



MPP ADJUSTING BOND FORCE PARAMETERS (4500, 5000 iBond)

ADVANCED TECHNOLOGY FOR
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FACT SHEET

- SCOPE: Adjustment of the process bond force parameters for 1st and 2nd Bonds on Micro Point Pro (KnS) 4500 Series and 5000 iBond Series Manual Wire Bonders.

- During the bonding cycle, bond force is applied while ultrasonic energy is being applied to the wedge/capillary. The static bond force is a combination of the Static Bond force and also additional bond force applied from the Force coil.

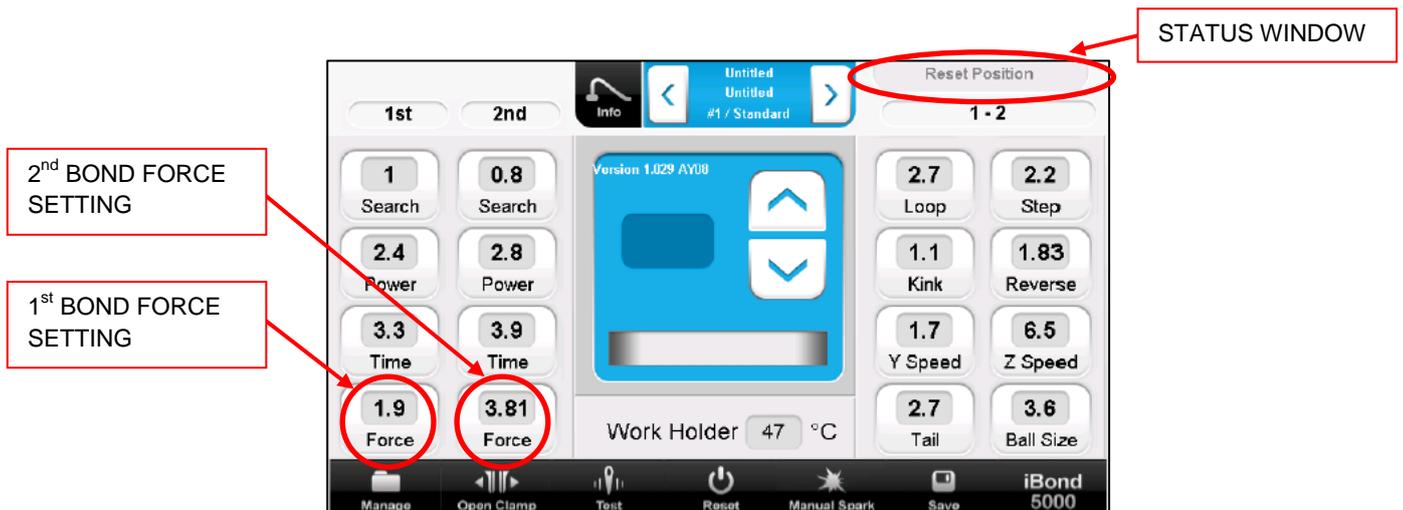
45XX Series

- The Force coil is controlled via the 1st Bond and 2nd Bond potentiometer dials on the left hand side front panel:



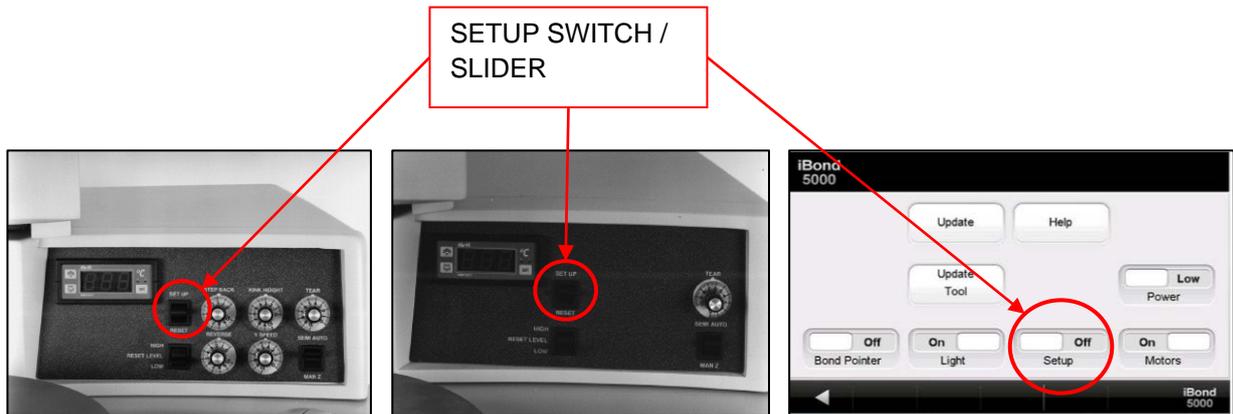
iBond5000 Series

- The Force coil is controlled via 1st and 2nd Bond Force adjustment on the touch screen panel:

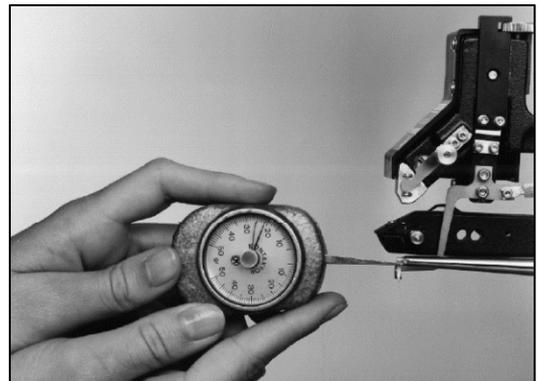


To Set the Bond Force

- Ensure the Bonder is in Reset Position; confirm this by ensuring the '1st Bond LED' is illuminated (4500 series) or 'Reset Position' is displayed in the status window (iBond series).
- The 'Set Up/Reset' switch located on the right hand side panel (4500 series) or 'Setup' slider within the iBond5000 menu section (iBond series) are showing SETUP.
- With the bonder in SETUP the machine will drive the Force Coil constantly at both 1st and 2nd bond forces depending on the machine cycle position.



- Set both 1st and 2nd Search adjustment to zero.
- Press and hold the 'Semi/Auto Chessman button'. The bond head will move into the '1st Search height'.
- Using a suitably scaled gram gauge lift the bond head under the wedge/capillary. As the bond head starts to rise, read the value on the gram gauge.
- This measured value is the bond force for the 1st Bond; adjust the '1st Bond Force adjustment' until a desired force is measured on the gram gauge.
- Release the 'Semi/Auto Chessman button', the bond head will move to the 'Loop Height'.
- Press and hold the 'Semi/Auto Chessman button'. The bond head will move into the '2st Search height'. Again lift the bond head with the gram gauge under the wedge/capillary until the bond head starts to rise.
- This measured value is the bond force for the 2nd Bond; adjust the '2nd Bond Force adjustment' until a desired force is measured on the gram gauge.
- Release the 'Semi/Auto Chessman button', the bond head will move to the 'Reset Height'.
- Return the 'Set Up/Reset' switch to the mid position.



For further information on Micro Point Pro equipment:

<https://www.inseto.co.uk/microelectronic-equipment-mpp-manual-wire-bonders.php>