

This handout provides steps for initial set up and use of the VFC Digital Data Logger. Proper use of storage equipment is important in ensuring vaccines are safe and effective. The Michigan Department of Health and Human Services (MDHHS) follows recommendations set forth by the Centers for Disease Control and Prevention (CDC) on digital data loggers.

## Equipment

Be sure to have all necessary equipment as provided by manufacturer—Control Solutions:

- Data Logger, with clear plastic cover
- Extra Battery—should already have a battery in unit
- 2 year NIST traceable Certificate of Calibration
- Quick Start Guide (keep handy for guidance on battery replacement or to reference LCD indications)
- Clear Plastic Stand and single data logger cradle
- Glycol Liquid Probe vial

## Preparing Your VFC Digital Data Logger

- Use Quick Start Guide to prepare data logger for use
- Install software and USB driver by inserting mini-disk (provided) into CD drive of computer
  - Follow instructions in step 1 of the “Quick Start Guide”
  - If a mini-disk was not provided; please download the latest EL-WIN-USB software from <http://www.vfcdataloggers.com>
- Ensure battery correctly installed and unit working
  - NOTE: If battery goes bad, logger will not work, but previous temperatures are maintained

## Setting Up Your Digital Data Logger

- Insert data logger into available USB port on computer
  - NOTE: Leaving data logger plugged into computer will decrease battery life
- Double click on Easy Log USB icon on Windows™ desktop; this will load configuration software
- Once configuration software is open, select set up and start USB Data Logger option:
  - Name data logger—the number of logger will already be visible
    - May want to name logger based on unit it is placed in: example (Unit #1 Freezer)
- Select temperature scale and input type; K for TC models and A or 2 for TP models (Check tag on probe)
- Select frequency of reading—this is how often data logger will record a temperature
  - Recommended every 15 minutes by CDC; if 15 is unavailable use interval less than 15 minutes
- Select data logger display; LCD on for 30 seconds after button pressed or suggest LCD always on
  - LCD always on allows temperature to be seen when near storage unit—will decrease battery life
- Select how data logger is to perform when it is full—suggest selecting logger stops when full
- Select alarms to be set and set temperature readings that would indicate high and low temperatures
  - Fahrenheit reading, suggest 47°F for high and 34°F for low for refrigerator; freezer suggest 6°F for high and -59°F for low (-40 is lowest allowable for TP models)
  - Celsius readings, suggest 9°C for high and 1°C for low for refrigerator; freezer suggest -16°C for high and -51°C for low (-40 is lowest allowable for TP models)
  - In order for logger to continue to indicate an alarm condition, check “hold”
- For TP models Enter the number of consecutive readings in an alarm condition before it is indicated by the LEDs—suggest 1 reading no delay for both high and low alarms
- Indicate when to start data logger, suggest:
  - Delay start and add 10 minutes to displayed start time
  - When data logger button is pressed, remember to press button once

## How Do You Place a Data Logger in a Storage Unit?

- Data logger monitor is placed outside refrigerator or freezer; place probe in storage unit, centrally located directly with vaccines. Connect probe to monitor via the 4 foot cable—for large storage units, 10 foot probes are available (10 foot probes come standard with TP models)
- TP models only will flash “Prob” if logging and not connected to the probe. If this occurs you will receive the following error upon downloading: “During the last log session a probe connection error occurred. Ensure the probe connector is fully inserted. Connection errors will be shown on the graph as readings lower than -50°C (-58°F).”
- If using a pharmaceutical-grade storage unit there is often a built-in port in wall of unit, designed to allow probe to enter unit and remain in glycol among vaccines
- If storage unit does not have a built-in port for temperature monitoring, probe should enter through door of storage unit
  - The wire should enter refrigerator/freezer on the hinge side high in the corner
  - Be careful to monitor wire and ensure that frost does not build up

## Downloading Data

- To download data, remove data logger from outside of storage unit by disconnecting from cord
  - Probe should stay inside of storage unit
- Place data logger into USB port on computer, open EasyLog software via the EasyLog USB icon, choose option on the configuration software to “Stop the USB Data Logger and download data”
  - A pop up will appear prompting to save as a .txt file; add date to file name and save in desired location on computer—suggest in a folder on computer labeled “VFC Data Logger”
    - NOTE: When saving the .txt file, software will default to name of the logger—If name is not changed every time it is downloaded, it will overwrite previously saved data
  - After naming logged data (e.g., Freezer 2 January 9, 2015), a graph program will open automatically and display downloaded readings as a graph
    - Graph screen information can be saved in additional formats using the Export function; exporting to an Excel file will give quick access to graphs in the future
    - Any out-of-range temperature can be checked from the graph screen using Data View option—out of range temperatures will be highlighted in red
  - Once logger data has been saved and reviewed, the data logger will need to be set up again
    - Select set up and start USB data logger option from the EasyLog USB software screen and repeat the steps under “Setting Up Your Digital Data Logger” section of this tip sheet
  - Remember: Data logger data should be downloaded and saved weekly
  - All temperature data should be stored for at least 3 years, including temperature logs and .txt files

## Reset Minimum/Maximum Temperatures

- Assess and record temperatures on a temperature log twice daily
- It is recommended to assess, record and reset min/max temps every AM
- To assess the min/max temperature, press button on data logger and max temperature will be displayed with an up arrow; press button again to display min temperature with a down arrow
- Press and hold button 4-7 seconds until “CLr” is displayed to reset daily min/max temperatures

## Key Points to Remember

- When need to change the battery, follow the instructions in step 2 of the “Quick Start Guide”
- In case of temperature excursion, download data logger and print out readings to assess temperature history and durations; useful when calling vaccine manufacturers for viability concerns
- Please follow manufacturer recommendations for required calibration
- For handout to display on your storage unit refer to: “Tip Sheet for Steps on VFC Data Logger Use”