

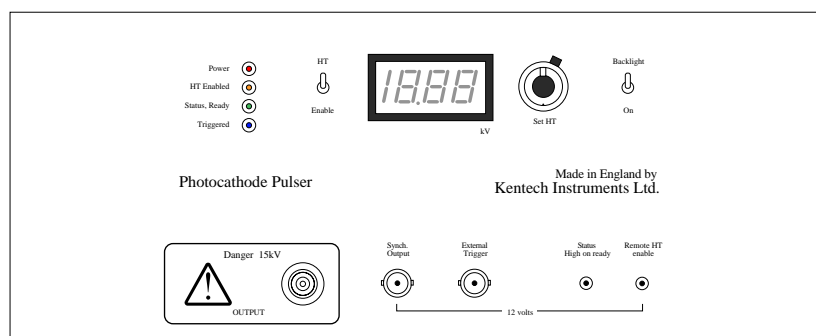
Kentech Instruments Ltd.

PHOTOCATHODE PULSE GENERATOR

This pulse unit is a low repetition rate pulse generator designed to pulse cathodes on image tube so that higher extraction fields, and consequently time resolution, can be obtained. The unit is designed to be remote from the cathode and capable of pulse charging the cathode capacitance for around 20ns. The unit uses a active self matched line configuration to achieve a single pulse into any resistive load or a small capacitor.

SPECIFICATIONS

| | |
|-------------------------|--|
| Voltage range | -0.2kV to -15kV as a negative pulse device. |
| Maximum repetition rate | Depends upon the voltage. 40Hz at 15kV into an open circuit. |
| Trigger input | 3 volts 10ns f.w.h.m. into 50Ω. |
| Jitter | Approximately 100ps or less (hard to measure) |
| Synchronisation Output | TTL approximately 50ns after trigger. |
| Main output | Reverse terminated 75Ω. Output will > 20kV into an open circuit with the HT set to maximum. |
| Remote HT enable | This 12 volt input needs to be shorted to activate the HT. |
| Status | TTL (high on ready) on the front panel for remote interrogation of the status. The status is high when the voltage on the switch equals that preset on the front panel, and when the HT is on. |
| Power input | Universal 85 to 264 volts A.C. at 47 to 440Hz. 2 amp fuse, type T (anti-surge) This unit contains an auto-resetting thermal trip rated at 70°C Maximum average power consumption 25 watts. |
| Connectors | |
| Power | IEC |
| Trigger input | BNC |
| Synchronisation output | BNC |
| Status Output | Lemo 00 (Part number FFA.00S.250.CTA C27) |
| Main output | Fischer DK105A005/7.2 Note that the output has a female centre pin. |



HIGH VOLTAGE PULSER SUMMARY

| Pulser | Amplitude | T _{rise} /PW | PRF | RMS Jitter | Features | Options |
|--------|-----------|-------------------------|-------|---------------|----------|-----------|
| APG1 | >100V | 150ps/150ps | 10kHz | 10ps | S/D | |
| ASG1 | >200V | 100ps/8ns step | 1kHz | 10ps | St/D | |
| SPSV | >1kV | 0.7ns/1,2,4,8,10 & 12ns | 100Hz | 10ps | S/D | |
| CPS1 | >2kV | 150ps/2ns decay | 1kHz | 20ps | | /S |
| CPS2 | >4kV | 150ps/2ns decay | 100Hz | 20ps | | /S |
| CPS3 | >6kV | 150ps/2ns decay | 10Hz | 20ps | | /S |
| HMP1 | >4kV | 100ps/5ns | 100Hz | 10ps | | S/D/Q/V/F |
| HMP2 | >4kV x 2 | 100ps/5ns | 100Hz | 10ps | | S/D/Q/V/F |
| PBG1 | >6.5kV | 100ps/5ns | 100Hz | 10ps | | S/D/V/F |
| PBG2 | >8.5kV | 100ps/5ns | 100Hz | 10ps | | S/D/V/F |
| PBG3 | >12.5kV | 100ps/5ns | 100Hz | 10ps | | S/D/V/F |
| PBG5 | >24kV | 150ps/3ns | 1kHz | 20ps | | S/D/V/F/B |
| PBG7 | > 45kV | 150ps/3ns | 500Hz | 20ps | | /B |

Features and Options

- S Shaped pulse
 - St Step pulse
 - D Internal switchable delay, rate generator, trigger indicator, auxiliary low level outputs
 - Q Fast rise time (quick) down to 90ps on some units
 - V Variable output (approximately 60% to 100%)
 - F 1kHz repetition rate (some pulsers can achieve this without this option, consult factory)
 - B Balanced outputs
- Units are available with multiple synchronous outputs,
e.g. a PBG5 will drive sixteen 50Ω outputs to 6.4kV

Voltages are into 50Ω, both positive and negative outputs are available.

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From small to very large; custom built pulsers are available for a wide range of applications.

Kentech Instruments Ltd. manufactures a large range of pulse generators and builds systems to customer specification. If you do not see a suitable instrument listed here please consult the factory to discuss your requirements.

Kentech Instruments Ltd. also make a range of time resolving and imaging devices for both X-ray and Optical wavelengths. In particular we manufacture gated optical image intensifier systems with gate widths down to 50ps and high repetition rate systems with bandwidths to GHz.

For X-rays we can offer gated imager and streak cameras.



The Kentech HRI (High Rate Imager)
 Optical image modulation to 1GHz,
 gate widths to 300ps at 110MHz
 repetition rate