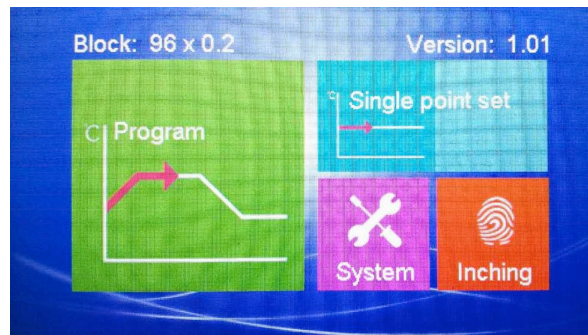## Bioer MB-202 ThermoShaker Mixing Block

Quick Start Guide

SETUP AND ASSEMBLY:

Unpack the base unit and modular thermal blocks. Set aside the packing list, QC certificate, power cord, and spare parts (rubber ball feet and fuses). Place the base unit on a hard surface with adequate space for airflow in every direction (more detailed placement precautions can be found in the full operation manual).

Holding a thermal block with the eject button to your right, hook the left side over the left edge of the shaking platform of the base unit, then press the right edge down until it clicks into place. Lift the clear cover to remove it from the block.

Connect the power cord to the back of the base unit and plug it into the wall. Turn on the power switch at the back of the unit. The home screen will appear:

From here you'll have 4 options:
- "Single point set" - Start a single-step incubation with specific parameters
  - Temperature (0 – 100°C)
  - Time (up to 99h:59m:59s or continuous)
  - Speed (300 – 2000 rpm forward, reverse, intermittent or alternating)
- "Program" - Create, save and run a program with multiple steps
- "Inching" - Momentarily shake samples at ambient temperature
- "System" – Change language and audible feedback options

SINGLE POINT SET:

Touch with finger or stylus to select that option, then within each white numerical value box to change. Enter a digit for every place value or "clr" for the minimum allowable value.

- Temperature: Touch the ellipsis (…) to define the rate of temperature change (allowable range is 1 - 6°C/min but operating conditions may affect actual results).
- Time: Touch "∞" for continuous operation.

- Speed: Touch the ellipsis (…) to define shaking direction and intermittent shaking intervals. Forward and Reversal represent, respectively, clockwise and counterclockwise shaking. Interval and Alternate will allow for intermittent shake and pause cycles (Alternate will change direction every time); boxes will allow entry of cycle time values if Interval or Alternate are selected.

Touch "OK" if in a submenu, then "SAVE" to make your new settings the default for a Single point set run. Finally touch "RUN" to start the program. **Note that the countdown timer does not start until the endpoint temperature has been reached**.

PROGRAM MODE:

Touch "Program" and then "ADD" from the bottom menu. In the table that appears, the five columns represent the maximum number of steps a program can include. Touch column 1, which is prepopulated with sample parameters. Adjust the parameters as in the SINGLE POINT SET menu, then touch "OK".

To insert a second step, touch "ADD" again and set parameters. Touch "OK" and notice that these second step parameters will appear in column 2. Again, in each consecutive step, the timer will not start until the target temperature has been reached.

Touch "SAVE" to store this program with a unique alphanumeric name (maximum of 8 characters). Key in the name and touch "SAVE" again. Touch "RUN" to start the program right away or "BACK" to return to the program screen. You'll be able to save up to 10 programs. At any point during the run, touch "DETAIL" to see the full program along with which step is currently running. You can pause (shaking and timer will stop but temperature will be maintained) or stop (entire run will terminate) at any time.

INCHING:

This function allows for momentary use of the shaker. Touch the fingerprint to begin, release to stop. Speed follows that parameter in the "SINGLE POINT SET" menu but is always clockwise and continuous.

SYSTEM:

Use this screen to change display language and select which device functions (every key pressed, error, end of program) will produce audible feedback.