

8" Wood Bandsaw



For your safety, please read this manual carefully before operation

What's Included

Quantity	ltem	Part	Model Number
			MJ3420
1 No	8" Bandsaw	Α	
1 No	Bandsaw Blade 1,400mm Long 6"TF	ין	
	(Mounted on the saw but not tension	oned)	
1 No	Table	В	
1 No	Fence Rail with Scale	С	
1 No	Fence Assembly	D	
1 No	Mitre Fence	E	
1 No	Push Stick	F	
Bag Containing	y:		
4 No	M6 x 12mm Bolts	G	
4 No	M6 Shakeproof Washers	н	
4 No	M8x12mm Bolts	I	
4 No	M8 Washers	J	
1 No	Angled Bolt and Nut	к	
1 No	3mm Hex Key	L	
1 No	10-13mm Spanner	М	
1 No	Instruction Manual		

Having unpacked your saw (see below) and its accessories please dispose of any unwanted packaging properly. The cardboard packaging is biodegradable.



What's Included



Good Working Practices/Safety

The following suggestions will enable you to observe good working practices, keep yourself and fellow workers safe and maintain your tools and equipment in good working order.



WARNING! KEEP TOOLS AND EQUIPMENT OUT OF THE REACH OF YOUNG CHILDREN

Work Place/Environment

Make sure when the machine is placed that it sits firmly on the floor, that it does not rock and is sufficiently clear of adjacent obstacles so that cutting operations will not be impeded. Check you have adequate clearance both in front of and behind the machine when cutting long stuff. If you are liable to be processing unwieldy or awkward work pieces, it is suggested that you consider fastening the machine down to the floor.

The machine is not designed for sub-aqua operation, do not use when or where it is liable to get wet. If the machine is set up in the open, and it starts to rain (unusual though this would be in U.K.), cover it up or move it into the dry. If the machine has got wet; dry it off as soon as possible with a cloth or paper towel. Do not use 230V a.c. powered machines anywhere within a site area that is flooded or puddled and do not trail extension cables across wet areas. Keep the machines clean; it will enable you to more easily see any damage that may have occurred. Clean the machine with a damp soapy cloth if needs be, do not use any solvents or cleaners, as these may cause damage to any plastic parts or to the electrical components. Keep the work area as uncluttered as is practical, this includes personnel as well as material.



UNDER NO CIRCUMSTANCES SHOULD CHILDREN BE ALLOWED IN WORK AREAS.

It is good practice to leave the machine unplugged until work is about to commence, also make sure to unplug the machine when it is not in use or unattended. Always disconnect by pulling on the plug body and not the cable. Once you are ready to commence work, remove all tools used in the setting operations (if any) and place safely out of the way. Re-connect the machine.

Carry out a final "tightness" check e.g. guide fence, table tilt, etc., check that the 'cutting path' (in this case the path that the work piece will travel) is unobstructed.

Make sure you are comfortable before you start work; balanced, not reaching etc.

If the work you are carrying out is liable to generate flying grit, dust or chips wear the appropriate safety clothing, goggles, gloves, masks etc. If the work operation appears to be excessively noisy, wear ear-defenders. If you wear your hair in a long style, wearing a cap, safety helmet, hair net, even a sweatband, will minimise the possibility of your hair being caught up in the rotating parts of the tool. Likewise, consideration should be given to the removal of rings and wristwatches, if these are liable to be a 'snag' hazard. Consideration should also be given to nonslip footwear, etc.

Do not work with cutting tools of any description if you are tired, your attention is wandering or you are being subjected to distraction. A deep cut, a lost fingertip or worse; is not worth it!

Do not use this machine within the designated safety areas of flammable liquid stores or in areas where there may be volatile gases. There are very expensive, very specialised machines for working in these areas, **THIS IS NOT ONE OF THEM.**

General Instructions

Check that blades are the correct type and size, are undamaged and are kept clean and sharp, this will maintain their operating performance and lessen the loading on the machine. Above all, **OBSERVE**.... make sure you know what is happening around you and **USE YOUR COMMON SENSE**.

Specification

Model	MJ3420
Power	250W 230V 1ph
Blade Speed	800 m/min
Blade Length	1,400mm
Blade Width Min/Max	6-13mm
Max Width of Cut	200mm
Max Depth of Cut	80mm
Max Width of Cut with Fence	102mm
Table Size	300 x 300mm
Table Tilt	0-45°
Table Height	290mm
Wheel Diameter	200mm
Dust Extraction Outlet	40mm
Overall L x W x H	330 x 270 x 700mm
Weight	20kg

Please read the Instruction Manual prior to using your new machine; as well as the operating procedures for your new machine, there are numerous hints and tips to help you to use the machine safely and to maintain its efficiency and prolong its life.

Keep this Instruction Manual readily accessible for any others who may also be required to use the machine.

Assembly

Fitting the Table

NOTE: The table can be fitted without removing the bandsaw blade. However, if you feel safer with the bade removed, loosen the blade tensioning knob (A),see fig 01 and very carefully remove the blade. To refit the blade refer to pages 18-19 for "Changing the Saw Blade".



WARNING! WE ADVISE YOU WEAR GLOVES AS THE BLADE HAS SHARP TEETH!





Assembly

Step 1 Locate the bandsaw table (B), the four M6 bolts (G) and shake proof washers (H). Slot the blade into the table's slot and line up the threaded holes in the table with the pre-drilled holes on the tilt quadrant, see fig 02.

Fig 02



Step 2 Place a shake proof washer (H) over each M6 bolt (G), screw the bolts through the tilt quadrant into the table and tighten using the supplied spanner, see fig 03.

Fig 03



Fitting the Fence

Step 1 Locate the fence rail (C), fence assembly (D), four M8 bolts (I) and washers (J). Place a washer over the end of each bolt and lightly screw the bolts into the threaded holes beneath the front of the table (B), see fig 04. **NOTE: Leave sufficient distance between the bolt head and table for mounting the fence rail.**



Step 2 Find the fence rail (C), line up the half moon cutouts with the four bolts in the table and insert the fence rail up against the table (B), see fig 05.

Fig 05



Secure the fence rail (C) in position by tightening the four bolts with the supplied spanner, see fig 06.

Fig 06



Step 3 Locate the fence assembly (D). Lower the fence over the table until the clamping lever assembly slots into the fence rail's "T" slot. **NOTE: Make sure the clamping hook to the rear of the fence (D) has engaged over the rear of the table.**

Assembly

Twist the locking lever clockwise to adjust the clamping tension.(two rotations should be adequate) then press down the lever to lock the fence in position, see figs 07-08.

Fig 07



Step 4 Locate the angled bolt (K), screw the threaded end of the bolt into the threaded hole to the top of the bandsaw frame and, using the supplied 10mm spanner, tighten with the nut to lock the bolt in position, see fig 09. Find the push stick (F) and hook it onto the angled bolt (K), see fig 10.

Step 5 Locate the mitre fence (E) and slide it into the table's "T" slot, see fig 11.

Fig 09-10





Fig 11



Securing the Bandsaw

Step 1 Place the bandsaw on a work bench. Mark the position of the holes in the bandsaws base, place the bandsaw to one side and drill the holes.

Step 2 Line up the holes and secure the bandsaw in place with bolts, washers and shake proof nuts.







Mitre fence assembly (A) Index and pointer (B)



Table levelling stop bolt



ON/OFF NVR switch assembly



Blade guide adjusting knob (A) Blade guide clamp (B)



Tracking control knob (A) Tracking control butterfly lock (B)



Blade tensioning knob



Tilt quadrant (A), Tilt scale (B) Tilt scale pointer and adjusting screw (C)





Lower blade guide assembly (A) Blade guide pin and clamping grub screw (B)



Upper blade guide assembly (A) Rear thrust bearing and clamping grub screw (B)



Lower blade guide guard (A) Rear thrust bearing and clamping grub screw (B)



Upper guide assembly fore and aft clamping grub screw (A)



Blade tensioning spring (A), under tension



Blade tensioning spring (B) with no tension applied



Twist the locking lever clockwise to adjust the clamping tension, (Two rotations should be adequate) then press down the lever to lock the fence in position.





Tensioning and tracking the blade

Make sure both top and bottom blade guide are well clear of the blade.

Open the front covers fully, giving good access to the top compartment of the saw and good visibility into the bottom compartment, see page 13. For tracking the blade first adjust all bearing guides so that they're well clear of the blade. Check that the blade is sitting approximately in the middle of the wheels, see fig 12.

Apply some tension to the blade by turning the tensioning wheel clockwise. Spin the top wheel by hand, and check that the blade remains centrally on the tyre, see fig 13. If it does not, loosen the tracking control lock and adjust the tracking by turning the tracking control at the rear of the upper saw wheel compartment, see fig 14. Viewed directly onto the tracking control wheel, turning clockwise should cause the blade to track to the rear of the tyre, anti-clockwise to the front (DO NOT make large adjustments).

Spin the top wheel again, check again. Continue until the blade tracks in the centre of the tyres with no appreciable to and fro movement. Tension the blade fully. A sideways push of about 7-8 lbs(3+kgs) in the middle of the blade should allow a 1/4" (6.5mm) distension. Check the tracking again, adjust if necessary.

Connect the power to the machine. Stand clear and start the saw, check that the saw is running smoothly, (no thumps, bumps, knocking or excessive vibration) and the blade appears to be tracking correctly (in one place). You can check this by holding a marker e.g. a pencil, close to the back of the blade (approach from the back of the blade only) and check that the gap remains constant. If it doesn't, adjust the tracking until it does. If you adjust the tracking with the saw running, make very small adjustments and wait for the saw to react before you adjust again, sometimes the reaction is not instantaneous. Once you are satisfied that the tracking is correct switch the machine off and allow it to run to a stop. Retighten the tracking control lock.







Fig 14





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Checking the table is square

If the preset table stop has been fitted, proceed as follows:-

Loosen the lift and shift handle clamping the tilt mechanism, see fig 15, and turn the table hard against its stop. This is a bolt with a lock nut screwed into the underside of the table, see fig 16, that acts as a stop when it strikes the machine frame. Tighten the butterfly nut.

Fig 15-16



Make sure the upper blade guide is raised as high as possible. Place a square on the table and move it up against the blade (behind the teeth), see fig 17.

Fig 17



Check that the blade is perpendicular to the table. If it is not, try resetting the table.

If it is still not correct, loosen the locking nut and adjust the bolt until perpendicularity is achieved, see fig 16. Tighten the lock nut and then re-check. When you are satisfied that the table is set correctly, check that the pointer of the tilt gauge reads zero, if not, adjust it, see fig 18.

Fig 18



Tilt pointer (A) and tilt gauge (B)

Setting the Fence

Always make sure the fence is parallel to the table by placing an engineer's rule against the fence and setting equal distances to the front and back face of the fence, see figs 19-20.

Fig 19-20



Continues Over...



Setting the Blade Guides

Lower the upper blade guide to approximately 1 1/2''(38mm) above the table by loosening the blade guide height clamp and turning the adjusting knob. Clamp in place, see figs 21-22. Loosen the grub screw (A) holding the guide assembly in place, see fig 23. Adjust the fore or aft position so that the leading edges of the side guide pins are approximately 2mm behind the gullets of the saw blade.

Re-tighten the grub screw, see figs 24-25.



Fig 23







Fig 26



Loosen the grub screw (B) that clamps the rear thrust bearing and adjust the thrust bearing so it's just touching the blade; re-tighten the grub screw, see fig 26. Turn the blade by hand to check the thrust bearing turns. Loosen the two grub screws holding the guide pins (D), move to approximately 0.5mm from each side of the blade. Re-tighten the grub screws. NOTE: An A4 sheet of paper is approximately 0.5mm thick, slide a note between the blade and guide pin until the pin is set to the correct thickness. Re-tighten the grub screws (D), see fig 27. Repeat for the other guide bush.

Fig 27



Setting the Lower Blade Guides

NOTE: For easier access to the lower blade guides it is recommended you remove the table.

Open the lower wheel access door then open the lower blade guard door, see fig 28. Repeat the procedures as described for the upper blade guides and thrust bearing, see fig 29. Once all adjustments are completed rotate the blade, replace the table and close the blade guard door.

Fig 28 Blade guard door



Fig 29



Close the upper and lower doors, re-connect the power, switch the saw on, allow to run for several minutes, check that the blade is still tracking correctly, there is no excessive vibration, etc. Switch off and wait until the saw comes to a complete stop. **The saw is ready to be used.**

Operating Instructions

1. Make sure you have read and fully understood the general instructions and safety precautions that are printed in the preceding pages of this manual.

2. Before connecting the machine to the supply; check the tool for obvious signs of damage, paying particular attention to the plug and the power cable. Rectify or have rectified any damage you discover. Check that the blade you are using is the correct one for the job in hand. Change the blade if necessary. Check the blade is not damaged; is clean, sharp, tracks properly and is correctly tensioned.

3. Set the upper blade guide to approximately 12mm (1/2") above the height of the work piece.

4. Check, especially on site, that there are no foreign objects e.g. old nails, screws, small stones etc. embedded in the material you are about to cut.

5. Check that all accessories, tools etc., that have been used to set the machine up, are removed and set carefully aside or stowed away correctly.

6. Ensure the machine is switched off. Plug the power cable into a correctly rated switched socket outlet. If extension leads are being used, check these for damage, do not use if damaged; if you are working outside, check that any extension cables in use are rated for outside work. Switch on. Allow the saw to run up to speed.

7. Make sure that the material you are about to cut is within the machine capacity, and the cut you are about to make is within the blade's capabilities. e.g. Do not try to cut a 1" radius curve using a 5/8" blade.

8. Make sure the blade is not in contact with the material when you start the saw. Start the cutting operation.

Operating Instructions

Do not try to cut too quickly; the correct cutting speed, if one could be so precise, would never see the blade pushed back against the thrust bearing. The saw would cut and clear the saw line at the rate the work piece was fed into it. If you notice that you require more and more pressure to effect the cut, and the blade is in continual contact with the thrust bearing, the chances are the blade is becoming blunt. Check and change if necessary.

Do not let go of the work piece; if you have to change your grip, make sure one hand is holding the material at all times.

9. If you are cutting long pieces of material think about sawing cutouts (i.e. a saw cut from the edge of the material to the saw line) along the saw line so that you can discard the off cuts as you progress down the saw line.

10. Observe the old woodworkers' adage of never allowing your hand/fingers within one handbreadth of the blade.

11. If you have to cut very small pieces of material, arrange or manufacture some form of 'shoe' to carry the timber. If the work piece is exceptionally small, find something to use as a sacrificial carrier and mount the work piece on it with double sided tape, or similar.

12. Remember to check the blade tension after a new blade has been 'working' for 30-60 mins. The blade will 'stretch' slightly when new.

13. Do not release the tension on the saw blade when work is complete. The blades and the main saw frame do not respond kindly to frequent large changes in stress and tension. Only release the tension to change the blade or if the blade is to be removed because the machine is to be 'mothballed' for a lengthy time period.

The blade in tension over a long period of non-use will cause the tyres to develop 'flat' spots. Open the saw cut, either by pulling apart or driving a wedge in close to the back of the blade. Try to "wriggle" the blade free of the saw. If this is not possible; check that the saw is free in the cut, start the saw, allow it to run up to speed and 'cut out' as quickly as possible. The removal of the 'off cut' may well prevent the saw jamming again if you resume the original cut.



WARNING! IF THE SAW JAMS! SWITCH OFF IMMEDIATELY.

Fia 30

Changing the Saw Blade



Put the table back to the level position if it has been tilted. Set the upper blade guide assembly approximately midway in the throat. Open the top and bottom covering doors. Remove the fence and guide rail and place safely aside. Slacken the blade tension by turning the blade tensioning wheel anti-clockwise, until the blade can be easily slipped off the wheels, see fig 30.

Remove the blade carefully, "wriggling" it clear of the upper blade guard, and out through the slot in the table. NOW is an excellent time to clean out the interior of the machine, remove the impacted 'crud' from the tyres, apply a little light oil to the screw



Slacken the blade by turning the tensioning wheel anti-clockwise

threads of the blade tensioner, and the tracking control. The pivots and the slides of the top wheel

mounting assembly could likewise be lightly oiled. If you are fitting a new blade it will have been supplied to you "folded", bound together in this configuration with tape or tie wrap. Also check the blade did not "unfold" inside out. i.e. looking at the right side front of the loop, the teeth should be on the front of the blade, and pointing down. If you can't arrive at this view, turn the blade inside out from its current position and look again.



NOTE: BE VERY CAUTIOUS WHEN YOU "UNFOLD" THE BLADE; IT TENDS TO 'SPRING' OPEN, BLADE AND TEETH GOING EVERYWHERE.



MAKE SURE THE BLADE TEETH ARE POINTING DOWN!

Open up all blade guide pins so that they are clear of the blade. Hold the blade approximately midway on either side of the loop and feed into the table slot. When you get to the table insert cutout void, work the left side of the loop into the slot in the guard in the neck of the main saw frame."Wriggle" the right hand side of the blade through the guard on the upper blade guide assembly. Ease the blade over the wheels and locate the blade in both the upper and

Fig 31



lower blade guides, see fig 31. Apply some tension to the blade. Turn the top wheel by hand to ensure the blade will not skip off the wheels and the blade is travelling in the blade guides, see fig 32. Apply a little more tension and check by once again spinning the

Fig 32



upper saw wheel by hand. Loosen the upper blade guide clamp and set the upper blade guide assembly so that the top of the blade guide is level with the centre of the top drive wheel, see fig 33. Re-tighten the clamp.





When you are sure that the blade is "ON" and stable, re-fit the fence rail and fence. Now carry out the procedures as detailed in "Setting up the Saw".

Routine Maintenance

Daily

- Keep the machine clean.
- Check the saw blade for missing teeth and cracks, see fig 34.
- Spray oil the bare metal surfaces.

Weekly

• Open the top & bottom wheel covers and clean out all saw dust.

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Clean out impacted 'crud' & saw dust

Clean out impacted 'crud' & saw dust

Monthly

• Open the lower and upper doors and check the condition of the tyres & the drive belt, see fig 34.

• Clean impacted 'crud' from the tyres, apply a little oil to the screw threads of the blade and drive belt tensioners. **DO NOT USE OIL** near the belt.

• The pivots and the slides of the top wheel mounting assembly and the captive stub axle of the belt tensioner in its slot could likewise be lightly oiled.

• Using an air line (wearing goggles) blow out the vents in the motor casing, see fig 35.







Oil



• Blow out motor vents (c)



Parts Breakdown/List



Parts Breakdown/List

PART NO	DESCRIPTION	QTY	33	Connection seat, upper guide	1
1	Frame	1	34	Upper guide housing	1
2	Key 5x14	1	35	Lower guide housing	
3	Wing nut M8	1	36	Adjusting gear	
4	Spring,lock plate	1	37	Hex.bolt	2
5	Washer 6	1	38	Upper door	1
6	Washer 10	1	39	Upper door	1
7	Column Cover,frame	1	40	Locking nut	1
8	Motor	1	41	Locking handle	1
9	Guide bracket	1	42	Locking handle housing	1
10	Blade tensioner	1	43	Switch plate	1
11	worktable	1	44	Switch	1
12	Ratchet lever M6	1	45	Adjusting nut	1
13	Lower blade guide guard	1	46	Push stick hook	1
14	Bearing bolt support upper	1	47	Brush	1
15	Lower wheel	1	48	Pin guide	1
16	Upper wheel	1	49	Bearing shaft	2
	Bearing 6000	2	50	Connection shaft for upper guide	1
	Circlips for holes d=26	1	51	Bearing 625Z	2
17	Bearing bolt upper	1	52	Shaft for lower guide	2
18	Table trunnion upper	1	53	Shaft for upper guide	2
19	Guide piece	1	54	Spring	1
20	Worktable support	1	55	Dishing cover	1
21	Bandsaw tyre	2	56	Thread rod	1
22	Locking frame for rip fence	1	57	Tension pin	1
23	Rip fence	1	58	Guide board	1
24	Washer block	2	59	Knob for door	2
25	Front rail	1	60	Setting knob	1
26	Lock plate for rip fence	1	61	Door hinges	4
27	Lock rod for rip fence	1	62	Setting knob	1
28	Saw blade	1	63	Spacer bushing	1
29	Upper guide guard base	1	64	Table insert	1
30	Upper guide guard	1	65	Cover board	1
31	Slide board	1	66	Hex.bolt M6x12	11
32	Dust port	1	67	Hex.bolt M6x40	1

Parts Breakdown/List

68	Washer 6	18		95	Cross recessed countersunk
69	Flange nut M6	8			screw M4x6
70	Square neck bolt M6x16	3		96	Cross recessed countersunk screw M4x12
71	Hex.nut M6	2		97	Cross recessed pan head
72	Adjusting knob	1			tapping screw ST4.2x12
73	Hex.bolt M8x16	4		98	Square neck bolt M6x25
74	Washer 8	6		99	Square neck bolt M6x60
75	Thin hex.nut M8	2		100	Square neck bolt M8x70
76	Hex.socket cap head screw M5x25	2		101	Self-lock nut M8
77	Hex.socket cap head screw M5x16	2		102	Split washer 6
78	Self-lock nut M5	2		103	Self-lock nut M6
79	Hex.nut M5	4			
80	Hex.socket cap head screw M6x16	5		104	Circlips for shaft d=26
81	Spring washer 6	5		105	Saddle washer
82	Large washer 6	1		106	Spring-type pin 3x16
83	Hex.bolt m6x16	1	1	107	Step bushing
84	Hex.socket set screw M6x6	9		108	Safety switch assembly
85	Hex.socket set screw M6x8	2		109	Cross recessed pan head screw M4x30
86	Hex.socket set screw M6x12	1		110	Mitre gauge knob
87	Cross recessed pan head screw M4x10	3		111	Washer 6
88	Washer 4	9		112	Mitre gauge block
89	Hex.nut M4	5		113	Cross recessed countersunk
90	Mitre gauge	1		114	Cross recessed pap head
91	Pointer,mitre gauge	2		114	screw M5x10
93	Knob	1			
94	Cross recessed pan head screw M4x6	1			

