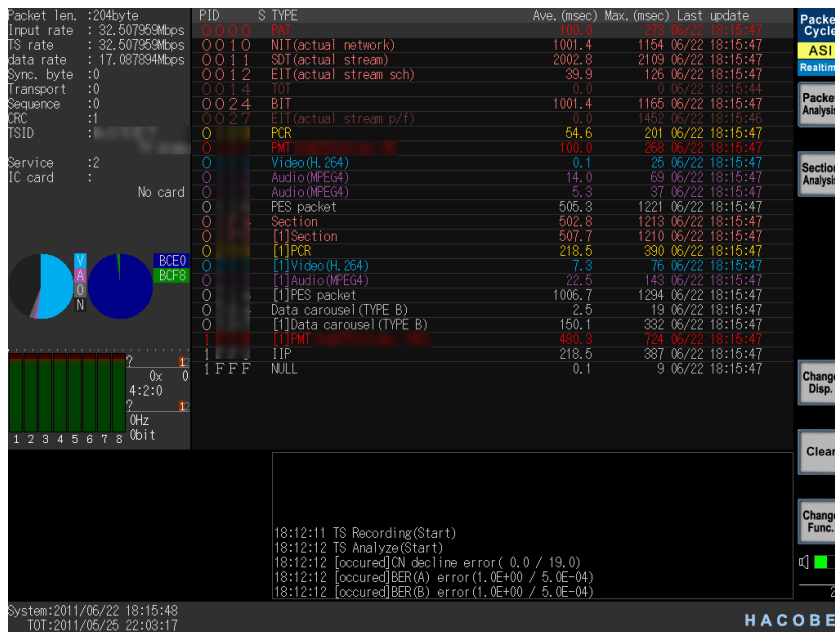# How to record RF status with GPS data.

1   Preparing the GPS data acquisition.

   1.1   Saving the contents of the log set
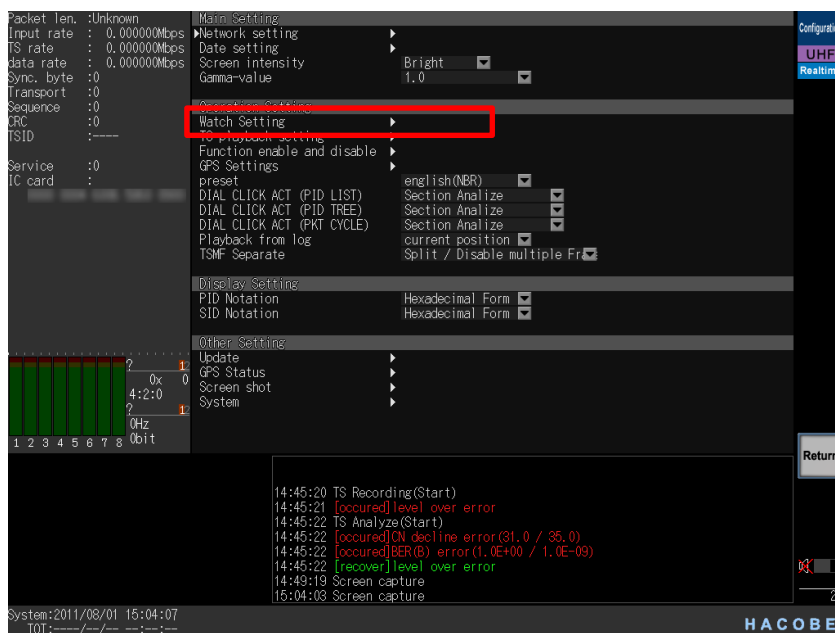
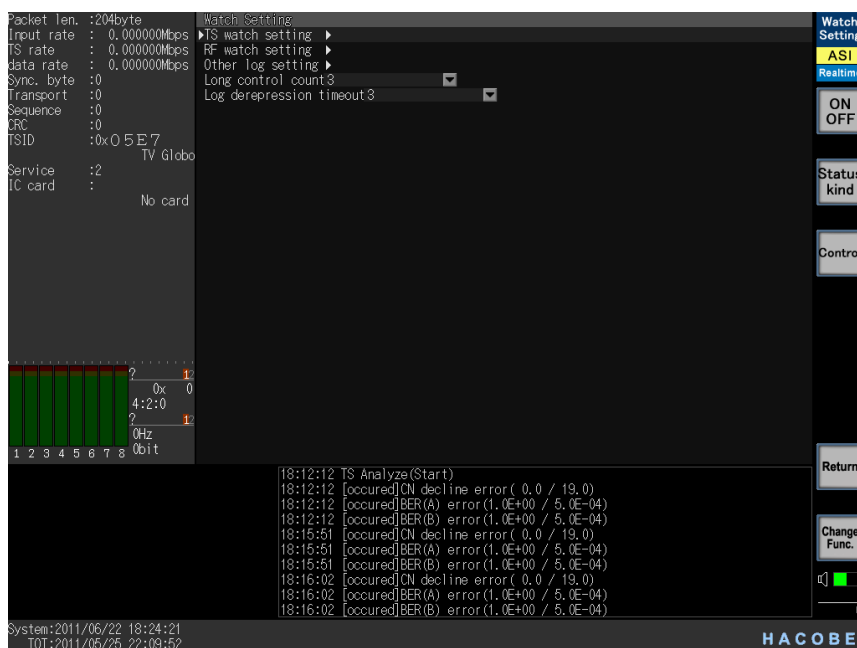   1.1.1 Go to the Config mode

Please press [Change Func.] two times and press [Config.] to enter Configuration screen.

      1.1.2 Watch Setting (1/5)

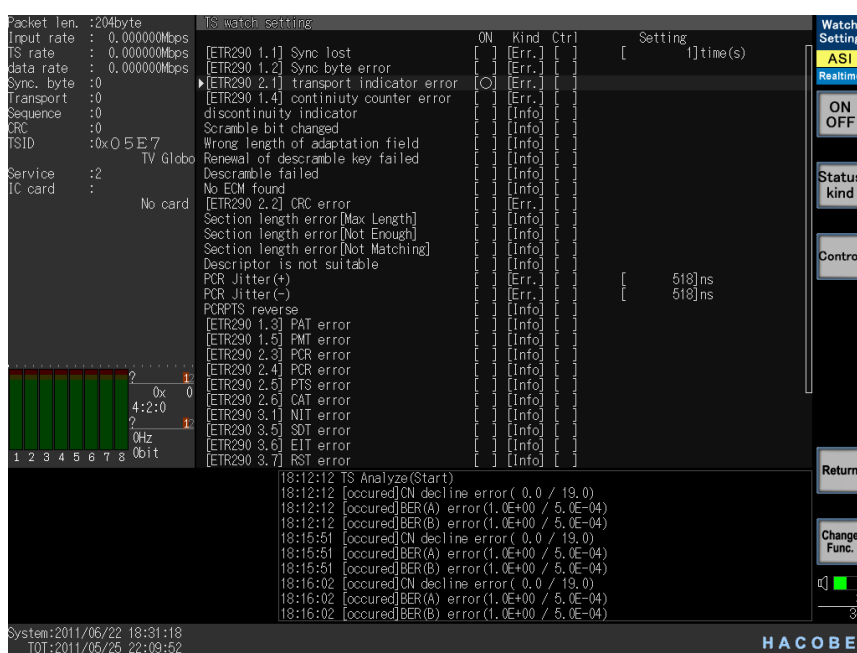   Select "Watch Setting" with DIAL and press DIAL to enter Watch Setting Screen.
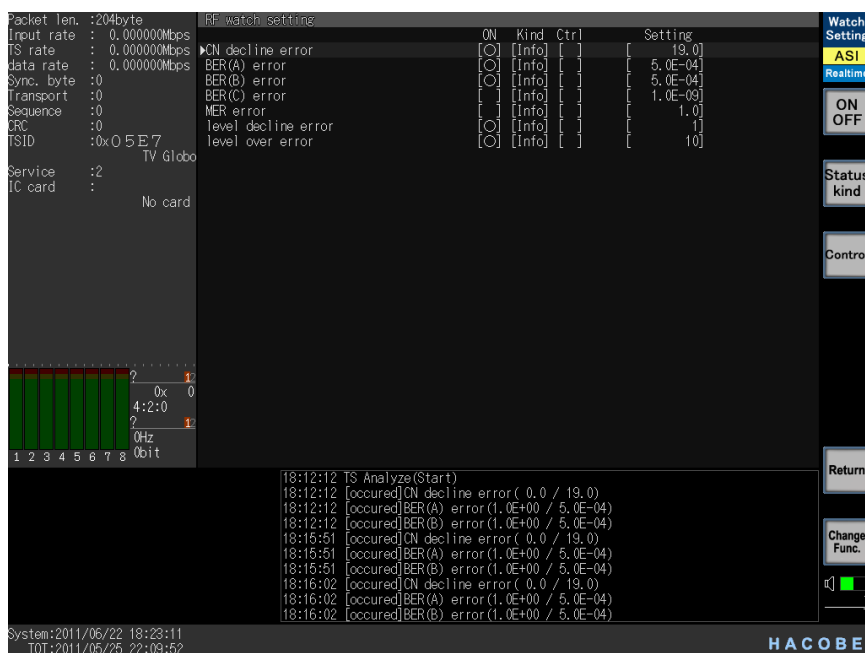
1.1.3 Watch Setting (2/5)

Select "TS watch setting" with DIAL and press DIAL to enter TS watch setting Screen.

1.1.4 Watch Setting (3/5)

Only the "[ETR290 2.1] transport indicator error", please check that you have turned ON.

transport indicator error is received by the worsening situation

Occurs when an error correction code that could not be corrected in the data received.

Will likely occur in the BER over the usual 2E-04.
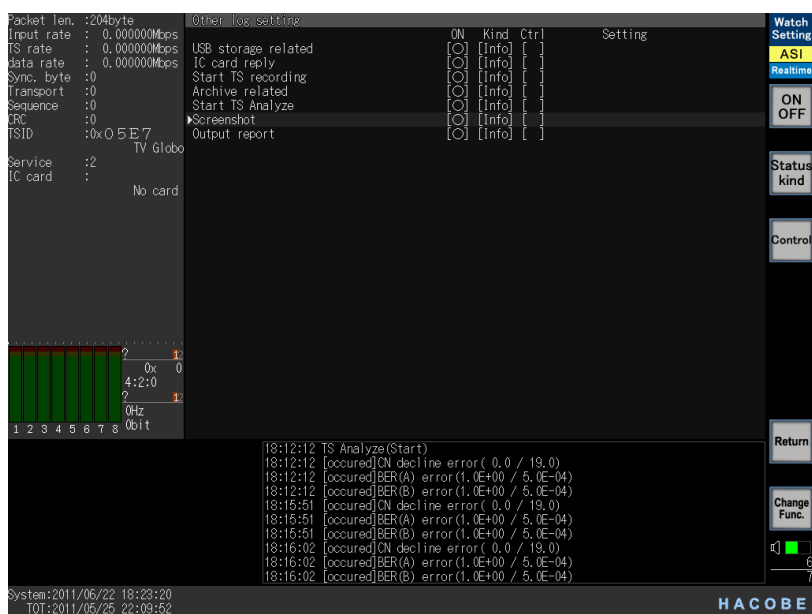
1.1.5 Watch Setting (4/5)

Select "TS watch setting" with DIAL and press DIAL to enter RF watch setting Screen.

- CN decline error

- BER(A) error

- BER(B) error

- level decline error

- level over error

please select "ON" , about On the above list.

In addition, the Setting field values, please set according to your policy.
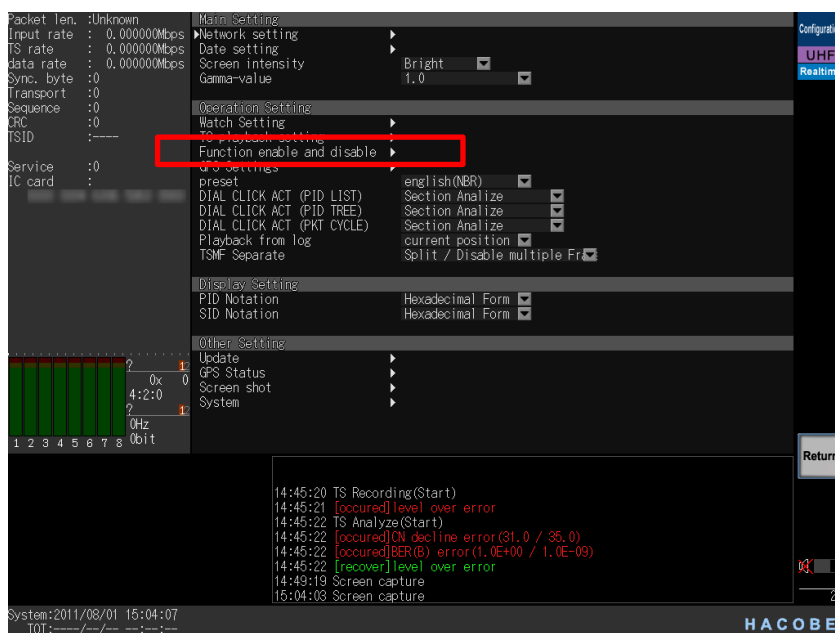
1.1.6 Watch Setting (5/5)

Select "TS watch setting" with DIAL and press DIAL to enter Other log setting Screen.
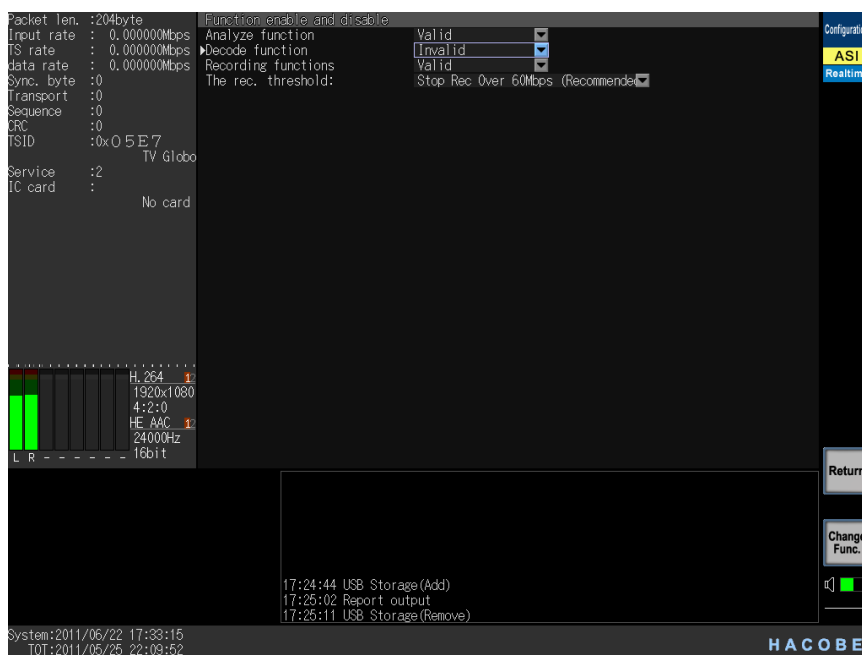
please select "ON" , about all.

1.2　ON / OFF setting of the decoding

1.2.1

Move to Function enable and disable screen

1.2.2

When it becomes unstable when the RF acquisition occurs, please change to Inavlid the Decorde function. In normal recording, no problem remains Valid.

[[[Caution]]] When you disable the [Recording Function], because it can also stop recording RF status, Recording function, please make sure to set Valid.
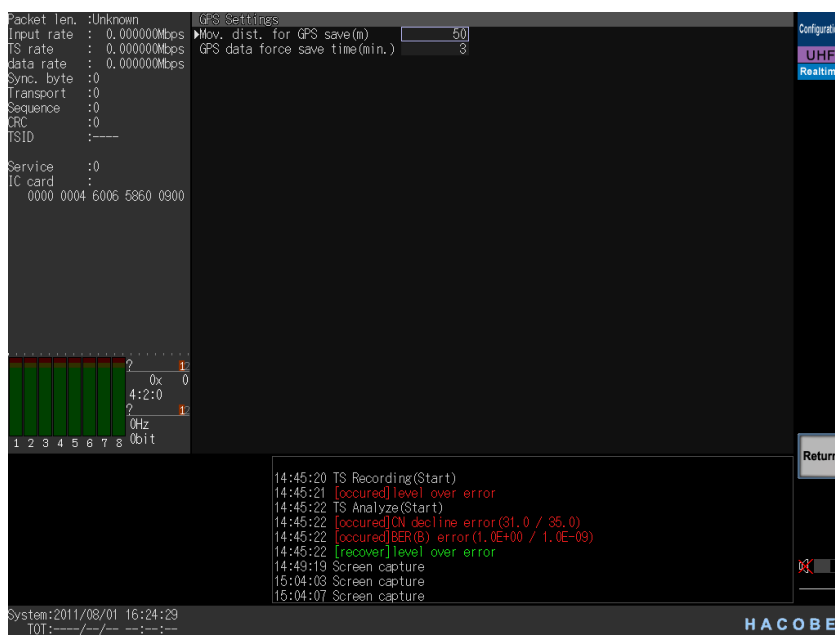
1.3　Specify the interval of the GPS data recorded

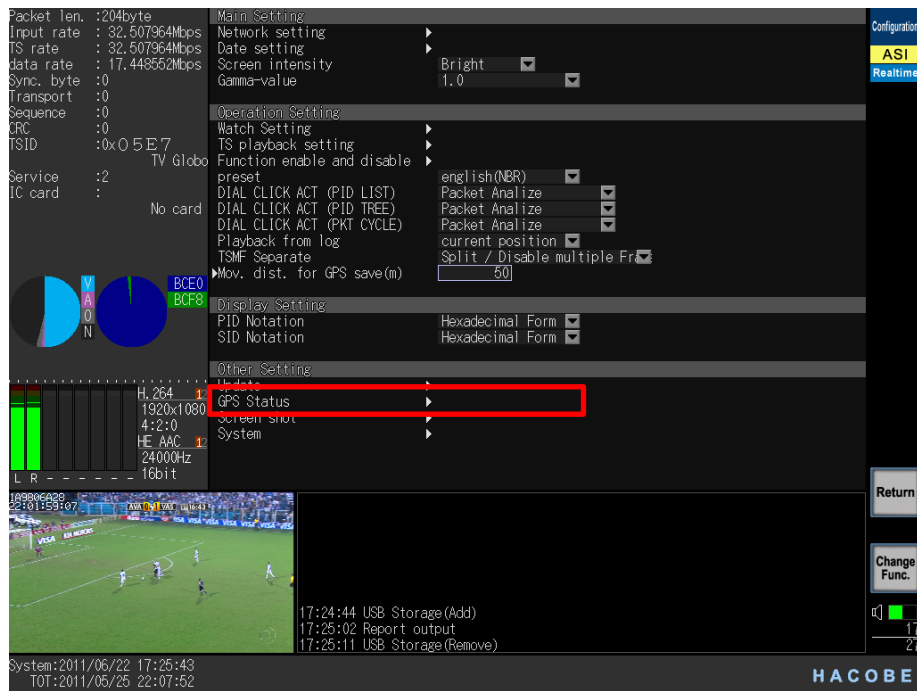1.3.1
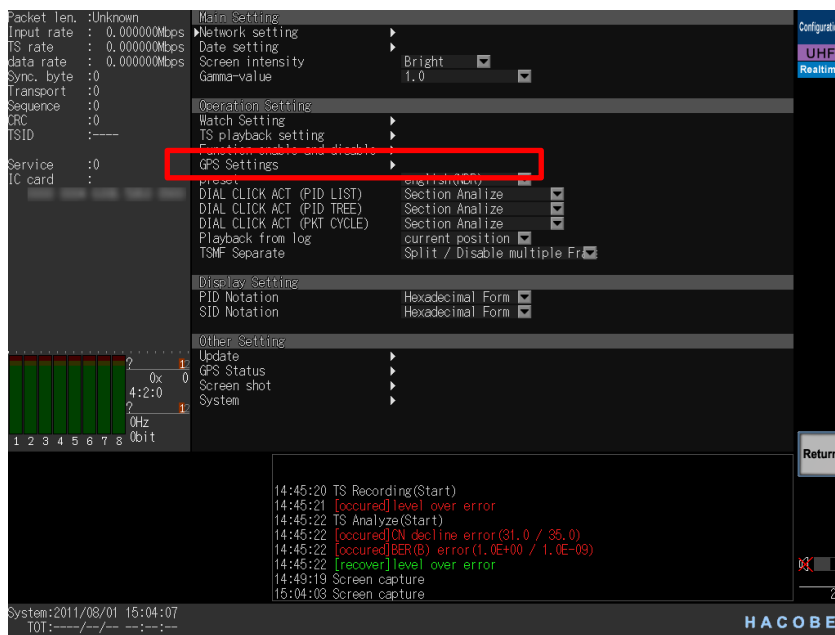
Move to "GPS Settings" screen.

1.3.2

"Mov. Dist. For GPS save (m)" records the RF data to the travel distance exceeds a specified distance was measured by GPS.

Even if you do not move a specified distance, "GPS Data force save time" automatically records the time and after setting.
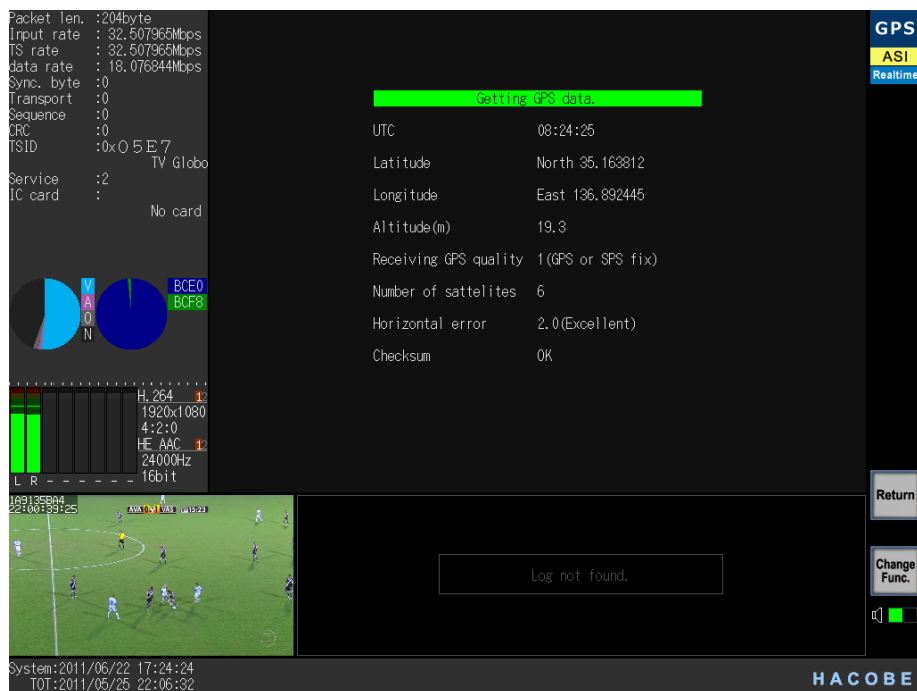
2　Checking the GPS status

2.1

Move to GPS Status screen

2.2

Please connect to the USB port of the GPS module HACOBE.

If you can connect a GPS module, "Getting GPS data" is displayed in green.

3　Recording (measured)

　　3.1　While the power is turned ON to Valid HACOBE and Recording function when connected to a GPS module, GPS data and records associated with the RF status automatically.
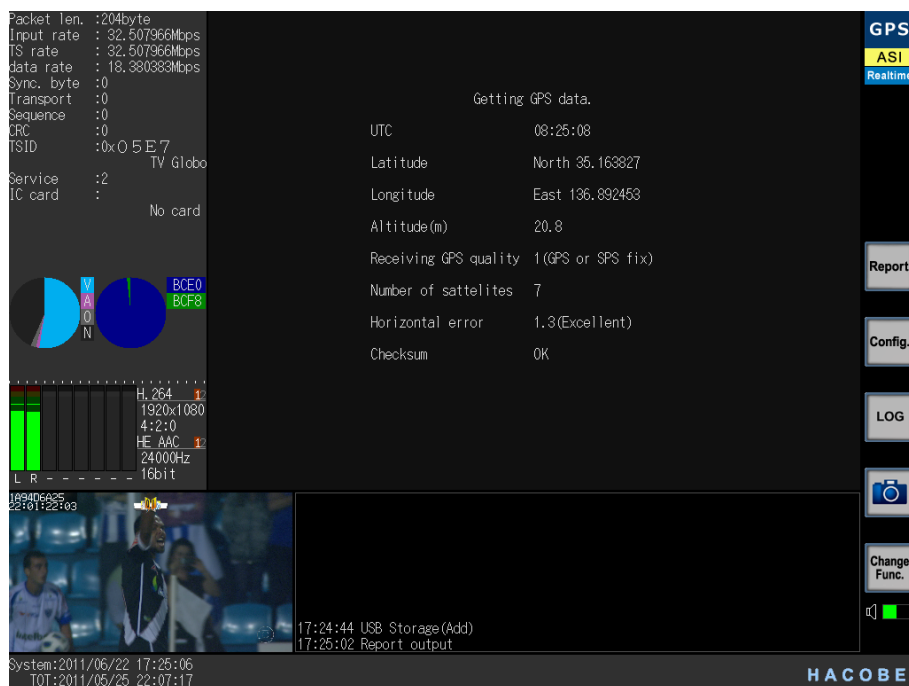
4　Retrieve the recorded data

　　4.1　Connect the USB memory to the HACOBE.
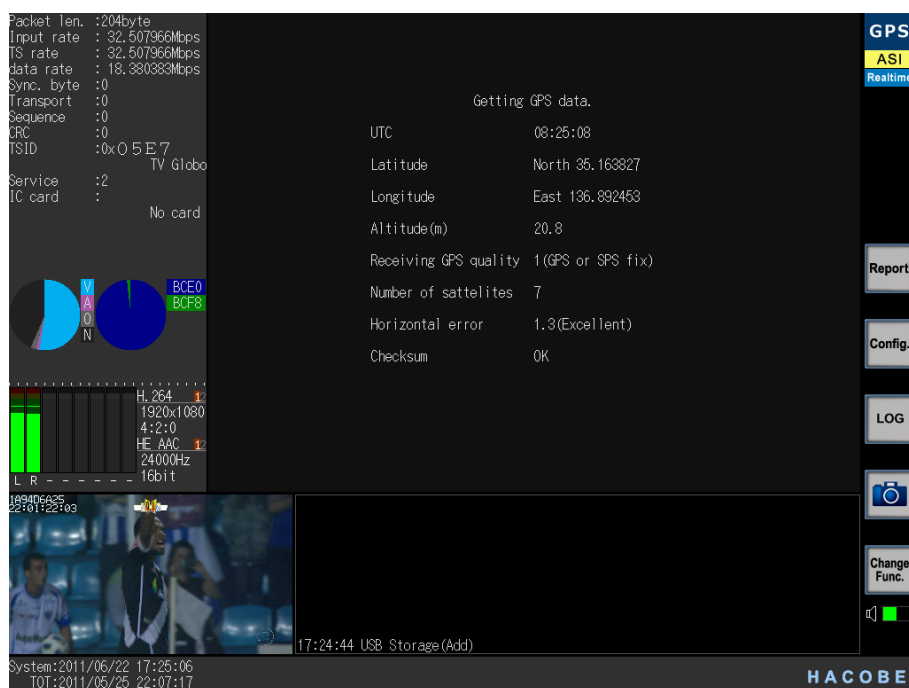
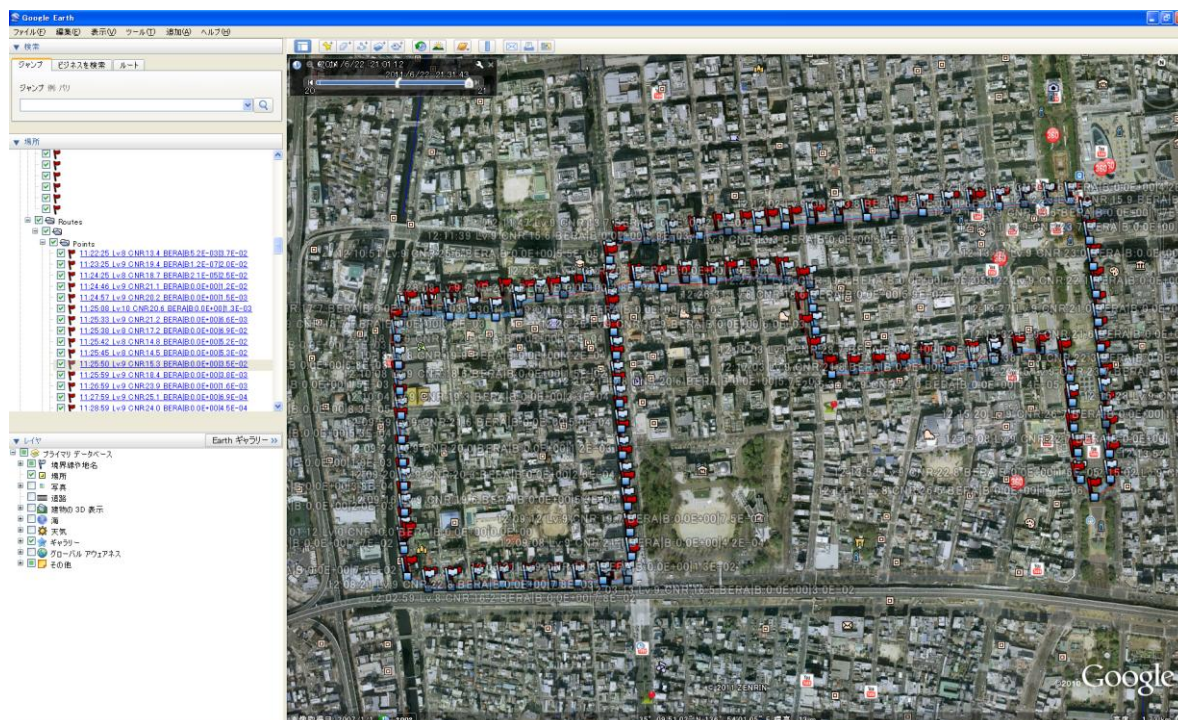　　　　And to recognize the USB memory HACOBE, the log area "USB Storage (Add)" is displayed.

　　4.2

　　　　GPS data is saved by pressing the [Report] after twice pressing the [Change Func.] button,in the GPS Status screen.

7

5   Using the data retrieved

5.1

The gpx data stored in USB memory, you can drag and drop into Google Earth, such records are displayed above.

The above data is recorded when the car ran the same course twice in the Japanese city of Nagoya. Points in the tree view list on the left of the screen displays a list of measured data by clicking on the line will pop up on the map where appropriate.
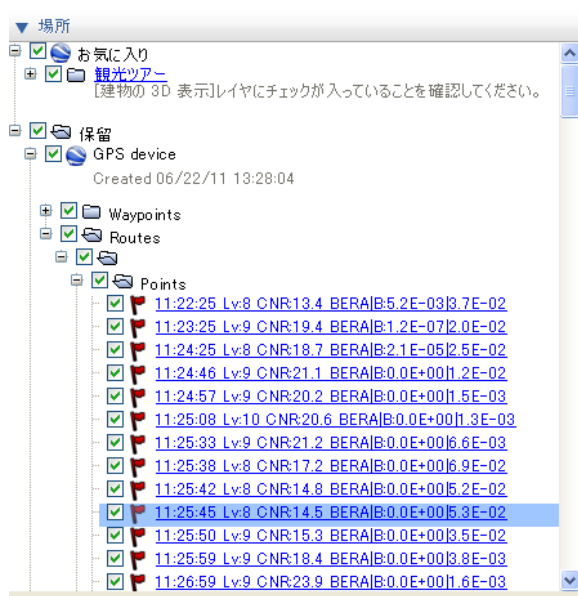
6 csv sample

```
Date,              Latitude,  Longitude,   Altitude, Input,   Ch, TSID,  Lv, CN,    BER(A),BER(B)
2011/06/22 12:02:12, 35.163295, 136.892498, 43.5,     OUHF,    19, 7FC3,  8,  17.8,  0.0E+00,7.7E-02
2011/06/22 12:02:19, 35.162772, 136.892578, 38.0,     OUHF,    19, 7FC3,  9,  17.7,  0.0E+00,7.5E-02
2011/06/22 12:02:29, 35.162535, 136.893077, 27.3,     OUHF,    19, 7FC3,  9,  20.7,  0.0E+00,2.1E-03
```