

## PRODUCT DATA SHEET



The CDG-3000 Countdown Generator has been designed to provide launch timing information for launch sites.

The CDG-3000 generates a countdown time in IRIG-CS3 and IRIG 109-64 output in both FSK and RS-422 formats. It also generates an IRIG-CS3 Launch Window Time output, IRIG-CS3 Hold Time output.

The unit operates in two basic modes. One as a countdown generator synchronized to an IRIG B123 time code signal and the other as a slave translating an IRIG-CS3 input to provide IRIG-CS3 and IRIG 109-64 outputs.

The operator has complete control over the operation of the generator using the front panel keyboard and LCD display. This is user friendly to allow operation by an inexperienced operator. A menu approach along with HELP screens guide the operator in performing tasks.

The unit can also be operated remotely using a serial port on a computer.

*Technical Specifications*

**Inputs**

IRIG-B123      1-9Vpp  
2:1 to 4:1 modulation ratio,  
10K ohm, transformer isolated.  
Triax connector (BJ-77)

IRIG-CS-3      1-9Vpp  
2:1 to 4:1 modulation ratio  
10K ohm, transformer isolated.  
Triax connector (BJ-77)

Missile Liftoff  
(MLO)          0.7 to 5 Vpp, 1KHz sinewave  
Interruption of sinewave at MLO  
10K ohm, transformer isolated  
Triax connector, isolated

**Outputs**

Count Hold      0 volts hold  
+5 volts (into 50 ohms) = counting  
Screw Terminals  
Form "C" relay contacts  
.1A @24 VDC  
Screw Terminals

Countdown      IRIG-CS3  
Amplitude      .3 to 10 Vpp, adjustable  
Modulation      1:1 to 6:1ratio, adjustable  
Impedance      <50 ohms, transformer isolated  
Connector      Triax (BJ77)

Countdown      IRIG 109-64 (FSK)  
Amplitude      1 to 6 Vpp, adjustable  
Modulation      FSK, 1062.69 Hz Space, 1147.45 Hz Mark  
Connector      Triax (BJ77)

Countdown      IRIG 109-64  
Amplitude      RS-422 voltage levels  
Connector      Triax (BJ77)

Hold Time      IRIG-CS3 Format  
Amplitude      .3 to 10 Vpp, adjustable  
Modulation      1:1 to 6:1ratio, adjustable  
Impedance      <50 ohms, transformer isolated  
Connector      Triax (BJ77)

**Outputs continued**

Launch          IRIG-CS3 Format  
Window Time      .3 to 10 Vpp, adjustable  
Amplitude      1:1 to 6:1ratio, adjustable  
Modulation      <50 ohms, transformer isolated  
Impedance      Triax (BJ77)  
Connector

Count/Hold      0 volts = Hold  
+5 volts (in to 50 ohms) = Count  
Screw terminals

Form "C" relay contacts  
Activated when counting  
.1 A @ 24 VDC  
Screw terminals

Count/Hold      Audible alarm when MLO occurs.  
Alarm              Front panel disable switch.

RS-232          Allows remote operation using  
Interface a serial port.

**Front Panel**

Countdown      .6" High LED digits.  
Readout

LCD Display      4 line by 40 characters per line with  
backlighting.

Keypad          4 x 4 keypad

Alarm Disable      Disables count/hold alarm

MLO Insert      Protected pushbutton to manually insert  
MLO.

Power On/Off      Controls AC power to unit.

Power              115 +/- 10% VAC, 50-70 Hz  
Line filter and transient suppression.

Size                19" Rack mount, 3.5"H x 12"D

Environmental      0-50 degrees C  
10% to 90% non-condensing

*Specifications subject to change without notice.*      082306