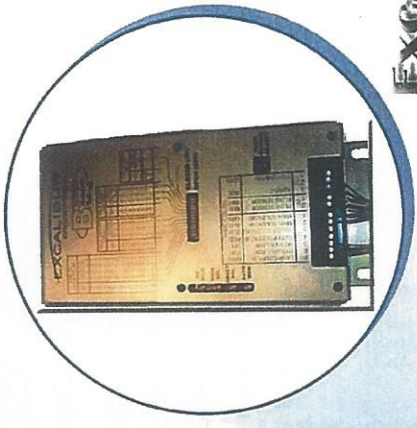


# B2000 Automatic Takeoff

→ Operating Manual ←



**Excalibur**

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*-Ensure all Power has been turned off!*

**- Complete System Installation**

- Connect white Molex Connectors to board as shown below, matching colors.
- Mount unit using available holes.
- Hookup Molex Connectors to matching connectors.

**- Complete System Replacement**

- Remove the old Board System using the four screws on the Front Panel.
- Replace the old Board System with the new Board System.
- Attach with the same four screws to the Front Panel.
- Hook cables up—matching each plug and receptacle as shown below.



**- Idle (Power-On) State**

In its idle state, the claw is in a lowered position. The B2000 may be set to either automatic or manual mode by pressing the auto/manual button.

If the attach button is pressed in manual mode, the claw is raised and remains there until either the auto/manual or attach button is pressed, at which point the B2000 returns to its idle state, lowers the claw, and switches to automatic mode.

If the attach button is pressed in automatic mode, the automatic milking sequence is initiated. This sequence may be aborted at any time by pressing the attach button. The sequence consists of three phases:

1. Let-down
2. Milk
3. Sweep

Once the sequence has started, the B2000 may be set to manual by pressing the auto/manual button, but manual mode only affects the milk phase.

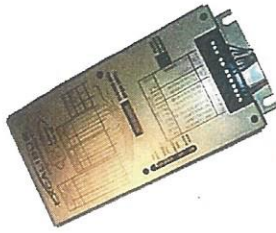
\*\*\*Please read all instructions in this manual and included with your unit before use.\*\*

1. When using the B2000 Automatic Takeoff always follow basic Safety precautions to reduce the risk of electric shock and Personal injury.
2. Keep environment clean and dry to avoid electric shock.
3. Do not touch back side of the unit circuitry while in operation.

**Warning!!**  
*To reduce the risk of injury, always unplug the unit before performing any maintenance or removal.*

**Features**

- Drop in Replacement of Boumatic™ Style Takeoff
- Easy Programming
- LED Indicators
- Fuse Protected
- Complete System or Board Only Available
- Replacement Connectors & Fuses Available
- Automatic & Manual Modes



Order # I0055

*Boumatic is a Trademark of Dairy Equipment Corporation*



**- Let-Down Phase**

Once the claw is raised, the B2000 waits either 90 or 120 seconds (depending on the setting of SW11) for the liners to be attached and for milk to begin to flow.

Let Down Time (sec)	SW11
90	Closed
120	Open

**- Milk Phase**

After the letdown phase, the B2000 monitors the milk flow. If no milk is detected in the sense chamber for a certain amount of time (based on the settings of SW1 – SW4), the B2000 assumes that the milk flow has stopped. If the milk flow stops within the first 90 seconds of the milk phase (and the B2000 is in automatic mode), the claw is lowered, the no-milk light blinks, and the B2000 returns to its idle state. On the other hand, if the milk stops after 90 seconds the milk phase is terminated and the sweep phase begins. In manual mode this sequence is the same way except that the milk flow is ignored until the B2000 is switched back to automatic mode.

End of Milk Delay (sec)	SW1	SW2	SW3	SW4
1	Closed	Closed	Closed	Closed
2	Open	Closed	Closed	Closed
3	Closed	Open	Closed	Closed
4	Open	Open	Closed	Closed
5	Closed	Closed	Open	Closed
6	Open	Closed	Open	Closed
7	Closed	Open	Open	Closed
8	Open	Open	Open	Closed
9	Closed	Closed	Closed	Open
10	Open	Closed	Closed	Open
11	Closed	Open	Closed	Open
12	Open	Open	Closed	Open
13	Closed	Closed	Open	Open
14	Open	Closed	Open	Open
15	Closed	Open	Open	Open
16	Open	Open	Open	Open

Operation

**- Sweep Phase**

During the sweep phase, the claw is lowered and the sweep valve is activated after a certain period of time (as set by SW5 - SW7). The sweep valve is active for an amount of time set by SW8- SW10 and the B2000 returns to the idle state.

Milk Sweep Delay (sec)	SW5	SW6	SW7
0	Closed	Closed	Closed
1	Open	Closed	Closed
2	Closed	Open	Closed
3	Open	Open	Closed
4	Closed	Closed	Open
5	Open	Closed	Open
6	Closed	Open	Open
7	Open	Open	Open

Operation

Milk Sweep Delay (sec)	SW8	SW9	SW10
0	Closed	Closed	Closed
1	Open	Closed	Closed
2	Closed	Open	Closed
3	Open	Open	Closed
4	Closed	Closed	Open
5	Open	Closed	Open
6	Closed	Open	Open
7	Open	Open	Open

**Replacement Parts**



**Replacement Board**

Order #10055B



**Power Connector**

Order #10057



**Sensor Connector**

Order #10058



**Main Solenoid Connector**

Order #10059

**Replacement Parts**



**Front Panel Only**

Order #10085



**Lamp Connector**

Order #10069



**Fuse**

Order #10061

**- Lights and Indicators**

On the front of the B2000, there are 4 red LED indicators. The meaning of each indicator is shown below.

**Indicator**

- No Milk
- Main Solenoid
- Sweep Solenoid
- Auto/Manual

**When lit:**

- No milk detected in the milk sensing chamber flashes on power-up and when milking error occurs
- Claw has been (or being) lowered
- Milk Sweep Active
- Indicates Manual Mode

Keep out of wet conditions.  
Do not use heavy tools to adjust or remove unit. Shorts may occur and cause the unit to stop working. For questions contact Excalibur Engineering. For repairs return unit to:

**Excalibur Engineering**  
**1260 N. 200 E. #2**  
**Logan, UT 84341**  
**(435) 755-9221 FAX (435) 755-9321**