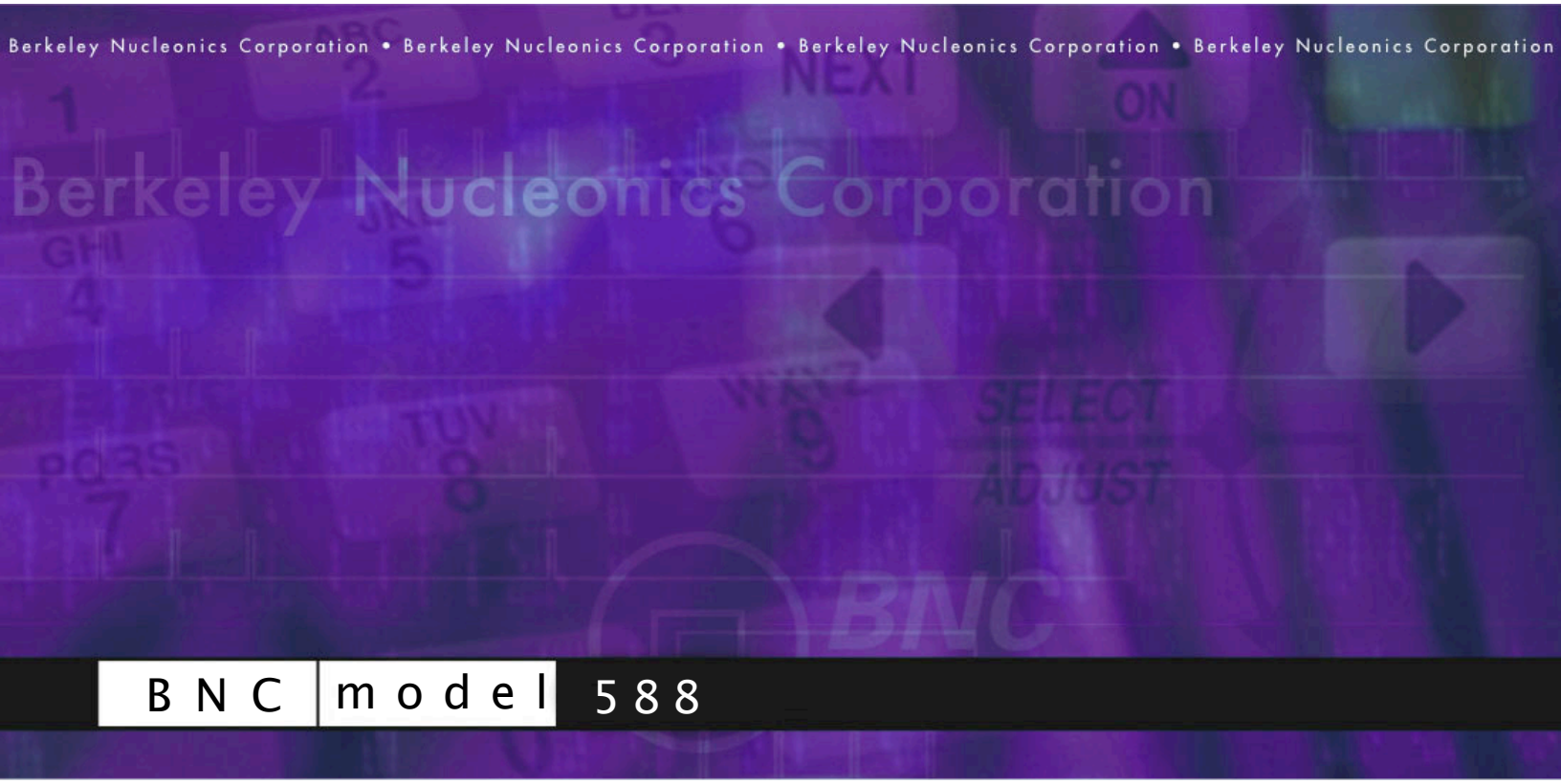
Model 588 – 1U Rack Mount 8 Channel DDG



M O D E L 588

- 50pS Internal Jitter, 200pS trigger jitter
- 250pS Delay & Width resolution
- Multiplex up to 8 Channels

BNC model 588

MODULE SPECIFICATIONS

TTL/ADJUSTABLE CHANNEL OUTPUTS

oputput impedance	50 ohm

TTL/CMOS MODES

output level	4.0 V typ into 1 kohm
rise time	3 ns typ
slew rate	0.5 V/ns
jitter	50 ps RMS

ADJUSTABLE MODE

output level	2.0 to 20 VDC into 1 kohm 1.0 to 10 VDC into 50 ohm
output resolution	10 mV
current	200 mA typical, 400 mA max (short pulses)
slew rate	> 0.1 V/ns
overshoot	< 100 mV + 10 % of pulse amplitude
rise time	15 ns typ @ 20 V (high imp) 25 ns typ @ 10 V (50 ohm) (10% - 90%)

TRIGGER/GATE DUAL INPUT (STANDARD)

Standard dual channel input, providing one trigger input and one gate input. May be used with the dual trigger firmware option to provide two independent trigger sources.

threshold	0.2 to 15 VDC
maximum input voltage	60 V peak
resolution	10 mV
input impedance	1 Mohm + 40 pF or 50 ohm
insertion delay	< 180 ns
pulse inhibit delay	< 120 ns
output inhibit delay	< 50 ns
jitter	< 800 ps RMS

*Other custom modules available. Call with your request.

SYSTEM EXTERNAL TRIGGER/GATE INPUT(S)

TRIGGER INPUT

function	generate individual pulses, start a burst or continuous stream
rate	DC to 1/(200 ns + longest active pulse)
slope	rising or falling (maximum of 5 MHz)
behavior	used to control the internal rate

GATE INPUT

function	pulse inhibit or output inhibit
polarity	active high / active low
behavior	used to control the internal rate generator

STANDARD FEATURES & FUNCTIONS

communications	USB/RS232/Ethernet
external clock in	10 MHz - 100 MHz in 1 MHz increments
external clock out	5 MHz - 40 MHz
configuration storage	T0, Rate, Chan, 2x ExtPLL, 1 ExtPLL, ½ ExtPLL, ½ Ext, 40MHz, 20MHz, 10MHz, 5MHz, and Disabled

STANDARD OUTPUT MODULES

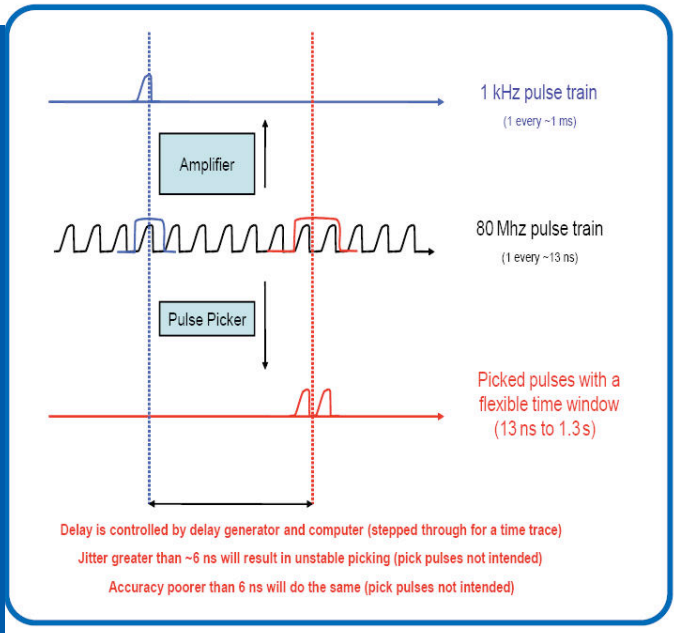
AT20	quad channel, TTL/CMOS & adjustable output module

OPTIONAL MODULE

TZ50	quad channel, high current TTL/CMOS (for driving 50 ohm loads) & adjustable output module

SYSTEM OPTIONS

I	incrementing (provides automatic high speed incrementing/decrementing of delay and/or pulsewidth for each channel)
DT15	dual trigger logic – provides additional trigger via gate input



- Independent Channel Enable/Disable
- Delayed Channel Enable - allows flash lamp/ diodes to be fired, stabilizing the laser before the Q-switch or shutter is enabled.
- Single shot or Burst mode laser pulse bursts, controlling either just the Q-switch or entire laser.
- Duty cycle mode allows firing laser at an optimal rate, but picking pulses out at the user required rate.
- Output multiplexer allows the timing of any combination of channels to be output on any of the output ports, providing very complex pulse trains.

INTERNAL RATE GENERATOR

rate	0.0002 Hz to 10.000 MHz
resolution	10 ns
accuracy	1 ns + .0001 x period
jitter	50 ps RMS
settling	1 period
burst mode	1 to 9,999,999 pulses
timebase	100 MHz, low jitter PLL
oscillator	50 MHz, 25 ppm
system output modes	single shot, burst, duty cycle, continuous
pulse control modes	internal rate generator, external trigger, external gate

PROGRAMMABLE TIMING GENERATOR

channel output modes	single shot, burst, duty cycle, normal
control modes	internally triggered, externally triggered and external gate each channel may be independently set to any of the modes
output multiplexer	any/all channels may be multiplexed to any/all outputs
delayed output	0 to 9,999,999 pulses
timebase	same as internal rate generator

DELAY

range	0 - 1000 s
accuracy	1 ns + .0001 x setpoint
resolution	250 ps

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