Operational Description Jabra BT320s Headset

1. Introduction

The Jabra BT320s is a Bluetooth-enabled, wireless hands free stereo product that is designed to work with mobile phones and other portable stereo devices as long as they adhere to the Bluetooth 1.2 specifications and support the A2DP, AVRCP, headset or hands free Bluetooth profiles.
The product can also be used with PCs and PDAs for music playing and voice communication (to be used with PC for VOIP) or music listening; however this is not the main usage.

2. User Operated Controls

The headset has the following user operated controls:

- Multi Function Button (MFB) for power on/off, pairing, to initiate a call, hang up a call etc.
- Volume up/down buttons for increase/decrease of volume.
- Play/Stop/Pause button for play control.
- Skip forward/backward buttons for jumping between numbers on playlist.

3. Indicators

A multicolor LED is used to indicate Charging Mode, Power ON/OFF, Pairing, Bluetooth Audio Link Established, Low Battery and Standby Mode.

Tones in receiver during the call also indicates low battery.

4. Radio Frequency Scheme of Operation

The channel is represented by a pseudo-random hopping sequencejumping between the 79 RF channels. The unique hopping sequence is determined by the Bluetooth device address of the master; the phase in the hopping sequence is determined by the Bluetooth clock of the master. The channel is divided into time slots where each slot corresponds to an RF jump frequency. Consecutive jumps correspond to different RF jump frequencies. The nominal jump rate is 1600 jumps/sec. All Bluetooth units participating in a piconet are time- and jump-synchronized to the channel.

The channel is divided into time slots, each 625 µs in length. In the time slots, master and slave can transmit packets. A TDD scheme is used where master and slave alternatively transmit. The RF jump frequency will remain fixed for the duration of the packet. For a single packet, the RF jump frequency to be used is derived from the current Bluetooth clock value.

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In total, 5 types of hopping sequences are defined:

- A page hopping sequence with 32 unique wake-up frequencies distributed equally over the 79MHz, with a period length of 32.

- A page response sequence covering 32 unique response frequencies that all are in an one-to-one correspondence to the current page hopping sequence.

- An inquiry sequence with 32 unique wake-up frequencies distributed equally over the 79MHz, with a period length of 32. (Note: The headset does **never** use this sequence)

- A inquiry response sequence covering 32 unique response frequencies that all are in an one-to-one correspondence to the current inquiry hopping sequence.

- A channel hopping sequence which has a very long period length, which does not show repetitive patterns over a short time interval, but which distributes the hop frequencies equally over the 79MHz during a short time interval.