

Pedalcar info

Axles

15mm bright mild bar en1a best from ebay
(user ukfab12 = Ringwood metal fabrication or user metal mania = 10gbottles)

15mm lightweight steel pressed pillowblock (mounted) bearings (4 needed)

Rims

20" 451mm either SUN ICI-1 or CR-18 ERD441

sun ringle CR-18 part no. 62581 (black) or 62577 (silver) chain reaction
<http://www.chainreactioncycles.com/Models.aspx?ModelID=19957>

sun ringle ICI-1 part no. 62584 chain reaction
<http://www.chainreactioncycles.com/Models.aspx?ModelID=42485>

Or possibly Alex DA22

See http://www.schwalbetires.com/tech_info/tire_dimensions

Tyres tubes

Schwalbe Durano HS399 Rigid Tyre - 20 x 1 1/8 Inch (28-451) SJS part no 26053

Tubes – any cheap presta valve 20 x 1 3/8 /500A - 37 x 440-451 SJS part no 3889

Rim Tape schwalbe fabric rim tape 50M x 15mm roll
<http://www.amazon.co.uk/Schwalbe-Fabric-Tape-50mx15mm-Workshop/dp/B000UJ41Q0>

Chassis

all from ERW steel (lighter) or standard box

30mm x 1.5mm box (or 25 mm) front boom is 38mm

<http://www.austenknappman.co.uk/>

Bottom Bracket shell 68mm BBSleeve68.38 - 38.1OD x 68mm Width

From <http://www.framebuilding.com>

Steering

4 x M10 male rose joints to build swivels

40mm x 5mm thick steel plate

25mm x 3mm thick steel plate

10 mm id tube for track rods
M8 male rose joints RH & LH pair (2 sets) and tube nuts

Hubs – Front ordered from <http://www.thecycledivision.com/>

Sturmey Archer X-SD		Cycle division code
HSB500 Hub £26 (1 per side)		ZSTUBHUB
HSB510 Brake Assembly Left		ZSTUBLH
HSB509 Brake Assembly Right		ZSTUBRH
HMW531 Inner Spacer	(1 per side)	ZSTUBBPS
HMW533 Outer Spacer	(1 per side)	ZSTUBSPA
HSL881 130mm Axle	(1 per side)	ZSTUBAX2
HMN422 Nyloc M12 fine nuts	(1 per side)	
HSK715 Pinch Bolt assembly	(1 per side)	
HSB422 Brake Cable Adjuster	(1 per side)	

The hubs we use are part no HSB500 and they come with bearings and need no machining

You also need a HMW531 , HMW533 and HSL881 for each side - and a HSB510 for the right hand side and a HSB509 for the left hand side

Instead of buying axles use M12 metric fine bolts and nyloc nuts from local supplier

Some brake components eg the pinch bolts are cheaper from other suppliers eg Icletta or Hykeham Wholesale

Full hub details see <http://www.sturmey-archer.com/userfiles/manuals/X-SD-Part-List-20090730.pdf>

Hubs Rear

MTB Front Disc Hub 36H with large flanges – 3 allen bolts in disc mount engage with drive hub

Try brand-x or TWA

Rear drive hub. Custom machined Alloy hub. Either 60mm alloy bar, or 3.5" picador pulley machined to suit with holes on disk brake pcd to engage with drive bolts

Spokes

Front 200mm rear 206mm but check on a spoke calculator eg <http://lenni.info/edd/>

3 Cross Buy DT Swiss from ebay user Joe Buxton Joe22999 or other supplier

Seat

Either borrow mould from Neil/Jeremy and mould own or buy recumbent seat from Marcin at <http://oceancycle.co.uk/> cost is approx £60

Chainrings

<http://www.chickencycles.co.uk/index.php?cat=32>

or <http://www.highpath.net/>

or from SJS or Chain reaction

Brakes lever

Trike dual lever or similar (usually for disabled bikes) Sunlite Dual Cable Brake Lever

http://www.bikecare.co.uk/product_info.php?id=443 or

[http://www.bikecare.co.uk/product_info.php?acc=Brake Levers&id=89](http://www.bikecare.co.uk/product_info.php?acc=Brake+Levers&id=89)

<http://www.allterraincycles.co.uk/product/112876.html>

search for MISSION DUAL FUNCTION BRAKE LEVER

Drive

Use standard bottom bracket screw cups, with a machined insert and 15mm shaft collar CABU15Z from technobots online or bearing boys or ebay to make drive hub for rear sprockets

NB need two set up in opposite directions ie one for LH and one for RH freewheels

<http://www.bearingboys.co.uk/CABU15Z - 15mm Shaft Collar -40274-p>

Need Screw on BMX freewheels 3/16 ACS Southpaw 16T on normal one LH drive

Chain reaction part nos 195069 LH and 195081

Use a rear hub either screwon or cassette with matching 7 speed (or more) cluster. Bolt on a pair of 22T (or larger) sprockets to make the intermediate drive hub. Need matching derailleur and shifter/trigger.

Use a square taper sealed bottom bracket eg

RPM Square Taper 68-110 chain reaction part no 68691

Alternatively use a dual drive rear freehub Trykit two wheel drive cassette body see <http://www.trykit.com/> or ask Jeremy nicely where he gets his

Lights

Rear – mounted in a reflector or similar, high brightness 5mm led with dropping resistors. Ebay or maplin

Front

EasyAcc Cycling Headlight Bicycle Lights Bike Lamp with USB Cable 3 Mode [CREE XML-T6 LED]

<http://www.amazon.co.uk/gp/product/B00BXU24NM>

old lights – 8W LED Bright Hand Torch Flashlight Lamp – Black

<http://www.suntekstore.co.uk/product-14001837-8W+LED+Bright+Hand+Torch+Flashlight+Lamp+-+Black.html>

Body

Nose – borrow mould from Jeremy or Neil and mould from GRP or use correx (corrugated pvc sheet)

Suppliers

<http://www.ecfibreglasssupplies.co.uk/>

<http://www.fibreglassdirect.co.uk/>

<http://www.mdpsupplies.co.uk/>

<http://www.chainreactioncycles.com>

<http://www.ringwoodprecision.com>

<http://www.austenknapman.co.uk/>

<http://www.suntekstore.co.uk>

is <http://www.thecycledivision.co.uk/> temp username/password guest/guest

Email martin@thecycledivision.co.uk or sales@thecycledivision.co.uk mention you are notenray network and are building pedalcar etc in conjunction with neil carter and falcon esu

Other prices on SJS website <http://www.sjscycles.co.uk/> but they are more expensive or look at <http://www.icletta.com/>

<http://www.austenknapman.co.uk/>

<http://www.hykehamwholesale.co.uk/store/>

<http://www.thecycledivision.com/>

<http://lenni.info/edd/>

<http://oceancycle.co.uk/contact>