COMMAND REFERENCE

This command reference describes the communication between the host computer and the GeneralTouch serial interface controllers.The basic packet structure is introduced and how packets are sent and received.

PACKET STRUCTURE

For serial interface controllers,the controller uses the eight_byte packet with an additional Lead_in byte and a trailing Checksum byte for a total of ten bytes.

<Lead in byte><8-byte Command or Response><Checksum byte>

Lead_in Byte

The Lead_in byte is used to signal the start of a packet.The standard Lead_in byte is an ASCII 'U'(55H). This character was chosen due to its distinctive alternating bit pattern.

Checksum Byte

The trailing Checksum byte may be used to validate the serial communication and to synchronize with the received data stream.

The Checksum is calculated as follows:

Checksum byte =   <AAH>+<Lead in byte> + <8 Data bytes>

where the addition is performed with 8_bit unsigned numbers and overflow is ignored.

Generally speaking,the host is not reqired to send a properly calculated Checksum in command packets,and our controller does not do the Checksum verification. But a dummy value is required to provide the correct packet length.

.COMMAND AND RESPONSE

.Touch('t')

Touch packets are generated automatically when you touch,drag and untouch.Here will list the 8_byte command packet in the following form(The Lead_in byte and Checksum byte is not included).

't'	Status	XLow	XHigh	YLow	YHigh	ZLow	ZHigh

The Status byte indicates the touch status and has the following bit positions.

Bit	Status	Description
0	Initial Touch	If 1,the Touch packet is for an Initial touch.
1	Stream Touch	If 1,the Touch packet is for a stream touch.

| 2 | Untouch | If 1,the Touch packet is for the point of untouch(when the finger is lifted). |
| 7 | Reserved | Reserved for Z_axis Valid. If 1,the ZLow and ZHigh byte stores the real value. |

The coordinates of the touch are unsigned numbers reported in the X,Y, and Z integers.

XLow,XHigh = Touch X coordinates low byte and high byte;

YLow,YHigh = Touch Y coordinates low byte and high byte;

ZLow, ZHigh = Touch Z coordinates low byte and high byte;