

Programming a Boston Scientific Defibrillator to Inhibit Tachy Therapy Using a Magnet

SUMMARY

A magnet is often used during surgical procedures to prevent inappropriate shocks to the patient due to the oversensing of noise from surgical tools. This *A Closer Look* article describes how to program any Boston Scientific ICD or CRT-D to temporarily inhibit tachy therapy when a doughnut magnet is applied, and then following magnet removal, return to the programmed tachy therapy mode.

All current Boston Scientific ICDs and CRT-Ds have a feature called **Enable Magnet Use**. This feature must be programmed On to inhibit tachy therapy with a magnet.

Many BSC devices have an additional feature called **Change Tachy Mode with Magnet**, which allows tachy therapy to be turned Off/On when a magnet is applied¹. To ensure tachy therapy returns to the previously programmed setting when the magnet is removed (i.e., has not toggled On or Off), the Change Tachy Mode with Magnet feature must be programmed to Off.

ICD: Implantable Cardioverter Defibrillator

CRT-D: Cardiac Resynchronization Therapy Defibrillator

CRM PRODUCTS REFERENCED*

All current Boston Scientific ICDs/CRT-Ds
*Products referenced herein may not be approved in all geographies.

CRM CONTACT INFORMATION

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This *A Closer Look* article describes how to program **any** Boston Scientific ICD or CRT-D to inhibit tachy therapy when a doughnut magnet is applied, and then following magnet removal, return to the programmed tachy therapy mode.

Program ICD or CRT-D to Inhibit Tachy Therapy Using a Magnet

Using a Model 2920 ZOOM programmer or Model 3120 ZOOM LATITUDE programmer, program magnet features as described below. Note: The programming options below are not available if the **Patient Triggered Monitor** feature is programmed to On.

STEP 1: Select the Setup button from the toolbox on the main application screen.

STEP 2: Set magnet features.

For VITALITY® Models 1870/1871/1872, VITALITY AVT Models A135/A155, VITALITY 2/2 EL Models T165/T175/T167/T177 and VITALITY HE T180:

- Review currently programmed settings. Ensure the **Present** column for **Enable Magnet Use** is set to On² (Nominally On) (Figure 1).

Magnet/Beeper		
Magnet	Present	Change
*Enable Magnet Use	On	<input type="text"/>
*This feature is unavailable when "Patient Triggered Monitor" is enabled.		

Figure 1.

For all other current Boston Scientific ICDs and CRT-Ds:

- Review currently programmed settings. Ensure the **Present** column for **Enable Magnet Use** is set to On (Nominally On).
- Ensure the **Present** column for **Change Tachy Mode with Magnet** is set to Off (Nominally Off) (Figure 2).

Magnet/Beeper		
Magnet	Present	Change
*Enable Magnet Use	On	<input type="text"/>
*Change Tachy Mode with Magnet	Off	<input type="text"/>
*These features are unavailable when "Patient Triggered Monitor" is enabled.		

Figure 2.

STEP 3: Press the program button to save magnet settings.

The device is now programmed to inhibit tachy therapy with a magnet, and then following magnet removal, return to the programmed tachy therapy mode. Consider printing a quick notes report documenting the currently programmed parameters.

Inhibit Tachy Therapy Using a Magnet

STEP 1: Program magnet features (Figures 1 and 2).

STEP 2: Position a doughnut magnet over the device (within ~ 3 cm [1.2 inches] of device). The device will emit audible R-wave synchronous tones³ (use a stethoscope as needed), indicating that **tachy therapy is inhibited**. Tachy therapy will be inhibited as long as the magnet remains positioned over the device and audible tones are emitted.

STEP 3: When ready to return to the programmed tachy therapy mode (e.g., surgical procedure is complete), the magnet may be removed from over the device and tones will no longer be emitted from the device.

NOTES:

- Magnet application does not affect bradycardia pacing in an ICD or CRT-D.
- If the Enable Magnet Use feature programmed to Off, a programmer is required to deactivate tachy therapy.
- Advise patients to have their pulse generator checked whenever tones are heard coming from the device.
- For additional information on magnet use, please refer to the appropriate product *System Guide*.

¹If the **Change Tachy Mode with Magnet** feature is programmed to On, the tachy mode of the device can be changed when a magnet is positioned over the device for more than 30 seconds. If this feature is programmed to Off, the tachy mode of the device **will not** change in the presence of a magnet.

²Boston Scientific issued a Product Advisory dated June 23, 2005, regarding important information for specific CRT-Ds (CONTAK RENEWAL[®] 3 & 4, RENEWAL 3 AVT[®] & 4 AVT and RENEWAL RF devices (Models H170/H173/H175/H177/ H179/H190/H195/ H197/H199/M150/M155/M157/M159/ M170/M175/M177/M179/H230/H235/H239). We recommended that physicians consider programming the Enable Magnet Use feature OFF in these devices. An Advisory Update was issued on August 1, 2005 describing a programmer software upgrade, which identifies affected devices and warns clinicians when they attempt to program Enable Magnet Use to ON. A serialized device lookup tool to determine if a specific device is affected by this product advisory is available at www.bostonscientific.com.

³R-wave synchronous tones indicate the programmed Tachy Mode is Monitor + Therapy. Continuous tones indicate the programmed Tachy Mode is Off.