

**BC10 Trouble Shooting Tips**  
**GE 1.5 and 3T BC10 coils**  
[www.mayoclinicmedicaldevices.com](http://www.mayoclinicmedicaldevices.com)

In the event of problems with a bc10 coil, the following are helpful hints to use to try and debug your system and coil. In terms of trouble shooting this text will try to sort between coil id issues, coil wiring for forward and reverse ramped magnets, and imaging protocol problems. Accomplishing each of the following steps will help to determine whether your coil is having problems:

**1. Coil won't scan?**

After setting up the SNR scan from the manual (or some other scan), look at the currently connected coil window to see if the Mayo coil appears (see coil names at the bottom of this paragraph) – if the coil id and config are valid, only one name appears and it is the mayo coil name. If not, try re-seating the coil connector evenly and recheck. If the coil does not come up – there is either a config problem or bad coil id in the connector. Check the coil config file for names below – if the correct name and id code is in the config file – then a new coil is needed (bad coil id in the connector) – contact Mayo. If the coil name isn't present, the coil must be installed using the coil config manager.

GE 3T HDX (side A) Rev >= 14.0	Coil Name - "HD Wrist Coil" Coil Code-MAYOrT0pjlGncocViMgM7QspmUrhpkV
GE 3T HDX (side A) Rev <= 12.0	Coil Name - " Mayo BC10 HDX" Coil Code- MAYOrT0pjlGncocViMgM7QspmUrhpkV
GE 3T legacy port	Coil Name - "Mayo BC10" Coil Code - MAYOBeTo78Ru19TnZypXGS0OpfrdznsZ
GE 1.5T HDX (side A)	Coil Name - "HD TR WristCoil" Coil Code - MAYOOFJfarB99LTOMDdsHYUvXrahBEnT
GE 1.5T legacy port	Coil Name - "Mayo BC10" Coil Code - MAYOMIophERoIzjWk74XsUvIvgcb1cSP

**2. Coil Signal to Noise Ratio (SNR)**

If the coil will scan, note in the operator's and service manuals sent with your coil a procedure is given to obtain an estimate of the coil SNR. This simple test can give you a quick idea if your coil is working within acceptable limits. Follow the instructions and obtain the signal and noise information from the images. Compare the calculated SNR to that in the manual to see if your coil is operating within acceptable margins. If not, consider tests 3 and 4.

**3. Low TG manual prescan test**

This test will determine if your coil is wired properly for your system. To test for this – place the coil and included phantom (with spacing rings) at isocenter and establish the SNR protocol from the operator's or service manual. Enter the manual prescan mode and manually set the TG =20 and choose the coarse center frequency test. The graphical display at the operator's console should show a well defined and clear peak near the center of the display if your coil is wired properly. If no peak (or a very small peak) is shown and only noise is visualized in the graph – it is possible the coil wiring is backwards for your system. The repair for this is simple – open the connector with a screwdriver and (being careful of static electricity!) reverse the wires from the cable on the circuit board. Then repeat the manual prescan test using TG =20. If the peak is now visualized, conduct an auto-prescan and continue with the SNR test.

**4. Image quality evaluation (some images are good, others are bad?)**

If your site has image quality problems on scout images for example – it is possible that the prescribed image planes are outside of the coil. Verify the image plane locations and if in doubt conduct the SNR procedure. If the SNR passes, the coil is performing correctly. Please feel free to access our web site for more information including example protocols and images.

**5. Who to contact?**

**Mayo Clinic Medical Devices** service representative at:

Phone: 866-677-2213 or direct at 507-538-4215

Website: [www.mayoclinicmedicaldevices.com](http://www.mayoclinicmedicaldevices.com)

Email: [mayoclinicmedicaldevices@mayo.edu](mailto:mayoclinicmedicaldevices@mayo.edu)