

# ZOOM® Dual Power Supply

Catalog Numbers ZP10001, ZP10002

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Use the following instructions to operate the power supply for **high voltage/low current** and **low voltage/high current** applications using **Constant Operation** (below) with one voltage limit, current limit, and power limit for the entire length of the electrophoresis or **Programmable Mode** (reverse side) for applications that require varying limits of voltage (V), current (mA), or power (W) during specified periods of time as discrete changes (STEP) or as gradients (RAMP). For more information and detailed instructions, refer to the ZOOM® Dual Power manual, available at [www.lifetechnologies.com/manuals](http://www.lifetechnologies.com/manuals).

## General Instructions

- Use the power switch located on the rear side of the power supply to turn on the instrument. Upon start-up, the **Main Menu Screen** appears.
- Use the Pause key, Start/Stop key, and output jacks on the **left** side of the instrument for **high voltage/low current** applications.
- Use the Pause key, Start/Stop key, and output jacks on the **right** side of the instrument for **low voltage/high current** applications.
- Use the F1 key displayed next to the page-up or page-down sign on the screen to move to the next screen or to the previous screen, respectively.
- Use the F2 key displayed next to the ESC sign on the screen to return to the **Main Menu Screen** or to move from the **Programming Screen (Programmable Mode)** to the **Set Program Limits Screen**.









## Constant Operation

Use the **Constant Operation** if your application requires only one limit for voltage (V), current (mA), and power (W) for the entire duration of electrophoresis.

- Press F1 to select **Constant Operation** from the **Main Menu Screen** options.


- Use the F1 key on the **left** hand side to run a **high voltage/low current** application.
- Use the F1 key on the **right** hand side to run a **low voltage/high current** application.

- Set **Constant Limits Screen - setting constant parameter limits for electrophoresis**

- Use the   keys to move the cursor up and down between parameters.
- Press the  key to select the parameter you want to set.
- Use the   keys to move cursors between numeric place values.
- Use the   keys to increase and decrease numeric values.
- Press the  key again to set the entered parameter values.

- Set **Constant Limits Screen - toggling between minutes (Min.) and volt-hours (V.H. or V/H)**

**Note:** For best results, we recommend using time (Min.) with Life Technologies electrophoresis products.

- Use the  key to move the cursor down to the time parameter (default on **Set Constant Limits Screen**).
- Press F3 to toggle between time (T) and volt-hours (V/H).

- Press F1 on the **Set Constant Limits Screen** to advance to the **Running Screen**.

- Running Screen - toggling between ENABLE or DISABLE the No Load detection alarm**




- If you intend to run an operation with very low current (<0.01 mA), for example isoelectric focusing, press F2 to **DISABLE** the No Load detection alarm before starting electrophoresis. When disabled, the screen will display **No Load DISABLE**.



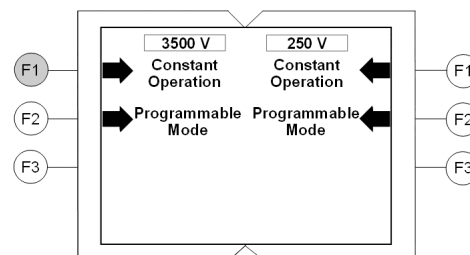
Disengage any unused leads and electrophoresis units before starting an operation when the No Load detection alarm is **DISABLED**.

- The alarm is automatically reactivated if electrophoresis is interrupted by pausing or stopping the run and must be disabled manually again before resuming electrophoresis.

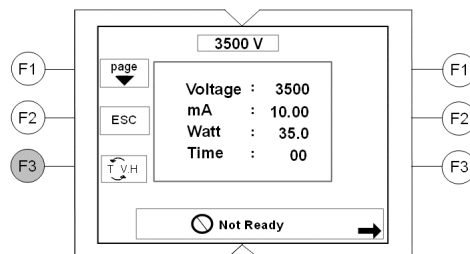
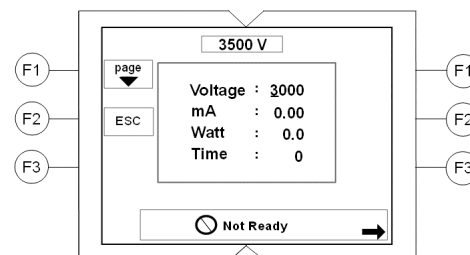
- Running Page - Start, Stop, and Pause**

- Press the  key to start electrophoresis.
- Press the  key to temporarily interrupt power to an electrophoretic run in progress without terminating the operation. Press the PAUSE key again to resume the operation without resetting the timer.
- Press the  key to stop electrophoresis prior to reaching its programmed end or to clear the "FINISH" display and stop the audio signal that occur upon completing an operation.

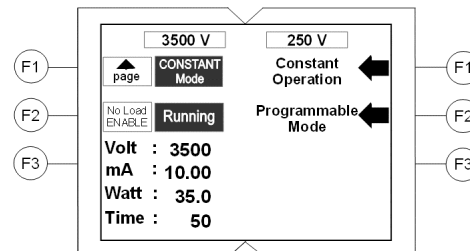
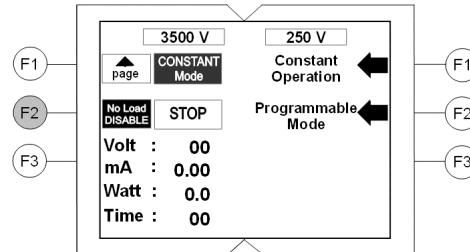
Main Menu Screen



Set Constant Limits Screen


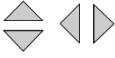


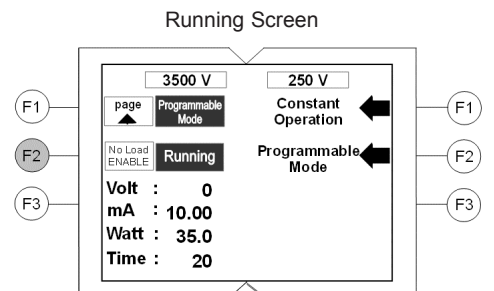
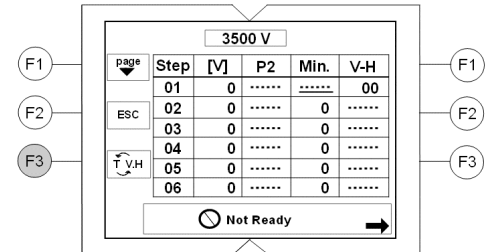
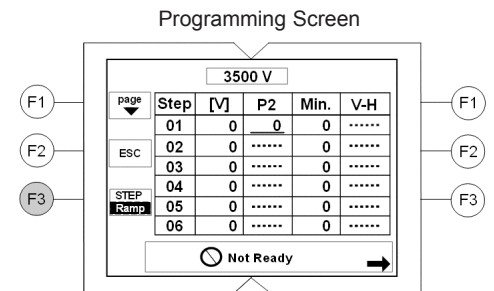
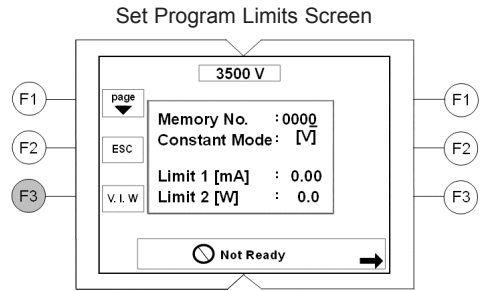
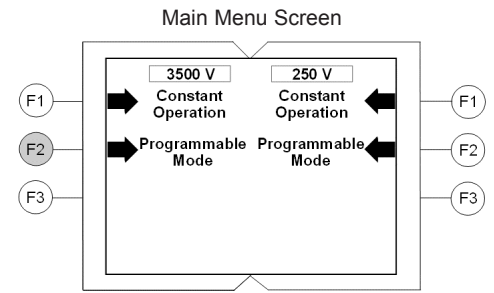
Running Screen




# Programmable Mode

Use the **Programmable Mode** if your application requires varying limits of voltage (V), current (mA), or power (W). See reverse side for **General Instructions**.

- Press **F2** to select **Programmable Mode** from the **Main Menu Screen** options
  - Use the **F2** key on the **left** hand side to run a **high voltage/low current** application.
  - Use the **F2** key on the **right** hand side to run a **low voltage/high current** application.
- Set Program Limits Screen - choosing Memory No. and Limits for electrical parameters**
  - You can choose from 16 Memory Nos. (0-15) on each side of the instrument. To save a program, choose from Memory Nos. 1-15. Use Memory No. 0 for immediate use; this program will not be stored.
  - Follow the instructions in Step 2 of **Constant Operation** (see reverse side) to set parameters.
- Set Program Limits Screen- choosing limiting electrical parameters**
  - For the **Constant Mode**, the default setting is voltage (V) with Limit 1 in current (mA) and Limit 2 in power (W).
  - Use the  keys to move the cursor to the **Constant Mode** parameter.
  - Press **F3** once to change the **Constant Mode** parameter to current (mA) with Limit 1 in voltage (V) and Limit 2 in power (W). Press **F3** once again to change the **Constant Mode** parameter to power (W) with Limit 1 in voltage (V) and Limit 2 in current (mA).
- Press **F1** on the **Set Program Limits Screen** to advance to the **Programming Screen**.
- Programming Screen - setting program parameters**
  - Use the  keys to move the cursor along rows (Steps 01 to 06 of the program) and columns (voltage [V] in the default setting; P2 for setting a RAMP endpoint; Min. or V-H for setting the duration of the run in minutes or volt-hours).
  - Follow the instructions in Step 2 of **Constant Operation** (reverse side) to set parameters.
- Programming Screen - toggling between RAMP and STEP settings**
  - The STEP setting (for discrete changes of parameter values) is activated by default on the **Programming Screen** (dashed lines in the P2 column).
  - Use the directional arrow keys to move the cursor in the P2 column to the row corresponding to the step for which you want to apply the RAMP function (for a gradual, linear change of the parameter towards the selected end-point).
  - Press **F3** to activate the RAMP function (an underlined numeric value appears). Use the SET key and up and down arrow keys to enter the RAMP endpoint value.
- Programming Screen - toggling between minutes (Min.) and volt-hours (V-H or V.H.)**
  - By default, the Min. column is activated (dashed lines in the V-H column). **Note:** For best results, we recommend using time (Min.) with Life Technologies electrophoresis products.
  - Use the directional arrow keys to move the cursor in the Min. or V-H column to the row corresponding to the program Step you want to set.
  - Press **F3** to switch between activation of Min. and V-H in the targeted Step. Activated cells display a numeric value. Inactive cells display “- - - -”.
  - Use the SET key and up and down arrow keys to set the desired duration values.
- Press **F1** on the **Programming Screen** to advance to the **Running Screen**
- Running Screen - toggling between NO LOAD detection alarm ENABLED/DISABLED**
  - If you are performing a run with very low current, press **F2** to **DISABLE** the No Load detection alarm. “No Load **DISABLE**” will appear on the screen.
- See Step 5 of **Constant Operation** (reverse side) for further important information about the No Load detection alarm.
- Running Screen - Start, Stop, Pause**
  - Follow the instructions in Step 6 of **Constant Operation** (reverse side) to Start, Stop, and Pause electrophoresis.



 See Step 5 of **Constant Operation** (reverse side) for further important information about the No Load detection alarm.

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