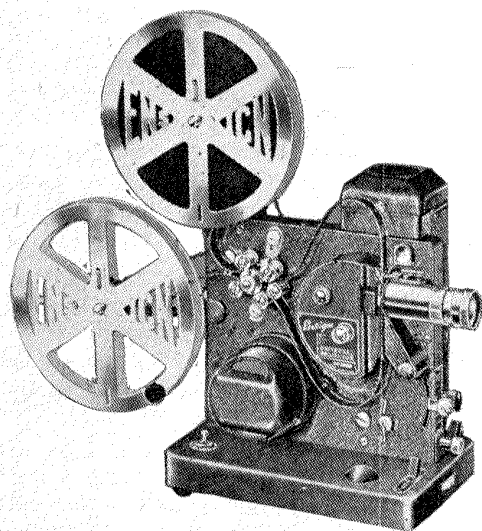


ing. The 602 has dispensed entirely with belt drive and the automatic re-wind can be brought immediately into play by operation of a lever on the top spool arm. Although the manufacturers were satisfied with their own handiwork, they bowed to a continuous demand from education authorities for a silent projector with a larger spool capacity, and thus the 602 was replaced with the 613, which was in almost every respect similar. Unfortunately, in re-building the mechanism to accept 800 ft. spools it was found necessary to dispense with the internal gear drive to the spindles and replace these with spring belts.

In passing, I would mention two other 16mm. silent projectors which enjoyed reasonable success in this country after the war. One was the Simplex Ampro Imperial and the other was the Eumig P3 (later termed the P26). In specification, both these machines were unlike the Bell and Howell 602, having reverse projection, still pictures, and a built-in pilot lamp. If anything, these two machines had something of an edge over the Bell and Howell, in that their pilot lamps function in opposition to the lamp switch, but at that time both suffered from the disadvantage that their names were not so well known as the Bell and Howell.

A very useful feature of the Eumig was that no external transformer was necessary as in the case of the Ampro and Bell and Howell machines. As the manufacturers of both these machines are still in existence today, you can buy without fear of being in difficulties over spare parts.

The Imperial was a development from the



The Ensign Universal was designed to accept films of different sizes for which a conversion kit was supplied. The layout of the machine was adopted by one or two manufacturers besides and featured a right angled light path with the lamp house on the offside of the machine and a single sprocket acting as both feed and take-up.

earlier Ampro silent projectors, the earlier models KD and NC projectors. Although similar, the principal difference between these machines was that the NC model was designed for sound conversion. The upper-works of both machines were identical and the only difference was in the motor housing and in the drive arrangements.

Before leaving 16mm. silent projectors, I would mention the existence of three projectors which are not frequently thought of when considering the purchase of a silent machine.

These are the Ampro Stylist, the Debie and the Siemens 800. The reason that few people think of these projectors is that they are in fact silent versions of sound projectors and each was introduced with the idea of later conversion to sound. Not many of these machines have been manufactured and of course their original price, for silent machines, was high in relation to today's projectors designed only as silent machines. Their value, of course, depends upon the possibility of them being converted to sound. So far as I am aware, no conversion facilities now exist for the Ampro projectors but conversion facilities for Siemens projectors and Debie are still in existence in this country.

PRICES

Pre-war Specto projectors of the standard 100w. type can be purchased for around £15 or sometimes less, but the 500w. models are usually over £20. The Dekko projectors, although more expensive initially, do not now sell at much higher prices than the Specto 500s and they sometimes can be seen selling for less. The average price for the Bell and Howell 702 or the American made Diplomat is £30, although I have seen them selling for less than this. But the later 613 can be anything from £30 to £40. The Ampro Imperial is likely to be around the £30 mark, perhaps a little lower, and the Eumig P26 about the same price, but perhaps in the lower £20s for the black P3 model. The Ampro convertible projector, although rare, may be purchased on occasions for around £50, and the silent version of the Debie would be in this region. The Siemens series are likely to be higher than this, but these machines are extremely sought after, and such a machine might be hard to come by if you particularly wanted one secondhand.

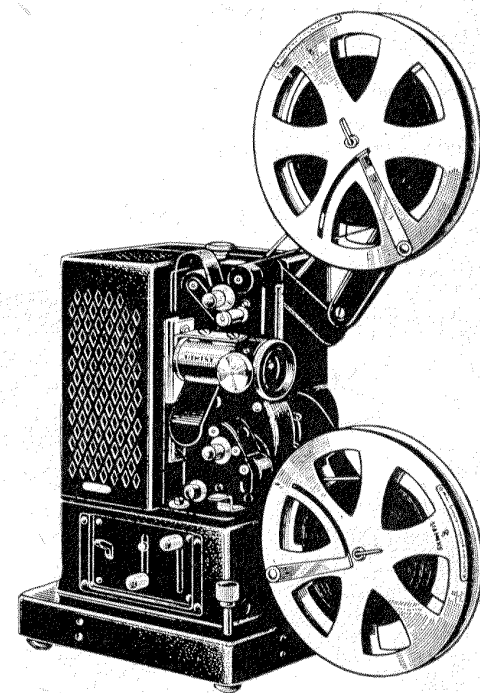
Pre-war Sound Projectors

16mm. sound projectors have been available in this country since the end of the 1920s, and so many of the early machines are available today at quite low prices. But I would suggest that as far as the average user is concerned, he should avoid the very

earliest models as these call for very close knowledge of the construction of the machine and some of the very earliest tend to be rather fussy in operation. A sound projector offered at a very low price may be a white elephant if the cost of overhauling it turns out to be five times the price of the machine, and this could well be the case—especially if new components have to be manufactured from scratch.

So first of all, let me list the projectors which I feel would be suited only to the "workshop man". These are the B.T.H.-SRB, the G.B.-Scope A and B and Grosvenor; also the early Western Electric machines. What does this leave for the average user? Quite a large choice in fact—and to begin with, I would mention what has probably become the most well-known machine on the secondhand market, and that is the G.B. L516.

These projectors were made in Britain by G.B. Equipments Ltd., up to and during the war. In comparison with earlier machines, they were compact and easy to handle. Spool capacity was larger than previous machines from G.B.-Scope manufacturers and they were fitted with power re-wind and safety trip-outs. A convenient



The Siemens model C projector employed the unusual 'beta movement', in which the intermittent movement was effected without use of the sprocket holes. A still picture device was fitted to these machines and immediate access to any part of the mechanism could be gained by simply releasing the top catch. A similar machine known as the Home Projector was manufactured by Siemens in which the 'beta movement' was replaced by a conventional claw.

feature of the L516 projector is the overall cube shape of the mechanism which makes servicing of the machine easy, since it can be stood in any position without risk of damage to any part. The projectors are fitted in wooden blimp cases and the mechanism is accessible by a hinge-open door.

There are two unusual features. Firstly, the curved gate held by side tensioning springs as opposed to the more conventional type of straight gate (with front and back plates), and secondly the elimination of an exciter lamp by using an inverted type of projector lamp, burning base uppermost, enabling a light source for the PE cell to be tapped off from the base of the lamp house. Although the L516 is so well known, it is not generally realised that it is one of a group of *four* machines—to wit, the K16, the L16, the K516 and L516. In fact people quite often refer to any of the machines in the group as being L516s when sometimes this is not true. In the first place the K models are slightly smaller (i.e. not quite so high as the L516) and they had a smaller speaker and lower wattage lamp with the outfit. The figure 5 in the model denotes that the projector uses a 500w. lamp as opposed to the 200w. as was supplied in the L16 and K16. I recommend the K516 and L516 as good value for money, particularly in view of the fact that spares are widely obtainable and excellent sound quality can be obtained from these machines.

If you are considering a machine for permanent or perhaps semi-permanent

installation does not necessarily signify that they cannot be moved about, but they are heavy machines and not designed for "instant portability".

One of the first companies to enter the 16mm. sound field outside of Britain was the Bell and Howell company who commenced a range of sound machines in the 1930s and marketed under the name of Filmosound. These machines embodied the same basic mechanism as I have already described under silent projectors and suffer from some of the same faults. But all in all, the Filmosounds were of a very satisfactory design and have given millions of performance hours between them without mishap. The early Filmosound projectors are built into very solid cases as was usual with most of the pre-war sound projectors but lenses, lamps and other spare parts are still available.

PRICES

If you have a yen to buy an old 16mm. sound projector and re-build it, there is really no limit to how little you can pay for one of the early projectors which I have mentioned. Very often, you will find that owners of the old G.B.-Scope projectors or SRB models are only too pleased for somebody to take these huge machines off their hands. The L516 projector usually sells for around about £45 secondhand, although it is possible to buy machines at lower prices than this. The lowest price I have seen for

sure you are not being sold a K516 under a different name!

The average selling price of the early black Debric projector is around £50 to £60—perhaps even a little more than this if the machine is in excellent order. The Bell and Howell Filmosounds under the reference model 142 seldom go for more than £45 unless they happen to be very good specimens.

Post-war Sound Projectors

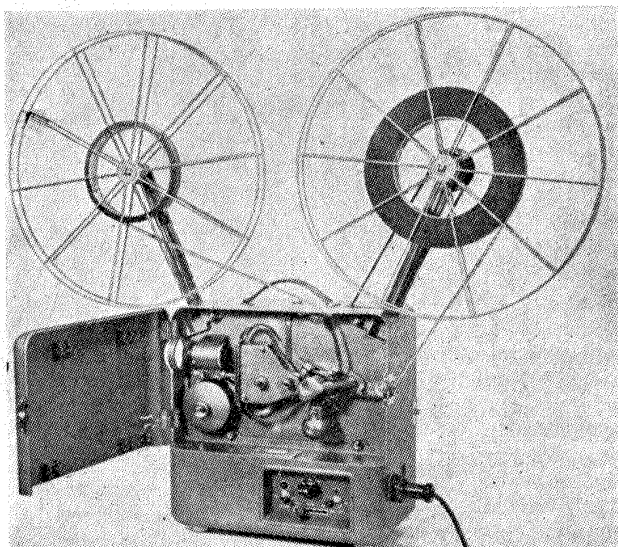
An early development, after the war, was the decision by G.B. Equipments Ltd. not to manufacture any further sound projectors of their own. Instead, the Company began to manufacture in this country, under licence, models of the American design Bell and Howell equipment. The first 16mm. sound projector to be produced in this country under this arrangement was the Bell and Howell 601, which was almost identical to the earlier American made Bell and Howell 142. The 601 was the first of a long series of highly successful projectors—indeed without doubt the G.B. Bell and Howell became the most successful selling projector in this country. Space does not permit a detailed description of the models in this range.

Briefly, however, the models were as follows:

- 601—110v. operation, supplied with 12 in. speaker and mains transformer. Also compact version with 6 in. speaker.
- 621—Minor modifications only. Compact version.
- 622—Similar specifications to 621, but change from rexine covered casing to paint finish. On and from this model, dual inserts on the film path were supplied as a matter of course.
- 623—Built-in detachable 6 in. speaker.
- 626—Mains operation model with lightweight 10 in. speaker.
- 630—First magnetic and optical sound projector.
- 631—Two case model, optical sound or compact version. Two-tone finish.
- 640—Rebuilt magnetic-optical projector with interchangeable recording heads for half-track and full-track recording.

After the model 640, the whole design of the Bell and Howell machines was scrapped in favour of a completely new model and variations on this have since been manufactured including the 642, 643 and 644 covering both optical and magnetic.

Probably the principal competitors of the Bell and Howell series was the Simplex Ampro, but projectors that were available in this country were of American origin and in due course the American machines were manufactured under licence by the Kelvin, Bottomley and Baird organisation.



The Safar type PEM 16mm. sound projector—better known as the Dansen—was manufactured by the now defunct Dansen Development Company. The machine boasts a number of exclusive features among which must be included its overall size as the casing of neither the projector nor speaker is much larger than 12 in. at its maximum dimension.

installation, I recommend the Debric series of D16 machines. The pre-war models of these can be distinguished by their black finish, and although certain modifications have been made to the series, early models are still very good buys and spares and servicing facilities are still in existence. The fact that I refer to these models as being particularly suitable for semi-permanent

such a machine in good working order is £30. It is worth mentioning on this point that there are sources for the purchase of reconditioned L516 machines which are sold under guarantee. The prices of the K16 are very close to the L models with usually only a matter of £5 or so difference, but if you are offered an L516, at least it is worthwhile looking closely at the nameplate to make