Canon A1

Has the machine gun rattle of Canon's attack on the SLR market reached its peak with the arrival of the A1

Some cameras have automation with aperture priority. Some have automation with shutter priority. A few cameras have automation in which a programmed relationship between shutter speed and aperture is the method adopted for exposure control. In what appears to be a dying breed, there are even cameras which have no automation at all, the exposure being left to the skill and experience of the user.

One all the time

The Canon A1 is none of these and it is all of them. You can have any of the known forms of automation, or you can say "I'm in charge", and take over full control yourself.

At first sight the camera appears to be a much more complicated instrument to use than any other on the market other that is, than a few architectural field cameras.

In fact, once you have discovered which lever or button to set, and where you could leave the camera alone for the rest of its (and we suspect your) life, subject to the limitations of each form of automation, the camera will produce well exposed negatives on into infinity. Speaking of infinity, the camera does have one shortcoming, you have to focus it!

From all of this you will have gathered that there are a number of peculiarities in the controls, though this is not all that evident. Anyone who has handled an SLR would find no difficulty in handling the A1 as a 'normal' camera. All the usual controls are there, and very much in their expected positions.

Take first, not an oddity of function so much as an oddity of means, the delayed firing mechanism. As with a number of cameras before this, the delay is controlled by an electronic timer. The difference is that this delay is set by moving a lever which has 4 stations marked on it, and is sited on the hub of the lever wind.

The 4 stations are marked 'A' for Action, 'L' for locked, and to figures '2' and '10'. When the lever is set to these the delay is either 2 seconds or 10, and is brought into play by pressing the shutter button. During the operation of the delay an LED winks, with the 10 second setting at a rate of a little short of one second intervals until the last 2 seconds when it begins to wink very rapidly as a warning.

In the case of the 2 second setting the whole period is occupied by this rapid winking. There are three very similar buttons to perform three very dissimilar functions. They are all about ¼ inch in diameter, and two are placed on the left wall of the lens plateau, one above the other, while the third is set in the top plate between the rewind knob and the prism box.

To take the last mentioned first, this is the battery check, causing that same LED which signals the action of the delayed release to wink if the battery is good.

The two buttons on the front of the camera serve respectively as an exposure lock to allow the user to hold an exposure setting when the camera has been moved to another position (the upper button), and as an exposure preview (the lower button). This button causes the metering system to show the proposed time and aperture on the readout within the viewing area.

Examination of the hotshoe of the camera will reveal three contact pins instead of the more usual single contact. That single contact, of course, allows the use of any hot-shoe fitting flashgun, but the other two pins are peculiar to Canon.

They mate with Canon's 199A and 155A guns, permitting them to take over a degree of command of the camera. When in action they automatically set the shutter to the camera's synchronisation speed, 1/60 sec. The metering systems of the Speedlites control the light output.

When the guns are switched off, the camera returns to its normal control system, whichever that might be at the time. The flashguns also control the aperture within the ranges set by the user on the gun calculator. These guns can also be used with full manual control using traditional guide number calculations.

When so-used the readout displays an 'M' to remind you that you are on your own, as well as the letter 'F' to inform you that the gun has come to full charge. Instead of the aperture information given in the automatic modes, the readout indicates that the shutter speed has been set by the system to 1/60sec.

The battery is loaded through what has become the standard trapdoor on the front of the Canon bodies, the battery being that most expensive of products, the silver oxide Mallory PX28. You can, however, get away with a shorter lived manganese alkaline cell.

Other fittings

Our sample A1 was fitted with a grip plate on the front, hard by the battery trap door. This we had to remove in order to fit the motor drive unit.

The motor drive has four settings, one being, not unnaturally, 'off'! The other three are for single shots, high speed drive and low speed drive. On test, and with the camera loaded with a dummy film, fresh batteries (12 pen torch cells no less) ran the camera at 5¼ frames per second during the first half of the cassette, dropping to 4 frames per second as the resistance built up in the second half of the film. The actual average over a full film being 4⅔ frames per second. With this kind of abuse, it is not surprising that we flattened a set of batteries in half an hour. When the speed selection switch was set to 'L' for Low speeds, we found that over a burst at the beginning of the cassette the maximum frame rate

reached was 3, while the average over the entire film came to 2¼ frames per second.

All the normal functions of camera may be performed with the motor drive in place, even when the drive is switched off. And while the weight of the camera equipment is certainly greater when this unit is fitted, the handling and carrying of the camera is much improved with the motor in place.

As with all other Canon's of the upper grades, the A1 may be fitted with a vast arsenal of bits and pieces to fit it for specialized uses, some of which are so far removed from typical amateur use as to be outside their knowledge or experience. The least of these specialised units is the well known Data Back which imprints a variety of information on the film at the moment of exposure.

The shutter is a modification of the now well established Canon cloth blind, electronically timed unit.

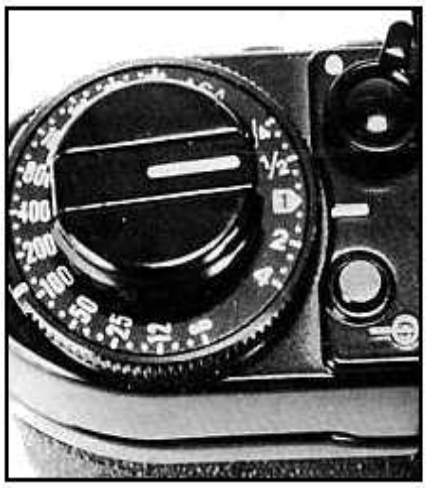
As we have said, you have the choice of setting the shutter yourself or leaving the camera to do this for you. In either case, the camera's internal calculating system will print up the speed in use on the lower edge of the viewing area, but outside of the actual scene.

The speed figures are large and clear, and resemble those on a pocket calculator, part of whose workings have been co-opted by Canon for the exposure system of the camera.

The viewfinder is bright and clean, and free from the intrusion of exposure information, which being set below the bottom margin of the screen, is only noticeable when attention is consciously directed to it.

Even this intrusion may be switched out by the flick of a switch on top of the camera, and you may then proceed in happy ignorance of what the camera is up to. The variation in the response of the meter over the scene is one of the smoothest we have tested. The fall in sensitivity being even and regular out to the edge of the field. Canon refer to the metering as being of the 'Central Emphasis' type, and this exactly describes what we found.

The focus aids are the usual split central image backed up by a microprism annulus, and they share the ease of use found throughout the rest of the camera's systems.



Exposure models

If the camera is set with the lens disengaged from the 'A' setting on the iris diaphragm ring, and the automatic exposure mode selector switch set to a marking 'TV' then the camera becomes a comparatively simple TTL exposure indicating instrument.

If the lens aperture ring is set back to the 'A' index, and the automatic exposure control switch is left at the 'TV' setting, then the camera has become an automatic using shutter priority. The user selects the shutter speed and the camera selects the aperture.

Move the mode selector switch to the setting marked 'AV' and the selection of the shutter speed is left to the camera while the user takes over control of the aperture.

The clue to which mode is in operation, other than the indexing on the mode selector switch, is to be seen under a window beside the shutter button, a mask is moved by the selector switch which
reveals either a set of shutter speeds which may be set against an index marking, or the range of apertures to be set against that same index.

Movement of that dial is accomplished by fingering a knurled wheel which protrudes slightly at the upper front of the camera. For the camera to take over all exposure control, the programmed control system may be called into play by setting the mode selector to 'TV', and turning the shutter speed dial to a mark 'P', which is the next step beyond the 1/1000 detent. The setting of the iris diaphragm ring remains at 'A'.

The actual programme is such that the shutter / diaphragm combination is set by the camera to give the highest speed and the smallest aperture over part of the range. Over ranges where even with the lens fully open exposure would be insufficient, the aperture remains wide, while the shutter speed is reduced.

As can be seen, Canon have settled the arguments pro and con the various aspects of exposure control at a stroke. A stroke? No, they have fired a blunderbuss into the milling crowd of arguing photographers, killing off all opposition.

The Lens

We have often said that Canon lenses respond to test so uniformly that it is

almost a waste of time to test a further example. However, on this occasion those who keep back numbers of SLR Camera will note that the curve for this 50mm f1.8 lens differs from those of the same type tested in previous issues. The rise to peak resolution is sharper, and the top resolution recorded is much higher than hitherto.

Is the lens a new and improved version? No, in fact under test in our lab it was found to agree very well with all the others of which we have records. What has happened is that the final figures given here are the result of tests on Kodak AHU Recordak Microfilm type 5460, a film which we have found to sharply differentiate between the men and the boys, and having a stunningly high resolving power in its own right.

It is a film which has certain disadvantages for general use, since it is unforgiving of careless use, but for our purposes in lens testing for publication it has the great advantage that it can separate widely two lenses which if tested with normal films will show figures which seem to have little to separate them.

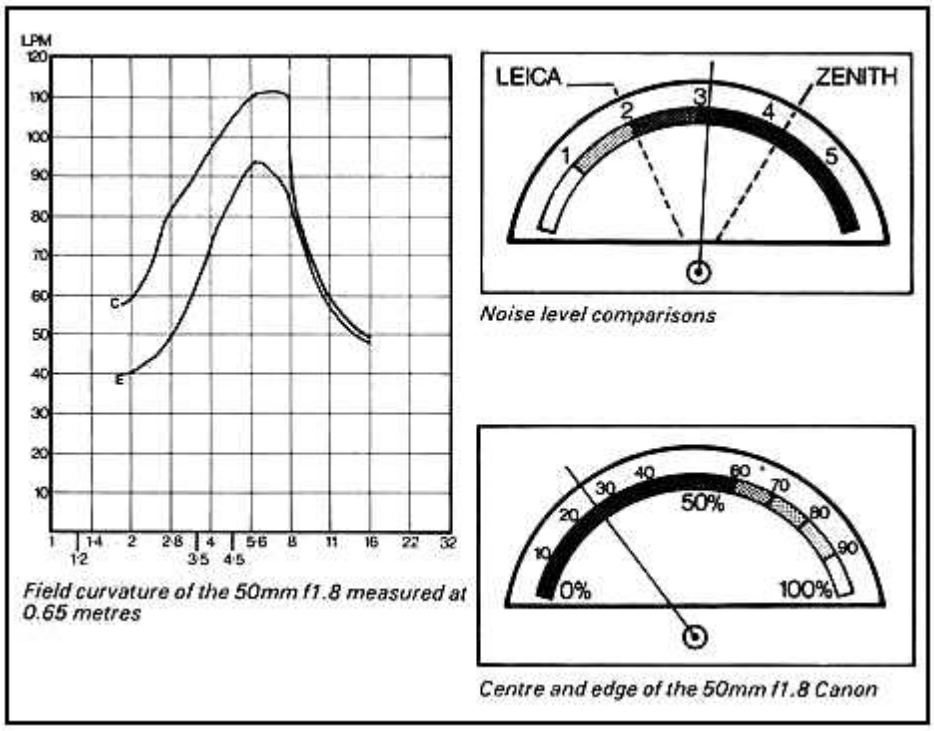
Films like Panatomic X and Pan F flatten the top of resolution graphs, and leave you to fall back on word descriptions of the image quality. Or force you, if you wish pointlessly to impress readers with your expertise, to publish MTF graphs. Since not one photographer in a hundred can gain much from these curves, we do not publish the curves derived at our lab, but keep them for future reference, and as a cross check in case something has gone wrong in the photographic tests. It is the negative which counts after all.

Conclusions: With a camera such as this what can we say? Every objection and point of view has been met and answered. We have to find some criticism to avoid being totally lost in praise. The best we can come up with refers to the battery.

It is the most expensive battery called for in photography, and it is most certainly not easily bought, even in London as we can testify after spending a full day searching for one for a previous Canon camera.

That being so, the total failure of the camera on the death of the battery is to be deplored. The shutter will not fire, and there is no mechanical fall back speed.

The rarity of the stockists for the battery will be moderated by the certainly that this is a very common camera about the streets for in spite of this single and to most photographers minor fault, this camera must be the most tempting morsel to hit the markets since Ihagee brought out the Kiné Exacta.



Field curvature of the 50mm f1.8 measured at 0.65 metres

Noise level comparisons

Centre and edge of the 50mm f1.8 Canon