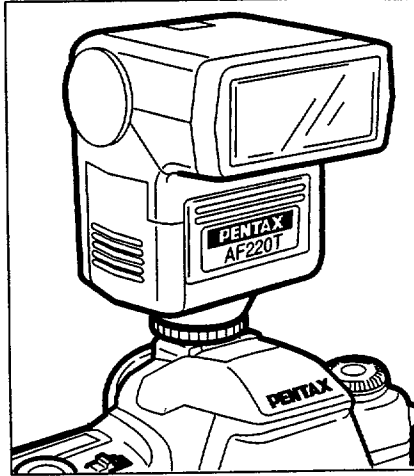


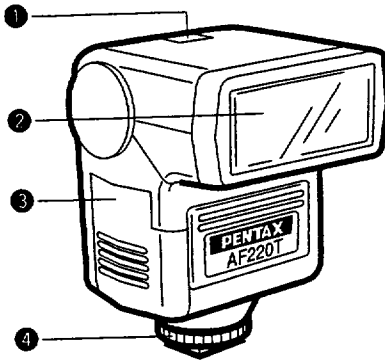
PENTAX®

AF220T

OPERATING MANUAL
 BEDIENUNGSANLEITUNG
 MODE D'EMPLOI
 MANUAL DE
 INSTRUCCIONES
 MANUAL ISTRUZIONI
 GEBRUIKSAANWIJZING
 使用說明書



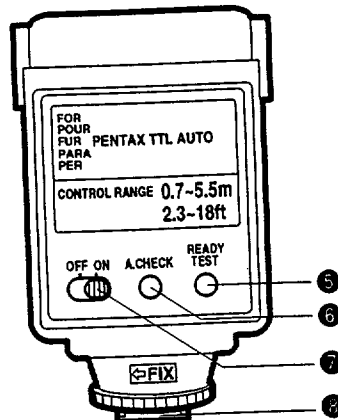
NAMES OF PARTS / BEZEICHNUNG DER TEILE / DESCRIPTIF / NOMBRES DE LOS COMPONENTES / NOM



1.
 - Bounce-angle index
 - Index für Schwenkreflektor
 - Repère d'inclinaison de tête du flash
 - Índice del ángulo de reflejo
 - Indice angolo luce rillessa
 - Indexteken flitshoek
 - 反射角度指數
2.
 - Reflector
 - Reflektor
 - Réflecteur
 - Reflector
 - Riflettore
 - Reflector
 - 反射器
3.
 - Battery chamber cover
 - Batteriefachdeckel
 - Couvercle du logement des piles
 - Tapa del compartimento de la pila
 - Copri-vano batteria
 - Deksel batterijcompartiment
 - 電池蓋蓋
4.
 - Thumb screw
 - Feststellschraube
 - Molette de verrouillage
 - Rosca manual
 - Vite di blocco
 - Bevestigingsschroef
 - 插座鎖
5.
 - Flash ready lamp/Test button
 - Blitzbereitschaftslampe/Testknopf
 - Témoin de disponibilité du flash/bouton Test
 - Piloto de "flash" preparado/botón de comprobación
 - Spia flash pronto/luisante Test
 - Flitsgereed-indicatie/Testknop
 - 閃光備用指示燈 / 測試鈕
6.
 - A.CHECK lamp
 - Belichtungskontrolllampe
 - Témoin de contrôle
 - Piloto de comprobación automática
 - Spia di corretta esposizione
 - Lampje voor automatische controle
 - 自檢指示燈

DESCRIZIONE / DE VERSCHILLENDE ONDERDELEN / 部件名稱

7.
 - Power switch
 - EIN / AUS - Schalter
 - Interrupteur
 - Interruptor de la corriente
 - Interruttore di alimentazione
 - Aan/uit-schakelaar
 - 電源開關
8.
 - Hot shoe bracket
 - Blitzschuh
 - Sabot de fixation
 - Engarce de la zapata
 - Staffa del contatto caldo
 - Bevestiging flitsschoentje
 - 熱靴插座



OPERATING MANUAL (ENGLISH)

Please read this manual carefully before operating the flash.



WARNING

- The electric circuits inside the camera contain high voltage working parts. Never attempt to disassemble the flash unit yourself.
- Never touch internal parts of the flash unit if they become exposed from dropping the flash unit or for some other reason, as there is danger of electric shock.



CAUTION

- Do not use the flash near anyone's eyes, as it may hurt them. Be particularly careful with the flash around infants.

PRECAUTIONS

- Replace all batteries at the same time. Do not mix battery brands and types, or mix old batteries with new ones.
- Remove batteries when not using the flash unit for long periods of time. Batteries tend to leak if left too long in the unit. This may cause serious damage.
- Do not dispose of the battery in fire, as it may explode.
- If the AF220T is used with any camera other than a Pentax, it may cause malfunction, or may damage the electronic circuitry of the camera.

NOTES ON FLASH PHOTOGRAPHY

- If you take a flash photo of two persons, one very near and the other distant, in one picture, the near person tends to be overexposed. So, in such case, keep an extremely near subject out of the frame.
- If the subject you are shooting in place like a theater is small, not in the camera of the picture area, and the central background is black, it tends to be overexposed.

SPECIFICATIONS

Type: Clip-on type, Series-control TTL auto flash, Specially designed for use with the camera incorporated TTL flash control device.

Guide Number: 22 (ISO 100m)

Flash Coverage Angle: Covers picture area of 35mm lens.)

Color Temperature: Equivalent to daylight

TTL flash range: 0.7m - 5.5m (2.3 - 18ft)

Aperture Auto Set Function: With any Pentax programmed AE with its lens set to "A"

Usable Film Speed: ISO 25 - 1600

Power Source: Four AA-size batteries (1.5V x 4); Alkaline, Manganese or Ni-Cd batteries

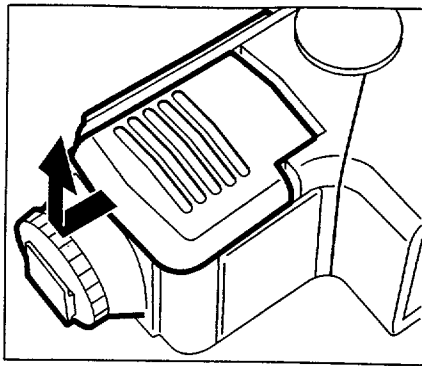
Number of Flashes & Recycling Time(Approx.)

Power Source	Recycling Time	Number of Flashes
Alkaline	6 sec	280
Manganese	10 sec	70
Ni-Cd battery	4 sec	100

(Based on Pentax testing conditions)

Dimensions: 62(W) x 104.5(H) x 69.5(D)mm
2.4" (W) x 4.1" (H) x 2.7" (D)

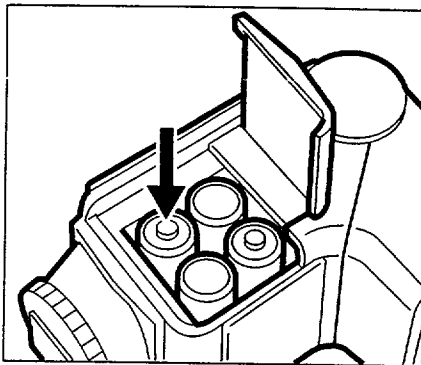
Weight : 165 g (5.8 oz)



1

1. Open

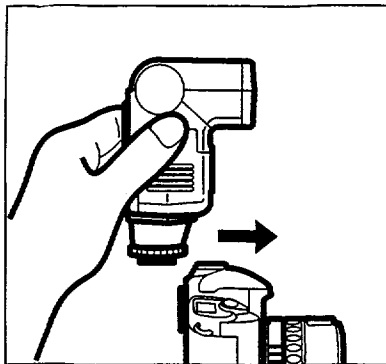
Öffnen
 ouverture
 Abrir
 Aprire
 Openen
 打開



2

2. Insert batteries/Close

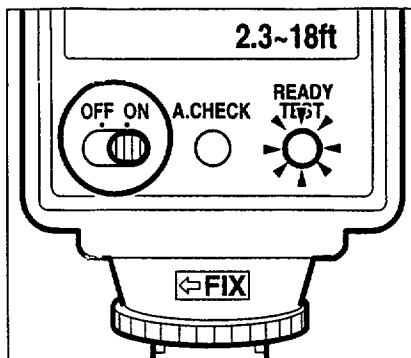
Batterien einlegen und schließen
 Introduire les piles/Fermeture
 Colocar las pilas/Cerrar
 Inserire le batterie/chiudere
 Batterijen inleggen/sluiten
 裝入電池 / 關閉



3

3. Slide into the hot shoe

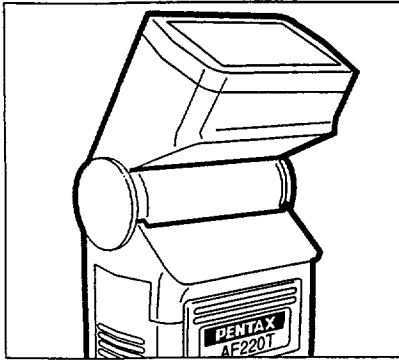
Anschluß Mittelkontakt
 Monter le flash sur le sabot
 Conexión contacto central
 Inserire sul contatto caldo
 In flitsschoentje schuiven
 將閃光燈插入相機熱靴內



4

4. Turn the switch "ON"

Den Schalter einschalten "ON"
 Mettre l'interrupteur d'alimentation sur "ON"
 Ponga el interruptor de la posición "ON"
 Portare l'interruttore su "ON"
 Schakelaar op "ON" zetten
 將開關推置 "ON" 位置



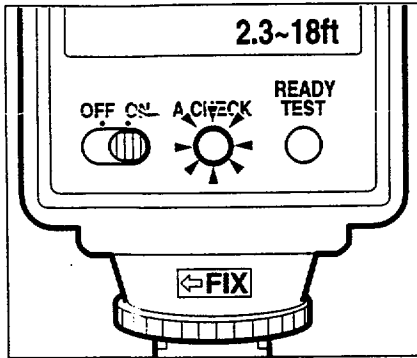
5

5. Adjustable bounce flash head

A bounce flash helps avoid harsh shadows and softens the overall picture effect. The bounce angle is click-adjustable for 60°, 90° upwards.

Verstellbarer Reflektor für indirekte Blitzaufnahmen.

Er läßt sich um 60° oder um 90° nach oben schwenken um Schlagschatten zu vermeiden und um einen weicheren Gesamteindruck zu erhalten.



6

6. Automatic Exposure Check

If the "A.CHECK" lamp lights up just after flash, it indicates a correct exposure has been made.

Bei korrekter Belichtung leuchtet die "A. CHECK"

Lampe nach dem Auslösen auf. Sollte sie nicht blinken, verringern Sie den Abstand zum Motiv.

Contrôle d'exposition automatique.

Si le témoin de contrôle A s'allume juste après l'éclair du flash, cela indique que l'exposition est correcte.

TTL Auto Flash Range (ISO 100)

Table no.1

f/stop	Flash Range
1.2	2.8 - 18.3m (9.2 - 60ft)
1.4	2 - 15.7m (6.6 - 51.5ft)
2	1.4 - 11m (4.6 - 36.1ft)
2.8	1 - 7.8m (3.3 - 25.6ft)
4	0.7 - 5.5m (2.3 - 18ft)
5.6	0.7 - 3.9m (2.3 - 12.8ft)
8	0.7 - 2.7m (2.3 - 8.9ft)
11	0.7 - 2 m (2.3 - 6.56ft)
16	0.7 - 1.3m (2.3 - 4.3ft)
22	0.7 - 1m (2.3 - 3.3ft)

At ISO 400, the distances are doubled, while at ISO 25, the distances are halved.

COMPATIBLE CAMERAS AND EXPOSURE MODES

This flash is designed to work with the camera incorporates TTL Flash function. The dedicated functions are shown in Table 2 below.

Table no.2

Exposure mode	K _{AF} /K _{AF2} mount cameras, 645
Programmed AE	O*
Aperture-Priority AE	O**

* Upon completion of charging, the flash-sync speed and Programmed f-stop will be set automatically.

** Upon completion of charging, the flash-sync speed will be set automatically. However, the aperture should be set manually.

ISO FILM SPEED, APERTURE, AND FLASH RANGE

In the Programmed AE mode, the aperture is automatically set to the f-stop as shown in Table No.3. The flash range (flash to subject distance) is fixed from 0.7m to 5.5m (2.3 - 18ft.).

In the Aperture Priority AE and Manual Exposure control modes, a proper f-stop must be manually selected in accordance with Table No.1. Otherwise, a proper exposure will not be obtained.

Table no.3

ISO	f/stop	ISO	f/stop
25	2	400	8
50	2.8	800	11
100	4	1600	16
200	5.6		

Specifications are subject to change without any obligation on the part of the manufacturer.