

Research – Analogue and digital photography - Phonoflex

What do people want from photography?
? Has the digital takeover left the
analogue days in the darkroom.

Design Brief

To design a product that will boast the characteristics of both
analogue and digital photography.

Chart representing how many
respondants use photography

■ Photography users ■ Non - users

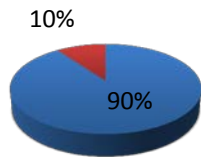


Chart representing whether
respondants prefer digital or analogue
photography

■ Digital ■ Analogue

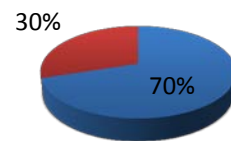


Chart representing why respondants
prefer Digital photography

■ Faster ■ Quality
■ Cheaper ■ Easy to upload and share
■ Allows mistakes

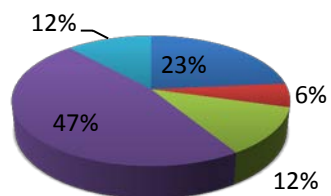
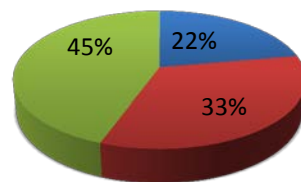


Chart representing why respondants like
Analogue photography

■ Meaningful ■ exciting ■ Quality



The Brief points:

- The product will be easy to use and ergonomic
- The product must have the appearance of a vintage and classic design
- The product must use digital technology
- The product must be colourful and resemble retro gadgets
- The product will have USB connectivity to enable sharing with a PC
- The product must incorporate the Analogue nostalgic feeling

The findings from the questionnaire and focus group proved
what the consumers' really want and need with regard to a
photography product. It was this secondary research and my
primary research into the technology behind photography that
produced an interesting design brief for a product.



Research mood board - Phonoflex



Nostalgic

Bold designs



Configurable

Multifunctional



Fashionable

Appreciation

Quirky

Instantaneous

Upload

Minimalistic



Quality

Unusual

Expensive

Reliable

Fun

Retro

Complicated



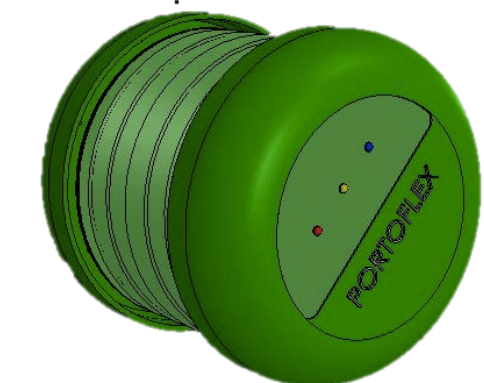
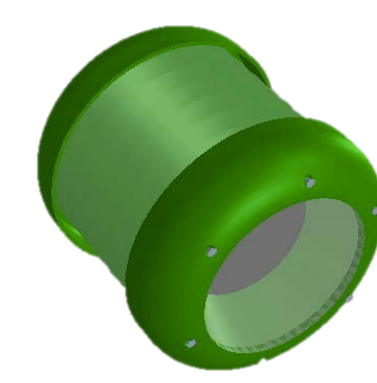
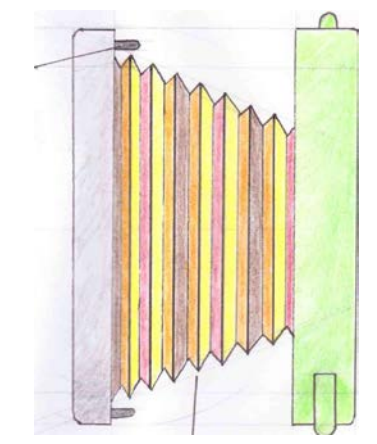
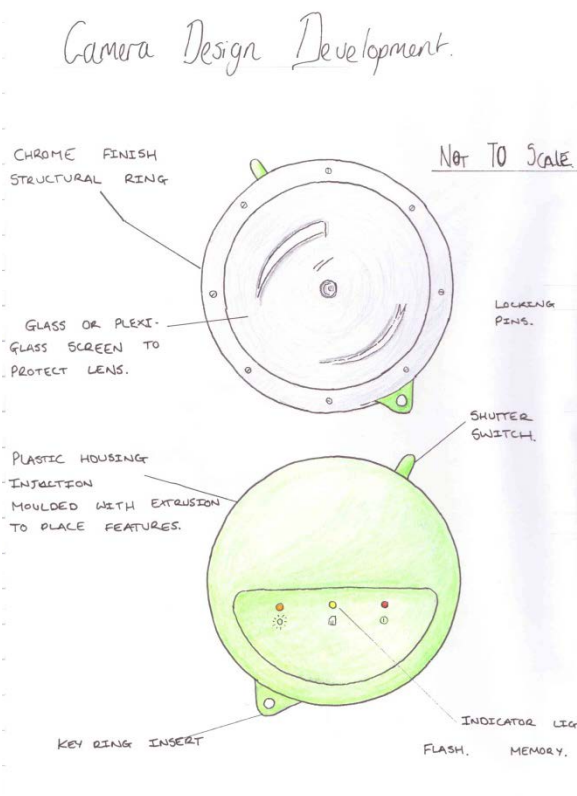
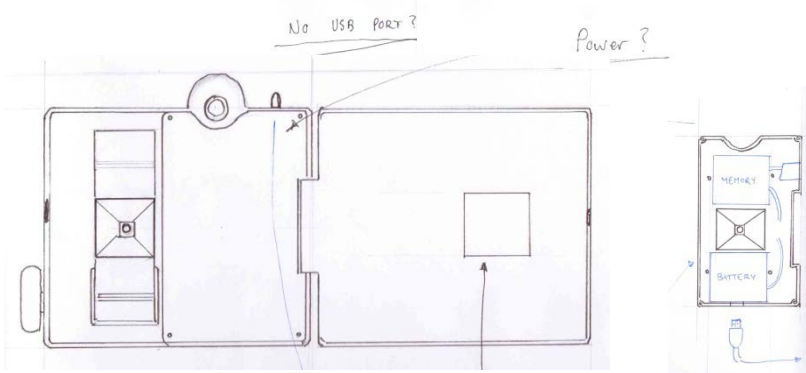
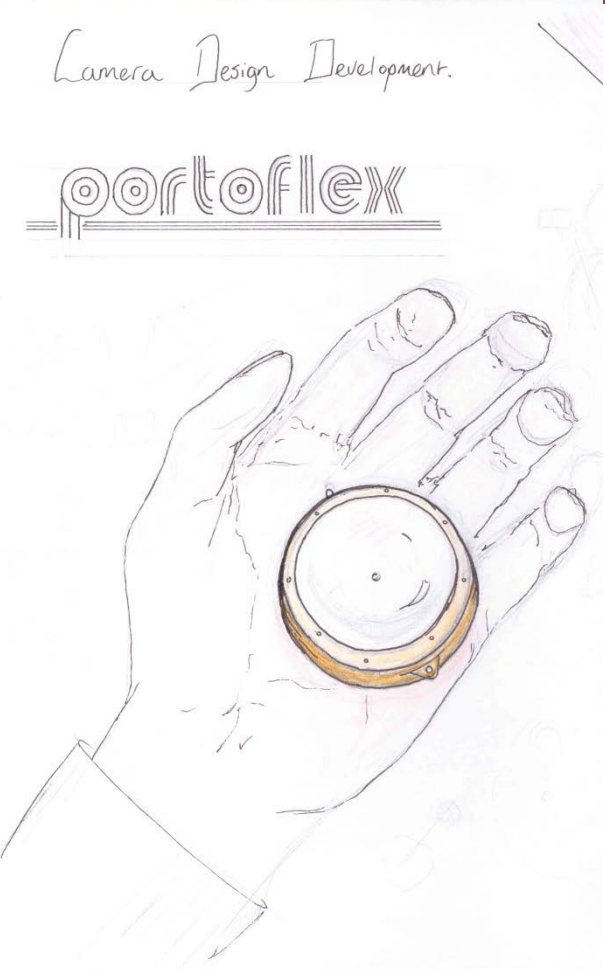
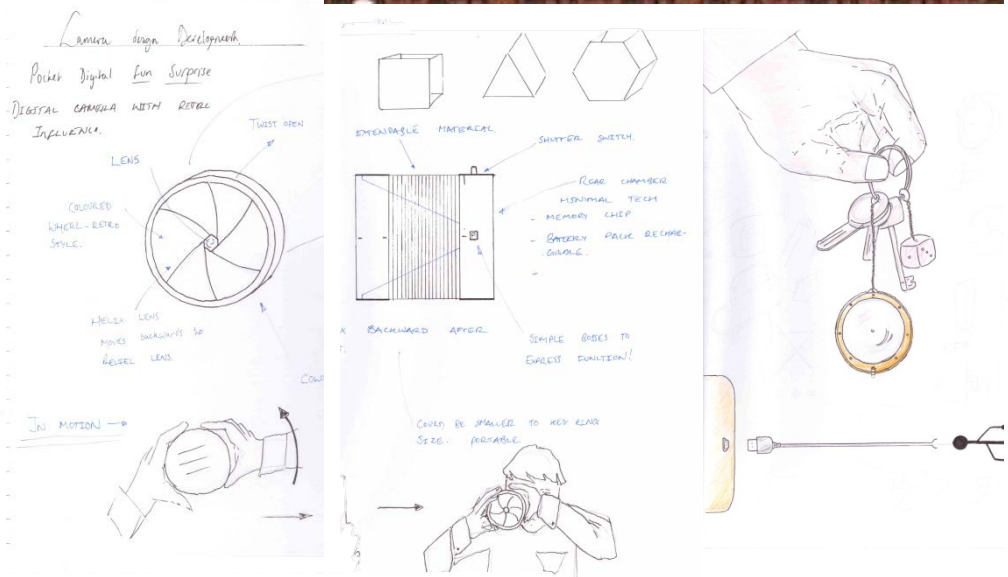
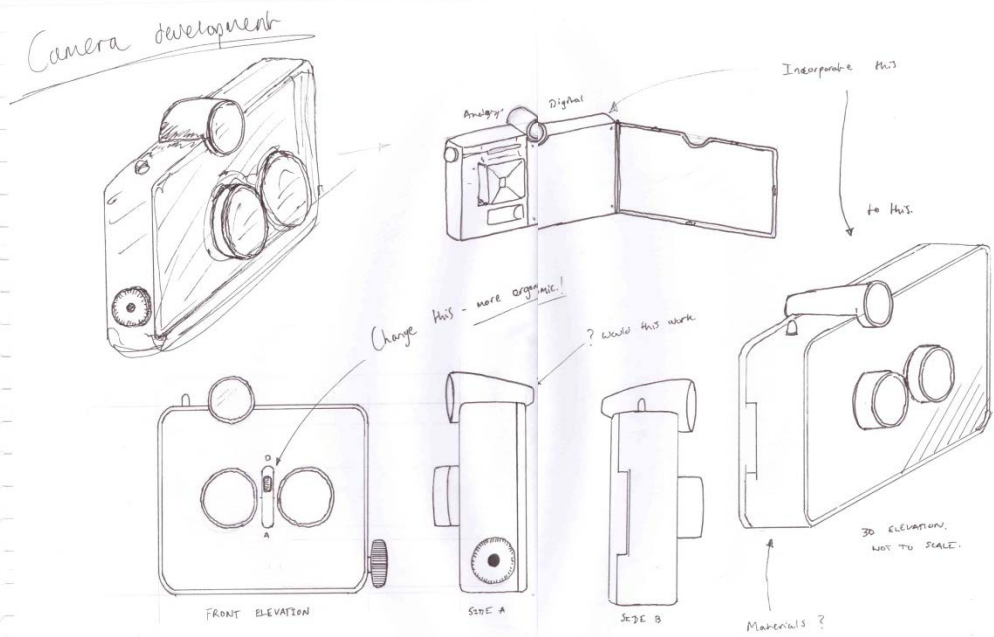
Individual quality



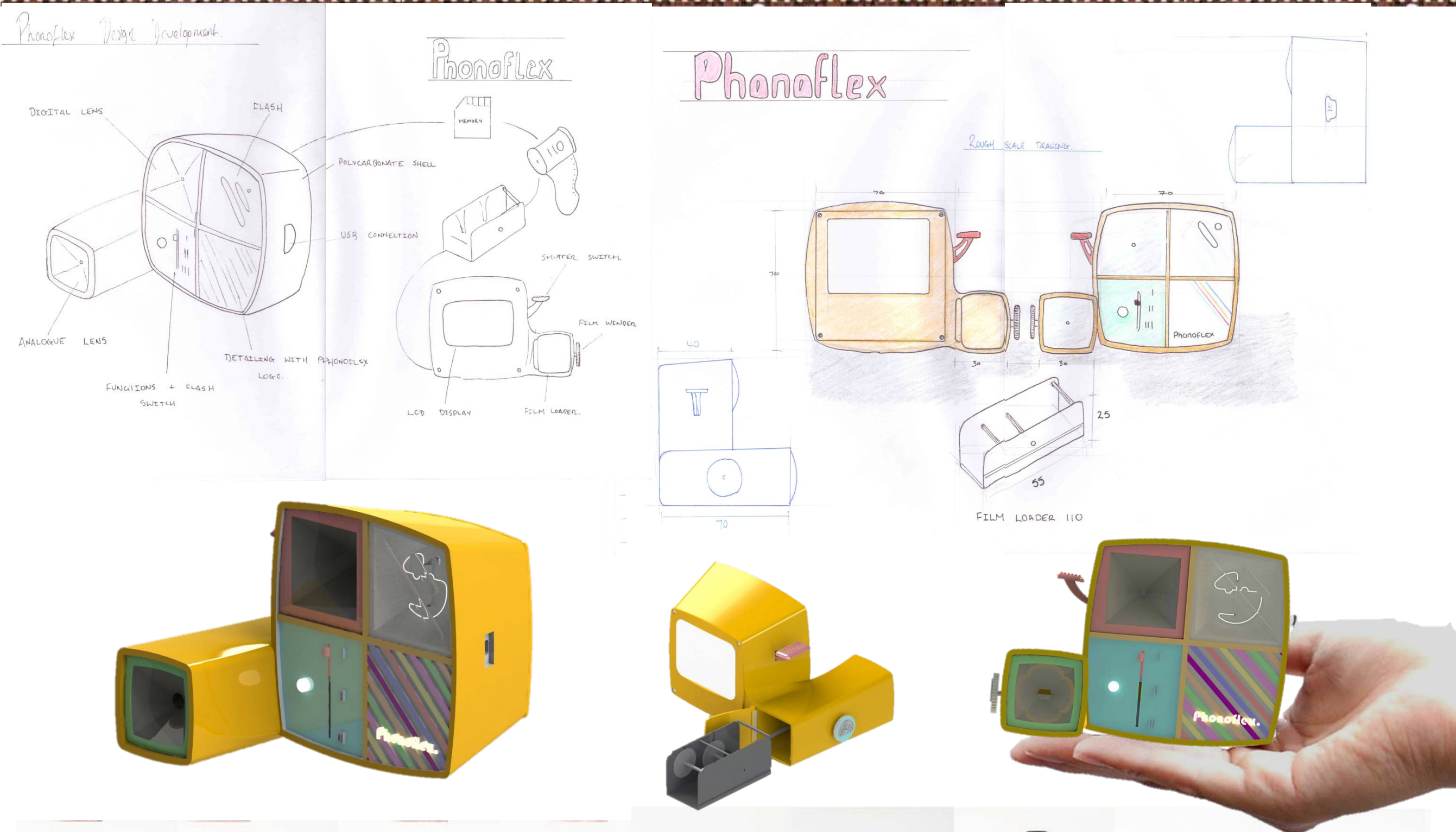
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Design development - Phonoflex



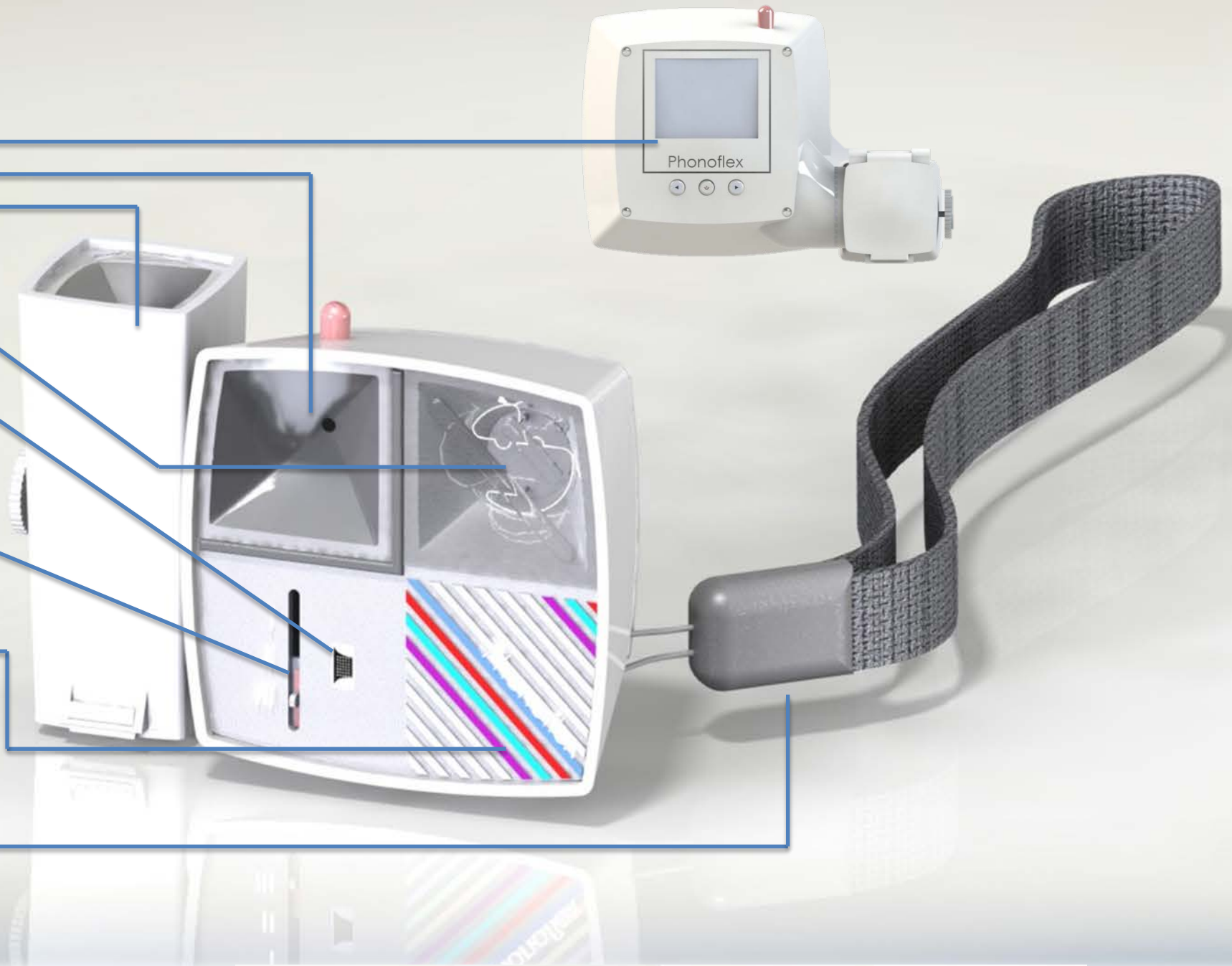
Design development - Phonoflex



Final design Key Features - Phonoflex

Features

- Rear LED screen
- Digital 8Mp camera
- Analogue chamber with electronic shutter system supporting 110 film & APS Film
- Built in flash for night photography
- Internal battery charged by USB
- USB connection for uploading pictures
- images can be taken digitally or by analogue or together by user settings
- Lightweight
- Compact durable design
- Foldable structure makes it easy for travelling
- Retro looking with various color models
- Changeable neck strap



How its used - Phonoflex

Start

Twist down to turn on the Phonoflex

On

Push open the film loader panel and slide the film loader outward.

Load the 110 or APS film onto the correct film loader carefully winding the roll around the viewing grips and onto the twist wheel then return the chamber into the analogue chamber.

Adjust user setting to digital, digital – analogue or analogue

Point and shoot!!!!

Upload images to PC or send you film to get processed



How it works - Phonoflex

The Phonoflex camera uses a user defined double electric shutter system; one within the analogue chamber to expose the film and record an image; and another to record a digital image that stores to an internal memory card.

These shutters are configurable via a slider switch on the front of the Phonoflex;

- I) Analogue and digital exposure shot record the image on both.
- II) A digital exposure recording only on the internal memory.
- III) An analogue exposure recording only on film.

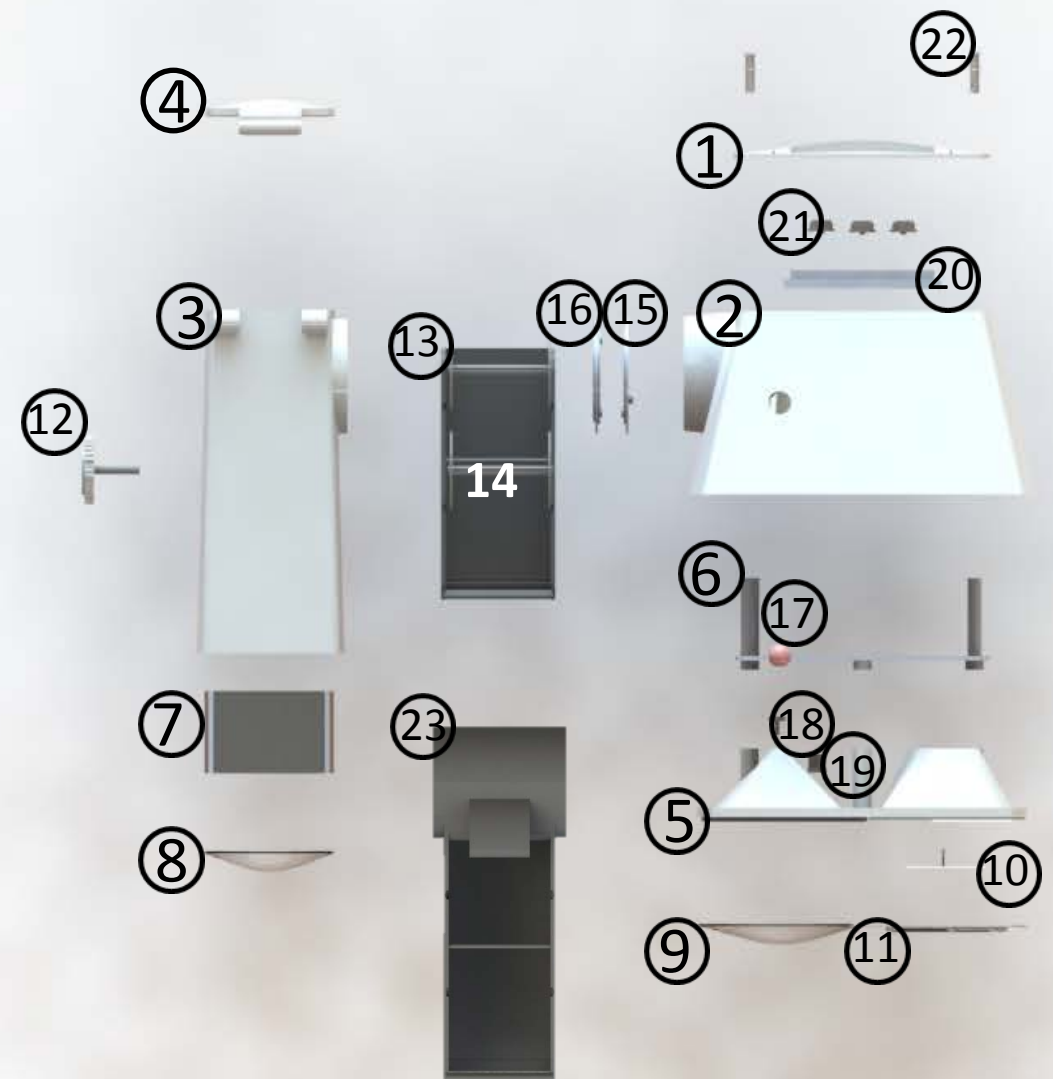
The two electric shutters are powered by an internal battery that is charged via a USB port on the front panel.

The rear LED screen provides a preview image of the digital exposure on the rear of the Phonoflex, it also works as the cameras view finder.

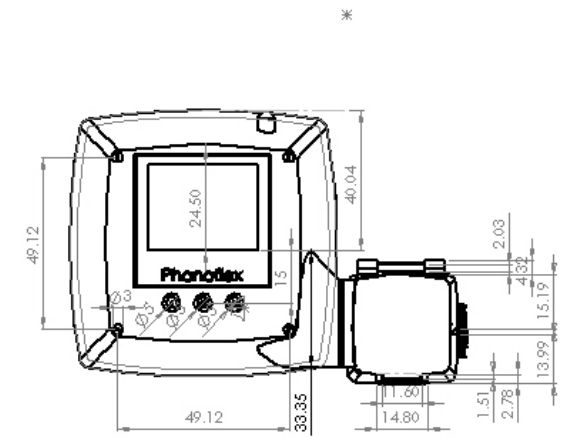
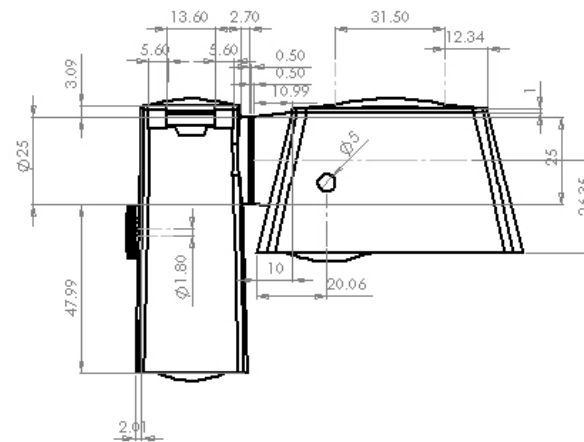
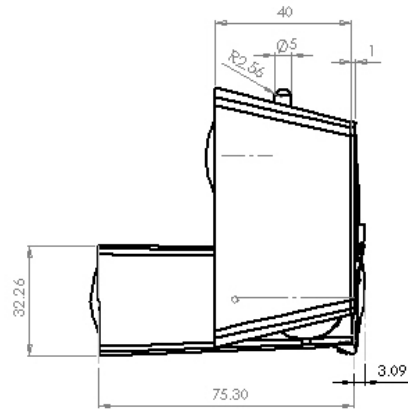
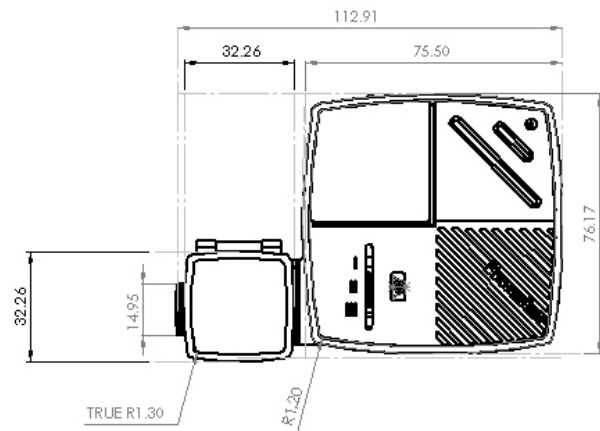


Exploded view - Phonoflex

Part	Quantity	No.
Rear panel	1	1
Main body Phonoflex	1	2
Analogue body Phonoflex	1	3
Analogue rear panel	1	4
Front panel	1	5
Internal component panel	1	6
Analogue lens	1	7
Analogue lens glass	1	8
Digital lens glass	1	9
Flash bulb	1	10
Flash glass	1	11
Analogue twist wheel	1	12
110 Film slider block	1	13
Film reel	2	14
Twist washer male	1	15
Twist washer female	1	16
Shutter switch	1	17
Control switch	1	18
USB Port	1	19
LED screen	1	20
Control switch rear	3	21
Screws	4	22
APS Film slider block	1	23



Materials and manufacturing - Phonoflex



The Phonoflex is made up of 23 parts most of which are manufactured from Injection molded ABS, these include the main housing and internal structural parts.

ABS was chosen as the main manufacturing material after a series of material testing and simulation. ABS proved to have the highest resistance to damage, as well as a high thermal resistance making it a suitable material for application; it was also the cheapest option from the other materials tested.

The electrical components within the Phonoflex such as the electronic shutter system and internal battery are sourced from other external manufacturers.



Final Model - Phonoflex

