<u>8mm Kodak Sound "8"Projector – Model 1E – 1960; and others</u> <u>magnetic sounds projectors models - Silma Sonic 8; Silma 240 s; Silma</u> <u>S232XL</u>

Introduction page 2

early version of magnetic sounds projectors – Pathe Marignan 9,5; p4 <u>I. The body of Kodak Movie Sound 8 - page 9</u>

II. Motor; page 11

III. Lamp; page 12

IV. Lens; page 13

- V. Spool size; page 13
- VI. Threading; page 13

VII. Gate; page 14

VIII. Speed; page 14

IX. Shutters; page 15

X. Other features; page 15

XI. Accessories; page 15

XII. Weight and measurement of the projector; page 15

XIII. Production No: page 15

XIV. Silma <u>Sonic</u> 8; Silma 240S; page 16-21

XV. Super 8 projectors; page 22

XVI. Summarising; page 25

XVI. Bibliography; Page 26

Introduction



Pic.1, 2, 3; Kodak Sound 8 model 1E projector, in our collection; ©Anna Vacani

The Kodak Sound 8 model projector was introduced in 1960, at Photokina Exhibition, in Cologne.

As we are reading in ACW 26 January 1961 review of "New Projectors" exhibited at Photokina – "Kodak Sound 8. This relatively low-priced machine (\$345 in the U.S.) showed that it was capable of some remarkable good result. [...] the magnetic head is made of a new super-hard material, Alfenol, which has allowed its width to be reduced to about 20mil., so that it is narrower than the track; as a result the edges are not scanned, and as these are often not quite even, a great improvement in the noise figure result. [...] Still and reverse run are possible, and there is a reduced brilliance switch to save lamp-life when recording". This model of Kodak Sound "8" projector was produced; in Rochester N.Y. USA by Eastman Kodak Co.

The announcement of the appearance of the projector on the English market was made in June 1961. The projector was presented at Photo-Cine Fair at the Kodak showrooms in Kingsway, London.

The advertisement of that model was published in 4th January 1962, in ACW. It was described in "The Photographic Blue Book" in 1962.

At that time it was priced as £170. But in October 10, 1963 ACW price was specified as £185.

In the Blue Book – 1962-63 edition, the projector was enthusiastically described:

"This is the long awaited 8mm sound [...] projector which incorporates a complete system for recording and playing back magnetic sound on 8mm film. It provides amateur movie makers with the chance to bring home movies to life with voices, music and other sounds effects. Sound may be added to any 8mm film [...] with magnetic striping. Commentary [or music] is recorded by speaking into the microphone [...] as the film is projected. [...] voice and music can be recorded simultaneously. The sound track plays back when the film is projected again. The operator can erase, re-record or ply back sound at will and to make changes, he simply [reverses and] re-records the new sound track automatically wipes out the previous version".

You can watch on YouTube an old instruction of Kodak Sound 8 projector: https://www.youtube.com/watch?v=ypRB3yuH7W4 ;

- early version of magnetic sounds projectors

Let's see *some early versions of magnetic stripe recording projectors*.

In 1951 in France was produced, by Pathe, the projector Marignan 9,5mm with magnetic stripe recording. As indicated the first original Schematic of the amplifier, it was dated 5.09.51 (in our collection).

The Pathe was one of the first to initiate magnetic stripe recording. That projector was introduced to the UK in 1954. At that time the price of the Marignan projector was £190 without amplifier. As connoisseurs were talking at that time it was very cheap projector, when others were priced over £300.



Pict 4a; Pathe Marignan 9,5mm projector, in our collection;



©Anna Vacani

Pict 4b; Pathe Marignan 9,5mm projector with amplifier connected to magnetic head, in our collection; ©Anna Vacani



Pict 4c; Amplifier for Pathe Marignan 9,5mm projector, in our collection; ©Anna Vacani



Pict 4d; Pathe Marignan 9,5mm projector with amplifier, in our collection; ©Anna Vacani

Pathe Marignan 9,5 mm projector built at early 1950s. According to the "Cine 9,5 No288" French magazine published January 2006, our projector was built in 1954 as the production No 060857.

The cine amateurs using the projector, at that time, made a comment on the recording and reproducing sound as big success. It is operated very quietly, so that its own noise is not recorded.

It is very intelligently constructed. It is rather small projector – 295 mm W x 265 mm H x 175 mm D, weight about 18kg.

When you open the front cover, it is not visible a power connection. But when you open the left side cover there is a cable power plug in and a ventilation hole.



Pict 4e; Pathe Marignan 9,5mm projector,

left side, in our collection; ©Anna Vacani

As we are reading in "Pathe Projectors 9,5 and 16 mm, Instruction Book" published by Pathe in 10.1954, - "A magnetic sound head for recording and plyback is incorporated with the projector, together with **a patented assembly of rollers** which guide the film, whilst running over the magnetic sound head."

Marignan was available in 16 mm version as well.

Other characteristics;

- The projector speed is 16fps – the users are pointed that at this speed the sound quality is superior.

- Lens; Hermagis Paris – Magister 1:1.6 F = 35 mm No297588.

- Lamp Philips 110 v 400 W pre-focus – English No A1/39 (in our proj). Next intelligent feature – the access to the lamp department for exchange a lamp is uncomplicated. On the left top of the projector is a ventilation frame. Pushing the side clip the frame can be lifted up.

- The loudspeaker has to be connected to the amplifier.

- The projector it running on a transformer as it is AC mains 110/120 volts, 50 cycles. To switch on the projector must to be push down the switch M1 – for motor on and next push in M2 and release. The switch "L" – for lamp you can push down as you are ready for the projection – see *Pict. 4b, 4d*

- There is no clutch, no reverse drive, not a power rewind of the film.
- Below the lens is placed optical framing.

- Instruction pointed that "All the roller guides near the magnetic head should revolve freely. If not they need cleaning and oiling". The oil has to be adding before each show or after 2h of projection. One or two drops of oil in the holes provided (marked in red colour) are sufficient.

- 8 mm magnetic sound projectors;

The first 8 mm magnetic stripe projector – "Movie Sound 8" was design and built by the Move Mite Corp. – later on taken over by The Calvin Company. The Movie Sound 8 is taken 1,600ft 8mm spools – the largest at that time. It was made for 110 volt, 750 or 500 watt biplane filament lamp (STD). Induction motor is 60 cycle a.c. only and speed of 16 and 24f.p.s.

The weight of the machine is 34lb- 15.4221. It is rather large device. The projector was produced only during two years (1952-1954); it was made about 1.000 devices. New owner was not interesting in the production of the projectors, at that time. This model was never available in Britain. The Mite Corp. was making for some years the Movie Mite 16mm optical

sound projector, as well.



Pict 5; Move Sound 8 projector, picture published in ACW. As we are reading in ACW August 1952 edition, in 1950s were produced all size of magnetic sound projectors – 8mm, 16mm and 9,5mm.

(3) Projector

Two magnetic recorder-projectors (as they are called) are on the American market. The RCA-Victor model 400 arrived late in 1951, and the Bell & Howell Filmosound 202 early this year. Both are similar to ordinary 16mm. sound projectors, and will show standard 16mm. sound and silent films as well as showing and recording striped film. The Victor runs at 24 frames per second only.

In France, Emel are making under American licence an 8mm. projector with magnetic sound known as the *Chicago*. In view of the name, this would seem to be a Bell & Howell job. Pathe have two 9.5mm. magnetic sound projectors, which can also be used as recorders. These three machines were demonstrated during March at the 23rd Salon in Paris.

Pict 6; ACW August 1952 edition

In early 1960s around the world were produced other projector of 8 mm magnetic stripe – in Germany, Italy, Japan and USA.

As a major feature on 8mm. stripe projectors will be appearing in a forthcomming issue we are therefore giving below only a tabulated summary of the different models currently available.								
	AGFA SONECTOR- PHON 8	ELMO TP-8	KODAK SOUND 8 (MODEL 1E)	NIZO VISACUSTIC	RICOH SOUND 8	SILMA SONIK	TOEI TALKIE 8 (also playback of 8mm. optical sound)	
Made in Mains V (a.c.) Lamp Lens	W. Germany 110–260v. 8v. 50w. Choice	Japan 110–240v. 21.5v. 150w. <i>f</i> /1.5 zoom	U.S.A. 200–250v. 12v. 100w. f/1.0	W. Germany 110–240v. 8v. 50w. Choice	Japan 110–240v. 115v. 150w. 15-25mm. f/1.4	Italy 110–240v. 21.5v. 150w. Choice	Japan 110–240v. 21.5v. 150w. f/1.5.25mm	
Threading Spool Capacity Running Speed(s) Reverse	Manual 400ft. 18 & 24 Yes	Manual 400ft, 16 & 24 Yes	Manual 400ft. 18 & 24	Manual 400ft. 16 & 24	zoom Manual 400ft. 16 & 24	Manual 400ft. 18 & 24	Manual 600ft. 18 & 24	
Still Pictures Weight 56 frame sep'n	No 36 lb. Yes	Yes	Yes 30 lb. Yes	Yes 28 lb. Yes	No 36 lb. Yes	Yes Yes 45 lb. inc. case Yes	No No 23 lb. Yes	
Amplifier output	7×3 m., in cover Separate amp., $2\frac{1}{2}$ w.	5 m., m cover 10w.	$10 \times 2\frac{1}{3}$ in., in proj. $2\frac{1}{2}$ w.	in cover 3-4w.	6in. 3w.	8in., in cover $3\frac{1}{2}$ w.	5 × 8in., in cover 6w. transistorised	
Volume indicator	2 with mixing	separate (extra) 3 channel mixer	2 on one vol. control	2 with mixing	2 with mixing	2 with mixing	2 with separate mixer	
Superimposition Price:	Yes £185 16s. 9d.	Nagic eye No	Neon No	Magic eye Yes	Meter No	Magic eye Yes	Magic eye Yes	
Distributor	with zoom lens		£185	To be announced	£139 10s.	£139	£99 10s.	
	Agra Ltd.	Rosley Ltd.	Kodak Ltd.	G. Elliot & Sons Ltd.	Mayfair Photo- graphic Suppliers	David Williams (Cine Equip- ment) Ltd.	Dixons	

Pict 7; Stripe 8mm projectors, table published in ACW, in 1963.

In Jun 1962 was announced Japanese first 8mm magnetic and optical sound projector, manufactured by Japanese Toei Company. It takes 600 ft reels and operates at 24fps. The lens is 25mm f/1.5. It is lighter than most stripe projectors – only 20lb (9.07185 kg).

Let's look at the features of our projector – Kodak Movie Sound 8.

I. The body of Kodak Movie Sound 8;

The projector is firmly constructed, in some way elegantly; cast main panel and lamp house is fitted into a wooden box and finished with gray-green leatherette covered.



All mechanisms running the projector are fitted into the front side.

Pic.8; Kodak Sound 8 projector's mechanisms; ©Anna Vacani



Pic.9; Kodak Sound 8 projector, audio panel; ©Anna Vacani

On the front panel is a lamp cover. The access to the lamp compartment is very simple; it is necessary to unscrew the cover plate (*see Pict 3*).



Pic.10; Kodak Sound 8 projector, lamp house; ©Anna Vacani

In the above picture is visible, that the height of the lamp is adjustable by the screws on the top of the springs.

A height adjuster is mounted on the right side of the projector.



Pic.11; Kodak Sound 8 projector, height adjuster; ©Anna Vacani

On that side behind the grill is fitted loudspeaker. On the left side of the projector is a ventilation grill.



Pic.12; Kodak Sound 8 projector, the left side with the ventilation grill; ©Anna Vacani

Presumably Kodak as the first to used Alfenol heads in an 8mm stripe projector as we can read in ACW published in December 1963. Alfenol – it is a permeability alloy that has 16% aluminium and 84% iron. That is a very hard material for the magnetic pick-up head.

II. Motor

The projector is running on 210-250v – model "E" is for 210-250v mains. Our projector was produced for Europe. It is running on 105-125 as well; that is switchable between that powers. It operates on 210-250 volt, 50 cycles A.C.

induction motor.

Audio frequency of this projector as level between 85 and 7,500 cycles per sec. at 24fps, and about 5,000 c.p.s. at 16f.p.s. It is good to provide good music, clean sound free from background noise and hum.

III. Lamp;

Our projector is fitted with - 12v. 100w (Philips A1/203) with integral mirrorcondenser type projection lamp, as it is marked on the control panel. Some collectors named it as "Marlin Monroe" or lately "Space Man". On the board of the device is a feature which let you to adjust the power of the lamp. It is possible to switch to position – "lamp normal" or "lamp bright". It is a very practical feature (*Pict 5*).

As we can say from our experience, often lamps are broken when a projector is just switched on. The lamp is cold and it causes the destruction of the lamp. When we switched to – "lamp normal" – to the lower brightness we can prolong the life of our lamp and left on that setting when recording, or when projecting small pictures.

Our lamp was produced in Holland and has Philips catalogue No 13116C/04 printed on our lamp.



Pict 13; Philips Lamp in our projector; ©Anna Vacani

IV. Lens

This projector being a later model is fitted with "Kodak Projection Ektar Lens 22mm f/1.0", ultra wide aperture of the lens, which gives little depth of focus.

V. Spool size

This projector takes plastic or aluminium spools with 400ft (12,192m) capacity (about 1/2h projection time).

The metal steel spool could destroy soundtrack of films.

VI. Threading

It is completely manual threading projector. On a side of the projector front side is an instruction showing how to threading a film.

The projector has a special valuable feature – film threading check. While the film is threaded we can check if the film is correctly positioned into 16-tooth sprockets, moving the knurled wheel, on the left side of the lamp cover – *Pict 3* & 10 – visible as it is parallel to the lamp.



Pict 14; the film threading diagram; ©Anna Vacani

The film can be reverse only at 24fps. After projection the film is rewind able

using the knob "Rewind" – placed on the left side of the top arm spool (Pict 3)

VII. Gate

The gate is opening in a very simply way – pulling forward the lens.

The gate is fitted with sprung edge guides, keeping the film level on the edge. And front pressure plate is sprung as well.

It is double claw +3 +4 gate.

It is unusual to find that kind of gate on 8mm projector. It is simple to clean the gate as it is widely opened.



Pict 15; the opened gate; ©Anna Vacani

VIII. Speed

The device has variable speed control – Forward, Reverse, Still, 16 and 24fps. The frame speed 16fps is debatable, as we are reading in ACW December 1963 - *"Kodak – like most manufacturers – are guilty of mis-labelling the "16 fps", speed, which is actually 18 as per the proposed American Standard "silent"*

projector speed. The 18/24fps selection is via a sturdy two-position clutch".

As instruction says frequency reaction of this projector is level between 85 and 7,500 cycles per sec. at 24fps; and about 5,000 c.p.s. at 18f.p.s. But experienced users will know that this statement about frequency cannot be absolutely true.

It is good to provide good music, clean sound free from background noise and hum.

IX. Shutters

The projector is fitted with 3 blades shutter as we can see opening the lamp cover.

X. Other features

A 2x10in = 5.08x25.4cm oval speaker is mounted in the projector case and this is cut out of circuit when an external speaker is plugged in. The volume indicator is a simple neon bulb which flushes on peaks of volume. The projector cannot to be operated by turning the main control knob, until it is turned on switch on.

XI. Accessories

An external speaker can be attached to the control panel and either or both speakers can be used at any time.

XII. Weight and measurement of the projector

The projector is very heavy. Its weight is 30lb -13.6078kg. Dimensions: H x W x D – High 390mm (15.3543in); Width 280mm (11.0236in); Deep 260mm (10.2362in).

XIII. Production No:

No - 1E85247; the number is printed on the height adjustment metal foot.

XIV. Other magnetic sound projectors - Silma Sonik 8; Silma 240S;

The Silma Sonik 8 projector was produced in Italy by the same Company as Cirsesound projector – by Rivoli Torinese. Cirsesound 8mm sound projector was described in The Photographic Blue Book 1960-61 edition. The price of the projector was £139 10s.

ACW in October 1962 edition it was announced – "The popular Cirsesound has been discontinued; it successor the Silmasound has been delayed by strikes in Italy, and probably won't be seen until nearer the end of the year"



Pict 16; The Silma Sonik 8 projector; ©Anna Vacani

On the front of the projector we see symbols drawings that they play a task of the instructions.

The projector contains 3 motors – for optical head, sound drums and cooling. The cooling motor is attached to the back cover of the projector mechanisms.



Pict 17; the Silma Sonik 8 projector mechanisms; © Anna Vacani

Unfortunately our projector does not have all elements as:

- one motor is missing, presumably sound drums;
- 3 belts;
- there are no power cables;
- and some parts are partly missing.

The Silma Sonic 8 mm has a powerful lamp -21,5 V -150 W. The lamp is very expensive and it is difficult to find on the market. The lamp is the same for late model of Bell& Howell Lumina and Lumina II. Unfortunately they have very short life.



Pict 18; The lamp Atlas Made in

Britain 21,5V – 150W; ©Anna Vacani

The projector is fitted with a very good focused lens produces in Germany – Schacht Travenon 1.3/20 mm.

The gate is opening in the same way as in Kodak Sound 8 – pulling forward the lens. Furthermore in the same technique - The gate is fitted with sprung edge gate, keeping the film level on the edge. And front pressure plate is sprung as well.

It is +2 of claw position in the gate.

The features of the Silma Sonic 8 mm projector are not so much different from Kodak Sound 8mm projector.



Pic.19; Silma Sonic 8mm projector, audio panel; ©Anna Vacani

- Dissimilar features

1.A biphonic speaker is built into the cover of the case and supplied with 30 feet (9.144m) of cable. The case with microphone is fitted into cover (bottom right), as well.



Pict 20; the Silma Sonik 8 projector; microphone & speaker; ©Anna Vacani

2. The lens is made in Germany – Schacht Travenon 1: 1, 3/20mm; it is focus by side knob.

3. In Silma Sonik projector claw position is +2.

<u>Silma 240S projector</u> – standard 8 was produced in Italy by Rivoli Torinese Company.



Pict 21; the Silma240S projector; ©Anna Vacani



Pict 22; the Silma240S projector- technical Data; ©Anna Vacani



Pict 23; the Silma240S projector- instruction; ©Anna Vacani

Other characteristics;

-The projector has to be lubricated after about 20h running, taking off the back cover and to place 1-2 drops of extra fine oil on the felt pad of the cam and on the self-lubricating bush.

- Lamp is 12 V 100 W, quartz iodine;
- During rewind, the lamp will pre-light at 25% of normal power.
- Lens in our projector- Silma-Pallux zoom F: 1, 5 F/ 15mm 25 mm;
- A separate channel for silent film projection;



Pict 24; the Silma240S projector- film channels and film counter; ©Anna Vacani

- External loudspeaker built into the carrying case with microphone and phono (type of plug) input lead;

- Projection of silent films, on Silma 240S is possible to project silent films without treading through the sound head. Thread the film into upper film channel – channel below the lamp house.



- Our projector has some spare parts and spare lamp.

Pict 25; the Silma240S projector- spare parts compartment; ©Anna Vacani This projector was very popular among amateur cine users, in the UK. It has a very useful feature – automatic loader and film counter. It will be easy to record a comment when you know at which point, stop the projector.

Often the projector has a problem with the speed adjustment from 18 to 24 fps or 24 to 18. It does not keep the adjusted speed, the knob is still moving.

XV. Super 8

The Super 8mm projectors were produced as magnetic sound projectors as well.

It was enthusiastically awarded on the market.

An American collector of projectors and films - Paul Adsett says about a model - Kodak M100;

"The Kodak M100 is probably the best super 8 sound projector that Kodak ever made [...]Several years ago I kad [bought] a Kodak M100, and it is indeed an impressive looking machine, literally a super 8mm version of the 16mm Kodak Pageant. The machine has really great light output, and has the Kodak f1.0 22mm Ektar lens (non-zoom) which is hands down the best lens I have ever seen on a super 8 machine, and that's including the Elmo f1.0 lens. The PQ is amazing, with a razor sharp flat focus field and stunning contrast. It's worth buying this projector just for that lens!"



Pict 26; Kodak M100 super 8 projector; ©Paul Adsett

In our collection is a super 8 magnetic sound projectors as well. It is model – <u>Silma S232 XL projector</u>, produced in Italy by Rivoli Torinese Company.



Pict 27; the Silma S232 XL projector; ©Anna Vacani

As it is specified in the instruction;

- projector takes film format Super 8 and Fuji format Single 8mm.
- Maximum real capacity 600ft 180m;
- Automatic treading from spool to spool.
- Projection speed 18 and 24 fps forward and reverse projection.

- Rewind - Motor is driven rewind through the film channel.

- Lens, in our projector – Will-Wetzlar Vario-Travenon 1:1.3/16, 5-30 mm. It is zoom kind of lens.

Power connection; two types are available – either 110-120/130-220-240 V /
 50 Hz or 115 V – 60 Hz. Voltage selector switch is placed on the back side of

the projector. The electrical data label on the bottom of your projector indicates the voltage at which it will be operate.



Pict 28; the Silma S232 XL projector; data label; ©Anna Vacani

- Lamp – 12 V – 100 W iodine quartz lamp with dichroic reflector; the lamp in our projector is – Atlas A1/231.

- Loudspeaker is built in - 8 Ohm impedance; rated output – 5 W; peak output 10 W.

- Other characteristics – Automatic recording level control, adaptable for microphone and record player; infinitely variable trick control for fading-in with adjustable click stop; Central frame line adjustment.



Pict 29 a, b,; the Silma S232 XL projector; instruction; ©Anna Vacani

Operational elements of the							
pr	ojector						
1	REAR SPOOL HOLDER						
2	FRAME CENTERING SWITCH						
3	MAIN SWITCH						
4	LAMP COVER						
5	SPOOL HOLDER ARM						
6	FRONT SPOOL HOLDER						
7	LENSbinoculars-cinecollectors.com						
8	FOCUSSING KNOB						
9	LOOP FORMER						
10	FRONT ADJUSTABLE FOOT						
11	INPUT SOCKET (micro/phono)						
12	RECORD BUTTON						
13	RECORDING INDICATOR LAMP						
14	VOLUME CONTROL						
15	TRICK CONTROL						
16	CHANGEOVER SWITCH FOR RECORD						
	PLAYER/MICROPHONE (recording)						
17	SPEED CHANGEOVER SWITCH (18 and 24 f.p.s.)						
18	SCREWS FOR REAR COVER (3x)						
19	VOLTAGE SELECTOR SWITCH						
20	CONNECTING SOCKET FOR MAINS CABLE						
21	INTERNAL LOUDSPEAKER						
22	CONNECTING SOCKET FOR EXTERNAL						
	LOUDSPEAKER						
23	REAR COVER						

Pict 29, c; the Silma S232 XL projector; instruction; ©Anna Vacani

Next similar model of Silma Super 8mm was – Silma Delta 7. "Test report" on this model was published in Movie Maker, December 1978 edition.

XVI. Summarising

It was a very desirable projector 8mm "Kodak Sound" at the time of the production.

We presume that the present generation will not be able understand the time of all process of taking film, develop it and next project the film on cine screen. Magnetic sound projectors were very modern, at the time of the production. The magnetic sound projectors revolutionized the armature film market. People could takes private films and record own comments or background music.

Pathe Marignan 9,5 mm was designed in a very intelligent way. It does not have a still picture and automatic reverse, but it was chosen the most important features for perfect sound and projection.

In about 1965, it was time of Super 8mm projectors.

If the reader will have any comment we will be happy to hear them.

XVI. Bibliography

The description of the projector is based on the owners' knowledge, long experience and literature:

- The Photographic Blue Book – 1960-1961; 1962-63 edition; in our collection.

- ACW (Amateur Cine World) – published in: 1952,1958,1961,1962, 1963, and 1965.

- Move Maker magazines

- Popular Photography Directory & Buying Guide 1963 – published only in USA.

- Schematic of the amplifier dated 5.09.51.

- "Pathe Projectors 9,5 and 16 mm, Instruction Book" published by Pathe in 10.1954

- Pathe catalogue 1953-1954, in French language.

- "Cine 9,5" No 289 ,magazine January February March 2006 edition, in French language. No 288 April May June 2006.