



● **ALPHA7A/L Update**

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ALPHA7A/L with Remote Radial Head



What is new?

- Software V2.2.0.2 was released to production in early 2010
- V2.2.0.2 delivered with all new units since that time
- Numerous improvements to the user interface, no changes to the alarm algorithms
- Time to Alarm Excel spreadsheet simulator has been developed
- Operation of Remote Client on Windows XP
- Best in class sensitivity with lowest false alarm rate

Time to Alarm Simulator

Time_to_Alarm Worksheet

Preliminary Version

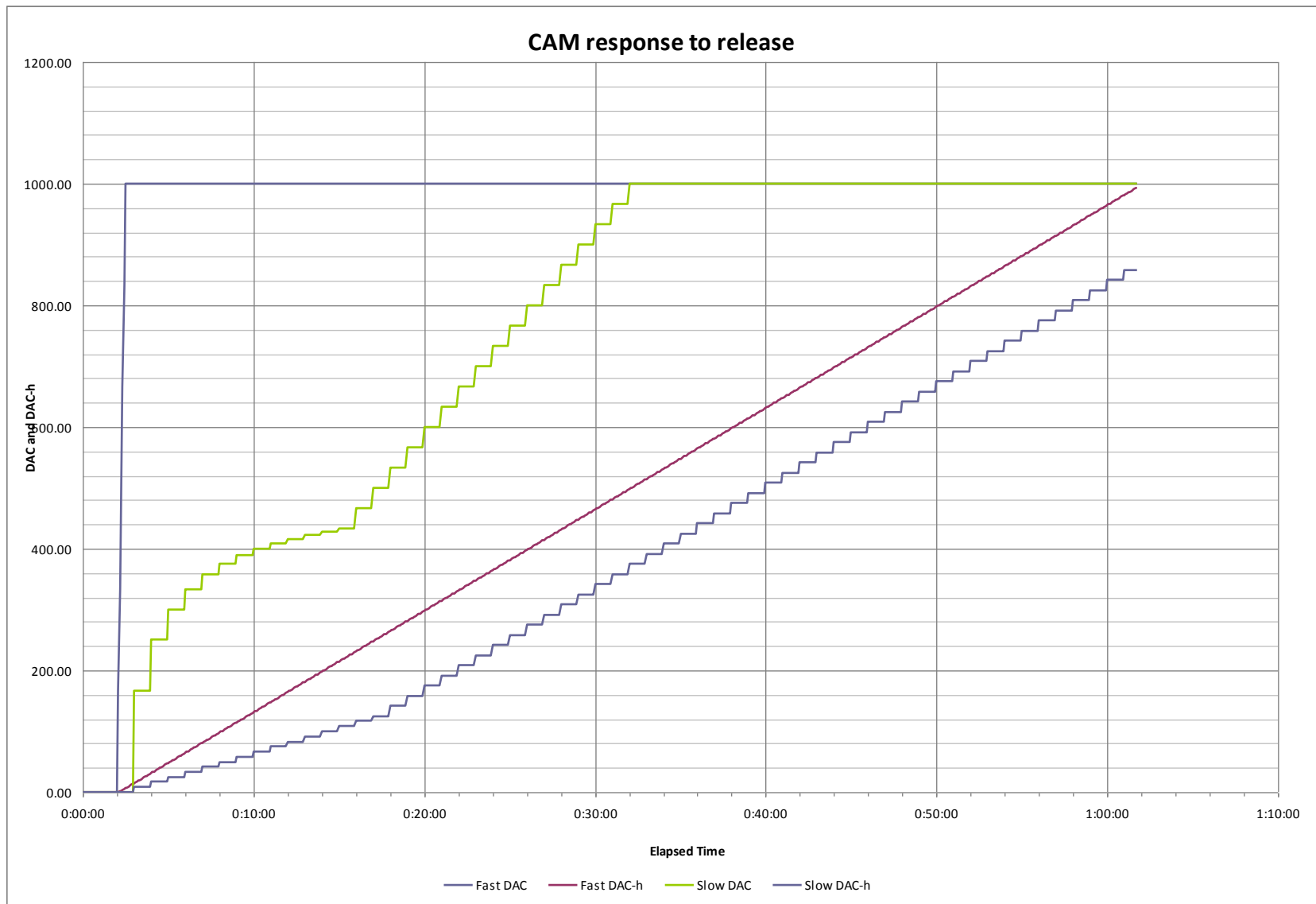
2/12/2010

		Alarm Setpoints	
Flow	40 lpm	Fast DAC	80.00
Fdac	2.00E-12	Fast DACH	80.00
DPM	10	Slow DAC	8.00
WindowF	0.25 min	Slow DACH	8.00
WindowS	15 min		
Detail	0:00:05		

Time to Alarm
0:00:10
0:05:05
0:01:05
0:01:05

Time	Exposure (DAC)	Instantaneous DPM	Fast				Slow				Exposure Time	
			Window	Activity DPM	Fast DAC	Fast DAC-h	Window	Activity DPM	Slow DAC	Slow DAC-h		
0:00:00	0	0	0.00	0.0	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0:00:00
0:00:05	0	0.00	0.08	0.0	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0:00:00
0:00:10	0	0.00	0.17	0.0	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0:00:00
0:00:15	0	0.00	0.25	0.0	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0:00:00
0:00:20	0	0.00	0.25	0.0	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0:00:00
0:00:25	0	0.00	0.25	0.0	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0:00:00
0:00:30	0	0.00	0.25	0.0	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0:00:00
0:00:35	0	0.00	0.25	0.0	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0:00:00
0:00:40	0	0.00	0.25	0.0	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0:00:00
0:00:45	0	0.00	0.25	0.0	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0:00:00
0:00:50	0	0.00	0.25	0.0	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0:00:00
0:00:55	0	0.00	0.25	0.0	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0:00:00
0:01:00	0	0.00	0.25	0.0	0.00	0.00	0.00	1.00	0.0	0.00	0.00	0:00:00

Time to Alarm Chart



LANL Update

- 200 Units in Service, primarily the Radial Head configuration
- Program Manager, David Wannigman, very pleased with the performance
- 3 DAC-Hr alarm set point
- Alarm level is routinely achieved in 5 minutes or less
- Typical MDA is 1 DAC-Hr

LANL Update (continued)

- Very low false alarm rate, approximately 6 per year
- False alarm rate is 1 per 2 million CAM operational hours, or the rate of 1 per CAM each 33.3 years
- Fleet is operating on software V2.1.0.1
- V2.2.0.2 has been tested and approved but not yet implemented

INL Update

- Approx 150 units in service within three different functional groups
- Currently operating versions 1.9 and 2.0
- Two of the three groups are preparing units to field test the latest software version, V2.2.0.2
- Intend to upgrade their entire fleets to V2.2.0.2 once field testing is completed

Future Development/Considerations

- New Single Board Computer
- USB connections
- Instrument operation on Windows XP and/or Windows 7
- Client program dialog box for user settings (replace current registry entry method)
- Differential mode algorithm
- Additional improvements to the user interface

Questions?
