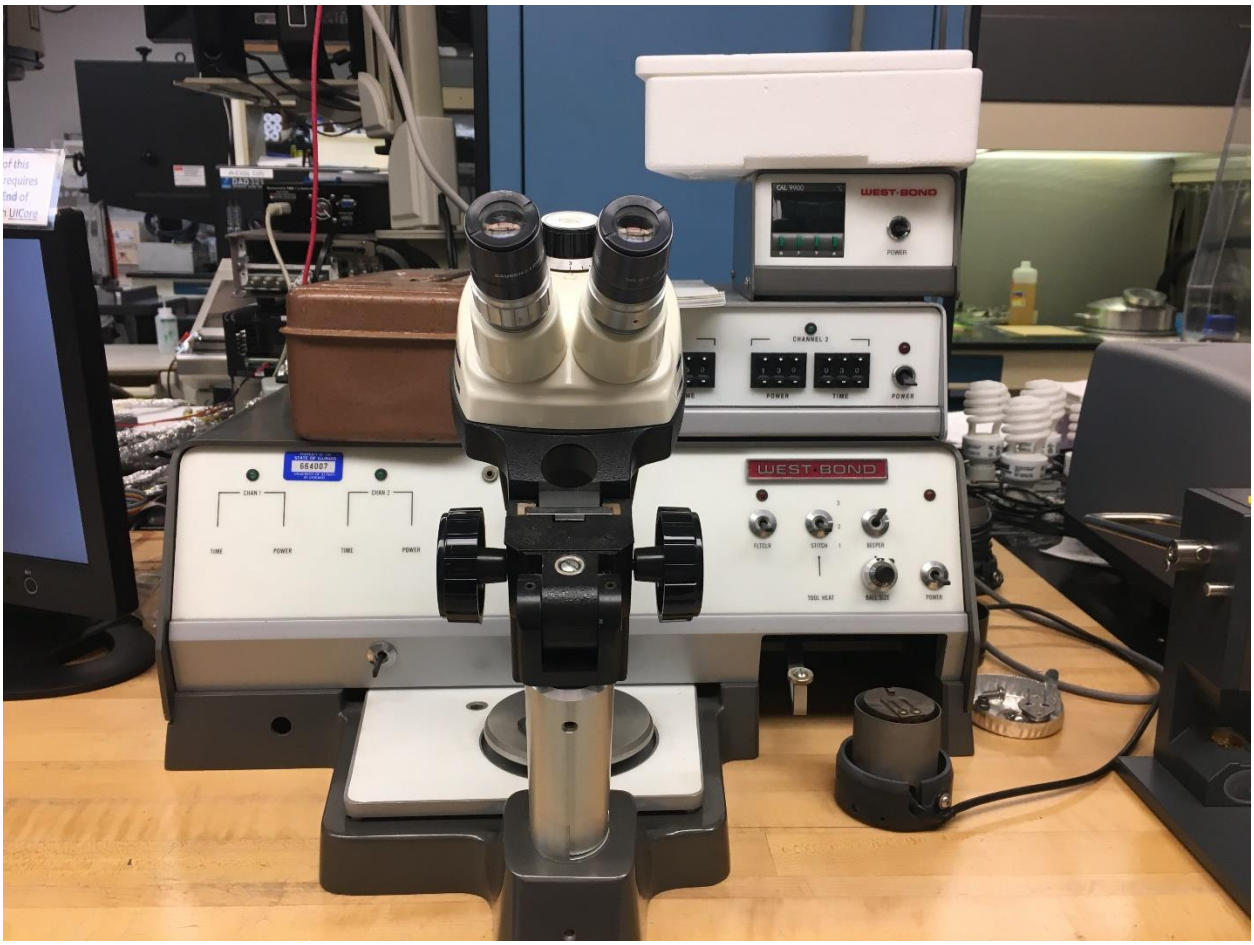
Westbond Ball Bonder

West Bonder 7700A and 7716A are ball -wedge bonding machines for making interconnecting wire loops to semiconductor devices. Model 7700A employs ultrasonic energy to the bonding tool, and model 7716A employs heat on both the tool and the workpiece. The wire to be bonded is fed to the bonding tool, and a ball is formed on the end of the wire with an electronic arc. The tool is then manipulated to the bonding target on the workpiece, and moved downward to touch the work where the tool pressure, heat, and ultrasonic energy cause a first bond. The second bond is achieved by a similar sequence after wire has been looped. After the terminating bond, the wire is clamped, then separated from the completed interconnection. A new ball is then formed on the wire extending from the bonding tool and the machine is then sequenced for another operation. Progression through this controlled by the single-lever X-Y-Z micromanipulator and is indicated by the panel-mounted lights.

The west bonder model 7700A and 7716A bonding machines feature a single lever X-Y-Z micromanipulator for tool motion control with 12:1 ratio reduction, a vacuum operated wire clamp, and a work sensing firing switch. The bonding tool and wire clamp assembly are directed by the X-Y-Z micromanipulator to each bonding target, and vertical positioning movement is sensed to initiate the advance of the bonding sequence. The workpiece is held by a mechanical grip to the heated work station, which is mounted on the machine base casting.


WEST·BOND
CHANNEL 2
POWER
TIME
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WEST·BOND
CHAN 1
CHAN 2
TIME
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TIME
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FILTER
STITCH
BEEPER
TOOL HEAT
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