

WSB Communication Specification

Configuration

The communication of the WSB works via an HC_12 RF module. The Commands are then sent from the remote (WSBR) to the display (WSBD), where a direct UART is used. The UART is configured as following.

HC_12 Baud Rate	9600
HC_12 RF Channel	433.4Mhz
HC_12 Transmission mode	Default (FU3)
HC_12 Power mode	+20dBm
OTA UART mode	8N1

Table 1: UART / HC_12 Configuration

Commands

All commands are ended with CR+LF. An the response of the display if the command was executed successfully is the command itself, but "AT" gets replaced with "OK". e.g. "AT+RESET" → "OK+RESET".

Command	Description	Options	Example
Reset	Reset all counts / points.		AT+RESET
Buzz	Activate the buzzer.		AT+BUZZ
Flip	Flip the points on the display between the teams.		AT+FLIP
Count	update a counter.	U/D: Count Up/Down P/S: Count Point/Set A/B: Count for Team A/B	AT+COUNTUPA AT+COUNTUSB

Table 2: Commands list