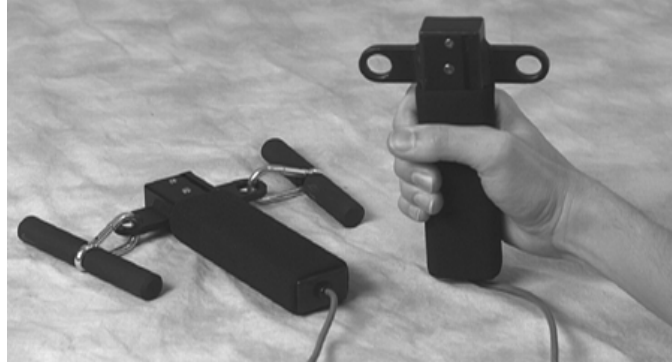


SS25L has been discontinued; see SS25LA or SS25LB (compatibility based on BIOPAC system software version).

SS25L HAND DYNAMOMETER



DYNAGRIPS option and SS25L Hand Dynamometer

The multi-purpose hand dynamometer adds a new dimension to force measurements. This fully isometric transducer can be used in the traditional hand grip strength fashion, pulled apart by both hands (the DYNAGRIPS option), or mounted against a wall and pulled. The hand dynamometer can be used in isolation, or combined with EMG recordings for in-depth studies of muscular activity. The isometric design improves experiment repeatability and accuracy. The hand dynamometer is designed to interface with the MP30. With the proper equipment and correct scaling techniques described below, precise force measurements can be obtained.

HARDWARE SETUP

Connect the SS25L to the MP30. When using this type of transducer, proper hand placement is at the uppermost portion of the foam grip, directly below the dynagrip connections.

SCALING — SOFTWARE SETUP FOR THE MP30

- 1) Select **Setup Channels** under the MP30 menu and enable one analog channel.
- 2) Select the desired **Hand Dynamometer Preset** (Kg or Lbs).
- 3) Click on the **View/Change Parameters** button.
- 4) Click on the **Scaling** button to activate a dialog box similar to the one shown below:

	Input value	Scale value
Cal1	0.7556 μV	0.0000
Cal2	0.7819 μV	1.000

Units label: Kg

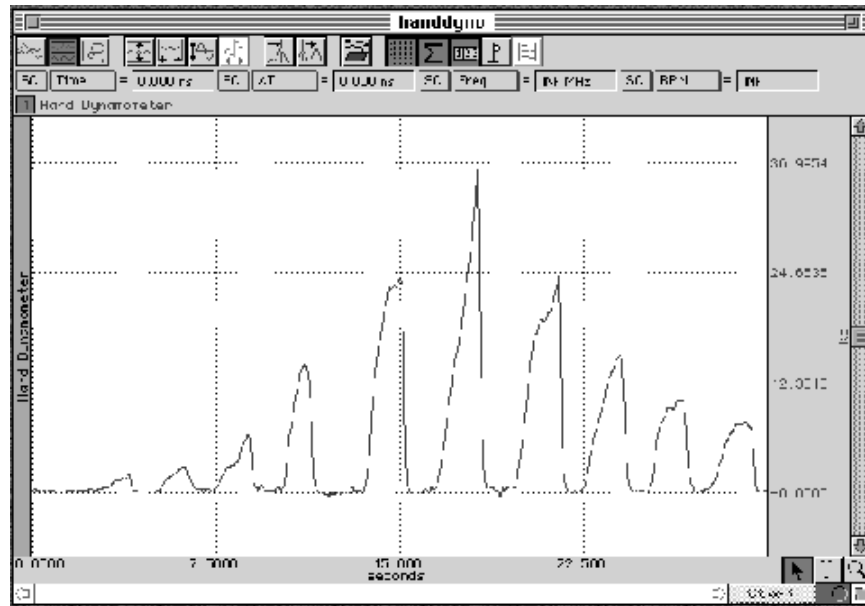
Buttons: Cancel, OK

- 5) In the **Scale value** column, enter the scaling factors of “0” for **Cal1** and “1” for **Cal2**. These represent 0 and 1 kilograms, respectively.
- 6) Take the SS25L and rest it on the table.
- 7) Click on the **Cal1** button with the mouse to get a calibration reading.
- 8) To obtain a value for the **Cal2** box, add $65.75\mu\text{V}$ per kg to the value from the Cal1 box.
 - This is done because the MP30 is factory-set to 5V of excitation, so you will always add $65.75\mu\text{V}$ per kilogram.

TESTING CALIBRATION

To see if the calibration is correct:

- a) Start acquiring data.
- b) Place the hand dynamometer on a flat surface and place a known weight on the uppermost portion of the grip. The weight should be reflected accurately in the data acquired.



Sample Data

SS25L SPECIFICATIONS

Isometric Range:	0-100 Kg
Dimensions:	185mm (long) x 42 mm (wide) x 30 mm (thick)
Nominal Output:	$20\ \mu\text{V}/\text{kg}$
Weight:	315 grams
Cable Length:	2 meters