



Yeovil Electronic Developments

YED/PCI-A568T1

ARINC568 DME Test Simulation card and software

The ARINC568 DME Test Simulation card and software provides an easy method for testing and verifying the correct operation of Distance Measuring Equipment (DME) display units.

DME is used by pilots to ascertain their relative position to various radio beacons on the ground. The information given out by this type of equipment provides distance in nautical miles and bearing from the aircraft to the beacon.



The product consists of a PCI ARINC568 transmitter card and a Windows GUI software package. The various tests can be conducted without the need to have an in depth knowledge of the ARINC interface.



THE HARDWARE

The YED/PCI-A568-T1 DME interface test card is designed to simulate the six-wire ARINC568 interface employed by DME display equipment. As per the ARINC568 specification, this interface consists of a clock, synchronization and data signals. The card is a full “plug and play” product and is compliant with the PCI standard version 2.1.

The transmission bit rate is variable under software control over the frequency range of 7.0kHz to 14.0kHz. The output amplitude of the resultant waveforms is fixed at 10V pk-pk. Label 201 is transmitted at a fixed repetition rate of 50mS.

The ARINC568 signals are brought out via a 37-way filtered "D" socket connector.

THE SOFTWARE

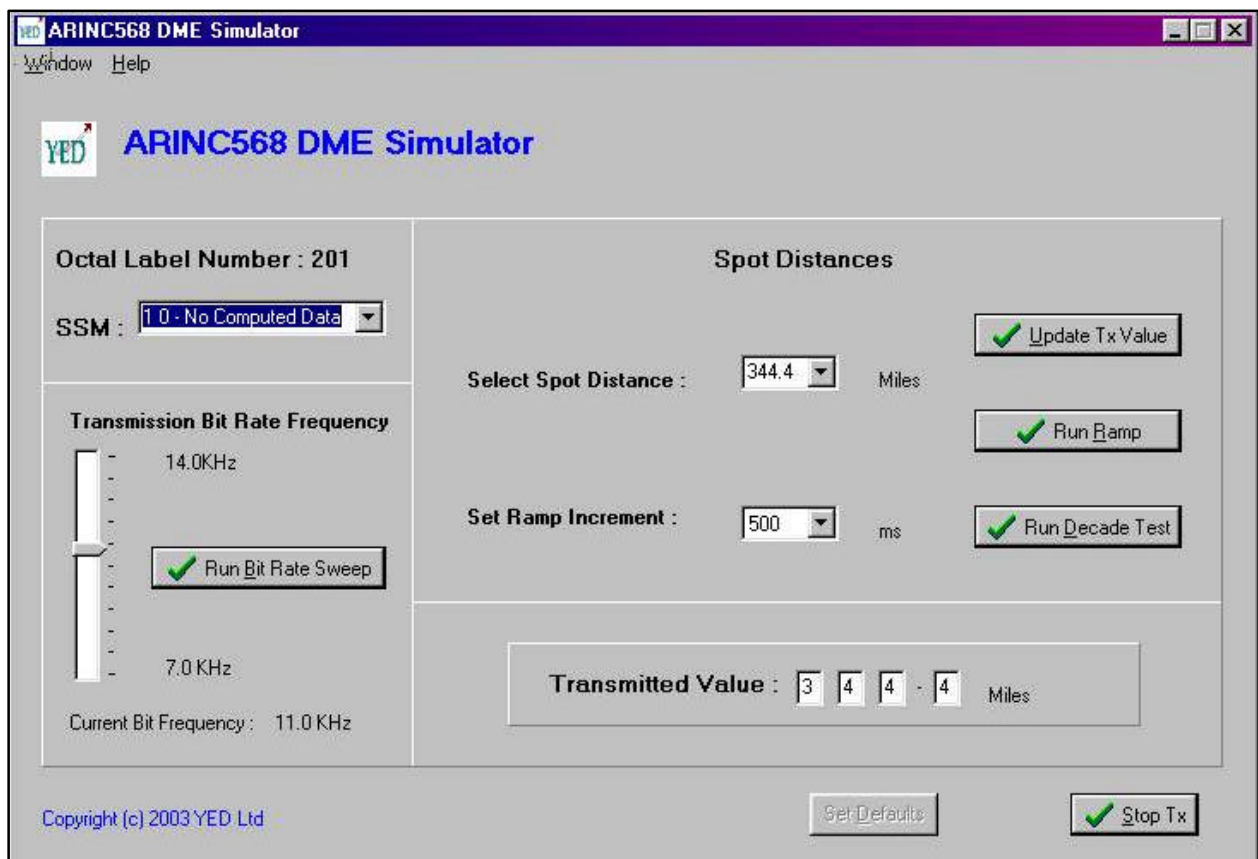
The PC software has been designed for use on any Pentium PC with a PCI bus running Microsoft Windows™ 98/NT4/XP (later operating systems will also be supported – check with YED for further information).

The supplied GUI Application software provides full control over the data values that can be transmitted and includes a variety of automatic tests that can be performed.

Product Specification

- ARINC568 - Label 201 DME signal source.
- Simulate spot distances from 000.0 to 399.9 miles.
- Automatic ramping of spot distances.
- Automatic 7 to 14kHz bit rate frequency sweep
- Variable ramp step times
- Intuitive easy to use Windows software.
- Context sensitive embedded Help.
- PCI half-length interface card.

THE SOFTWARE FEATURES



THE TESTS PROVIDED INCLUDE:

SSM

A Special Status Matrix combo box allows for the selection of up to four different operational designations. These are:

- 00 - Valid Data,
- 01 - Functional Test,
- 10 - No Computed data and
- 11 - Not Assigned.

FREQUENCY SWEEP

A test to automatically sweep the transmitted data word bit rate from 7.0kHz to 14.0kHz and back again has been provided to check the bandwidth reception of the DME UUT. Dragging the slider provided also provides manual sweep control of this frequency.

SPOT DISTANCE VALUE SELECTION

A drop down box is provided that allows for the selection of popular spot distance values. User defined values are also permitted in this box.

RAMPING SPOT DISTANCE VALUES

This test allows for a ramp of transmitted spot distance values. The starting value for the ramp is entered into the "Select Spot Distance" box and the ramp is then initiated by clicking a <Run Ramp> button.

DECADE RAMP TEST

A test to check for sticking adjacent decade wheels on the DME UUT. This test again starts from the starting value entered and will cycle each digit in turn through 0 to 9.

VARIABLE RAMP STEP TIME

The rate of the ramp step increment can be varied between 50ms to 1 second by setting the value in the "Set Ramp Increment" box.

TRANSMITTED VALUE

The transmitted value is always displayed in the panel provided.

Contact us for a free copy of our demo software!



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