

## ONCORE TECHNICAL APPLICATION NOTE

### *VP Oncore Firmware Version History*

Version 8.1      Released 3/95      Models: Bxxxxxxx3

- 8 channel code added
- 8 channel messages added (@@Ec, @@Ek, @@Ea, @@Eg, @@Fa, @@Fd)
- Foliage tracking improvements added
- RTCM Type 9 message decoding added
- Position filter enabled for real-time differential mode
- New user selectable differential time-out message (@@AJ) added
- Almanac time-out extended from 26 weeks to 127 weeks
- Search pattern strategy improved when receiver set in AIR application type
- NMEA GGA message modified to add additional digit of resolution for position
- Time RAIM option I added for isolation and detection of errant satellites
- New 6 channel Time RAIM setup and status message (@@Bn) added
- New 8 channel Time RAIM setup and status message (@@En) added

Version 8.4      Released 8/95      Models: Bxxxxxxx4

- Time RAIM automatic satellite removal added
- Time RAIM enhanced to alarm on extremely large errors (days or weeks)
- Almanac check added to ensure a minimum number of satellites before accepting
- Magnetic variation table updated through year 2000

Version 8.8      Released 10/96      Models: Bxxxxxxx5

- 1PPS control mode feature implemented
- 1PPS compensated for delay due to B4 hardware
- Ephemeris decoding extended to foliage tracking mode
- Ephemeris decoding limited to one satellite each second
- NMEA GGA message DGPS flag modified
- NMEA GGA message geoidal separation sign reversed
- Lock detection algorithm modified to eliminate rare incorrect Doppler measurements
- Individual satellite time outputs adjusted to agree with pseudorange outputs

Version 10.0      Released 11/97      Models: Bxxxxxxx6

- 1PPS compensated for delay due to B8 hardware
- Integrity monitor in position filter implemented