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RWI B21 Mobile AI Robot

Specifications:

(Not accurate, estimated and/or measured. Specifications found here are subject to change and will be updated if official records or better information is located)

Manufacturer: RWI, later models iRobot.

Production run: estimated 1995-2000

Model Year Presented: July 1997

Model as reviewed did not have the arm option.

Reviewed B21 model Includes the Base, Upper Enclosure, Frame Grabbers, Radio Links, Lidar, Pan and Tilt, B/W cameras, Nav Compass.

B21 Robot Base Specifications:

Ground Clearance: 2"

Base Height: 12"

Base plus LIDAR height: 21"

Base Diameter: 21"

Base Weight: 80lbs no batteries or panel doors

Base weight with batteries and panel doors: 212lbs

Synchronous mode 4-wheel drive motion, slip ring commutated.

Four 4.5" wheels on a WA (Wheel Assembly)

Three drive motors and one encoder on one motion controller

Overall motor to wheel reduction 18 – 1, Belts and Gears.

Max motive power: 1,393 Watts.

Max Speed: 1.96MPH, 2.87"/sec.

One orientation motor, one encoder and one motion controller.

Overall motor to rotation reduction 110 to 1, 2 stage Belts.

8 Panel / doors with four each of SONAR, IR and Bump? Switches.

Power: Four 12V batteries, using 48Volts.

Upper Enclosure Specifications:

Height: 29" – factory default

Diameter: 22"

Weight no panels: 75lbs

Weight with panels: 90lbs.

six door panels, with four each of SONAR, IR and Bump? Switches.

Combined Robot:

Overall, Height: 58" to top of cameras.

Diameter: 22"

Weight: 302 lbs.

Payload: 25lbs

Features:

Four Lead Acid Gel cell 12V 33Ah batteries, delivering 48Volts. 26lbs per Battery unit.

Two computer bays with Pentium 5 or MMX level CPU's.

Coax internal network 10base2

ARLAN Wireless bridge (Not 802.11 type WI-FI)

Other Sensors:

Sick 2D LIDAR PLS101

Two B/W video cameras

Sonar: Polaroid 600 Series

KVH C100 Compass Engine

Outer "Smart panels"

Software:

Linux OS with RWI RAI robotics software / BeeSoft

Computers:

Two computer bays:

Intel P5 / MMX CPU

8Mb RAM

10 Gb hard drives

5 pin DIN round keyboard cable. Mouse – if used, serial.

Parallel Printer Port

two 9 pin serial ports

one or two multi-port serial port cards

10 base2 and 10 baseT (100Mbps) network interface cards (NIC)

Enclosure Power Budget: Estimated 150 – 500 watts.

Please note:

We at this time do not have official Factory specifications for this robot.

If you have question or can help us, please contact **CYCOGS**.

We thank you.