



CB Electronics

# **Biphase Divider Biphase Converter**

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### Biphase Divider / Pulse+Dir -> Biphase / Biphase -> Pulse+Dir PCB

#### BI-PHASE Divider S/W 1

- \* BI-PHASE Input . . . . . High Impedance, Any Pulses per frame
- \* BI-PHASE Output . . . . . Open collector, Input Rate/1..255
- \* Edge Detect . . . . . Counts both edges of both biphase inputs

#### BI-PHASE Divider S/W 2

- \* BI-PHASE Input . . . . . High Impedance, Programable 2..255 Pulses per Frame
- \* BI-PHASE Output . . . . . Open Collector, 2 pulses per Frame (48/50Hz)
- \* Edge Detect . . . . . Counts both edges of both biphase inputs

#### PULSE+DIRECTION -> BI-PHASE

- \* PULSE Input . . . . . High Impedance, 8..255 Pulses per Frame
- \* DIRECTION Input . . . . . High Impedance, Forward High or Low
- \* BI-PHASE Output . . . . . Open Collector, 2 pulses per Frame (48/50Hz)
- \* Pulse detect . . . . . Counts falling edge of pulse input

#### BI-PHASE -> Pulse+Direction

- \* BI-PHASE Input . . . . . High Impedance, Any Pulses per frame
- \* Pulse Output . . . . . Open Collector, Input Rate/1..255
- \* Direction Output . . . . . Open Collector, Forward Low or High
- \* Edge Detect . . . . . Counts both edges of both biphase inputs

#### Physical

- \* Small size . . . . . 3.1" x 1.2" (79 x 31 mm) PCB
- \* Input/Output Connector . . . . . 9 pin 'D', Female on PCB
- \* Low Power . . . . . +5v to +15v @ 50mA
- \* Designed to be built into existing projectors/Mag Machines to provide a unified pulse input rate or Output Rate.

#### Biphase Divider

##### Software 1

Divide input biphase by any integer number between 1 and 255 to give a symmetrical biphase output (Provided that the biphase input is symmetrical).

##### Software 2

Nominal 2 ppf Biphase output, Set input ppf to any integer between 2 and 255. The biphase output will not always be symmetrical (dependant on the input pulse rate) and is dependant on the input pulse rate.

#### Pulse+Direction -> Biphase

Nominal 2ppf Biphase Output, Set input ppf to any integer between 8 and 255. The biphase output will not always be symmetrical and is dependant on the input pulse rate. Reverse output connections if direction is reversed.

#### BI-PHASE -> Pulse+Direction

Divide input biphase by any integer number between 1 and 255 to give the required output pulse rate. The output pulse is an active Low mono-stable output, direction will change when output is High only

#### Setting the DIP Switch

The DIP switch is programmed either with the Divide Ratio (Biphase Divider S/W 1) or the nominal input Pulses Per Frame (Biphase Divider S/W 2 or Pulse+Direction -> Biphase). One you decide the number to be programmed it must be converted to Binary. The table below shows some examples.

Biphase Divider/Input Pulse Rate Examples								
Switch>	8	7	6	5	4	3	2	1
Binary>	128	64	32	16	8	4	2	1
100	Off	On	On	Off	Off	On	Off	Off
75	Off	On	Off	Off	On	Off	On	On
25	Off	Off	Off	On	On	Off	Off	On
10	Off	Off	Off	Off	On	Off	On	Off
5	Off	Off	Off	Off	Off	On	Off	On

The pre programmed chips are available for OEM use