Manual operating of flash lamps FX PRO serie

FX 600 PRO
FX 1200 PRO

Producer:

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Flash lamp
FX 600 PRO
shielded
cat. no. A157

or

Flash lamp
FX 1200 PRO
shielded
cat. no. A158

Halogen bulb 300W
cat. no. A163

or

Halogen bulb 650W
cat. no. A063

Power cable
cat. no. A100

I. Introduction

FX PRO flash lamps come from highest utilitarian properties line of our products. These lamps have been especially designed for demanding photographers who think highly of comfortable work and simplicity of maintenance alike.

They are characterized by reliable repeatability of parametres and settings due to digital technology applied. FX PRO lamp construction has been based on proven solutions that come from Quant flash lamps. Cooling system has been modernized the most. Lamps have been equipped with fan and strong, halogen modelling lamp as well. Front panel has been changed thoroughly but readable LED display is still the same. Lamps are equipped with popular accessories fastening system Bowens type.

II. Purpose

The lamps are intended for all professional photographers. They were especially designed for photo studios needs that do portrait and occasional photos. They also may successfully be used as an additional equipment for advertising photography due to high parametres of utilisation.

Fastening system Bowens type enables any accessory to be mounted. Wide range of accessories is available.

III. Features

FX PRO serie gives more advanced functions and enhanced technique than Quant at comparable price. The flash energy can be set over the range of 6f with the high accuracy of 1/10 f-stop. There is advanced system of strong, halogen modelling light to be controlled. The convenient element is an possibility the readiness for work to be selected, in order to increase comfort of maintenance. Automatic energy dumping system allows the flashtube life to be extended, and let the work comfort to be better too. Digital display allows the relative energy value to be shown precisely (by 1/10 f-stop), and makes the values to be read distinctly**.**

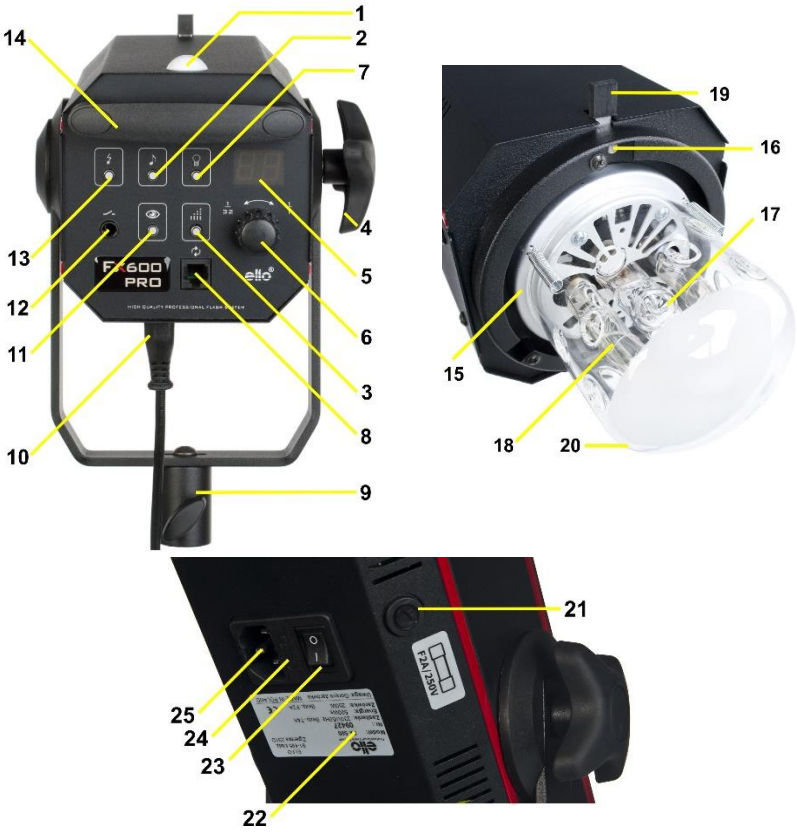
There is new model of flashtube applied. Flashtube and halogen bulb are shielded by frosted glass casing. For that reason photographer can get perfect proportion between flash and modelling light. Two sources of light inside the casing, shines if they were placed in one place.It is important if accessories like reflectors, honeycomb or snoot are in use. Sticked out flashtube allows the light to be diffused better.

Digital, rotary encoder was applied for energy to be controlled. There is possibility to link up external control panel that takes over all functions and settings, including energy, and make them be available to be controlled from panel, instead of front of the lamp.

All settings of the lamp can be latched (except flash), in order to avoid undiserable settings changes

External control panel is an optional equipment and standard lamp doesn't include this one. There is one type of control panel that detects determined type of the lamp, and adjusts for it automatically

IV. Controls description



All available controls are shown on picture.

1. Photocell dome

Protruding photocell dome let the visible light, flash of other lamp or IR come from all directions to be gathered thoroughly. It is necessary for the lamp to be triggered out properly. There is sensor characterized by sensitivity for the light that changes suddenly (flash). The lamp is triggered out by another flash lamp wirelessly. The flash light must reach photocell dome and then photocell works properly. It can be directional light or reflected light harnessed to trigger out the lamp by photocell. For that reason triggered lamp photocell has to be accessible for main, leading lamp. It is especially important when you work on location. There is no photocell signal delay. The flash is being carried out at the same time as the current "sees" a flash from another source.

2. Acoustic signalling mode switch

The three-position switch controls acoustic signalling modes. To change operation mode press the button consecutively. The round border of button shows present status of the lamp.

- Shines steadily – serie of pulsating sounds while lamp is loading, and longer cue at the end.
- Blinks – one long signal after the procedure of loading is finished and the lamp is ready to flash.
- Light off – acoustic signal is deactivated.

3. Modelling light mode switch

Energy of modelling light is controlled. There are three modes available. Repeatedly pressing changes operation modes. Its activity is connected with bulb switch mode (7). The round border of button shows present status of the lamp:

- Shines steadily **(100%)** – there is full power of modelling light activated.
- Blinks **(USER)** – there is power of modelling light set by user.
- Light off **(proportion)** – flash energy and power of modelling light change simultaneously from minimum to 100% with proportion.

USER mode. In order to enter the USER mode, press the modelling light mode button (3) and hold it down until sound is audible (you can hear the sound regardless of acoustic signalling mode). Halogen will be activates as well regardless of current modelling light mode). Dot on display (5) disappears and the latest level of user mode is displayed. In order to set a new setting, rotate control knob (12). Desired value is stored after 4 s and long acoustic signal is audible. Then lamp is back to normal operation mode, and energy value is displayed.

Status of modelling lamp				
		On	**Blinks**	**Off**
	**On**	**100%** doesn't extinguish after the flash	**100%** extinguish after the flash	Off
	Blinks	**USER** doesn't extinguish after the flash	**USER** extinguish after the flash	Off
	Off	**Proportion** doesn't extinguish after the flash	**Proportion** extinguish after the flash	Off

Results of related operation of both switches (3) i (7) is shown in the table.

4. Side revolving clamp knob

When accessories are heavy there is need to lock, and then twist the knob right (clockwise). If the lamp is to be bent up or down, there's need to catch the handle with left hand and then rotate the knob counterclockwise with right hand slightly. Rotate clockwise again and desired position is fixed.

5. Display for values of flash energy and level of modelling light

It shows relative energy values:

- for lamp FX 500 PRO from 1.0 to 2.0
- for lamp FX 1200 PRO from 2.0 to 7.0

There are relative power values. When both lamps (regardless of the type* and its power) have the same value displayed, energy are also the same.

Status of the readiness is indicated on display too. When the lamp is not ready to use (is charging or discharging) set value on display blinks until loading process is complete. When the lamp is ready display shines constantly. Display functioning like this is regardless of acoustic signalling and occurs in any situation.

When USER mode is activated, display shows relative values of energy of modelling light:

- for lamp FX 500 PRO from 10 to 60
- for lamp FX 1200 PRO from 20 to 70

6. Encoder

Digital potentiometer in other words. It is used for energy and level of modelling light to be set. Construction of energy control knob is based on potentiometer with unlimited revolution angle. When it rotates, displayed values are changing instantly. Energy value is shown with 1/10 f stop accuracy.

In order to increase the energy twist the knob right (clockwise), to decrease, twist left (counterclockwise). As a result of changing energy, lamp has to charge up itself, or (if decreased) dump excess of energy gathered inside capacitors. Display is pulsating when it is being processed. Display shines continuously when it is finished and lamp is ready to flash.

* Applied for lamps produced by Elfo® serie: Quant, Quant Pro, AX, FX, FX PRO, Miqro Pro, Miqro Pro B, Octalight.

7. Bulb mode switch

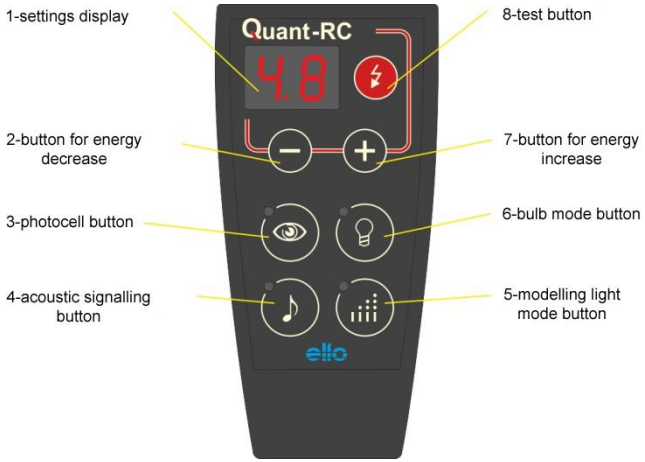
Modelling light bulb operation mode is controlled. There are three modes available. Repeatedly pressing changes operation modes. The round border of button shows present status of the lamp:

- Shines steadily – modelling light always shines.
- Blinks – light shines only when lamp is ready to flash.
- Light off – modelling light doesn't shine.

Level of modelling light energy is relative to settings of modelling light mode switch (3).

8. External control panel socket

Jack RJ-45 connector for connecting an external control panel. Control panel takes over control of all functions (except USER settings). When control panel is connected, blue border of TEST button is pulsating. Neither buttons on front of the lamp (except TEST button) nor encoder work. When control panel changes the value, borders of corresponding buttons response. The latest values of lamps are restored when control panel is disconnected. There is one type of panel that automatically detects up to which lamp is plugged and takes over its control range.



There are almost no differences between maintenance of lamp by means of control panel and of main front panel of the lamp. There are the same symbols that make the maintenance easy. Each press of button causes mode and signalling change. Energy control element consists of two buttons „-„ and „+", instead of revolving potentiometer, for utilitarian conditions. Each press (7) or (2) button makes energy increased or reduced by 1/10 f-stop. Control panel is equipped with cable 10 m long.

External control panel is not standard equipment. It can be bought separately

9. Tripod sleeve

Lamp is equipped with universal 5/8” sleeve, and it enables lamp to fix on the tripod or hung on pantographs under the ceiling system. There is set screw inside that sets the lamp and it protects it against accidental knock off.

10. Power cable plug

The set is supplied with cable 5 m long. It must be connected to socket with protection earth electrode.

11. Photocell switch

Photocell operation mode is controlled. There are two modes available. Repeatedly pressing changes operation modes. The round border of button shows present status of the lamp:

- Shines steadily – photocell on.
- Light off – photocell off.

There is photodiode placed underneath photocell dome. It is the sensor for incident flash light (1).

12. Synchro socket

The socket allows to connect the device to enable synchronous triggering flash. It can be synchro cable, radioflash receiver or something else. There is low voltage 12V and for that reason all connected devices are protected.

All devices connected to synchro socked must have plug JACK 6,3 mm type.

13. TEST button

The test triggering out of lamp is a main task of this button. It also enables current energy settings to be latched. It is useful when accidental changes of settings are unwanted.

To activate this function press and hold down TEST button until sound is audible. Current settings are locked and blue border of TEST button shines steadily. Then lamp may be triggered by means of TEST button, synchro socket or photocell (if activated) only. Function may be deactivated in an analogous manner.

The TEST button can also turn the display by 180^{o} (upside down). It is especially useful when lamp hangs under the ceiling in reverse position. To activate there is need to hold up the TEST button (13) first, and turn on main power (23). To turn the display on again please repeat the procedure.

- Shines steadily – settings locked.
- Pulsating – there is control panel connected.

14. Handle

Carrying handle and manipulate the flash.

15. Reflector

Element that reflects the light.

16. Lock bolt

Bolt locks accessories mounted on the lamp. To fix the accessories, insert the tabs into the three holes of the lock ring and turn right (clockwise) until perceptible drag. There will be self-latching and locking hardware.

17. Modelling lamp halogen

Halogen is a source of modelling light. It is possible to apply bulbs with pins GX6,35, voltage ~230V and max power of 650W. In lamp FX 1200 PRO there is a standard halogen, but in lamp FX 600 PRO there is standard halogen 300W applied with possibility to use stronger. You must not touch the bulb because of high temperature. User can replace the halogen alone, on condition that:

- lamp is off (power cable plug out of integrated socket);
- bulb is chilly;
- handle with care, taking precautions to avoid of damage flashtube (warranty doesn't include flashtube that was mechanically damaged).

18. Flashtube

Main operational component.

You must not look directly at the uncovered flashtube when used!!!
You also must not touch the flashtube because its high temperature and fragility!!!

Flashtube replacement may be performed in authorized service only.

19. Lock lever

Lever to unlock the lock in order to remove equipment mounted on the lamp. It is one hand neccessary to hold the accessories, and the other pull towards the back of the lamp and turn left (counterclockwise). Now the bolt is released, and taps of any accessory can be removed from holes of the lock. The large and heavy equipment requires other person to help.

20. Glass casing (cushion).

Casing shields either flashtube or halogen bulb, and it protects against accidental touch and dust. It is fastened to reflector by means of three springs.

21. Modelling light bulb fuse socket.

Modelling light bulb fused socked. User may replace the fuse by oneself on condition that the lamp is separated from electricity. There is fuse F2A (F4A in FX 1200 PRO) applied. It is strongly recommended to aplly fuse compliant with specification because of safety.

22. Data table

The label contains the most important information about the device, such as the product name, serial number, basic electrical parameters, CE certificate.

23. Integrated power socket - switch

There is integrated power socket placed at the bottom of the lamp. It consists of:

- main socket ~230V with earth electrode (25);
- fuse socket (24);
- main switch (23).

There are two fuses type T4A (T6,3A in FX 1200 PRO) inside the socket. One of them works and the other is spare part. User may replace the fuse by oneself on condition that the lamp is separated from electricity. It is strongly recommended to aplly fuse compliant with specification because of safety.

V. Conditions of use

optimal work duration…… steady
portability……. carrying is allowed

VI. Device class

Protection against electrical shock. Connection to electricity with earth electrode (PE) is required.

VII. Power supply connection

Disconnectable three-wire cable included.

VIII. Housing

It is electric one and keeps away the user from touch of dangerous voltage, and protects against highly dangerous increment of energy.

IX. Accessibility

Operator access area……whole unit
Limited access……picture below

Flashtube replacement only in authorized service!

Picture shows the most crucial unit area. These elements are sensitive to shock because of fragile, glass components. There is also dangerous voltage too.

You must not look directly at the uncovered flashtube when used!!!

X. Protections

All lamps FX PRO serie are doubly fused:

- main fuse – time delay fuse T4/4A in FX 600 PRO and T6.3/6.3 A in FX 1200 PRO;
- modelling light bulb fuse - fast F2/2A in FX 600 PRO and F4/4A in FX 1200 PRO;
- thermal fuse on/off automatic.

Main power circuits of the lamp and capacitors are protected against overheating. The lamp can be turned off automatically when temperature exceeds critical values. It may occur when lamp works intensively (frequent flash with modelling light, and small accessories), or there is high outer temperature. If it occurs, symbol **oF** appears on display, and steady sound is audible. Then lamp has to be off, and it is required to assure suitable air circulation, and wait until lamp is on automatically. It may take several minutes dependently on overheating degree.

XI. Service

In the case of lamp failure or in the event that the correctness of your lamp aroused concerns, please contact us by phone or e-mail:

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Opening hours: 8^{00} - 16^{00} (from Monday to Friday).

XII. Technical data

Specifications	FX 600 PRO No. Cat A157	FX 1200 PRO No. Cat. A158
Flash energy	600Ws	1200Ws
Mains voltage	170V – 240V 50Hz	
f-stop (1m, ISO 100, reflector 60°)	64,1	90,1
Energy adjustment	1/32-1/1	
Charging time	0,9s – 2,6s	0,9s - 2,8s
Flash duration $t_{0,5}$	1/750s	1/400s
Colour temperature	5400K (+/-200K)	
Modelling light optimal power/max	300W/650W	650W
Energy control	Stepless by 0,1f	
Control range	6 f-stops	
Triggering	Synchro cable, photocell, IR	
Triggering voltage	12V	
Energy stabilisation	+/- 1%	
Main fuse	4A	6,3A
Modelling light fuse	(F)2A	(F)4A
Dimensions	14 x 18 x 37 cm	14 x 18 x 43 cm
Weight	3,5 kg	4,4 kg
Additional functions	External control panel Quant RC	