

# VOLTMACE

## DELTA 3b TWIN JOYSTICK

The DELTA 3b TWIN joystick will work with a BBC MODEL B, or a MODEL A which has had an A/D interface added. It will also work with an ELECTRON fitted with an ACORN PLUS 1 interface or other analogue interface.

The joystick plugs directly into the socket on the rear of the computer marked "analogue in"

The joystick will run any ACORNSOFT or ACORNSOFT compatible software written for a one or two joysticks.

The DELTA 3b TWIN has analogue joysticks and are hence ideal for graphics programs.

In BASIC the joysticks are read as follows:-

ADVAL 1 = LEFT JOYSTICK horizontal (RED)	ADVAL 2 = LEFT JOYSTICK vertical
ADVAL 3 = RIGHT JOYSTICK horizontal (YELLOW)	ADVAL 4 = RIGHT JOYSTICK vertical

A quick check can be run on your joystick by running the following short program.

```
10 X=ADVAL1 20 PRINT X 30 GOTO 10
```

A stream of numbers should run down the screen; these numbers will change from below 256 to above 65000 as you move the joystick in the direction that you are testing. You can then repeat it for ADVAL2, 3 & 4

The fire buttons are read by:-

ADVAL0 AND 3 = 0 No button pressed	ADVAL0 AND 3 = 1 One red button pressed
ADVAL0 AND 3 = 2 One yellow button pressed	ADVAL0 AND 3 = 3 Red and yellow pressed together

### GUARANTEE

Your DELTA joystick is guaranteed for a year against faulty manufacture or components. As with anything with moving parts it is possible to wear it out inside that time if you use it an abnormal amount.

If you suspect the joystick to be faulty it should be returned to the place of purchase. If the joystick is less than a few weeks old, then the shop can replace it with a new one and we will replace the item for the shop. If the item is more than a few weeks old then it should be returned, either directly or by the shop, to Voltmace Ltd., Park Drive, Baldock, Herts. where it will be repaired or replaced.

### CARE OF YOUR JOYSTICKS

The joysticks should not be lubricated. An occasional wipe around the ball and socket joint with a clean dry cloth is all that should be required.

### DELTA 3b TWIN's on the ELECTRON

The DELTA 3b TWIN is ideal for use with an ELECTRON fitted with a plus 1 interface and will run all programs written for analogue joysticks. It will not run games written for switched joystick interfaces for which you need a DELTA 3S joystick.

IF A PROGRAM ASKS FOR A JOYSTICK ADDRESS THEN IT IS NOT WRITTEN FOR A PLUS 1 INTERFACE

The address being asked for is not in the joystick it is the address at which a switched joystick interface has the joystick socket.