COCOON create

3DPRINTERTOUCH

INSTRUCTION MANUAL
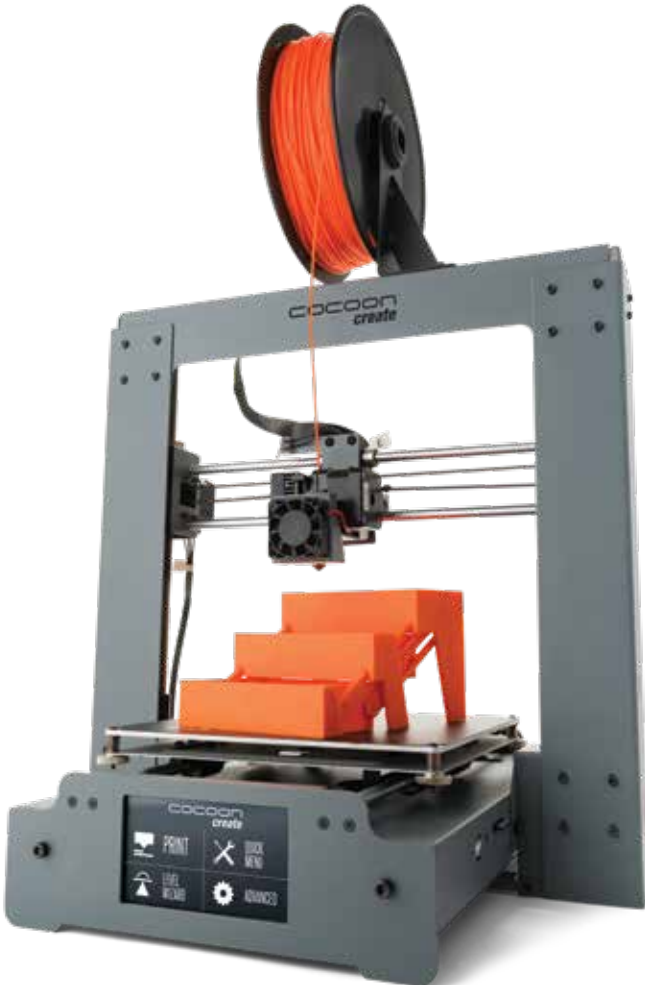
MODEL NUMBER: HE161192

VERSION 1
ISSUED 23/11/17

IMPORTANT

Getting the most out of your 3D Printer Touch:

Read the manual carefully
It will help you set up with ease

Visit www.cocoonproducts.com.au
We have additional support videos and guides

Call After Sales Support - 1300 663 907
Available Monday - Friday, 8:30am - 6:00pm AEST

Email customercare@winplus.com.au
We're always happy to help

WARRANTY NOTE

If you experience any issues with this product or its performance is not what you had expected, please contact us at Winplus before returning the item to the store.

It is likely that we can resolve any problems for you via phone or email.

We can be reached on:

Phone: 1300 663 907 (Mon - Fri; 8:30am - 6:00pm AEST)
Email: customercare@winplus.com.au
Web: www.winplus.com.au

COCOON™
create

3D Printer Touch

Warranty Details

The product is guaranteed to be free from defects in workmanship and parts for a period of 12 months (dependant on product) from the date of purchase. Defects that occur within this warranty period, under normal use and care, will be repaired, replaced or refunded at our discretion. The benefits conferred by this warranty are in addition to all rights and remedies in respect of the product that the consumer has under the Competition and Consumer Act 2010 and similar state and territory laws.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

SAFETY INSTRUCTIONS

Before you get started, please read these important safety instructions.

CAUTION: The Cocoon Create 3D Printer Touch generates high temperatures and includes moving parts that can cause injury. Never reach inside of the Cocoon Create 3D Printer Touch while it is in operation, and allow time for the printer to cool down after operation.

HOT SURFACE
DO NOT TOUCH

MOVING PARTS

Vapours/fumes may be irritating at operating temperatures. Always use the Cocoon Create 3D Printer Touch in an open, well ventilated area.

Do not leave the Cocoon Create 3D Printer Touch unattended during operation

Contact with extruded material may cause burns. Wait for printed objects to cool before removing them from the build platform.

Always take care when using the Scraper. Never direct the Scraper towards your fingers.

Only use the 3D Printer Touch in a clear working area

- The printer must not be exposed to water or rain, or damage will occur.
- The printer is designed to be used with ambient temperature ranging 15°C - 30°C, and humidity ranging 20% - 50%. Operating outside these limits may result in low quality models.
- In case of emergency, turn off the 3D Printer Touch at the power outlet.
- It is recommended that you use eye protection when cleaning/sanding printed models to avoid small particles contacting eyes.
- Please read and understand the contents of this installation and user manual carefully. Failure to read the manual may lead to personal injury, inferior results, or damage to the 3D Printer Touch. Always make sure that anyone who uses the 3D printer knows and understand the contents of the manual and makes the most out of the 3D Printer Touch.
- 3D Printer Touch is not intended for use by persons with reduced physical and/or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety. Children should be under constant supervision when using the printer.
- Before installation, you should make sure that the 3D Printer Touch is unplugged from the power supply. Only using furniture that can safely support 3D Printer Touch.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.

3D Printer Touch has been tested according to the AS/NZS 60950-1, which falls under the low voltage directive. 3D Printer Touch must be used in conjunction with the original power cord. In combination, they guarantee safe use in relation to short-circuit, overload, over-voltage and over temperature. Always unplug the printer before doing maintenance or modifications.

CONTENTS

PARTS LIST

1 x Cocoon Create 3D Printer Touch (Extruder Tower, Heated Print Bed)
1 x Filament Spool Holder
1 x Filament Spool Stand
1 x Power Cable
1 x USB Cable
1 x SD Card

1 x Scraper
1 x Replacement PTFE Tube
1 x Hex Key Set
6 x Hex Bolts
2 x Cable Ties
4 x 10m PLA Filament
3 x Print Bed Mats
(1 on Print Bed and 2 spare)

1 x 0.4mm Drill Bit
1 x Extruder Cleaner
6 x Rubber Feet
1 x Levelling Card
1 x Instruction Manual
1 x Getting Started Guide
1 x Warranty Card

TECHNICAL SPECIFICATIONS

Printing

Print Technology:	Fused Filament Fabrication (FFF)
Build Volume:	200 x 200 x 180mm
Layer Resolution:	0.1 – 0.4mm
Positioning Accuracy:	X 0.012mm
	Y 0.012mm
	Z 0.004mm
Extruder Quantity:	Single Extruder
Extruder Diameter:	0.4mm
Print Speed:	10mm/s - 70mm/s
Travel Speed:	10mm/s - 70mm/s
Supported Print Materials:	Cocoon Create Branded PLA, ABS, PVA, HIPS, PLA Wood, PLA Flex, Conductive

Temperature

Ambient Operating Temperature:	15°C – 30°C
Operational Extruder Temperature:	170°C – 255°C
Operational Print Bed Temperature:	15°C – 109°C

Software

Slicer Software:	Cura
Cura Input Formats:	.STL, .OBJ, .DAE, .AMF
Cura Output Format:	.GCODE
Connectivity:	SD Card, USB port (Expert users only)

Electrical

Input Rating:	200-240VAC, 50/60Hz, 2.0A

Physical Dimensions

Printer Frame Dimensions:	400 x 410 x 400mm
Weight:	10KG

INTRODUCTION

1.1 What is 3D Printing?

3D Printing is a process whereby a real object is created from a 3D Design. Fused Filament Fabrication (FFF) is one of the most common technologies used by 3D Printers to achieve this. FFF works on an 'additive' principle by laying down material, such as PLA or ABS filament, in layers to create a 3D object.

1.2 From 3D Design to Printed 3D Object

3D Design ➡ Slice to GCODE ➡ Setup 3D Printer Touch ➡ 3D Printing Process ➡ 3D Printed Object

3D Design

Having a 3D Design is the first step to creating a 3D Object. To start your creative journey, visit www.cocoonproducts.com.au/3dcreator to download and share free 3D Designs. There are a number of websites that provide free access to 3D designs however all that we provide are already converted to the correct printing format (GCODE). Most other website files require reformatting (See 'Slice to GCODE' for further information).

Alternatively, you can create your own 3D Design using 3D Modelling Software. Programs such as SketchUp or Blender allow this, however this can take some practice before successfully modelling your 3D Design. After you've finished your 3D Design, you can export it as an .STL file, to be imported into a 'Slicer' program such as Cura.

Slice to GCODE

A 'Slicer' converts a 3D Design (usually in .STL or .AMF format) into individual layers. It then generates the machine code (such as GCODE) that the 3D Printer Touch will use for printing.

INTRODUCTION

We recommend Cura, as it uses a simple interface and includes a large amount of support material.

Setup 3D Printer Touch

It's important to set up your printer before every print. We've included some steps on page 12 in section 1.3 '**Good 3D Printing Practices**' for you to quickly refer to each time.

3D Printing Process

Now that you've loaded a GCODE file onto the printer, it will commence heating up the Extruder and Heated Print Bed, then start printing. While printing, the nozzle will move along the X and Y axis as each layer is printed. This can take some time, depending on the size of the 3D model, print speed of the 3D Printer Touch and resolution of each layer.

Here is an example of how size, infill, and resolution can affect printing time:

Dimensions:	62.5 x 25.75 x 67.75mm		70 x 70 x 140mm	
Infill:	20%	**0%**	20%	20%
Resolution:	2mm	2mm	2mm	**1mm**
Print Time:	53min	39min	6hr 40min	13hr 12min
Filament Used:	4m	2.54m	45m	45.67m

3D Printed Object

Once the printer has completed all the layers, you will have a 3D Printed Model.

The Cocoon Create 3D Printer Touch is compatible with a broad range of filament types and is capable of printing 3D models ranging from small and simple to complex objects with moving parts. What you print is limited only by your imagination.

INTRODUCTION

1.3 Good 3D Printing Practices

Please refer to these steps during every print to ensure the best quality.

Before Printing

1. Ensure your GCODE file is correctly setup, filament diameter is set to 1.75mm and correct temperature settings for the material you are using (refer to table 3.3.1, page 24)
2. Check all cables and connectors are connected
3. Check that Heated Print Bed is level and approximately 0.1mm from the nozzle
4. Check that Heated Print Bed is clean and dust free and nozzle does not have excess material stuck to it

Always check GCODE file settings match filament and printer

Always check Print Mat is clean and there is no residual plastic
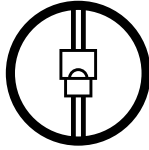
Always check all cords are connected
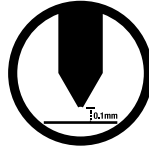
Always check Extruder distance is 0.1mm from Print Mat
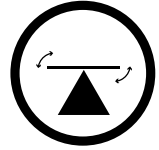
Always check Print Bed is level

During Printing

1. Closely monitor the first layer being printed – Most problems will occur in the first layer. If problems occur, stop the 3D Printer Touch at the power outlet
2. Do not leave the 3D Printer Touch unattended while in operation
3. Keep hands clear while machine is operating

After Printing

1. Wait for the Heated Print Bed and Extruder to cool down
2. Carefully remove 3D Object using the supplied scraper. Never use Scraper towards your body. Keep Scraper evenly flat when scraping to avoid damage to the Heated Print Bed. Damaged Heated Print Bed will affect adhesion for future prints
3. Store 3D Printer Touch in a clean, dry environment

PRODUCT OVERVIEW

2.1 Printer Front View
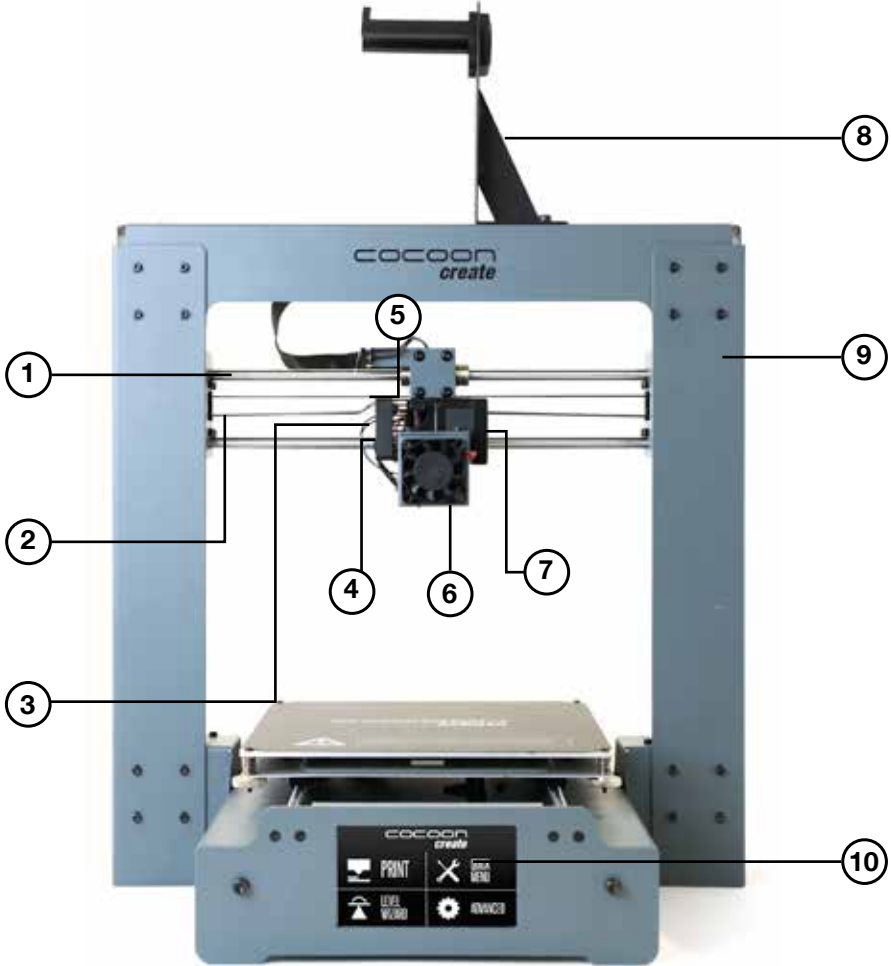
1. X Rail	**5.** X Stop (Micro Switch)	**8.** Filament Spool Holder Assembly
2. X Belt Drive	**6.** Filament Cooling Fan	**9.** Tower Frame
3. Extruder Spring Lever	**7.** Extruder Driving Motor	**10.** Touch Screen
4. Extruder Cooling Fan		

PRODUCT OVERVIEW
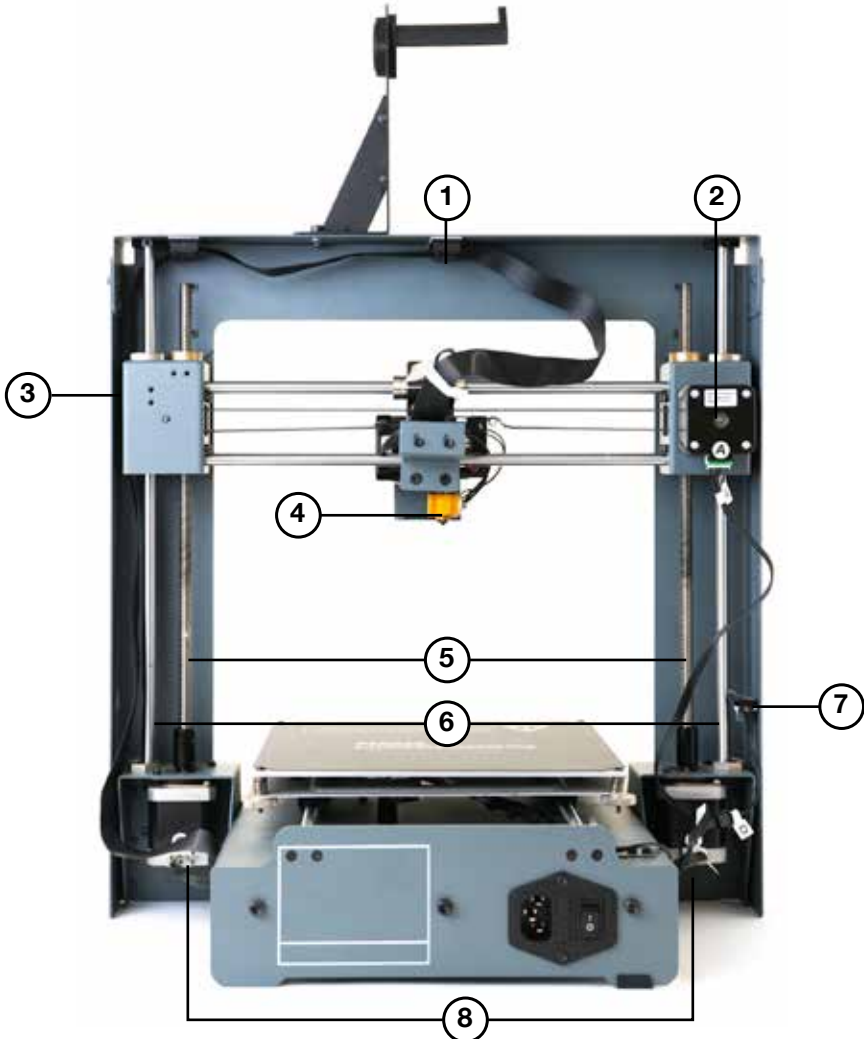
1. X Cable Track
2. X Axis Stepper Motor
3. Z Cable Track

4. Extruder
5. Z Drive Screw
6. Z Rod

7. Z Stop (Micro Switch)
8. Z Axis Stepper Motor

PRODUCT OVERVIEW

2.3 Print Bed
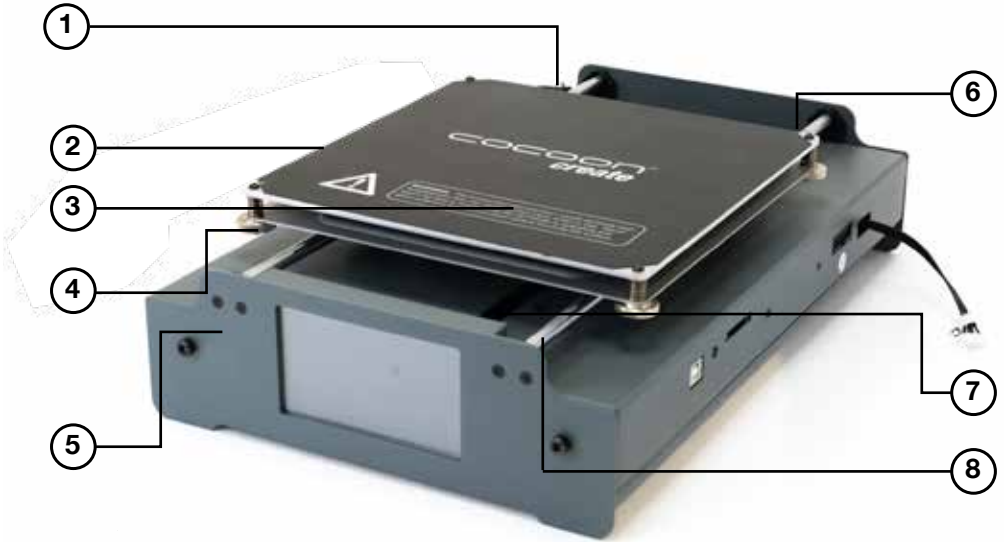
1. Y Stop (Micro Switch)
2. Heated Print Bed
3. Printing Mat
4. Levelling Thumb Screw
5. Print Bed Frame
6. Y Axis Stepper Motor
7. Y Belt Drive
8. Y Rail

PRODUCT OVERVIEW

2.4 Control Panel
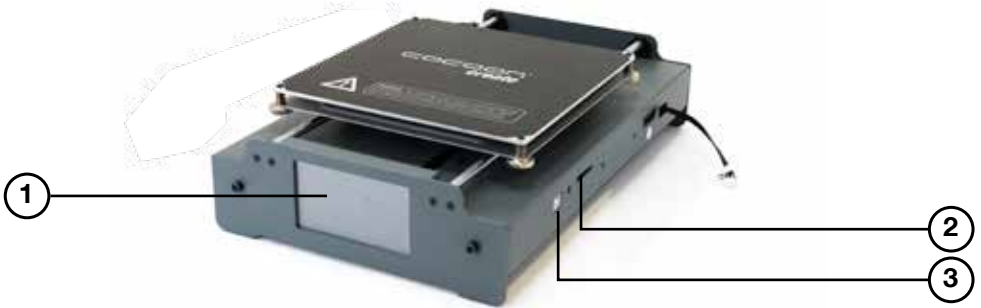
1. Touch Screen   **3.** Mini USB Port   **5.** Power Switch

2. SD Port   **4.** Power Socket

PRODUCT OVERVIEW

2.5 Touch Screen Control Panel
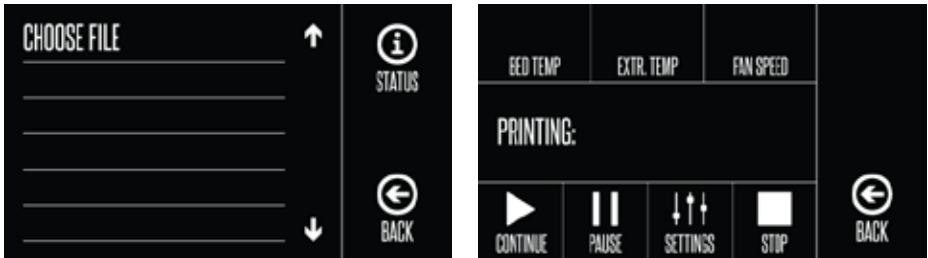
Print

- **Choose File:** Shows files on SD card ready to print
- **Status:** Status of chosen print file
    - **Bed Temperature:** (0-109ºC)
    - **Extruder Temperature:** (0-255ºC)
    - **Fan Speed:** (0-100%)
    - **Continue:** Starts/resumes printing the selected file
    - **Pause:** Pauses the currently printing file
    - **Settings:** manually increase/decrease print speed (0-300%), extruder temperature, bed temperature and fan speed

*NOTE: If you are making changes in '**Settings**', ensure you select '**Confirm**' to proceed to update the changes made for your current print file*

- **Stop:** Stops the current print job completely
- **Back:** Return to Main Menu

PRODUCT OVERVIEW

Quick Menu

- **Preheat:** Preheat Extruder and Heat Bed Temperature for PLA or ABS filament
- **Home XZY:** Automatically resets Extruder location to Home position
- **Move:**
    - **-X Axis+:** Move the Extruder along the X-Axis manually
    - **-Z Axis+:** Move the Extruder along the Z-Axis manually
    - **-Y Axis+:** Move the Extruder along the Y-Axis manually
    - **Extruder Flow:**
        - **In:** Pulls filament into the Extruder
        - **Out:** Ejects the filament out of the Extruder
    - **Disable Motor:** Unlocks Print Bed to be movable manually
    - **Home X:** Position the Extruder to the home position on the X-Axis
    - **Home Y:** Position the Extruder to the home position on the Y-Axis
    - **Home Z:** Position the Extruder to the home position on the Z-Axis
    - **Back:** Return to Quick Menu
- **Cool Down:** Select to begin cooling down your Printer's Print Bed and Extruder
- **Change Filament:**
    - **Add Filament:** Select from Touch Screen the type of filament you will be inserting.
    - **Remove Filament:** Select from Touch Screen the type of filament you will be removing. Your Printer will begin to heat up the Extruder and Print Bed to the correct temperature settings of selected filament type
    - **Raise Extruder:** Automatically raise the Extruder from the Print Bed
    - **Preheat PLA:** Select for printing with PLA Filament. Once selected, the Bed Temperature and Extruder Temperature status will be displayed on touch screen
    - **Preheat ABS:** Select for printing with ABS Filament. Once selected, the Bed Temperature and Extruder Temperature status will be displayed on touch screen
    - **Back:** Return to Change Filament Page
- **Disable Motor:** Unlocks Print Bed to be movable manually on x and y-axis only
- **Back:** Return to Main Menu

18

PRODUCT OVERVIEW

Level Wizard

Follow instructions on the touch screen for levelling the Print Bed

- **Back:** Return to Main Menu
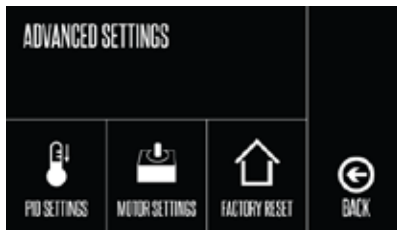
Advanced Settings

- **PID Settings:** (We recommend to leave setting as default if you are new to 3D Printing)
    - **PID-P:** Proportial Response
    - **PID-I:** Integral Response
    - **PID-D:** Derivative Response
    - **Confirm:** Select to update print settings
    - **Back:** Return to Advance Settings

- **Motor Settings:**
    - **X-Axis:**
    - **Y-Axis:**
    - **Z-Axis:**
    - **E-Axis:**
    - **Confirm:** Select to update print settings
    - **Back:** Return to Advance Settings

- **Factory Reset:** Resets 3D Printer to default Settings

- **Back:** Return to Main Menu

SETUP

3.1 Unboxing and Assembly

Your Cocoon Create 3D Printer Touch is packed tightly and carefully - take your time unpacking it.

To view a step by step video of the Unboxing and Assembly, visit **cocoonproducts.com.au**

1. Carefully remove the Extruder Tower and Heated Print Bed from the box and place them on a clean, level work space. Slot the rubber feet onto all 4 corners of the Heated Print Bed Base, and one on both sides of the Extruder Tower Base. Carefully remove the cable tie that holds the Extruder in place

NOTE: *Raise the Extruder by gently pulling the z-axis rod towards the top of the Extruder Tower and move the Extruder to one side prior to assembling the Printer*

2. Insert the Heated Print Bed Controller carefully through the legs of the Extruder Tower and align the bolt holes on each side. Using the Hex Wrench, insert and tighten the two bolts on bottom of each Extruder Tower

3. Insert the long cable connector marked 'A' into the motor connector of the Extruder Tower marked 'A'

4. Insert the short cable connector marked 'B' into the motor connector of the Extruder Tower marked 'B'

5. Insert the white connector marked 'C' into the motor connector of the Extruder Tower marked 'C'

SETUP

6. Insert the black connector marked 'D' into the black connector of the Extruder Tower marked 'D'

7. Insert one end of the black cable connector marked 'E' into the black connector of the Extruder Tower marked 'E'. Insert the other end to the black connector marked 'E' into the black connector on the side of the Heated Print Bed marked 'E'

8. Attach the upper arm of the filament spool holder by unscrewing the end cap, then reattaching. Position the Filament Spool Holder Stand on top of the Extruder Tower, then insert the bolts and tighten with the Hex Wrench

9. Ensure the power switch is in the OFF position, then insert the Power Supply Cable into the back of the 3D Printer Base. Insert the other end into a nearby mains power outlet. Turn on the power outlet, then turn on the power switch at the back of the 3D Printer Base

10. Wait for the printer to initialise, with the home screen shown on the Touch Screen.
You have successfully setup your Cocoon 3D Printer Touch

SETUP

3.2 Levelling the Bed

IMPORTANT NOTE: Levelling the bed is an extremely important step and if it is not done correctly every time, your prints will fail or be of poor quality

Before you begin to level the Heated Print Bed:

- Ensure the springs on all 4 corners of the Heated Print Bed are tightened all the way to the bottom by turning each thumbwheel anti-clockwise until you can no longer turn them. This reduces the distance between the 2 plates of the print bed to a minimum. Wipe the top of the Heated Print Bed with a clean, lint-free cloth to ensure no dust particles or other objects are on the Heated Print Bed
- Check the Z axis alignment. The X rail (holding the Extruder) should be parallel to the Heated Print Bed. If it is not, manually rotate individual z-axis stepper motors on the bottom of both shafts to adjust. Place a Hex Wrench on the z-axis rod and run it across the Heated Print Bed to check the z-axis is aligned horizontally
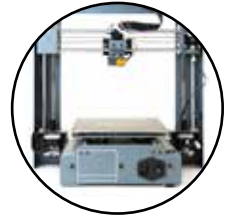
Option 1 – Using Level Wizard to Level the Bed

1. Press '**Level Wizard**' on the touch screen panel and follow the steps as indicated

*NOTE: The '**Level Wizard**' will guild you through levelling each corner of your Print Bed. Check the Heated Print Bed is approximately 0.1mm from the nozzle. Once all 4 corners are checked, it is recommended that you press '**Next**' to thoroughly check once more and ensure your Bed is levelled.*

2. To return to Main Screen, press '**Back**'

TOO HIGH
Nozzle Too High

Insufficient contact area resulting in poor adhesion and extrusion skipping

PERFECT
Correct Height

Filament pushed into the print bed slightly to maximize surface area contact whilst still allowing good extrusion flow

TOO LOW
Nozzle Too Low

Not enough clearance for the filament to be extruded, which can damage the extruder and/or print bed

SETUP

Option 2 – Manually Levelling the Bed

1. Select '**Quick Menu**' on the Main Screen and select '**Home XYZ**'

*NOTE: The 3D printer extruder nozzle will move to the '**Home**' position in the front left corner of the Heated Print Bed. Turn off the 3D printer.*

NOTE: Immediately turn off the machine if any of the motors are jamming or forcing against the chassis

2. Select Disable motor to manually move the Bed

3. Manually move the Bed so the Nozzle Head is at a corner of the Bed

4. Adjust the thumbwheels on the bottom of the Heated Print Bed so the distance between the Bed and the Nozzle head is approximately 0.1mm apart

5. Fine tune the gap distance by sliding the levelling card or using an A4 piece of paper. You should be able to feel a slight friction when sliding the paper between the Bed and the Nozzle Head

6. Repeat steps 4 to 6 for all other corners of the Bed

7. Move the Extruder to the centre of the Heated Print Bed and test the gap with the levelling card or a sheet of paper. Keep adjusting and testing until the gap is uniform on all points of the bed

SETUP

3.3 Filament

The Cocoon Create 3D Printer Touch uses high quality PLA and ABS filaments. Only use quality Cocoon Create filaments as using generic filaments may damage your 3D Printer Touch, affect the print quality and may void your warranty. Extra filament including multiple colours and types are available from the online store at **cocoonproducts.com.au**.

For beginners, we recommend using PLA materials as they are easy to print and does not produce fumes when printing. Before using other types of filaments, ensure you understand the advantages and disadvantages of other filaments and their proper usage.

3.3.1 Filament Types

Filament Type	PLA	ABS	PVA	HIPS
Extruder Temp:	215ºC	240ºC	175ºC	240ºC
Heat Bed Temp	60ºC	90ºC	50ºC	60ºC
Official Name:	Polyactic Acid	Acrylonitrile Butadiene Styrene	Polyvinylv Alcohol	High Impact Polystyrene
Printing Level:	Basic	Advanced	Advanced	Advanced
Advantages:	• Bioplastic • Non-Toxic • Less warping issues • Hard or soft/ flexible variants • High print speed	• Smooth finish • Durable • Ideal for mechanical parts	• Water soluble • Non-Toxic	• Lightweight • Cost effective • Dissolvable in Limonene
Disadvantages:	• Low heat resistance • Easier to break than ABS • Requires thicker walls than ABS	• Petroleum-based • Non-biodegradable • Heated Print Bed required • Fumes when printing • Sunlight deterioration	• Sensitive to high heat. **Do not heat over 190C**	• Only available in white
Finishing:	• Sanding possible • Limited gluing	• Easy sanding • Easily soluble in acetone	• Gluing Only	• Gluing Only

Alternative types of PLA

These PLA Alternatives require advanced knowledge of the 3D Printer Touch. Please visit **www.cocoonproducts.com.au** for details of filament types and parameters.

SETUP

3.3.2 Inserting Filament

1. On the Main Screen, select 'Quick Menu' > 'Change Filament' > 'Add Filament'

2. Select the desired type of Filament to be added. The Extruder will automatically be raised and your Printer will begin heating the Extruder to the correct temperature. When the temperatures are within a few degrees of the target, you are ready to insert the filament

3. Place the included filament onto the Spool holder. Carefully insert the end of the filament into the hole on the Extruder. The Extruder will begin to slowly pull the filament in. Once filament begins extruding, press 'Back' to stop

4. Carefully remove the extruded filament from the Nozzle Head and ensure the Print Bed is clean

WARNING: *Extruder and Heated Print Bed will still be hot*

3.3.3 Removing Filament

1. On the Main Screen, select 'Quick Menu' > 'Change Filament' > 'Remove Filament'

2. Select the desired type of Filament to be removed. The Extruder will automatically be raised and your Printer will begin heating the Extruder to the correct temperature

3. Once the Extruder reaches the correct temperature, the filament will begin retracting from the Extruder. Gently pull the filament up until it is released and press 'Back' to stop

NOTE: *Trim of the end of the retracted filament prior to reinserting into the Extruder to prevent clogging the Printer Nozzle.*

3.3.4 Storage

Both PLA and ABS filaments are sensitive to moisture. If stored in a humid environment, the quality of the filament can deteriorate, with a tendency to bubble and spurt from the nozzle tip. This will affect print quality, so when storing PLA or ABS for an extended period of time, follow these tips.

• Store in a sealed, air tight bag/container. We recommend a vacuum seal bag
• Store with a silica gel (moisture absorber) pack. One is included with each filament spool

SETUP

3.4 Using the SD Card

3.4.1 Loading files from your Computer

1. Insert your SD Card into a card reader or memory card slot and connect to your computer (refer to your computer manual for further instructions if required)

2. The SD Card will appear as a folder (refer to your computer manual for further instructions if required)

3. Copy your converted GCODE files to the SD card, then safely remove

3.4.2 Printing from the SD Card

1. Insert the included SD card into the slot on the right side of the 3D Printer, ensuring that the metal contacts are facing upwards

2. Select 'Print' from the Main Menu and select your desired file to print

3. Once selected, your file will begin to load and your file status can be viewed on the touch screen. Your printer will automatically commence heating the Extruder and Print Bed to the correct printing range before commencing the print

NOTE: *If your file is not printing correctly, press the 'Stop' Button to discontinue the print. Ensure the extruder is raised prior to removing the print off the Bed*

NOTE: *Immediately turn off the machine if any of the motors are jamming or forcing against the chassis*

NOTE: *If you cannot access the Print menu, it is likely the SD Card is not mounted properly. Try removing and reinserting the SD Card.*

SETUP

3.5. Removing 3D Objects from the Bed

When the Cocoon Create 3D Printer Touch has completed printing your 3D printed object, it's time to remove the object from the bed.

1. Once the print is completed, the nozzle and Heated Print Bed will automatically commence cooling down. Wait until the Extruder and Heated Print Bed have cooled down to room temperature. This will allow the plastic to contract, making it easier to remove

2. Once cooled, turn off your 3D printer and carefully remove the 3D printed object using the supplied Scraper , carefully 'wedge' under one of the edges of the 3D object. Take care to keep the Scraper flat with the bed, as to not cause damage to the Print Mat

3. As one edge begins to lift, gently maneuver the Scraper forward to continue to 'wedge' between the 3D object and the Heated Print Bed

4. Once the part has fully separated from the bed, it is safe to remove

NOTE: Always take care when using the Scraper. Never use excessive force or scrape towards your hand.

NOTE: Always keep the Scraper as level as possible. Scraper can damage the print mat if not used correctly

NOTE: Removing a 3D object, particularly one with a large surface size, can be a long process. Never rush when removing a 3D printed object

TIP: If you are persistently having trouble removing 3D printed objects, try the following:

*   Use a layer of blue masking tape (designed to not leave behind residue) on the Heated Print Bed. Be sure to remove and replace after each print
*   Check if the printing mat is damaged and replace if needed

Replacement mats can be purchased at **cocoonproducts.com.au**

PREPARING TO PRINT A FILE

4.1 Creating a GCODE File

The Cocoon Create 3D Printer Touch prints 3D files in GCODE format. GCODE files provide essential movement and printer settings required to print your object. To prepare and convert your 3D file to GCODE format, you must use a 'Slicer' program such as Cura. Cura is a free open source slicer available for Windows and Mac platforms. Cura can convert various 3D file formats, such as STL files, into GCODE. Follow the steps below to download and install Cura.

4.2 Cura Setup

Install the Cura software on the included SD card or download the latest version of Cura from the link below:

https://ultimaker.com/en/products/cura-software/list

You can learn how to install and use Cura from below link:
https://ultimaker.com/en/resources/16579-installation

After installing Cura, please add your Cocoon Create 3D Printer Touch to Cura:

1. On first launch, Cura will ask you to add a 3D Printer Touch. Alternatively, you can add a 3D Printer Touch by selecting **Machine** > **Machine Settings** > **Add New Machine**
2. Select **Other**
3. Select **Custom…**
4. Enter Machine name as 'Cocoon Create Touch', or your desired name
5. Input Machine width and depth as 200
6. Input Machine height as 180
7. Change Nozzle size to 0.4mm
8. Ensure Heated Print Bed is ticked
9. Select 'Finish'

4.3 Download the Latest Cura Profile

For optimal print settings, download the most up to date Cocoon Create 3D Printer Touch Cura Profile from the link below and import it into Cura. Note this is optimized for use with PLA.

https://www.cocoonproducts.com.au/download/

SERVICING

5.1 Servicing your 3D Printer Touch

5.1.1 Replacing the Print Mat

The Cocoon Create 3D Printer Touch includes 2 Extra Print Mats.

Additional Print Mats are available for purchase from

cocoonproducts.com.au

1. Remove the current Print Mat by slowly peeling from one corner
2. Using rubbing alcohol and a microfiber towel, carefully remove any residual adhesive left on the Heated Print Bed
3. Peel the 3M backing from the new Print Mat
4. Gently place the new Print Mat onto the Heated Print Bed, making sure to align with each edge. It is recommended to start at a corner to ensure no bubbles become present
5. Use the Scraper to apply pressure on the new Print Mat, ensuring strong adhesion. Keep the Scraper level as it can damage the Print Mat

TIP: Warming the bed slightly may make removal easier. You can also use masking tape in lieu of a Print Mat. Blue painters tape is recommended.

5.1.2 Nozzle Cleaning

If your Extruder nozzle becomes blocked, follow these steps to clean the nozzle.

1. Remove the existing filament using steps from section 3.3.3 'Removing Filament'
2. Using a clean 0.4mm drill bit, insert the drill bit into the nozzle by hand, twisting while inserting
3. Remove the drill bit from the nozzle, twisting while removing
4. Repeat steps '2' and '3' three times, then follow the steps in section 3.3.2 'Inserting Filament' to re-insert the filament into the nozzle

SERVICING

5.1.3 Extruder Cleaning

If your Extruder becomes blocked, follow these steps to unclog the Extruder.

1. Remove the existing filament using steps from section 3.3.3 'Removing Filament'
2. Gently press down on the Extruder lever, and carefully insert the Extruder Cleaner into the filament hole. You will notice excess filament clogged in the Extruder being pushed through the nozzle.
3. Remove the Extruder Cleaner from the hole and repeat the step '2' until no more filament is exiting the nozzle.
4. Follow the steps in section 3.3.2 'Inserting Filament' to re-insert the filament into the nozzle

5.1.4 Routine Component Check

Motor Connectors

Loose motor connections could cause a 3D print to fail. It's a good habit to routinely check for any damage to the connectors or the black cables.

Axis Lubrication

Regular lubrication of the X and Y Axis rods is important for the longevity and smooth running of your printer. The rods can be lubricated with machine oil or synthetic grease. We recommend using bearing grease, and to apply generously to both the X Axis and Y Axis rods.

Nuts and Bolts

Loose nuts and bolts could affect the geometry of the 3D Printer Touch.

Check that all nuts and bolts remain firmly tightened. If required, re-tighten using the hex wrench.

5.1.5 Storing

Always store your 3D Printer Touch in a cool, dry location that is free from dust.

FINISHING

6.1 Finishing Techniques

6.1.1 Useful Tools/Equipment

- Safety Goggles
- Mask
- Long-nose Pliers
- Wire cutters
- Sandpaper (100, 200, 300, 400, 500, 600 Grit)
- Medium, fine and extra fine sanding sponges
- Acrylic based primer spray paint
- Acrylic based spray paint (colour of your choice)
- Acrylic based varnish spray paint

NOTE: *Different paint types are also compatible with PLA and ABS. Consult your local paint supplier for the best compatibility for your intended purpose.*

6.1.2 Removing Support Material

Even after support material is removed by hand, residual material will remain.

1. Ensure that safety goggles and a mask are worn for protection
2. Remove most of the support material by hand, taking care not to damage the 3D object
3. Using the long-nose pliers, carefully grasp some of the remaining material, then twist to remove. Repeat until no more material can be removed.
4. Using the wire cutters, cut away any excess filament.

FINISHING

6.1.3 Sanding

Though Fused Filament Fabrication (FFF) is capable of producing high quality objects straight out of the machine, the layer lines will be visible. Sanding will reduce these 'step' marks in the model.

1. Ensure that safety goggles and a mask are worn for protection

2. Starting with 100 grit sandpaper, carefully sand your 3D object using small, circular motions

NOTE: PLA is less resistant to high temperatures caused by sanding. Take your time sanding your 3D object to avoid damage.

3. Using the medium sanding sponge, sand difficult to reach areas of your 3D object

4. Gradually increase the sandpaper grid until the 3D print is smooth

TIP: Spraying a primer filler will also help to reduce the layer lines on the 3D Object. This can then be sanded away and repeated, until the desired smoothness is achieved

6.1.4 Surface Coating

Finally, to make your models more presentable, follow these steps;

1. Ensure that safety goggles and a mask are worn for protection

2. Ensure that your 3D object is clean and free from dust

3. Spray your model using an acrylic based primer, following the directions of your primer

4. Allow appropriate time to dry before applying additional coats

5. Spray your model using an acrylic based paint of your colour. Allow appropriate time to dry

6. Spray your model using an acrylic based varnish, following the directions of your varnish. Allow appropriate time to dry before applying additional coats.

NOTE: Different paint types are also compatible with PLA and ABS. Consult your local paint supplier for the best compatibility for your intended purpose.

Congratulations! Your 3D object now looks like a professionally finished product!

MAINTENANCE

The maintenance of 3D Printer Touch should be conducted by skilled person only. Always unplug the printer before doing maintenance or modifications.

In order to have a smoothly working 3D Printer Touch it is important to maintain it correctly. Please follow the safety/deterioration checks during maintenance:

- Check condition of all rubber belts
- Oil the lead screens with light machine oil (sewing machine oil)
- Check the condition of the power cable. Make sure there are no cracks in the sheath
- Check the condition of the wiring on the printer to ensure nothing is pinched of damaged
- Check the fans are operational during print
- Check the chassis is secure. Tighten any screws if there is flex in the frame

DISPOSAL OF PACKAGING

This product has been packaged to protect it against transportation damage. Unpack the appliance and keep the original packaging carton and materials in a safe place. It will help prevent any damage if the product needs to be transported in the future, and you can use it to store the appliance when it is not in use.

In the event, it is to be disposed of, please recycle all packaging material where possible. Wrapping can be a suffocation hazard for babies and young children, so ensure all packaging materials are out of their reach and disposed of safely. Observe any local regulations regarding the disposal of packaging and dispose of it appropriately for recycling. Contact your local authorities for advice on recycling facilities in your area.

DISPOSAL OF PRODUCT

Observe any local regulations regarding the disposal of waste products. Contact your local authorities for advice on recycling facilities in your area.

At the end of its working life, do not throw this product out with your household rubbish. Electrical and electronic products contain substances that can have a detrimental effect on the environment and human health if disposed of inappropriately. Observe any local regulations regarding the disposal of electrical consumer goods and dispose of it appropriately for recycling. Contact your local authorities for advice on recycling facilities in your area.

TROUBLESHOOTING

10.1 Troubleshooting

If having any troubles when using the 3D Printer Touch, please refer to the troubleshooting guide below, or call customer support on **1300 663 907**.

You can also visit **cocoonproducts.com.au** for support videos and advanced tutorials.

10.1.1 Printing Problems

Clicking sound from one of the stepper motors

One of your stepper motors may not be connected properly. Check each connection and then inspect the cable routing for any faults

File not printing

Remove the SD Card and insert into your Computer. Open the GCODE file using a text editor (eg. Notepad), and inspect if GCODE is readable or not. If file consists of multiple 'ÿÿÿÿ' symbol, then file has been corrupted. Try reformatting your SD Card and reloading the GCODE file.

NOTE: *Reformatting will delete all files on your SD card*

Not extruding when starting to print

Ensure that the nozzle temperature has been set to match your material

Not sticking to the bed

- Ensure that the bed is clean and free from dust
- Check that the bed is level and set to a distance of approximately 0.1mm
- If there are defects / deep scratches in the printing mat, it may need to be changed. Change the mat or use blue painters masking tape
- Add a brim or raft to your file
- Check that the bed temperature matches your material
- Ensure nozzle to bed gap is not bigger than 0.1mm. Material will solidify if gap is large.

Models Warping/Curling

- Check that the bed temperature matches your material
- Check the infill % of your GCODE. The higher the infill, the more likely to warp
- Add a brim or raft to your file

TROUBLESHOOTING

Model appears very 'stringy'

- Ensure that the filament diameter is set to match your filament spool (1.75mm), then try creating a new GCODE before printing again
- Check you are using the correct temperature for the filament used

Print stopped halfway

- Check that the GCODE file is complete and not corrupt
- Check the original model file

The motor does not stop at the end of axis

Check that the stop micro switches are aligned with the motor mount and registering.

The print head/bed does not move

- Check the part can be moved by hand when stepper motor is disabled. Clear anything that is blocking the path
- Check that the motor is turning (using position menu). If motor turns but belt does not, you will need to tighten the gear motor gear nut. Please visit **cocoonproducts.com.au** for further support.

10.1.2 Connectivity Problems

My 3D Printer Touch isn't turning on

Check that you have correctly inserted the power cable into the rear of the Control Box, the power cord is plugged into the mains outlet and that the Control Box power switch is on.

TROUBLESHOOTING

10.1.3 Other Problems

Filament stuck when removing

Please visit **cocoonproducts.com.au/3dprinter/videos** for a video on how to clear the nozzle with stuck filament.

Where can I buy more filament?

If you require more filament, visit our online store, **cocoonproducts.com.au** to purchase various colours and types.

What brand of filament should I buy?

We recommend using only Cocoon Create branded filament. Lower quality generic filaments can damage your 3D Printer Touch and potentially void your warranty.

What types of filament can my 3D Printer Touch Print?

The Cocoon Create 3D Printer Touch accepts various types of filaments including PLA, ABS, PVA, HIPS and specialty filaments such as wood, flexible, luminous and conductive. For our full range of filaments visit **cocoonproducts.com.au**

10.2 Useful Terms

ABS Filament

Commonly used plastic filament with good strength and industrial properties

Brim/Raft

Types of printed foundations that help models adhere to the printbed

Display

Provides the main interface for operating the 3D Printer Touch

Firmware

Software that is programmed into the electronic board

GCODE

Code that is produced using the slicing process. Describes the movements and temperature

TROUBLESHOOTING

settings of your 3D Printer Touch

Heated Print Bed

Surface that your 3D objects are printed onto

Nozzle

Opening at the bottom of the print head where filament is pushed through

PLA Filament

Commonly used plastic filament with low environmental impact

SD Card

Secure Digital memory card. This is where your GCODE files can be stored and accessed by the 3D Printer Touch

Slicing

Process that turns a 3D Design into a code that can be used by 3D Printer Touch

Spool

Filaments of PLA and ABS are wrapped, creating a spool

Stepper Motor

DC motors that move in discrete steps. This allows for precise positioning and/or speed control

.stl

A common file format for 3D Designs/Models

USB Cable

This cable allows communication between the Cocoon Create 3D Printer Touch and a computer, using the USB port of the computer

APPENDIX

References

Some of the 3D Models used in this manual and other included materials were sourced from the below:

Another Fidget Cube by mistertech
Published on September 4, 2016
www.thingiverse.com/thing:1732530

Creative Commons - Attribution

Twisted 6-sided Vase Basic by MaakMijnIdee
Published on March 7, 2012
www.thingiverse.com/thing:18672

Creative Commons - Attribution - Share Alike

Unicorn Head by kellesabelle
Published on February 5, 2012
www.thingiverse.com/thing:17090

Creative Commons - Attribution - Share Alike

Sliding Storage Drawers by Intentional3D
Published on August 27, 2015
www.thingiverse.com/thing:987412

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3D Printer Touch

Repair and Refurbished Goods or Parts Notice

Unfortunately, from time to time, faulty products are manufactured which need to be returned to the Supplier for repair.

Please be aware that if your product is capable of retaining user-generated data (such as files stored on a computer hard drive, telephone numbers stored on a mobile telephone, songs stored on a portable media player, games saved on a games console or files stored on a USB memory stick) during the process of repair, some or all of your stored data may be lost.
We recommend you save this data elsewhere prior to sending the product for repair.

You should also be aware that rather than repairing goods, we may replace them with refurbished goods of the same type or use refurbished parts in the repair process.

Please be assured though, refurbished parts or replacements are only used where they meet ALDI's stringent quality specifications.

If at any time you feel your repair is being handled unsatisfactorily, you may escalate your complaint. Please telephone us on 1300 663 907 or write to us at:

Winplus Australasia

PO Box 537 Bayswater Business Centre, Victoria, Australia

1300 663 907 - Hours: Mon-Fri 8:30am - 6:00pm AEST

customercare@winplus.com.au

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