

Electrical Issues & PAT testing

Actions

- Monthly visual checks in each area for apparent damage or mis use
- Any donated or bought equipment should be checked for condition and history
- Cheap extension leads should be avoided
- Ensure equipment turned off when not required - turn off at socket or other isolator
- Avoid batteries (eg with laptops)
- Be careful with the 3 portable heaters in three rooms - they are a fire risk and expensive to run

PAT testing

- If we buy new from reputable suppliers, we can assume the equipment is safe at that point
- It unlikely that genuinely portable equipment generally needs testing under 3 years
- Equipment which is plugged in and does not move generally needs inspection at less than 5 years
- The CNC router and laser cutter need to be considered for visual inspection more frequently

In a small organisation like DDM

- We have a limited inventory of equipment used in a single location
- The risks are generally low if we act sensibly
- Most problems are caused by mechanical damage to insulation, flexible cables or water
- We should encourage members to be vigilant and use common sense
- We will need to PAT test
 - any second-hand equipment whose history is unclear
 - mains appliances subject to movement or damage after long period of use (eg vacuum cleaner)

Annual Inspection in June

We will require a repeat examination and inventory update every 12 months from 3 June 2023.

Mike Price
Dunblane Digital Makerspace
3 June 2023

Makerspace Equipment & PAT Testing					
Location		Manufacturer	Other Information	Needs Tested	Tested
Laser Room	CO2 Laser Cutter	Mantech			
	Air Compressor	Hailea	Powered through laser cutter's 13 amp socket		
	Chiller	S&A	Powered through laser cutter's 13 amp socket		
	Blower 650W	Yeungcheng	Powered through laser cutter's 13 amp socket		
	Laptop	HP	With charger for testing		
CNC Room	CNC machine	Shapeoko	24 v power supply for computer controller		
	Router	Makita			
	Various mains leads for CNC		There are various mains leads with intermediate plug and socket arrangements feeding the CNC machine and associated Router		
	Emergency Stop switch	Unknown	Mains flexes are connected to an emergency stop switch feeding both Router and CNC controller		
	Dust Extractor for CNC Router	Shepako	Located in MDF box with sound absorption material.		
	Desk Computer	Dell			
	Monitor for Computer	Asus			
	Vacuum Cleaner	Draper			
	Convection Heater	Unknown	2kW		
3D Room	Filament Printer (1)	Ultimaker	Separate Low voltage power supply		
	Filament Printer (2)	Ultimaker	Separate Low voltage power supply		
	Resin Printer	Anycubic	Connected by Euro plug adaptor		
	Resin Print Wash	Anycubic	Separate Low voltage power supply		
	4G WiFi router	ZTE	Separate Low voltage power supply		
	Convection Heater	Unknown	2kW		
	4 way Ext. lead (1)		Feeds resin printer, resin wash and desktop computer and monitor		
	Desk Computer	XPS case			
	Monitor for Computer	Dell			
	4 way Ext. lead (2)		Feeds 2 x Filament Printers (Appears to be needed due to damaged wall socket.		
	Unused 4 way ext. lead (3)		On shelves		
	Kettle	"Morrisons"	On shelves/ Appears unused dispose of or return to owner?		
Front room	Desk Computer	Lenovo	Separate Low voltage power supply		
	Unused 4 way ext. lead		In top drawer of desk.		
Kitchen	Convection Heater	Levante	2kW Under council Cat 5 router feeding library.		
	Fridge	LEC			
	Kettle	Breville	Previously PAT tested / marked for retest 2017.		
	Dust extractor	Draper			

	Toaster	Sunbeam	Test due 2019. Appears unused dispose of or return to owner?		
	DC Power Supply	Tenma			
	Oscilloscope	Hitachi	No test marked on scope, but mains lead tested 2021		
	Multi-meter	Fluke	Mains powered, last tested 1991, but mains lead tested 2021.		
	Desk work lamp	Pro Elec			
	10 way extension lead	Unknown	10 way extension lead feeding work desk equipment.		
	RCD plug	Luceco	Given building is RCD protected and this does not have appear to provide additional protection, maybe unnecessary.		
	Pulse generator	Global Specialities	Tested 1994, retest due 1997. In Cupboard		
	Oscillator	Farnell	Tested 1995, retest due 1997. In Cupboard		
	Signal generator	Iso Tech	In cupboard		
	4 mains leads		Last tested 2021. In cupboard Pulse and Signal Generators are missing such leads.		