

Topcon GB-1000 - Receiver Board Firmware v3.1.3 Release Notes

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User visible changes in the firmware version 3.1 p3 since version 3.1 p2

Highlights.

1. Support of external/internal CDMA modem has been implemented.
2. The output of the state of the parameter "/par/frq/amp" for NET-G3 boards has been implemented.
3. If the parameter "/par/frq/input" was set to "off", EGGDT and NET-G3 boards did not correct the oscillator frequency offset upon turning the power on. This problem has been resolved now.
4. The logic for locking SBAS satellites have been modified. Now all the available SBAS satellites can be tracked.
5. New commands that allow specifying the timeouts for SBAS fast corrections in manual mode have been added.
6. Performances of DGNS (code differential) mode have been improved.
7. Corrections connected with identification of GLONASS satellites, in which C/A L2 signal is available, have been implemented.
8. RTK mode: internal logic improvements (in particular, for G3-based receivers).
9. [DL] message: the format has been corrected (a comma has been added to the end of the group of parameters embraced with {...}).
10. The problem connected with AFRM mode (the receiver does not open a new file, if a pre-defined amount of free memory remains) has been resolved.
Note: this problem was not resolved in the version 3.1 p1.
11. The contents of [CC], [C1] and [C2] messages has been corrected for G3-based receivers.
12. The logic of "coarse" RAIM has been modified.

0. Compatibility notes.

- 0.1 The format of [DL] message has been corrected to make it compatible with rules defined for ASCII messages.

1. Messages.

No changes.

2. Parameters.

2.1 Parameters for SBAS fast corrections

Name: /par/waas/fastcor/maxage

Access: rw

Type: int

Values: [1..1200]

Default: 18

Description: This parameter specifies the maximum age (timeout) of SBAS fast corrections. This setting will affect processing of SBAS fast corrections provided the parameter /par/waas/fastcor/mode is set to "manual".

Name: /par/waas/fastcor/mode
Type: enumerated
Values: auto | manual
Default: auto
Description: Being set to "manual", this parameter allows the user to specify a user-defined timeout for SBAS fast corrections else the timeouts will be determined automatically in accordance with broadcast data.

2.2 For CDMA support, new PPP parameters have been added:

Name: /par/ppp
Access: r
Type: list {state, speed, xt, modem, addr, debug, auth, compression, gprs, cdma, dialup}
Description: The list of PPP parameters.

Name: /par/ppp/cdma
Access: r
Type: list { dial, user }
Description: The list of gprs parameters.

Name: /par/ppp/cdma/dial
Access: rw
Type: string[0..31]
Default: "#777"
Description: Dial number for CDMA data connection

Name: /par/ppp/cdma/user
Access: rw
Type: string[0..31]
Default: ""
Description: User name

Name: /par/ppp/cdma/passwd
Access: rw
Type: string[0..31]
Default: ""
Description: CDMA password.

NOTE:

To create PPP link through internal or external CDMA modem connected to the receiver serial port, the user has to set the modem mode of corresponding modem port to "cdma":

```
set,/par/modem/c/mode,cdma
```

To close PPP connection the user has to set modem mode to "off":

```
set,/par/modem/c/mode,off
```

For CDMA modem, PPP connection works the same way as PPP connection established through GPRS.

2.3 The speed parameter of PPP was changed to rewrite.

Name: /par/ppp/speed
Access: rw
Type: enumerated
Values: 9600 | 19200 | 38400 | 57600 | 115200
Default: 9600
Description: PPP connection speed (baud rate).

Notes. If you change the speed parameter before set modem mode to gprs, cdma or dialup, the firmware start searching from the modem response form the specified baud rate. Was made to speed up the modem serch if the real baud rate is known and the user don't want wait for automatical definition.

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