

Channel Board Course at Sodankylä EISCAT site, 9-10 December, 2014

The purpose is to learn to repair at least the most common problems with the Channel Boards, such as those caused by one or more burned driver chips. The minimum aim is to repair the boards currently known to be faulty. Thus, it is hoped that you bring all the faulty channel boards from your site with you when you come to Sodankylä.

The main diagnostic program for the channel boards has been the so called "bufftest" program, which we will become familiar with during the course.

The course aim to provide some background information, so that in problem situations it is easier to know what to look for in the (by EISCAT standard) fairly extensive documentation. Please locate the channel board documentation folder at your site and bring it with you to Sodankylä, if at all possible. It is a pretty thick pile of paper, and we have only one copy in Sodankylä. The folder would be good to have at hand during the course.

We will start the course work on Tuesday, 10 December at 9.15 at the EISCAT site building. I will provide a short reminder about the EISCAT receiver, especially the digital receiver, and will recall the basics of the the digital signal processing that the receiver does. I will also review the Eros commands and files required for channel board configuration and control.

Then, we start digging into the actual block diagrams and schematics of the channel boards. Here, we are guided by Markku Postila of SGO, who designed the board in the late 1990s when he was working as the site manager at the Sodankylä site. Markku will give a short overview of the VME environment; present the actual physical layout of the systems; and describe the control and configuration of the boards. An emphasis is on how to perform diagnostics of the boards.

Next, we will start using bufftest to get a first look at the boards you have brought with you, and also start taking a look at the practical aspects of the repair. Here we are helped by Toivo Linatti, now at SGO, formerly at EISCAT, who helped Markku in building and testing the boards, and has afterwards taken the responsibility for repairing them.

Our goal for Tuesday is to acquire a reasonably firm diagnostics about the faulty channel boards. If we get some of the boards fixed already on Tuesday, all the better.

We continue at 9:15 on Wednesday with the diagnostic and repairing work, stopping when all the boards are verified to be in working condition. If this can be done in reasonably timely manner, Sauna will be in the offering in the evening.

I'm are expecting you to arrive to SGO sometime in the afternoon or evening of Monday, 8th of December. Accommodation has been reserved for you in one of the guesthouses of SGO. You should be prepared to pay about 25 EUR per night to SGO office, with

card or cash. If, as is to be recommended, you want to have lunch at the SGO cafeteria, that will cost about 15 EUR per meal. Lunch is served 11-13 each day, and for that, cash is unfortunately needed. As about dinner, there are some possibilities, though not very good ones, for it in the Sodankylä village, some 7 km from the site. Or you can prepare to make your dinner yourself; there are kitchen facilities in the guesthouse.

I will be around and reachable via my mobile on Monday afternoon and evening. Drive to the EISCAT site, then call me. Or drive directly to the guest house (the guesthouse number I will provide you as soon as that becomes fixed); the keys will be on the mailbox at the front door.

Jussi