

“SKF-1” System uses

Suggested by Mr. Dr. Abraham Spitz

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FOREWORD:

This article is a cry to men’s inventiveness and ingenuity in recycling good ideas to unlimited scopes, inviting people in develop great ideas for the future.

The “SKF-1” system, is intended to obtain photographic stereoscopic images and this edition is a product born from the technical and industrial cooperation between the firms CFC Novacon do Brasil and Fotopribor of Ukraine, under special request.

It is a result of a painstaking research among all known stereoscopic fundamentals proposed in the world technical press, and the first item of a full stereo system, to be grown up further.

Among every proposition, carefully studied and experimented by the Moscow Science Academy, and evaluations took around by CFC Novacon, based on forums of ISU (International Stereoscopic Union) Netherlands, and from SCF

(Stereo Club Français) France, We can dare say that our full proposed system is: THE BEST AND MOST AFFORDABLE PROCESS TO PERFORM THE REAL HIGH QUALITY 3D!

DESCRIPTION:

The “SKF-1” basic system is conceived directed to amateur dreams to introduce himself in the 3D world, at a low budget, using his already own 35mm SLR cameras (ZENIT or alike). The equipment was first planed be used with all types of films available; color slides, color negatives, and B/W of both types.

Dr. Spitz is a consultant and researcher engineer from the UNIVERSIDADE FEDERAL DE SÃO PAULO who took himself the challenge to use the set to obtain far beyond results of the traditional limits, using commom digital cameras able to be fitted with the system, and joined us with the international team of experimenters we showed in the previous article.

Dr Spitz arose two main challenges:

- a) Use the device in a digital camera using a different frame size, [diagonal 22mm (digital) x diagonal 45mm (analogical)]**

- b) Obtain real stereoscopies in the high speed field of photography where there were only 2D commonly used.**

Through studies of the optical properties of the set, it was felt the usual limitations of this kind of device.

TECHNICAL DATA DESCRIPTION:

- 1) The “SKF-1” original is intended to be used between 2 to 10 meters (6 to 30 ft), this, because as all existing equipment, the stereoscopic effect is anomaly exaggerated at distances closer than 2m and is lost above 10m.**
- 2) With this drawback on mind, we from NOVACON developed a simple device in order to use the SKF-1 splitter also in the macro Field áreas, and opening its uses to be employed also with Jupiter 9 lens opening so a new scope for the device.**

So, it was born the NABLA auxiliary lens, a direct descendant of the DISTAR lenses employed together TESSAR lenses to increase their focal lengths.

Distance between homothetic points (identical points in the two stereo images) taking

**pictures at 2m from the object (mm)
17,0±0,5mm.**

***NABLA lens satisfies this condition when focusing Helios 44 or Jupiter 9 at close range
In accordance to the pictures shown at the first phase of our description.***

The “SKF-1” was developed to render best results with “HELIOS-44” 58mm F.L. lens.

With other objectives of 50mm F.L. results will be slightly lesser than optimum.

In all lenses:

The splitter only allows diaphragms in the range f/2 to f/8

EXTENDED USES:

The “SKF-1” can also be used as auxiliary equipment in the macrophotography when used together “JUPITER-9” lens and the two greater rings of the “UTZ-T” or the 42mm ring of “MAKROPLETT” sets for “ZENIT” M42 cameras. Now it is possible to obtain a relationship of 1:2.4 image reduction.

Under special request the “SKF-1” could also be adapted on several cameras in other formats. 2 ¼ X 3 ¼ (6 X 9), 2 ¼ X 2 ¼ (6 X 6), 2 ¼ X 1 5/8 (4,5 X 6). (useful only rectangular format). Also

in all digital cameras whose covering angle be near the 45° . The approach to be used is having a relationship around 1.6 to 1.9, when deviding the value in mm of prime focal length of the used lens by the horizontal width of the camera frame.

**Now let's see the astonishing
Pictures gently yielded by the Dr. Abraham
Spitz from S. Paulo city.**

1

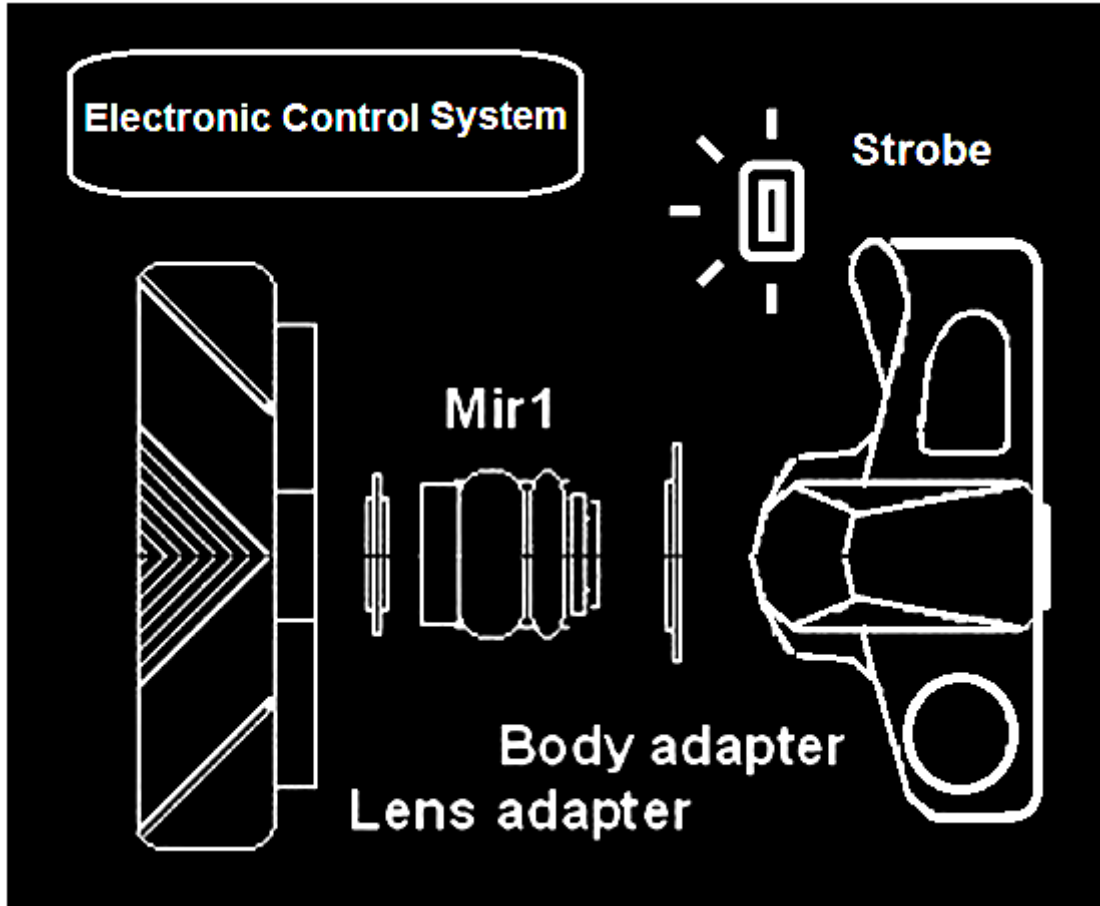


2



1, 2 - Flying bat – Taken with infra-red sensor detecting the bat presence and firing the camera through electric relay. Electronic Flash picture.

Lay out and used elements for taking the previous pictures:

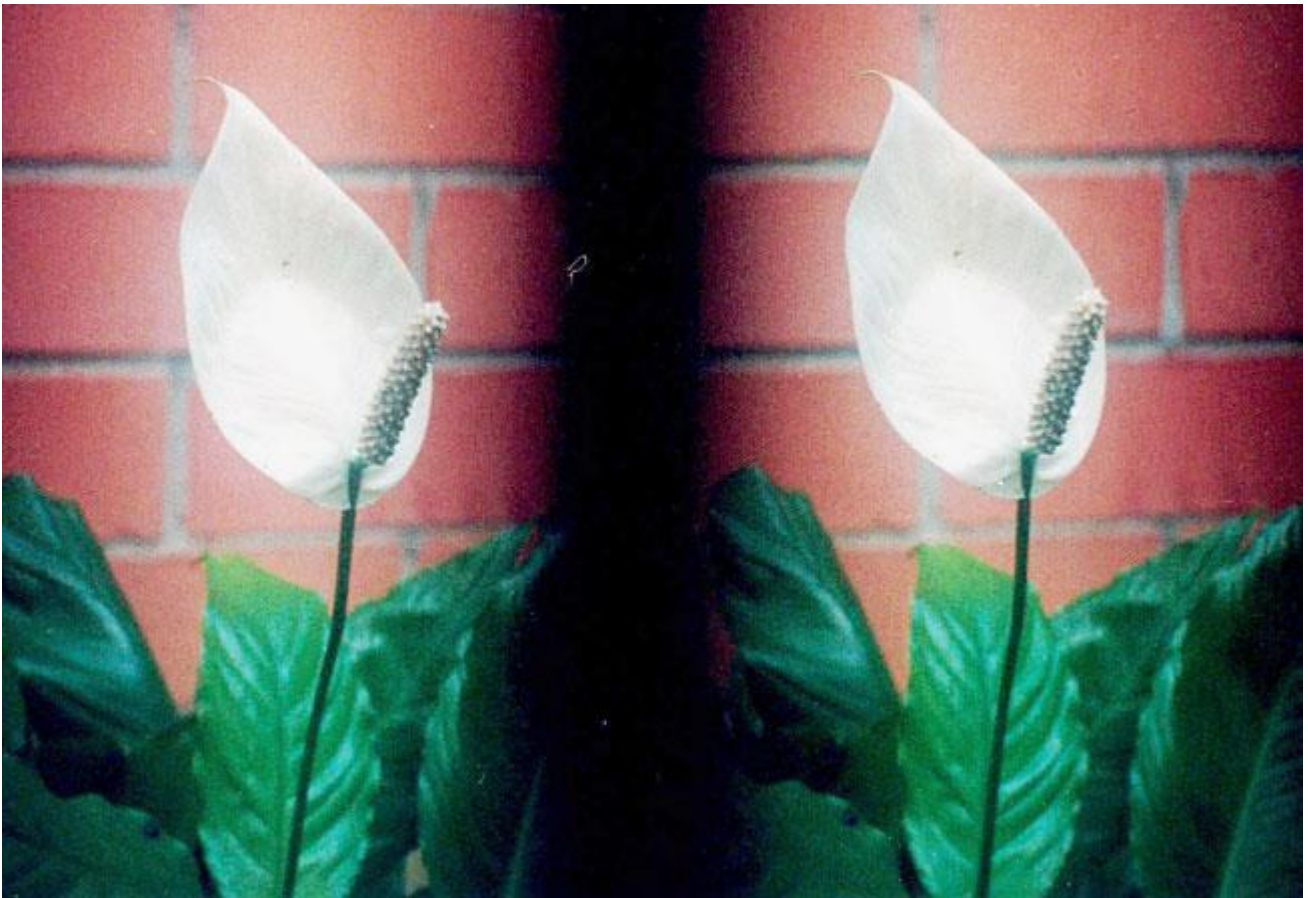


Pictures 1 & 2

3



4



5



6



7

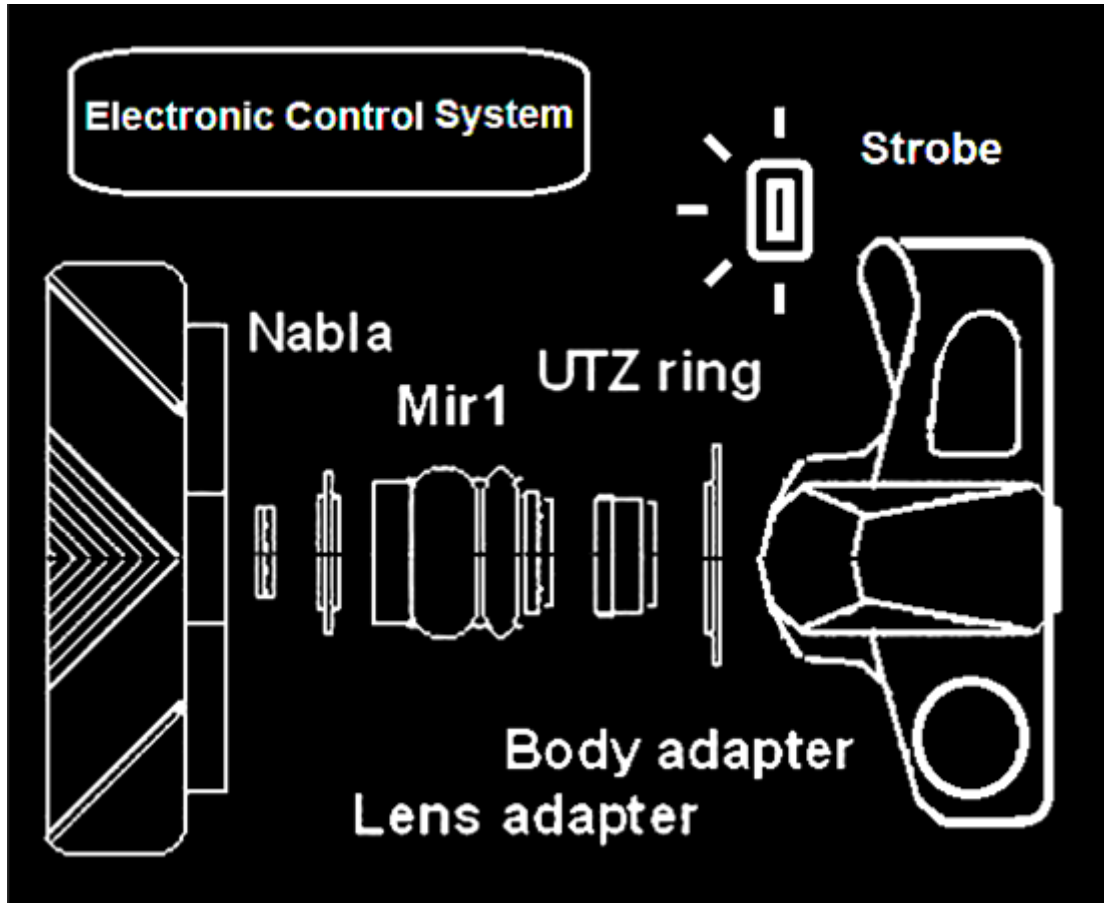


8



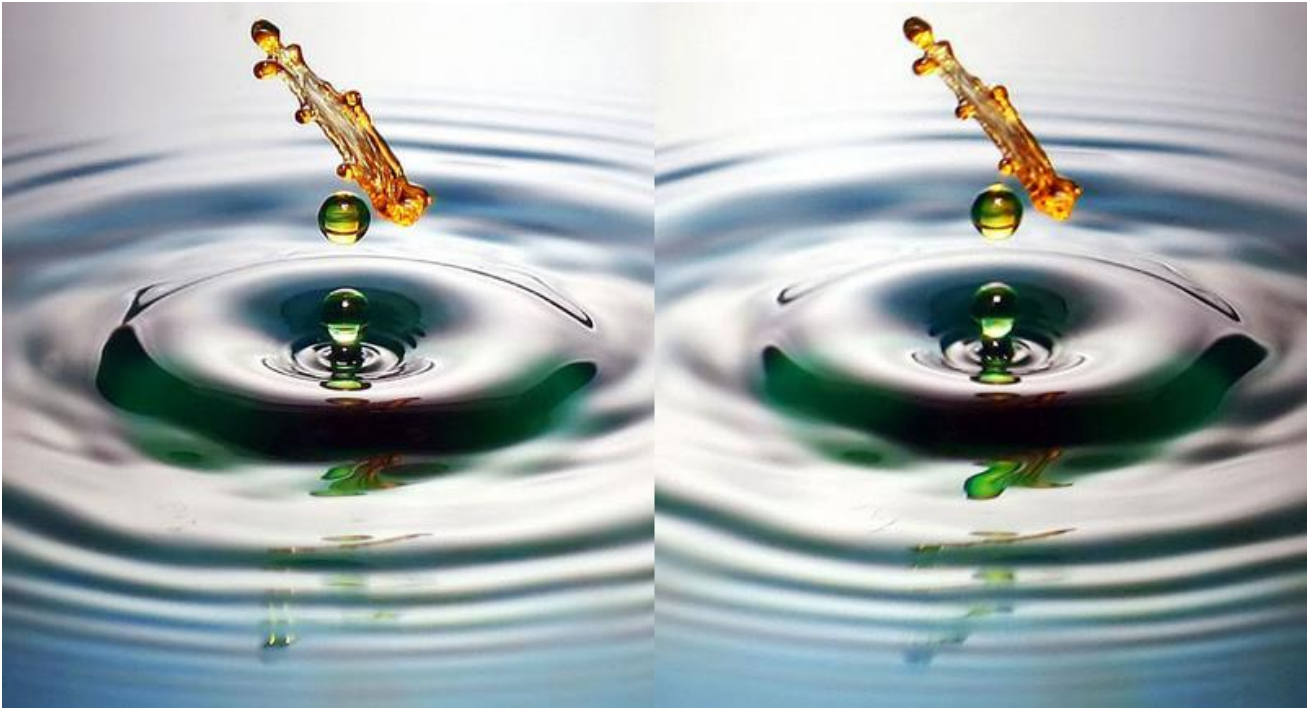
3, 4, 5, 6, 7, 8 - Flowers - Using SKF - 1 with Nabra for close-up picture taking.

Lay out and used elements for taking the previous pictures:



Pictures 3, 4, 5, 6, 7 & 8

9



10



11



12



9 10 11 12- Drops- SKF -1 Nabra + Home built Strobo

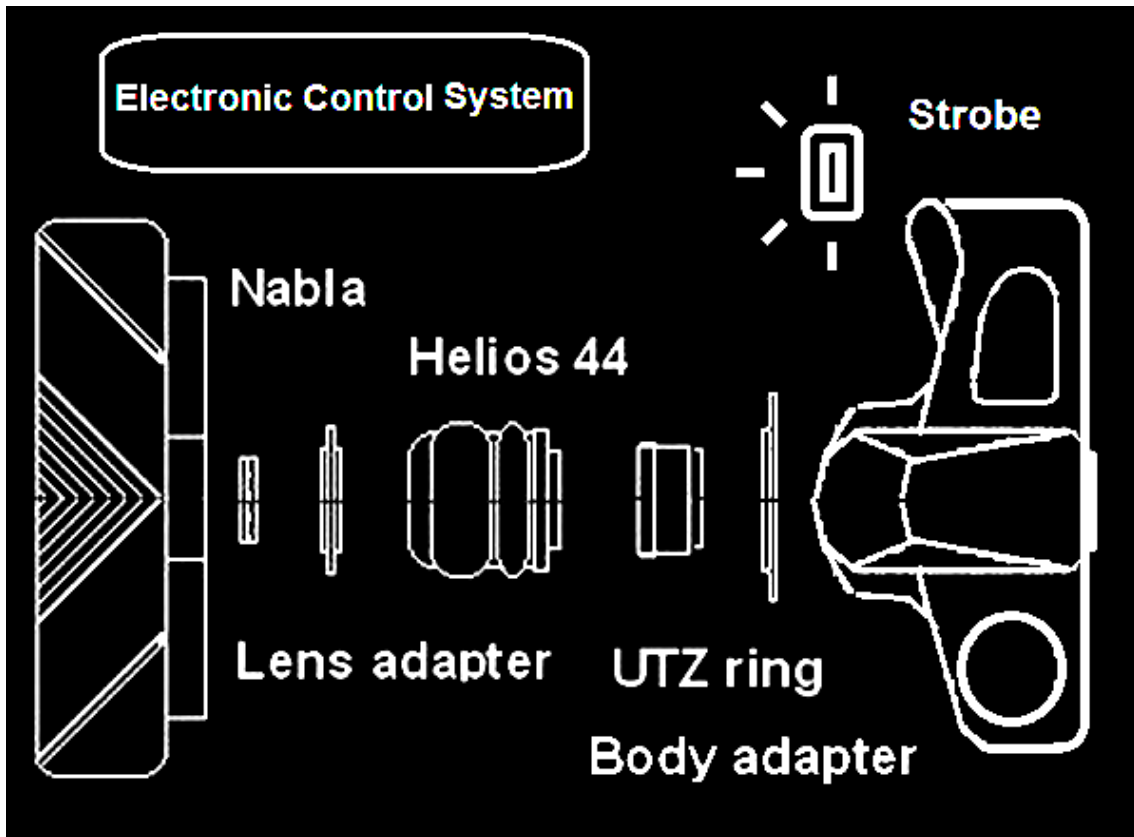
All pictures were taken at his apartment balcony in São Paulo, at night, with minimum ambient illumination, with camera at low ISO settings, f8 pre-set diaphragm on all lenses and the TTL flash controlled for the right light amount.

Pictures 9 and 10 are water drops.

Pictures 11 and 12 are milk drops.

These pictures were taken with a nome built high speed Strobe with an electret acoustic sensor instead of the light sensor the that fires different colors at fast sequence of 1/2000 of second. With a controlled time lapse from the sound up to the light firing, he optimizes the bigger wave of better visual effect caused by the drop in the liquid. Each color remains only 1/6000 of second. The drops so shows different colors as they change their forms creating varying colorful patterns caused by the variation of density of its surface.

Lay out and used elements for taking the previous pictures:



Pictures 9, 10, 11 & 12

These digital pictures were cropped in order to be able to be seen in the "SSV" viewer.

In the next images one can see employed elements description and classification for picture taking.

1



2



3



4



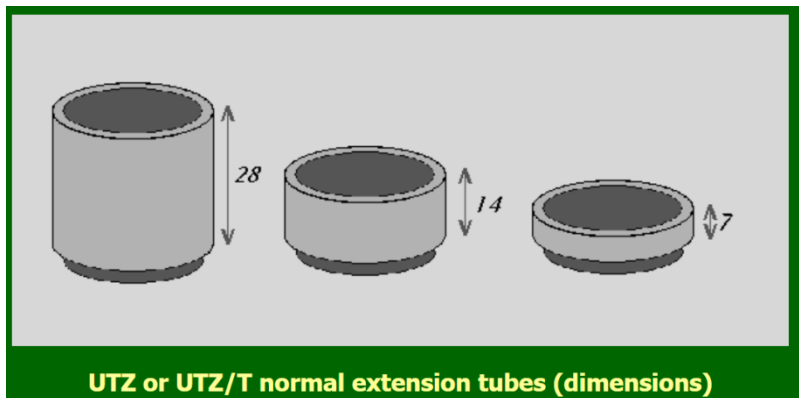
MIR-1V

HELIOS 44-3

5



6



UTZ or UTZ/T normal extension tubes (dimensions)

Macro Rings Extension Tube m-42 for Zenit made in USSR



7

8

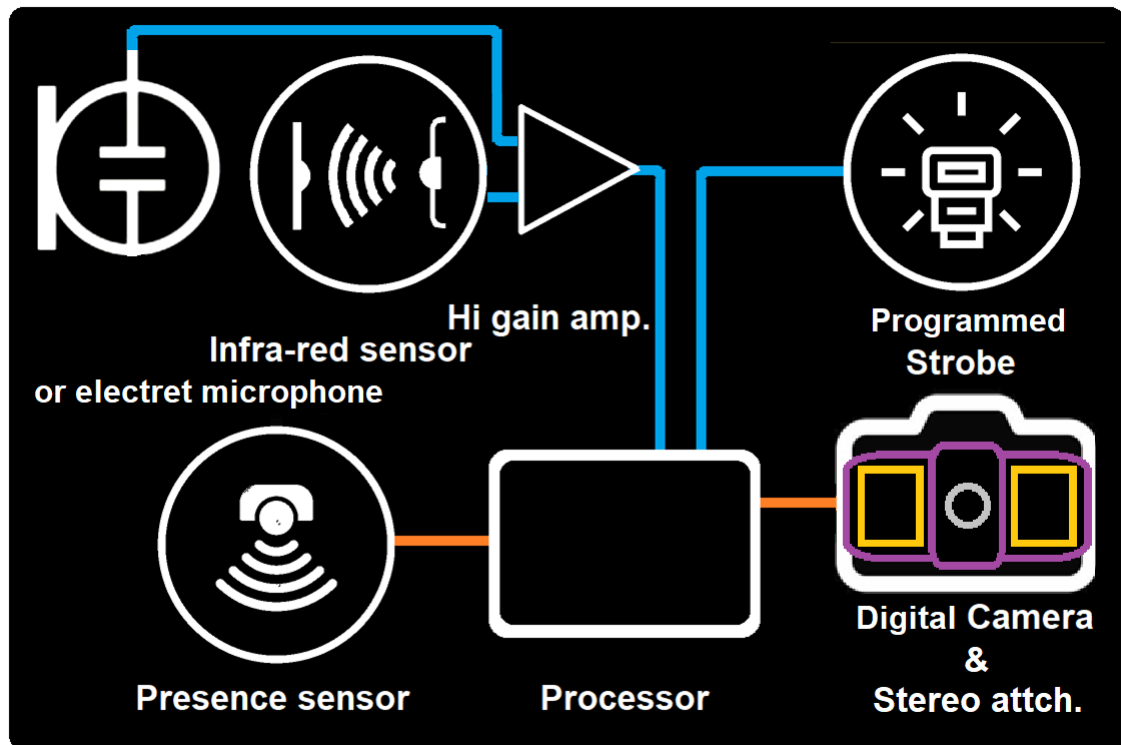


From left to right:

- **Presence sensor**
- **IR light trigger or microphone**
- **Hi gain Micro amplifier**
- **Processor (built into a computer fountain case)**

9

Operation



Any alteration in the pre-set Picture area opens the camera shutter at “B” setting.
The event is then captured by the infra-red sensor or the electret microphone triggering the electronic flash with a chosen delay (time lapse) electronic relay in the main processor module.
Sensors become “OFF” after light blinking.

Circuitry invented and developed by Dr. Abraham Spitz
São Paulo Brazil.

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Technical Elements Nomenclature

1- 4/3 DSLR Camera

2- SKF-1 Stereo Divider

3- Nabl lens

4- MIR 1V and Helios 44-3

5- UTZ tubes and Canon adapter

6- UTZ tube lengths

7- Professional Electronic Flash

8- From left to right:

- **Presence sensor**
- **Trigger IR or Microphone**
- **Hi gain Micro amplifier**
- **Processor (Fountain case)**

**9- Block operative schematics
Circuitry & Operation**

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