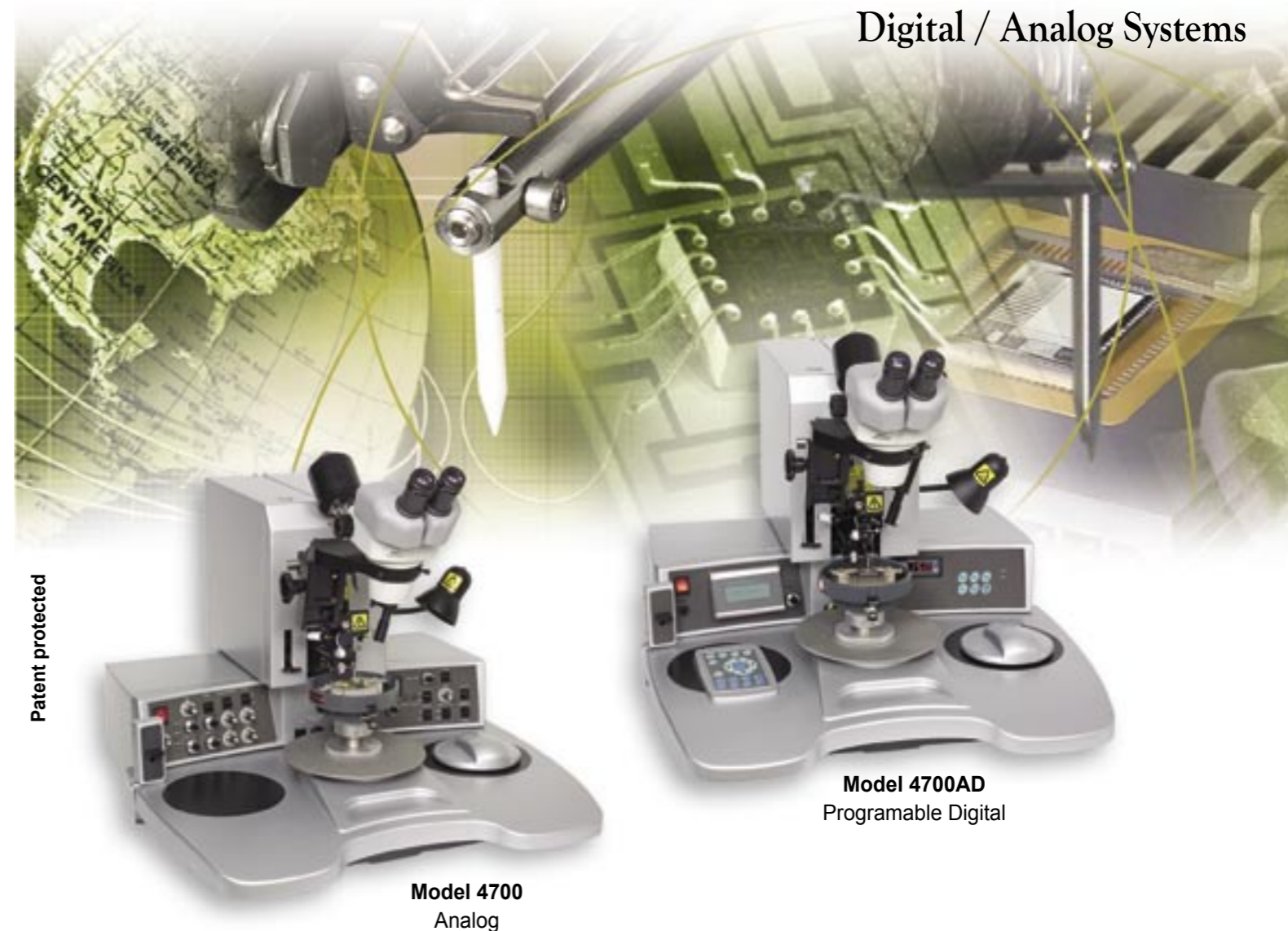


Convertible Wire Bonders

Digital / Analog Systems

Technical Specifications	Machine Specifications
<ul style="list-style-type: none"> Ball-wedge and wedge-wedge bonding capability Wire feed angle 90 degrees, vertical feed / wedge 30 degrees, 45 degrees Gold wire diameter <ul style="list-style-type: none"> Ball bonding and wedge bonding - 0.7 mil to 3.0 mil diameter - 17 micron to 75 micron diameter Gold ribbon <ul style="list-style-type: none"> Wedge bonding - Up to 1 x 10 mil - Up to 25 x 250 micron Aluminum wire diameter <ul style="list-style-type: none"> Wedge bonding - 0.8 mil to 3.0 mil diameter - 20 micron to 75 micron diameter Spool size <ul style="list-style-type: none"> Ball bonding 2" x 1" double flange spool Wedge bonding - 2" x 1" double flange spool - 1/2" spool (type TS-1) - 2" x 1" spool holder for ribbon Bonding tool specification <ul style="list-style-type: none"> Wedge bonding wedge length - 0.750" Ball bonding capillary lengths - 0.375" - 0.437" - 0.625" 	<p>XY Table</p> <ul style="list-style-type: none"> Bonding Area 135 mm x 135 mm (5.3" x 5.3") Throat Depth 143 mm (5.6") Gross Table Motion 140 mm (5.5") Fine Table Motion 14 mm (0.55") Mouse Ratio 6:1 (Choose Mouse Type) <ul style="list-style-type: none"> Left side mouse with right side manual 'Z' lever. - Recommend optional 'Portable Dials Kit' - Locates critical dials on right side - For operator comfort (Search 1st, Search 2nd, Loop and Tail) - Right side mouse with left side manual 'Z' lever - Right side mouse with integrated manual 'Z' lever Motorized Y <ul style="list-style-type: none"> Stepback up to 4 mm (160 mil) Reverse up to 0.25 mm (10 mil) Kink height up to 0.5 mm (20 mil) Z Axis Control DC Servo with closed loop tachometer feedback Z Axis Travel <ul style="list-style-type: none"> 0.500" (12.5 mm) 'Z' travel Increased travel range Full range of control with the 'Z' motor Ultrasonic System <ul style="list-style-type: none"> High Q 60kHz K&S transducer Phase Lock Loop self-tuning ultrasonic generator <p>Parameters</p> <ul style="list-style-type: none"> Low Ultrasonic Power 1.3 watts High Ultrasonic Power 2.5 watts Bond Time (Selectable range) <ul style="list-style-type: none"> 10-100 milliseconds 10-1000 milliseconds Bond Force (Static force adjust) <ul style="list-style-type: none"> 10-250 grams (requires added weights >80 grams) No springs Bond Force Coil Range - <ul style="list-style-type: none"> Added 3-80 grams (depends on Force parameter setting) Separate 1st bond and 2nd bond parameters No springs Wire Termination <ul style="list-style-type: none"> Clamp Tear, adjustable 'Tear' parameter and 'Tail' parameter Wire tail feed Programmable clamp motion for wedge bonding Programmable tail pull for ball bonding Temperature Controller <ul style="list-style-type: none"> Built-in Range up to 250 o C, +/- 5 oC <p>Facility Requirements</p> <ul style="list-style-type: none"> Electrical: 100 - 240V, 50 / 60Hz Dimensions in mm: 680 (27") W x 700 (27.5") D x 530 (21") H Weight in kg: Shipping: 55 (122 lb), Net: 31 (69 lb)



4700 series Convertible Wire Bonders allows Ball-Wedge and Wedge-Wedge Bonding Cycles on one machine.

The 4700 Convertible Wire Bonder series is based on the proven K&S 4500 Series, the market leader for nearly a decade. The 4700 features dials/digital control for ease of use, combining the best features of the workhorse K&S wedge and ball models. Wedge or Capillary mounting is easy and precise with a special transducer, unique to the K&S Model 4700. Applications ranging from the basic type to the most challenging

are handled with ease and with the versatility demanded by today's leading research or production requirements. No tools are required for changeover, just swing the NEFO assembly to the proper position and switch to 'Ball Bonding' or 'Wedge Bonding' process. (Note: capillary, wedge and/ or bond wire must be loaded for proper operation).

Kulicke & Soffa
1005 Virginia Drive , Fort Washington PA 19034
(215) 784-6000 phone, (215) 659-7588 fax
www.kns.com

For sales, service and manufacturing locations, visit www.kns.com.
2008 Kulicke & Soffa Industries Inc. Specifications may change without notice.



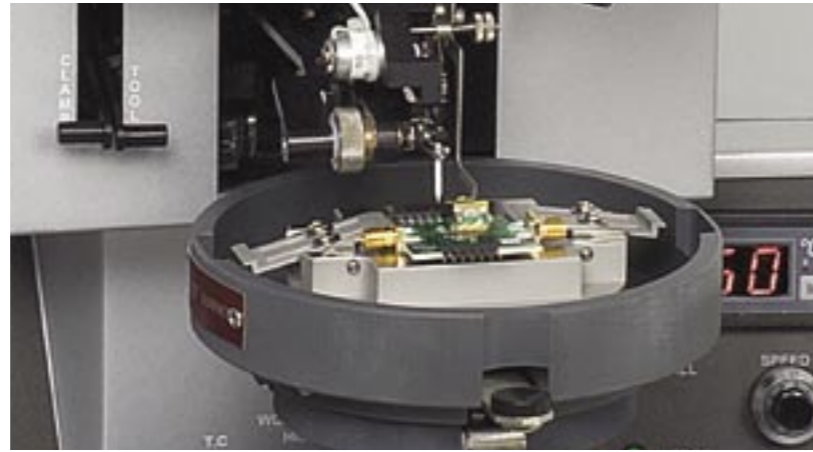
MWB-001-2/27/08



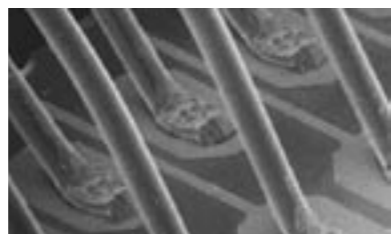
One machine. Dual function capabilities.

• Benefits

- Wedge-wedge and ball-wedge bonding on the same machine
 - Fast changeover by operator with no tools
 - Bonding mode changed by automatic switch
- Patented plunger moving arm
- Special K&S proprietary transducer for proper bond tool mounting
 - Ball bonding capillary mounts with split clamp
 - Wedge bonding tool mounts with set screw
- 90-degree deep access wedge bonding with 12.5 mm 'Z' axis travel
- Ball bonding with 12.5 mm 'Z' axis travel
 - Special K&S proprietary swing arm EFO/ Drag Arm assembly
- High-end Negative EFO with missing ball detection
- PLL Ultrasonic Generator
- High Q 60kHz Ultrasonic Transducer
- 2 Channel Independent Bonding Parameters
- Semi-Auto and Manual Z Bonding Modes
- Built-in Digital Work Stage Temperature Control



○ Plunger Moving Arm



4700 series systems provide the high yield and excellent repeatability needed for every wedge & ball bonding application, including:

- Optoelectronic Modules
- Hybrid / MCMs
- Microwave Products
- Discrete Devices / Lasers
- Chip-on-Board

• Model 4700AD programmable digital

Enables you to store process programs and Load them instantly. The programmable wire cycle combines flexibility and consistency for high yields

Special features

- Motorized Y axis and programmable auto stepback function for precise wire length and loop formation
- 200 program storage capacity w/six independent channels per program
- Auto 2nd bond mode for complete single wire programmed sequence
- Digital readout of all bonding parameters



• Model 4700 analog

Traditional analog control panels for complete control of your bonding parameters and fine 'bond' tuning

Special features

- The analog model includes motorized axis auto-stepback
- Separate dedicated knobs covering all wire bonding parameters.



• 4700 series common features:

- Manual Z Lever
- Right/ Left Hand Mouse
- Chessman mouse w/built in Z

