# BUCCANEER®
Instruction Manual

The Buccaneer®

Carefully read all safety information and instructions before using the Buccaneer®.

Your new Buccaneer® is a cloud connected 3D printer which allows you to print 3D objects from any input device, including your smartphone, tablet, or computer. Buccaneer® features an automatically-leveled printing platform which was covered with a special material allowing for enhanced 3D printing experience.

Remember, Buccaneer® only supports PLA filament authorised by Pirate3D®. Printing with PLA filament produced by third party manufacturers may result in low quality prints and may damage your printer.

⚠ **CAUTION**
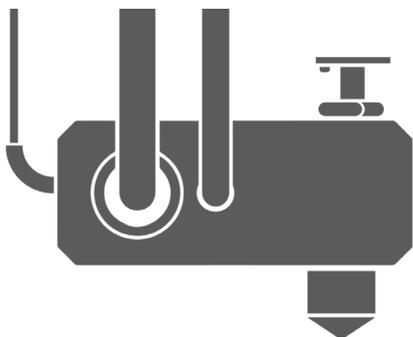
CAUTION: HOT SURFACE
Contact with skin may cause
burns.
DO NOT TOUCH.

WARNING: ROTATING FAN
BLADES
Can cause serious injury or cut.
Keep hands clear. Turn off and
lo**ck-out unit before servicing.**

Not for use by anyone under the age of 12. Anyone under the age of 16 needs adult supervision.
Please ensure that the removable platform is in place before starting a print. Always ensure that the power
adapter is plugged in before switching on the wall socket. In case of emergency, remove the power from the
wall socket.

For more information, contact us at **contact@pirate3d.com**.

Product Specification

The Buccaneer®

AC Input	90W, 110-240V / 0.4A (AC), 50 / 60Hz
DC Output	19V DC, 4.74A
Product Type	FDM 3D Printer
Ambient Operating Temperature	15° to 35° C [60° to 95°F]
Storage Temperature	0° to 40° C [32° to 104°F]
Operating Humidity Range	20% to 80%
Layer Resolution	50 microns
Printing Dimension	136mm x 96mm x 146.5mm W,D,H
WiFi	WIFI 802.11b/g/n
Nozzle Diameter	0.4mm
Filament Diameter	1.75mm

Contents

Contents

1 Package Contents

Buccaneer® 3D printer
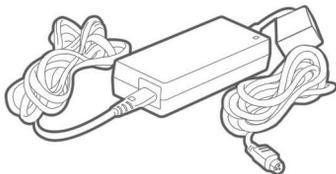
AC/DC power adaptor

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pirate3d.com/beta
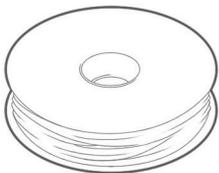
Filament spool

Removable printing platform

Safety Sheet and Tech Sheet

2 Safety Notice

Before removing the print or touching the Buccaneer® please make sure that the LED indicator on the front panel of your Buccaneer® is glowing **bluish-white (Fig. 1)**.
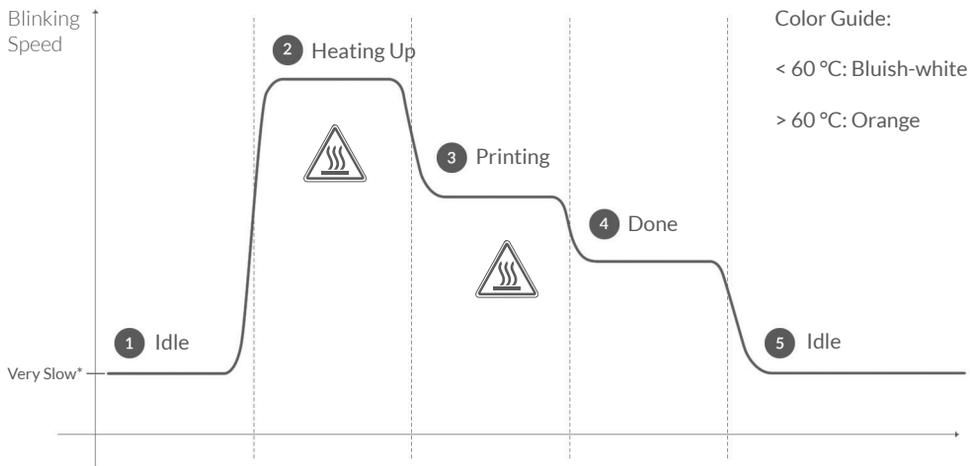
Fig. 1: LED signal system of the Buccaneer® 3D printer.

❶	Idle Stage:	LED will glow **bluish-white** and the light will flicker *very slowly.
❷	Heating Up Stage:	LED will glow **orange** and the light will flicker in **quick succession**.
❸	Printing Stage:	LED will glow **orange** and the light will flicker at **moderate speed**.
❹	Done Stage:	LED will glow **bluish-white** and the light will **flicker slowly**.
❺	Idle Stage:	LED will glow **bluish-white** and the light will flicker *very slowly.

*One blink every 3 s

3 Setting up the Buccaneer®

3.1 Video Tutorial Guide

Watch the setup video by going online to
www.pirate3d.com/tutorials.

Then select Pirate3D - Instructional Videos and
watch the videos.

3.2 Switching on the Buccaneer®
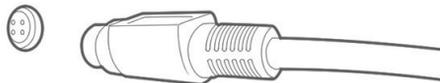
Fig. 2: Connecting the power cable to the
Buccaneer®.

Buccaneer® 3D printer does not have an ON/OFF
switch.

To switch on the printer, simply attach the power
cable to the printer (**Fig. 2**), then plug the adapter
into the power outlet.

You should see the LED indicator on the front panel
of the Buccaneer® glow **bluish-white** and start
flickering slowly.

3 Setting up the Buccaneer®

3.3 Installing the Buccaneer® 3D print app

Fig. 3: The Buccaneer® 3D print app icon.

Download the app:

Windows
http://pirate3d.com/windows/

iOS App
https://itunes.apple.com/us/app/bucca-
neer-3d-printer/id922822022?mt=8

Android
https://play.google.com/store/apps/details?id=com.
pirate3d.buccaneer

3.4 Launching the Buccaneer® 3D print app

Fig. 4: Setting up your printer.

Launch the app and follow the instructions.

4 Loading filament

4.1 Preparing the filament
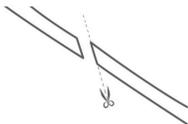
Fig. 5: Cutting the filament.

Remove the filament cartridge from the package. Sharpen the tip of the filament thread by cutting it diagonally at approximately 45° (Fig. 5).

4.2 Inserting the filament
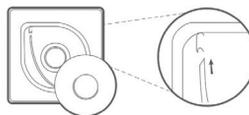
Fig. 6: Inserting the filament.

Insert the filament into the small hole in the top cover of the Buccaneer® and push it all the way in. You should feel some resistance. **Stop when you feel that the filament cannot be pushed any further.** You can now place the spool into a slot in the top cover of the Buccaneer®.

Ensure that the filament will uncoil in a clockwise direction, as seen from the top.

4 Loading filament

4.3 Loading the filament

Fig. 7: Loading the filament.

Press the **Load filament** button in your app and let the printer run its operation, follow all instructions there.

4.4 Filament emerging from the nozzle

Fig. 8: Emerging filament.

Filament is successfully loaded when you see filament coming out from the nozzle and it prints a line on your platform.

Repeat the steps explained in Section 4 (Loading filament) each time you change the filament.

5 Using the Buccaneer®

5.1 Adding a new print

Step 1. Launch the Buccaneer® app, then choose a model from our library or 'drag and drop' your .STL file into the windows app.
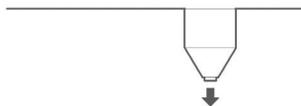
Or click **Add new 3D print** and select an STL file that you wish to print.

Step 2. Adjust printing settings.

Your Buccaneer® allows you to vary the printing settings. You can choose from four pre-defined Print Quality settings:

Fast (~300 microns per layer): This quality setting allows you to print fast at the expense of a rougher surface on the resulting print.

Normal (200 microns per layer): This is the default setting of the Buccaneer®. It allows you to produce fairly smooth prints in a reasonable amount of time.

High (100 microns per layer): This setting allows for a smoother looking print, at the expense of slower printing speed.

Highest (50 microns per layer): This setting allows for an extremely smooth looking print, at the expense of extremely slow printing speed.

Step 3. Print.

Note: You can send multiple prints to the Buccaneer®, and multiple users can send prints simultaneously. These prints will be automatically stored in a queue and printed based on priority. (printed in chronological order)

5.2 Advanced settings
You can also customize advanced options, such as adhesion type, automatic generation of supports, and print scale.

5.2.1 Adhesion type
Alter these settings to increase the surface area of the first printing layer to prevent deformation of the object during printing. You can select between two adhesion types:

Brim. A brim is a layer of plastic laid down around the base of your object to increase its surface area. Brim does not extend underneath your object, and it is easy to remove from the final print. **(Recommended Settings)**

Raft. A raft is also used to increase the surface area of your object. Unlike brim, it consists of multiple layers of plastic laid down onto your printing platform. Your object will be printed on top of these layers. Raft is often difficult to remove from the bottom of your object, and generally it results in a low surface quality of the bottom of a print.
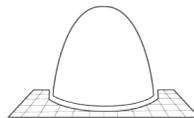
5.2.2 Supports
As a rule, supports are any structures attached to the underside of a 3d print sloping surface. These supports ensure that overhangs and undercut surfaces are able to print successfully.

Note: Not all prints will require support structures and/or increased adhesion. Certain prints may only need increased adhesion, but not supports.

5.2.3 Print scale
You can vary the size of the final print by increasing or decreasing its scale relative to the size of the printing platform.

5.3 Monitoring the printing process

Printing process consists of several stages, each corresponding to the operation the Buccaneer® is currently performing on your STL file:

Uploading. File is transferred to the printer directly (host mode) or through the Pirate3D® relay server (Internet). The speed of this process depends on the size of the file, and may take some time if the file is larger than 5MB.

Queuing. The STL file is being queued for printing.

Downloading. Buccaneer® only gets to this stage if the STL file was transferred to it via the Pirate3D® relay server, otherwise the Buccaneer moves on to Slicing stage.

Slicing. The successfully uploaded STL file is sliced by a special program inside the printer, based on the quality setting selected by the user. The duration of this stage depends on selected layer height and size of 3D model.

Extruder Heating. Extruder is being heated to 185°C before printing starts.

Printing. Buccaneer® prints the STL file. The progress of the printing process is indicated by a progress bar.

5.4 Removing a print

After your Buccaneer® finishes a print, wait for the printing platform to lower. Once the platform has lowered, LED indicator on the front panel of your printer will change its color to **bluish-white** and start flickering very slowly. Your Buccaneer® is now in **Idle Mode**, and the print can be easily removed from the printing platform. If there are any remaining debris on the platform, use a spatula to clear them.

5 Using the Buccaneer®

5.5 Ejecting filament

Press **Eject Filament** at the top right corner of the Buccaneer 3D print app and wait for nozzle temerature to reach 185°C. Once done, an alert will be shown to the user stating that the material can be removed (**Fig. 9**). Pull out the filament, and store the spool in a cool, dry place.

5.6 Maintaining Platform Adhesion

If the platform is no longer sticky, you may use spray mount from 3M or related products and spray a thin even layer over the surface.

Leave it to cure overnight and it will be ready for use again.

 Sharing access to your Buccaneer® with other users
All users on your WiFi network with the printer app can use your Buccaneer®.

6 Troubleshooting

⚠ **WARNING:** BEFORE SERVICING THE BUCCANEER® 3D PRINTER OR ACCESSING ITS MECHANICAL OR ELECTRONIC PARTS, ENSURE THAT THE POWER CABLE IS COMPLETELY REMOVED.

6.1 Buccaneer® Wi-Fi network is not detected once the printer is On
Once the Buccaneer® is turned on, it goes through a sequence of initialization operations. As soon as initialization is completed, you should hear the motors move the extruder back to the home position. After this, your computer will be able to locate **Buccaneer-XXXXXX** Wi-Fi network and connect to it.

If the LED indicator on the front panel of your Buccaneer® has turned red, you are experiencing a **post boot error**. In this case, contact a Pirate3D® distributor in your country. Alternatively, you can contact our Pirate3D® Customer Service via support@pirate3d.com for assistance.

6.2 Filament is not coming out of the nozzle
This may be due to two things

1) Filament is broken inside the tube.
Solution: Watch our online help videos on how to conduct this operation in our Pirate3D YouTube Instructional Videos playlist at **www.pirate3d.com/tutorials**.

2) Gears are not catching the filament.
Solution: Run the **Load filament** operation again and push the filament in more.

The next part will guide you on how to remove the extruder and clear jams

6 Troubleshooting

6.3.1 Removing the top cover

Fig. 9: Removing the top cover of the Buccaneer®.

Turn off the Buccaneer® by disconnecting the power cord.

Wait until the extruder cools down (approximately 10 minutes), then remove the top cover of the Buccaneer®.

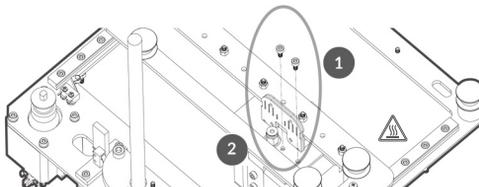**6.3.2 Locating the extruder fastening screws**

Fig. 10: Extruder fastening screws.

Locate the **1** extruder fastening screws.

Remove the extruder fastening screws with a HX2.5 hex screwdriver and carefully detach the extruder from the **2** gantry **by removing the data and power cable.**

6 Troubleshooting
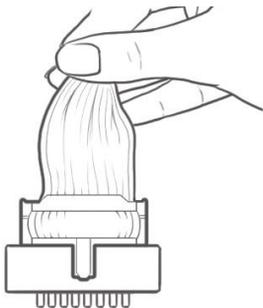
6.3.3 Removing the data cable

Fig. 11: Remove the data cable.

Pull up gently on the data cable. It should detach in a few gentle tugs.

6.3.4 Detaching the filament tube

Fig. 12: Close-up of the tube-fastener.

Unscrew the filament tube from the extruder by turning it around until it comes free.

6 Troubleshooting

6.3.5 Pushing out broken filament

Push filament through the bottom of the tube until the broken filament comes out from the top.

Follow steps **6.3.1** to **6.3.5** in reverse order to reassemble and reattach the extruder.

7   Contact Us

If you have any questions regarding your Buccaneer® 3D printer or if you are facing any technical issues not covered in this Instruction Manual, you can report any technical issue via a Pirate3D® support form at **www.pirate3d.com** or through the **Ask us** button (English language only).

You could also email us at support@pirate3d.com

8 Read This

Read this, if you don't do anything else.

1) Cut cable ties on the inside of the printer before turning it on. (Usually 3 cable ties)

2) Watch set up videos/trouble shooting videos at **www.pirate3d.com/tutorials.**

3) **DO NOT** download the Chrome app which is no longer supported.

Go To: **http://pirate3d.com/windows/**

4) **DO NOT** calibrate the printer the first first time you use it as it is calibrated for you at the factory.

5) **DO NOT** run the software on Mac as it is not supported (it is supported on iPhone and iPad).

6) If you need help, email: **support@pirate3d.com**

Don't Panic.