

# Accu-Gold Software ver. 1.6.3 Release Notes

#### **Overview and Comments**

Document Version 1, May 26, 2015

### **1** Overview

This update extends the capabilities of Accu-Gold software, provides improved performance and incorporates routine bug fixes. Once the update is installed, the capabilities described below will become available without any additional action on the part of the user. This version is backward compatible with session files produced with all previous versions of Accu-Gold.

## 2 Extended capabilities - use examples

#### 2.1 Drag & Drop to Excel

In the Measure window you may now click on a data value and drag it directly to an open Excel sheet. You may also copy any individual Measure data item to the clipboard and then paste it in any open document.





## 2.2 Hide individual waveforms in Wave View

Occasionally one waveform may obscure detail in another waveform. You can now selectively hide any wave by clicking on the wave name (e.g. rate or kV) as listed at the top of the Wave graph. Clicking again will un-hide the wave.

Wave view with	difficult to	see details
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💽 Measure 📃 List 🛛 🔼 Wave	
Gy/s Filter O	ff - QQQ
39.41 mGy/s 137.9 kV 260.4 ms	
🖸 Measure 🗐 List 🛛 🕅 Wave	💽 Measure 📃 List 📉 Wave
2.993 mGy/s	Rate AGMS 22.81 mGy/s 77.2 k ↓ ↓ Filter Off ▼ ♀ ♀ ♀ ♀
kV Off 488.8 ms	Dose Rate Off
33.78 mGy/s 118.2 kV	
	22.38 mGy/s 78.32 kV

## 2.3 AGMS DM+, D+, M+ will display dose information when filter is out of range

Previous versions of Accu-Gold did not display multi-sensor dose information when kV data could not be obtained when the reported filtration was out of range (e.g. >40 mm Al eq. for diagnostic x-ray). This information is now available for all Accu-Gold "Plus" multi-sensors. This capability is especially useful for



copper filtered diagnostic beams (> 1mm Cu). For mammographic beams, aluminum filtration can now be added up to 1 mm without loss of dose accuracy (± 5%). Thus, manual hvl measurements can be performed with aluminum filters. Although dose will continue to be displayed with >1mm Al added filtration, the uncertainty may increase to >10% for filtrations exceeding 2mm Al. Note: there is no warning that the uncertainty has exceeded Radcal's specification for dose once the 1 mm Al limit is reached.



Examples with a W/Ag beam while adding aluminum. The ion chamber is a Radcal 6M:

Note: In the first exposure (above) Accu-Gold reported the hvl to be 600 um Al. In the exposure below, 600 um Al was added to the beam. The result was a reduction in dose of 0.50 as reported by both the 6M ion chamber and the multi-sensor.





5/5/2015 6:37 AM			W Ag 🏼 🕚		<b>F F</b> X
<b>kVp</b> Multi-Sensor	Duration Digitizer	Dose Multi-Sensor	Dose Ion Chamber		Side-by-side AGMS-M, 6M
	405.4 ms	<b>899.7</b> μGy	<b>896.3</b> μGy		W/Ag, 36.4 kV, 30mAs 45.1um Ag, Paddle in beam
Average kV Multi-Sensor	HVL Multi-Sensor	Dose Rate Multi-Sensor	Dese Rate Ion Chamber		1.0 mm Added Al
		2.219 mGy/s	2.211 mGy/s	ents 🔻	
Blased Average kV Multi-Sensor	Filtration Multi-Sensor	Don Ratio AGMS / IC Multi-Sector	Pulse Count Digitizer	omme	
		1.00	1	•	
			and we have a second		
		<b>—</b> R:	ate AGMS 🛑 Rate ICh		
		Filtration for AGN	//S is out of range!		carry over to new measurements.



## 2.4 Dynamic Stop Trigger ON/Off.

There are occasions when using a dose diode or an ion chamber, that the automatic dynamic stop trigger ends an exposure inappropriately. This may happen with long slowly changing or undulating waveforms such as CT scans or fluoro exposures. In previous Accu-Gold versions, the solution was to use a second sensor as a trigger (e.g. Dose Diode) or to use Free Run as a trigger. NOTE: The default value for Dynamic Stop trigger is On. Important: Only change the Dynamic Stop Trigger to Off if you experience a faulty ending triggers with ion chambers or dose diodes.



Ion Chamber Exposure with incorrect stop trigger

Dose Ion Chamber	Dose Rate Ion Chamber	Duration Digitizer	
<b>13.05</b> mGy	12.28 mGy/s	<b>1.062</b> s	
Temperature Ion Chamber	Air Pressure Digitizer	Trigger Level Digitizer	
24.1	1002.0	Standard	
Incorrect Stop Trigger			

#### Select Dynamic Stop Trigger Off



New exposure with Dynamic stop trigger Off

Dose Ion Chamber	Dose Rate Ion Chamber	Duration Digitizer	
<b>16.28</b> mGy	8.181 mGy/s	<b>1.991</b> s	
Temperature Ion Chamber	Air Pressure Digitizer	Trigger Level Digitizer	
23.6	1002.0	Standard	
Dynamic Trigger Off Full exposure is captured			