



## Digital Ultrasonic Generator D-USG X

### >> Features

- Universal Ultrasonic generator for all types of wire bonding and other joining processes; entirely digitally controlled
- Large range of frequencies and power
- Usable for all standard transducers from all suppliers
- Control and frequency generation by digital signal processor (DSP)
- Software-based control algorithms of any kind, such as voltage, current or power regulation; optionally also combinations of these
- Multiple input options from simple up to dynamic real-time templates of complicated pulse profiles such as bursts, ramps or temper phases
- Powerful process monitoring by output of time course of frequency, phase, voltage and current at the transducer
- Transducer-Health-Check: Diagnosis of transducer state by frequency sweep to find position and quality of resonance; simple monitoring of correct mounting of transducer and bond tool
- Optional: Entirely novel control features by custom-tailored algorithms to evaluate process parameter outputs

### D-USG X

Thanks to its completely digital concept, our D-USG X is the most versatile ultrasonic generator for wire bonders on the market.

It works with all standard transducers, with all wire types and also with ribbon bonds.

Versatile control options allow the use with practically all wire bonders. In addition, an extensive range of process data are recorded, providing extremely powerful analytical tools for quality assurance.

The transducer diagnostics make it simple and rapid to diagnose the state of transducer and bond tool.

### >> Specification

<b>Ultrasonic output</b>	Frequency range: 20 – 200 kHz Power: load-dependent, limited to 50 W (optionally higher)
<b>Control mode</b>	Voltage, current, power or customer-specific algorithms
<b>Input options</b>	USB-C for configuration and non-time-critical bonds

8-Bit-parallel input by 26-pin-flat cable for real-time applications and arbitrary pulse profiles

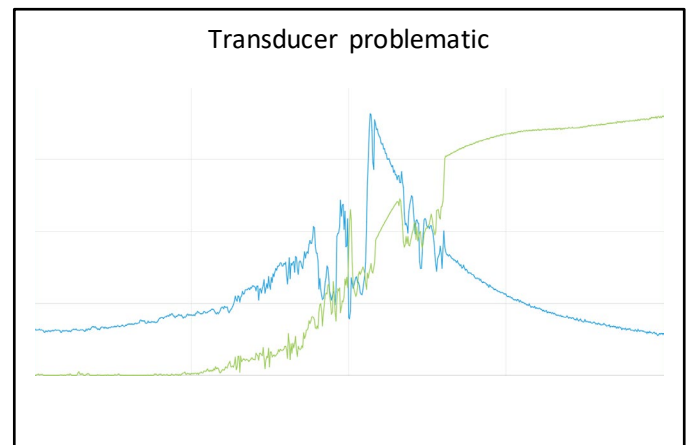
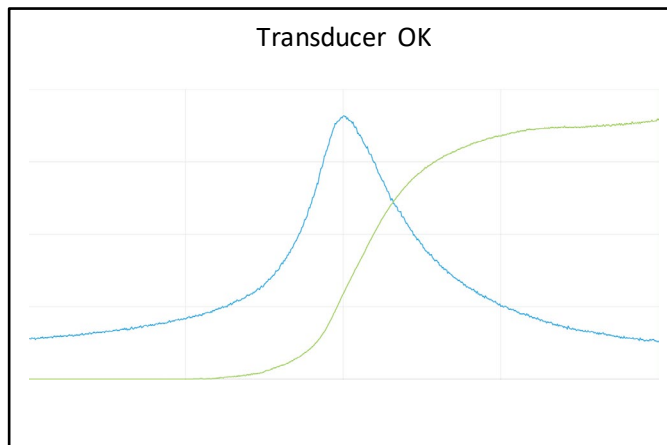
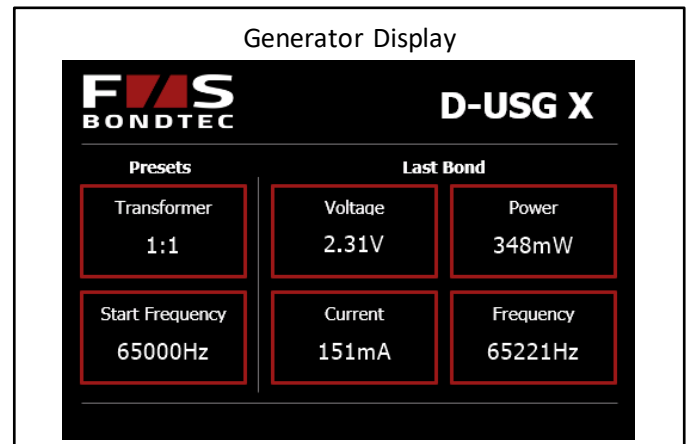
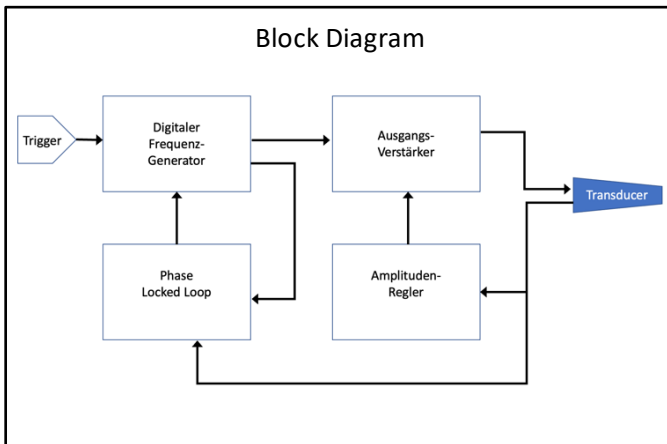
Optional: Fieldbus to integrate into F&S BONDTEC machines

<b>Transducer connector</b>	25-pin DSUB-plug
<b>Power supply</b>	100-240 VAC 50-60 Hz C14 power cable socket Fuse: 2x 2AT 5x20 mm
<b>Dimensions, weight</b>	29.5 x 9 x 22.5 cm ( W x H x D ); 4.30 kg

## >> User Interface

<b>Status display</b>	Display of settings and informations to last US pulse LEDs: BOND, LOCKED & ERROR Test Button for ultrasonic pulse
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<b>Hardware monitor</b>	Host Software to configure the D-USG X (Windows 10 / 11)
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