

electronic initiation systems



digishot[®] Φ

digishot[®] *plus* Φ

smartshot[™] Φ

geoshot[™] Φ

driftshot[™] Φ

DYNO
Dyno Nobel

Groundbreaking Performance

electronic initiation systems

Take Control of Your Blasting Challenges

- ✓ **Increase Safety and Security**
- ✓ **Ensure Reliable Performance**
- ✓ **Reduce Environmental Impact**
- ✓ **Improve Operational Efficiency**

electronic initiation systems

Electronics are Accurate and Precise



**Not Accurate
Not Precise**



**Precise
Not Accurate**



**Accurate
Not Precise**



**Accurate
and Precise**

 = Average Time

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Toughest Downline Wire



Robust Design Ensures Reliability



Most Advanced Data Management

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More Control of Blast Site Safety

Wall
Stability

Flyrock
Reduction

Encrypted
Firing



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More Control of Community Relations

Vibration

Airblast

**Structure
Damage**

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More Control of Operational Efficiency

**Predictable
Fragmentation**

**Crushing
Costs**

**Load / Haul
Costs**

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smartshot[™] Φ

driftshot[™] Φ

geoshot[™] Φ

viewshot[®] Φ

for every application

Small Blasts – Surface & Underground

Large Blasts – Surface & Underground

Largest Blasts – Surface & Underground

Underground Development & Tunneling

Geophysical Exploration

Integrated Software System

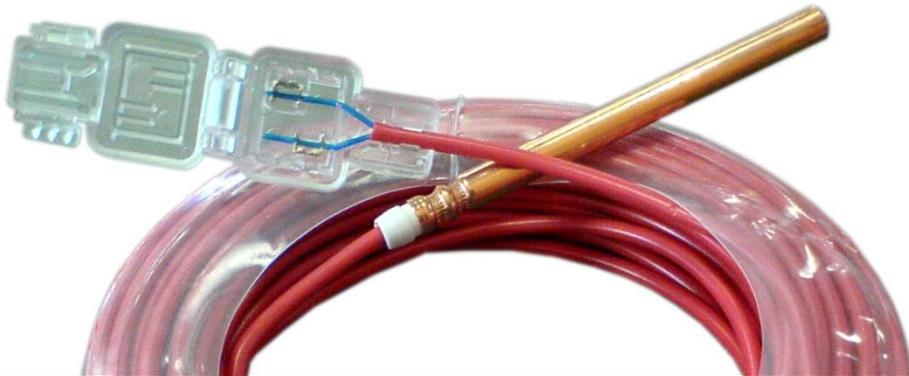
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digishot[®]

electronic initiation systems

- ✓ Smartkey and Fire Command encryption for security
- ✓ Fully programmable in advance or at blast site
- ✓ Robust connectors and downline wires
- ✓ Full two-way communication



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digishot[®] *plus*

electronic initiation systems



- ✓ All the features of DigiShot and . . .
- ✓ Larger blasts - up to 7,200 detonators
- ✓ Downloadable blast patterns
- ✓ Remote firing
 - Base station with up to 4 bench boxes
 - Leaky feeder compatible
 - Repeater station increases distance



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smartshotTM Φ

electronic initiation systems

- ✓ All the features of DigiShot Plus and . . .
- ✓ Largest blasts - up to 9,600 detonators
- ✓ Auto-programming
- ✓ Easy, robust daisy-chain connections
- ✓ Remote firing, leaky feeder compatible



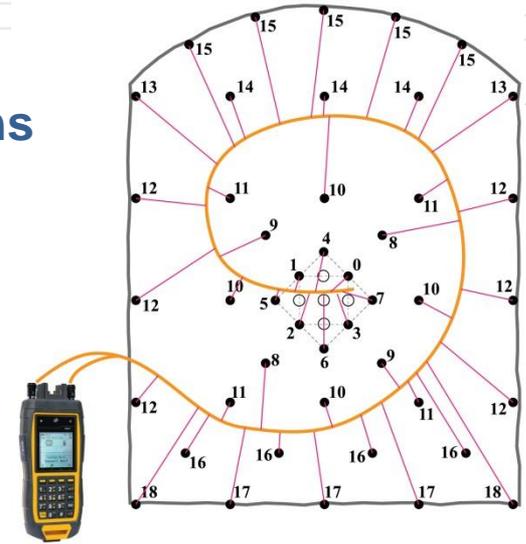
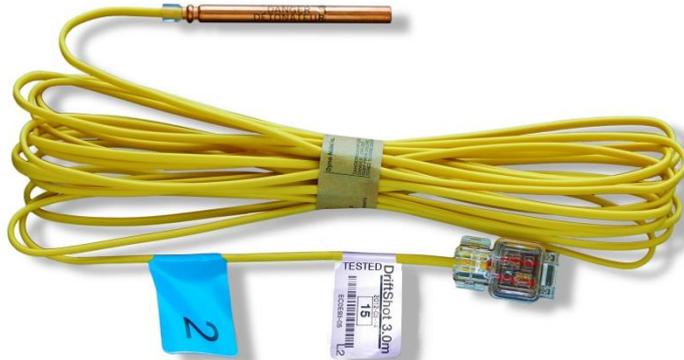
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Groundbreaking Performance

driftshot[®]

electronic initiation systems

- ✓ Simple system emulates NONEL LP delay periods
- ✓ Minimal training required
- ✓ Hookup to busline in any order
- ✓ 6 channel Blast Control Unit with preloaded options
- ✓ Nominal and programmable templates available



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geoshot[®]™

electronic initiation systems



- ✓ Integrated safety and security features
- ✓ Rugged reliability in challenging conditions
- ✓ Enhanced data management
- ✓ User-friendly

geoshot[®] Daily Drill Report

Project: Smith 3D Date: AS
Job Number: 42 Driller Name: Bill
Client: ABC Helper 1: Joe
Location: 3A Rig Number: R312

No.	Line/Shot/Hole	Detonator ID	Length	Hole Dept	Charge Weight	Initiation
1	60960725	187350	30	30	2.2	
2	60960726	187320	30	30	2.2	
3	60960729	187206	30	30	2.2	
4	60960722	187329	30	30	2.2	
5	60960723	187380	30	30	2.2	
6	60960724	187340	30	30	2.2	
7	60960725	187366	30	30	2.2	
8	60960724	187320	30	30	2.2	
9	60960728	187310	30	30	2.2	
10	60960720	187310	30	30	2.2	
11	60960722	187310	30	30	2.2	
12	60960725	187310	30	30	2.2	

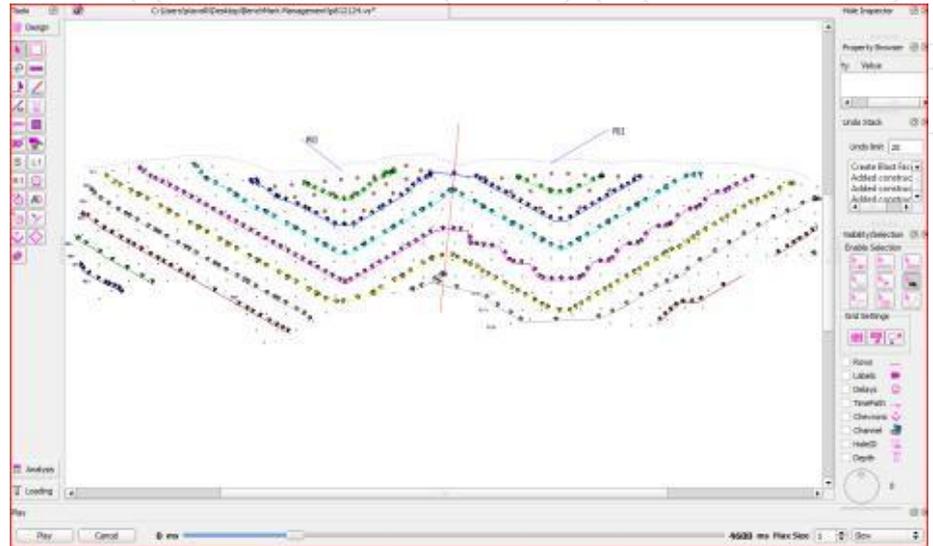
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viewshot[®]

blast design software

- ✓ Accurate, sophisticated blast designs and timing analysis
- ✓ Imports from mine planning applications
- ✓ Blast simulation capability
- ✓ Export designs directly to Dyno Nobel control equipment



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