

WILSONWERKS ARCHIVES

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OWNER'S MANUAL

HONEYWELL AUTO/STROBONAR 360A

Welcome to Honeywell's Family of Fine Photography

We hope your new equipment never causes problems. But if something should go wrong, please let us help. Our national network of Honeywell owned and operated service centers is staffed by trained technicians who know Honeywell equipment better than anyone else. You can get in touch with the center nearest you through your Honeywell photo dealer or by contacting the center directly. They're listed at the back of these instructions.

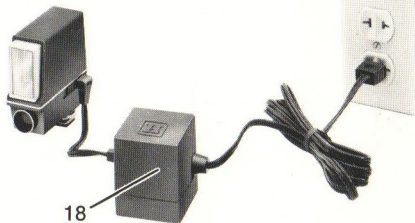
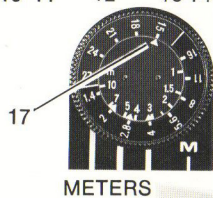
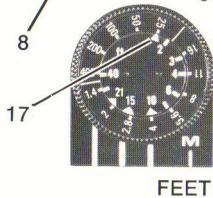
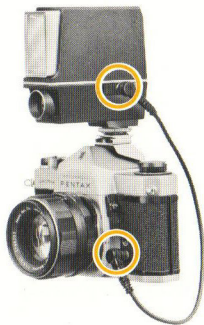
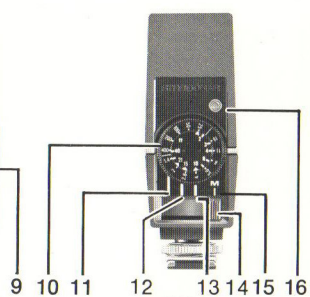
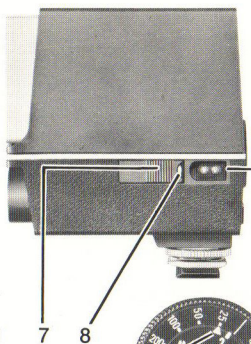
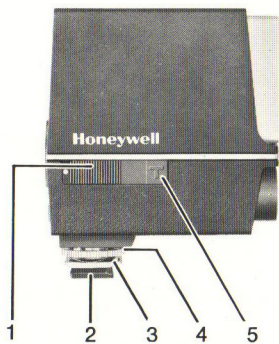
Please write to me directly if you have comments or suggestions on how we can serve you even better. We'd really like to hear from you.



Robert M. Spangler, Director Consumer Affairs
Honeywell Photographic Products
5200 East Evans Avenue
Denver, Colorado 80222

Open this flap

Leave this flap open for easy reference while reading through the instruction book.



Parts chart

1. Battery switch
2. Center contact
3. Mounting foot
4. Knurled locking nut
5. Open flash button
6. Automatic sensor
7. Shutter connector lock
8. Shutter connector receptacle
9. Charger receptacle
10. Calculator
11. Maximum range index (blue)
12. Medium range index (silver)
13. Minimum range index (green)
14. Automatic/Manual selector lever
15. Non-automatic index (M)
16. Ready light
17. ASA or DIN index
18. Charger

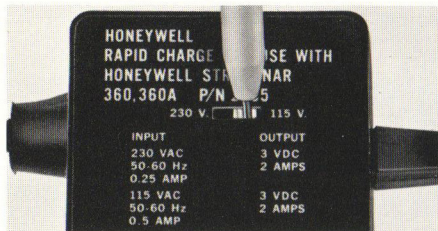
Operating steps

Familiarize yourself with your Honeywell Auto/Strobonar 360A – then follow these simple steps:

1. **Set charger input line voltage (see page 5).**
2. **Charge the battery and form the storage capacitor (see pages 5, 6 and 7).**
3. **Attach to camera (see page 7).**
4. **Set shutter speed (see page 8).**
5. **Set film speed on calculator dial (see page 10).**
6. **Select f/stop you prefer opposite one of the colored indexes for auto operation (see pages 9 and 10).**
7. **Set AUTO/MAN selector lever to same color index mark as f/stop selected (see pages 8 and 9).**
8. **Set selected f/stop on camera lens and shoot within auto range selected (see page 9).**
9. **Set battery switch to on. Compose and focus your picture.**
10. **Take your picture when ready light comes on. Your picture will be properly exposed within the shooting range for f/stop selected.**

First – Set charger voltage

Your Honeywell Rapid Charge unit can be used to charge the built-in nickel cadmium battery on either 115 volt AC (standard U.S.A.) or 230 volt AC (many European and other countries*). Set the charger voltage selector on the bottom of your rapid charge unit to match the line voltage you will use. Use a ballpoint pen or similar object positioned in the slot as shown to set the voltage selector.



Your charger has been factory set to the 115 V position and provided with 115 V AC plug.

CAUTION: The charger voltage selector must be set to the voltage you are using to prevent damage to your charger.

A wall outlet AC adapter may be necessary in some countries to adapt the two-prong plug on your charger to the AC wall outlet. The adapter may vary from country to country or within a particular country.

Second – Charge battery

Before you use your unit the first time, charge the battery for at least 3 hours.

TO CHARGE, set the voltage selector as described above. Connect the charger as shown on page 3 and set the Battery switch (1) to **OFF** (white dot **not** visible). (See page 6 for more information about the battery.)

Third – Form the capacitor

After charging form the capacitor.

TO FORM THE CAPACITOR, set the Battery switch (1) to **ON** (white dot visible) and fire the flash about 5 times by pressing the Open Flash Button (5). Wait about 30 seconds between flashes. (See page 7 for more information about forming the capacitor.)

***NOTE:** When operating the charger at 90 to 100 volts AC (Japan), set the voltage selector to 115V. The number of flashes per minute of charge will be less than shown on page 15.

What to know about the battery

Before first use

Because of shelf-life discharge, you must charge the battery for at least three hours before you use your unit the first time. If time permits, an overnight or 24-hour charge is recommended. See page 15 for average number of flashes per minute of charge.

How often to charge

It's good practice to charge the battery before and after each use. The battery must be charged when the recycle time is 30 seconds or longer. To keep your 360A ready for instant use, charge the battery at least once every 30 days.

Battery conditioning

Nickel cadmium batteries that are not charged periodically lose some of their charge whether you use them or not. They may even go completely dead during extended periods of inactivity, particularly if stored at high temperature.

The battery used in your 360A discharges completely in about 90 days whether you use it or not. The rate of self-discharge increases significantly if the unit has been exposed to temperatures above 95° degrees Fahrenheit (35° degrees centigrade).

Here's how to get top performance from your battery. Just recondition it any time you're not getting the number of flashes listed on page 15. To recondition: Charge for 24 hours. If you're still not getting the number of flashes listed, discharge and recharge again in this manner. Turn on your 360A. Let it idle for about 1½ hours. Don't flash it during this time! It's not necessary. Then charge for a second 24-hour period. One period of charge/discharge followed by a 24-hour charge will in most cases completely restore the battery.

ALWAYS DISCONNECT the charger from your Auto/Strobonar when you have completed charging. This is required to keep the battery from discharging needlessly through the circuitry in the charger.

AVOID STORING OR CHARGING your Strobonar at temperatures in excess of 95 degrees Fahrenheit (35 degrees centigrade). To do so will cause the battery to accept a limited charge in the times recommended (see page 15). To obtain normal battery operation again, charge for at least three hours at temperatures below 95 degrees.

WARNING: Do not operate your Auto/Strobonar if the ready light takes 30 seconds or more to glow. Charge the battery and then operate your Auto/Strobonar.

Save Battery energy

Turn off your flash unit if there's likely to be more than a minute between flashes. Leaving it on constantly drains energy and can result in less flashes per charge.

Forming the capacitor

Like all electronic flash units, your 360A has an energy storage capacitor which stores the electrical energy required by the flashtube. When your flash is new or has not been used for 30 days or more, it's normal for it to lose some of its ability to store electrical energy, or deform. A deformed capacitor causes longer recycle time for the first few flashes and less flashes per battery charge. Flashing your unit a few times as described on page 5 will reform the capacitor.

Attaching to camera

If your camera has a built-in accessory shoe, mount your Strobonar to the accessory shoe and tighten the knurled nut on the mounting shoe. Cameras equipped for cordless flash have a center contact in the accessory shoe. In this case, there is no need to connect the shutter cord included with your 360A.

If there is no contact in the accessory shoe, just connect the shutter cord by sliding the lock (7) open and inserting the locking tip connector. Connect the end with the removable tip connector to the X-sync terminal of your camera. Tip connectors are available for a variety of cameras (see your dealer). A standard PC (DIN) tip is supplied. Be sure the tip is screwed in as tightly as possible.

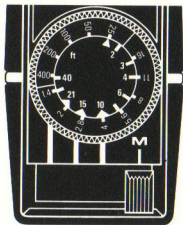
If your camera does not have an accessory shoe, use one of the many Honeywell brackets available from your dealer.

Setting shutter speed

Use X-synchronization (zero delay). If your camera has a between-the-lens shutter it will synchronize at all speeds. If it has a focal plane shutter, it will synchronize only at slower speeds, generally up to 1/60 second. Check your camera instruction manual or see your dealer.

Creative control

The 360A gives you a choice of 3 f/stops with 3 different shooting ranges when shooting automatically. This means you can creatively decide on more or less depth of field (area of sharp focus) by using a larger or smaller f/stop while shooting automatically. Your 360A has manual (non-automatic) operation, too. Use manual for such techniques as fill-in flash (page 14), bounce flash, etc., or for pictures beyond the auto flash range.

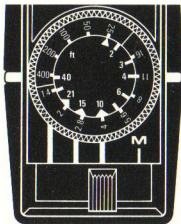


MANUAL

The AUTO/MAN lever has four positions.

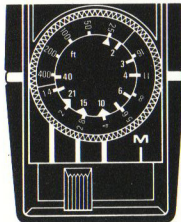
This position is for non-automatic or manual operation only.

(Continued on next page)



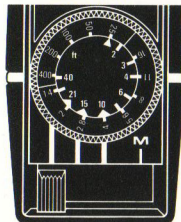
GREEN

This automatic position lets you use a small lens opening to increase depth of field while shooting at a close flash-to-subject range of 2 to 10.5 feet (.6 to 3.2 meters).



SILVER

This is the middle position. It lets you use a larger lens opening for medium depth of field at a medium shooting range of 3 to 15 feet (.9 to 4.6 meters).



BLUE

This automatic position lets you use a very large lens opening to decrease depth of field at extended shooting range of 4 to 21 feet (1.2 to 6.4 meters).

Taking pictures automatically

1. Set your camera shutter speed for X-sync (see page 8).
2. Turn outer ring of the calculator dial (10) until the ASA or DIN number of the film you're using is opposite the ASA or DIN index (17).
3. On the outer ring of the calculator dial, choose the f/stop that gives you the depth of field and/or range you want opposite one of the three colored index marks (11, 12 and 13). You have a choice of three f/stops for each different film speed. The maximum shooting range is indicated opposite the colored triangle for your selected f/stop.

EXAMPLE 1: If you're using a film speed of ASA 25 (DIN 15) you can shoot at either BLUE f/2.0 (4 to 21 feet or 1.2 to 6.4 meters), SILVER f/2.8 (3 to 15 feet or .9 to 4.6 meters), or GREEN f/4.0 (2 to 10.5 feet or .6 to 3.2 meters).

EXAMPLE 2: If you're using ASA 100 (DIN 21), you can shoot at either BLUE f/4.0 (4 to 21 feet or 1.2 to 6.4 meters), SILVER f/5.6 (3 to 15 feet or .9 to 4.6 meters), or f/8.0 (2 to 10.5 feet or .6 to 3.2 meters).

4. Set Automatic/Manual selector lever (14) to the colored index opposite your selected f/stop. Just match the colors for f/stop and range.
5. Set your camera lens to your selected f/stop.
6. Set battery switch (1) to **ON**, white dot visible.
7. Shoot your picture after the ready light (16) comes on, within the range of your selected f/stop, your subject will receive correct exposure automatically — with no bothersome adjustments or calculations.

Taking pictures non-automatically using calculator

1. Set your camera shutter speed for X-sync (see page 8).
2. Set Automatic/Manual selector lever (14) to M (15).
3. Turn calculator dial (10) until the ASA or DIN film speed of the film you're using is opposite ASA or DIN index (17).
4. Focus your camera and check the distance to your subject, using camera range finder or some other convenient method. Remember it is flash-to-subject distance that counts, not camera-to-subject distance.
5. Adjust your camera lens to the f/stop that appears opposite the flash-to-subject distance on the calculator.
6. Switch the Battery switch (1) to ON (white dot visible) and take your picture after the ready light comes on.

EXAMPLE: If you are using a film speed of ASA 25 (DIN 15) with a flash-to-subject distance of 10.5 feet (3 meters), the proper f/stop to set on your camera is f/4.

NOTE: *The calculator scale and the guide number are based on averages calculated for average size rooms with light walls. If you are taking pictures in a very large room or out of doors at night, you may need to increase the exposure by one f/stop or more.*

Taking pictures non-automatically using guide numbers

1. Set your camera shutter speed for X-sync (see page 8).
2. Set the Automatic/Manual Selector (14) to M (15).
3. Find the guide number for the film speed you are using in the table below.
4. Focus your camera and find your flash-to-subject distance.
5. Divide the guide number by the flash-to-subject distance to find your f/stop setting for average exposure, and set this f/stop on your camera.
6. Switch the Battery switch (1) to ON (white dot visible) and take your picture after the ready light comes on.

EXAMPLE: If you are using a film speed of ASA 25 (DIN 15) at a flash-to-subject distance of 10 feet (3 meters), the proper f/stop to set on your camera is f/4.0 (42 **divided by** 10 or 12.8 **divided by** 3), which is f/4.2. The nearest click stop on your camera is close enough for practical work.

ASA	25	32	40	50	64	80	100	125	160	200	250	320	400	800	1600
GUIDE NO. FEET	42	47	52	59	67	75	84	96	106	118	134	150	168	236	336
GUIDE NO. METERS	12.8	14.3	16.2	18.0	20.4	22.9	25.6	29	32.3	36	40.9	45.7	51.2	72.3	102.4

REMEMBER, these are “guide numbers”. Experience and your personal taste may suggest more or less exposure than these guide numbers call for to get the results that suit you best.

Tips for using your Auto/Strobonar

Move in close for tight shots or back away for long shots. You can do this without changing setting when operating automatically.

Try to line up a group so that everyone is about the same distance from your Auto/Strobonar.

Try to keep your subject a few feet (about 1.5 meters) from the wall. This will keep the harsh shadows out of your pictures.

For more pleasing results, try to have a light, bright color a few feet from your subject.

Avoid shooting through doorways or against windows where objects close to your field of view may reflect light into the sensor, causing incorrect exposure.

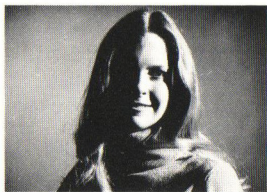
Bounce flash – Use manual mode for bounce flash. Remove flash from your camera and allow two full stops more exposure to compensate for the light absorbed by the ceiling or wall under average conditions.

Stop-Action – The fantastic speed of your computer flash (1/70,000 to 1/4,000 second) is excellent for such stop-action pictures as breaking a light bulb, hitting a golf ball, and bursting a balloon. Creative pictures of this type require special techniques. Usually the camera shutter is set to “B” and a simple switch (made of aluminum foil, paper clip or pieces of wire) is used to fire the flash at the moment you desire to make the exposure. Be sure to photograph your subject in a dark area and fire the flash when the shutter is open. For further information, write Consumer Affairs.

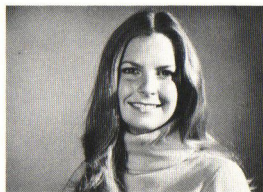
Outdoor use for fill-in light

Your Auto/Strobonar can be used quite simply in manual mode as fill-in light when sunlight causes heavy side or front shadows. Just enough fill light should be used to soften the shadows so more detail can be seen in the shadow areas. Of course, too much fill light will overpower the reflected sunlight and completely cancel the shadows. The amount of fill light to use depends upon your personal preference.

The techniques of fill flash, although not complicated, are beyond the scope of this owner's manual. If you would like to explore this technique, write to Consumer Affairs.



Subject in bright sunlight without fill-in flash.



Strobonar fill-in softens shadows and gives crisp detail. Meter reading was taken on sunlight side of subject.

For further information, write to: **HONEYWELL INC.**
Photographic Products Division
Consumer Affairs
P.O. Box 22083
Denver, Colorado 80222 U.S.A.

Know Your Auto/Strobonar

Power Source
..... Rechargeable, nickel
..... cadmium batteries

Charger Input Voltage
..... 104 to 129 VAC, 50-60 Hz
..... 208 to 258 VAC, 50-60 Hz

Battery Charging
..... (Before first use) charge for 3 hours

Flashes per Charge*
..... 5 after 5 minutes of charging
..... 15 after 20 minutes of charging
..... 40 after 3 hours of charging

Guide Number
..... Automatic Not Applicable
..... Manual (English) ... 42 for ASA 25 film
..... Manual (Metric) .. 12.8 for ASA 25 film

**Automatic Lens Setting — Choice of Three
for each Film Speed**
..... For example: ASA 25,
..... Choice of f/4.0, f/2.8 or f/2.0

**Automatic Shooting Ranges
(All Film Speeds)**
.. when set at:
.. Index (11) 4 to 21 feet — 1.2 to 6.4 meters
.. Index (12) 3 to 15 feet — .9 to 4.6 meters
.. Index (13) 2 to 10.5 feet — .6 to 3.2 meters

Flash Speed Automatic
..... 1/70,000 to about 1/4,000 second

Flash Speed Manual
..... 1/4,000 second

Recycle Time
..... About 9 seconds to ready
..... light with fully charged batteries

Angle of Coverage
..... 50 degrees horizontal and vertical

Color Temperature
..... Approximately noon daylight

Automatic Sensor Measuring Angle
..... about 16 degrees

Shutter Synchronization
..... Between-the-lens shutters
..... X-sync all speeds
..... Focal plane shutters
..... X-sync — usually 1/60 second

Shutter Cord
..... 12 inches (30cm) long with locking tip
..... connector on flash end and threaded tip on
..... camera end for tip connectors which fit a variety
..... of cameras. A PC (DIN) tip is supplied

Weight ... Less than 9 ounces (252 grams)

Size ... 3.25" deep x 1.35" wide x 3.15" high
..... (3.8" including foot)
..... 82.5mm deep x 34.1mm wide x 80mm high
..... (96.5mm including foot)

*Achieved when flashed 2 per minute until recycle time exceeds 30 seconds with fully conditioned battery.

WARRANTY POLICY

Your new Honeywell Strobolar is warranted for one year against defects in material and workmanship. This covers either the original purchaser or the gift recipient. Your Strobolar will be repaired or replaced at our option within the 12-month period provided it has not been abused, altered or operated contrary to instructions. For in-warranty service, the Strobolar must be packaged carefully and shipped postpaid to the nearest factory service center listed, along with your warranty card or other proof of purchase date. Please include a note describing the difficulty. Honeywell extends no other warranties beyond the face hereof, and will not be liable for damages from delay or loss of use or other indirect or consequential damages associated with an equipment defect.

HOONEYWELL PHOTOGRAPHIC SERVICE CENTERS:

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5200 East Evans Ave.
Denver, CO 80222

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Cleveland, OH 44114

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Coral Gables, FL 33134

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Honeywell