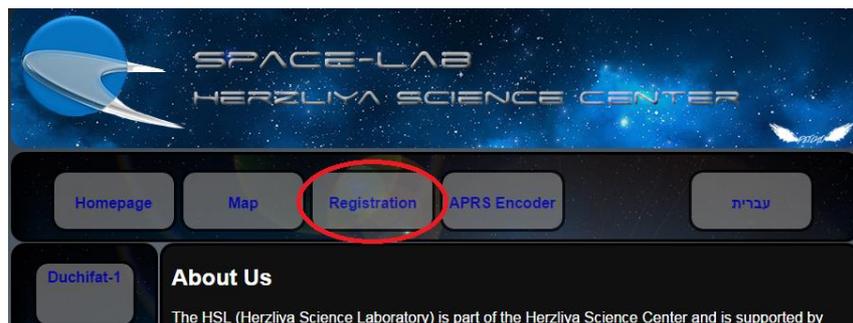




# Duchifat-1 APRS Compressed Packet Generator Manual

## 1. Creating APRS Compressed packets

(before starting this process, register at our website . This process is not available to unregistered users.)



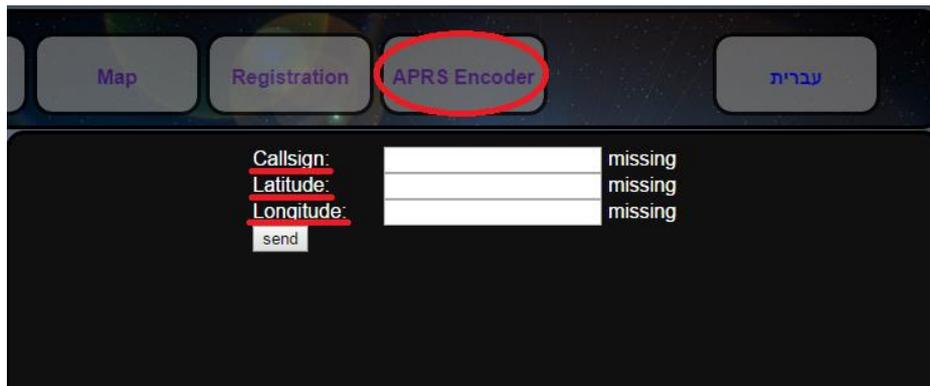
If there are any registration issues, please take a look at "A walk through the registration process" document

A screenshot of a registration form with fields for "Name:", "Last name:", "Call Sign:", and "eMail:". Each field has a "missing" status indicator. A "get code" button is below the email field. At the bottom, there are two "download" links: "Terms of use" and "A walk through the registration process" (circled in red).

First, enter the information at [APRS Encoder](#) (Callsign, Latitude and Longitude required).

Your location's coordinates can be obtained also from [Google maps](#).

For example, the coordinates of Buckingham palace in London are Latitude: 51.501302, Longitude: -0.141871

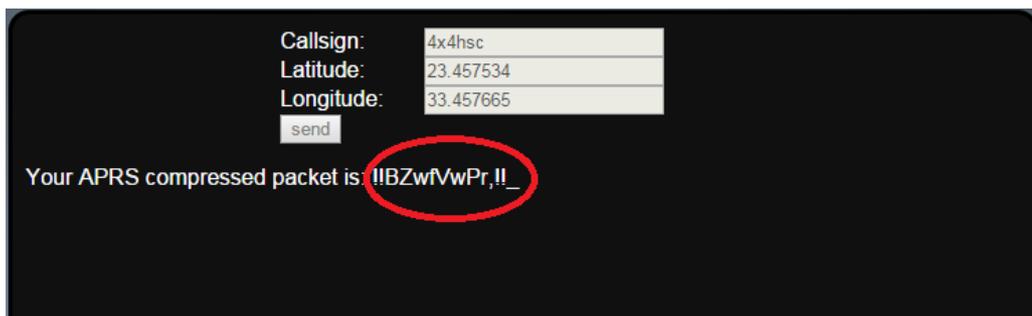


Map Registration **APRS Encoder** עברית

Callsign:  missing  
Latitude:  missing  
Longitude:  missing

send

The result will be the APRS compressed packet at the bottom of the page .This is the fully made APRS compressed packet to transfer to the satellite. See below comment about the packet structure



Callsign: 4x4hsc  
Latitude: 23.457534  
Longitude: 33.457665

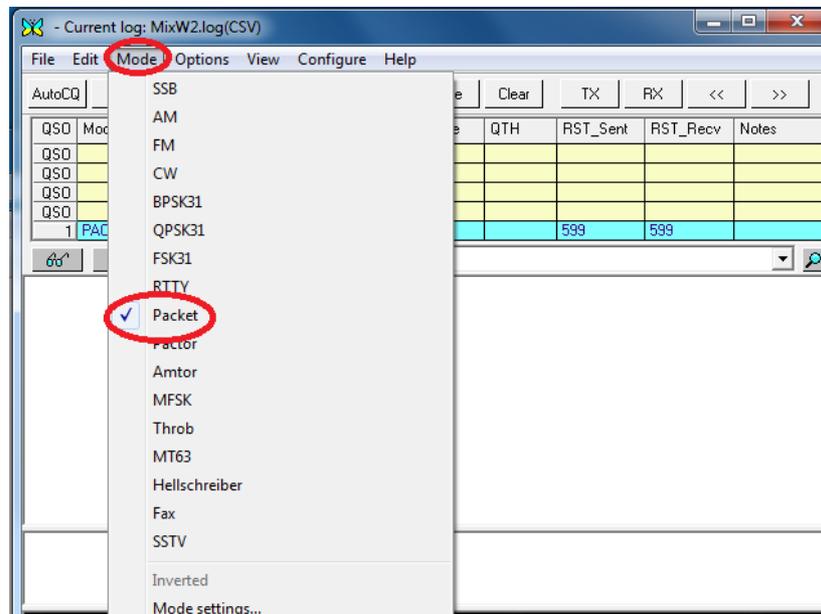
send

Your APRS compressed packet is: !!BZwVwPr,!!\_

## 2. Converting text to digitally modulated audio

Using the program MixW (download from [here](#)) turn the packet to audio

(steps: turn mode to packet mode [mode -> packet])



In Mode settings chose "VHF 1200 baud (standard, 1200/2200 Hz)"

Copy the packet to the bottom white box and press Enter

## 3. Sending the APRS packet to the satellite

Transmit the packet audio to the satellite at the Uplink frequency of 435.220 MHz, more or less up to 9KHz for Doppler compensation

# COMMENT ABOUT COMPRESSED APRS PACKET STRUCTURE

The Compressed APRS packet for Duchifat1 looks in general like this: **!a\_c?hmZ^Pb!!\_**

The first character must be "!". Unfortunately the satellite won't accept "=" as first character.

The 2nd and 11th characters are those given at registration. In this example: 'Symbol Table ID'=**a** and 'Symbol Code'=**b**

For succeeding with sending packets to Duchifat1, it is vital to read the document in the Registration page called 'Terms of use'. On that page there is also 'A walk through the registration process' document.

In the satellite page there are also the 'Configuring TT4 Explanation doc' document and ground station SW prepared by the HSL students. The BPSK decoder engine was provided by ISIS space in the Netherlands.