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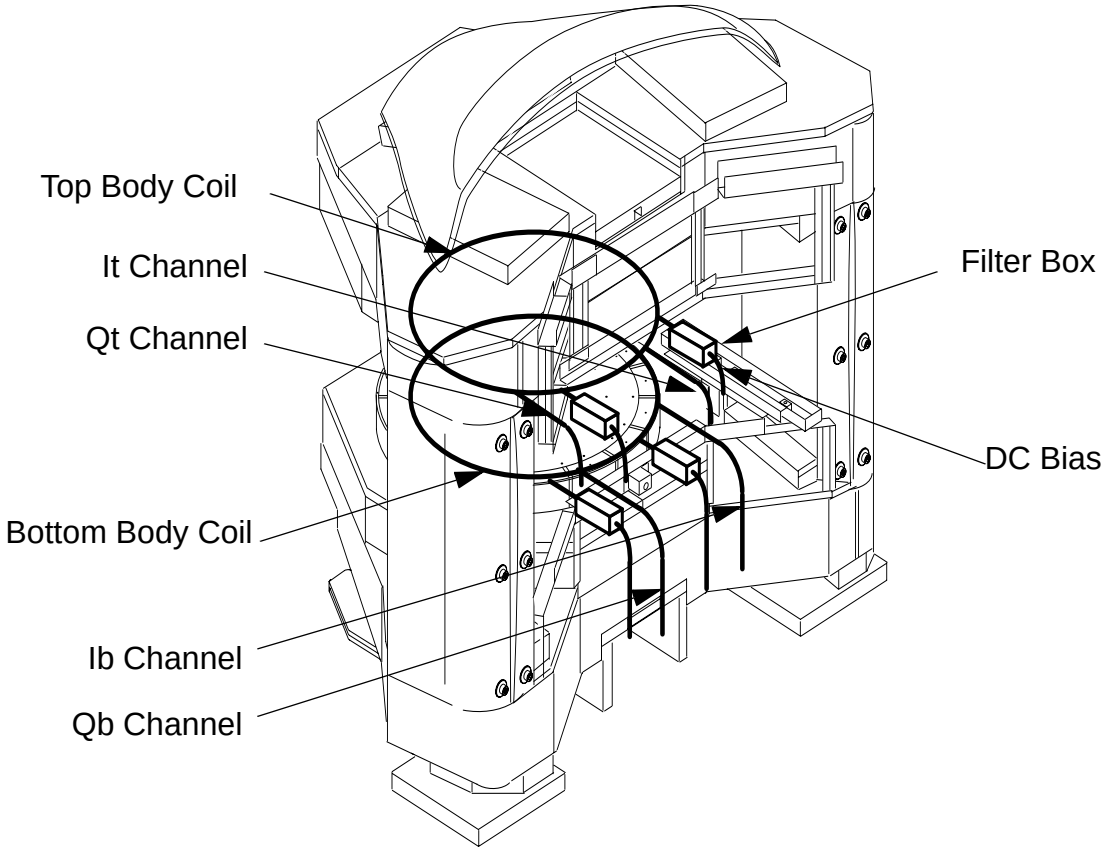
## 1. Overview

This procedure describes how to select f0 tune board to insert to Body Coil prior to Body Coil Installation.

Body coil consists of **Top Body Coil** and **Bottom Body Coil**. Each coil consists of two channels, namely I channel and Q channel, so there are four channels in all: **It Channel**, **Qt Channel**, **Ib Channel** and **Qb Channel**. Refer to the following illustration for corresponding RF cables. The cables with Filter Box are **DC Bias Cables**.




In order to get best performance of Body coil, there is need to tune the Body Coil. This is done by selecting the appropriate f0 tune boards, and also adjusting the trimmers. Since it is easier to insert the f0 tune boards before you install Body Coil into the magnet, you need to select and install the appropriate f0 tune board to both Top and Bottom Body Coil before installing them into the magnet.

The selection of Fo tune board procedure is

a. Define Target Frequency : f(target)
b. Calculate difference between F(target) and No Board Frequency F(nb) for It channel.
c. Select the appropiate fo tune board for It channel.
d. Insert f0 tune boards to Top Body Coil It channel.

e.Repeat b thru d for Qt, Ib, Qb channels.

## 2. Defining Target Frequency

1. Target Frequency is defined as site Frequency (F(site)) ± XXkHz. The reason for xxkHz differnce is to tune Body Coil to get best performance for person who weighs 500 lbs (225kg). Calculate F(target) according to the following formula.
   Refer to the value recorded on “Magnet shimming” for F(site).

**F(target) = F(site) ± XX kHz**

TABLE 2-1
**F(SITE) AND F(TARGET)**

| F(site) | F(target) |
|---|---|
| | |

**CABLE CONNECTION**

## 3. Calculate difference between F(target) and No Board Frequency F(nb) for It channel

1. Calculate difference F(diff) between F(target) and No Board Frequency F(nb) according to the following formula. F(nb) is marked on Body Coil. Refer to the illustration for F(nb) mark location.

**F(diff) = F(nb) - F(target)**

example:
If F(nb) is labled 15.280MHz and F(target) is 14.850MHz, F(diff) is 430kHz.
15.280MHz - 14.850MHz = 0.43MHz (430kHz)

## 4. Select the appropiate fo tune board for It channel

1. Select the appropiate fo tune board for It channel refering to the following table.

example:
If F(diff) is 430kHz, select Board No.3, since Board No.3 is adjustable between 400kHz and 460kHz

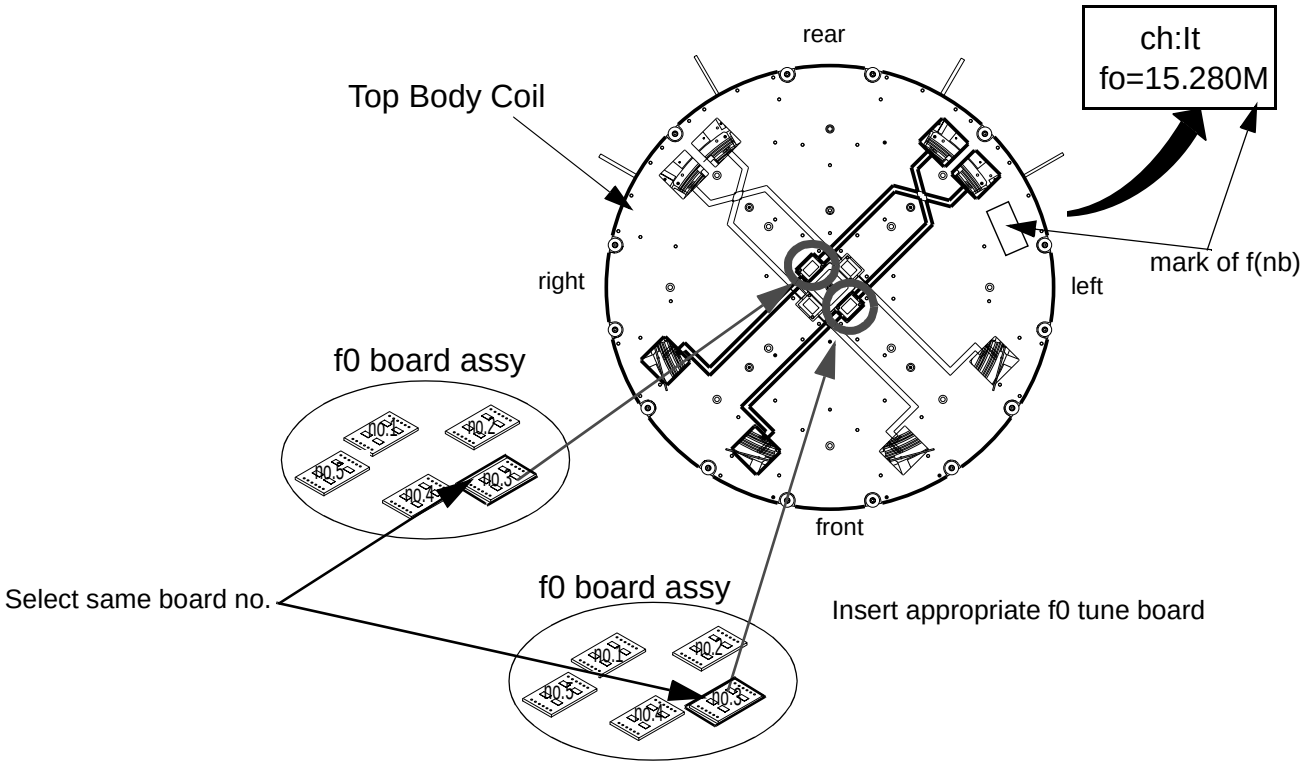
TABLE 4-1
**F0 TUNE BOARD SELECTION**

| Fo tune board no. | Adjustable Frequency Range (Compared to NO f0 tune board) |
|---|---|
| No. 1 | 280kHz thru 340kHz |
| No. 2 | 340kHz thru 400kHz |
| No. 3 | 400kHz thru 460kHz |

| Fo tune board no. | Adjustable Frequency Range (Compared to NO f0 tune board) |
|---|---|
| No. 4 | 460kHz thru 520kHz |
| No. 5 | 520kHz thru 580kHz |

**5. Insert f0 tune boards to Top Body Coil It channel.**

1. Insert f0 tune boards to It channel. There are two places to insert f0 tune boards. Be sure to select the same No. Board from two f0 board assys




**6. Repeat for Qt, Ib, Qb channels**

1. Repeat section 3 thru 5 for Qt, Ib, Qb channels
   Insert F0 tune boards for Qt channel to Top Body Coil.
   Insert F0 tune boards for Ib and Qb channels to Bottom Body Coil.