Instructions for Use

To execute the tool, navigate to the folder where the project was downloaded (the folder contains two files: menu.py and PCPS.py) and run the menu.py file. To execute it simply with the command ./menu.py, you must grant the operating system the necessary permissions using the command chmod +x menu.py.

Once the tool has been executed, you will see the main menu shown in **Figure A.1**, where there are two options to proceed:

1. Analyze a recorded file
2. Record a file

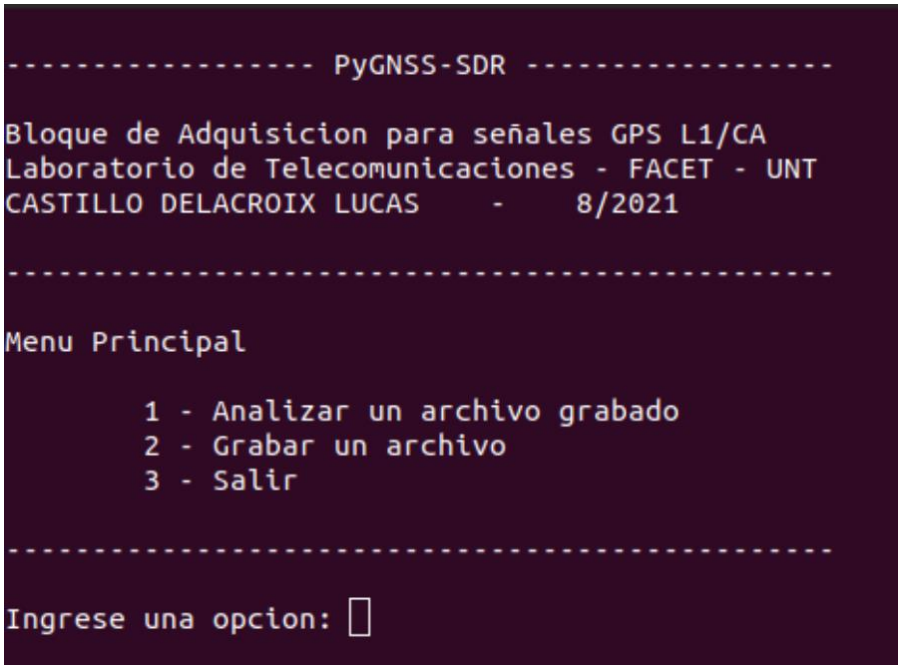

Figure A.1. Tool Main Menu

- **Analyzing a Recorded File**

To analyze a previously recorded file, select option **1** (after choosing an option, press Enter), and you will see the menu shown in **Figure A.2**.

You can execute the acquisition algorithm through two approaches:

1. Run with default parameters
2. Configure parameters

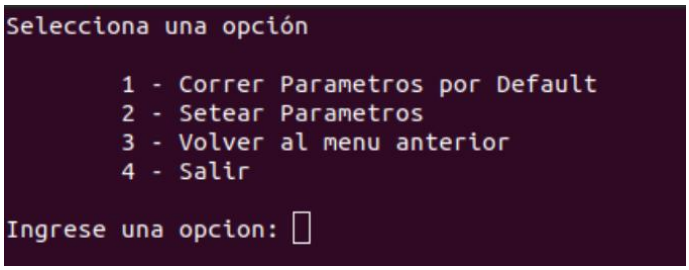

Figure A. 2. File Analysis Submenu

If option **1** is chosen, the tool uses a set of pre-loaded generic options to simplify execution, assisting users unfamiliar with the details of each option. However, certain parameters (e.g., file path, file format, sampling frequency, number of satellites to search, save results, analysis time) must still be entered one by one.

The tool then displays all parameters, both the pre-loaded and user-provided ones, and requests confirmation, as illustrated in **Figure A.3**.

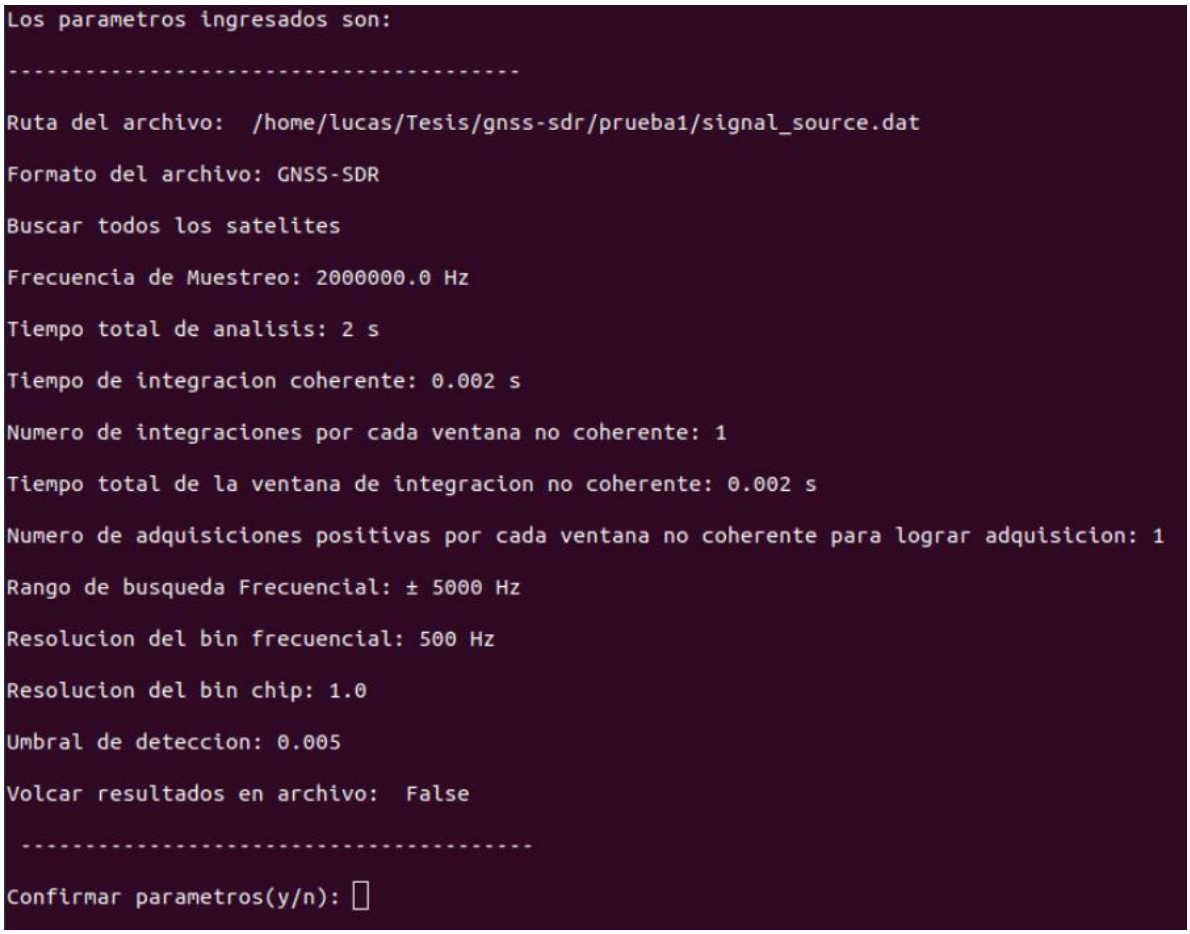

Figure A.3. Default parameter visualization

If the entered parameters are confirmed, the algorithm is executed. Otherwise, the parameters can be reset, or the user can return to the main menu (see **Figure A.4**).

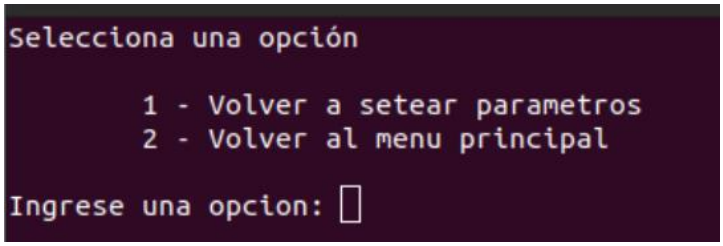

Figure A.4. Parameter cancellation submenu

- **Recording a Sample File**

To record a file, select option **2** in the main menu (**Figure A.1**) and proceed to the submenu shown in **Figure A.5**, where you must choose option **1** to configure recording parameters.

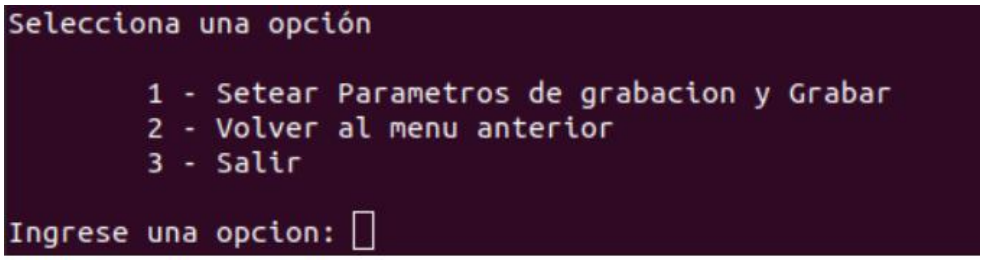

Figure A.5. File recording submenu

The required parameters (e.g., file name, sampling frequency, front-end gain, duration of recording in seconds) must be entered one by one (see **Figure A.6**).

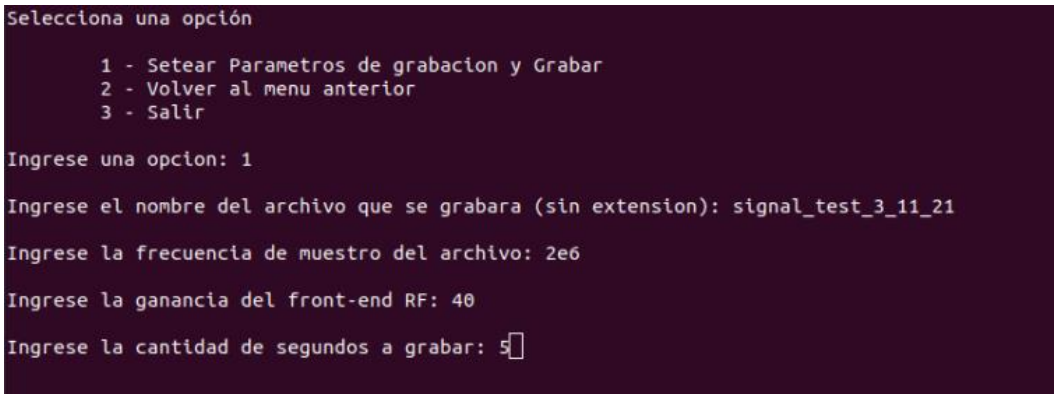

Figure A.6. Recording parameter configuration submenu

If the parameters are correct, and the device is connected and ready, the tool begins recording and displays a screen, as shown in **Figure A.7**, indicating the recording process.

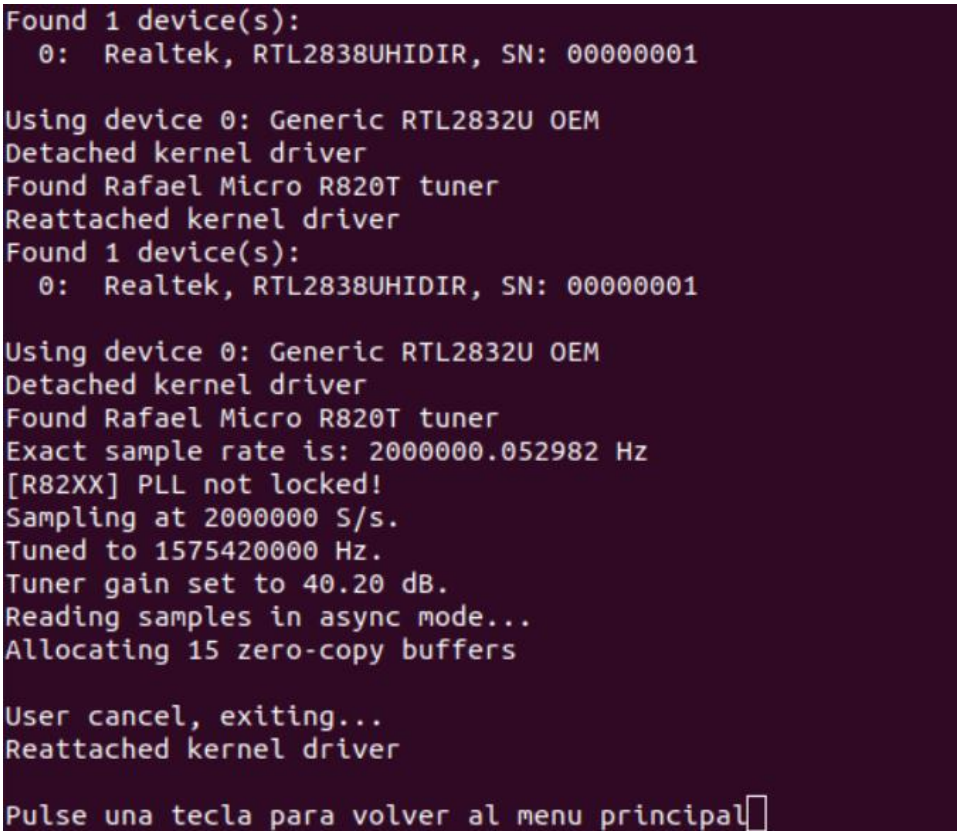

Figure A.7. File recording screen

If the device is not connected or not recognized, the tool shows the error screen in **Figure A.8**

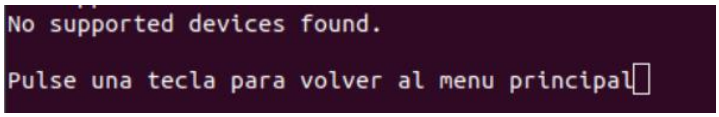

Figure A.8. Error screen during recording