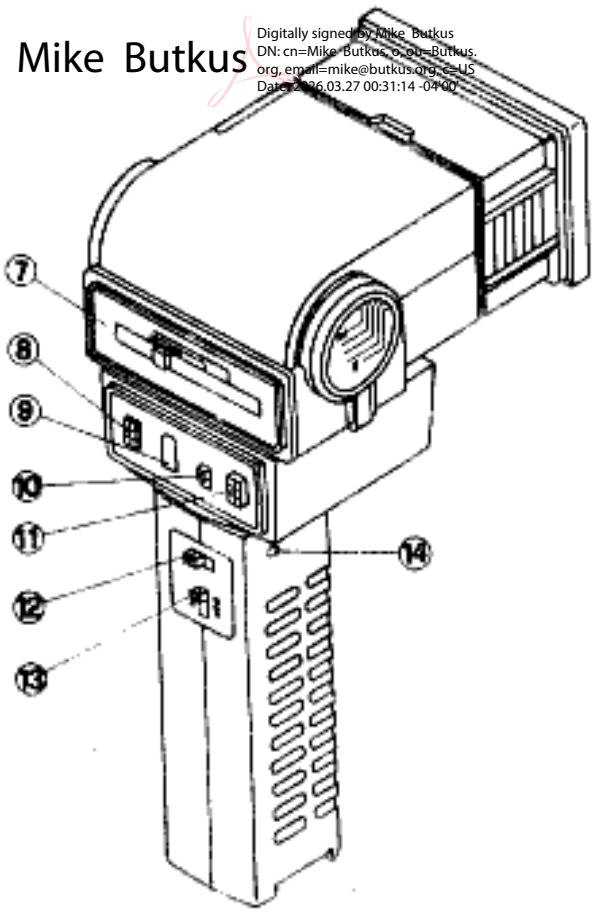
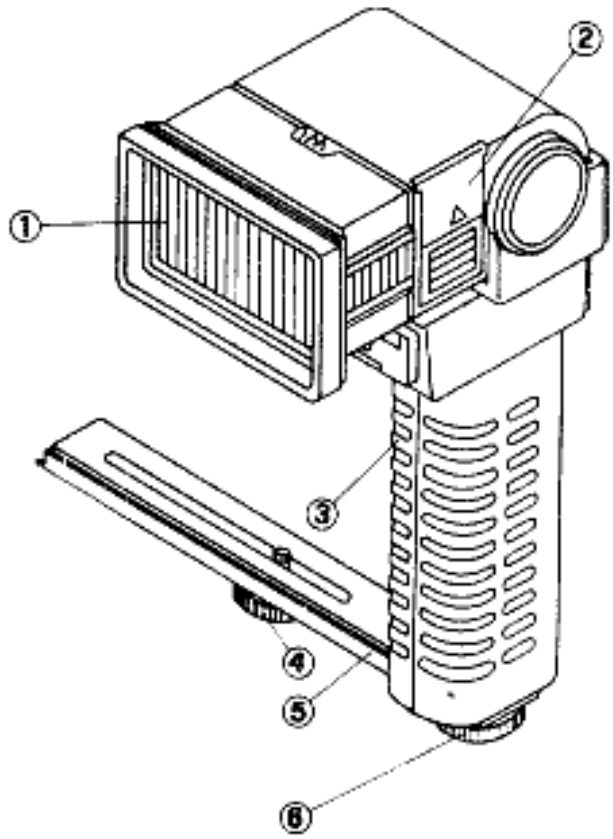
Electronic Flash

Thyristor

Starblitz 360 GTZ

INSTRUCTIONS





1. Flash Head.
2. Battery Compartment Cover.
3. Hand Grip.
4. Camera Lock Screw.
5. Bracket.
6. Grip Lock Screw.
7. Exposure Calculator.
8. Sufficient light Indicator.
9. AC Socket.
10. ON/OFF Switch.
11. Ready Lamp/Test Button.
12. Auto/Manual Control Switch.
13. GN/F-stop Control Switch.
14. Synchro Cord Socket.
15. Synchro Cord.

SPECIAL FEATURES

1. THYRISTOR CIRCUIT
   The advanced strobe is equipped with a powerful Thyristor Circuit which saves the excess energy not needed for a proper exposure. It provides a fast recycle time and a great number of flashes.

2. ADJUSTABLE GUIDE NUMBER
   The Guide Number of the strobe can be changed from 36 to 18 and 9. This feature makes multi-flash and close-up photography especially effective.

3. BOUNCE FLASH
   The Flash head of the strobe can be swiveled by 180° horizontally and 90° vertically. This gives you a great variety of options in the control of indirect light, the reflector can be directed either towards the ceiling, a wall, or any other reflective surface.

4. ZOOM LENS
   A 3-position zoom lens is equipped which delivers proper lighting coverage when using camera lenses of focal lengths from 35 mm to 85 mm.

5. SUFFICIENT LIGHT INDICATOR
   The strobe is equipped with the green lamp to let you know whether the light intensity is adequate or not before taking picture.

BATTERY LOADING

1. Slide the ON-OFF Switch to "OFF" position.
2. Slide the Battery Compartment Cover outwards.
3. Load 6 "AA" size batteries into the compartment according to the polarity diagram, and close the Cover.
4. Flip the ON-OFF Switch to ON position, a humming sound will be heard, this is normal.
5. The Ready Lamp will turn on in a few seconds. The unit is now ready to flash.

6. Press the Test Button. The flash will fire. This should be done twice in succession if the flash has not been used for a few days.

7. When the batteries are weak, the time for the Ready Lamp to turn on will be longer. If the Ready Lamp fails to turn on after 30 seconds, replaced all the batteries.

ATTACHING BRACKET

Fix Bracket on to Flash Unit by tightening Grip Lock Screw. Mount your camera on the other end of the bracket and tighten Camera Lock Screw.

CONNECTING SYNCHRO CORD

Plug the pointed end of Synchro Cord into Synchro Cord Socket of the Flash Unit. Plug the other end into the camera's flash ternimal, usually marked "X".

SETTING SHUTTER SPEED

Set your camera to the proper shutter speed for electronic flash use, "X" or 1/60 second. (Refer to your camera manual under "Electronic Flash".)

ZOOM LENS POSITION SETTING

The retractable Zoom Lens Hood of the unit can be set at 3 positions to fit different lens using in your camera.

(1) Closed position	:	'W'	Wide angle	35 mm lens
(2) Middle position	:	'N'	Normal	50 mm lens
(3) Extended position	:	'T'	Telephoto	85 mm lens

AUTOMATIC OPERATION

I. In automatic mode, your Flash Unit automatically determines and shoots only the necessary light for the subject within the automatic operating range, thus conserving the rest battery power.

On-line camera manual library

If you find this manual useful, how about a donation of $2 to:
M. Butkus, 29 Lake Ave., High Bridge, NJ 08829-1701
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The flash also has 3 different f-stops for different aperture setting on your camera lens. This provides you with a mean for controlling the depth of field in your photographs. For example, when the Zoom lens is set at "N" position, the f-stop and auto operating range would be found as follow:

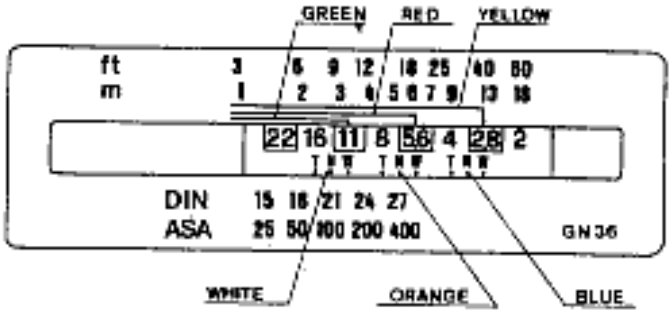
Switch Position	F-Stop		Auto Operating Range
	ASA100/ DIN21	ASA400/ DIN27	
Yellow Mark	2.8	5.6	1-12.8m (3.3-42 ft.)
Red Mark	5.6	11	1-6.4m (3.3-21 ft.)
Green Mark	11	22	1-3.2m (3.3-10.5 ft.)

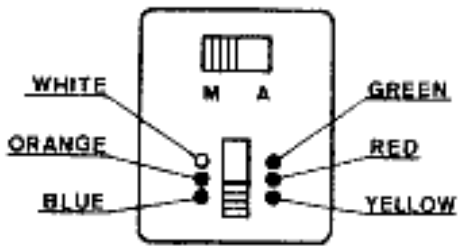
II. Operating procedure:

1. Set the Zoom Lens Hood at proper position according to the focal length of the camera lens.
2. Slide Auto/Manual Control Switch to "A" position for automatic operation.
3. Align the 'N', 'T' or 'W' mark (white color) shown on the slide plate to the film speed shown on the fixed plate of the Exposure Calculator. The mark 'N', 'T' or 'W' using in the Exposure Calculator should be in accordance with the Zoom Lens position.
4. You will find 3 different f-stops under the different color index. The distance ranges above those color lines indicate the effective flash range.
5. Determine the f-stop for your photograph. Then set the unit by sliding the GN/f-stop Control Switch to either of the green, red or yellow position.
6. Adjust the aperture of the camera according to the f-stop showing under the selected color index on the Exposure Calculator.
7. Within the effective flash range, the aperture of your camera need not be readjusted.

8. For Example:

Zoom Lens position	:	"N"
Film speed	:	ASA100 (DIN 21)
GN/f-stop Control Switch setting	:	Red mark position
Camera lens setting	:	f/5.6
Effective flash range	:	1-6.4m (3.3-21ft)





MANUAL OPERATION

In manual mode, you can take pictures outside the automatic operating range, or at the required aperture for your special photographic effect, or for the use with a flashmatic camera.

1. Set the Zoom Lens Hood at proper position according to the focal length of the camera lens.
2. Slide Auto/Manual Control Switch to "M" position.
3. Set GN/F-Stop Control Switch to white, orange or blue position according to your photographic requirements.

Switch Position	ASA100/DIN21		ASA400/DIN27	
	Guide Number in m.	Guide Number in ft.	Guide Number in m.	Guide Number in ft.
White	36	120	72	240
Orange	18	60	36	120
Blue	9	30	18	60

4. Align the 'N', 'T' or 'W' mark (with same color as the selected switch position) shown on the slide plate to the film speed shown on the fixed plate of the Exposure Calculator. The mark 'N', 'T' or 'W' using in the Exposure Calculator should be in accordance with the Zoom Lens position.

5. Focus your camera and estimate the flash to subject distance.

6. Find the flash to subject distance on the distance scale of the Exposure Calculator and set the camera lens to the f-stop indicated under that distance.

   For example:

Zoom Lens position	:	"N"
Film speed	:	ASA100 (DIN 21)
GN/f-stop Control Switch setting	:	Orange position
Flash to Subject distance	:	3m (10 ft.)
f-stop	:	f/5.6

7. You can also figure out the f-stop from the following handy formula:

$$\frac{\text{Guide Number}}{\text{Camera-to-Subject Distance}} = \text{f-stop}$$

NOTE:

(1) Disregard the color lines marked on the Exposure Calculator when shooting manually.

(2) Remember to recalculate and re-set the lens aperture setting every time you change the camera-to-subject distance.

(3) When photographing outdoors or in a large room or hall, where there are no effective reflecting surfaces nearby, it is necessary to set the camera lens at a wider aperture than is indicated on the exposure calculator (1 or 2 f-stops).

BOUNCE FLASH

Instead of using the direct light of the flash, the flash head of the unit can be swiveled by 180° horiziontally and 90° vertically. Thus, the reflector can be directed either towards the ceiling, a wall or any other reflective surface.

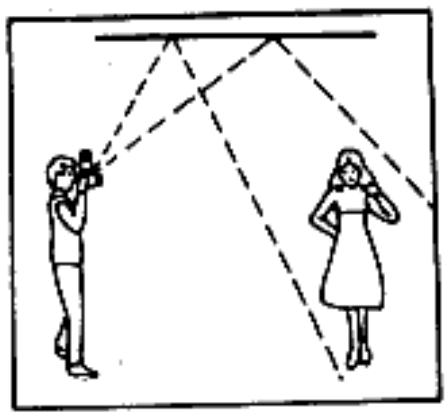
In bounce photography, the automatic range refers to a total of the bounce coverage distance, i.e., the distance between Flash Unit, reflecting surface and subject.

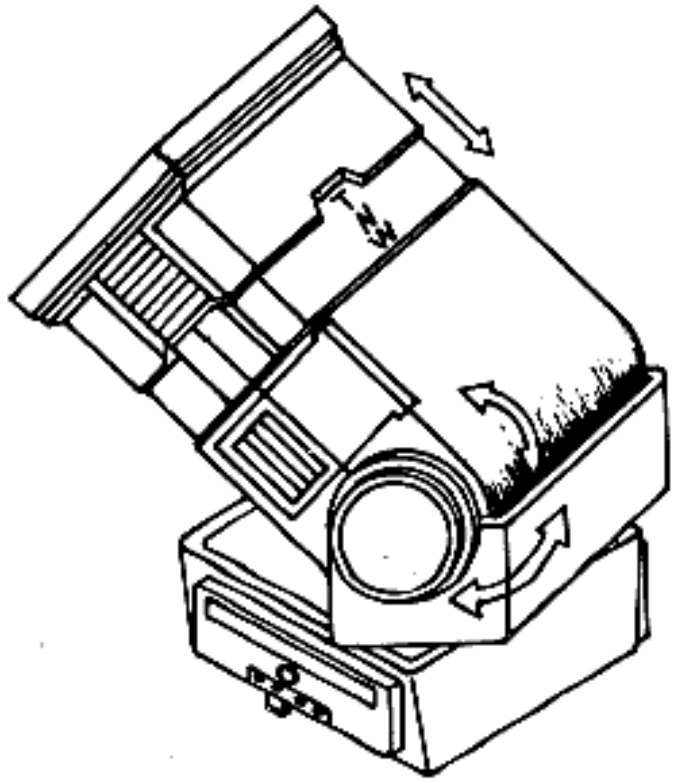
NOTE:

(1) The Bounce Flash functions with any position of the Auto Mode.

(2) Before taking picture, use the sufficient light indicator to check whether the illumination of the subject is adequate or not. If the green lamp does not glow after firing a test flash, you should make adjustments that allow more light to reach the subject.

(3) If you are taking pictures in manual bounce flash, open your camera lens 1 or 2 f-stops wider than indicated on the Exposure Calculator.





SUFFICIENT LIGHT CHECKING

The Sufficient Light Indicator lets you know before you take a picture if the light output will be sufficient for a good exposure, and is especially helpful in bounce light situation.

1. Position your camera, flash unit, and the subject just as you wish for a final picture.
2. Set your camera lens according to the desired f-stop setting at the Control Switch.
3. Switch on the flash unit, after the Ready Lamp glows, fire the flash by pushing the Test Button.
4. If the flash exposure is adequate, the green Sufficient Light Indicator will glow on immediately after firing the flash, then you can take a picutre.

NOTE:

(1) The Sufficient Light Indicator is for use in any position of the Automatic Mode.

(2) The green lamp will not light if the Mode Selector is set on manual position.

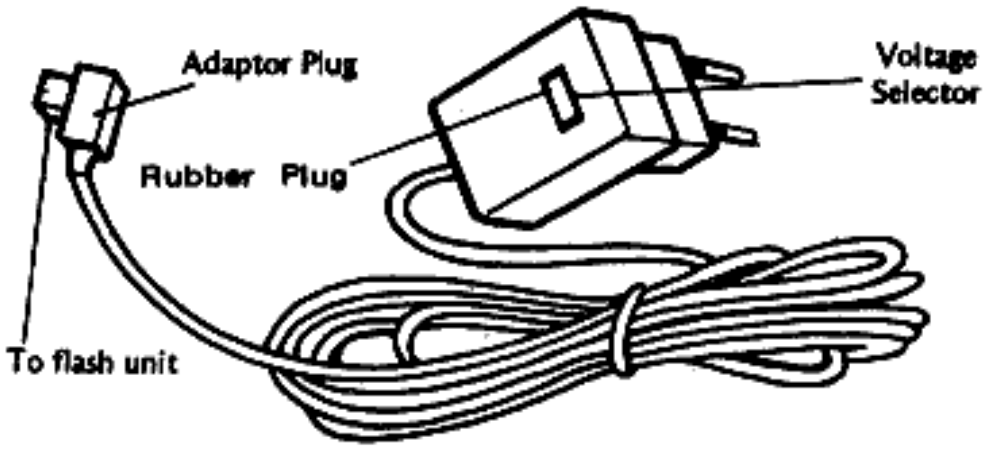
OPTIONAL ACCESSORIES

I. AC ADAPTER (AD-350)

1. The flash unit can connect to an AC adapter for using the household alternating current of 50 or 60 Hz and the proper voltage 220V or 110V.
2. Before using AC operation, check the voltage selector position whether it is set at the same voltage as the line voltage. If it is set at a different voltage position, take out the Rubber Plug, set the voltage selector at the same voltage as the line voltage and then set back the Rubber Plug.
3. Flip the ON-OFF switch of the flash unit at "OFF" position (Black).
4. Insert the Adapter plug into the AC socket of the flash

unit.

5. Plug the adapter into the AC Source (110V or 220V).
6. After inserting the Adapter Plug into the AC socket, though the ON-OFF Switch cannot be moved to "ON" position (Red), the AC power source can start the capacitor charging and the flash unit is in working condition.



II. COLOR FILTER KIT (F-430)

1. Filter Kit consists of Red, Orange, Green and White Filters.
2. Connect the color filter you selected to the flash head of the unit.
3. For using the color filter, open the camera lens aperure 1 or 2 f-stop wider to obtain better result on the picture and it is recommended to use flash unit in manual operation.

CAUTION IN HANDLING

1. When the unit is not in use, always set the ON-OFF Switch at the "OFF" position.
2. Remove the batteries from the unit when not in use for a long period of time.
3. Do not open or attempt to repair the flash unit. It contains high voltage circuitry and should be serviced only by properly trained personnel.

SPECIFICATIONS

Guide Number (Normal):	
ASA 100 (DIN 21), m	36
ASA 25 (DIN 15), ft	60
Power Source:	
DC	6 "AA" size Alkaline batteries (9V)
AC	AD-350 AC Adapter (Optional) 110 or 220V
Angle of Illumination (N):	
Horizontal	60°
Vertical	40°
Recycle Time (sec):	
Manual	0.5—10
Auto	0.5—10
Number of Flashes Per Replacement (Alkaline batteries)	150—1,200
Flash Duration (sec)	1/1,000—1/15,000
Color Temperature	5,800°K
Auto Operation:	
f-stop control and	Yellow: f/2.8, 1—12.8m (3.3—42 ft)
effective distance	Red: f/5.6, 1—6.4m (3.3—21 ft)
(ASA 100)	Green: f/11, 1—3.2m (3.3—10.5ft)
Varible Guide Number in Manual Operation (ASA 100/DIN 21m)	36, 18, 9
Dimensions (mm)	125 x 95 x 210
Weight (g)	480
Accessories	Synchro-cord, Bracket