

fmachine **PRO⁴**



ORIGINAL INSTRUCTIONS





Thank you for purchasing the F-Machine Pro4. **'F'** stands for **Fun** (honestly) and that is exactly what the F-Machine was designed for, **FUN**.

We have taken the utmost care in designing your F-Machine and we hope that it will service you and your friends for many years to come. Please read this entire instruction manual and all other accompanying documents carefully before using the product and keep it as a reference for future use. If you handover the product to someone else, give the instruction manual as well. Follow all warnings and information in the instruction manual.

Should you have any issues with your F-Machine or require spare parts, please contact your nearest F-Machine retailer or email us directly at sales@f-machine.com.



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Explanation of Symbols Used

Throughout this instruction manual, the following symbols are used:



Caution / Warning



To reduce the risk of injury, the user must read the instruction manual



Warning! Danger of moving or rotating parts. Keep hands and body parts away from external moving parts, risk of injury



Switch off product and disconnect it from the power source before assembly, cleaning, making adjustments, maintenance, storage and transportation



Warning! Danger of electric shock



Warning! Danger of hot surfaces and burning/scalding



Do not expose the product to rain or wet conditions (moisture/liquids)



Waste electrical products should not be disposed of with your household waste. Please recycle where facilities exist. Check with your Local Authority for recycling advice



The product complies with the applicable European directives and an evaluation method of conformity with these directives was done

General Safety Instructions



WARNING! Read all safety warnings, instructions, illustrations and specifications provided with this product. Failure to follow all the instructions may result in electric shock, fire and/or serious injury. Save all warnings and instructions for future reference.

Intended Use

- This product is intended for domestic use only. It is not intended for use related to any commercial activities.
- It is only to be used by persons aged 18+. Persons with reduced physical, sensory or mental abilities or those with lack of experience and knowledge of the safe use of the product should not use it.

Operating Area Safety

- Keep the operating area clean and well lit. De-clutter the operating space and avoid dark areas.
- Do not operate the F-Machine in the presence of flammable liquids, gases or dust as these are potentially explosive atmospheres.

- Always place the F-Machine on a firm, flat and horizontal surface during operation. Never operate the F-Machine on a raised/unstable surface (such as a table, desk, chair or other item of furniture) or where there is insufficient flat space available or where it could be knocked over and cause injury or damage to property. Never place the F-Machine on soft furnishings and ensure that any moving parts never come into contact with loose items such as bed linen or furniture covers etc.
- Do not operate the F-Machine in a confined area.

Electrical Safety

- Power plugs must match the outlet. Never modify the plug in any way.

- If using a travel adapter make sure it is the correct one for your region and has an earth continuity connection.
- Always ensure the F-Machine is connected to a power socket that has an earth connection, on a fused circuit, that is protected by a residual current device (RCD) and installed by a qualified technician.
- Always make sure the power socket the product is connected to is easily accessible.
- Avoid your body contacting grounded or earthed surfaces, such as radiators, fridges, electrical appliances or pipes, as this can increase the risk of an electric shock.
- Do not expose the F-Machine to wet conditions or rain. Liquids entering the F-Machine body or the power supply will increase the risk of electrical shock, can damage the product and potentially cause a fire or electrical fault.
- Do not abuse the power cord. Never use any of the cords to carry, pull on or move the F-Machine. Keep the power and control cords away

from sharp edges and moving parts. Do not tread on cords/plugs and regularly inspect them for integrity along the length and at the connections. If any damage is found, the affected components should be replaced with new original parts.

- Do not operate the F-Machine outdoors.
- Do not modify any of the components of the F-Machine. Only use the standard parts that are supplied with the original product or F-Machine accessories.
- Do not use an F-Machine with a defective switch or controller. Always follow the start-up procedure detailed in this manual and conduct a trial run before using the F-Machine.

Personal Safety

- Stay alert, pay attention to what you are doing and use common sense when operating the F-Machine.
- Never use the F-Machine when you are tired or under the influence of alcohol, recreational drugs or medications. Doing so may result in injury.

- Observe all the instructions in this manual regarding the start-up procedures. Ensure the switch on the control electronics box is in the OFF position before connecting to the power source. Do not carry or move the F-Machine without first disconnecting it from the power source.
- Ensure that only one operator is using the controls of the F-Machine at any one time. Do not activate the controls whilst either yourself or another person is adjusting the F-Machine mechanism. Before making any adjustments to the F-Machine (including changing the leg height, crank adjustment or thruster rod settings) always switch off the power source before touching the mechanisms.
- Always remove any tools that have been used for adjustment or maintenance prior to using the F-Machine. For instance, a wrench or key left attached to a moving part may fly off, cause jamming and/or cause an injury.
- Do not overreach. Keep a proper footing and/or appropriate body position and balance at all times.
- Wear appropriate attire. Do not wear loose apparel or jewellery that may be caught in any moving parts. Also be careful to keep long hair tied up and away from moving parts.
- Never use the F-Machine if your body is constrained in any way. Always be able to move freely whilst operating the F-Machine.
- Do not let familiarity gained from frequent use of the F-Machine allow you to become complacent and ignore the general safety principles outlined in this manual.
- Do not use the F-Machine when pregnant. If in any doubt, consult your doctor about any pre-existing medical conditions before using the F-Machine.
- An appropriate lubricant for the toy attachment material should be used where necessary.

Use, Care and Maintenance

- Never deliberately jam the crank arm or the moving mechanism. Do not let anything touch the moving parts. Do not try to prevent the thruster rod from moving.

- Do not use excessively large or heavy toys/attachments with the F-Machine. Heavy objects on the end of the thruster rod (especially at greater extensions and higher motor speeds) can make the F-Machine unstable/vibrate. If this occurs, reduce the rotational speed of the motor and/or the thruster rod extension and travel until the movement stops. Choosing a lighter/smaller toy will also help, as will lowering the chassis relative to the floor.
- Never leave the F-Machine running or powered on unattended.
- Never leave the F-Machine unattended where minors, pets or farm animals may come into contact with it.
- Do not let persons who are unfamiliar with the operation of the F-Machine or these instructions operate the F-Machine.
- Maintain the F-Machine in a clean and good order. With the power source disconnected, check over the F-Machine for damage and do not use it if any damage is found. Replace any damaged items with genuine replacement parts.
- If necessary, clean the mechanical parts of the F-Machine with a slightly damp cloth and dry them afterwards. Do not use any aggressive chemicals or solvents on the F-Machine.
- Keep handles and grasping surfaces dry, clean and free from oil and grease or other lubricants to allow for safe handling of the machine.
- Make sure all cables are kept away from moving parts and that they are laid out in such a way so as not to become entangled in the machinery if moved (for instance when operating the hand controller).
- Never try to operate the F-Machine without first checking all bolts, nuts and connections are tight. Never attempt to run the F-Machine without first attaching the legs securely.
- Use only with the bases, brackets and stands specified by the manufacturer or sold along with the product.

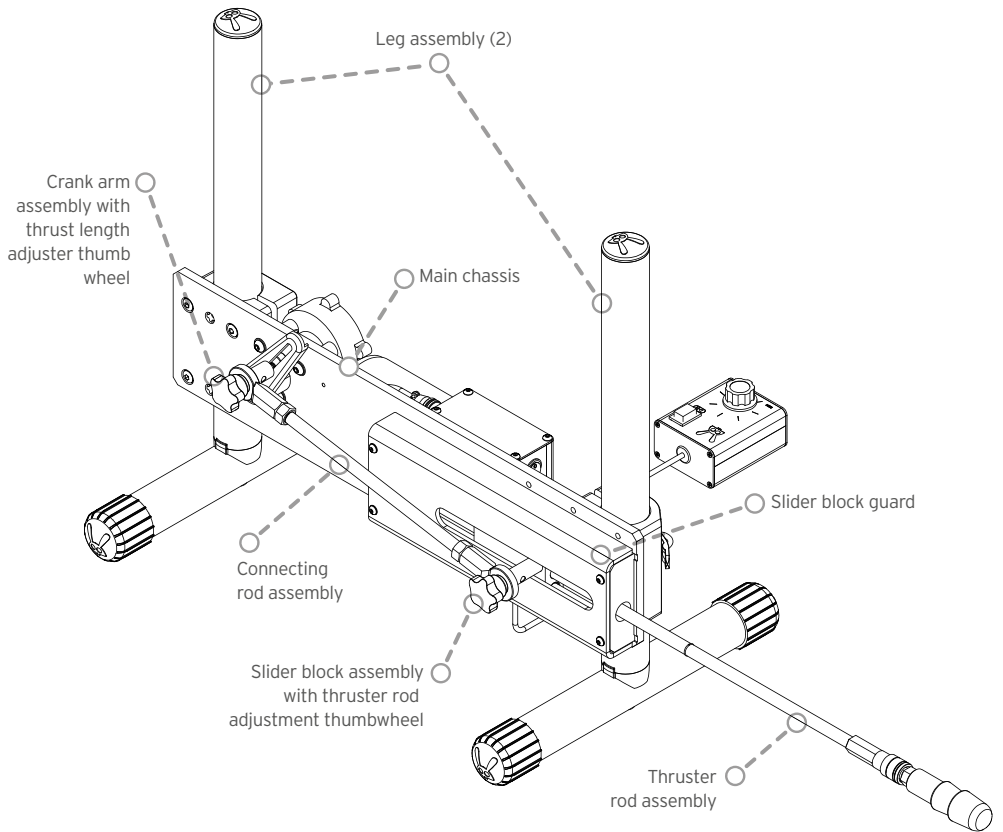


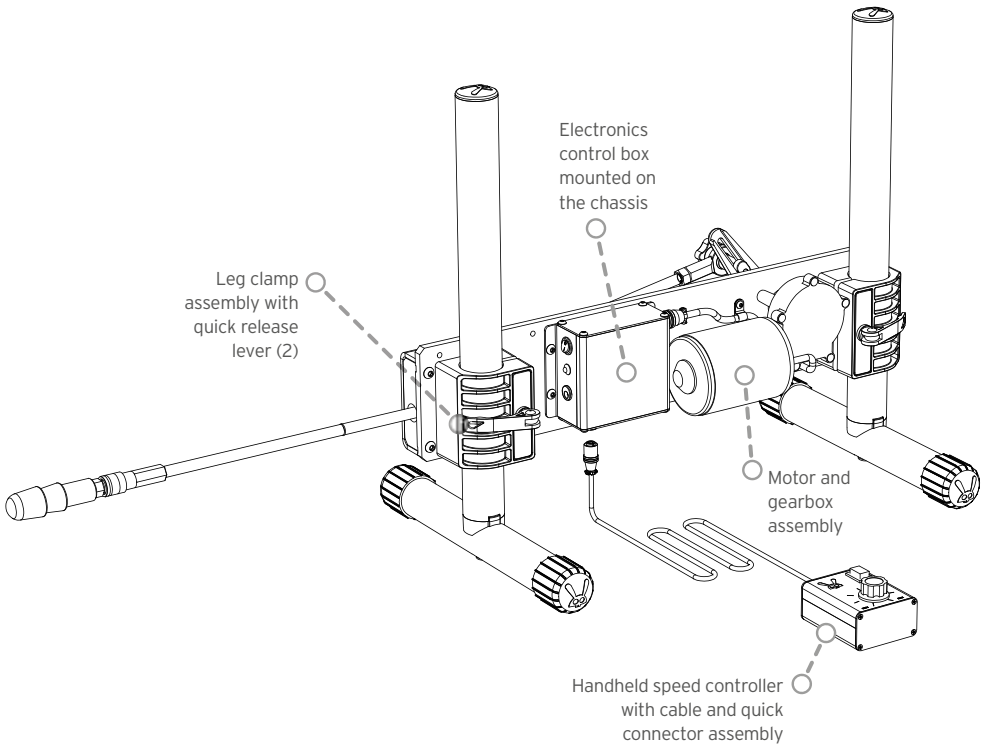
Pro 4 Box Contents

In your F-Machine box you should have the following:

- 1 x black fabric carry case with foam inserts for storing your machine
- 1 x 110-240V power supply with mains supply lead
- 1 x mains power adapter (may vary depending on your region)
- 1 x main chassis including motor and electronics control box
- 1 x handheld speed controller with cable and quick release connector
- 2 x leg uprights with end caps
- 2 x leg lower cross members with rubber feet and plastic joining saddles
- 1 x thruster rod
- 1 x quick release toy adapter
- 1 x 'barb' toy adapter
- 1 x 8 inch toy made from silicone material
- 1 x tool bag with necessary tools for maintenance (not shown)
- 1 x original instructions manual (you're reading it)

Product Description & Overview





Assembly Instructions for the F-Machine Pro4

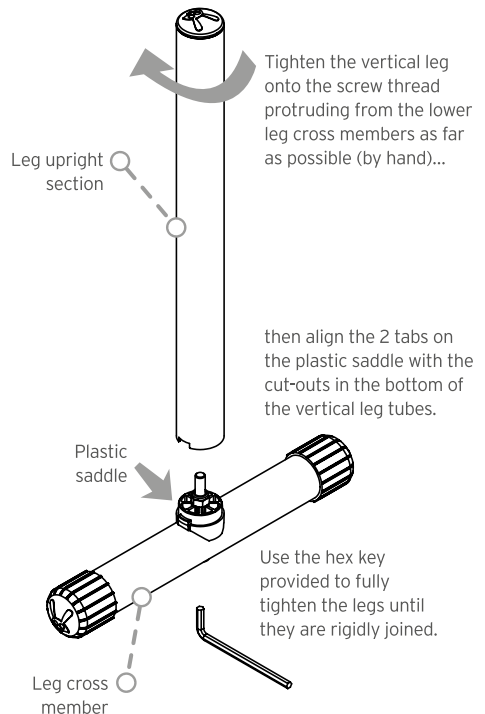


Make sure you read the instructions carefully and understand them fully before you proceed. Assemble the machine according to the following instructions and check everything is tight before connecting the power supply to the machine, as the final step.

Carefully remove the contents from the outer cardboard shipping container, taking care not to damage the packaging in case you need to re-use it in the future. You should find a black canvas carry case containing your new F-Machine inside. Unzip the bag fully and layout the contents carefully on a flat surface.

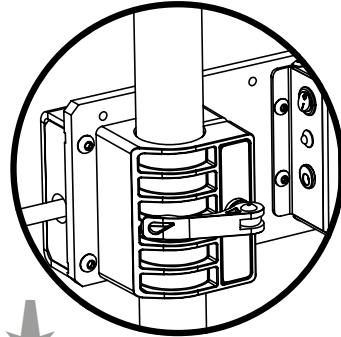
Assembling the legs

Take the two leg upright sections and assemble them to the leg cross members as per the diagram (note: the plastic saddle must be in place). Tighten until the legs are rigid, being careful not to break the plastic saddle by overtightening.



Assembling the legs to the chassis

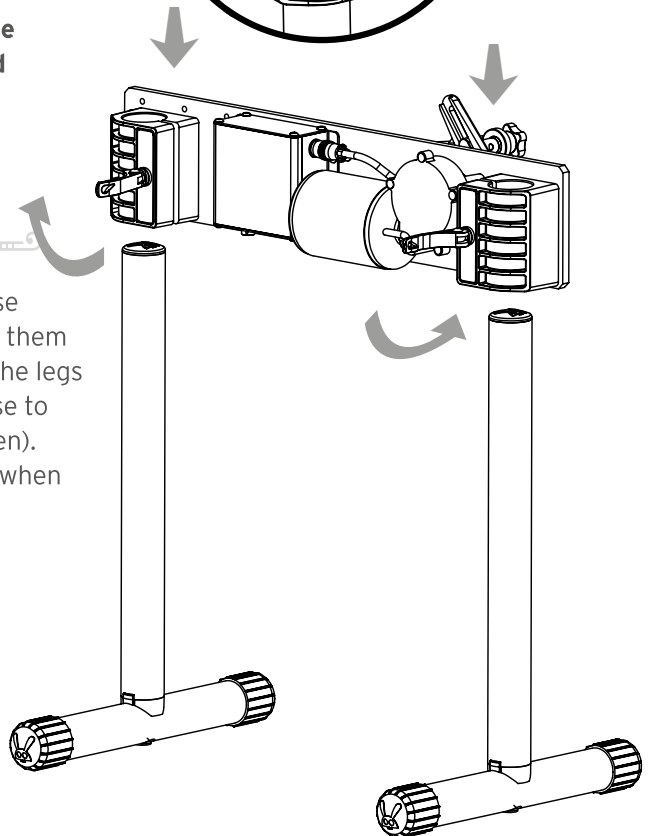
Next, assemble the 2 leg assemblies to the main body of the F-Machine by sliding them through the plastic leg clamps (loosen the quick release levers first). Re-tighten the quick release clamps to the necessary positions.

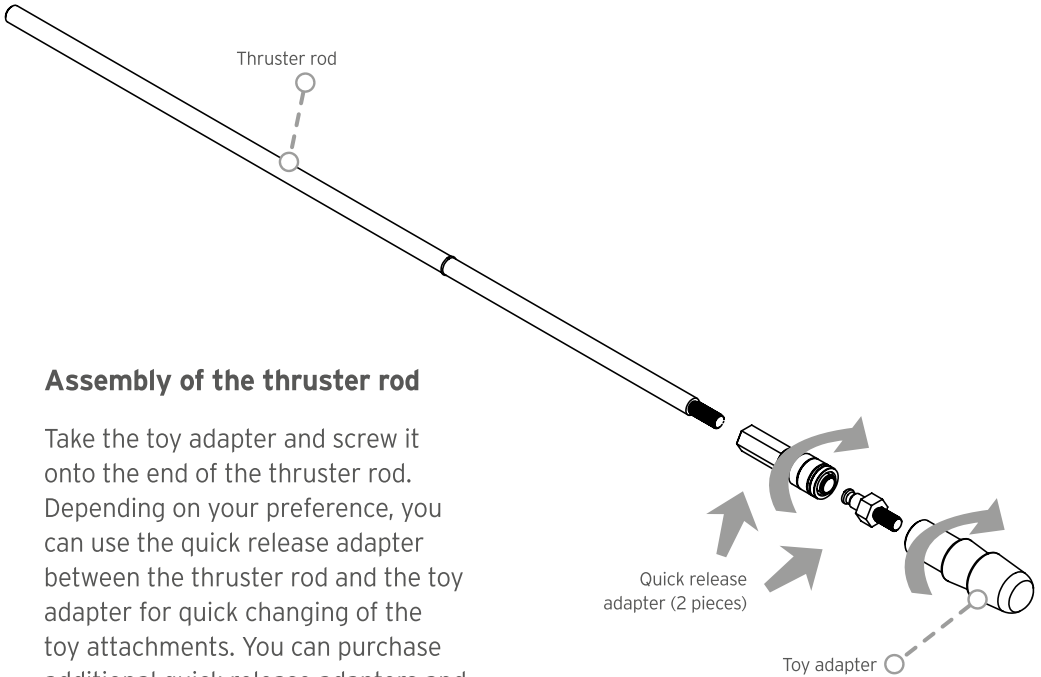


Lever in closed position

Note: The leg clamps enable you to adjust the angle and height of the thruster rod by varying the height at the front or the rear of the F-Machine.

Before closing the quick release levers, you may have to rotate them to ensure the perfect grip on the legs by the plastic clamps (clockwise to tighten, anti-clockwise to loosen). Firm resistance should be felt when closing the lever.





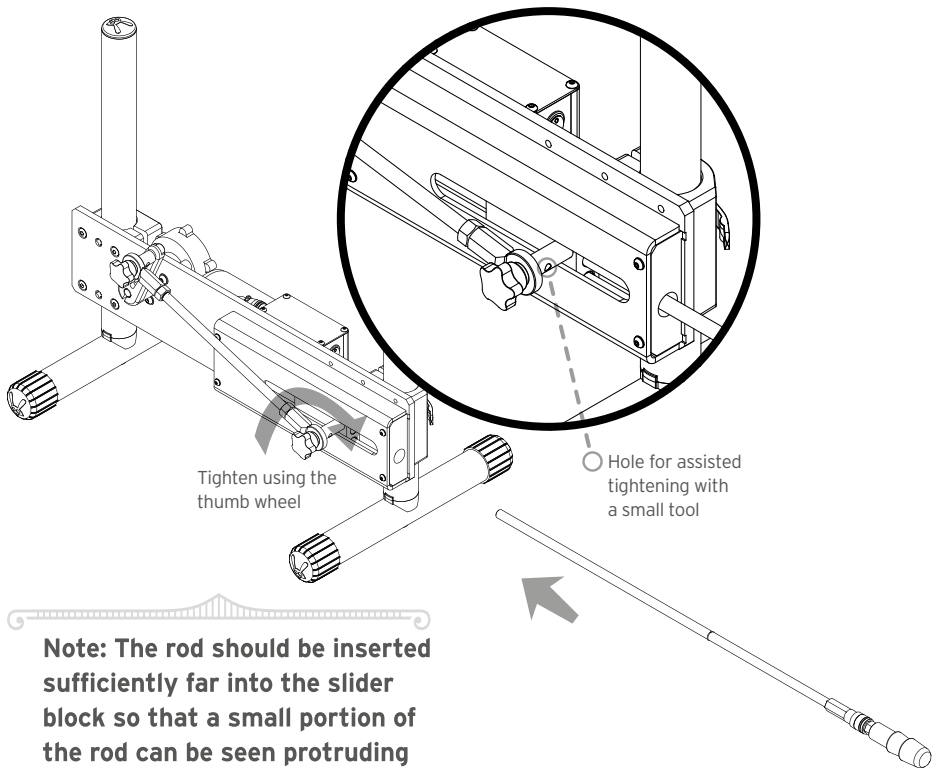
Assembly of the thruster rod

Take the toy adapter and screw it onto the end of the thruster rod. Depending on your preference, you can use the quick release adapter between the thruster rod and the toy adapter for quick changing of the toy attachments. You can purchase additional quick release adapters and other attachments from F-Machine or your nearest retailer.

Insertion of the thruster rod into the F-Machine

Having assembled the thruster rod assembly, slide it into the front of the slider block and tighten the front thumb wheel adjuster, until it holds the thruster rod securely. The length of the thruster rod can be adjusted by loosening the front thumb wheel and

re-positioning the rod. Once you are satisfied with the length, re-tighten the thumbwheel (clockwise) and then test that the rod will not slide or rotate. There is a hole in the front peg which can be used to increase the tightness of the joint. A small tool can be inserted to increase the amount of purchase on the front peg, allowing you to increase the tightness of the connection.

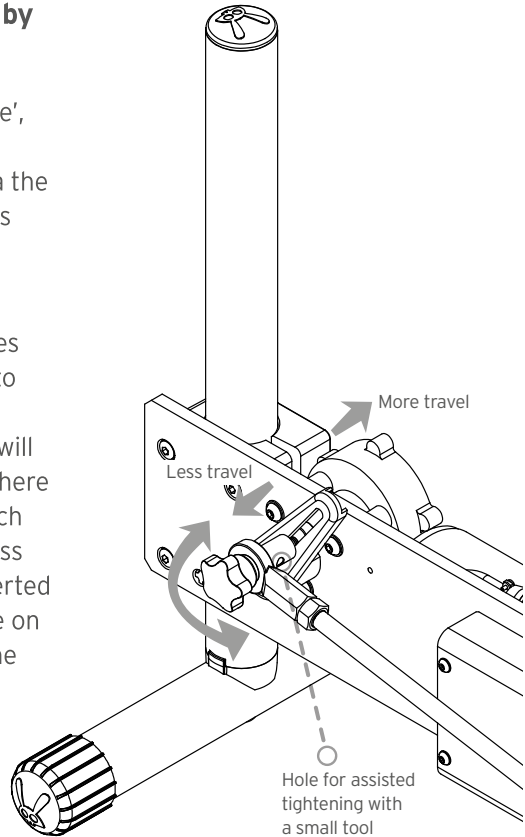


Note: The rod should be inserted sufficiently far into the slider block so that a small portion of the rod can be seen protruding from the back of the slider block, as a minimum.

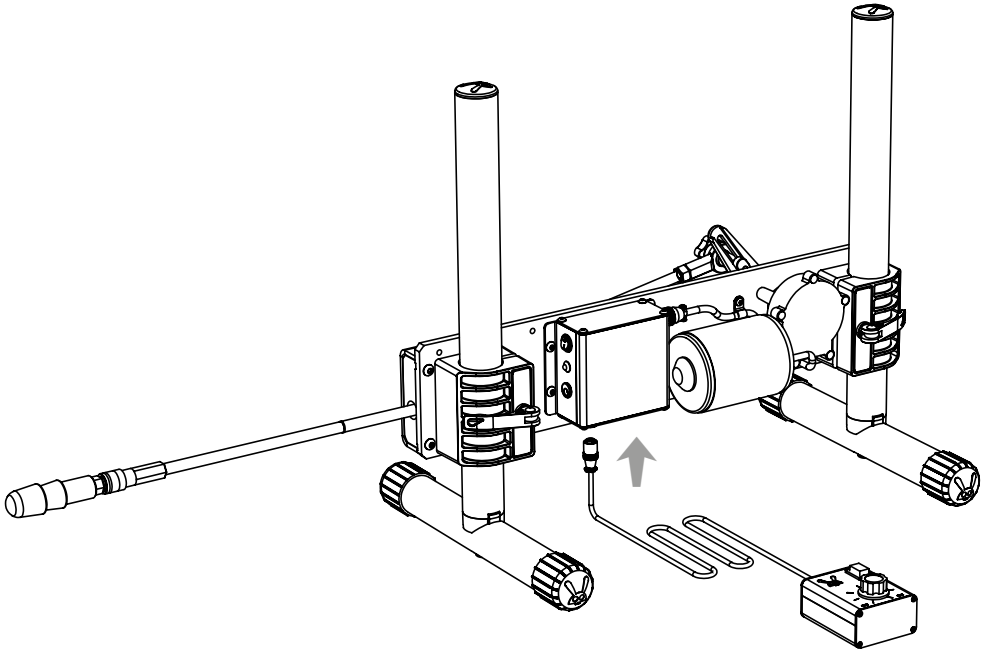
Setting the thruster rod travel by adjusting the crank arm

The F-Machine features 'fast-change', a revolutionary method of quickly changing the thruster rod travel via the crank arm. The thruster rod travel is adjustable from 1 to 6 inches.

Undo the crank thumb wheel by turning it approximately 180 degrees anti-clockwise (see diagram), slide to desired thrust depth and re-tighten making sure it's nice and tight and will not come loose during operation. There is a small hole in the crank peg which can be used to increase the tightness of the joint. A small tool can be inserted to increase the amount of purchase on the peg, allowing you to increase the tightness of the connection.



WARNING! Never attempt to adjust anything on the F-Machine whilst it is operating/moving. Always disconnect from the mains power socket before making any adjustments or carrying out any maintenance.



Connecting the handheld speed controller

Next, connect the handheld speed controller to the electronics control box on the rear of the F-Machine chassis. Take the quick connector on the end of the fly lead and push it onto the connector on the bottom of the electronics control box. Set the speed control dial to the MINIMUM setting.

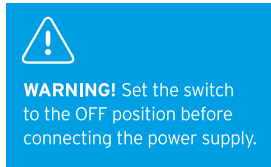
Note: There is a keyway inside the connector which needs to be orientated correctly before you push it on. Look at the connector to ensure the correct orientation before insertion. To remove the hand controller after use, pull back on the collar of the quick release connector to disconnect it, prior to packing away (do not disconnect the other quick connector which is for the motor).

Connecting the power supply to the F-Machine

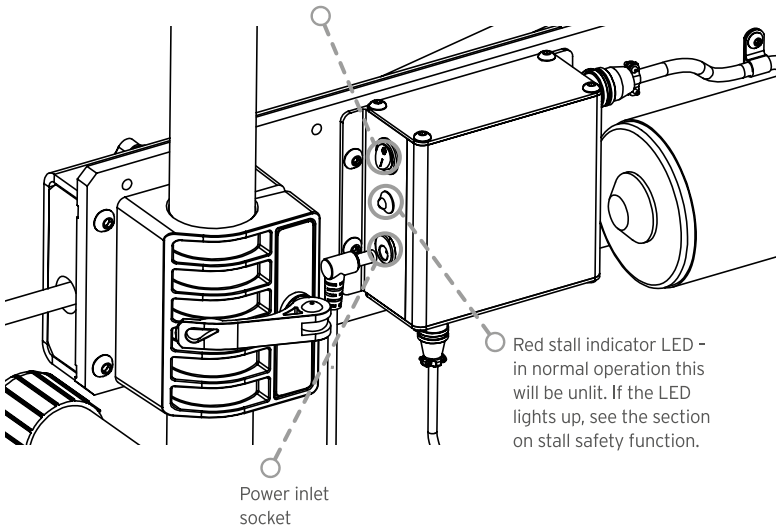
Before connecting the power supply to the F-Machine unit, first check that the switch on the electronics control box on the chassis is in the OFF position. You can now install the 90 degree co-axial connector from the power supply into the power inlet socket on the electronics control box on the rear of the chassis. Next, plug the supplied mains cable into the power supply and

connect it to a mains power socket. Turn on the power socket (where appropriate) and the blue LED indicator on the power supply block should light up, indicating power is connected.

Finally, the ON/OFF switch on the electronics control box can be turned ON and it should light up RED, indicating the F-Machine is now live.



ON/OFF switch set to the OFF position (as shown). When switched on it should light up RED, indicating the F-Machine is live.



Power supply information

The F-Machine power supply is a universal 110 - 240 volt unit that will adapt to the mains voltage of your country. There is no need to make any adjustment. The F-Machine power supply should be supplied with a region specific mains power lead (IEC 60320-1 C13). There may also be an earthed mains adapter to cover different regions. If you reside outside of these regions, you may have to obtain an earthed IEC 60320-1 C13 cable (main power lead) for your country which you can plug into the F-Machine power supply. These are commonly found on personal computers and other similar equipment. The alternative is to use an earthed adapter plug suitable for your region.



WARNING! Always ensure that the F-Machine is connected to an electrical outlet that has an earth connection and is protected by a miniature circuit breaker (MCB), and a residual current device (RCD) circuit which reduces the risk of electric shock.

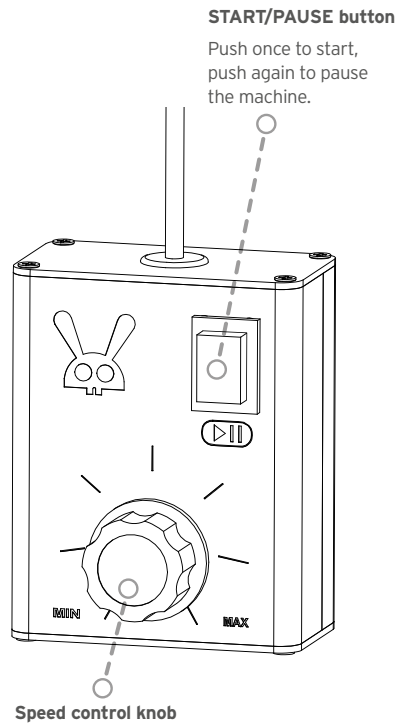
Start-up and operation



WARNING! The F-Machine has some external moving parts which could potentially cause injury if the operator is careless. It is very important to read and understand the notes in the General Safety Instructions.

Take the handheld speed controller and set the speed to slightly above the MINIMUM setting.

Press the START/PAUSE button on the hand controller once and the crank should start to turn slowly. There is a soft start safety feature on the motor controller, so the machine will start slowly at first and increase to the desired speed. You can now adjust the speed by rotating the speed control knob on the hand controller (clockwise for faster, anti-clockwise for slower). To temporarily stop the machine, press the START/PAUSE button again and the crank should stop turning. Press the button again and it should re-start at the previous speed level. If you wish to make any adjustments to the crank settings or the thruster rod length you should first disconnect the power source, rather than rely on the START/PAUSE button controller.



Stall Safety Function

The F-Machine electronics have been designed to cut out if the motor is stalled or overloaded for any reason. In the event that this happens, the motor should stop and the red stall indicator LED on the electronics control box should light up. To remedy this, immediately switch off the machine at the power socket and inspect the mechanism for any reason that might have caused the issue. Remove any foreign objects that may be caught in the mechanism before carefully re-starting the machine. The red stall LED should go out if the problem is corrected.

Note: The machine can stall for a number of reasons, including that there is too much resistance applied to the end of the thruster rod. This is less likely to occur if you decrease the crank arm setting to a smaller displacement, which will reduce the load on the motor and electronics.



SAFETY WARNING: If the machine is operated for extended periods and/or at high speed and loads the motor will become HOT. This is within the design capability of the motor. However, care must be taken to not touch the motor surface to avoid scalding. Observe and follow the safety labels on your F-Machine. Do not cover the motor or allow it to come into contact with anything. Never leave the F-Machine running or connected to the mains power when it is unattended.



WARNING! Always disconnect the F-Machine from the power source before making any repairs or adjustments. Repairs should only be carried out by competent qualified persons. Only use genuine F-Machine replacement parts - contact F-Machine or your retailer for assistance.

Fault Finding Procedures

Problem	Possible cause	Indication of issue
Product does not start or runs intermittently	No power reaching the power supply	The blue LED on the power supply should light up if working properly
	No power reaching the electronics control box	The ON/OFF switch on the electronics control box should light up RED when switched on. If the switch does not light up:
	Power is reaching the electronics control box (switch lights RED) but there may be a fault in the electronics control box and/or hand controller	Under normal conditions the crank arm of the motor should 'kick' slightly when the ON/OFF switch on the electronics control box is powered on. If the crank does not kick:
	Motor is not working/damaged	Grinding/whirring sound from motor, the crank may or may not turn
	Crank is loose on motor shaft	Motor shaft is spinning in the crank, but crank not moving
	Red Stall LED on electronics control box lights up	Motor does not turn, or tries to turn then cuts out
		Motor cuts out when load is applied to the end of the thruster rod
Product makes a knocking or other strange sound	Loose components	Product is excessively noisy compared to normal
	Motor gearbox needs re-greasing	Noises emanating from the motor/crank arm area
	Motor gearbox damaged	<ul style="list-style-type: none"> • Crank arm moves intermittently • Grinding/knocking noises from the motor gearbox and/or crank does not turn • Crank arm moves in a jerky motion

Solution

- Check the wall socket is switched on and working
- Check the fuse in the power plug if one is fitted and replace if needed
- Check the power cord for any signs of damage and replace if necessary
- Check the mains power lead (C13 connector) is fully pushed into the power supply
- If the blue LED remains unlit, replace the power supply

- Check the 90 degree connector is fully inserted in the power inlet socket on the side of the electronics control box
- Check the cable between the power supply and electronics control box and the 90 degree connector for damage
- Replace the power supply if damaged

- Check the quick connector for the hand controller is fully engaged into the connector on the bottom of the electronics control box (make sure keyway is aligned)
- Check the hand controller speed control knob is set above zero
- Check the hand controller wire for damage & replace the assembly if necessary
- Check the quick connector for the motor is fully engaged into the connector on the side of the electronics control box (make sure keyway is aligned)
- Check the hand controller speed adjustment knob is keyed tightly to the potentiometer shaft and is not freely spinning
- If the motor does not 'kick' and does not respond to the hand controller after the above tests, you will need to replace the electronics control box and/or hand controller

- Disconnect from power supply, remove the gearbox cover and check the gears
- Replace motor if any damage is found

- Unplug the product from the power source
- Tighten crank arm connection on the motor shaft

- Unplug the product from the power source
- Inspect the mechanism for foreign objects and remove any found
- Disconnect the connecting rod from the crank arm and try and move the motor and slider block independently to identify the problem area if necessary
- Carefully re-start the machine following the start-up procedure

- Reduce the crank arm setting to lower the load on the motor and electronics
- Reduce the size and weight of any toys and attachments on the thruster rod

- Disconnect the product from the power source
- Check all the nuts, bolts and connections are tight as per the set up instructions laid out earlier in this manual

- Disconnect the product from the power source
- Remove the gearbox cover screws and inspect the gearbox
- Re-grease if necessary using a thick lithium type grease

- Disconnect the product from the power source
- Disconnect the connecting rod from the crank arm by undoing the crank thumbwheel connection fully
- Rock the crank arm back and forth to check for excessive movement and knocking noises
- Remove the motor gearbox cover and inspect for damage
- Replace the motor if necessary

Additional Information

Service and repair

Have your F-Machine serviced by a qualified repair person using only genuine replacement parts. This will ensure the safety of the F-Machine is maintained.

Never attempt to service or modify items such as the power supply or electronics which are unserviceable and could expose you to mains voltages. Modification to the electronics may affect the safe operation of the F-Machine and should not be attempted under any circumstances.

Technical specification

Product model:	F-Machine Pro4
Power supply model:	PS-05
Power supply rated voltage:	110-240 V a.c. 50/60 Hz
Motor voltage:	24 V d.c.
Motor type:	Brushed DC gear motor
Motor no load speed (n_0):	270 rpm
Packaging dimensions:	63 x 29 x 30.5cm
Gross weight:	Approx 13.9Kg
Thruster rod screw thread:	M8 x 1.25

Transportation and storage

The F-Machine comes complete with a re-usable storage bag to keep your product neatly and discreetly packed away and out of sight of prying eyes. Always clean and inspect your F-Machine prior to packing and storing it for longer periods. Ensure that all components, attachments and toys are dry before placing them back into the storage case in the same configuration that they arrived in, in order to preserve your F-Machine in the best possible condition.

Recycling and disposal



Waste and end-of-life electrical products should not be disposed of with your household refuse. Please use recycling facilities where they exist. Check with your local authority or consult your retailer for recycling advice.

Limited Warranty

This product carries a limited warranty of 12 months starting from the day of purchase. Please retain your original receipt, which will be required as proof. The warranty excludes commercial use.

Refer to regional website for regional specific warranty.

This warranty specifically excludes losses due to:

- Normal wear and tear including accessory wear
- Overload, misuse or neglect
- Failure of consumable items (such as batteries)
- Repairs attempted by anyone other than an authorised agent or competent qualified persons

- Any modification of the product away from the original specification
- Accidental damage caused by foreign objects or substances/liquids
- Failure to follow manufacturer's guidelines
- Transport damage
- Due to continuous product improvement, we reserve the right to change the product specification without prior notice.

This warranty does not affect your statutory rights. For further inquiries relating to the warranty please contact F-Machine or your retailer.

EU Declaration of Conformity



We,
F-Machine, Unit 860, 26 The Hornet, Chichester, West Sussex PO19 7BB,
United Kingdom

Hereby declare that the equipment mentioned hereafter:

Equipment: F-Machine
Model Number: F-Machine Pro 4
Serial Numbers: FMP-, PS05

Complies with the essential health and safety requirements of the following directives:

2014/35/EU - Low Voltage Directive (LVD)

References to the following harmonised standards were made:
EN62368-1:2014+A11:2017

2014/30/EU - Electromagnetic Compatibility (EMC)

References to the following harmonised standards were made:
EN55032:2015, EN55035:2017, EN61000-3-2:2019, EN61000-3-3:2013+A1:2019

2006/42/EC - The Machinery Directive

References to the following harmonised standards were made:
EN ISO 12100:2010

Authorised signatory and technical file holder:

F-Machine, Unit 860, 26 The Hornet, Chichester, West Sussex PO19 7BB,
United Kingdom.

On: 21/04/2022

A handwritten signature in cursive script that reads 'John Lawrence'.

John Lawrence, Quality Director

Disclaimer

F-Machine is a FUN-Machine designed for fun use. Where that fun takes you is entirely up to you and entirely at your own risk. We at F-Machine accept no liability or responsibility whatsoever for injury or death caused as a result of the use of the F-Machine. As already stated in this manual, the F-Machine is very powerful and great care **MUST** be taken at all times when using it. If for any reason you are not happy with the F-Machine, then please return it unused in its original packaging within 14 days & you will be issued with a full refund.



Should you have any issues with your F-Machine or require spare parts, please contact your nearest F-Machine retailer or email us directly at [**sales@f-machine.com**](mailto:sales@f-machine.com)