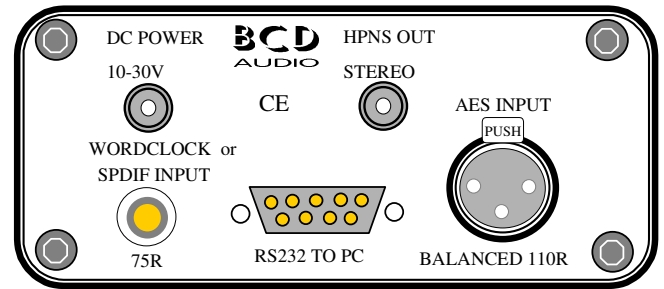
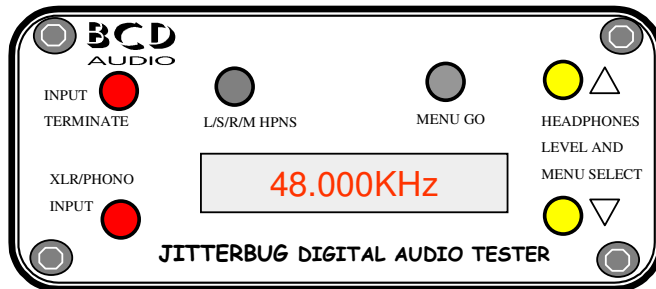


The Jitterbug is the only unit you'll ever need to test Digital audio AES signals. Housed in the black-box, the unit is able test an AES-3 signal. What's more, you can hook it up to your PC!



Jitterbug controls

- ◆ **Latching input switch.** Selects between a balanced AES input on XLR and an unbalanced input on a Phono socket. This will accept a digital audio signal OR a TTL wordclock signal.
- ◆ **Input termination switch.** Terminates the selected input. When the switch is changed, the unit measures the source impedance, and displays it, if possible.
- ◆ **Menu up/down buttons.** Pressing these aborts the current measuring mode, and displays the menu. Eight menu options are available, covering all the signal tests required. The buttons are also used to control the headphones level.
- ◆ **Menu GO button.** Pressing this accepts the current menu selection, and starts the test. Pressing the GO button again toggles some of the tests between two different modes.
- ◆ **Headphones mode.** Pressing this button cycles the built-in amplifier between left-only, stereo, right-only, and mono operation.

Menu selection

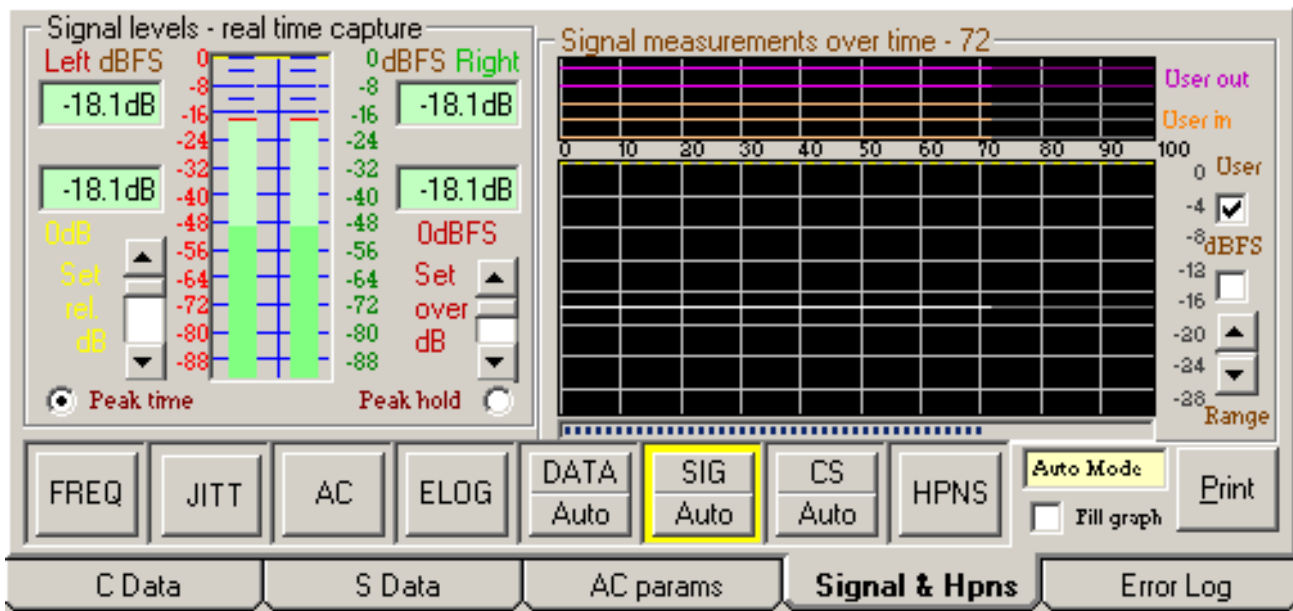
The operational mode is selected by menu buttons. Pressing either 'up' or 'down' aborts the current measurement, and enters the menu. The menu can be cycled around by the 'up' and 'down' buttons, and accepted by pressing the 'menu go' button.

- ◆ **Frequency.** Measures the wordclock or recovered sample rate. The unit is capable of measuring any logic signal in the range 1Hz to 7MHz, with 1Hz accuracy.
- ◆ **Jitter.** Measures the jitter of the wordclock or recovered sample rate, to 2nS resolution.
- ◆ **AC Levels.** If the XLR input is selected, then the 'go' button toggles between measuring the carrier and the common-mode signal. If the BNC input is selected, only the carrier level is meaningful. Non-Digital Audio signals may also be measured.

- ◆ **AES Error log.** Press 'go' to start the test. The unit monitors the signal for Lock, confidence and parity, and validity. The display shows the first error encountered. The PC software maintains a time-stamped log-file of all errors encountered.
- ◆ **AES Status.** Press 'go' to view the channel status information. The key flags are shown locally and full information is displayed by the PC. Press 'go' again to display the signal data in binary form.
- ◆ **AES Signal.** Press 'go' to display a stereo bargraph. Press 'go' again to display the signal level to 1dB resolution. The PC software indicates the signal to a higher resolution.
- ◆ **AES Tests.** Press 'go' to start the test. The Jitterbug steps through the above tests in succession.
- ◆ **HPNS out.** Press 'go' to enter this mode. The menu buttons are now used to control the headphones level. Press 'go' again to exit this mode.

Jitterbug connectors

- ◆ **Input XLR.** Accepts a balanced AES-3 signal. The Signal level, data, source impedance and sample frequency can all be measured. Transformer balanced earth-free input. Termination switchable 110R and high impedance.
- ◆ **Input phono socket.** Accepts an unbalanced SPDIF or TTL signal. For non-AES type signals, the signal level, frequency and jitter can all be measured. The signal could be a Wordclock source, or any other TTL type of signal. Termination switchable between 75R and high-impedance.
- ◆ **Power socket.** Accepts DC from 8 to 30V DC.
- ◆ **Stereo jack socket.** High impedance stereo headphones, Oscilloscope or Audio test-set may be connected here.
- ◆ **RS232 connector.** The unit may be connected to a PC, and controlled remotely.



Jitterbug software description

The Jitterbug can be used stand-alone, or may be used with the Windows software. An RS232 port is used to communicate with the Jitterbug; any available port can be used, and the settings are automatically saved. The major software components are accessible via the tabbed windows.

The Jitterbug mode is selected by the UP, DOWN and GO buttons emulating the front panel switches. The tabbed display windows are automatically switched to the appropriate window.

- ◆ **Signal headphones window.** In this window, a real-time signal bar graph and levels are displayed. The calibration can be changed from dBFS to any normal calibration. The headphones gain and mono/stereo mode can also be adjusted here.
- ◆ **Error Log window.** On this window an error log can be obtained from the tested source.

The jitterbug is switched to AES LOG mode, and GO is pressed. If any AES signal error occurs, the Jitterbug display holds on the first error found, and the Error log records the time for all errors found.

- ◆ **Data bits window.** The recovered signal's data bits may be displayed here, together with the AES flags. A single shot or repeated capture can be displayed.
- ◆ **Channel status display windows.** The recovered signal's channel status information can be displayed here, in full ASCII data format, or interpreted. AC parameters window. In this window, the electrical signal parameters are displayed. The input source of either the XLR or Phono socket is indicated. If the Jitterbug termination switch is pressed, the source impedance is measured and displayed here. The signals AC signal level, sample frequency and jitter can all be displayed.