

WEST·BOND® INC.
WEST·BOND INTERNATIONAL INC.



7KF

CONVERTIBILITY

45° Wedge – Wedge

90° Feed – Deep Access Wire

90° Feed – Deep Access Ribbon

Single Ball / Ball – Stitch / Stitch on Ball
Tab

ALL IN A SINGLE TOOL HEAD

Two models available 7KF (Low Frequency) and 7KFH (High Frequency)



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UNLIMITED PART SIZE: Access to remote bond targets on large packages, or modules, with WEST·BOND's throat-less chassis and micromanipulator design. All machine components are arrayed above the horizontal bond plane eliminating any restriction to package size or shape. With the FX version of this system, the bonder can be suspended over very large parts. This manual model can be configured to bond all types of applications from • Microwave • Semiconductor to • RF and • Hybrid production.

CONVERTABILITY: WEST·BOND introduced the first triple convertible wire bonder back in November of 1969. Today WEST·BOND utilizes the tool head from the E series that can bond it all: 45° wedge, 90° feed for wire and ribbon as well as ball bonding. A simple exchange of clamp assemblies, bond tool, and wire path provided with the software mode will allow conventional 45° wire feed, deep access wire or ribbon, ball bonding, insulated wire and single point tab / lead bonding. All programmed bond variables as well as machine settings for each bond mode are retained in the machine's memory.



PROGRAMMING: The machine may be programmed for up to thirty devices per mode of operation in separate buffers. Each buffer may have up to 21 stitch bonds with individual ultrasonic power, time, force, and loop elevation control data. Program values, action prompts and fault diagnostics are displayed on a 7" LCD Capacitive Touch Screen.

FEATURES: Programmable force (15-120 grams), primary and secondary ball sizes, pure vertical Z, orthogonal X, Y, Z, 8:1 micromanipulator, pneumatic braking of all axes during bonding and programmable radiant tool heat. The system is available without the base and work platform as a 7KFX for tabletop or conveyor system. Risers are also available for extra tall parts.

MACHINE SPECIFICATIONS:

- Control Logic: Cortex M7 Microcontroller
- Memory: 2MB Solid State RAM
- Data Entry: 7" LCD Capacitive Touch Screen

BOND AREA

- ESD Protection: Conductive and dissipative 10^6
- Bond Platform: 11" x 11" (280 mm x 280 mm)
 - Optional: 20" x 20" (508 mm x 508 mm)
- Z Travel: 0.5625" (14.3 mm) / 0.001" (25µm) resolution
- XY Travel: 0.7"sq (17.8 mm²)
- Manual control via an 8:1 ratio micromanipulator arm

WIRE AND TOOL CAPABILITY

- Au / Al: 0.7 to 3 mil (18 to 75µm)
- Ribbon: 0.5 x 2mil to 1 x 10 mil (12.5 x 50µm to 25µ x 250µm)
- Ball Bonding: Cu 0.7 to 1.5 mil (18 to 38µm)
Au 0.7 to 2.0 mil (18 to 50µm)
- Spool: ½" standard; 2" optional
- Tool Diameter: 1/16" (1.58 mm)
- Shank Length: 0.750" (19 mm) standard for wedge bonding
0.625" (16 mm) standard for ball bonding

ULTRASONIC SYSTEM

- ½ wave length, 63 KHz transducer or 110KHz
- 8 bit, 4 watt PLL Ultrasonic Generator
- Ultrasonic tool positioning utility
- Low Power: 2.5 W; High Power: 4 W

BOND PARAMETERS

- Bond Force: 15 - 120 grams (programmable)
- Bond Time: 0 - 999 ms
- Individual power, time and force per bond in all 90 buffers
- Ball Formation: Negative EFO
 - Missing ball detection via Open and Short error
 - Primary and secondary ball size control

FACILITY REQUIREMENTS

- 100 - 240 VAC 50/60Hz
- 50 PSI clean dry air

Dimensions: 24" (610 mm)W x 22.5" (571 mm)D
x 12.25" (311mm) H

Weight: Crated with accessories: 140lbs (63.5 kg)
Uncrated: 60lbs (27 kg)

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