4077 HF Map & Track

- **Live Asset Tracking over HF Radio**
- **Viewable Tracking History and Playback**
- **Downloadable Maps**
- **Optimised Operator Interface**
- **Automated GPS Transmission & Receipt**
- **Definable Geofencing Zones**

Monitoring the position of mobile assets is critical to their effective management in both marine and land mobile environments. The Barrett 4077 HF Map & Track solution provides situational awareness for commercial, non-government and government agencies alike, including fishing fleets, long distance haulage, emergency response including police and defence force deployments. When paired with a Barrett 4050 HF SDR Transceiver, the Barrett 4077 HF Map & Track system effectively eliminates the field operator's need to manually send GPS transmissions. The Barrett 4050's "GPS Push" option automates multiple channel encrypted GPS transmissions and the Barrett 4077 Map & Track system displays the received position and track history on down-loadable multi-level mapping software.

The 4077 HF Map & Track software gives the user the option of four unique map types: standard, dark, terrain and sea marks. All maps are open source and can be saved to the hard drive of the operating PC as each area is downloaded during operation. This ensures the operability of the system even in locations where Internet access is unreliable or restricted.

4077 Map & Track includes multiple tools for the monitoring of mobile assets including user definable areas for the zoning of safe regions, routes and exclusion zones. These areas are defined in colour and overlayed on the mapping software without compromising map integrity or impacting ease of operation.

Minimum Requirements

System

- Windows 7/8/10 32/64 Bit
- i5 processor or equivalent
- 4GB RAM
- USB port (for optional serial adaptor)

Hardware

4000 Series

- Barrett 4077 Map & Track (BC407700) - base station only
- Barrett 4050ip HF SDR Transceiver (BC405000ip) with GPS Push option - mobile unit only (BCO40518) and appropriate Antenna
- Barrett 4000 series Programming Software (BCA40001)
- IP connection (Barrett WiFi or RS-232)
- Appropriate Barrett GPS Receiver - mobile unit only

2000 Series

- Barrett 4077 Map & Track (BC407700) - base station only
- Barrett 2050 HF SSB Transceiver (BC205000) or PRC-2090 Tactical HF Transceiver (2090-00-01) with GPS Push option - mobile unit only (2050: BCO20518; PRC-2090: 2090-01-47)
- Barrett 2000 series Programming Software
- Appropriate Barrett GPS Receiver
- Appropriate Antenna

For further information on the Barrett transceivers mentioned in this brochure, please contact Barrett Communications.

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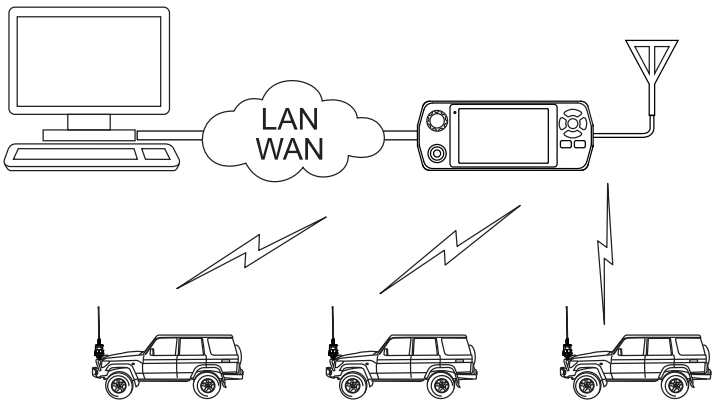
ISO 9001
BUREAU VERITAS Certification
BCB40770/4

Example Scenarios

The 4077 HF Map & Track system is versatile and can be adapted to suit many different operational requirements. The following two scenarios are simply two of the many possible configurations.

Scenario 1 - Single "scanning" base station transceiver with consecutive GPS Push Operation

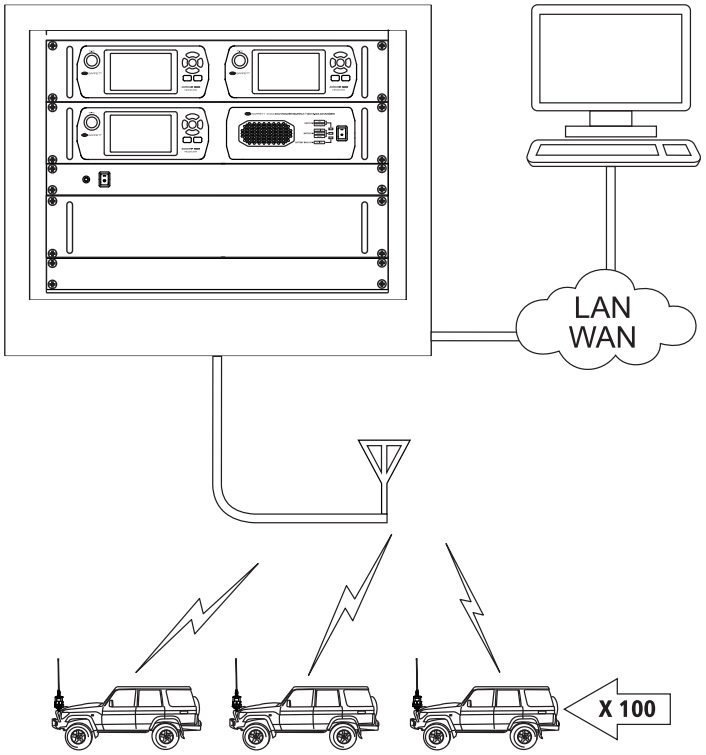


This scenario has 3 mobile transceivers, each with 6 channels programmed - 4 for voice transmission and 2 exclusively for consecutive GPS Push transmissions.

Each GPS Push transmission in this scenario takes approximately 15 seconds (including Antenna Tune time, preamble and the transmission), and the total time taken per station to transmit over 2 channels is approximately 30 seconds.

Trans-ceivers	Channels	Mobile units	Time taken per transmission	Time for all mobiles to transmit on all channels
1	2	3	00:00:15	00:01:30
		5	00:00:15	00:02:30
	3	3	00:00:15	00:02:15
		5	00:00:15	00:03:45

Scenario 2 - Multiple receiver base station with concurrent synchronised GPS Push operation



This scenario has 100 mobile transceivers, each with 3 channel programmed for GPS Push transmission. Each GPS Push transmission in this scenario takes approximately 10 seconds (assuming an antenna with memory tune is fitted).

Receivers	Positions simultaneously transmitted	Transmission time (sec)	Transmissions per minute	Max positions received per minute
3	3	10	6	18

Frequency of tracking is user definable per mobile and user requirements for frequency of GPS push location balanced with other communications use. To increase the rate of GPS positions received, the number of receivers in the receiver bank can be increased up to 8, as shown in the table below.

Receivers	Positions simultaneously transmitted	Transmission time (sec)	Transmissions per minute	Max positions received per minute
2	2	10	6	12
3	3	10	6	18
4	4	10	6	24
5	5	10	6	30
6	6	10	6	36
7	7	10	6	42
8	8	10	6	48

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