

Timer2

GeoAcoustics Timer and Trigger Pulse Module



KONGSBERG

Timer Box and Trigger Pulse Generator

Description

The Timer2 is a highly reliable, all-purpose timer box and trigger pulse generation system providing asynchronous key pulses on two independent output channels. It is well suited for a wide range of applications where two independent systems need to be run at different trigger rates. Applications such as Side Scan together with Sub Bottom Profiler or two differing SBPs such as GeoChirp and Boomer, can be operated simultaneously. This unit allows asynchronous triggering on two channels, with the timing performed by dedicated microcontrollers. The Timer2 is intended to meet the needs of customers who wish to generate up to two key signals with a predetermined repetition rate, or to delay and divide an externally generated signal. The Timer2 can be used to delay an internally generated or externally received (TTL/CMOS) key pulse by any multiple of 1ms. Either rising or falling edges can be selected as the trigger point. To use the Timer2 as a key pulse generator an internal repetition rate can be set with a time between pulses at any multiple of 1 ms.

Signal Specifications

- Key pulse out: CMOS or TTL compatible.
- Key input: CMOS or TTL compatible. Isolated
- Modes: Internal/delayed external
- Key delay ms: Determined by selection control
- Rep rate ms: Determined by selection control
- Divider: Determined by selection control

RS 232 serial port available to upload



Features

- Universal mains powered
- Lightweight, small sized format
- Easy to use with an LCD display and a single selection control
- Two independent outputs
- Each output can be triggered either internally or from one of two inputs
- Each output can be divided and delayed with respect to the source trigger
- Each output can be configured for pulse width
- Each output can be configured for polarity

Timer2 firmware upgrades or custom firmware.

Possible applications are (DGPS) PPS simulation, specialist timing/trigger regimes, pulse timing verification among others.

The Timer2 unit incorporates a liquid crystal display which shows the operating status at all times. On switch-on the screen declares the model number and version of the unit prior to displaying the main menu and settings. The LCD array is split into two easy to read horizontal bars that show the status of each of the inputs

and outputs. The status of these can be changed by using the selection control. This easy to use function is operated by simply pushing the button to select the next item and rotating the control to change its status. The control is speed sensitive so turning it faster will result in larger value changes.

Front Panel LCD Display

The LCD Display has 2 rows on which the current settings are shown. When used in conjunction with the Selection Control, the settings can be changed as required.

Selection Control

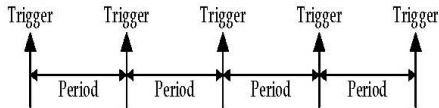
This control is used to navigate the settings shown on the LCD Display, and to make changes to the settings. It has two operations: a push-button, and a rotary switch.

How the Timer2 Works

The Timer2 can create 2 output signals 'Out A' and 'Out B'. These signals are completely independent, and can be triggered from separate Sources or from one common Source. The trigger Source can be an Internal Timebase or one of two input signals 'In A' or 'In B'.

Internal Timebase

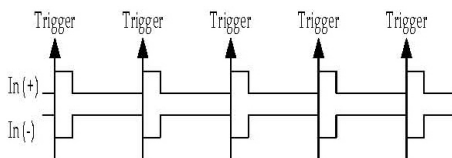
The timing for the Internal Timebase has the following form:



The vertical arrows show when the Internal Timebase causes a trigger

Inputs

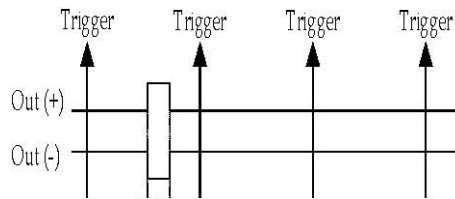
Each of the inputs 'In A' and 'In B' has the following form:



The two traces show the effect of the input Polarity – the top trace is positive going while the bottom is negative going. The vertical arrows show when the input causes a trigger.

Outputs

Each of the outputs 'Out A' and 'Out B' has the following form:



The two traces show the effect of the output Polarity – the top trace is positive going while the bottom is negative going. The vertical arrows show each trigger from whichever Source is selected for the output. The Divider in this example is set to 3, so the output pulse is generated every 3rd trigger. The Delay and Width of the output pulse are also indicated.

Physical

- Dimensions:
 - Width 26 cm (incl carrying handle 28 cm)
 - Depth 27 cm (incl carrying handle 31 cm)
 - Height 12 cm (incl carrying handle 18 cm)
- Weight 5.0 kg
- Power 5W
- Mains voltage 90 to 264 VAC
- Frequency 47 to 63 Hz

Environmental

- Operating Temp 0° to 40°C
- Storage Temp -10° to 50°C
- Humidity 10% to 90% RH non condensing
- Operating Altitude Sea level to 3000 m

MG020212

KONGSBERG GEOACOUSTICS LTD is engaged in continuous development of its products, and reserves the right to alter the specifications without further notice

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