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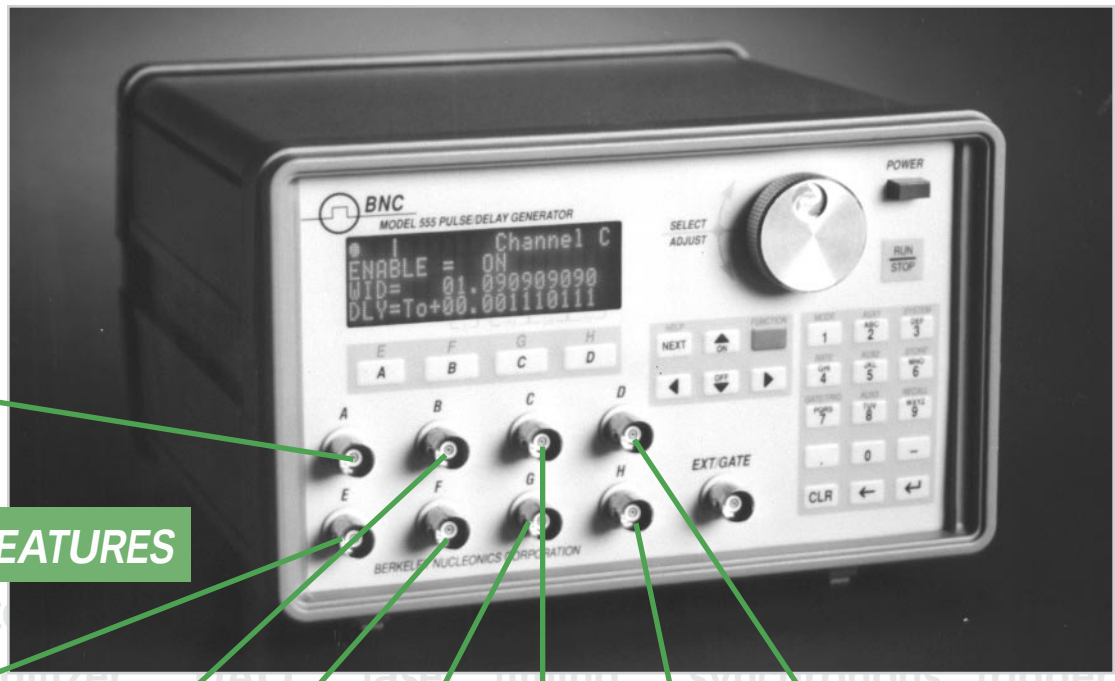
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Find the *Berkeley Nucleonics 555* at our website: *Click HERE*

BNC

Unbeatable Value!

MULTI-CHANNEL DIGITAL DELAY / PULSE GENERATORS



UNRIVALED FEATURES

8 Outputs, each with independent amplitude, delay, width and mode.

Model 500 Series

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Compare & Save

BNC

The Model 555 has features you need



Model 555 Series Digital Delay/Pulse Generators

- Low jitter triggering & 1 ns resolution
- Both width and delay from each channel
- Bursts
- Divide by N triggers
- Enable/Disable and Gate

A new standard for digital time control

The 555 establishes a new standard in value and utility. The 555 is a precise delay and pulse generator providing 2, 4 or 8 pulses with 1 ns resolution. Included is the ability to enable/disable channels, to gate the outputs, to provide bursts from each channel, to divide the triggers by a different N for each channel, and to even add customized timing via software. The digitally controlled time delays and widths may be programmed from the front panel or via the GPIB or RS232 interface. The 555 - for your precise triggering, gating, delaying, syncing and timing application.

Each channel provides true independent pulses – delay, width and amplitude

Our channels provide both delays and widths with 1 ns resolution. Each delay can be set from 0 to 100 seconds (each width from 10 ns to 100 s), with 1 ns resolution. Trigger modes include internal (0.01 Hz to 1.0 MHz), external (0 to 1.0 MHz), single shot, burst, duty cycle and gated. The amplitude of each channel is independently adjustable.

Selectable output options – polarity, level, TTL, enable/disable, 35V

Each Output can be individually adjusted for polarity, amplitude level or fixed TTL/CMOS output. In addition you may selectively enable or disable individual channels. An optional 35V output adds 35V output signals on the rear panel. Any or all channels may be gate controlled. Each channel may operate in a different mode. For example, with the External Trigger, you might trigger a single pulse, a burst and a continuous train.

Making it easier to use – Spinner/Select knob and 4 line LCD display

The 555's four line display shows the most important properties of each channel in a single display of menus. You can display timing information of all channels simultaneously. There is no need to cycle through levels of menus. A convenient spinner knob with quick-select allows you to select the properties of your pulses, scroll through stored settings, switch channels and control all instrument operations.

Unique timing needs - Upload software upgrades

Some timing applications require unique timing properties. BNC can develop a software file for your application. Upload the software in the field. Combine the channels into one output; burst packets or bursts within bursts; multiple input triggers with one output, you name it - we can do it. BNC offers an electronic library of custom output modes that can be loaded into your instrument in minutes. **Call the factory at 800-234-7858 x215.**

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Even Lower Cost

BNC

The 400/500 models - even lower cost

- Resolution as low as 200 ns
- Unmatched cost per channel
- Features galore!



Model 400A



Model 500D

Lowest cost per channel on the market without compromising quality

Many applications utilize coarser timing resolution. For those applications we offer the Model 400 and the Model 500. These units provide Divide by N, Wait, Enable, Gate, Burst. The features in the product, as well as the reference edge, differ between models, giving you the ability to pick the feature set for your application. Depending on the model, the number of channels provided may be 2, 4 or 8. The digitally controlled time delays and widths may be programmed from the front panel or via the GPIB or RS232 interface.

Features

Delay and Width	Each channel provides delay and width, each independently adjustable
Trigger Modes	Internal, external, single shot, burst, duty cycle and gated.
Divide by N	Channel outputs a pulse every N triggers, particularly useful for laser Q-switch applications
Burst of N pulses	Outputs pulses at the selected rate and stops after N pulses
Wait	Waits N triggers before outputing pulse train
Enable	Select which channels output pulses
Gate	Enable or disable with an external signal
Duty Cycle	Sets the On / Off ratio of pulsing / not pulsing
Count Cycles	Stops after a preset count of duty cycles
Shot Counter	Counts output pulses and displays that number
Store/Recall	Complete sets of timing configurations

Model 507 - high current output

- Precisely timed high current pulses
- Up to 10 amp outputs
- Safety interlock provision



Model 507-2

For airbag SQUIB and fuse testing

These 2, 4 or 8 channel units provide a single shot pulse from each channel with 200 ns resolution. The maximum pulse width is 100 ms and maximum delay is 100 seconds. Control is via the front panel or RS232 or GPIB.

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FEATURE	555	500A	500B	500C	500D	500E	400A	400B
No. of pulse outputs (delays & widths)	2/4/8	4	4	4	8	8	2	2
No. of channels	2/4/8	4	4	4	8	8	2	2
Delay Resolution	1 ns	200 ns	200 ns	200 ns	200 ns	200 ns	1 us	1 us
Delay Range	100 S	100 S	100 S	100 S	100 S	100 S	100 S	100 S
Width Range								
CMOS/TTL	5 ns - 20 s	[---------- 400 ns - 100 s ----------]					[1 us - 100 s]	
Adjustable Amplitude	[min width is slew rate dependent, slew rate 5 ns/V; max width Model 555:20s; Model 400/500:100S]							
Jitter (channel to channel)	800 ps	1 ns	1 ns	1 ns	1 ns	1 ns	2 ns	2 ns
Jitter (Ext trig to channel)	8 ns	100 ns	100 ns	100 ns	100 ns	100 ns	1 us	1 us
Max trig rate, internal & external	1 MHz	10 kHz	10 kHz	1 MHz	10 kHz	10 kHz	1 kHz	2 kHz
Selectable polarity/channel	✔	✔	✔	✔	✔	✔	✔	✔
Enable channel	✔	✔	✔	✔	✔	✔	✔	✔
Burst - # pulse/burst	dif #/ch	✔	✔	✔	✔	✔	✔	✔
Continuous, ext trig modes	✔	✔	✔	✔	✔	✔	✔	✔
Single shot, duty cycle modes	✔	✔	✔	✔	✔	✔	✔	✔
Count cycles, then stop	✔	✔	✔	✔	✔	✔	✔	✔
Gate Off, Active Low, Active High	✔	✔	✔	✔	✔	✔	✔	✔
Wait, Divide/N, Enable Gate	dif N/ch	✔			✔		✔	✔
Shot Counter	✔	✔	✔		✔	✔	✔	✔
Rise / Fall Time								
CMOS/TTL	<5 ns	[---------- slew rate 5 ns/V] to 200 ns ----------]					<1 us	<1 us
Adjustable Amplitude	[---------- rise/fall time is slew rate dependent, slew rate 5 ns/V ----------]							

Digital Delay / Pulse Generator Selection Guide

Trigger Modes 400 / 500 / 555 - Ext Trig, Ext Gate, Int, Single Shot, Burst, Duty Cycle; 507 - Ext Trig, Single Shot

Ext / Int Trigger (max)
- 400A / B — 1 kHz
- 500A / B / D / E — 10 kHz
- 500C / 555 — 1 MHz

External Gate All units have selectable Active High or Active Low.

Single Shot All units provide a single shot from a pushbutton on the front panel.

Burst Model 555 provides up to 50,000 bursts / Model 400 / 500 provide 32,000. The 555 allows different burst number from each channel.

Duty Cycle All units enable you select On and Off times while using Internal Triggers.

Divide / N 555 allows a different N for each channel. 400 A / B and 500D use a common N; 500D has 4 channels of Divide / N. 500 A has just one channel with divide by N.

Outputs Adjustable amplitudes, CMOS / TTL, 10 A current source, 35 V depending on model

Adjustable amplitudes Model 400 / 500 have adjustable amplitudes up to 20V (50 ohm source impedence); Model 555 adjustable to 6V (50 ohm), 12V (high impedence)

Polarity: active low / active high All units provide selection of pulse polarity.

Fast CMOS / TTL 555 - Selectable adjustable amplitude or fixed fast TTL / CMOS outputs. 4 V, < 5ns transition times.
507 - 10A current source. Maximum width 100 ms.

35 Volt Option 555 only. 5-35 V adjustable into 50 ohm. Widths adjustable to 1us. 100 ns fixed width. Outputs on rear panel.

Inputs – External Trig / Gate

Threshold All units to 400 / 500 - 3V; 555 - 0.2 to 12V adjustable

Edge / Polarity All units - selectable

Impedance All units: 50 / 1000 ohm

Interface – RS232 / GPIB

RS232 9600 baud - 400 / 500. Up to 19,200 baud for 555.

GPIB Optional for 500 / 507 / 555.

Store and Recall Standard with all units. Store complete sets of parameters for later recall.

Ordering Information

Model — XXX (X) – X – XXX

400, 500, 507 or 555

Output Configuration
A, B, C, D, E
Model 400 & 500 only

Channel Count Selector
Model 507/555 only
2 channels, select -2C; 4 channels, select -4C; 8 channels, select -8C

Options
G-GPIB (500, 507, 555 only)
GH2/GH4/GH8 - GPIB and 35V High Voltage Outputs, bundled (555 only)
AC-Special AC outputs (507 only)

Accessories
19" Rack Mount — P/N6914-500, P/N6914-507, P/N6914-555
Extended Service/Calibration Agreements available

Samples:
Model 400B
Model 500A-G
Model 507-4C-AC
Model 555-2C
Model 555-8C-GH8

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