28 & 29
 - 6.2.5. Use included Serial Cables to make remaining connections
- 6.3. Once all ER-4000s are attached in series, attach all Y-Cables to ER-4000 Power Supplies using Circular 5-Pin Connectors
- 6.4. Lastly, plug each Power Cord into each Power Supply and plug into wall power
 - 6.4.1. The green LED on each ER-4000 should turn on momentarily then turn off, the red LED should continue blinking
 - 6.4.2. If you have an E-Mitter® handy you can place it on top of each ER-4000 and move it around until the green light comes on and stays on

7. Connect all ER-4000s to VitalView Software

- 7.1. Run VitalView software
- 7.2. Click on "System Setup"
- 7.3. Enter the total number of ER-4000s attached to the computer in the field labeled "# of ER-4000's (0-32)"
- 7.4. Verify COM Port is correct, change if necessary
- 7.5. Click on "Utility" button
- 7.6. Wait ~ 10 seconds to establish communication
- 7.7. ID#s for all ER-4000s should appear in the column on the left of "ER-4000" Utility window
- 7.8. Click "Exit" button



- 7.9. On "System Setup" window click on "OK" button
- 7.10. On "VitalView Main Window" go to File -> Save Configuration to File
- 7.11. Click "Save" button
- 7.12. Name file something like "InitialConfig" and make a note of where it will be saved (You can load this configuration file during future sessions if necessary, to establish initial communication)
8. See the VitalView User Manual for detailed instructions regarding configuring data channels and animal names/groups
9. Trouble Shooting
 - 9.1. ER-4000 ID# list is incomplete or the numbers do not match installation
 - 9.1.1. Click Refresh to reacquire the list.
 - 9.1.2. Check the AC power, plug strip switches, breakers, etc. Verify that each ER-4000 has power connected to it, and the red LED is blinking on each device.
 - 9.1.3. Check that each Y-Cable and serial cable is connected properly.
 - 9.1.4. Make sure there is one power supply/Y-Cable for every 4 ER-4000s.
 - 9.1.5. Check that the correct COM port is selected in VitalView/System Setup.
 - 9.1.6. Make sure no ER-4000s have duplicate ID#s
 - 9.1.6.1. To correct this problem, perform the steps from the previous section to identify the ID# of each individual ER-4000
 - 9.1.6.2. Make corrections as necessary.
 - 9.1.6.3. Reconnect all ER-4000s and verify that all numbers now appear correctly.
 - 9.2. If the LEDs on the front of an ER-4000 indicate proper operation (red LED blinks, green LED lights in the presence of an E-Mitter) but the PC will not communicate with an ER-4000
 - 9.2.1. Check that the Serial/Y-Cables are connected properly
Note: Make sure all power supplies are unplugged from wall power before connecting/disconnecting
 - 9.2.2. If all connections are correct but an ER-4000 does not show up on the ID list, the internal circuitry may be damaged. Contact Starr Life Sciences for technical support
 - 9.3. If the red and green LEDs on the front of an ER-4000 do not light when power is applied, the internal circuitry may be damaged, contact Starr Life Sciences Technical Support.