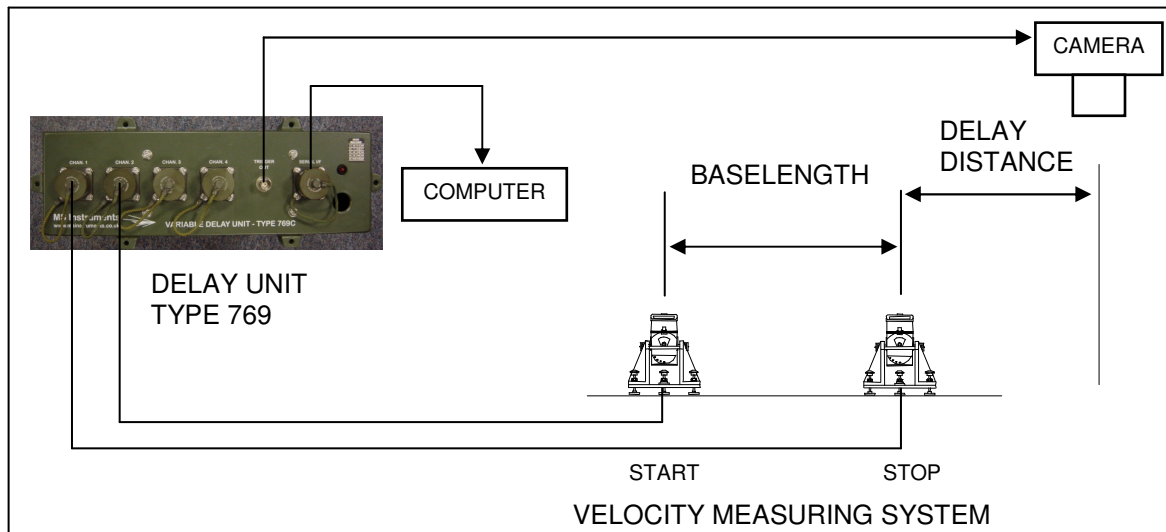


VARIABLE DELAY UNIT TYPE 769



The Variable Delay Unit type 769 is designed to provide a precise *distance* delay between a desired measurement plane and a reference point. The velocity of a projectile is calculated from two input signals, START and STOP. The input signals may be generated from optical detectors type 858, supplied by MS Instruments, or from any source providing a TTL signal. The 769 calculates the projectile velocity and generates an output pulse when the projectile is predicted to have reached the measurement plane. The output is a TTL positive pulse. The unit may also be configured to provide a transistor open-drain (contact-closure) output. This signal may be used to trigger a variety of devices such as a high-speed camera or a flash X-ray. The 769 is programmed from a PC via the USB serial port using the supplied 570 070AS computer interface unit & Ballistics DB software. All that is required to program the 769 is the following:

1. Distance from START to STOP detector.
2. Distance from STOP detector to measurement plane.
3. Minimum and maximum expected velocity.

This data is stored by the 769 and does not have to be re-entered. The system is armed to start checking for a valid START-STOP sequence. Once this is received the output pulse will be generated at the moment when the projectile reaches the measurement plane.

Using this method, the Variable Delay Unit type 769 allows any time delay changes due to variation in the velocity of the projectiles under test to be removed and allows accurate photographs to be taken with the projectile precisely located at the desired point in the measurement plane.

SPECIFICATION

Inputs:	Start, Stop and Two additional trigger inputs from 858 Optical Detectors or TTL pulses
Outputs:	TTL positive rising edge pulse
Delay Time:	From 50 μ s to 65535 μ s in 1 μ s increments (derived from projectile velocity)
Power Supply:	9-30V DC 12W (Furnished by a Detector power unit)
Dimensions:	330mm x 240mm x 120mm
Weight:	4.6 Kg
Environmental	
Humidity:	The unit is fully sealed against the ingress of moisture
Operating Temperature:	-10°C to +60°C