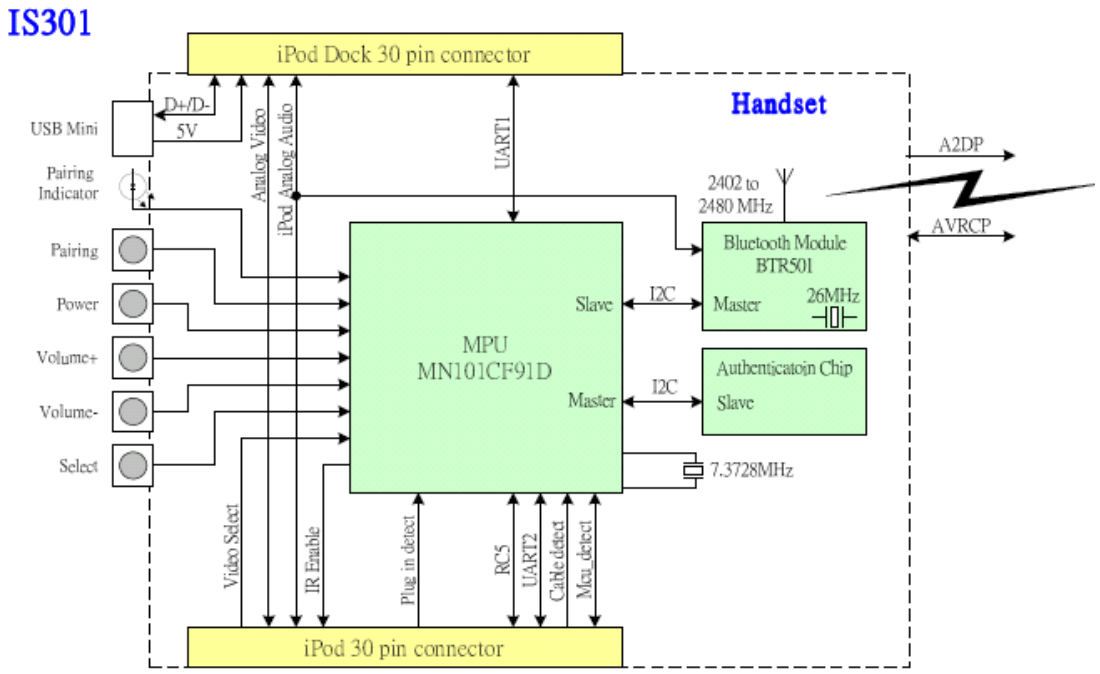
Applicant: Nicetex Electronics Ltd.
FCC ID: 0YNIS301T

Operation Description

Operation Frequency: 2402-2480MHz
Modulation Type: GFSK



The Analog Audio signal from iPod directly go to the Bluetooth Module BTR501, the Bluetooth Module BTR501 transmit digital audio signal to IS301RX by A2DP / AVRCP.
The switches Pairing, Power, Volume+, Volume- and Select are input signal to MPU: MN101CF91D for the purpose of pairing between IS301 and IS301RX, turn on power , adjustment volume level of amplifier which connect to the IS301RX.
The USB Mini connect in IS301 connect to iPod Dock 30 pin connector which carry out communication between computer and iPod.
The MPU: MN101CF91D connect to the iPod 30 pin connector with function of MCU detect, cable detect UART2, RC5, IR enable and Plug in detect, them the iPod 30 pin connector connect with iPod Dock 30 pin connector and pass pervious described functions to Base unit.
The antenna is SMD chip antenna, no consideration of replacement. There is no external ground connection. The ground is only that of the printed circuit board.
Electric current is supplied by a 5.0V iPod battery.

1. FHSS characteristics

The Bluetooth AFH construction (see Fig. 1). Add a group mapping in frequency synchromesh and frequency-hopping sequence generator. This mapping is a self-adjusting frequency selector in fact.

Group mapping construction (see Fig. 2). Select a channel from the groups need to be divided, through PN mapping instrument, select channel mapping to grouping sequence from original frequency-hopping sequence. Enumerates grouping channel content in every channel list according to rising forward sequence.

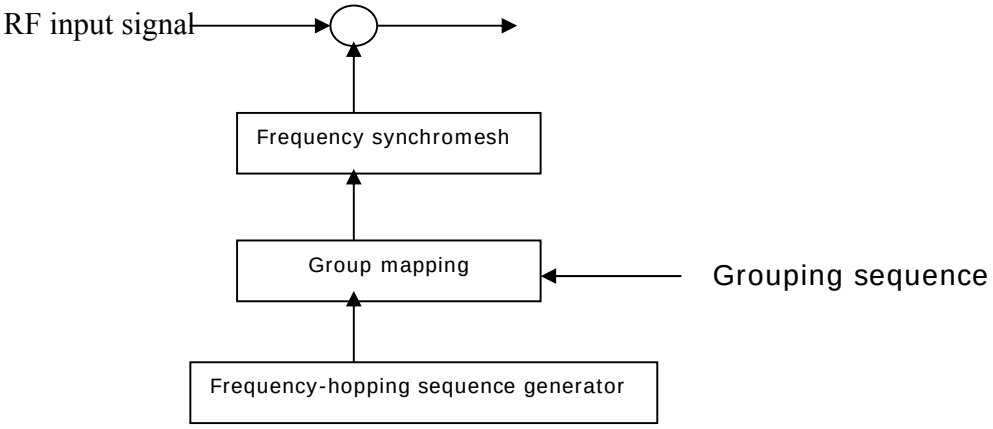


Figure 1 Bluetooth AFH Constructions

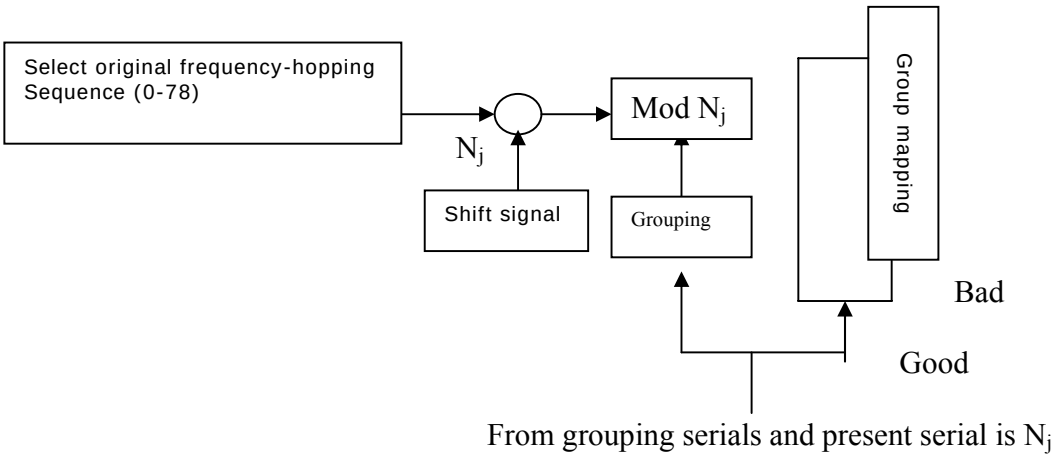


Figure 2 Group mapping construction

After grouping mapping, average shift signal balanced the channel usage. These shift signal is series counter, every counter indicate a group. The number J group is counting periodically in ｛0，1，2，…，Nj－1｝scope. Nj is the number J channel number in grouping. The selected grouping counter is counting the next data. And take the data as the shift signal output.
Channel is dynamically separated to 2 kinds of channel in Bluetooth: good channel NG and bad channel NB=79-NG, define N_{min} is the minimum required frequency number required for Bluetooth communication equipment.

Suitable for N_{min} smaller than NG situation. All the frequency spot can be selected in good channel in this situation, When the frequency-hopping generator happens good channel, no new mapping will repeat. When the channel is bad infrequency-hopping sequence, then choose a better channel from a good channel storehouse.

Through these 2 mode, in Bluetooth frequency selector, if the output channel is good, the use it directly; if it is the bad channel, then select frequency in good channel grouping. This selection avoids hit between the output frequency and other disturbing frequency.

2. Equal Hopping Frequency Use

The EUT Complies with the Bluetooth RF specifications, for details refer to Bluetooth standards

3. Receiver input Bandwidth

The receiver bandwidth is equal to to the receiver bandwidth in the 79 hopping channel mode, which is 1MHz, The receiver bandwidth was verified during Bluetooth RF conformance testing.

4. Receiver Hopping Capability

The EUT Complies with the Bluetooth RF specifications, for details refer to Bluetooth standards