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# HT-Harvester

## User Manual



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### Specification (Standard)

Cutter bar length—720mm.  
Cut horizontally from ground level to 520mm high,  
vertically from ground level to 1450mm high in two stages.

<b>Wheels Mounted</b>	<b>Outside</b>	<b>Inside Frame</b>
Wheel track	1335mm	1105mm
Overall width	1450mm	1380 c/w ballast (no power head fitted)

**For Freighting** (does not include pallet)

Weight 19 Kg

Dimension 1300mm x 1000mm x 300mm High

### **With HT Option:**

Hedge cut - vertically to 3m (10ft)  
- horizontally to 2.5m (8ft)

Mast Length - 2.3m

HT Option Weight -

### **Freighting**

Freighting on the back of a utility vehicle is preferred. The HT-Harvester is very light and if transporting on a trailer it is not heavy enough by itself to make the trailer springs work i.e. it will get badly shaken about. On rough road / tracks this could cause structural damage. One solution is to put an extra weight on the trailer as well as the harvester so the springs actually work!

## **HT-Harvester**

### **Introduction**

Congratulations on the purchase of your *Harvester Concepts Ltd HT—Harvester*. This machine is of high quality and will reward you with reduced effort and a great finish to your crop, garden edge or hedgerow .

Learning to operate your *HT—Harvester* won't take long. You will soon find it to be an invaluable tool.

### **Important Safety Note**

Read and understand all the instructions before using the *HT—Harvester* (HT).

- The HT should only be used for the purposes for which it was designed. Use it for no other purpose (e.g. it is not a grader blade or battering ram!). We have manufactured the HT using quality materials and manufacturing techniques however if faults do occur please have them corrected before you use it.
- Please read the Power Head (Ochiai) instruction book before use. Pay particular attention to running in and safety notes.
- Please read this instruction book before use and retain it for future reference.
- Unless mentioned in the instructions, it requires only one person to operate the HT-Harvester—keep all others away!
- Always turn the Power Head off before adjusting its position in the frame.
- Immediately after turning the power head off, fit the cutter bar cover. It should be removed last, before restarting the power head.

**Disclaimer** details in this handbook may vary from the harvester due to our continuous product improvement program

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with handle bars adjusted to allow the mast to rest on something low.

8. Ensure the throttle cable is routed "smoothly" and in such a position not to snag on hedging etcetera.; hold in place with velcro straps.
9. **Caution:-** This is the only action where we recommend the engine is started before final adjustments are made. However, ensure the engine is at idle and the cutter bar is not operating before proceeding. Keep away from cutter bar by positioning yourself on the opposite side of the mast. Lift the mast up to the vertical position and adjust the handlebars to operating position. **Note:-** If the wheels are wheeled up to a wall or hedge it will prevent the HT-Harvester moving away as the mast is raised. When correctly adjusted the cutter bar should be vertical and the mast on about a 20° angle to the vertical

You are now ready to side trim hedges. The same notes apply as for topping hedges. Also see Hint 2, on page 9 regarding steering and cutting straight lines. A string line can also be erected to line up with maybe the outer wheel.

To change from "top down" to "**bottom up**" trimming or vice versa, remove throttle cable, slacken the short and remove the medium triknob, rotate the power head to 180° position and secure with triknobs as before. Refit throttle cable and velcro straps

Dismantling the machine is a reversal of assembly procedure. See hint 3 on page 9.



**For Vertical Trimming:-**

Trimming can be done from bottom upwards (good for clearing prunings and for maximum cutting height) or from top down ( good for heavy cuts, penetrating dense bushes and for cutting right down to ground level)

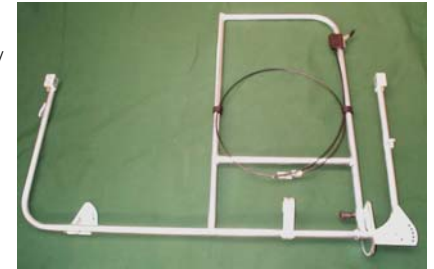
The set up is similar to that for horizontal hedge trimming except-

1. For “**top down**” pruning the handle bars should be in the forward facing position (see photo on page 7) and for “bottom up” pruning, in the rear facing position.
2. The mast clamp is positioned on the mast with its mounting face pointing forwards
3. Using long triknob, fit the angle adapter to the mounting face so the outer face of adapter is at correct cutting angle
4. With power head mount fitted to power head, engine stopped, use short triknob through the centre hole in index plate to secure power head to adapter plate.
5. Position power head cutter bar upwards or downwards as required and screw medium triknob through “R” or “J” holes as required, into adapter. Tighten all triknobs
6. Connect throttle cable to power head but don’t strap in place yet.
7. Adjust cutting height by unlocking & sliding the mast clamp up mast. This may be easiest



**Your HT-Harvester Consists Of:-**

- Main frame / handle assembly c/ w pipe lynch pin
- Two Wheels
- Power head with foot, removable handle & lynch pin, including instruction book and spanner.
- Power head adapter
- Angle bracket
- Triknobs, 3 male—long, medium & short
- Velcro cable tie (2)
- HT instruction book



For Hedge Trimming option you also have

- Mast
- Mast power head clamp
- Ballast basket & 4 ballast bottles
- Triknob, female
- Extension handle (mounted in handlebars)

## Other Options

- Half length mast
- #75 angle bracket
- Extendable wheel track

## Uses of the HT—Harvester

The HT has 3 main uses:-

- **General Trimming.** Using the Ochiai power head only, as a standard hand held hedge trimmer. Good for smaller jobs or trimming the hard to reach places.
- **Herb Harvesting.** Typically the HT will straddle the row to be harvested, topping it in one pass, then trimming each side of the row in 2 more passes
- **Border Trimming.** The HT can trim the sides of shrubs from ground level up to 1.55m (5ft) in 2 stages
- **Hedge Trimming.** An optional kit extends the use of the HT allowing side trimming of hedges up to 3m (10ft) and topping of the hedge to 2.5m (8ft). Special higher cutting options can be supplied on request.

in place with velcro straps.

11. **Caution:-** This is the only action where we recommend the engine is started before final adjustments are made. However, ensure the engine is at idle and the cutter bar is not operating before proceeding. Keep away from cutter bar by positioning yourself on the opposite side of the mast. Lift the mast up to the vertical position and adjust the handlebars to operating position. **Note:-** If the wheels are wheeled up to a wall or hedge it will prevent the HT-Harvester moving away as the mast is raised.

You are now ready to top hedges or trim lower branches off weeping type trees.

- If there are obstacles close to the hedge preventing access, you may be able to angle the harvester in from each side of the obstacle to reach all parts of hedge.
- If ground is uneven it could result in an uneven cut. If possible fill holes and smooth out ground then hedge trimming will always be easy. If this is not practical, raising and lowering the handlebars will give you some height control (although the hedge would still have a slope from side to side) or you can manually lift a wheel over any large hollows. **Hint 4:-** 2 boards placed in the wheel tracks, over any uneven ground will provide you a smooth surface but be careful the wheels stay on the boards!

Dismantling the machine is a reversal of assembly procedure. See hint 3 on page 9.

the eccentric shaft slightly in one direction or other. Hold in place and try the clamp lever for holding power. Adjust the eccentric shaft until mast clamp locks onto the mast correctly, Tighten the lock nut and test again. **Warning:-** It can be dangerous if the mast clamp does not lock firmly in position, allowing the power head to drop down.

4. Mount left hand wheel inside frame and right hand wheel outside frame
5. Mount ballast basket on left hand side. Fill the 4 ballast bottles with water and insert them in the basket. **Warning:-** It is unsafe to operate the HT in this mode without this ballast!
6. If desired, the extension handle can be used to aid control. The extension handle slides inside the right hand tube of handle bars, the nib spring engaging in the appropriate hole to secure it.
7. With power head mount fitted to power head, engine stopped, insert spigot on end of mount into lowest hole in the mast clamp. Use the short triknob to clamp the power head at the desired angle. **Note:-** to give some height adjustment when operating, adjust handle bars so the mast is laying backwards about 20° to the vertical
8. Connect throttle cable to power head but don't strap in place yet.
9. Adjust cutting height by unlocking & sliding the mast clamp up mast. This may be easiest with handle bars adjusted to allow the mast to rest on something low.
10. Ensure the throttle cable is routed "smoothly" and in such a position not to snag on hedging etcetera.; hold



## **General Trimming**

You only require the power head with its removable handle for this operation. The power head should always have it's removable handle fitted securely with the small lynch pin.

Please refer to the power heads operator manual for further instructions.

For all other operations you will require the HT Harvester in various configurations.

## **How to Assemble The HT—Harvester**

This depends on which operation you wish to perform.

However there are certain guide lines you should observe for all assemble and dismantling:-

- 1/.Decide which use you are going to use the HT for.
- 2/. Decide on approximate position you want the power head to be in
- 3/. Select components required for this assembly (see build requirements later in handbook
- 4/. Refuel the power head before assembly. **CAUTION:** Never leave the power head inverted for longer than necessary. Fuel leakage is always a possibility.
- 5/.Run the power head to warm it up before installing it. **CAUTION:** Don't touch the exhaust pipe; it will be hot.
- 6/. Remove the removable handle and carefully install the power head mount on the power head. Insert the spigot into the handle hole and then guide the mount over handle. Install lynch pin.



7/. **HINT 1:** It is often easier to assemble the harvester with the handle bar resting on the ground, with frame in operating position. Sometimes (especially when mounting the power head near vertical inside the frame) it makes assembly easier by resting the handle on a fence or shrub about waist height.



Adjust the handle bar position to rest on ground or a suitable rest. Do this by operating the handle latch, positioning the handlebars and ensuring the latch fully reengages a lock hole. **Note:** The handle bars can rotate 360° around the main frame but the **normal** or forward operating position is when the axle mounts and mast lower mount is trailing the main frame.

8/.Fit wheels, usually to outside of main frame but in some situations mentioned later they may be mounted inside the frame. Place the wheel axles into the mounting holes on wheel mounts. Push the axle lock pin down allowing the axle to enter fully. Release the lock pin to lock axle in place.

9/. Always attach the throttle cable last and remove it first when changing the machine configuration.

3. Screw the medium triknob into “I” hole. Tighten all triknobs.
4. Rotate handlebars to rearwards position.
5. Install throttle cable as previously described and secure with Velcro cable wraps

Dismantling the machine is a reversal of assembly procedure.

### **Hedge Trimming**

You require the HT—Option components for this. Adjust handlebars to face rearwards and so main frame is vertical. For all hedge trimming options it is best to warm the power head up by operating it for a few minutes before installing it on the HT—Harvester

#### **For Horizontal trimming:-**

1. Ensure handlebars are facing rearwards.
2. Fit mast to main frame and outer power head mount It fits up the rear of the RH leg of main frame; lower end sits on spigot and female triknob retains mast at outer power head mount.
3. Position mast clamp quarter way up mast so that its mounting face is pointing outwards to the right hand side. Clamp in place using the cam lever. **Note:-** If the cam lever does not clamp correctly on the mast it can be adjusted. The cam lever is mounted on an eccentric shaft. Loosen the lock nut holding this shaft and rotate





## **Border Trimming**

The HT-Harvester can trim the sides of shrubs, bushes or hedges from ground level up to 1450 mm high in two stages.

### **Stage 1:-**

1. With power head adapter fitted to power head, adjust handlebars to face forwards and so main frame is vertical.
2. Fit right wheel outside frame (but could be inside to miss obstacles) and left wheel inside frame.
3. Screw the medium triknob through “Q” hole and into top hole in angle plate to secure power head in position.
4. Mount angle adapter vertically on outer power head mount front face, using long triknob
5. With cutter bar down mount the power head to the angle plate by screwing the short triknob through the index plate centre hole and into the lower hole of angle adapter. Tighten all triknobs.
6. Install throttle cable as previously described and secure with Velcro cable wraps



See hint 2 on page 9 for advice. Curved borders are easy to cut. Depending on how dense the plant is it may be easiest to do the lower cut first followed by the higher stage 2 cut. If a lot needs cutting off it may be best to cut in 2 or 3 passes.

### **Stage 2:-**

1. Remove throttle cable from power head
2. Slacken the short triknob and remove the medium triknob while supporting the power head. Rotate the

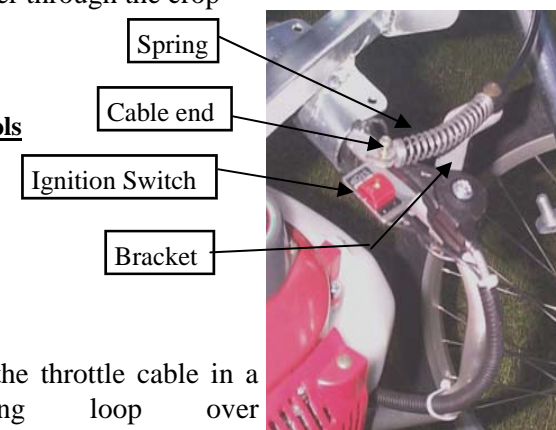
## **Herb Harvesting—Horizontal Cut**

The power head is mounted horizontally in the frame cutting from ground level up to 520 mm.

1. With the mount fitted to the power head, hook the mount over the support bracket and locate the end spigot in the handle mount hole. Fit lynch pin in support bracket and fit medium triknob loosely to hold assembly in position.
2. Adjust handle bars so that with cutter bar at correct operating height, the handlebars are at a comfortable working height. Remember that raising and lowering the handlebars is used to vary the cutting height.
3. At cutting height, ensure the cutter bar is level in the forward / aft direction and tighten the triknob to lock it in position. Small discrepancies are acceptable but could result in double cuts and more effort pushing the harvester through the crop



### **Engine Controls**



4. Route the throttle cable in a swooping loop over handlebars and towards the

throttle arm. Large swoops allow cable to function correctly. If bends are too tight cable will be very hard to operate. Ensure cable does not protrude from framework where it could snag on surroundings. Insert the cable end into the throttle arm by pulling against cable spring and aligning cable wire with slot. Rotate cable across power head handle and clamp cable end fitting in place with wing nut (underneath).

5. Fit velcro cable wraps around cable and frame at appropriate places to hold the cable in place.

Dismantling the machine is a reversal of assembly procedure.

### **Herb Harvesting—Vertical Cut**

The power head is mounted near vertical or vertical on the inner power head mount. In this position the HT is used for cutting the sides of low shrubs or hedges or row crops. With the power head mounted at an angle plants often have a better shape for growth, more pleasing to the eye and following the natural shape of the plant, provides economic harvesting.



1. With wheels fitted and handlebars adjusted so main frame is near vertical.
2. Fit the angle adapter to the inner power head mount (refer picture on page 6). The spigot on the angle adapter fits into the small hole on the mounting plate. Position the angle plate at the angle you wish to cut the plants at. Use the long triknob to secure it.
3. With the mount fitted to the power head, offer it up to the angle adapter. Screw the short triknob through the centre hole of the index plate and into the top hole of the angle adapter.
4. Tilt the power head and screw the medium triknob through hole “L” into the bottom hole in the angle adapter. Tighten all

triknobs

5. Fit cable to throttle as previously described, and secure with Velcro cable wraps

### **OPERATION:-**

Other holes can be used but the idea is to get the tip of the cutter bar a reasonable distance behind the wheel point of contact with the ground. In this position height adjustment is achieved by raising and lowering the handlebars.

The cutter bar has a foot fitted. Its purpose is to help prevent the cutter bar digging into the ground, also to ride over weed matting without cutting it. In operation you should aim to have the foot slightly above ground level.

Cut down one side of row and on return trip cut down other side. If you have extremely bushy plants i.e. large Lavender, as the HT is light, it is possible to run one wheel along the top of the row so as to position the cutter bar in the correct cutting position.

**Hint 2:-**Steering a straight cut line takes a little practice. If you can walk in line with the cutter bar it is easier. Otherwise try and line up on a wheel and steer a straight course. If you get off line it is best to back up a little, get on line and move forward again. Remember once the plant is cut it's not easy to put it back together again!

Dismantling the machine is a reversal of assembly procedure.

**Hint 3:-** For quick and easy dismantling and reassembly, remove just the long triknob rather than the two shorter triknobs.