



kcTrueStereo v1.0

User Guide

May 7, 2015

kcTrueStereo firmware offers separate Left and Right audio channels, using two Bluetooth modules which connect wirelessly, using a proprietary synchronization protocol to maintain correct phase and timing. A stereo source device connects to only one of the units, which then outputs the Left channel audio locally, and re-transmits the Right channel to the other, remote device.

kcTrueStereo firmware is identical for each the Left and the Right receiver device. Whichever makes a stereo source connection first becomes the Left channel device, and must then initiate a connection to the Right channel device. To manually search and connect to a Right channel device after being connected to a stereo source, press RR+FF for 1 second. Press again to immediately stop search attempt.

The UART is enabled with a limited number of system messages, indicating device state changes, and firmware edition.

QUICK START:

Left Speaker -

Connect to Phone/Player audio source First.

Press BT Button 1 sec to turn Pairing Mode On.

Search and Connect with Phone/Player.

After connection to Player, press RR+FF together for 1 sec to Search and Connect to Right Speaker device.

Right Speaker -

Press BT Button 1 sec to turn Pairing Mode On.

DFU – Pio 2

Hold high during power up

1.0 sec Press = DFU Mode

PLAY – Pio 3

Short Press = AVRCP Play/Pause

1.0 sec Press = AVRCP Stop

BTB – Pio 4 (Bluetooth Button)

Short Press = Voice Dial/Accept Call/End Call

1.0 sec Press = Reject Call / Pairing Mode
(Toggles On/Off)

2.5 sec Press = Power On/Off

VOLUP – Pio 5

VOLDN – Pio 6

Short Press = Volume Up/Down

RR – Pio 7

FF – Pio 8

Short Press = Prev/Next Track

Hold = Fast Backward/Forward

Release = Stop Backward/Forward

1.0 sec Press RR+FF = Connect Right Speaker
(Toggles Search/Stop)

5.0 sec Hold Both = Delete All Pairings

LED Patterns

Limbo (PowerOff) = None

Idle = Slow Blue Blink

Discoverable = Alternate Red/Blue Fast Blink

FindRight = Alternate Red/Blue Slow Blink

Connected = Double Blue Blink

Streaming = Double Blue Blink

Reset Pairing = Red+Blue Blink

Uart Messages

```
-> kcTrueStereo 1.0 b3
-> by KC Wirefree
-> BtAddr 64:6E:6C:00:00:11
-> [SetState Init]
-> [SetState InitAv]
-> [SetState InitHfp]
-> HFP Disconnected
-> [SetState Limbo]
-> [SetState Idle]
-> [SetState Pairing]
-> AVRCP Connecting Remote
-> A2DP Connecting Remote
-> HFP Connecting Remote
-> AVRCP Connected
-> [SetState Idle]
-> HFP Connected Idle
-> A2DP Suspended Audio
-> A2DP Connecting Remote
-> A2DP Disconnected
-> A2DP Streaming
-> [SetState Busy]
-> [SetState Idle]
-> [SetState Busy]
-> A2DP Suspended Audio
-> [SetState Idle]
-> A2DP Streaming
-> [SetState Busy]
-> A2DP Suspended Audio
-> [SetState Idle]
-> A2DP Connecting Remote
-> A2DP Disconnected
-> [SetState FindRight]
-> [SetState Idle]
-> A2DP Connecting Remote
-> A2DP Disconnected
-> Reset Pairing
-> DfuMode [Reset]
```