Application Note: Multi-Function Switches

SUMMARY

freETarget supports a pair of push button switches that can be used to customize the operation of the unit while in the target holder.

MULTIFUNCTION SWITCHES

There are two switches that can be used interchangeably, ie what can be done with A can be done with B. The JSON string {"MFS":VVVVV} controls the function of the switches in tap or hold as shown in Table 1. The functions available are shown in Table 2.

Table 1: MFS Control

Value	Use
Vxxxx	Value controls Tap on Switch 2 (only 0-1-2 allowed)
xVxxx	Value controls Tap on Switch 1
xxVxx	Value controls Hold on 1 & 2
xxVx	Value controls Hold on Switch 2
xxxxV	Value controls Hold on Switch 1

Table 2: MFS Values

Value	Use
0	Tap to wake up from sleep
1	Paper feed witness paper
2	
3	
4	Send test string to PC for debugging
5	Put target to sleep or wake it up
6	Enable / Disable Tabata
7	
8	
9	

OPERATION

The operation of the switches are controlled by how long the switches are pressed for

Tap: Press switch for less than ½ second
Hold: Press and hold the switch for more than ½ second

RESET

When powering up the target holding the Multi-Function Switches can be used to override the operation of the unit as shown in Table 3.

Table 3: MFS Control on Reset

Value	Use
Switch 1 & 2	Reinitialize the persistent storage to factory settings
Switch 1	Enable diagnostic trace
Switch 2	

LEDs

The LEDs will cycle to until the switches are released and the target goes back into operation