CE4 Commander™ System

combined with digishot® plus.4G

THE INDUSTRY'S MOST ADVANCED ELECTRONIC INITIATION SYSTEM

DYNO®
Dyno Nobel

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Introduction

Electronic blasting systems continue to add major value in overall mining efficiency, environmental protection, and safety. The DigiShot Plus 4G Initiation System from Dyno Nobel is the market leader in advanced blasting technology ensuring the best blast, on time, every time. The system is now well known for its ease of use resulting in fast deployment and programming, eliminating costly blast delays.

Features

- Fast and simple “tag by plan” deployment method.
- Automatic tagger verification that detonators per channel are within design capacity.
- Detonator energy monitoring right up to the point of blasting.
- Autonomous detection and testing of detonators.
- Programming speed is 7 times faster than existing systems.
- Blasting process wirelessly controlled through the multi-purpose CE4 Tagger.
- On-bench detonator hole position simplified with the GPS location of the detonator stored in the CE4 Tagger.
- Allows for 10 ViewShot plans to be stored on the CE4 Tagger.
- Maximum wire length per channel 16,000 m (400 dets per channel at 40 m).

Tagging Modes

Plan Mode:

- A pre-designed ViewShot 3D blast plan containing location and timing is downloaded from the PC to the CE4 Tagger. The user can define a tagging path that creates a detonator list in the sequence of tagging, which is suitable for large-scale blasts. The tagger writes the unique ID and timing into the detonator. The tagging path is flexible to allow adjustment of the plan during tagging, such as the insertion of new holes.

Basic Mode:

- The Basic tagging option makes tagging simpler as the delay is entered onto the Tagger and is assigned directly to the detonator during tagging.
- The timing on all detonators can be assigned or updated in one step. When connected to the harness wire, the Commander automatically discovers and tests detonators with increased speed and performance.

Advanced Mode:

- The Advanced mode includes more functionality than Basic mode, allowing for multi-primed holes, location assignment, and time incremental settings.

Time Assignment for Non-Complex Blasts:

- The CE4 Tagger simply assigns a time to each detonator – manually or with automatic increments.
- When connected to the harness wire, the Commander automatically discovers and tests detonators with increased speed and performance.

CE4 Commander™ System

DEPLOYMENT

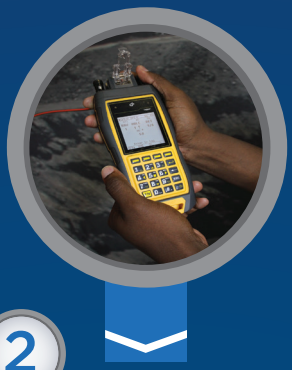
VIEWSHOT® 3D BLAST DESIGN

viewshot 3D

1

VIA USB

DOWNLOAD PLAN TO TAGGER



2

ON-BENCH TAGGING
ASSIGNING TIME DELAY TO DETONATOR

BASE COMMANDER

4

TAP TO BLAST

3000 m LINE OF SIGHT

REPEATER

OPTIONAL ONLY IF LINE OF SIGHT IS NOT POSSIBLE

VIA RF

SCALABLE, BLAST UP TO 10 BENCH COMMANDERS

BENCH COMMANDER 1600 DETS

MAX 16 000 DETS

3

TAP TO ARM

The 4G Detonator

The 4G Detonator is a fully programmable electronic detonator that is suitably tailored to fit all types of blasting operations. The design has evolved from the remarkable safety principles of the 3G detonator.

- Redesigned Application Specific Integrated Circuit (ASIC) has 15 times more memory, which allows the storage and tracking of unique identification numbers.
- Programming of the detonator timing delay can now be done during tagging; alternatively, only the hole locations can be logged to then assign timing delays at a later stage.
- Sufficient firing voltage at the furthest detonator before the user presses the fire keys.
- Down-hole wire length and other critical information is stored in the expanded memory.
- Non-volatile memory is used during detonator assembly.

The CE4 Commander

This multi-purpose device can be used as a Bench, Repeater, or Base Commander, and it controls the entire blast.

- It limits user interface through automatic detonator detection, testing, and fast programming.
- It can be wirelessly controlled by the CE4 Tagger or via the BlastApp on a Tablet device.
- Four channels can connect up to 400 detonators for a total of 1,600 per Commander.
- Up to 10 Commanders can be deployed for a single blast using long distance RF communication for 16,000 detonators per blast.
- The unique, robust design with a built-in long-range antenna can handle the harshest mining conditions (no external antenna required).
- The Arming and Blasting process is controlled with NFC BlastCards.
- It can potentially be integrated into mines' clearance systems to authorise blasting.

CE4 Tagger

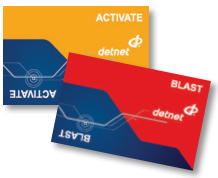
The multi-purpose V4 - CE4 Tagger is a leading innovation from Dyno Nobel and the best of its kind in the industry.

- Up to 10 ViewShot Xpress blast plans can be stored on a tagger.
- This inherently safe multi-purpose device is used for on-bench tagging of detonator delay and/or location, functional detonator testing including leakage and troubleshooting before leaving the bench.
- Scratch-proof glass screen provides excellent visibility.
- User alerts engage multiple sensory formats: tactile (vibration), audible (speaker) feedback, and visual alerts through bright LEDs.
- It uses excellent battery management technology with USB or wireless charging.
- Wireless communication with Commander is used to confirm system blast readiness and execute Arm & Fire.

ViewShot 3D

ViewShot 3D is a user-friendly and straightforward application that can run on a tablet, PC, or mobile phone. ViewShot 3D can design a simple blast on the bench, which can be downloaded onto the CE4 Tagger. ViewShot 3D seamlessly integrates with third party mine planning and reporting software.

BlastCards



- BlastCards use Near Field Communication (NFC) to wirelessly interact with the Commander.
- Encrypted blast commands and RF settings are stored in the card.
- BlastCards are password protected to ensure safe blasting.

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