Getting to Know the Data Logger (EL-USB-TP-LCD)
Getting to know the Data Logger

- LCD Button
- LCD Screen
- Flasing Indicator Lights (Top=red; Bottom=green)
- USB Tip
Data Logger Setup

- Install the software & USB Driver from www.lascarelectronics.com
Data Logger Setup

- Install the EL-WIN-USB Control software & USB Driver from www.lascarelectronics.com

**EasyLog USB Software**

Version 7.5 of our EasyLog USB software, compatible with 32-bit and 64-bit versions of Windows 7, 8 and 10.

**FEATURES**

- A simple Windows-based wizard guides you through the easy set-up of your logger. Choose data logger name, measurement parameter, user selectable logging rates, LCD power saving options, high and low alarm levels and logging start times.
- Download data in graphical format, view time and date stamped readings or export to external spreadsheet software packages.
- View average statistics over a period of time for easier overviews of data logging sessions.
Data Logger Setup

- An icon will appear on your desktop, “EasyLog USB.”
Easy Log Software Options

- Connect the data logger to the computer, using the USB port.
- Double click on the EasyLog USB icon on your Windows® desktop- this will load the configuration software.
- You have 3 options:
  - Setup the data logger for a new log
  - Download the data logger
  - View previously saved data in graph format
How does the data logger work?

- Based on the parameters used during the set up process, the logger is set up to record a temperature every 15 minutes.
- The temperature displayed on the LCD may not be the current temperature. It is the temperature that was recorded at the last 15 minute interval.
- The indicator light should flash regularly. It will either be green or red.
- Green flashes if recorded temperatures have remained in range.
- Red flashes if the data logger recorded 4 consecutive out of range readings per the parameters used during setup.
Easy Log Software Options

- To set up the data logger, select ‘Set up and start the USB data logger’ (Select the green arrow).
Easy Log-Setup and start the USB data logger

- Name your logger (VFC 5-digit number, starting with “2” and indicate “R” for refrigerator or “F” for freezer (add more info to clarify additional storage units. e.g. Lab refrigerator, pharmacy freezer, etc.).
- Select the temperature scale the provider prefers - Fahrenheit or Celsius
- Select ’15 minutes’ for the frequency that the logger will log a reading (11 months).
- Select NEXT
Easy Log-Setup and start the USB data logger (cont)

- Select ‘LCD Always On.’
- Select ‘Logger continues to log, overwriting the oldest data when full.’
- Select NEXT
Easy Log-Setup and start the USB data logger (cont)

- Select High and Low alarm for refrigerator
  - Refrigerator
    - High alarm: 46°F / 8°C
    - Low alarm: 36°F / 2°C
- Select High alarm for freezer
  - Freezer
    - High alarm: 5°F / -15°C
    - Low alarm: n/a
- Check the hold box for each alarm you set
- Ensure ‘Disable LEDs’ is unchecked
- Select NEXT
Easy Log-Setup and start the USB data logger (cont)

- Enter ‘4’ as the number of alarms (i.e. one hour) that should have a time delay threshold.
- Select NEXT
Easy Log-Setup and start the USB data logger (cont)

- Installing the data logger for the first time? (If not, see slide #15)
- Select the ‘Delay the Start time of the data logger; select a start time and start date’ option for launching the data logger button.
  - Plan the Start Time for 2 hours after installation. This will allow the glycol adequate time to stabilize in the refrigerator or freezer.
  - *It is recommended to start the data logger on the hour or quarters-hour “e.g. 11:00 am, 2:15 pm, 5:45 pm.”*
- Select FINISH
Easy Log-Setup and start the USB data logger (cont)

- Click OK
- Remove the data logger from the USB port, use the plastic cap to cover the USB tip, and connect the glycol probe jack to the socket at the base of the data logger.
- Be sure not to mix up the freezer logger with the refrigerator logger prior to placement in the storage unit(s).
- Re-starting the data logger and the glycol is currently in the storage unit?
  - Select ‘Delay the start of the data logger.’
  - Add start date/time for launching the data logger (round up to the next quarter hour, i.e. convert 11:07 AM to 11:15 AM).

- Select FINISH
Easy Log-Setup and start the USB data logger (cont)

- Click OK
- Remove the data logger from the USB port, use the plastic cap to cover the USB tip, and connect the thermistor jack to the socket at the base of the data logger.
- Be sure not to mix up the freezer logger with the refrigerator logger prior to placement in the storage unit(s).
## LCD Display Guide

<table>
<thead>
<tr>
<th>Display</th>
<th>Logger Status</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS</td>
<td>Delayed Start</td>
<td>This is shown when the button is pressed and the logger is set to start at a specific date and time</td>
</tr>
<tr>
<td>PS</td>
<td>Push to Start</td>
<td>This will flash when the logger is setup for ‘Push to Start’ logging</td>
</tr>
<tr>
<td>Log</td>
<td>Logging</td>
<td>This is shown when the logger is running in ‘LCD off’ mode, and the button is pressed. The display clears again after a short period</td>
</tr>
<tr>
<td>---</td>
<td>Stopped</td>
<td>If the logger has not been set to log and the button is pressed, three dashes are displayed for a short period</td>
</tr>
<tr>
<td>CLR</td>
<td>Clear Max/Min</td>
<td>This indicates that the maximum and minimum stored values have been cleared after pressing the button for a few seconds. This will not work if the probe is disconnected or the logger is connected to a USB port</td>
</tr>
<tr>
<td>Prob</td>
<td>Probe has been disconnected</td>
<td>The flashing message ‘Prob’, followed by a number or letter, will be displayed if the logger is logging and the probe becomes disconnected. The number/letter confirms the type of probe that should be connected</td>
</tr>
</tbody>
</table>
Glycol Probe and Data Logger Placement

Ensure the glycol probe is placed standing upright in the most centralized area in the refrigerator or freezer. Stay away from walls, top shelf of the refrigerator, doors, or drawers.

Place the USB data logger on the outside of the storage unit using the magnetic clip.
Easy Log- Stop the USB data logger and download data

- Detach the logger from the refrigerator/freezer by unplugging it from the jack. Leave the glycol/probe in the storage unit.
- Connect the data logger to the computer through the USB port.
- Open the EasyLog USB software from your desktop.
- When do I download the data logger?
  - Upon observation of a flashing red light alarm. (Note: Data logger flashes a green OR red light every 10-20 seconds, so be sure to observe the flashing light to determine next steps)

AND

- ODH recommends downloading the data loggers *once per month* to practice downloading data, review the stability of the storage units, and to ensure data is not overwritten when the logger is full.
Easy Log Software Options

- To stop and download the data logger, select ‘Stop the USB data logger and download data’ (Select the red arrow)
Easy Log- Stop the USB data logger and download data

- You will receive a “Are you Sure you want to STOP the Data Logger?” message
- Select -YES
You will receive a message that the logger is in the Stopped position and the number of recorded readings.

Select ‘OK’
Easy Log- Stop the USB data logger and download data

- Please make certain the file location displayed is dedicated to data logger files (i.e. VFC data logger readings). Change the pathway to save the file to an alternate location (e.g. Shared drive, My Documents, etc.)

- **Note:** All providers should have a dedicated file on their computer to store data logger files.

- Change the file name each time you download data by adding the current date to the file name to avoid losing previously saved data.
Once downloaded, a graph containing all the readings will be displayed. You may also review the readings in ‘Data View.’

From this graph you are able to zoom in and out of readings by date and time.

You can also export all readings to Excel® (if you have Microsoft Office® products).

Select the ‘Export’ button at the top.)
Once the data has been exported to Excel®, a graph will appear.

If you select the Data tab, you can view the data in a spreadsheet format.
Easy Log - Stop the USB data logger and download data (cont.)

- ODH has a requirement that providers speak with a representative from the VFC Program immediately upon discovery of a red light flashing on a data logger.
- Please contact the ODH VFC Program at 1-800-282-0546.
Easy Log – Data Logger

- Once the data is downloaded, the logger is in the stopped mode.
- Remember to go back to the setup step to re-start the logger.
  - Select the ‘Delay the start of the data logger.’
  - Add start date and start time for launching the data logger (round up to the next half hour, i.e. convert 11:07AM to 11:30AM).
- The file created is a text file with the extension: .txt- Note: ODH will request this txt. file in situations involving temperature excursions.
- The file can be found in the dedicated data logger file created on the computer.
- The step-by-step setup & download instructions can be found online.
Easy Log Software Options

- To view previously saved data, select ‘View previously saved data’ (Select the graph)
Easy Log – view previously saved data

- Open your dedicated Data Logger folder from your computer.
- Select the .txt file.
- Select - Open
Easy Log – view previously saved data

Sample refrigerator data
Easy Log – view previously saved data

Sample freezer data
This is what you will see if you open up the .txt file that is downloaded from your data loggers.

Note: If you attempt to directly open the .txt file from your computer (instead of opening the .txt file using the Easy Log software) the data is difficult to read and you will not be able to view the information in a graph nor export the data to Excel®.
Reviewing Min/Max Temperatures

• Sites should check minimum and maximum (min/max) temperatures on your data logger once daily. This check is to be completed with the AM temperature documentation.
• This will help to assure that your storage units have not logged any out of range reading that may not have triggered the data logger red light (4 consecutive out of range readings)
• The min/max readings will be logged on the same temperature logs where the twice daily temperatures are logged.
Checking Max/Min Temperature

Press the LCD button to display the Max temperature indicated by the ▲ in the bottom right hand side of the screen.

Press the LCD button again to switch the display to the Min temperature indicated by the ▼ on the screen.

Press and hold the LCD button to clear out the previous recorded Min/Max temps. Hold until “CLR” appears on the screen. (approx 3-5 seconds).
What if the Min or Max temp is out of range?

- Mark vaccine as “DO NOT USE” and quarantine the vaccine in the storage unit.
- Download the data logger file; reset the logger to continue recording temperatures in the unit.
- Contact ODH Immunization Program at 1-800-282-0546 to discuss temperature excursion, recent storage unit activity, and determine next steps.
“My Data Logger is flashing a red light?!?
What does this mean? What do I do?”
Out-of-Range Temperatures

- Mark vaccine as “DO NOT USE” and quarantine the vaccine in the storage unit.
- Download the data logger file; reset the logger to continue recording temperatures in the unit.
- Contact ODH Immunization Program at 1-800-282-0546 to discuss temperature excursion, recent storage unit activity, and determine next steps.
- Document temperature excursion, actions taken to resolve situation, and results on a vaccine storage troubleshooting record (http://www.immunize.org/catg.d/p3041.pdf)
## Vaccine Manufacturer Contact Information

<table>
<thead>
<tr>
<th>Manufacturer/Website</th>
<th>Phone Number</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>bioCSL</td>
<td>844-275-2461</td>
<td>Afluria</td>
</tr>
<tr>
<td>Biotest Pharmaceuticals</td>
<td>800-458-4244</td>
<td>Bivigam (IGIV), Nabi-HB (HBIG)</td>
</tr>
<tr>
<td>Emergent Biosolutions</td>
<td>866-300-7602</td>
<td>BioThrax, HepaGam B (HBIG), VARIZIG (VZIG)</td>
</tr>
<tr>
<td><a href="http://www.emergentbiosolutions.com">www.emergentbiosolutions.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GlaxoSmithKline</td>
<td>866-475-8222</td>
<td>Bexsero, Boostrix, Cervarix, Engerix-B, Fluarix, Flulaval, Havrix, Hiberix, Infanrix, Kinrix, Menevo, MenHibrix, RabAvert, Rotarix, Pediarix, Twinrix</td>
</tr>
<tr>
<td><a href="http://www.gskvaccines.com">www.gskvaccines.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Massachusetts Biological Labs</td>
<td>617-474-3000</td>
<td>IGIM, Td</td>
</tr>
<tr>
<td><a href="http://www.umassmed.edu/massbiolabs/index.aspx">www.umassmed.edu/massbiolabs/index.aspx</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MedImmune, Inc.</td>
<td>877-633-4411</td>
<td>FluMist</td>
</tr>
<tr>
<td><a href="http://www.medimmune.com">www.medimmune.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merck &amp; Co., Inc.</td>
<td>800-444-2080</td>
<td>BCG, Comvax, Gardasil, Gardasil 9, M-M-R II, PedvaxHIB, Pneumovax 23, ProQuad, Recombivax HB, RotaTeq, Vaqta, Varivax, Zostavax</td>
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<tr>
<td>Novartis Vaccines</td>
<td>877-683-4732</td>
<td>Agriflu, Flucelvax, Fluvirin, (distributor for Ixiaro)</td>
</tr>
<tr>
<td>PaxVax</td>
<td>858-450-9595</td>
<td>Vivotif</td>
</tr>
<tr>
<td><a href="http://www.paxvax.com/">http://www.paxvax.com/</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pfizer</td>
<td>800-438-1985</td>
<td>Prevnar 13, Trumenba</td>
</tr>
<tr>
<td><a href="http://www.pfizerpro.com/">www.pfizerpro.com/</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protein Sciences Corp.</td>
<td>800-488-7099</td>
<td>FluBlok</td>
</tr>
<tr>
<td><a href="http://www.proteinsciences.com/">http://www.proteinsciences.com/</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sanofi Pasteur</td>
<td>800-822-2463</td>
<td>ACAM2000, ActHIB, Adacel, Daptacel, Decavac, DT, Fluzone, Imovax Rabies, Ipol, Menactra, Menomune, Pentacel, Tenivac, Typhim Vi, YF Vax</td>
</tr>
<tr>
<td><a href="http://www.vaccineshoppe.com">www.vaccineshoppe.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talecris Biotherapeutics</td>
<td>800-520-2807</td>
<td>HBIG, IGIM, RIG, TIG</td>
</tr>
<tr>
<td><a href="http://www.talecris.com/talecris-biotherapeutics-us-home.htm">www.talecris.com/talecris-biotherapeutics-us-home.htm</a></td>
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</table>

March 2015
## Emergency Response Worksheet

What to do in case of a power failure or other event that results in vaccine storage outside of the recommended temperature range

Follow these procedures:
1. Close the door tightly.
2. Ensure the vaccine is kept at appropriate temperatures. Make sure the refrigerator or freezer is plugged in and working properly, or move the vaccines into proper storage conditions as quickly as possible.
3. Do NOT discard the affected vaccines unless directed to by your state/local health department and/or manufacturer(s). Label the vaccines “Do Not Use” so that the potentially compromised vaccines can be easily identified.
4. Notify the state/local health department or call the manufacturer (see manufacturers’ phone numbers below).
5. Document the inventory of affected vaccines below and document the circumstances of the event and the actions taken on the Vaccine Storage Troubleshooting Record (see www.immunize.org/caig/dp#3041.pdf).

### Vaccines Stored in Refrigerator

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Manufacturer</th>
<th>Lot #</th>
<th>Expiration Date</th>
<th># of Doses (i.e., n# of vials)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

### Vaccines Stored in Freezer

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Manufacturer</th>
<th>Lot #</th>
<th>Expiration Date</th>
<th># of Doses (i.e., n# of vials)</th>
</tr>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Important Contact Information:

**Vaccine Manufacturers**
- Crucell Vaccine Inc. *1* (800) 533-5809
- CSL Biotechnologies, Inc. (refer to Merck) *2* (877) 246-8472
- GlaxoSmithKline (888) 825-3249
- Intervaccines (301) 556-4500
- MedImmune, Inc. (877) 672-6372
- Merck & Co., Inc. (800) 672-6372
- Novartis Vaccines (800) 244-7668
- Pfizer Inc. (800) 438-1985
- Protein Sciences Corp. (800) 488-2099
- sanofi pasteur (800) 822-2463

**Health Departments**
- Local health department phone
- State Health Department phone

**Immunization Action Coalition**
- 651-647-9009

*Manufacturers of less commonly used vaccine:
1. rts
2. Abingdon
3. Janssen
Questions on Anthrax (CSL Biotechnologies, Inc.) should be directed to Merck & Co., Inc.
## Vaccine Storage Troubleshooting Record

Use this form to document any unacceptable vaccine storage event, such as exposure of refrigerated or frozen vaccines to temperatures that are outside the manufacturers’ recommended storage ranges.

<table>
<thead>
<tr>
<th>Date &amp; Time of Event</th>
<th>Storage Unit Temperature at the time the problem was discovered</th>
<th>Room Temperature at the time the problem was discovered</th>
<th>Person Completing Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
<td>Temp when discovered:</td>
<td>Temp when discovered:</td>
<td>Name:</td>
</tr>
<tr>
<td>Time:</td>
<td>Minimum temp:</td>
<td>Maximum temp:</td>
<td></td>
</tr>
</tbody>
</table>

### Description of Event

- General description (i.e., what happened?)
- Estimated length of time between event and last documented reading of storage temperature in acceptable range (36°F to 46°F [2°C to 8°C] for refrigerator; -20°F to 5°F [-29°C to -15°C] for freezer)
- Inventory of affected vaccines, including (1) lot #s and (2) whether purchased with public (for example, VFC) or private funds (Use separate sheet if needed, but maintain the inventory with this troubleshooting record)
- At the time of the event, what else was in the storage unit? For example, were there water bottles in the refrigerator and/or frozen coolant packs in the freezer?
- Prior to this event, have there been any storage problems with this unit and/or with the affected vaccine?
- Include any other information you feel might be relevant to understanding the event.

### Action Taken

- Document thoroughly. This information is critical to determining whether the vaccine might still be viable.
- When were the affected vaccines placed in proper storage conditions? (Note: Do not discard the vaccine. Store exposed vaccine in proper conditions and label it “do not use” until after you can discuss with your state/local health department and/or the manufacturer(s))
- Who was contacted regarding the incident? (For example, supervisor, state/local health department, manufacturer—list all)
- IMPORTANT: What did you do to prevent a similar problem from occurring in the future?

### Results

- What happened to the vaccine? Was it able to be used? If not, was it returned to the distributor? (Note: For public purchase vaccine, follow your state/local health department instructions for vaccine disposition.)