

# LATITUDE™

PROGRAMMING SYSTEM  
MODEL 3300



## Pacing System Analyzer (PSA) Application In-Service

## Patient Connections

- Inductive Telemetry Wand ..... Model 6395
- S-ICD Telemetry Wand ..... Model 3203
- Connection Port ..... (for future use)
- Patient ECG Cable ..... Model 3153
- PSA Cable A / RV ..... Model 6763
- PSA Cable LV ..... Model 6763



Verify proper adapter if  
video screen uses VGA or  
HDMI connection

## Physician Connections

- Power (ON / OFF) Button is green when the Programmer is ON
- USB 2.0 Port (3)
- USB 3.0 Port (1)
- Ethernet Port
- DisplayPort Out
- AC Power Connection




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## Verify Desired Power and Connectivity

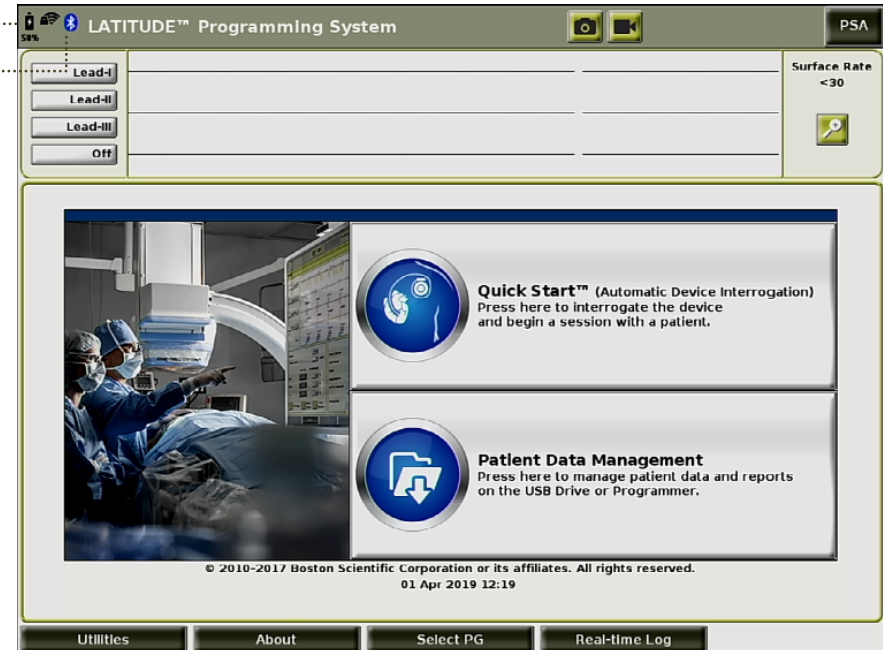
- **Lightning bolt (a)** appears inside the black battery symbol if the programmer is attached to AC power and battery charge is provided
- When unplugged to AC power, battery icon changes color at different levels of charge:

 **25-100%** charged

 **10-24%** charged

 **<10%** charged

- Check for **(b) Bluetooth® connectivity** on the Main Screen prior to selecting Quick Start or the PSA application to ensure **Bluetooth® printing** capability, or connect USB cable to USB printer



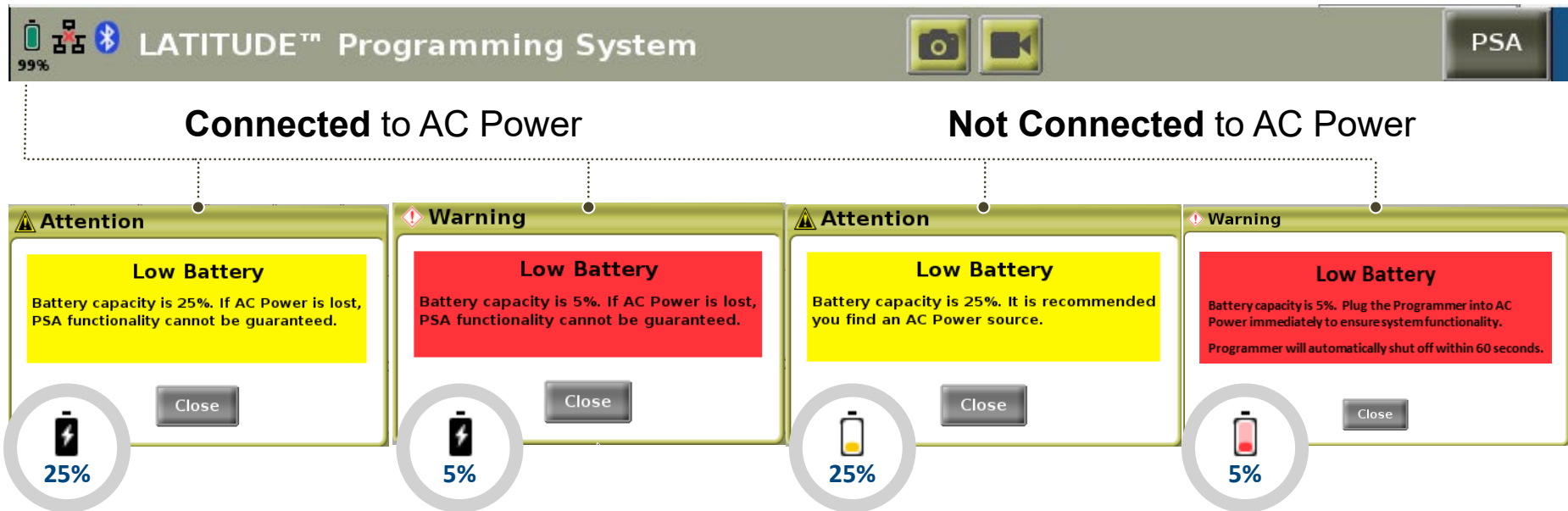
**Note:** When powering ON the LATITUDE™ Programming System, it may take up to one minute for the software to load and during this time the screen may be flashing or blank

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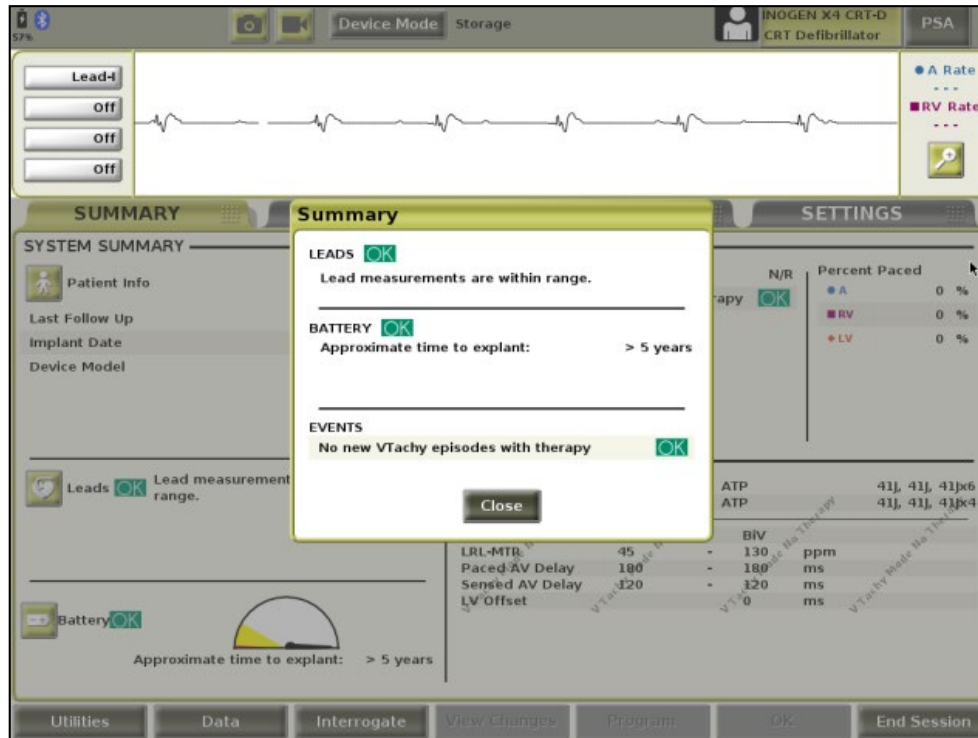


# Main Screen: Power Supply Indicator

- If the Programmer is connected to external AC power, the internal battery (Model 6753) will be charging, whether the Programmer is ON or OFF
- Depending on age of the battery, a full charge should last for approximately 2 hours of normal operation
- Messages will display on the Programmer screen at different levels of battery depletion



a



## Device Interrogation

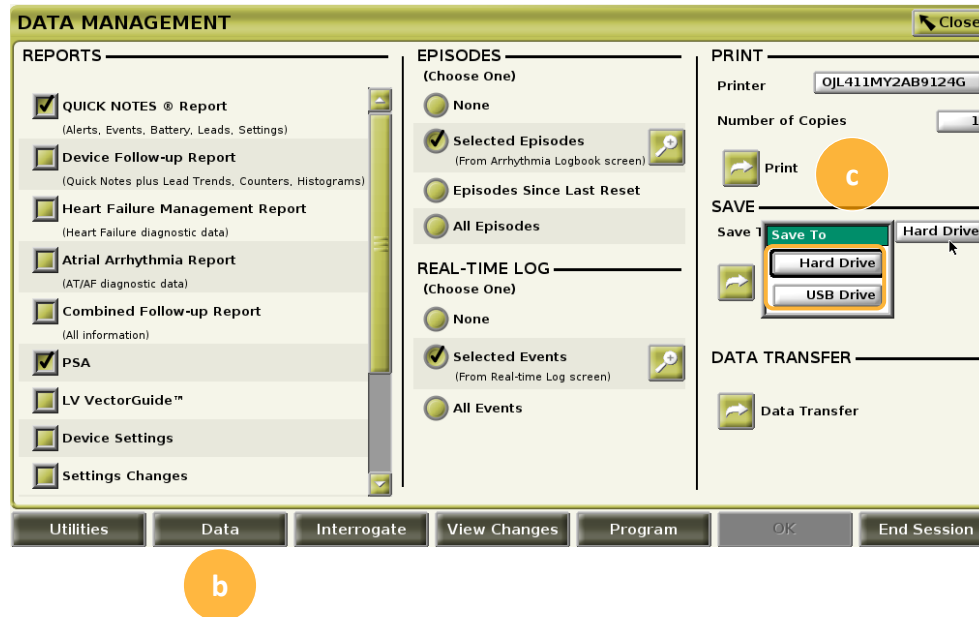
- Interrogate the device via **Quick Start button** before starting the PSA application
- Device application button (a) will then be visible at upper right of startup screen next to PSA button
- Saved PSA data will be associated within the device being implanted
- During the implant case, toggle between the PSA and PG application as desired

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# Startup Work Flow



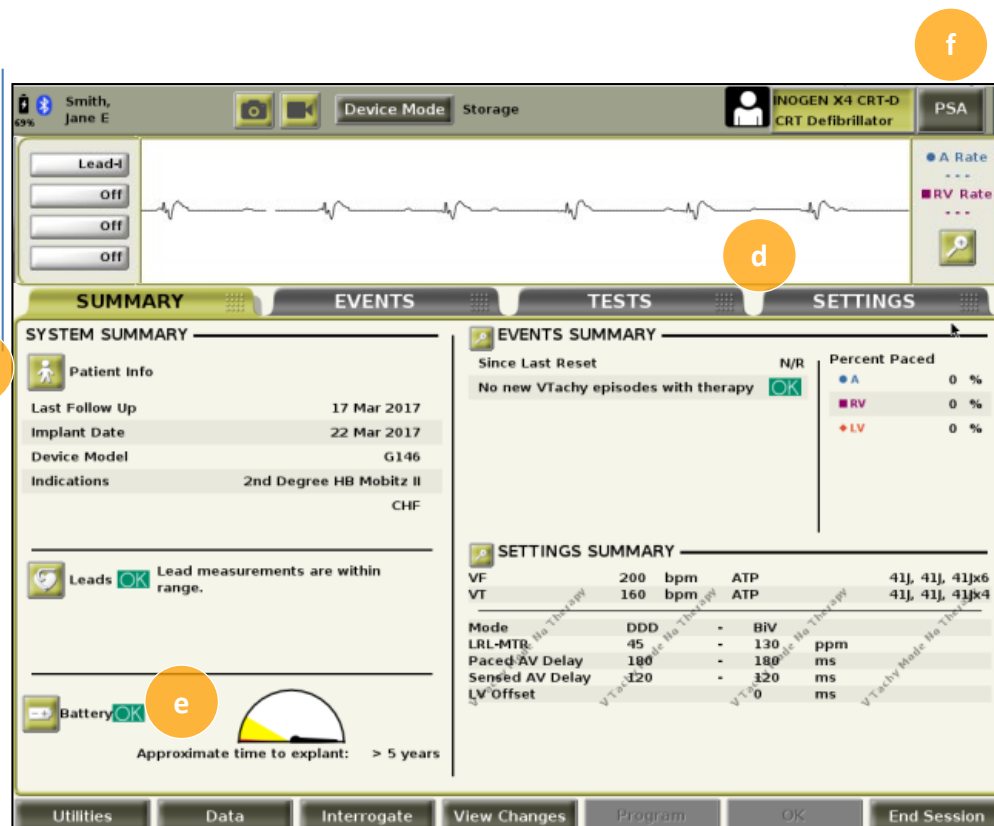
## Data Management

- Select **(b)** Data tab
- Select method to **Save**, either **(c)** Hard Drive or USB Drive

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# Startup Work Flow



- Enter and Program **(d)** **Patient Information** and any preferred **device settings**

- Check device **(e)** **Battery** and reform capacitor if a high-voltage device

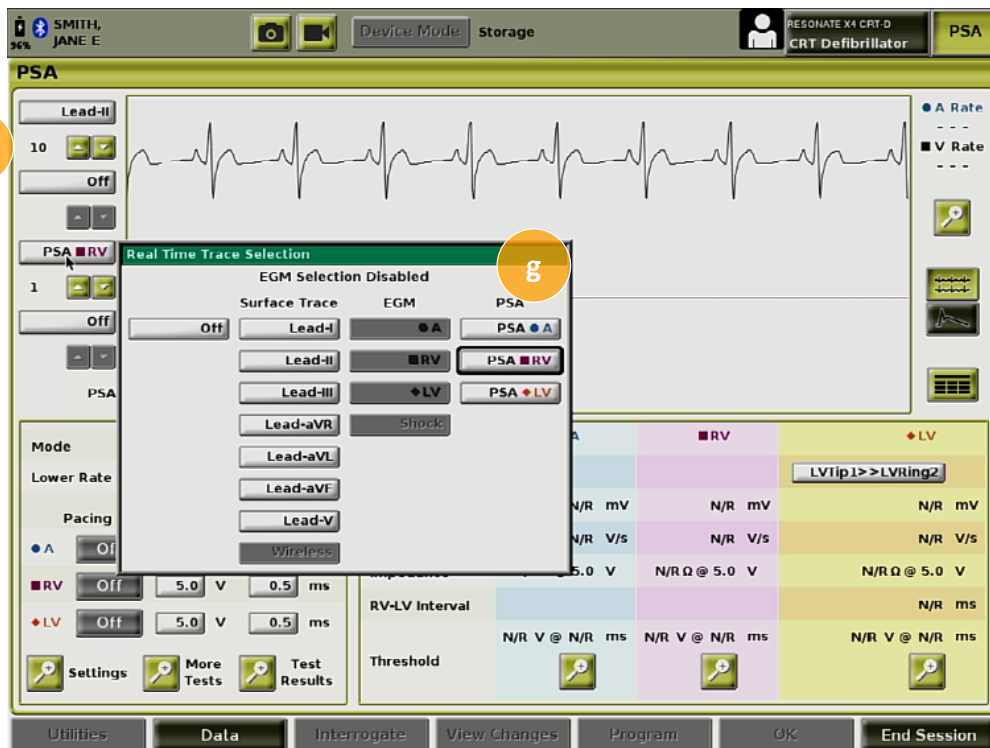
- Select **(f)** **PSA application**

PSA application remains active until Programmer is powered OFF

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# Select PSA Setting and Lead Traces



- Select **(g)** PSA traces
- Choose **(h)** Gain settings using the Up or Down arrows





# PSA Main Screen Layouts

## (a) Lead Traces panel

- 3-chamber pacing and sensing
- Displays real-time EGMs and markers

## (b) Magnify and Additional Settings

- Gain, surface filter, markers, pacing spikes

## (c) Lead Trace button

## (d) Current of Injury

## (e) PSA Real-time Log

## (f) PSA Pacing and Amplitude panel

- Enables / disables pacing
- Mode adjusts accordingly

## (g) PSA Settings button

## (h) More Tests button

## (i) Test Results button

## (j) PSA Test Chamber Measurements panel



# Lead Trace Panel

## ECG / EGM Full Screen Display

### (a) Gain

- Select the appropriate value to adjust the surface gain of the traces that are captured on printouts; range: AUTO, 0.5, 1, 2, 5, 10, 20 mm/mV

### (b) Calibrate button

- Transmits a 1 mV calibration pulse to the ECG display to establish a reference point to evaluate amplitudes

### (c) Baseline button

- Forces the trace back to the baseline



From the PSA Main Screen the **Magnify** button enlarges the lead trace area



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# Lead Trace Panel



## ECG / EGM Full Screen Display

### (d) Trace Speed

- Select the desired speed on the ECG display: 0 (stop), 25, or 50 mm/s

### (e) PSA Markers

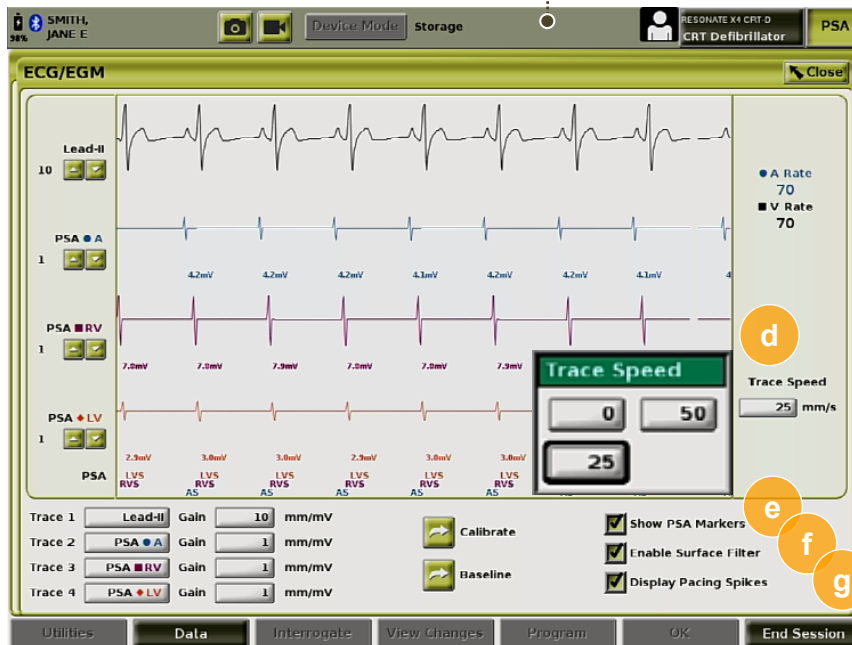
- When in a PSA application session, select the check box to enable the PSA markers

### (f) Surface Filters

- Select the check box to minimize noise on the surface ECG

### (g) Pacing Spikes

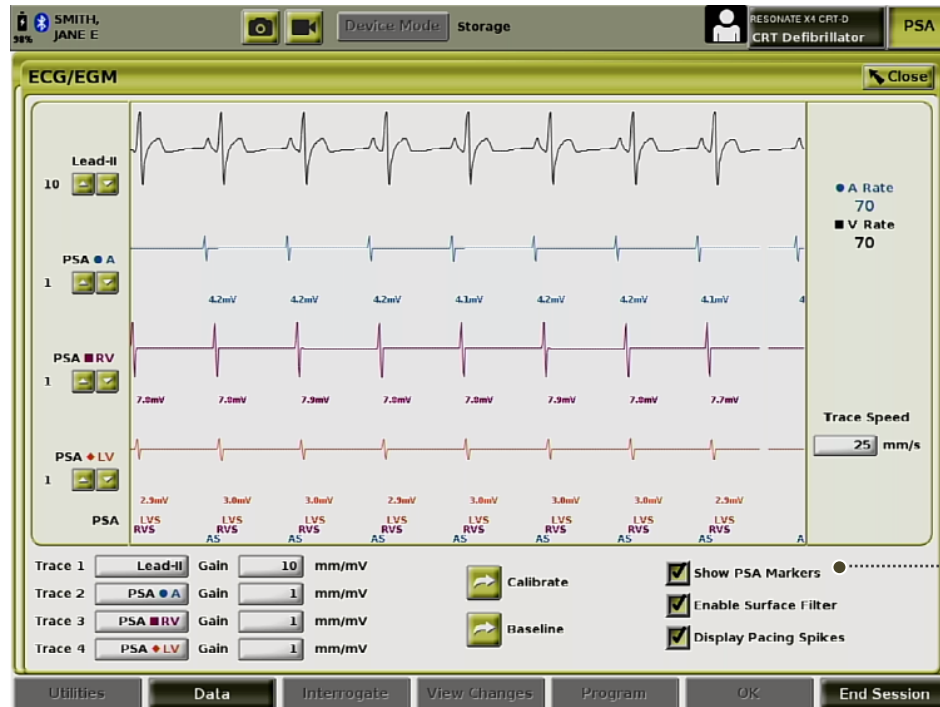
- Select the check box to show detected pacing spikes, annotated by a marker on the top waveform



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# Lead Trace Panel



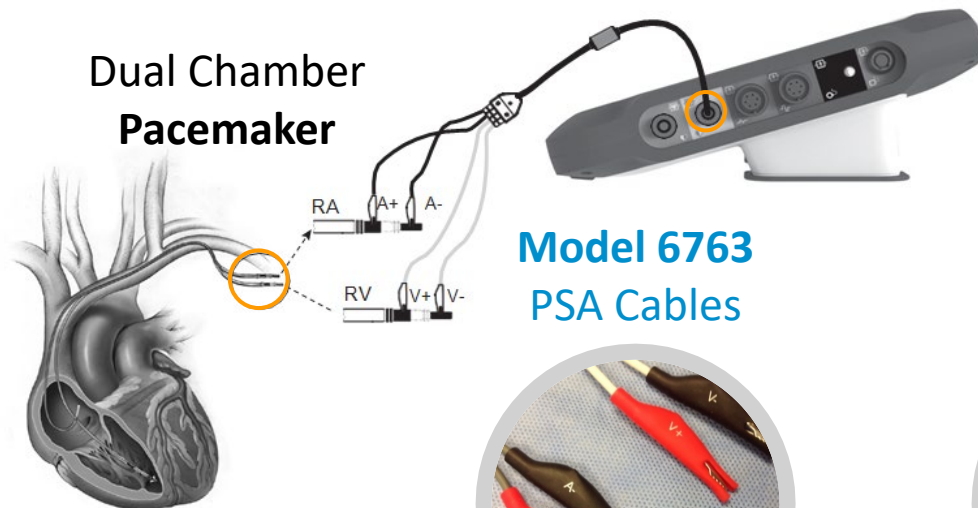
## PSA Markers

Parameter	Measurement
AS	Atrial Sense after refractory
(AS)	Atrial Sense during refractory
AP	Atrial Pace
RVS	Right Ventricular Sense after refractory
RVP	Right Ventricular Pace
LVS	Left Ventricular Sense after refractory
LVP	Left Ventricular Pace



# Dual Chamber Devices, PSA Cable Connections

## Dual Chamber Pacemaker

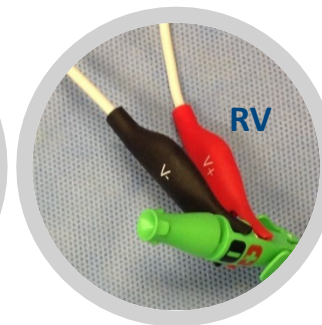
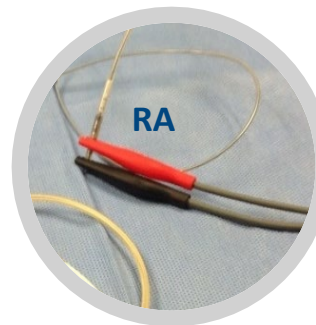


**Model 6763**  
PSA Cables



## Dual Chamber DF4 ICD

**Model 7001EZ-4**  
Connector Tool



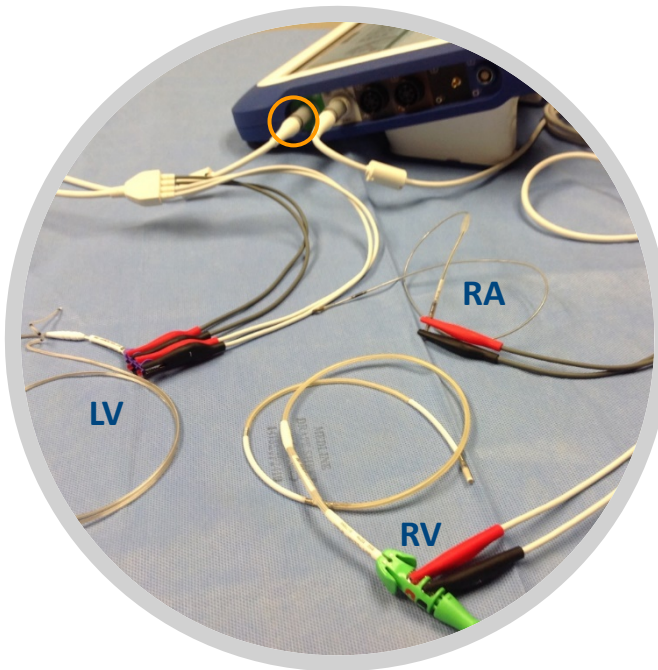
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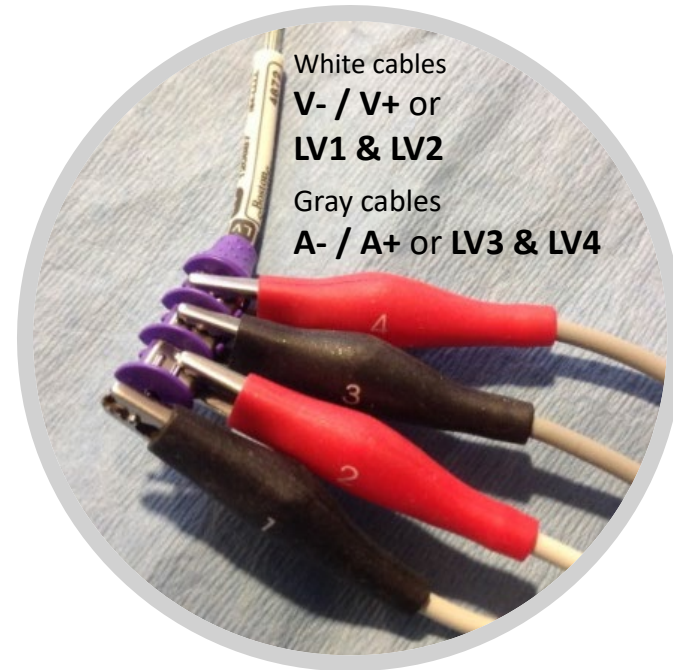


# BiV Quadripolar PSA Cable Connections

BiV Quadripolar  
CRT-D



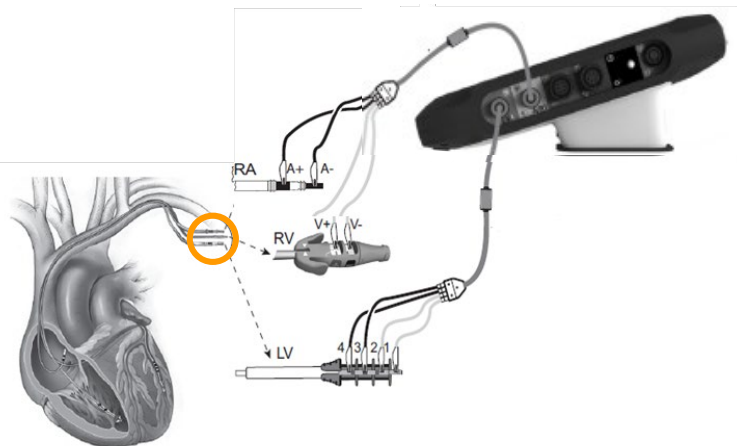
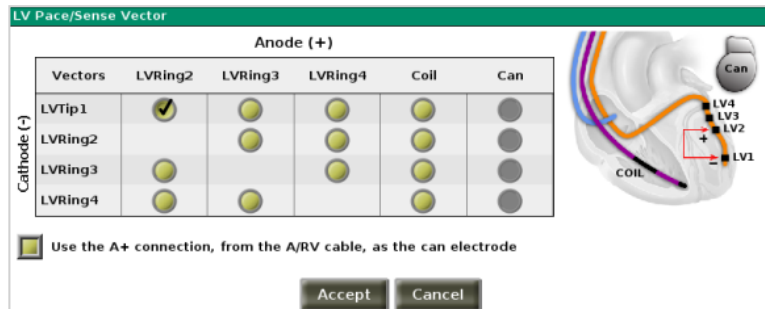
**Model 4625**  
Quadripolar Connector Tool



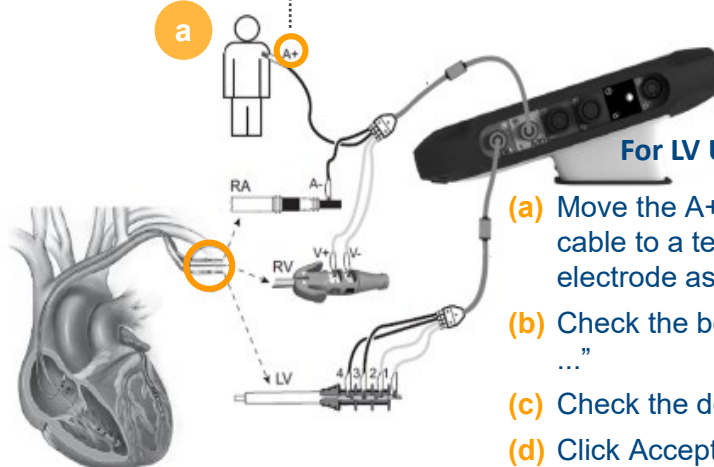
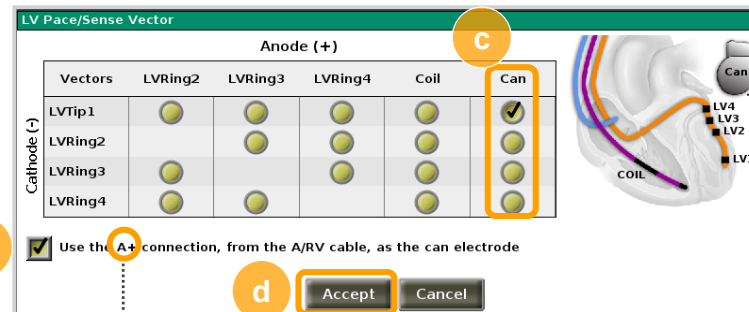
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# BiV Quadripolar PSA Cable Connections



**13 Bipolar  
LV Lead Vectors**



**4 Unipolar  
LV Lead Vectors**

## For LV Unipolar Connection:

- Move the A+ (red) clip of the A / RV cable to a temporary indifferent electrode as the can
- Check the box "Use the A+ connection ..."
- Check the desired Can electrode
- Click Accept

To end a unipolar configuration, select the desired bipolar LV configuration and deselect the "Use the A+ connection ..." box; this results in normal operation of the atrial lead anode

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# LV Impedance Parameter Ranges

\*The specified tolerance does not apply to LV lead impedance measurements using the LV PSA cable in combination with either the RV or RA cables. Clinical decisions using LV lead impedance values should be based on measurements using the LV PSA cable only.

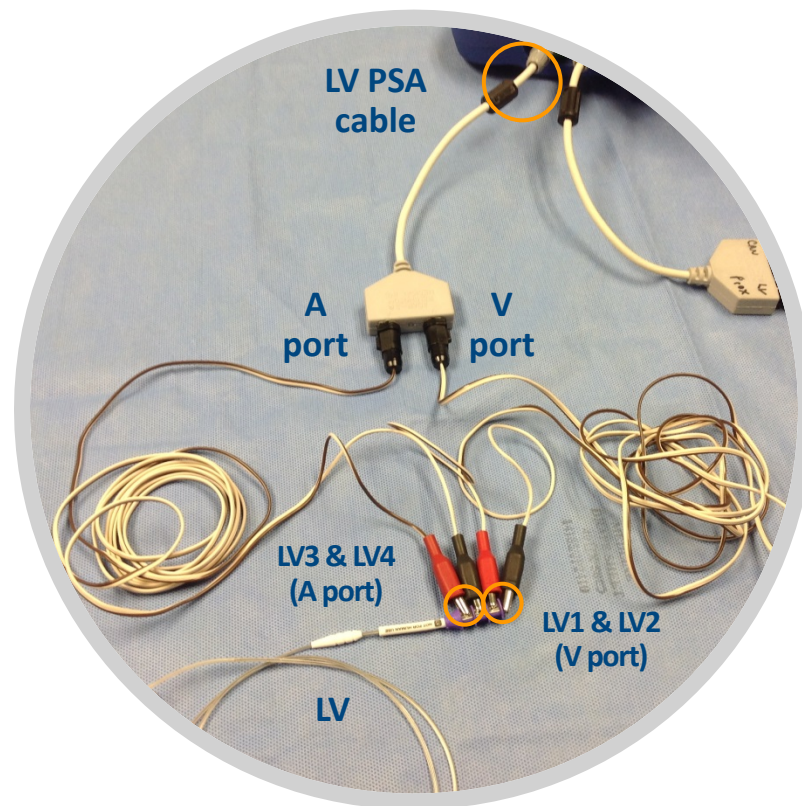
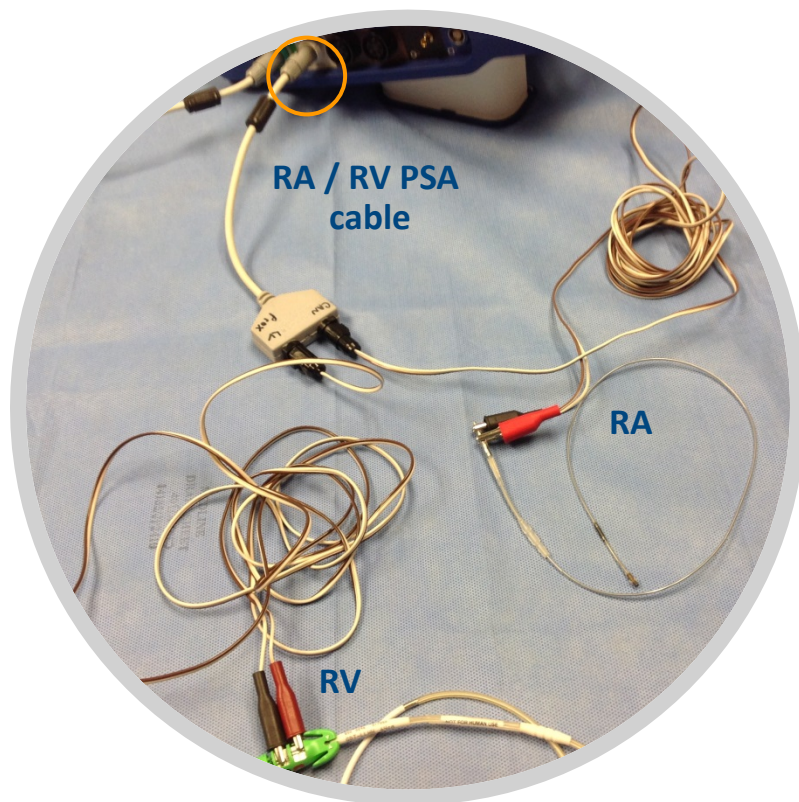
Impedance	Voltage	Pulse Width	Tolerance
100 - 3000 $\Omega$	0.5 - 7.5 volts	0.4 to 2.0 ms	$\pm 25\%^*$





# PSA Cable Connections (Model 6697)

## Optional Remington Cables (Disposable)



# PSA Settings



## PSA Nominal Settings

**PSA - SETTINGS**

PARAMETERS		PACING AND SENSING					
Mode	ODO	PVARP	250 ms	Pacing	Amplitude	Pulse Width	Sensitivity
Lower Rate	60 ppm	VRP	240 ms	• A	Off	5.0 V @	0.5 ms 0.6 mV
Max Tracking Rate	ppm	LVRP	250 ms	• RV	Off	5.0 V @	0.5 ms 2.5 mV
AV Delay	ms	Filter	Off	• LV	Off	5.0 V @	0.5 ms 2.5 mV
LV Offset	ms						

Utilities Data Interrogate View Changes Program OK End Session

**NOTE:** Verify PSA Settings prior to beginning lead testing, making modifications as necessary

**PSA - SETTINGS**

PARAMETERS		PACING AND SENSING					
Mode	ODO	PVARP	250 ms	Pacing	Amplitude	Pulse Width	Sensitivity
Lower Rate	60 ppm	VRP	240 ms	• A	Off	5.0 V @	0.5 ms 0.6 mV
Max Tracking Rate	ppm	LVRP	250 ms	• RV	Off	5.0 V @	0.5 ms 2.5 mV
AV Delay	ms	Filter	Off	• LV	Off	5.0 V @	0.5 ms 2.5 mV
LV Offset	ms						

The Filter dropdown menu is open, showing options: Off, 60Hz, and 50Hz. The 'Off' option is highlighted with an orange circle labeled 'b'.

Utilities Data Interrogate View Changes Program OK End Session

## Noise Filter

If noise is evident on electrogram trace, turn ON (a) **Filter** for (b) 50Hz or 60Hz frequencies

This feature is nominally OFF.





## Typical Method for P/R Wave Amplitude Measurements

- Select desired **(a) Surface ECG / PSA Lead Traces** based on lead connected
- If testing **(b) LV Lead**, ensure Pace / Sense configuration is set from the PSA Test Chamber Measurements panel
- Go to the **(c) PSA Settings and Output (PW and amplitude) panel** and turn OFF pacing to all channels where no leads are connected
- Disable **(c) Pacing** and enable sensing in the channel you want to measure (alternatively, decrease **(d) pacing rate** below the intrinsic rate of patient)
- Sense measurement values are now displayed on the **(e) EGM** with each corresponding sensed beat
- Repeat procedure for other channels

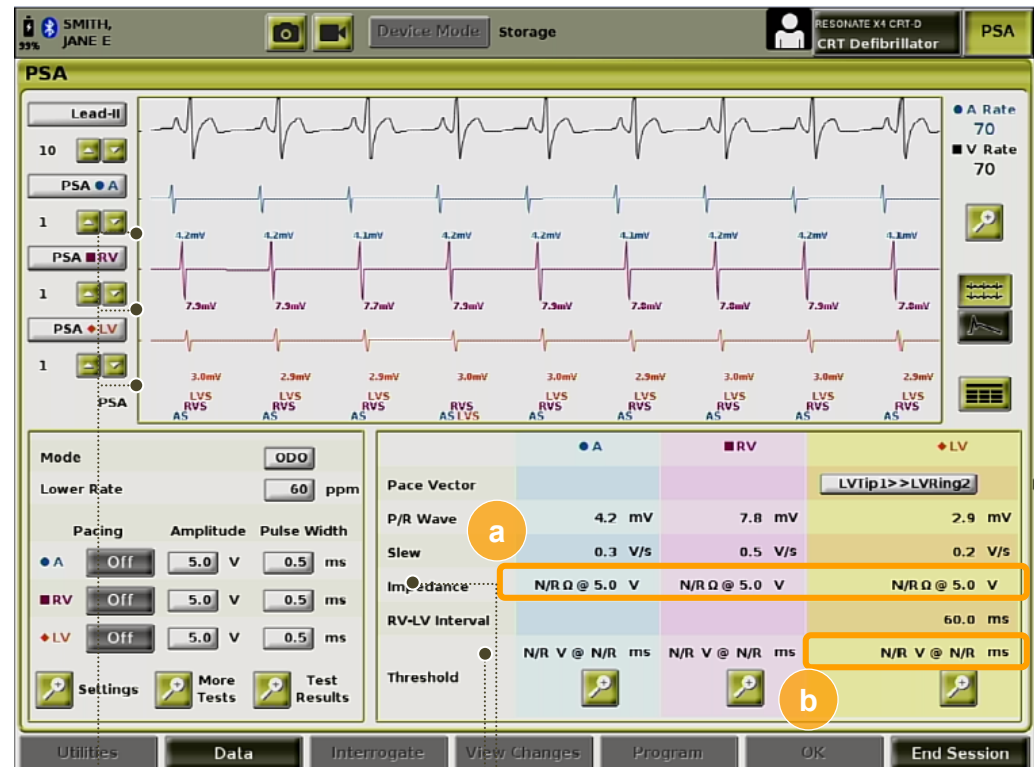


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## Slew Rate and RV-LV Timing

- (a) **Slew** displayed with each sensed intrinsic activity
- (b) **RV-LV interval** displayed when RV and LV cables are connected; a negative value will be displayed if LV is sensed before RV



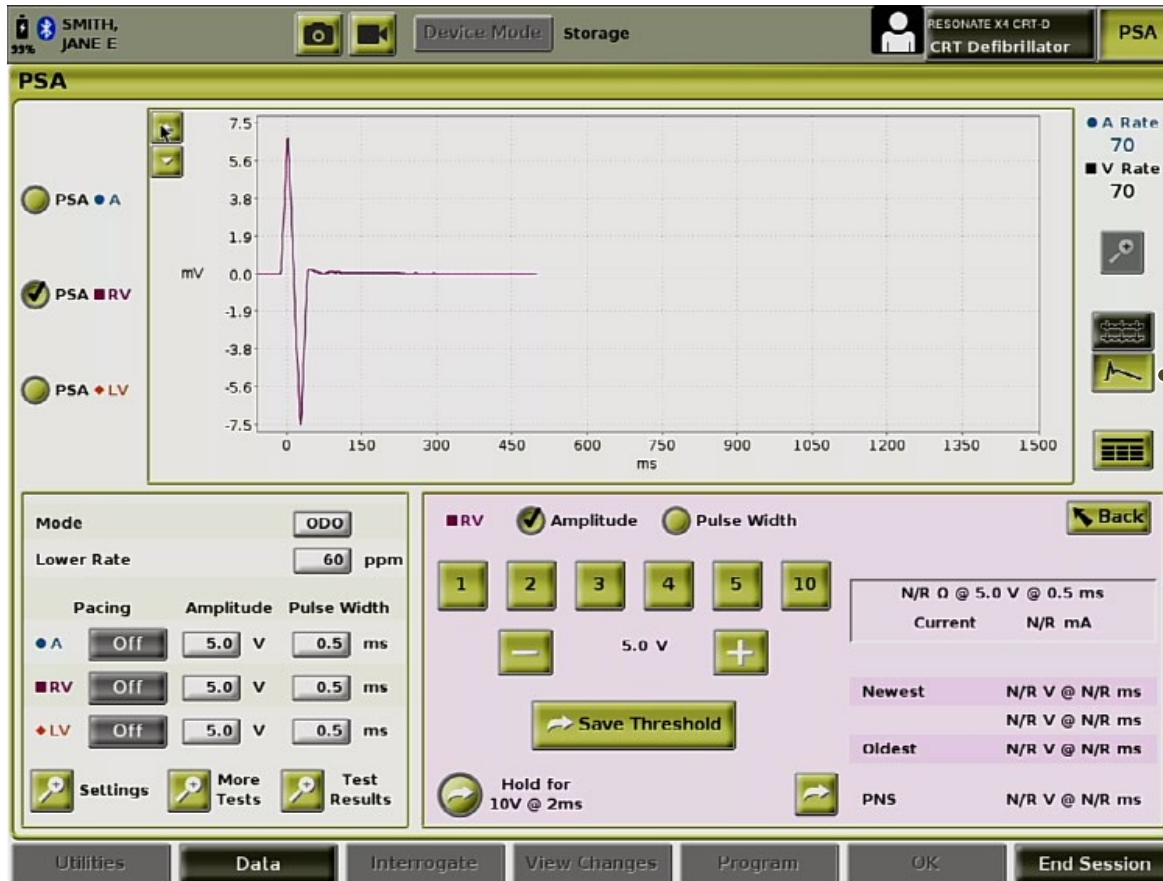
**Sensed measurement**  
values displayed  
beat-by-beat

**Slew Rate** displayed during  
sensed intrinsic activity on  
beat-by-beat basis

**RV-LV Interval** displayed

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## Current of Injury

Provides information that can be used in addition to measured information (i.e., pacing threshold, impedance, sensing) and may help indicate that lead repositioning is required



## Current of Injury Background

- **Displays** the injury to the myocardium at the site of anchoring the lead
- **Manifests** as an increase in the duration of the intracardiac electrogram and elevation of the ST-segment compared to the baseline—and then recovers
- Studies have suggested “adequate values of COI measured” in order to **predict good midterm performance** of the lead
- The **waveform display is updated** each time a pace or sense event is detected by the PSA in the selected chamber
- **No storage** of COI available

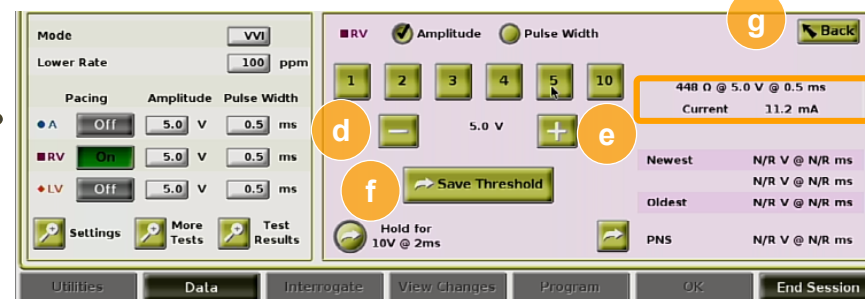
Current of Injury is readily visualized when present without the need for specific measurements. Boston Scientific does not make recommendations of ST-segment elevation measurements that are representative of an adequate Current of Injury.



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Advancing science for life™



- (a) **Channels** are color coded: ● A Blue, ■ RV Pink, ◆ LV Yellow
- (b) **Enable pacing** by changing from **Off** to **On** in a selected chamber or by (c)
- (c) **Enable pacing** by selecting the **magnifying button** in the chamber to be tested which will then display the Threshold panel
- (d) **Decrement or increment** pacing Amplitude or Pulse Width
- (e) **Impedance** value displayed beat-to-beat
- (f) **Save Threshold** to save data for P/R Wave, Slew, Impedance, and Threshold
- (g) Press **Back** to return



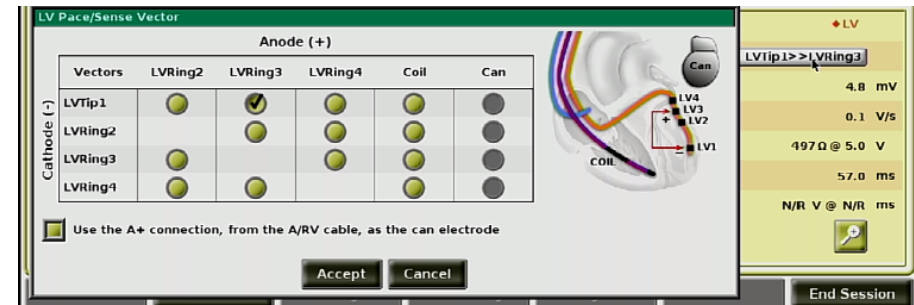
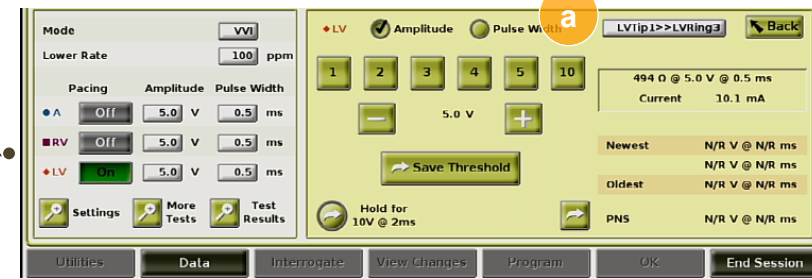


# Capture Threshold Testing



## LV Lead Testing

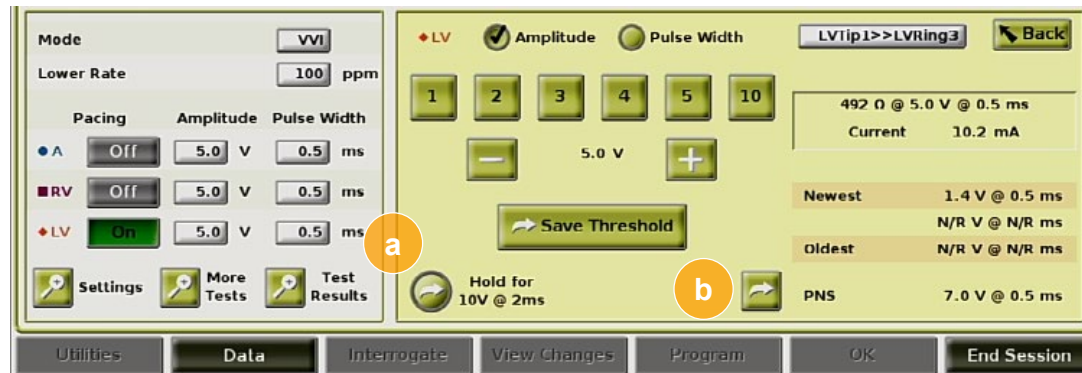
Same process as with RV Lead testing with addition of (a) LV Pace / Sense Vector button



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# Testing for Phrenic Nerve Stimulation



## Check for Phrenic Nerve Stimulation at max output

Press (a) Hold for 10V @ 2ms to check for extracardiac stimulation at maximum output; this button will not document results of the test.

- If desired for future reference, document the current voltage / PW of the Phrenic Nerve Stimulation (PNS) threshold using the (b) **PNS button**
- **The PNS button does not perform a PNS test** (simply stores the pacing values at the time the button is pressed, i.e., in this example, 7.0V @ 0.5ms)



# PSA Pacing and Amplitude Panel

## PSA Test Results

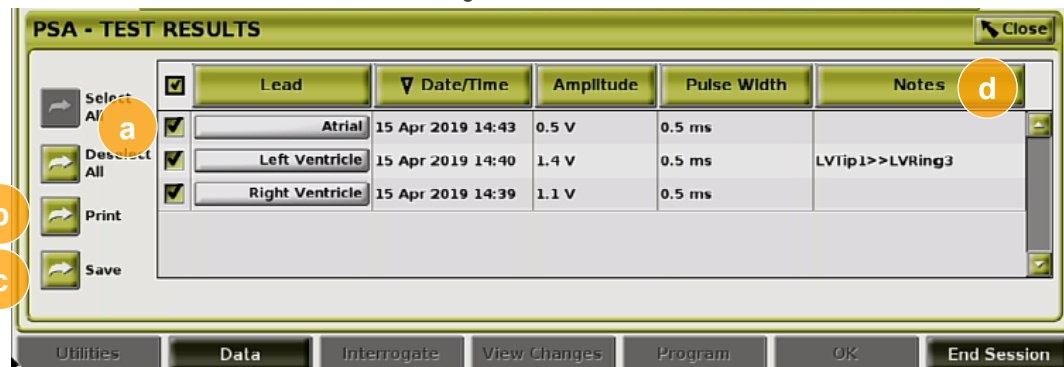
- Select the **Test Results** button
- Check the (a) box to select desired results to (b) Save and/or Print to **PSA Report** (see next slide)

**NOTE:** If PSA Test Results are not (c) saved, there will be no data on the PSA Report

- You may edit text in (d) **Notes** column and edit the **Lead** (a) of a result in any of the three chambers
- Additionally, most recent selected results saved for each chamber automatically transfer to the Programmer Implant Data - Patient Information Summary screen



The screenshot shows the 'PSA Pacing and Amplitude Panel'. At the top, 'Mode' is set to 'ODO' and 'Lower Rate' is '100 ppm'. Below, there are three rows for 'Pacing', 'Amplitude', and 'Pulse Width' for Atrial (A), Right Ventricle (RV), and Left Ventricle (LV). Each row has a status indicator (blue dot for A, red square for RV, red diamond for LV), a 'Pacing' button (all set to 'Off'), an 'Amplitude' field (all set to '5.0 V'), and a 'Pulse Width' field (all set to '0.5 ms'). At the bottom, there are three buttons: 'Settings', 'More Tests', and 'Test Results' (which is highlighted with an orange box).



The screenshot shows the 'PSA - TEST RESULTS' window. On the left, there are buttons for 'Select All', 'Deselect All', 'Print', and 'Save'. The main table has columns: 'Lead', 'Date/Time', 'Amplitude', 'Pulse Width', and 'Notes'. The 'Notes' column is highlighted with an orange circle (d). The table contains three rows of data for Atrial, Left Ventricle, and Right Ventricle. The 'Lead' column has a dropdown arrow (a) next to the 'Atrial' row. The 'Save' button is highlighted with an orange circle (c). The 'Print' button is highlighted with an orange circle (b). The 'Close' button is in the top right corner.

Lead	Date/Time	Amplitude	Pulse Width	Notes
Atrial	15 Apr 2019 14:43	0.5 V	0.5 ms	
Left Ventricle	15 Apr 2019 14:40	1.4 V	0.5 ms	LVTip1>LVRing3
Right Ventricle	15 Apr 2019 14:39	1.1 V	0.5 ms	

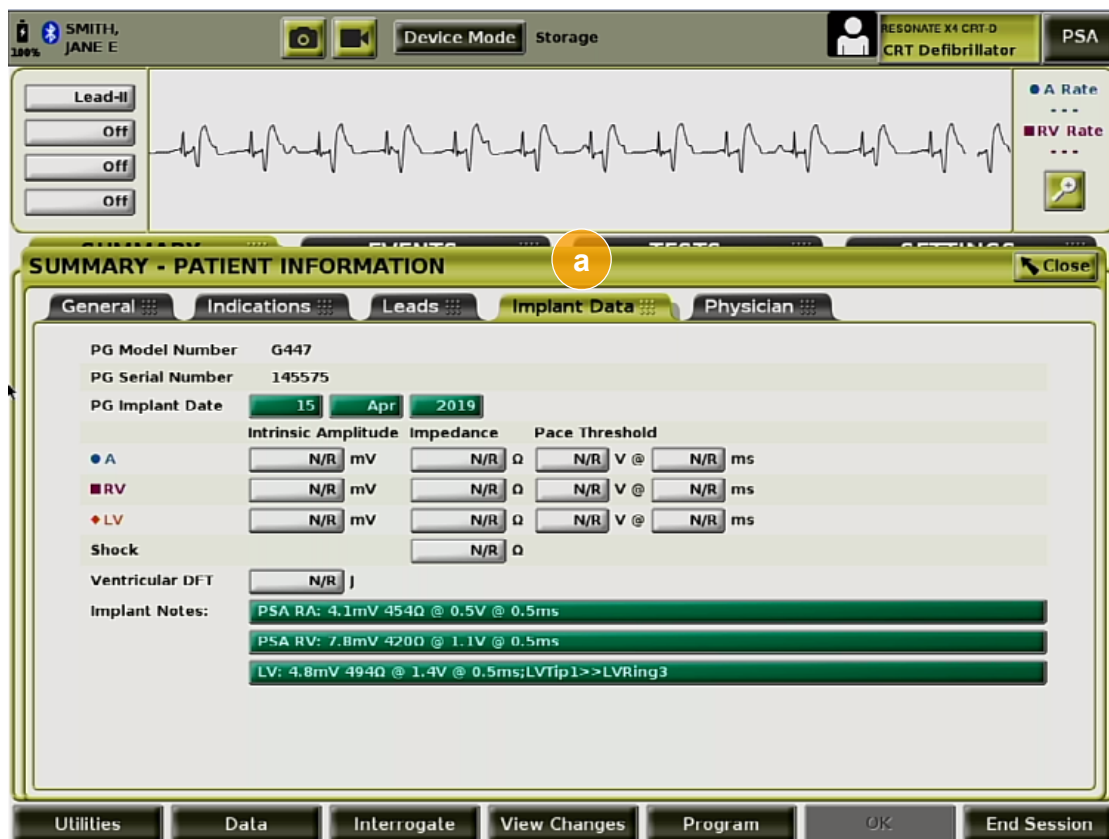
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# AutoSaving PSA Data in the Programmer

## PSA Implant Data

- Saved PSA data will be seen in the **(a) Implant Data window** of the PG application
- This provides a set of data from the implant PSA session to the implanted device for future reference
- It is recommended this data be captured in the PG
- This functionality provides an automated replacement for a previously manual entry



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## PSA Test Results

The following information can be saved to a **PSA Report** for each lead

- (a) Date / Time Stamp
- (b) Intrinsic Amplitude
- (c) Slew Rate
- (d) Lead Impedance
- (e) Pace Threshold Amplitude and Pace Threshold PW
- (f) Notes
- (g) RV-LV Interval
- (h) LV Pacing Vector
- (i) PNS (Phrenic Nerve Stimulation) Documentation

<b>Boston Scientific</b>	LATITUDE™ Programming System		Report Created 15 Apr 2019
	<b>PSA Report</b> <b>SMITH, JANE E</b> Date of Birth N/R N/R N/R Device RESONATE X4 CRT-D G447/ 145575		Last Office Interrogation 15 Apr 2019 Implant Date 15 Apr 2019

Atrial Saved Results						
(a)	(b)	(c)	(d)	(e)	(f)	
Date/Time	P-Wave	Slew	Impedance	Threshold	Notes	
15 Apr 2019 14:43	4.1mV	0.4V/s	454 Ω	0.5V@0.5ms		
Right Ventricle Saved Results						
Date/Time	R-Wave	Slew	Impedance	Threshold	Notes	
15 Apr 2019 14:39	7.8mV	0.6V/s	420 Ω	1.1V@0.5ms		
Left Ventricle Saved Results						
Date/Time	R-Wave	Slew	Impedance	Threshold	RV-LV	Notes
15 Apr 2019 14:55	3.8mV	0.3V/s	487 Ω	3.9V@0.5ms	65.0ms	LVTip1>>LVRing3
(i)	PNS 7.0V@0.5ms					

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## PSA Real-time Log

There are 3 types of Real-time Log Events

### 1. Snapshot

Pressing this button saves up to 10 seconds of real-time data prior to pressing and 2 seconds after

### 2. Real-time Recording

Pressing this button starts and stops a Real-time Log recording; minimum of 3 second segment, maximum of 3 minute segment, up to 100 segments per session

### 3. Triggered Captures

Initiated by an event without user action

Events can be saved to Programmer's hard drive or to USB drive, printed, transferred, and/or deleted

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# Automatic Real-time Log Events

## PG Events

Event Type	Trigger Event	Duration of Recording (seconds)
Presenting	Initial Interrogation Completed	12
Electrocautery Mode	Electrocautery Mode Entered	12
STAT PACE	STAT PACE Commanded	12
DIVERT THERAPY	Divert Therapy Commanded	12
PACE THRESHOLD TEST (AUTO, A, V, RV, LV, Ampl. and PW)	Threshold Test Ended	12
INTRINSIC AMPL TEST (A, RV, LV, and SSI)	Intrinsic Ampl Test Completed	12
TEMP BRADY	Temp Start Entered, Temp End Entered	Temp Start to Temp End
STAT SHOCK	STAT SHOCK Commanded	48
Commanded V ATP	ATP Commanded	12
Commanded V Shock	Shock Commanded	12
Fib Induction High	Fib Induction Commanded	24
Fib Induction Low	Fib Induction Commanded	24
Shock on T Command	Shock on T Commanded	43
Ventricular PES	PES Commanded	24
Atrial PES	PES Commanded	24
PG Ventricular Burst Pacing	PG Burst Completed	24
PG Atrial Burst Pacing	PG Burst Completed	24
PG Ventricular 50 Hz Burst Pacing	PG Burst Completed	24
PG Atrial 50 Hz Burst Pacing	PG Burst Completed	24
PG Fault	PG Fault Occurred	12

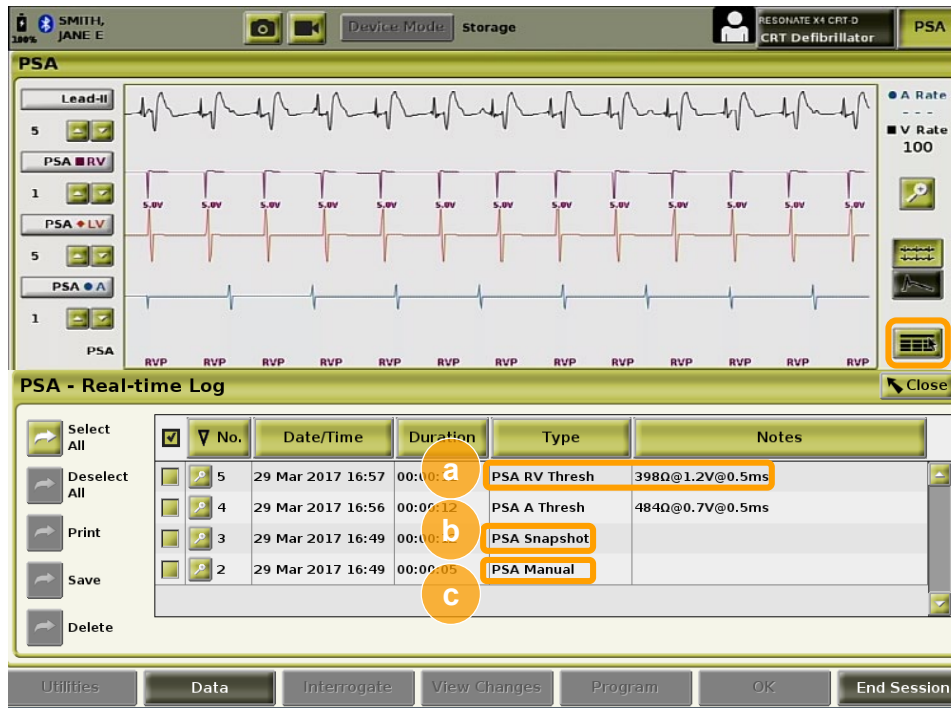
## PSA Events

Event Type	Trigger Event	Duration of Recording (seconds)
PSA PACE THRESHOLD TEST (A, RV, and LV)	PSA Save Threshold button pressed	12
PSA BURST PACING	PSA Burst button released	24

**Note:** Presenting event for a CRT-D device will show Surface lead and A, RV, and Shock EGMs, no LV EGM; if desired, select LV instead of Shock and press Snapshot

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## PSA Real-time Log

- Use Real-time Log button to view details
- Full markers on EGMs
- Notes area to add comments
- Real-time Log Events are not automatically saved when a session ends



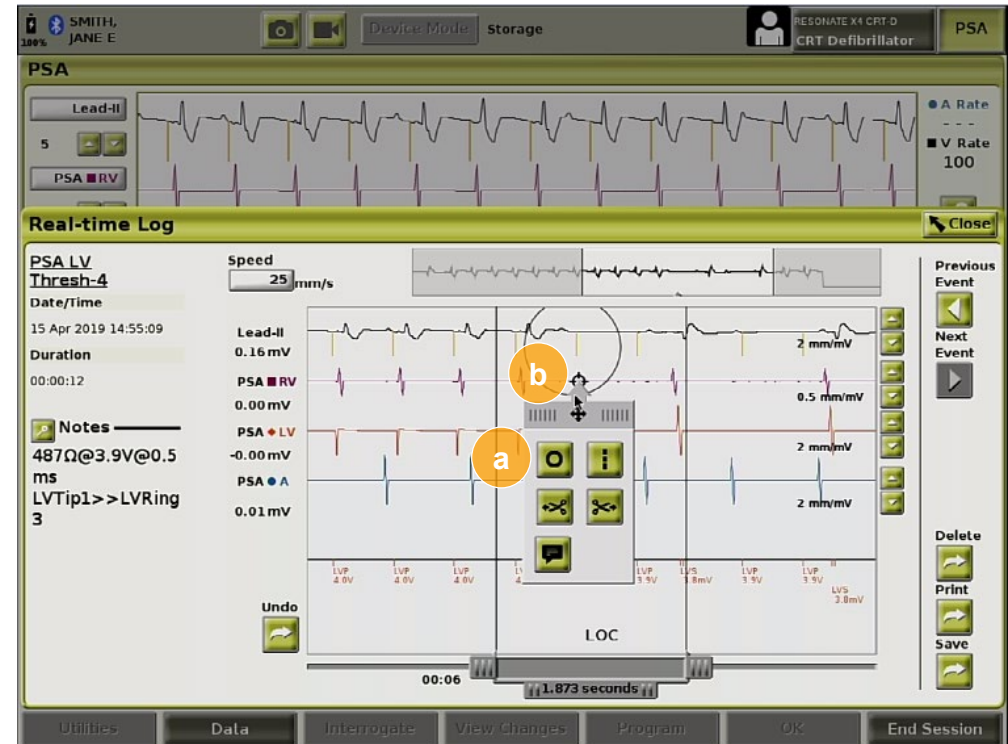
- (a) PSA Threshold (stored when Save Threshold button pressed)
- (b) PSA Snapshot
- (c) PSA Real-time Recording

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## Caliper and Tool Pop-up

- The timeframe measured between the calipers is measured in seconds
  - A **caliper** can be repositioned by selecting it and then dragging it to expand or collapse the timeframe
- **Customize** an Event by touching any part of the Real-time Log Event to display the **Tools pop-up**
- At the top center of the **(a) Tool pop-up** is an **(b) arrow** and a **target icon**
  - When a specific **tool is selected**, the tool action occurs at that **target point** on the screen

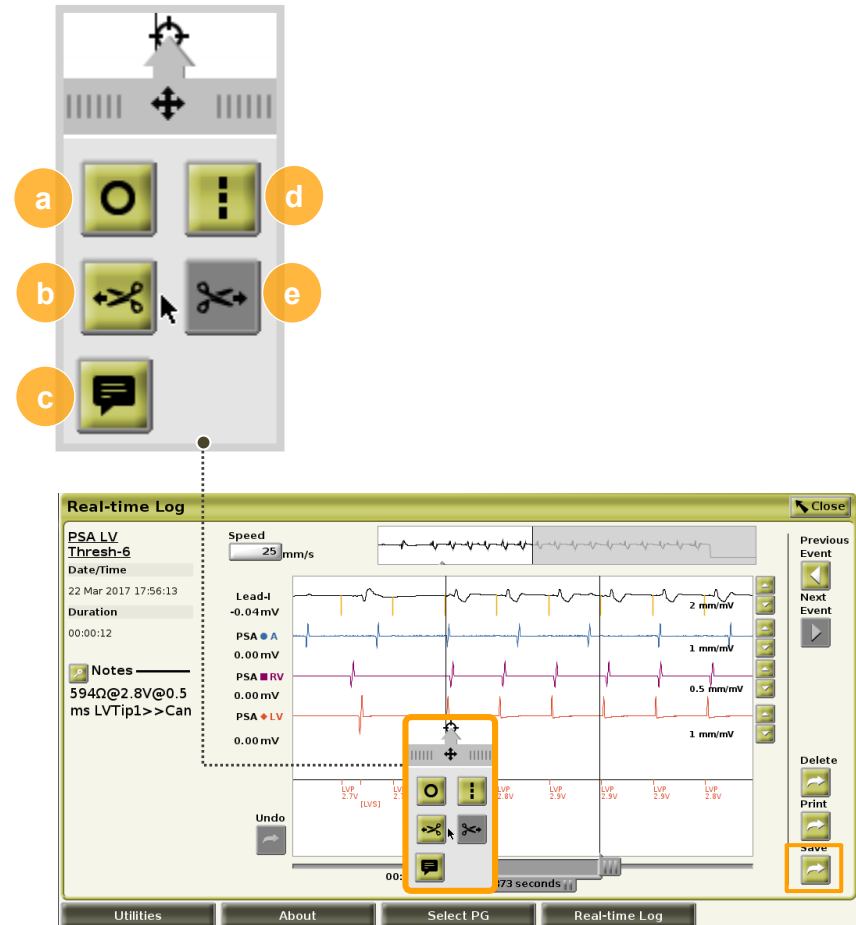


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## Editing Tools

- (a) **Places a circle** on the display at the target point
- (b) Left Scissor Tool **Creates a copy** of the Real-time Log and removes the entire portion of the recording to the **left of the target point** (the original recording is retained)
- (c) **Displays a keyboard** to type in any notes which then appear at the bottom of the Real-time Log
- (d) **Places a dashed vertical line** on the display at the target point
- (e) Right Scissor Tool **Creates a copy** of the Real-time Log and removes the entire portion of the recording to the **right of the target point** (the original recording is retained)



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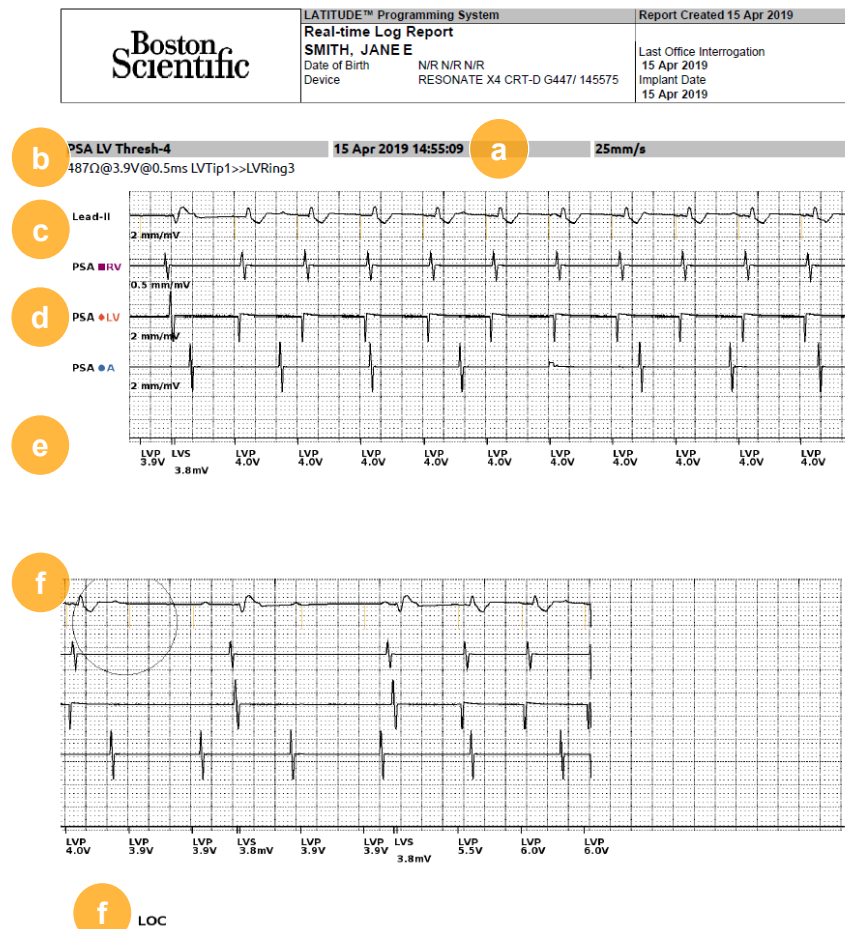




## PSA Real-time Log Report

### LV Threshold Example (12 seconds)

- (a) Date / Time stamp
- (b) Lead Impedance, Pace Threshold Amplitude, Pace Threshold PW, LV Pacing Vector
- (c) Surface Lead
- (d) Atrial, RV, LV EGMs
- (e) Markers / Voltage
- (f) Annotation



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# PSA Test Results & PSA Real-Time Log Comparison

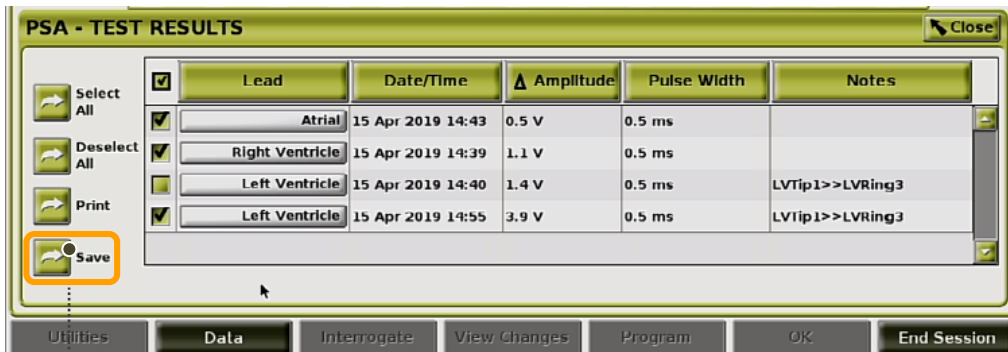
## PSA Real-time Log

- Threshold measurements include Amplitude and PW
- **EGM**
- Notes section (keyboard will display)
- **Select and Save desired data** to Print Event, Save to Hard Drive or USB, and/or transfer to LATITUDE Link™



The screenshot shows the 'PSA - Real-time Log' window. On the left, there are buttons for 'Select All', 'Deselect All', 'Print', 'Save' (highlighted with an orange box), and 'Delete'. The main table has columns: 'No.', 'Date/Time', 'Duration', 'Type', and 'Notes'. It contains four rows of data.

No.	Date/Time	Duration	Type	Notes
4	15 Apr 2019 14:55	00:00:12	PSA LV Thresh	4870@3.9V@0.5ms LVTip1>>LVRing3
3	15 Apr 2019 14:43	00:00:12	PSA A Thresh	4540@0.5V@0.5ms
2	15 Apr 2019 14:40	00:00:12	PSA LV Thresh	4940@1.4V@0.5ms LVTip1>>LVRing3
1	15 Apr 2019 14:39	00:00:12	PSA RV Thresh	4200@1.1V@0.5ms



The screenshot shows the 'PSA - TEST RESULTS' window. On the left, there are buttons for 'Select All', 'Deselect All', 'Print', and 'Save' (highlighted with an orange box). The main table has columns: 'Lead', 'Date/Time', 'Amplitude', 'Pulse Width', and 'Notes'. It contains four rows of data. Below the table are buttons: 'Utilities', 'Data', 'Interrogate', 'View Changes', 'Program', 'OK', and 'End Session'.

Lead	Date/Time	Amplitude	Pulse Width	Notes
Atrial	15 Apr 2019 14:43	0.5 V	0.5 ms	
Right Ventricle	15 Apr 2019 14:39	1.1 V	0.5 ms	
Left Ventricle	15 Apr 2019 14:40	1.4 V	0.5 ms	LVTip1>>LVRing3
Left Ventricle	15 Apr 2019 14:55	3.9 V	0.5 ms	LVTip1>>LVRing3

## PSA Test Results

- Threshold measurements include Amplitude and Pulse Width
- May edit lead selection
- Notes section (keyboard will display)
- Select and Save desired data for transfer to **PSA Report (PDF)** and to **populate in Implant Notes of Patient Information Screen**
- Save to hard drive or USB, and/or transfer to LATITUDE Link™

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# PSA Pacing and Amplitude Panel

## More Tests

- (a) Antegrade Conduction Test
- (b) Retrograde Conduction Test
- (c) Burst Pacing



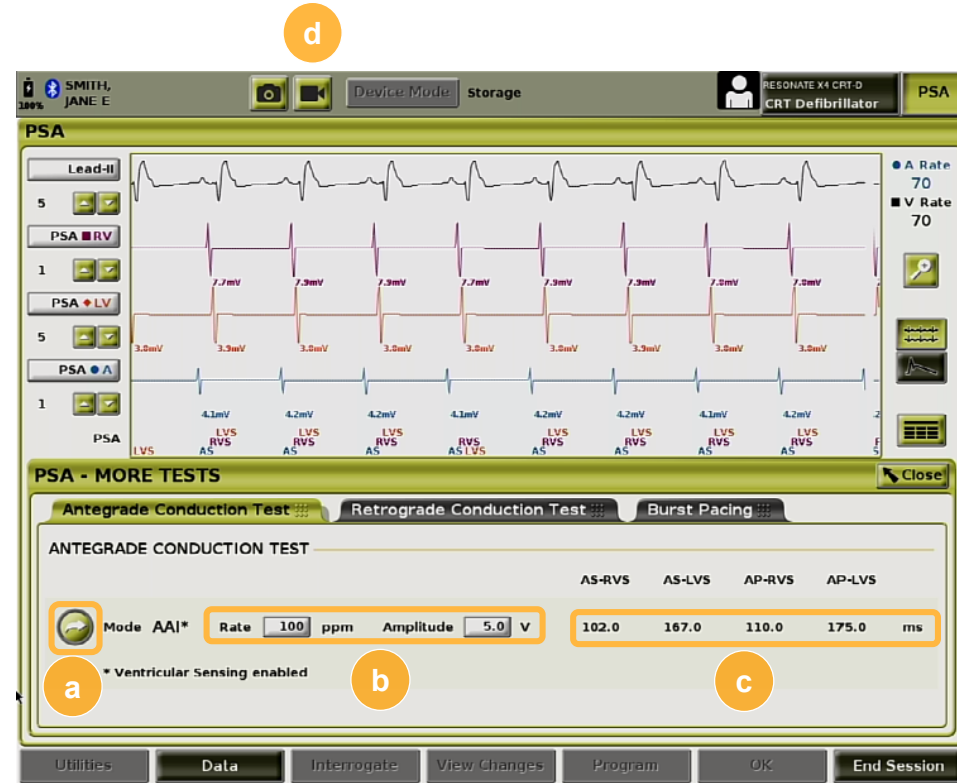
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## More Tests: Antegrade Conduction Test

Antegrade measurement uses AAI Brady mode with ventricular sensing enabled to measure patient's **A-V conduction times** based on either **paced** or **sensed** atrial event

- Press and hold **(a)** arrow button to activate test
- Select pacing **(b)** Rate and Amplitude
- **(c)** Beat-to-beat conduction measurements displayed
- No automatic Real-time Logs are captured for Antegrade or Retrograde conduction tests
- Select **(d)** Real-time Recorder button before beginning conduction test



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## More Tests: Retrograde Conduction Test

Retrograde measurement uses VDI Brady mode to measure patient's **V-A conduction times** based on either **paced** or **sensed** ventricular events

- Press and hold **(a)** **arrow button** to activate test
- Select pacing **(b)** **Rate** and **Amplitude**
- **(c)** Beat-to-beat conduction measurements displayed
- No automatic Real-time Logs are captured for Antegrade or Retrograde conduction tests
- Select **(d)** **Real-time Recorder** button before beginning conduction test



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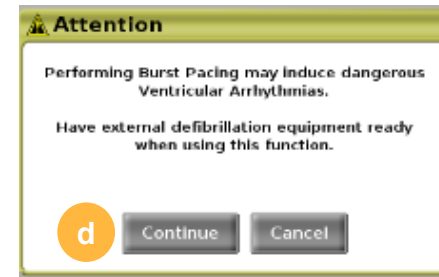
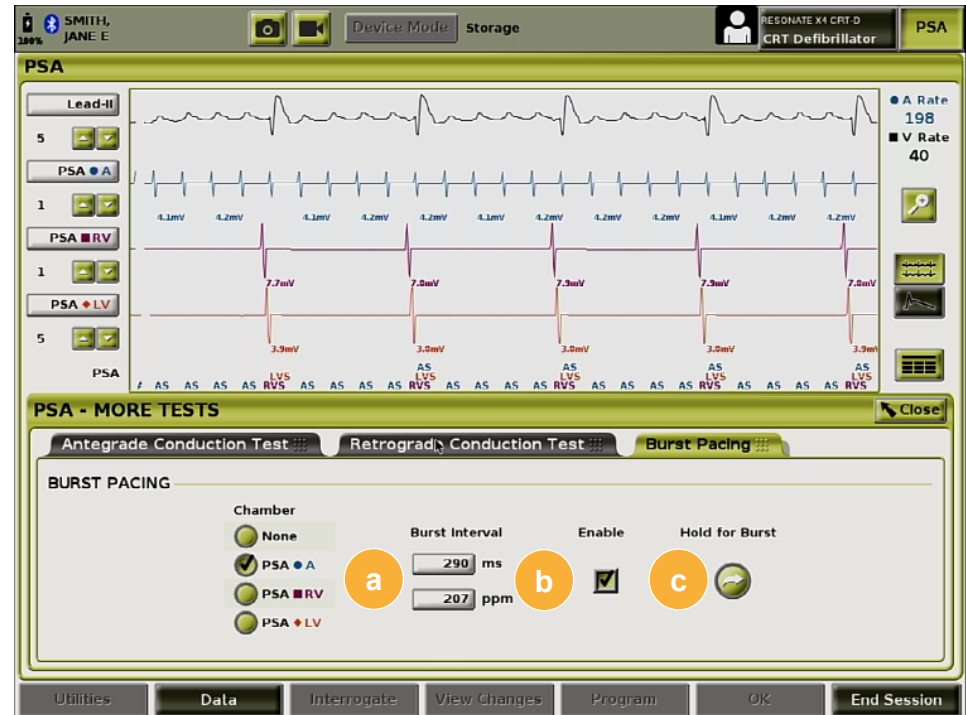




## More Tests: Burst Pacing

Used to **induce** or **terminate arrhythmias** when delivered to desired chamber—only the selected chamber receives Burst Pacing

- Select **(a)** desired chamber and pacing rate
- Pacing Interval in ms and corresponding ppm
- Check **(b)** Enable
- **(c)** Hold for Burst button
  - Maximum Burst **45** seconds in atrium, **30** seconds in ventricle
  - Automatically creates PSA Burst Pacing Event **24** seconds in Real-time Log
- Select **(d)** **Continue** in Attention window



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# Typical Implant Steps

1	<b>CONNECT</b>	power cord, telemetry wand, ECG BNC slave cable, USB Printer cable if using, and cable to DisplayPort out if desired
2	<b>INSERT</b>	pen drive into USB port if using to transfer data to LATITUDE™ Link or to save patient data
3	<b>POWER ON</b>	Programmer
	<b>ENSURE</b>	Bluetooth® enabled for printing if desired
4	<b>CHECK</b>	Internal battery status
5	<b>INTERROGATE</b>	device to be implanted to allow toggling between PSA and Programmer applications
	<b>SELECT</b>	Data tab
6	<b>CHOOSE</b>	method to save lead evaluation data (hard drive or USB drive)
	<b>ENTER</b>	patient data
7	<b>CHECK</b>	device battery
	<b>ADJUST</b>	device settings if desired
	<b>MANUAL RE-FORM</b>	capacitor if high voltage device
	<b>SELECT</b>	PSA application
8	<b>GO TO</b>	Settings and adjust parameters if desired for testing
	<b>SELECT</b>	PSA EGM traces

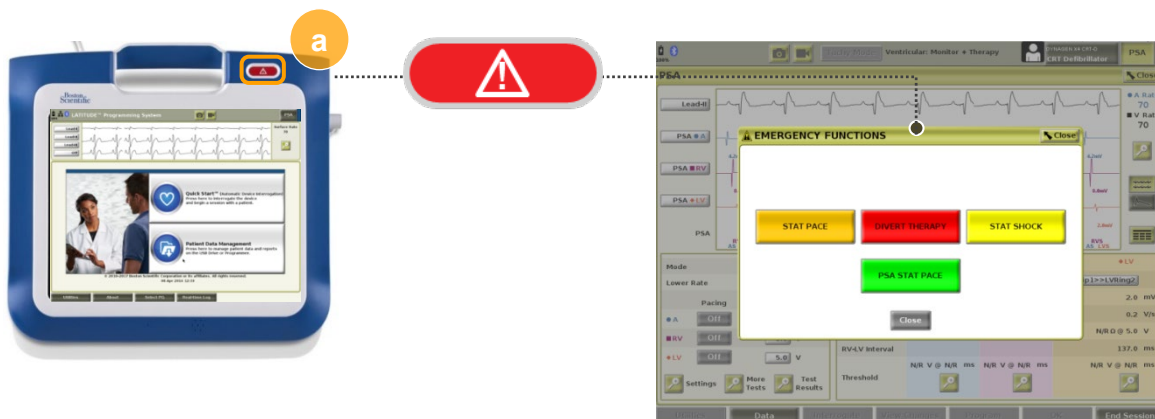


	<b>HAND OFF</b>	pacing cables to Scrub Technician
9	<b>OBTAIN</b>	all PSA measurements for each lead: Sensing, Slew Rate, Current of Injury, Pacing Threshold, PNS
	<b>PRESS</b>	Save Threshold button for each chamber tested to save data for P/R Wave, Slew, Impedance, Threshold
10	<b>SELECT</b>	PSA Test Results and Save data to generate a PSA Report and to automatically transfer implant measurements to Patient Information screen
	<b>Go to</b>	Real-time Log to review testing data
11	<b>SELECT</b>	data to Save and /or Print. Real-time Log is available in both PSA and device applications
	<b>SELECT</b>	device application when PSA testing is completed
12	<b>CHANGE</b>	PSA EGM traces to PG EGM traces
	<b>PERFORM</b>	device-based testing
13	<b>PERFORM</b>	final device programming
14	<b>GO TO</b>	Data Management Screen to save / print / store / transfer data
15	<b>REGISTER</b>	device with Boston Scientific


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# Emergency Function Button



Real-time Log Event automatically stored when any of these functions are requested

After selecting the (a) **red STAT hard button**,  press any of the onscreen buttons once to immediately initiate action

**NOTE:** No secondary confirmation screen

## Function

## What does it do?

## Availability

### STAT PACE

Programs immediate BiV pacing in CRT device, unipolar pacing in low-voltage device (pacemaker), bipolar pacing in ICD device **VVI @ 60 PPM, 7.5V @ 1.0ms**

Only available when in telemetry communication with high- or low-voltage transvenous device; reprogram pacing parameters in Settings to exit STAT PACE

### PSA STAT PACE

Programs immediate BiV pacing **VVI @ 60 PPM, 7.5V @ 1.0ms**

Only available if PSA session is in progress; reprogram pacing parameters in Settings to exit PSA STAT PACE

### DIVERT THERAPY

Stops pending therapy; pressing **Cancel Telemetry** will not divert therapy

Only available when in telemetry communication with high- or low-voltage transvenous device

### STAT SHOCK

Shocks at maximum-output energy

Only available for high-voltage transvenous devices

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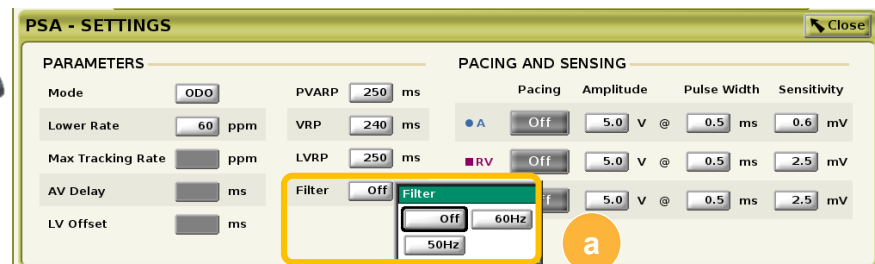


## Improving RF Performance

- Move Programmer closer to patient—ideally away from busy or crowded location in room
- Change Programmer orientation by rotating Programmer up to 45° clockwise or counter-clockwise
- Place Programmer into optional Model 6755 stand
- If there are any metal objects or electrical equipment (laptop, monitor, etc.) adjacent to Programmer, move them away from Programmer as much as possible
- If telemetry is still not consistent, connect Model 3203 S-ICD telemetry wand to its connector and place within two feet of implanted device, orienting the wand as necessary to improve RF telemetry; if in a sterile field, use Model 3203 sterile cover and place wand on top of patient's abdomen; the wand will act as an extra RF antenna
- Turn OFF RF; use inductive telemetry wand, Model 6395

## Mitigating Noise

- Turn ON (a) 50Hz / 60Hz filter
- Use grounding USB adapter and cable to provide earth ground



<http://desco.descoindustries.com/DescoCatalog/Grounding-Hardware/Banana-PlugAdaptors/09839/#.WM62hHzfND8>

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# Key Points when Operating the 3300 PSA

- ALWAYS press the ACCEPT button when changing LV Lead testing configurations for Pace/Sense vector when using the PSA
- When checking LV Lead impedance measurement with the PSA, use only LV lead electrodes
- To build a PSA Report, which will import data to the Patient Information screen, the user must press the 'Save Threshold' button while testing AND save the desired PSA Test Results
- When selecting the 'Save Threshold' button or selecting the 'Back' button when ending a pacing threshold test, the effective pacing voltage will revert to 5.0 volts, 0.5 ms pulse width

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# LATITUDE™

PROGRAMMING SYSTEM  
MODEL 3300



**CAUTION:** The law restricts these devices to sale by or on the order of a physician. Indications, contraindications, warnings and instructions for use can be found in the product labelling supplied with each device. Products shown for INFORMATION purposes only and may not be approved or for sale in certain countries. This material not intended for use in France.