Quick Reference Guide

Switch on - press "On/Start"

Set the time - press "Up" or "Down" as appropriate. Holding either button pressed scrolls the time continuously

Expose - press "On/Start" briefly

Making a fine Test Strip

1. Set the minimum time
2. Press "On/Start" to expose the whole of the paper
3. Cover the first part of the paper
4. Press and hold "On/Start" till the display shows "t1" then release the button
5. Cover the next part of the paper
6. Press "On/Start" briefly to expose
7. Repeat 5 and 6 as necessary
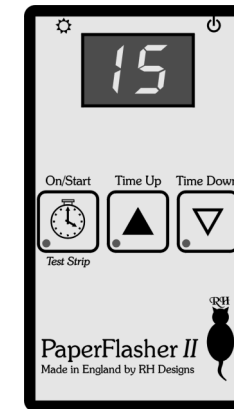8. Press "Up" or "Down" to exit Test Strip Mode

Making a coarse Test Strip

Proceed as above except at step 4 press and hold "On/Start" till the display shows "t5", then release the button

PaperFlasher *II*

Instructions for use

 CE

RH Designs

Introduction

The PaperFlasher provides an easy way to fog and flash photographic paper. Its accurate timer includes automatic test strip generation, and the light source can be fitted with filters to modify the intensity and colour of the light. Applications are limited only by the photographer's imagination, and include pre- and post flashing for contrast control, fogging to put tone in otherwise blank picture areas, fogging of print borders, solarisation (while the print is in the developer) etc. etc.

Please read these instructions carefully before use.

Care and Safety

The PaperFlasher operates on a 9v battery and is therefore quite safe in use. Like any electronic equipment however it doesn't like getting wet, so do not operate it with wet fingers and safeguard it carefully from chemical splashes and the like. Clean it using a dry cloth only. Should it be splashed with water or chemicals, clean it immediately using an absorbent material such as a paper towel. Damage caused by chemical or water ingress is not covered by the guarantee. While it is safe enough to mount the light source using glue, we don't recommend this as it will prevent repositioning. Do not attempt to mount it using screws etc.

The Timer Unit

Fig.1 The Timer Unit

The Timer Unit contains the timer itself and the battery which provides the power for both it and the light. There are three buttons on the Timer Unit and a two-digit LED display (fig.1). The display is safe for black and white paper; keep colour materials away from the unit or cover it when sensitive materials are exposed. Provided the display is pointed away from the enlarger baseboard it's unlikely that colour materials on the baseboard will be fogged by it.
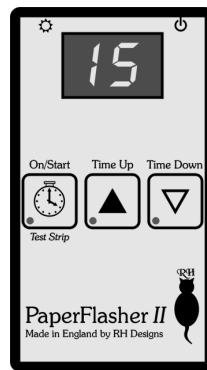
The Light Source Filter

The light source is supplied fitted with an opaque filter which reduces the light output to a level suitable for pre- and post-flashing papers.
To increase the light output, for fogging black borders onto prints for example, remove the filter. Prise the cover off the light source using a small pointed object, such as a small screwdriver, inserted carefully into the cut-out provided in one corner of the cover (Fig 2). Remove the filter (it will drop out of the light source) and replace the cover. Retain the filter safely for future use.

Light Source Positioning

Using Blu-tack or similar materials for mounting the Light Source allows easy repositioning for different applications. For general purpose flashing and fogging, you can stick the source to the darkroom ceiling - this has the advantage that once the correct exposure has been established you don't need to do any further tests provided you always place the material to be exposed in the same place, you may need an extension lead to achieve this which can be purchased separately. For selective exposures, it's handy to mount the source next to the enlarger lens so that you can dodge and burn in a similar manner to normal image forming exposures. However, this will require more testing if the enlarger head is moved. You may be able to find a position where the source can be fixed such that it illuminates both the bench and the enlarger baseboard, thus giving the best of both worlds; however, if you do this, keep dodging masks close to the paper as scattered light may find its way between the mask and the paper.

If you use your PaperFlasher in a novel or unusual way, we'd like to hear about it for future editions of this leaflet.

Using a Foot Switch

The silver 2.5mm jack connector in the centre of the top panel of the Timer unit accepts our standard foot switch or a similar normally-open momentary contact. If a foot switch is connected it exactly duplicates the function of the On/Start button, and either the button or the foot switch can be used to start or interrupt an exposure.

Acknowledgement

RH Designs are indebted to Les McLean for his ideas on the concept and uses of the PaperFlasher. Les runs fine print workshops both for groups and on a one-to-one basis, and can be contacted by telephone on 01890 850259.

Fig.4 shows a test strip. It's effectively a grey scale once the flash threshold of the paper has been passed. The count figure of each strip for both fine and coarse test strips is shown; the count figure is the number of times you need to press "Up" to set the exposure time to give the same density as that area of the test strip.

Hints and Tips

Pre-flashing

Pre-flashing involves exposing paper to white light to "sensitise" it, the idea being that the overall exposure shifts the image-forming exposure away from the toe of the paper's sensitivity curve. The result is improved highlight rendering and a reduction in overall contrast. The maximum pre-flash exposure is the area of a PaperFlasher test strip immediately before the first perceptible tone. When making a test strip for pre-flashing, it's helpful to keep an area of the strip unexposed for comparison purposes. It's easier to detect the appearance of tone next to a reference white area. You can also expose your image onto the paper after you've made the test strip exposures so that you can see the effects on the image directly.

Post-flashing

This is the same as pre-flashing except that the flashing exposure is made after the image exposure. Expose the image onto the paper before making the flashing test strip.

Fogging

Fogging is the same as flashing except that additional exposure is used, putting visible tone on the paper. When making test prints, use a combination of the image exposure and the white light exposure otherwise the results may be unpredictable. For selective fogging, for example of a blank sky area only, the image can be projected onto the paper through a red filter so that you can see the areas which need to be masked during the fogging exposure. (Most red filters supplied with enlargers are not actually that safe however, so exercise care and ensure the enlarger lens is stopped down.) Fogging can have a surprising effect on highlight areas of the print so experiment! Try printing at a much harder grade than normal and then use a fogging exposure to bring in the highlights, for example.

Solarisation

This process involves exposing the print to white light while it is in the developer. We suggest the PaperFlasher is used on its highest intensity setting for this so remove any filters from the light source. The results of this can be unpredictable so keep careful notes.

Fig.2 The Light Source
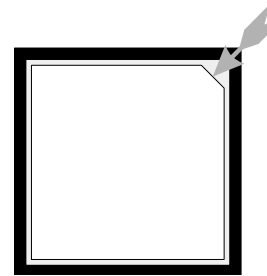
Do not press on or otherwise damage the diffuser material while the cover is removed. Should the filter or cover be lost or damaged we can supply replacements.

Other filters can easily be made from standard gels, so that coloured borders can be made on colour prints for example. The filter material should be 37mm (1.45 inches) square.

Positioning the Light Source

The Light Source can be mounted in any convenient position using Blu-Tack, double-sided tape, or similar. Suggested position is on or around the lens board of the enlarger. See "Hints and Tips" for further information.

## Installing the Battery and Connecting the Light Source

Open the battery compartment at the rear of the Timer Unit (press down on the arrow and slide the cover towards the bottom of the unit (fig 3), then lift the cover away) and install the battery. Any 9-volt PP3 / 6F22 / MN1604 type battery is suitable, including rechargeable types. Alkaline types will provide the longest life.

When you've positioned the light source, plug it into the Timer Unit's socket (positioned on the top of the timer case to the left of the display aperture).

Fig.3 Battery Compartment

Use of the on-off switch

The push-button switch on the top of the Timer Unit is the main on-off switch; press to switch on, press again to switch off. The display will show 15 seconds. After ten seconds of inactivity the display will be extinguished and the Timer Unit will enter a "sleep" mode to minimise battery drain; the keypad remains illuminated. It can be woken up again by pressing the "On/Start" button. While the unit is asleep, all settings are retained and it will awaken at the point at which it fell asleep when "On/Start" is pressed.
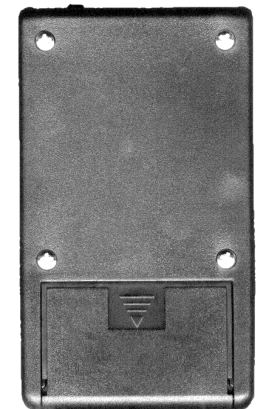
At the end of a printing session always switch the Timer Unit off by pressing the push-button switch on top of the unit. Leaving it switched on will result in shortened battery life.

Battery life

The battery should provide up to a year of normal occasional use; the circuitry of the PaperFlasher has been designed to minimise battery drain, and it also includes an electronic stabiliser to ensure that the light output remains consistent as the battery is used. If the display dims when an exposure is started, and/or the timer operation becomes erratic, replace the battery. We recommend that the battery is removed if you are not going to use your PaperFlasher for an extended period. Remember to switch off the Timer Unit when not in use!

Setting the time

If the display is extinguished, wake up the Timer Unit using the "On/Start" button. Set the desired exposure time using the Up / Down buttons. The time set is retained while the unit is asleep, but *not* when it is switched off. Time is set in steps of 0.1 stops; F-stop timing is used so that each step provides a constant change in density; pressing the "Up" button ten times increases the exposure by one full stop, equivalent to a doubling of the exposure time. The time can be set from 1.0 seconds to 84 seconds. Times above 9.9 seconds are displayed in whole seconds only; however internally the PaperFlasher stores the tenth stop increments and counts all exposures to 1/10 second accuracy.

Making the Exposure

If the display is extinguished, wake up the Timer Unit using the "On/Start" button. Press "On/Start" to start the exposure. The display counts down during the exposure and then reverts to the set time. Countdown is in seconds until 10 seconds is reached, and in tenths of seconds below 10 seconds. Press "On/Start" to repeat the exposure if required. An exposure can be aborted by pressing "On/Start" at any time while the light source is lit. The time set is retained while the unit is asleep.

Making Test Strips

The PaperFlasher can make fine or coarse test strips. We recommend that a coarse strip is used to find the approximate exposure time, and then a fine one to fine tune the exposure if necessary. Test strips are in increments of either 0.1 (fine) or 0.5 (coarse) stops. If the unit goes to sleep between the steps of a test strip, awaken it using "On/Start" and continue as usual.

Making a Fine Test Strip

Set the time to the minimum exposure you want to use. (For best accuracy we suggest a minimum of 4.0 seconds - shorter times than this will mean very short increments, especially for fine test strips, and bulb warm up and cool down times will affect accuracy.) Expose the whole of the paper for this time. Cover some of the paper. Press and hold "On/Start" for approximately one second until the display shows "t.1". Release the button to make the exposure. The display will alternately show the time and "t.t." to indicate that it is in Test Strip Mode. Cover some more of the paper and press "On/Start" briefly to make the next exposure. Cover some more of the paper and press "On/Start" again, and so on until the whole of the paper is covered. Press either "Up" or "Down" to exit Test Strip mode. Hint: Because the density increments on a fine test strip are small, it is helpful to mark the paper as you progressively cover it. It's then easier to identify the correct exposure.

Making a Coarse Test Strip

Proceed exactly as for the Fine Test Strip, but when "t1" is displayed continue to hold the "On/Start" button depressed for a further second or so until the display shows "t5".

Choosing and Setting the Exposure based on the Test Strip

Identify the area of the test strip which represents the desired exposure. Count the number of increments of exposure this represents, starting from the lightest area. The first exposure (the minimum time) is "zero". For example if the third area of the strip is correct, the count is 2 (the three areas being 0,1,2). If it's a fine test strip, press the "Up" button according to the count you've just determined. If the count is 2, press the button twice, and so on. If it's a coarse strip, you need to multiply your count by five first. So if the count is 2, press the button ten (2x5) times. The exposure time is now set correctly. Easier to do than to describe! (Users of our StopClock enlarger timer will be familiar with this process).

	INITIAL EXPOSURE		COUNT				
FINE	0	1	2	3	4	5	6
COARSE	0	5	10	15	20	25	30

Fig.4   Test Strips