

Marconi
RB2
TRACKER BALL



Marconi

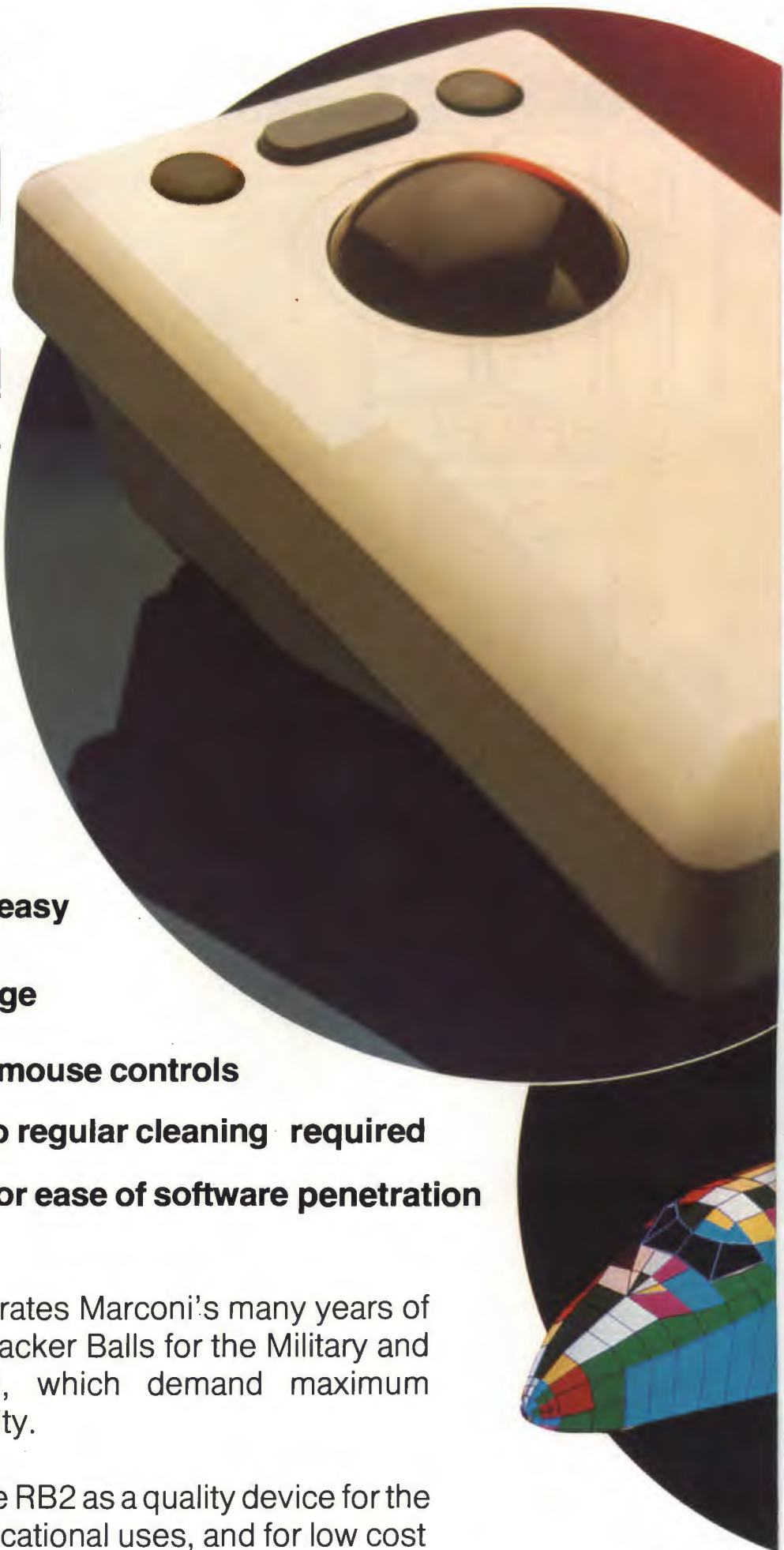
RB2

TRACKER BALL

- **Small footprint**
- **High impact plastic case**
- **Precise positional control**
- **Superb ergonomic design**
- **Low cost Tracker Ball technology**
- **Desk-top mounted for easy access**
- **Rapid directional change**
- **Replaces joystick and mouse controls**
- **Unlike the mouse — no regular cleaning required**
- **Three switch buttons for ease of software penetration**

The RB2 design incorporates Marconi's many years of experience in making Tracker Balls for the Military and for Air Traffic Control, which demand maximum performance and reliability.

Marconi has designed the RB2 as a quality device for the serious hobbyist, for educational uses, and for low cost CAD/CAM applications.



With the appropriate software the Tracker Ball takes over the functions of cursor keys in:—

● **Word Processing** — for Wordwise, View and other systems.

● **CAD/CAM and graphics** — freehand drawing, painting, menu-picking and dragging.

● **Positional control** — two dimensional positioning eg. robots, drill heads.

● **Games**

The RB2 consists of a resin ball freely rotating in any direction without the limiting stops or zeropoint drift of joystick controls. Positioning on the display screen is directly related to fingertip movement on the ball.

An inherent multi-rate device with fingertip controllability, it is easy to use for long periods.

Aimed initially at the BBC Micro computer, the RB2 comes complete with utilities software on disc or tape. To operate the RB2, simply plug the Tracker Ball into the BBC user port and load in the utilities software. Next, load in the main program to be run. The main program may then be run using either the cursor keys or the Tracker Ball.

Programs for joystick can be run using the Tracker Ball. The utilities software also allows the user to define the function of the three push-buttons. If appropriate, most programs can be Tracker Ball operated using the utilities software.

The user guide shows you how to write your own programs for the RB2 without having to load the utilities package. New commercial software is in preparation specifically designed for the RB2. A graphics and CAD software program will be available at a later date.

The RB2 will interface with other computers using the appropriate utilities software and an interface module. Marconi will be offering an RS232 type serial interface module. This will allow the RB2 to link to any computer with an available serial port. The interface module will be mounted in the RB2 housing.



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TECHNICAL SUMMARY

Mechanical

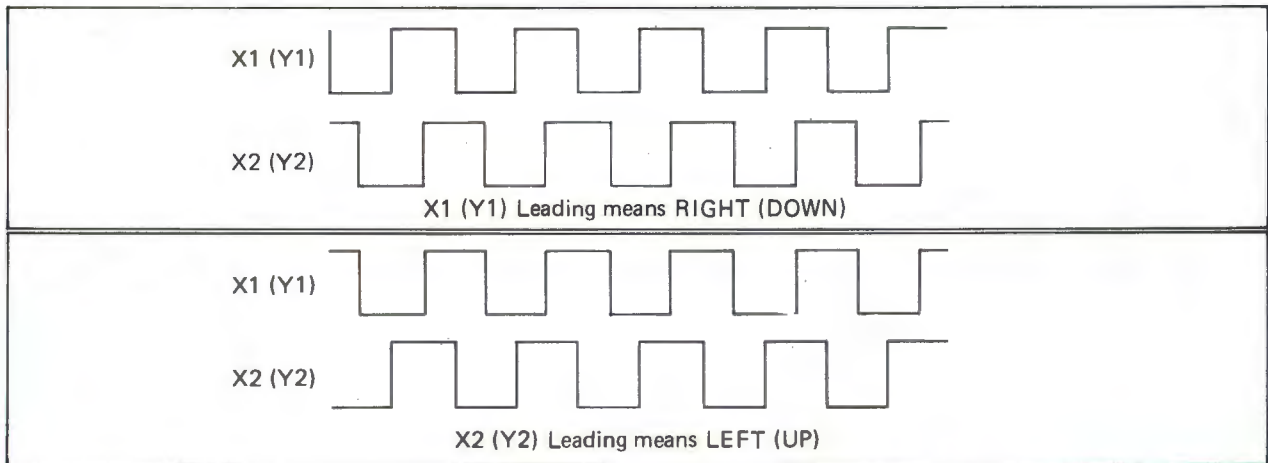
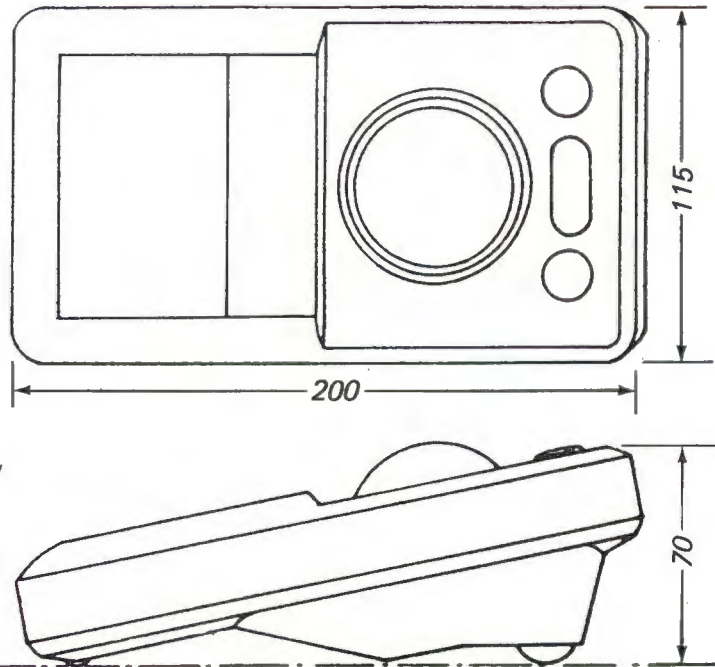
Ball diameter	— 2.25 inch
Ball colour	— Brown
Body colour	— Beige
Weight	— 600 grams
Tracking force	— 30 grams tangential force on ball periphery
Drive ratio	— 200 pulses \pm 5% for 1 full ball in X or Y direction
Buttons	— 3 - user assignable

Temperature

Operating temperature range	— 5 to 45°C
Storage temperature range	— -10 to 60°C

Electrical

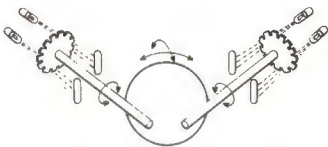
Input power required	— 5V \pm 5%, 70mA
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OUTPUT WAVEFORMS

SOFTWARE

Utilities programs are provided for cursor control. CAD and graphics software for use with the RB2 Tracker Ball will be available at a later date.



HARDWARE

The diagram shows a 2.25 inch ball suspended and free to roll on 3 points. Two of the points are freely rotating axes set at right-angles and the third is a free rolling ball bearing. Fixed to each axis is a rotary encoding device. Movement of the ball in the X or Y direction rotates the appropriate axis and its encoder. The outputs produced by the encoder are trains of pulses with the number of pulses indicating the distance moved by the ball in that direction.

INTERFACING

The RB2 Tracker Ball plugs directly into the BBC-B user port. Interface units (to be integral in the Tracker Ball unit) for other personal computers will also be available shortly.

Marconi
Electronic Devices
Doddington Road, Lincoln LN6 3LF
Tel: (0522) 688121 Telex: 56830

Power Division
Carholme Road, Lincoln LN1 1SG
Tel: (0522) 29992 Telex: 56163

