

WEST·BOND. INC.



7700E SERIES

MANUAL WIRE BONDERS

Continuing a Tradition of Quality

7700E Series

7700E - Single Ball or Ball-Wedge Bonder



BALL-WEDGE BONDING Machines of this series bond gold wires ranging from 0.0007 in. to 0.002 in. Bonds are made by the ball-to-wedge technique using ultrasonic energy and work piece heat. Wire is clamped and threaded vertically through a hollow capillary, allowing independent feeding action. The connection is begun with a ball formed on the end of the wire stock by electric discharge, and completed by a wedge bond under the end of the capillary tool. The operator using hand/eye reference to bond targets and elevations guides the bonding tool manually.

DEEP ACCESS to bond targets recessed within high walled packages is gained with West-Bond's model 7700E ball-wedge wire bonder. The 90° wire feed and overhead clamp design allows the closest proximity to adjacent walls or components. The system also allows for bonding in any direction from the initial ball bond without the need to rotate the work piece.

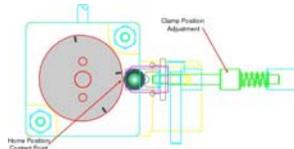
THROAT REACH is 5.125-in. from tool home position back to the machine lower panel. Vertical clearance above the work plane is approximately 0.250-in. over the throat reach distance. Range of movement of the tool by manipulator control is 0.563-in. vertically and 0.625-in. in horizontal directions with an 8/1 ratio of mechanical advantage.



PROGRAMMING for three different device types may be entered into separate buffers. Each device wire may be programmed with individual ultrasonic power, time, and force (high or low) and loop elevation control data. Program values, action prompts, and fault diagnostics are exhibited on the easy to read 4 lines, 40 characters LCD sequentially with machine operation.



FEATURES include programmable dual force (high or low), bond tool positioning utility, and pneumatic braking of Z and Y-axes during bonding. Available with or without adjustable height platform.



STANDARD SPECIFICATIONS

CONTROL LOGIC: Motorola 68000 Microprocessor
MEMORY: Battery back-up RAM
DATA ENTRY: Selector switch
Z TOOL RANGE: 0.5625 inch
Z ENCODER RESOLUTION: 0.001 inch
BOND FORCE RANGE: Adjustable, 10 to 250 grams
TRANSDUCER: 1/2 wave, 63 KHz (nominal)
BALL FAULT DETECTION: 7700E
ULTRASONICS: Built-in, 8 bit, 4 watts (Ultrasonic Positioning Utility)
WIRE RANGE: 0.7 to 2.0 mils
ESD PROTECTION: Protection against Electrostatic Discharge
DISPLAY: 4 line, 40 character LCD
BALL CAPILLARY LENGTH: 0.625 inch or 0.750 inch (7700E)

MICROMANIPULATOR: Dual counterbalanced, single lever, 8:1 ratio
WIRE SPOOL MOUNT: 0.5 inch with ball bearing rollers
RADIANT TOOL HEAT: Built-in
MICROSCOPE: Selection available (ESD types available)
ILLUMINATOR: Selection available (ESD types available)
WORK HOLDERS: Wide selection plus custom fabrication services
COMPRESSED AIR: Regulated to 50 psig, is required. Connection is via 1/4-inch tubing
ELECTRICAL SERVICE: Required is 50-60 Hz, single phase, either 115 VAC or 230 VAC, selected automatically
DIMENSION: W=24.000" D=21.250" H=11.625"
(exclusive of microscope, or H=15.000" to scope eyepieces)
WEIGHT: 60 lbs uncreated, or 95 lbs crated

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