

Force Two Vibrator Control TDMA Communication Upgrade Option (Pelton VibPro Vibrator Electronics Compatible)



Seismic Source Co., Of Ponca City, Oklahoma, is the world's largest independent center for vibroseis research and development. Its unrivalled facilities permit new techniques to be field-tested and hardware/software to be developed to work with a wider range of acquisition systems and vibroseis controllers than any other company's in the world. As a result, SSC is the largest supplier of modern vibroseis control products to the North American market and is rapidly expanding to other locations internationally.

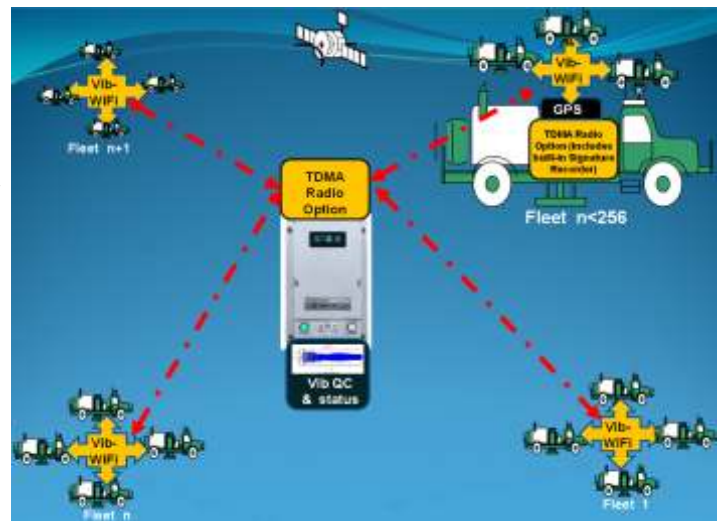
To cope with the need for increased flexibility in vibroseis control, SSC now offers its TDMA Communication Option package as a robust, simple and low-cost upgrade for all users of Force Two and INOVA Vib Pro™ control electronics. However, it is more than just a communications system; it is also a vibrator signature recorder. With the SSC Force Two system or the INOVA Vib Pro™ units enhanced with this option, they can provide greater functionality and flexibility than any other vibroseis control package in the world.

Vib Pro™ is a trademark of INOVA Geophysical Inc.

TDMA and the Latest Vibroseis Techniques

SSC's advanced high-speed Time Division Multiple Access option includes a digital radio communication subsystem. This allows standard, existing vibrator VHF radios to carry far more data. It does away with any need for additional specialized radio equipment. The SSC TDMA package can be used to improve standard vibroseis operations such as single fleet and flip-flop, as well as advanced vibrator techniques including:

- Slip Sweep (Shell)
- HFVS (ExxonMobil)
- ZenSeis (ConocoPhillips)
- ISS & Ds3 (BP)
- Control of up to 256 groups of independent vibrators.



TDMA and Vibroseis Signature Recording and QC

SSC's TDMA Communication Option not only enhances the latest vibroseis techniques, it also provides a range of automated data quality control features which are not available with any controller: It enables industry-standard **Vibrator Radio Similarities**; it allows GPS-conditioned synchronization to provide microsecond-accurate time stamps and GPS positions on every sweep; it has 24-bit built-in Vibrator Signature recording and storage for all sweeps. It also provides advanced vibroseis techniques to older acquisition systems including:

- ARAM/ARIES
- IO and ION
- Sercel

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TDMA and WiFi Group Communications

As an additional option to the TDMA package, SSC also offers its new Vib-WiFi package. Using Vib-WiFi every vibrator in a local group can report comprehensive QC and status messages after each sweep to the head vibrator. This data is then sent back to the observer using the TDMA communications option. Features include:

- Vibrator Group ready message
- Vibrator Group Center of Gravity accurate vibrator group position for:
 - Stakeless operation
 - Source-driven acquisition
- Group quality control message
- Easily change group assignments using simple radio commands.

TDMA and the latest Source Control and Observing Software.

SSC has also developed new software to complement the latest recording systems and acquisition techniques:

- SPS/XPS driven operations
- Source driven acquisition.

SSC's advanced software utility "Sigma Observer", offers a wider range of vibroseis control options than exists anywhere else today. These include manual or source-driven acquisition with almost any conceivable deployment of up to 255 vibs. When coupled with the Sigma* cablefree seismic system, land acquisition reaches new stages of flexibility. For the first time in land acquisition history, all sources, receivers and source controllers are able to act entirely independently of each other, and appropriate data sets generated harmoniously when required. Sigma may be used as a stand-alone system or side-by-side cabled recorders.

Sigma is trademark of ISeis Co., subsidiary of SSC.



SSC TDMA option on vib' crew using Sigma Acquisition System side by side traditional cable system

Modern Acquisition and Source Control Philosophies

Until recently, common acquisition philosophy for vibrators saw them under the command of the recorder. This in turn meant that the source controller was designed as a peripheral to the central recording system, restricted in its operational flexibility due to pre-conceived or old ideas of how sources and recorder must work together.

However, the latest vibroseis techniques require vibrators and recording channels to be entirely independent of each other, with all source and receiver records brought together harmoniously just when data files are to be compiled. Only in this way can crews maintain the highest levels of productivity and cope with ever-changing acquisition techniques. The latest source controllers and recording equipment from SSC are uniquely able to offer this level of independence and rapid deployability.

Seismic Source: one-stop shop for the world's latest source control and acquisition hardware.

www.seismicsource.com

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