Extreme Sales and Rental
HVTX Adjustable Power Limits
Revision 4

Date: March 31, 2022
Applicability: XEM
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BACKGROUND INFORMATION

Standard high voltage telemetry (HVTX) firmware has options for current settings between 0.3A and 5.0A and is hard coded with a minimum power output of 3W and a maximum of 15W.
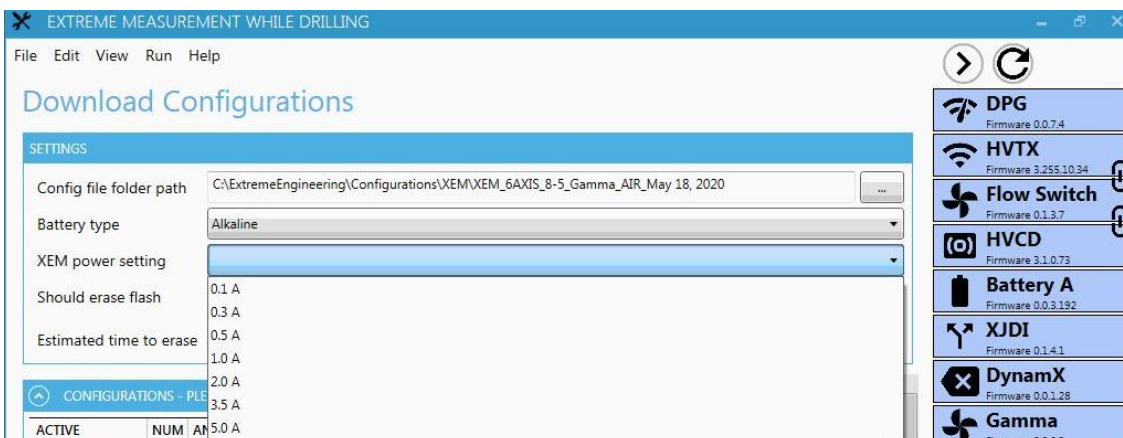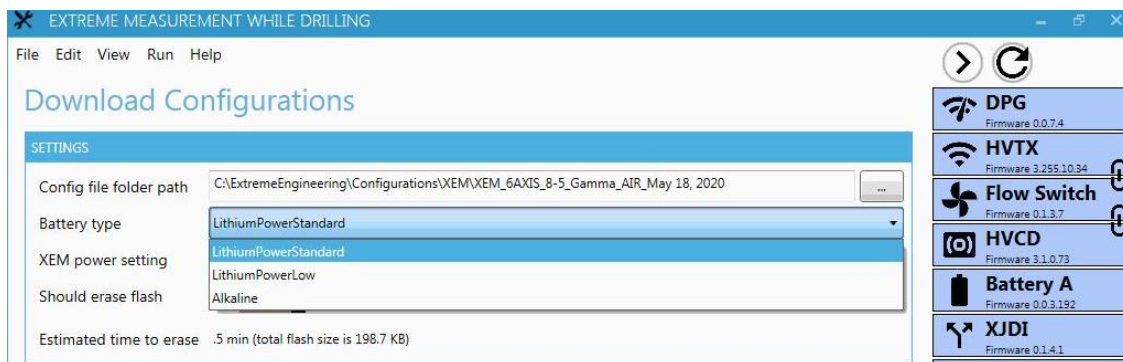
In some applications, the 3W minimum power output is well beyond what is needed for adequate signal at surface causing excess battery usage.

In other applications, the 15W maximum power output can excessively load alkaline cells and lead to premature cell depletion.

PROCESS IMPROVEMENTS

With the new HVTX firmware 3.255.10.35 and Class D firmware 3.1.0.73 programmed with XDirect version 4.0.0.63, or newer, the user can select from several power setting options for the HVTX probe. These are set on the "Download Configurations" page.

Here the user can choose from 3 different battery type settings that provide different power options. The battery type option does not depend on the physical battery type as it only sets the parameters of the tool's output options regardless of cell type. A table of these options is on page 2.

Below are tables detailing the battery type settings and their associated power levels.

Battery Type	PL1	PL2	PL3	PL4	PL5	PL6	PL7*
Lithium Standard	NA	0.3A	1A	2A	3.5A	5A	NA
Lithium Low	0.1A	0.3A	1A	2A	3.5A	5A	0.5A
Alkaline	0.1A	0.3A	1A	2A	3.5A	5A	0.5A

Target current 0.5A will be flagged as power level 7 (PL7). This is because the 0.5A target current was the most recent to be added to the system. Originally there were only 6 power levels. Adding 0.5A put it at number 7 in the list.

Battery Type	Minimum Power	Maximum Power	ClassD Power Type/Battery Type
Lithium Standard	3W	15W	1
Lithium Low	0.1W	15W	2
Alkaline	0.1W	4W	3

The battery type setting will be recorded in the pre and post run report under the HVTX (HVCD).

Tool	HVTX (HVCD)		Probe Serial Number	HVTX279
FW Version	3.1.0.73		Bay Serial Number	HVTX20460
Hours	44670.7			

#	Name	Result Value	Range	Unit	Result Type
1	ClassDPowerType/BatteryType	3	1 … 3		Pass
2	Max Watts	4.000	4 … 15	W	Pass
3	Min Watts	0.100	0.1 … 3	W	Pass
4	Target Current Amps	0.500	0.1 … 5	A	Pass

MOVING FORWARD

This firmware has been extensively field tested and has pass all field test requirements. The HVTX firmware 3.255.10.35 and Class D firmware 3.1.0.73 is now the new standard for all field operations using XEM.