Extreme Sales and Rental
DDR Upgrade and DPGS Obsolescence
Revision 2

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Applicability: XEM
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BACKGROUND

The original DPG (Duel Pressure Gauge) and subsequent DPGS (Strengthened) have been the standard transmitting probes of the XEM system for many years. With the development of EM downlinking an updated version of this probe was developed and released as a commercial product in 2018 as the DDR (Downhole Downlink Receiver).

MOVING FORWARD

The standard DPGS probe will no longer be produced, and the DDR probe will be the new standard. Extreme will upgrade its rental fleet over time to utilize the DDR as standard. During the transition, DDR probes may be shipped in place of DPGS where EM downlinking is not requested.

PROCESS CHANGES

The DDR probe was created in conjunction with the Extreme EM Downlinker box that allows the user to send EM downlinks to change tool settings in real time. The XEM tool can only accept these downlinks while it is not sending a signal and electrical noise in the bandwidth of the sent signal does not interfere.

There are two physical changes between a standard DPGS probe and DDR probe:
1. The DDR contains an additional electronic bay dedicated to the reception of EM downlink
2. The pressure housing that currently encloses the DPG bay will be extended 9.5" to accommodate for the new DDR bay. This will bring the probe to 71.29" from 61.79" in total length.

There are 3 types of downlinks that can be made to the DDR probe via EM Downlink.
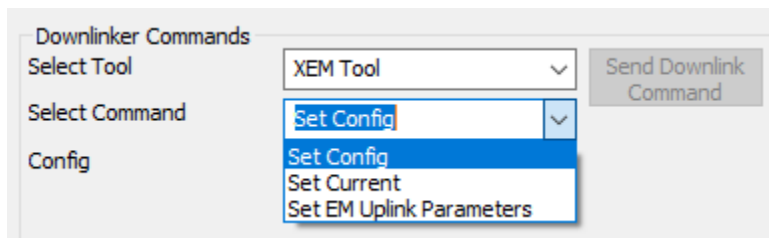
1. <u>Set Config:</u> User can select a configuration number between 1 and 8. This command will reset the tool.
2. <u>Set target Current:</u> User can select any standard target current between 0.1 and 5 amps. This command will not reset the tool.
3. <u>Set uplink Parameters:</u> User can select frequency and cycles per symbol together. This command will reset the tool.

Please refer to the EM Downlinker SOP on further information and instructions on how to operate this tool.