

# KeyDrill Mud Pulse Receiver Systems (KRS)



KeyDrill provides a variety of MWD surface receiver systems for various customer application requirements. As well as the traditional receiver system commonly used in the rig shack, KeyDrill also provides the certified Class 1 Division 2 computer receivers designed for use on the rig floor, which function as the receiver and display interface for the customer's downhole MWD Tools.

The pressure transducer on the pump directly connects to the KRS. The KRS acquires, processes, and decodes the mud pulses generated by the downhole MWD tool being utilized, and then sends the information received from the tool to its rig display and any standard WITS logging systems for viewing, logging and further analysis. The combined KRS, WITS support system, and a laptop PC together provide a complete surface system for customers' MWD directional tools.

## Features

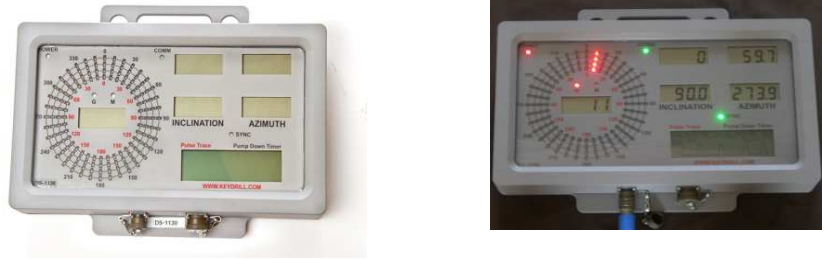
- Compatible with almost all of the more recognized MWD tools presently on the market
- The following parameters are decoded and displayed:

Tool Face	Inclination,	Azimuth,	Magnetic Field	Gravity Field,
Dip Angle	Gamma	Pressure	Battery Voltage	Temperature
General Variables	Gxyz	Hxyz	Resistivity	Various Flags
- Uses a "**plug and play**" automatic detection technology to simplify the operation and training processing, and to eliminate most operation errors in the field
- Highest rating in performance (**1 PSI detection ability and 1 pulse sync capability**)
- Sets the benchmark in accuracy and reliability in signal detection at a reliability over 90%
- Supports standard **WITS** and other popular logging systems
- Supports many other rig floor displays presently in the market
- Compact rugged construction and easy transport to any location
- Lightweight rig display computer - viewable in sunlight and dim lighting
- Pre-loaded application software

## Specifications

- Operation power: 90-240 VAC, 50-65Hz
- Operation Temperature: -40– 50C for C1D2 Computers  
0 – 50C for KRS Box
- Storage Temperature: -40 – 80 degree C
- Operation/non-operating vibration: 3G RMS
- Weight: 12 lbs (KRS) to 21 lbs (Computers)
- Dimension: 13"x9"x5" (KRS) and 15"x12.5"x4" (Computers)

## KeyDrill Rig Floor Display (K-RFD)



- Support all popular MWD surface systems,
- Extra DipA and Gamma displayed.
- Extra synchronization Indicator - reading of pump on, pump off, synchronization in the dark
- Gravity, magnetic field, pump pressure, battery voltage, temperature and even the survey confidential number can be displayed (in conjunction with the KRS).
- Built in Y-cable allows the display cable to transfer all pressure and display data together.
- Compact rugged design is fully sealed against the elements, making it highly reliable
- Operation Temperature: -30 to 75 degC, Storage Temperature: -40 to 85 degC
- Dimension: 16"x9"x2.25", Net Weight: 11 lbs

## KeyDrill Wireless Connection System (KWS)



KWS is capable of transmitting and receiving high-performance digital and analog communication data from one location to another in a wireless mode. The small size and superior performance of KWS makes it ideal to permit many applications at well sites to become wireless (i. e. wireless rig floor displays and wireless pressure transducers).

- Approximately 1500ft working range on rig sites, which can be extended with external antenna
- Completely compatible with the majority of brand name MWD tools and rig floor displays presently in use in the field
- "Plug and Play" to simplify the operation and training processing,
- Fully sealed - can be operated in all types of severe outdoor environments
- Extremely reliable
- Operation power: 90-240VAC, 50-65Hz
- Dimension: 10"x6"x4" (EM), 10"x6"x5" (PEM)
- Wireless Power: 0.1W to 1W,
- Operation Temperature: -20 to 60 degC
- Wireless Frequency: 902M - 928MHz
- Wireless Sensitivity: -106dBm