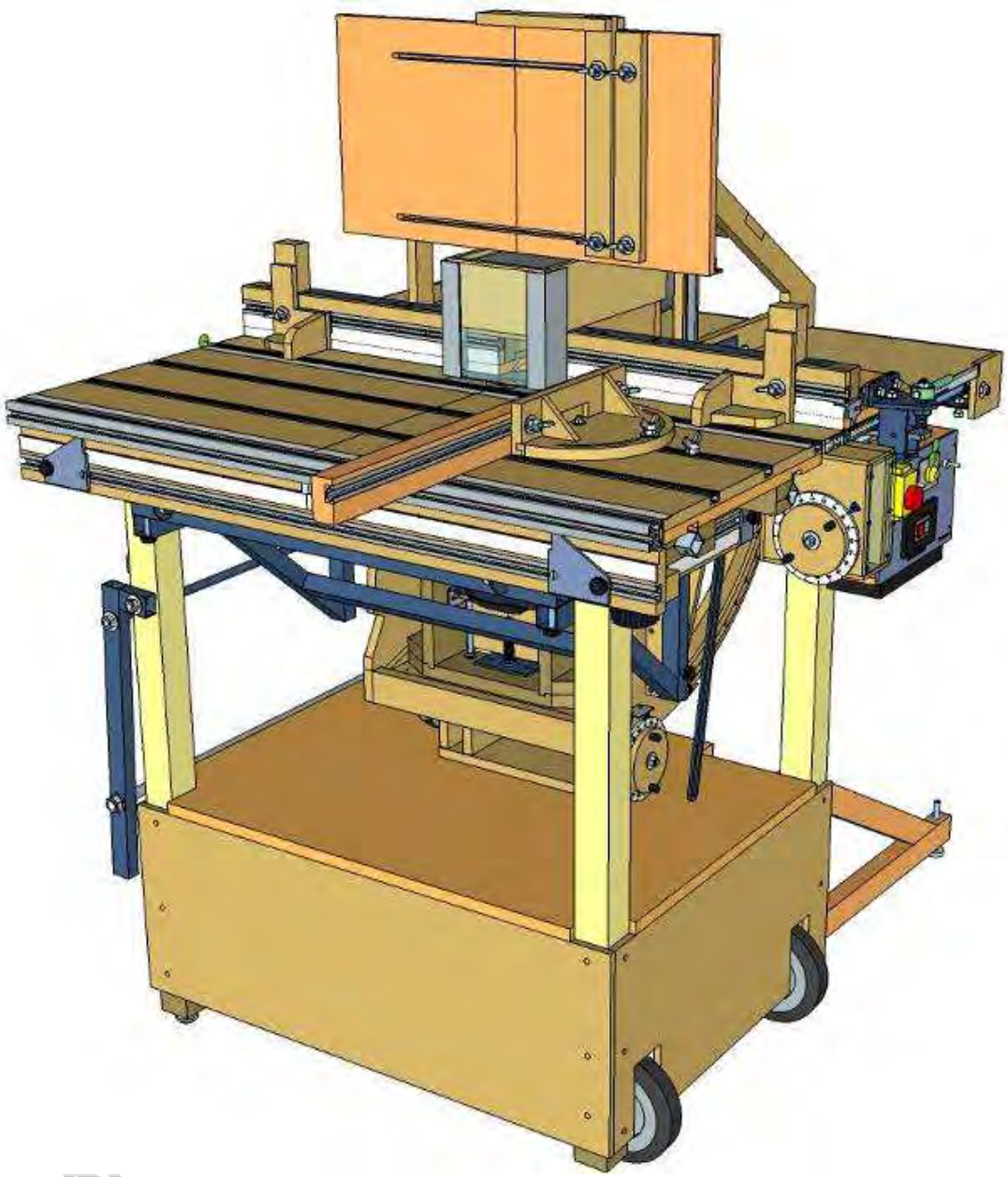
Champytool 2

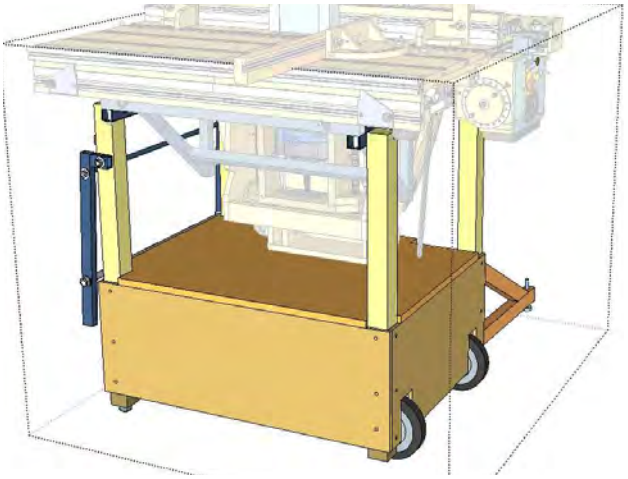
by Champy

English version

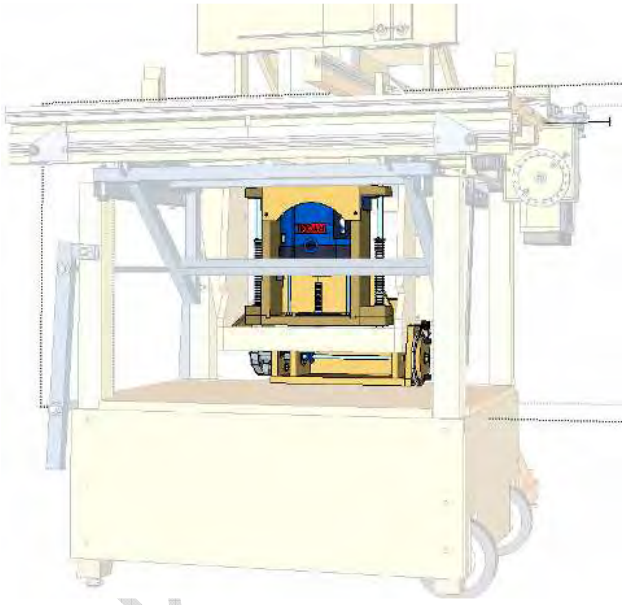


A modular assembly

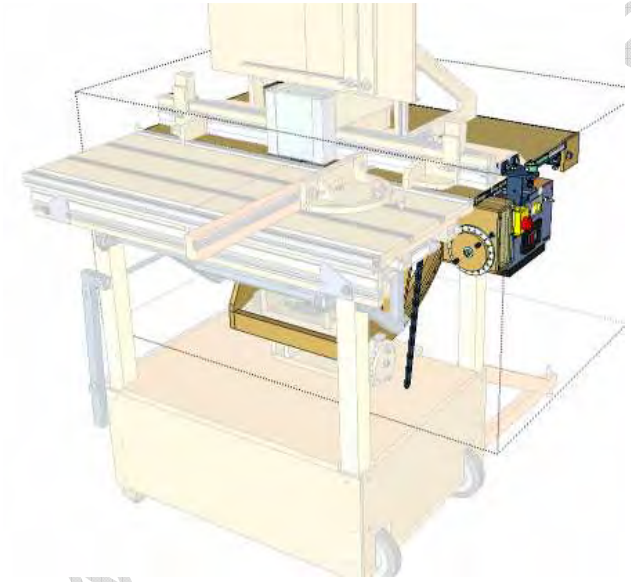
Chassis



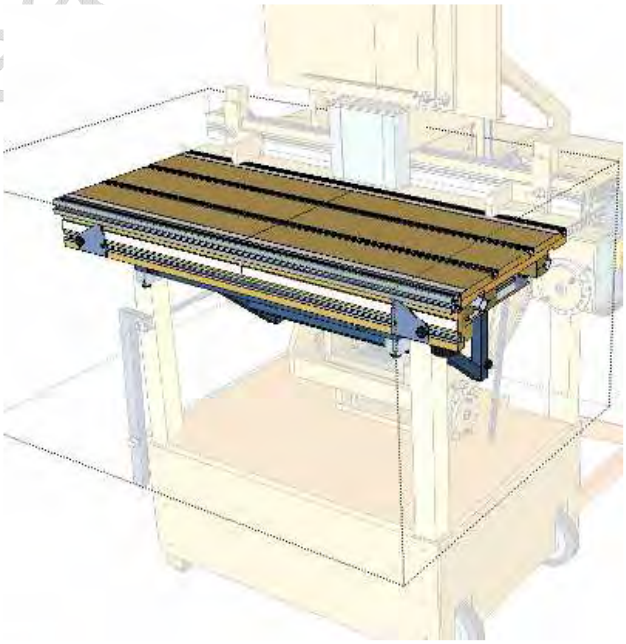
Router 'cage'



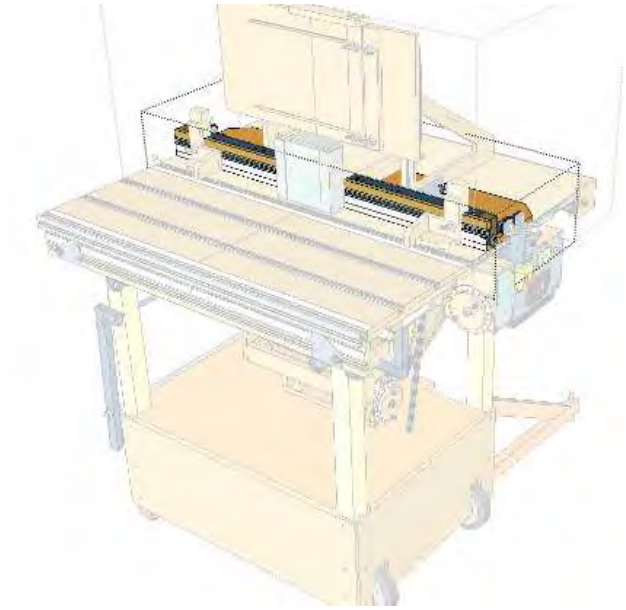
Reference table



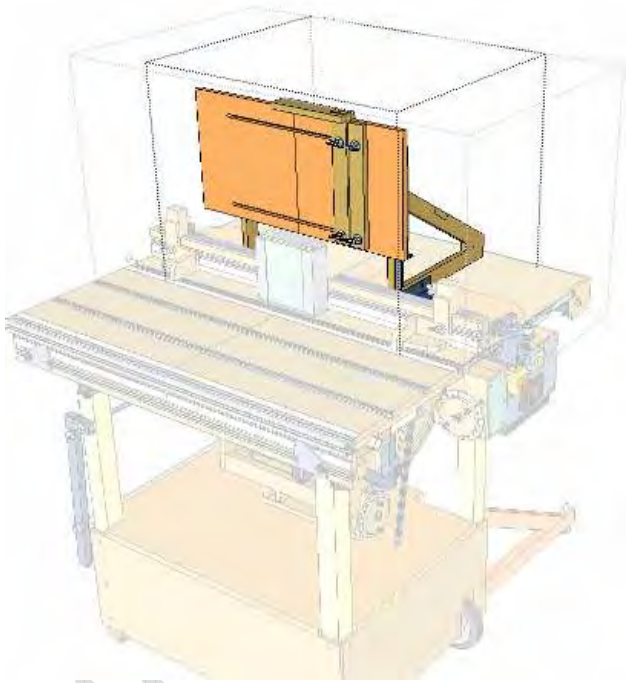
Main cross table



Parallel guide

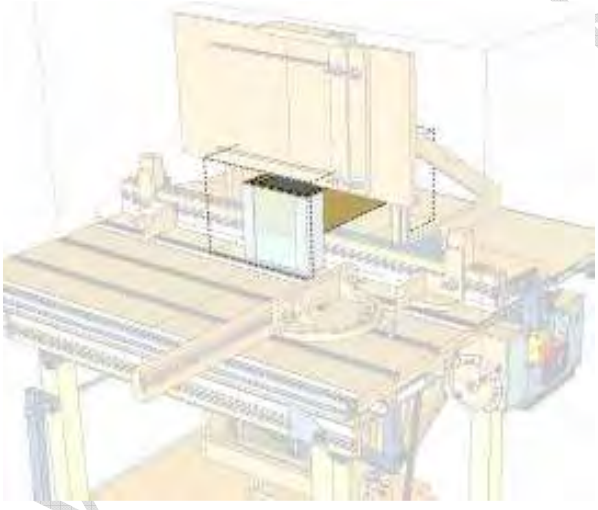


Secondary cross table

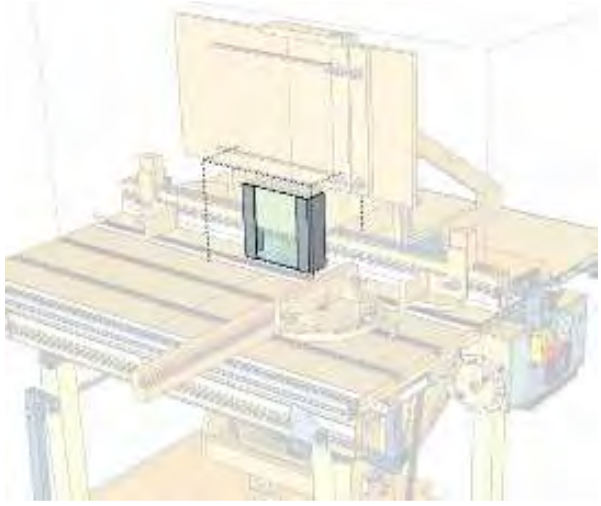


Accessoires

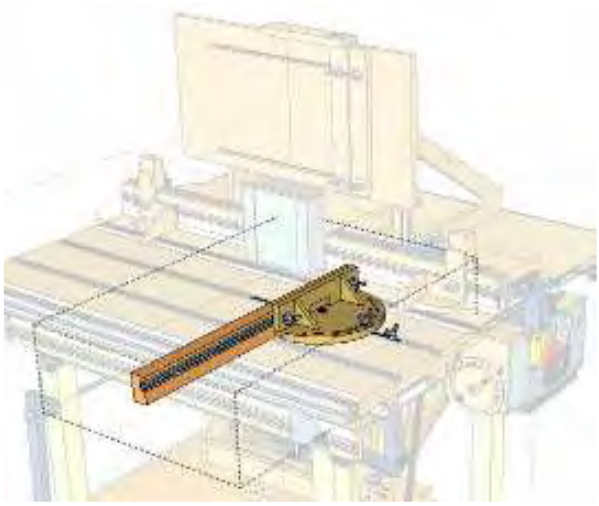
Dust collector



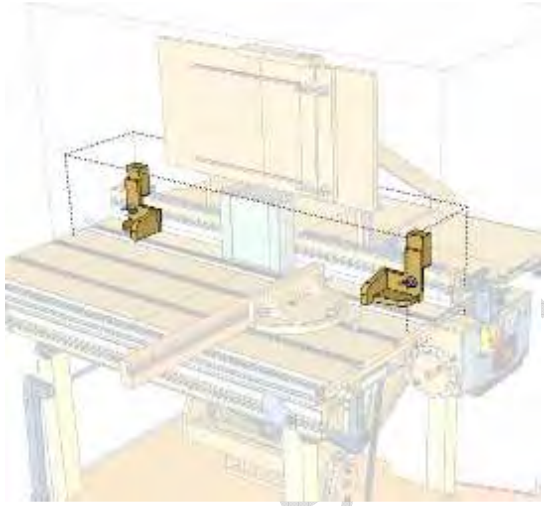
Security fence



Angular guide

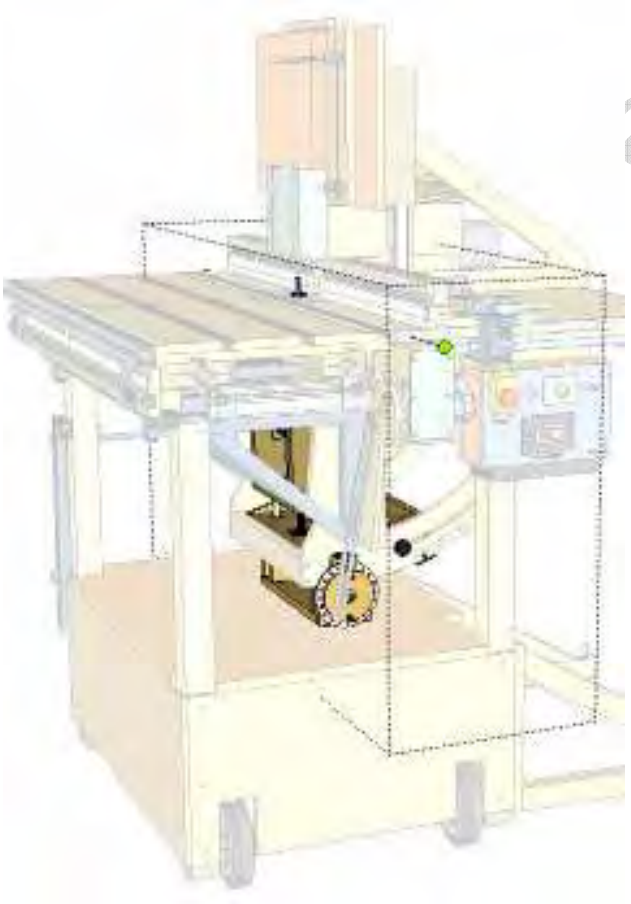


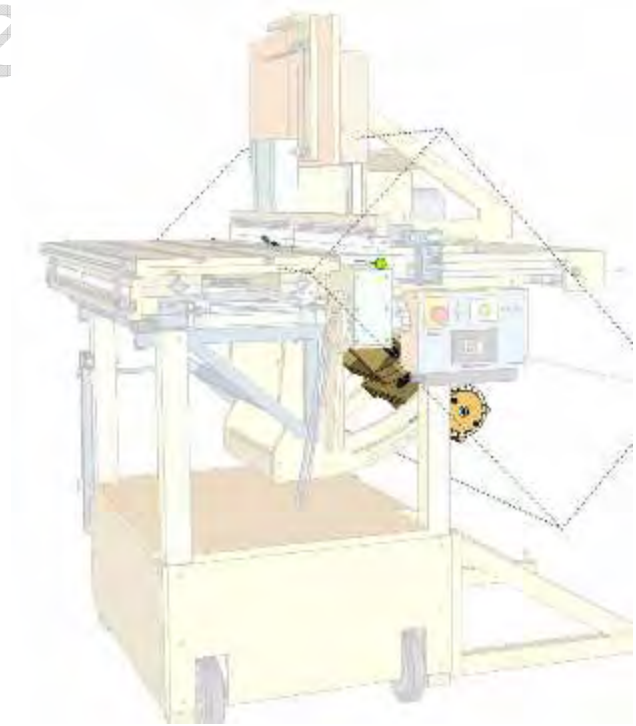
Parallel guide stop blocks



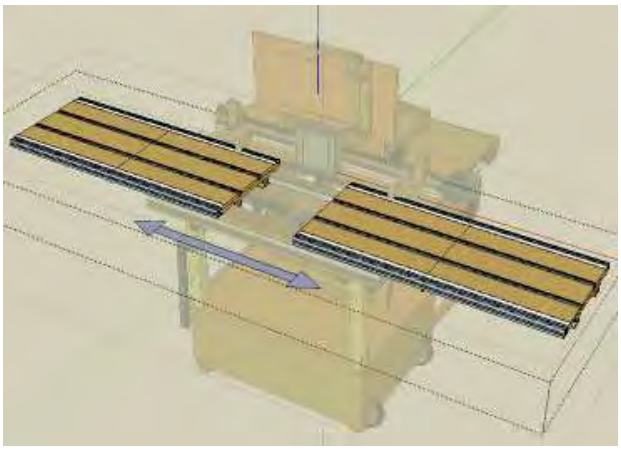
Two configurations

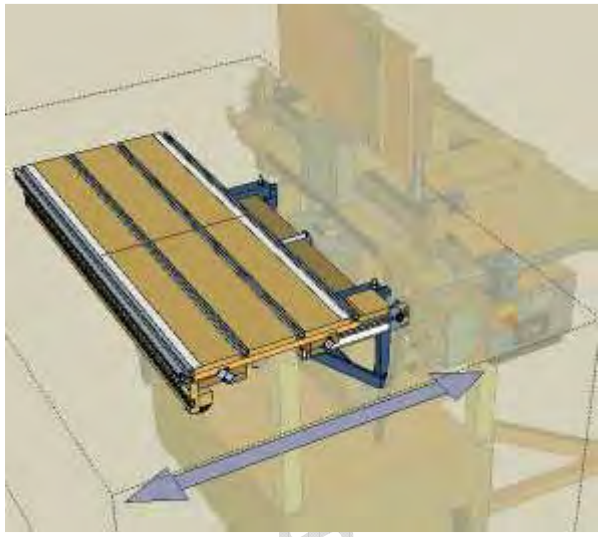
Horizontal config. (with vertical router, and tilted - here 45°)



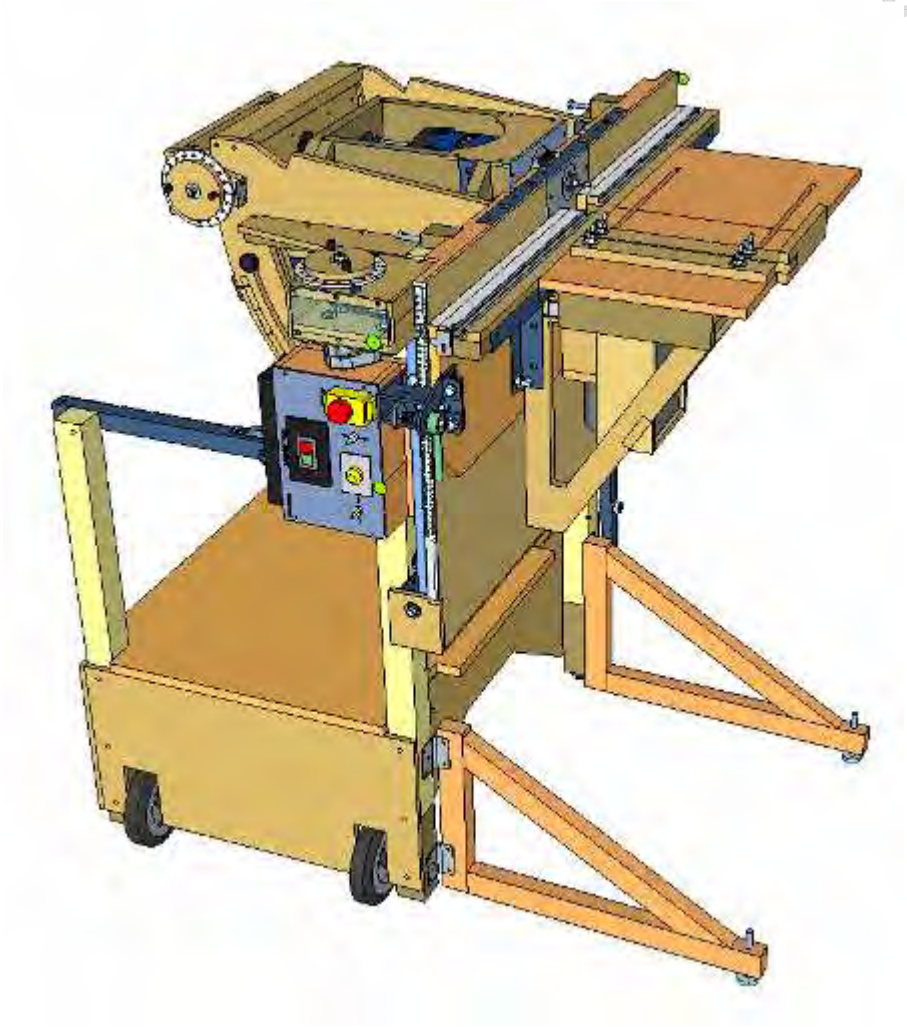


Cross table movements

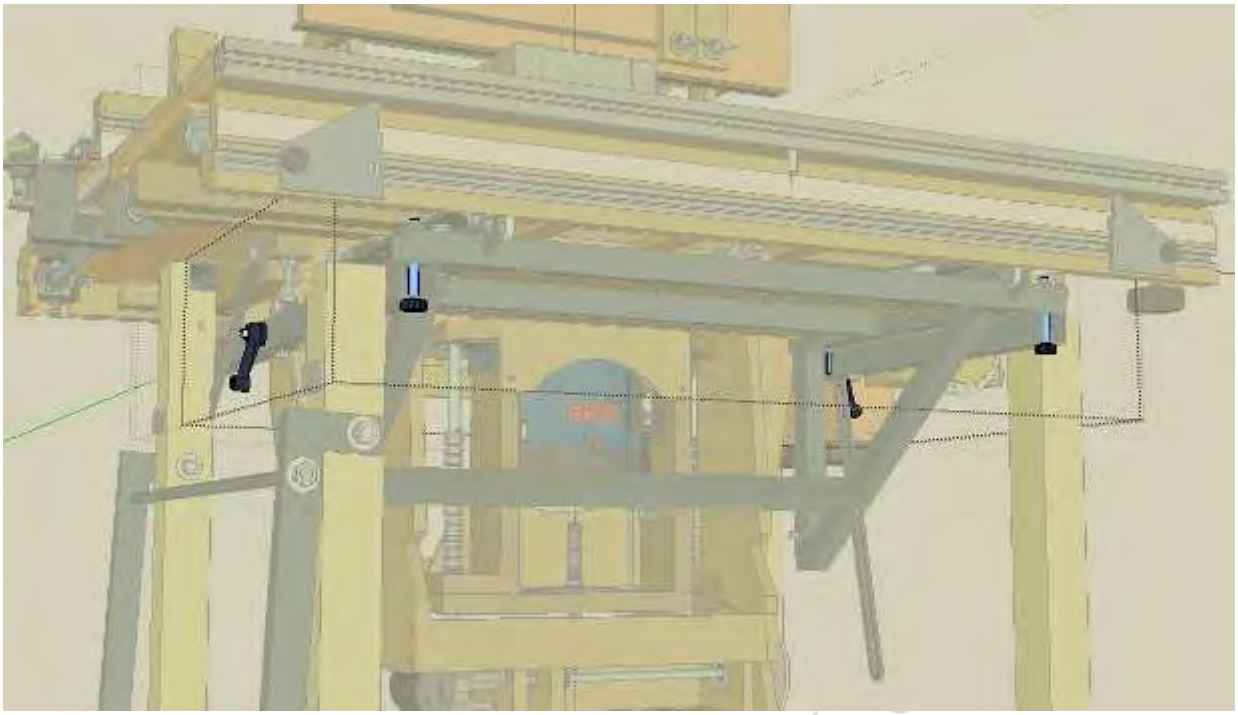




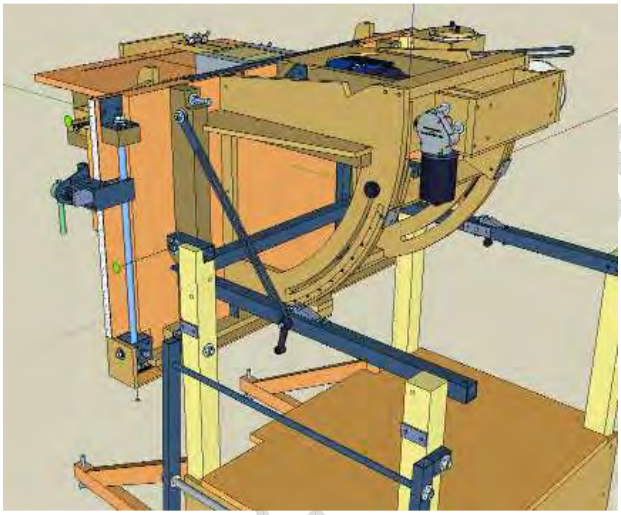
Vertical config.



The cross table has to be removed in order to tilt the assembly to 90°.



Levers and bolts used to lock (and unlock) the main cross table on the chassis



Same levers are used to lock the vertical conf.

Router tilted at 45°

Technical datas

All measures in milimeters

Overall size :
Width : 1140
Depht : 1000
Maximum height (horiz conf.) : 1385
Ground footprint : 800 x 600 (800 x 1162 with rear feet)
Reference table :
- Usable width : 1000
- Depht : 580
- Height (hoeriz conf.) : 1020

Main cross table :
- Widht : 1000
- Depht : 420
- Run : 180 in Y, 1320 in X
- Side stops usable on +/- 400

Parallel guide :
- Width : 1000
- Height : 70
- Run : - 30 à + 320 (/ bit axis)
- Side stops usable on +/- 400

Measurement cursor adjustment : +/- 5
- Router :
  - 2100 W
  - Vertical run : + 5 to - 70 (/ table level)
  - Orientation : 0° to 45°
  - Maximum bilt diameter : 60
  - Chuck with 6, 6.35, 8 and 12 adapter

Second. cross table :
- Width : 600
- Depht : 300
- Run : 110 in Y et 120 in Y
- Side stops usable on +/- 180

Dust collector :
- Run : - 50 à + 170 (/ parallel guide)

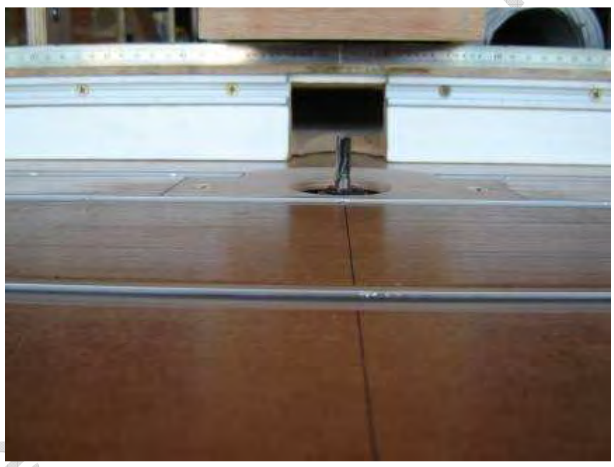
Security fence :
- Run : from table level up to 70

Angular guide :
- Length : 600
- Orientation : +/- 80°

True accuracy (mm)

- Position of parallel guide : +/- 0.1
- Bilt height : +/- 0.1
- Side stops on parallel guide : +/- 1
- Side stop on cross table : +/- 1
- Router orientation : +/- 0.5°

Maximum position for parallel guide is 300 mm



The router adapter maximum height is set at the table level

Commands

Parallel guide positioning is motorized. Measurement between bit axis and front side of the guide is given on the table side, with a cursor moving with the guide. Setting can be adjusted manually with a disk crank (written with 1/10 mm graduations). 1 turn is 2 mm.

Parallel guide position can be locked with 2 ‘brakes’ on the table left and right sides. This feature is only used in vertical config.

Bit positioning is motorized and can be adjusted manually. The measurement disk is the same but its zero can be setup and memorized (easy to keep bit zero position).

Setups

Electric ‘box’

Router motor is controlled with the big yellow and red security button.

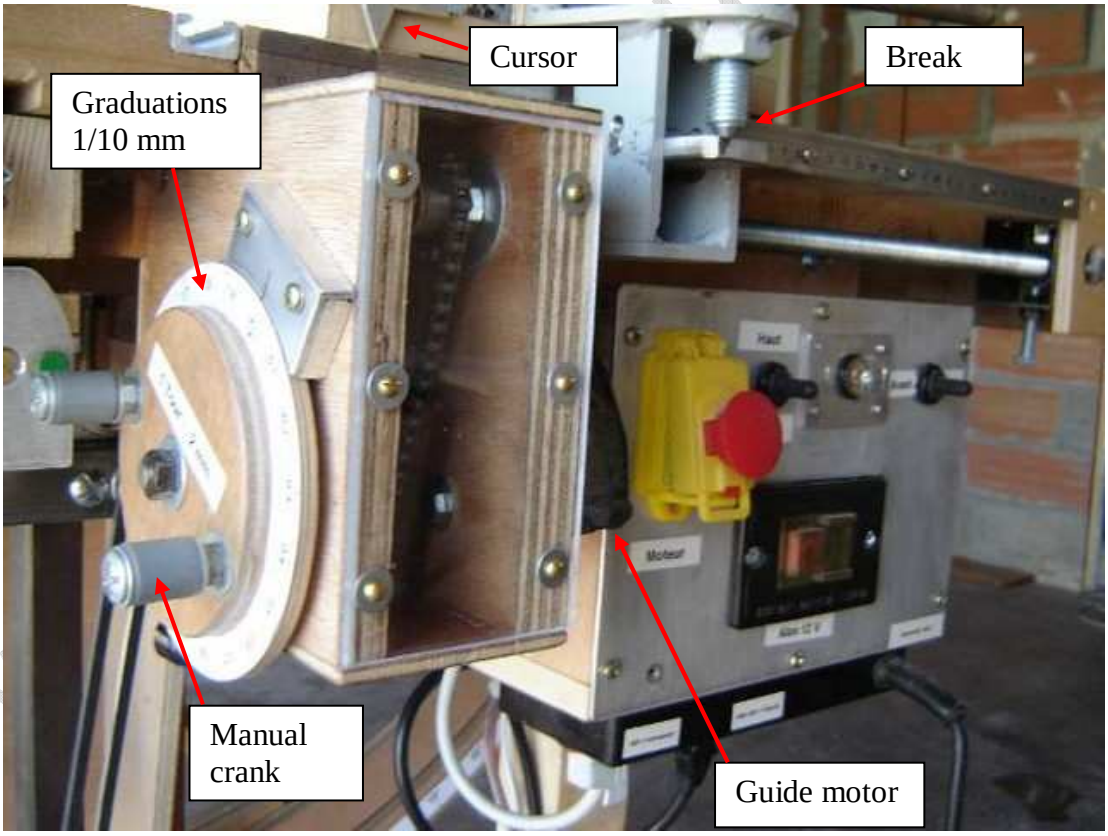
The 3 positions button (Haut/Bas) is used to rise or down the router with the motor. This movement is transformed is a translation from front to rear in vertical config.

The 3 positions button (Avant/Arrière) is used to set le parallel guide position with the motor. This movement is transformed in a rise or down of the secondary cross table in vertical config.

Central buttons are used to feed the motors (from windshield wipers) with 12 V tension (old computer power box).

Motors can be used during work (with care, of course…). An orange led is lighted when they are under tension.

Precise parallel guide setup



Parallel guide cursor is moving along the measure (on the reference table side). Its position can be adjusted.
The crank is used for accurate guide positioning (1/10 mm) Zero mark fits with locked side mark every 2 mm.

Accurate router high setting

Manually with the disk crank.
Zero positioning can be setup manually and memorized during the rotation of the axis (with a spring on the axis).

Router rotation

The router ‘cage’ is moving manually.
The angle is written on each side. The cursors are just below the nut (with ears…), on each side of the chassis.

Bilt changing

First, the router has to be in down position (easy and quick with a motor).
Then, just ‘open’ the cross table towards operator, and access is very easy to operate the bit.

Parallel guide ‘brakes’

Just turn the lever in one side or the other to lock or unlock the guide.
The intermediate piece of iron rotates a little, in order to ‘pinch’ the tables in between.
Tightening power can se adjusted with lever lag.

Accessories

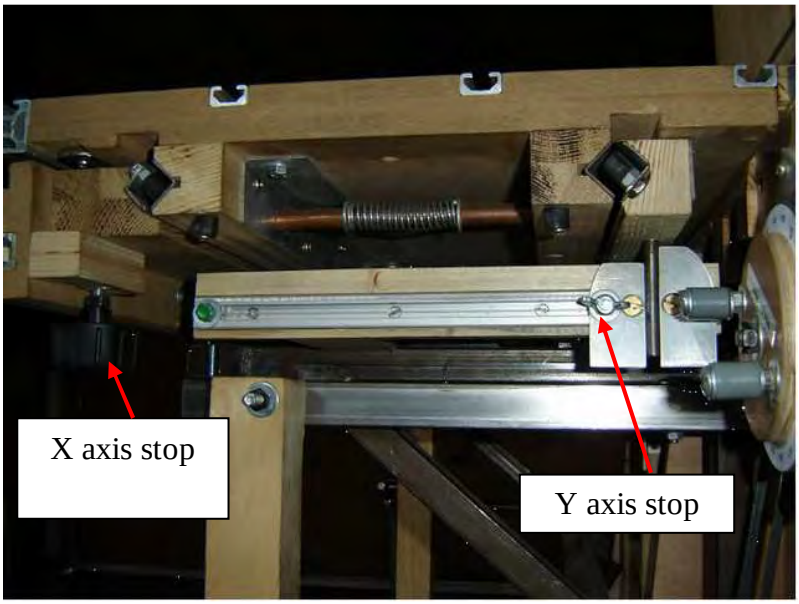
Stop blocks moves manually in a T track.
‘Ears’ nuts are used to lock them.
The measurement is given with two small magnetic measures (mounted on the guide).
It’s very useful and handy to slide magnetic measures, in order to get intermediate measurements.

Stop blocks are used in both config.

X cross table moving can be controlled with stop blocks along the table front.

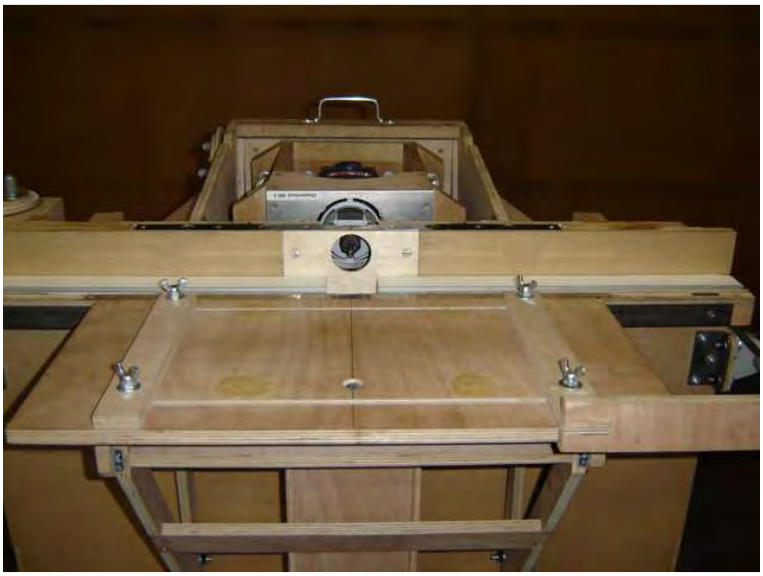
Y cross table moving can be controlled with a classical iron measure and metallic blocks

Use



The table can be used as a standard machine, when locking the cross table. In this case, the only difference is given by the router ability to rotate up to 45°.

When using main cross table, it's mandatory to lock wood pieces.
2 pairs of bridles (200 and 300 mm long) fit in most situations.



X and Y secondary cross table movements cannot be locked, but they are tightened enough to work with security.
2 stop blocks (moving along X axis) can be used to lock the wooden piece on the table. Nevertheless, the operator has to maintain vertical pressure on the piece.
This table is mainly useful to make mortises.

Angular guide can move freely in one of the T tracks when table is locked, or locked on the table when this one is unlocked (...)
The front guide can slide along the T track to adjust its position close to the bit.
Lately, I will put a magnetic measure on it, and another T track in front to put an additional stop block...

Note to readers : I apologize for my awful English… ☺

Text, drawings et pictures : Champy Page setup : Bernardlimont Read back :Champy