

Programming an ICD or CRT-D When Atrial Information is Not Used

SUMMARY

Boston Scientific dual-chamber ICDs and multi-chamber CRT-Ds will respond to atrial sensing regardless of whether an atrial lead is implanted. Therefore, if an atrial lead is not going to be implanted or information from an attached atrial lead is not going to be used, certain device parameters should be re-programmed.

Products Referenced

All Boston Scientific ICDs and CRT-Ds

Products referenced herein may not be approved in all geographies. For comprehensive information on device operation and indications for use, reference the appropriate product labeling.

CRT-D: Cardiac Resynchronization Therapy Defibrillator
ICD: Implantable Cardioverter Defibrillator

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Atrial therapy can be a valuable component of the overall therapy plan for ICD or CRT-D patients. Atrial information may be used to inhibit ventricular therapy in the presence of atrial fibrillation or atrial flutter, or it may be used to bypass ventricular therapy inhibitors if the ventricular rate is faster than the atrial rate.

While atrial therapy is often beneficial and atrial rate information is useful, there may be clinical situations in which atrial lead information is not useful. Examples include patients in chronic atrial fibrillation, absence of an atrial lead, or atrial lead dislodgement.

If atrial lead information is not required or an atrial lead was not implanted (the atrial port is plugged), reconfiguration of certain device parameters and features may be appropriate, as listed in Table 1. Tables 2 and 3 provide information on navigating to the programmer screen where these configuration changes can be made.

Table 1. Summary of Programming Changes and Results When Atrial Information is Not Used

Parameter	Programming	Programming Result
Pacing Mode	<ul style="list-style-type: none"> Program Mode to VVI(R)^a 	<ul style="list-style-type: none"> Atrial pacing will not occur Atrial information will not be used to drive brady pacing
Atrial lead configuration ^b	<ul style="list-style-type: none"> Program the Atrial lead to Off 	<ul style="list-style-type: none"> Atrial sensing will not occur AS markers will not appear The accrual of atrial counters will be minimized
Detection Enhancements	<p>For Stability/Onset:</p> <ul style="list-style-type: none"> Program V Rate > A Rate and AFib Rate Threshold to Off Review Stability and adjust if necessary^a <p>For Rhythm ID COGNIS[®] CRT-D / TELIGEN[®] ICD</p> <ul style="list-style-type: none"> Program Atrial Tachyarrhythmia Discrimination to Off. Review Stability (For Post-shock only) and adjust if necessary^a <p>VITALITY[®] ICD / VITALITY 2 ICD</p> <ul style="list-style-type: none"> Program Rhythm ID Detection Enhancement Mode to VR 	<ul style="list-style-type: none"> Therapy decisions will not be based on atrial-based measurements
Episode/EGM Storage ^c	<ul style="list-style-type: none"> Program Episode Data Storage for Brady (ATR and PMT) to 0% Program Atrial Electrogram Storage to Off 	<ul style="list-style-type: none"> Enables additional storage space in the Arrhythmia Logbook for tachy episodes
Atrial Daily Measurements	<ul style="list-style-type: none"> Program the atrial Intrinsic Amplitude and atrial Pace Impedance to Off 	<ul style="list-style-type: none"> Atrial diagnostic information will not be collected

^aNominal Stability setting is 10-20 ms for dual-chamber and 30 ms for single-chamber ICDs and CRT-Ds.

^bApplies only to COGNIS CRT-Ds and TELIGEN ICDs. An atrial EP test should not be performed if the atrial lead is programmed to Off.

^cApplies to all ICD and CRT-D devices except COGNIS CRT-Ds and TELIGEN ICDs.

NOTE:

- During follow-up visits, the user may de-select the atrial realtime electrogram trace.
- If an atrial lead is implanted and the physician subsequently elects to utilize atrial information, the disabled/adjusted parameters should be programmed back to the appropriate settings.

Table 2. TELIGEN® ICDs and COGNIS® CRT-Ds: Programming When Atrial Information is Not Used

Pacing Mode

Programming	Navigation	Settings - NORMAL BRADY/CRT
<ul style="list-style-type: none"> Change Mode to VVI(R) 		

Atrial Lead Configuration

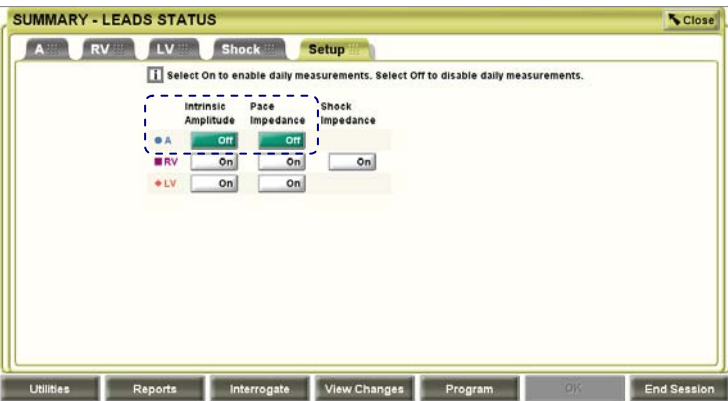

Programming	Navigation	Settings - LEADS
<ul style="list-style-type: none"> Change the Atrial lead to Off 		

Tachy (VT Detection Enhancement) Parameters

Programming	Navigation	Settings - COMMON RHYTHM ID PARAMETERS
<ul style="list-style-type: none"> Change Atrial Tachyarrhythmia Discrimination to Off Review Stability (For Post-Shock only) and adjust if necessary 	<p>If using Rhythm ID:</p>	
<p>For <i>both</i> INITIAL DETECTION and POST-SHOCK DETECTION:</p> <ul style="list-style-type: none"> Change V Rate > A Rate to Off Change AFib Rate Threshold to Off Review Stability, and adjust if necessary 	<p>If using Onset/Stability:</p> <p>* VT-1 or VT, whichever zone has Detection Enhancements On</p>	

Table 2. TELIGEN® ICDs and COGNIS® CRT-Ds: Programming When Atrial Information is Not Used (continued)

Atrial Daily Measurement Setup

Programming	Navigation	
<p>For the Atrial lead:</p> <ul style="list-style-type: none"> • Change Intrinsic Amplitude to Off • Change Pace Impedance to Off 		

Final Device Programming

When the desired changes have been made, select  on the screen or press the **Program** key on the programmer.

NOTE: If an atrial lead is implanted and the physician subsequently elects to utilize atrial information, the disabled/adjusted parameters should be programmed back to the appropriate settings.

Table 3. All Other ICDs and CRT-Ds: Programming When Atrial Information is Not Used

Pacing Mode (Normal and Post-Shock)

Programming	Navigation
Normal: <ul style="list-style-type: none"> Change Mode to VVI(R) 	
Post-shock: <ul style="list-style-type: none"> Change Mode to VVI(R) 	

Tachy (VT Detection Enhancement) Parameters

Programming	Navigation
For <i>both</i> Initial and Redetection: <ul style="list-style-type: none"> Change V Rate > A Rate to Off Change A Fib Rate Threshold to Off Review Stability and adjust if necessary	If using Detection Enhancements: <p>* VT-1 or VT, whichever zone has Detection Enhancements on</p>
<ul style="list-style-type: none"> Change Rhythm ID Detection Enhancement Mode to VR 	If using Rhythm ID (VITALITY® / VITALITY 2):

Table 3. All Other ICDs and CRT-Ds: Programming When Atrial Information is Not Used (Continued)

Arrhythmia Logbook Setup

Programming	Navigation	Arrhythmia Logbook Setup - Episodes/EGM
<p>Episode Data Storage:</p> <ul style="list-style-type: none"> Change Brady (ATR and PMT) to 0% <p>Electrogram Storage Source:</p> <ul style="list-style-type: none"> Change Atrial to Off 		

Daily Measurement Setup

Programming	Navigation	Daily Measurement Setup
<ul style="list-style-type: none"> Change Atrial Intrinsic Amplitude to Off Change Atrial Pace Impedance to Off 		

Final Device Programming

When the desired changes have been made, press the **Program** key on the programmer.

NOTE: If an atrial lead is implanted and the physician subsequently elects to utilize atrial information, the disabled/adjusted parameters should be programmed back to the appropriate settings.