

BIOCHROM ASYS EXPERT PLUS MICROPLATE READER

QUICK START GUIDE



1. Turn on the instrument. Connect instrument to a power source using the appropriate power cord.
 - ✓ Check user's manual for important safety information.
2. The display will show the main menu.

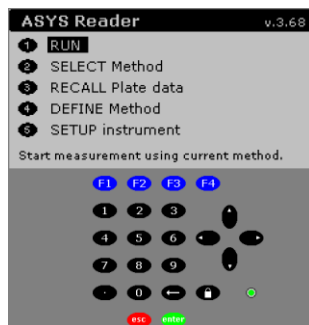


Figure 1 Expert Plus Display and Keypad

To select options on the screen use the arrow keys to position cursor and the green button to confirm your selection. The red button can be used to return to the main/previous menu.

3. Connect the instrument to a printer connecting the printer cable to the parallel port at the back of the instrument to the printer. Select printer in the onboard software by selecting **2)SETUP instrument** and **1)Printer**. See <http://www.biochrom.co.uk/faq/8/microplate-instrumentation.html> for a complete list of compatible printers.
4. To measure a plate, first define a method.
5. In main menu select **DEFINE Method**. A new method can be defined at this point or an existing method can be edited.
6. Select **START a new method**.
7. Select the measurement and reference wavelengths by scrolling through filters using the right and left arrow keys.
 - ✓ Note: A reference reading is recommended to account for optical interference that may result from the plate. For reference reading, select a wavelength that the sample of interest does not absorb.
7. Shaking or kinetics can be selected in the filters method definition window.
 - ✓ For shaking: Press F2. A new window will open, select time in seconds using the number key pad. Select mode (slow, medium, fast and intensive) using the up and down arrow keys to move the cursor and the right/left arrow to scroll through the mode options. Press F4 to confirm choices or F3 to discard.

- ✓ For kinetics: Press F4 to select interval in seconds and number of readings using the number key pad. Press F4 to confirm choices or F3 to discard.

If shaking and/or kinetics options were selected, the filters method definition window will show **ON** after shaking and/or kinetics.

- Next, define the plate layout. For controls, standards and samples, replicate direction can be selected under F3, **Options**. F1 selects the type, F3 selects horizontal or vertical replicates and F4 positions control in the plate. Press place to select the well of choice. Continue the plate layout is completed. Use the backspace arrow to erase choices.

Table I. Key to Control and Standards used in Plate Layout

Code	Control Type	When to Use:
BK	Blank	The absorbance of the blank is automatically subtracted from the absorbance of all other wells on the plate.
NC	Negative control	Use for qualitative/screening tests
PC	Positive control	Use for qualitative/screening tests
LP	Low positive	Use to define range of positive samples
HP	High positive	Use to define range of positive samples
CO	Control	Use as required
QC	Quality control	Use as required
ST	Standards	Use for quantitative determinations; a maximum of 16 standards can be used.

- ✓ Samples can be placed either individually by moving the cursor to the desired location or all wells can be filled with individual samples by selecting F2, Fill All.
- Press enter to move to the next method definition box. If a kinetic measurement was selected in a previous option, the kinetics definition options will be displayed (if not continue on). Select enter to reach next window.
 - Press enter to get to the next method definition: standards. Use this screen to enter the values of the standards, the units for the concentration and to choose the curve-fit method. Press enter.
 - ✓ Choose the F1, **Quick**, for entering standards using a dilution or multiplication factor.
 - If measurements are to be analyzed, select method to be used. Options include:

Method	When to Use:
Factor	If a batch-specific calibration factor is used

Elimination	If individual controls must meet set criteria
Transformation	If a calculation is to be applied to the entire plate
Thresholds	If samples are assigned to groups based on minimal measurements or transformation value
Validation	If controls must meet set criteria for a test is to be considered to be valid.

13. The next page will prompt the user to configure the printout. Press enter to confirm choices.
14. Name and save the new method using **Replace** (to replace existing method) or **Insert** (to add to method menu). Enter a name for the method using the alphanumeric function. Press enter to save method.
15. To run the method, position cursor to the first position in the main menu. The plate carrier will move out, allowing you to load the microplate. Enter a plate ID. Press the F3 key to select the post run option, printer serial or none (if neither printer nor PC is connected). Results are stored in the memory and can be recalled later, using the recall plate data option.