

Action Sheet

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Reduced Energy Guide

Simple steps to reduce our impact on the environment and save money across our students' union shops and bars

Leisure machines

Quiz machines, arcade machines and fruit machines

What is a quiz machine?

Quiz machines that are found in students' union bars are networked gambling games terminals. They are classified as "skills with prizes" (SWP) machines. Most have at least 10 games available, with many having around 25.

What is an arcade machine?

Arcade machines are designed to allow games to be played in a semi-simulation manner. The console will consist of a screen displaying the game content and an interactive controller, commonly a gun or steering wheel. The games that occur on these units are commonly those that have been successful on domestic games consoles.

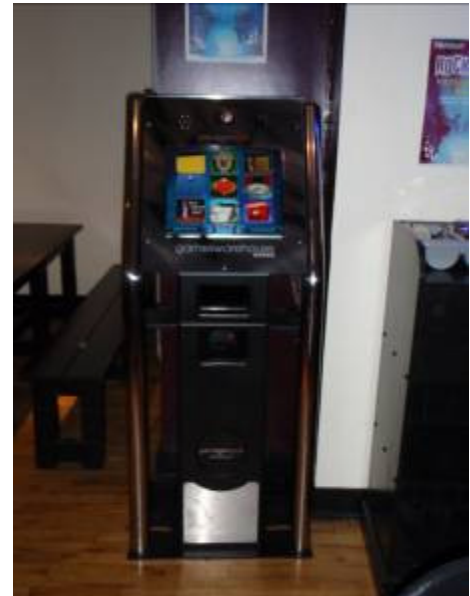
What is a fruit machine?

Fruit machines are casino-style gambling machines with three or more reels with symbols on that spin when a button is pushed. They are commonly controlled by a selection of buttons, but can sometimes be controlled by the use of a lever.

How do they work?

Quiz machine:

These devices operate via a computer and touch screen (typically LCD) interface. The games are normally run on a Microsoft Windows™ platform. As a consequence of this setup the energy consumption of a quiz machine is comparable with that of a desktop PC.



Quiz machine



Fruit machines

Arcade machine:

The machines are commonly upright, and are large units. Customers will commonly stand in front of them to play the game using the interactive part of the unit e.g. gun. Some arcade machines are based on driving games and in these games the customer will use a steering wheel. These machines have a computer based operating system. These units typically have inefficient CRT (old style TV) screens built in.

Fruit machine:

These machines consist of a selection of areas that are lit or not lit, the lit spaces being involved in the customer's game. The customer operates the unit using a selection of buttons and responds to the lights on the unit and the symbols on the reels. The unit also has a computer based processing system. The lights in the unit are commonly of an incandescent form and are therefore not

very energy efficient.

How much energy do leisure machines use?

Throughout our research in students' unions across the UK, we assessed a variety of leisure machines. The indicative energy consumption is provided in a table on the right.

Equipment type	Indicative TEC (kWh/24hrs)
Quiz machine	2.9
Arcade machine	10.2
Fruit machine	3.4

When do they use energy?

All of these appliances have a fairly consistent load, and energy consumption peaks when the machine is used by a customer. The peak is caused by the need for the computer system, which exists in different forms in each type of equipment, to process the activity that is occurring.

General guidance on energy efficient operation

- Switch off when trading area is closed
- Ensure any fans or grilles are clean and unobstructed

Timer plugs

Timer plugs are timed controllers that enable a schedule to be set for when an appliance should or should not be on. These can be fitted to a variety of appliances, are relatively cheap and readily available.



Timer plug

Quiz machine:

Fitting a timer plug, which costs around £20 for a good quality fitting, to a quiz machine would provide a payback of around 4 months. This is calculated on the assumption that they are located in a trading area with 12 hours closed time every day. If the quiz machine is off during this period then it should lead to a saving of 530 kWh, £60 and a reduction in carbon footprint of 0.28 tCO₂ per annum.

Arcade machine:

Fitting a timer plug, which costs around £20 for a good quality fitting, to an arcade machine would provide a payback of

around 1 month. This is calculated on the assumption that they are located in a trading area with 12 hours closed time every day. If the arcade machine is off during this period then it should lead to a saving of 1,860 kWh, £205 and a reduction in carbon footprint of 0.98 tCO₂ per annum.

Fruit machine:

Fitting a timer plug, which costs around £20 for a good quality fitting, to a fruit machine would provide a payback of around 3 months. This is calculated on the assumption that they are located in a trading area with 12 hours closed time every day. If the quiz machine is off during this period then it should lead to a saving of 620 kWh, £70 and a reduction in carbon footprint of 0.33 tCO₂ per annum.

*Please see glossary for *definitions and disclaimer.*