轻便分布式遥测地震勘探系统

PORTABLE DISTRIBUTED TELEMETRY SEISMIC PROSPECTING SYSTEM

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通过国家 863 计划重大项目支持，吉林大学主持研制的 SE863 型轻便分布式遥测地震勘探系统是具有低功耗、高稳定性和实时采集的有线无线混合遥测地震系统。该系统由单站单道采集站链、数据交叉站、便携式主控站、电源站等组成。系统采用世界上最先进的单站遥测技术，高分辨率（31 位）数据采集，毫秒实时采样，可带站上万道。系统采用有缆无缆混合遥测技术，便于在复杂地形条件下完成地震勘探工作。配套研制的小型电液伺服可控震源由浅井震源头、地表 PS 波震源头及自行式液压泵站组成，根据不同勘探需要可多台联合作业以增强能量加大勘探深度。

Supported by national 863 plan major project, Jilin University scientific research team have developed the Distributed Telemetry Seismic Prospecting System (SE863), this is a set of seismograph used in mineral resources exploration and is characterized by strong real time channel capacity, low power consumption and high stability, etc. This system consists mainly of Distributed acquisition unit chain, cross station, portable master control station and power station etc. This system adopts the best technique in seismic prospecting, known as mono-unit telemetric seismograph, featuring in 31-bits A/D convertor for high exploration resolution data acquisition, real-time sampling in millisecond level, and more than ten thousand acquisition channels to configure into 3D seismic data acquisition net. The combination of wire and wireless telemetric seismograph facilitates seismic prospecting under complicated topographic condition. This system can matched with electro-hydraulic servo seismic vibrator which consists of seismic vibrator working in shallow well or surface PS wave seismic vibrator and self-propelled hydraulic station. To increase exploration depth, we can use many sets of seismic vibrators to make up phased array and combination vibroseis.

分布式采集站链

Distributed acquisition unit chain

混合遥测交叉站

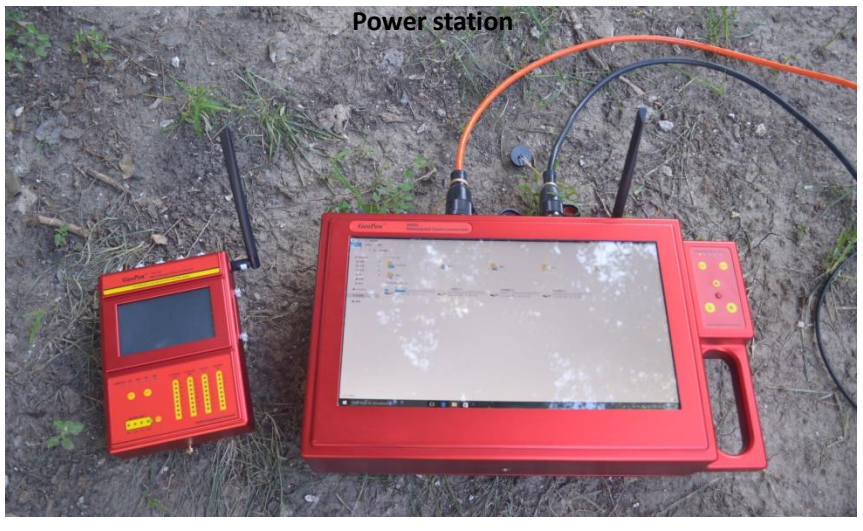
Telemetry cross station

小型自行式电液伺服可控震源

Self-propelled electro-hydraulic servo seismic vibrator

中继电源站

Power station



便携式主控站与爆炸机

Portable master control station and encoder