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# Nikon DATA BACK

# MF-16

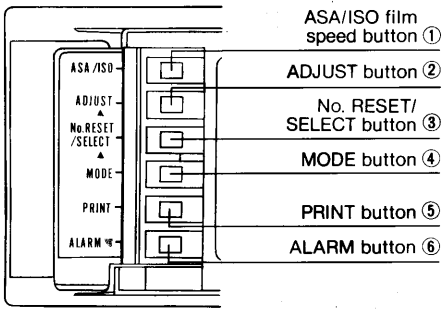
## Instruction Manual

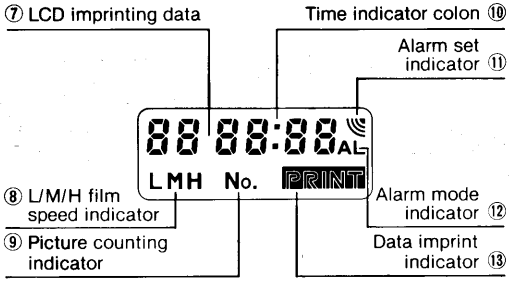
E

# CONTENTS

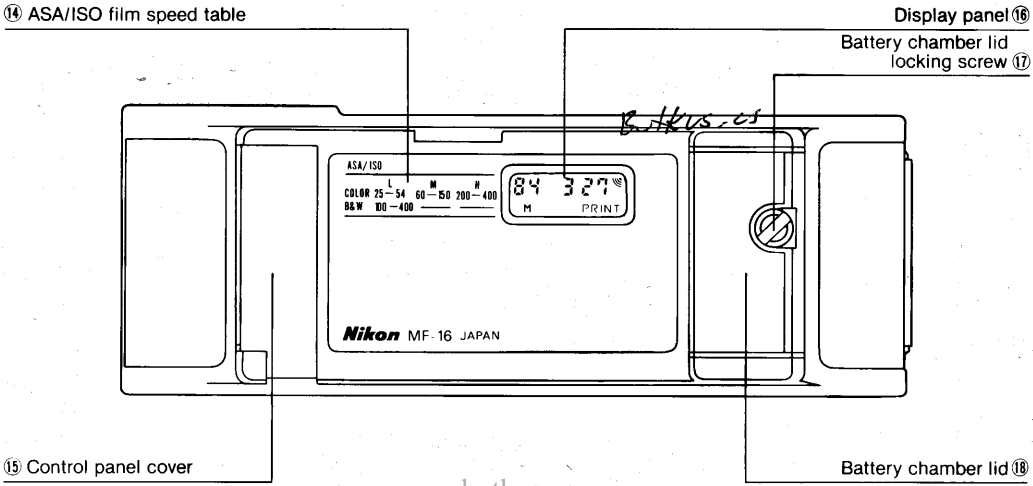
# NOMENCLATURE

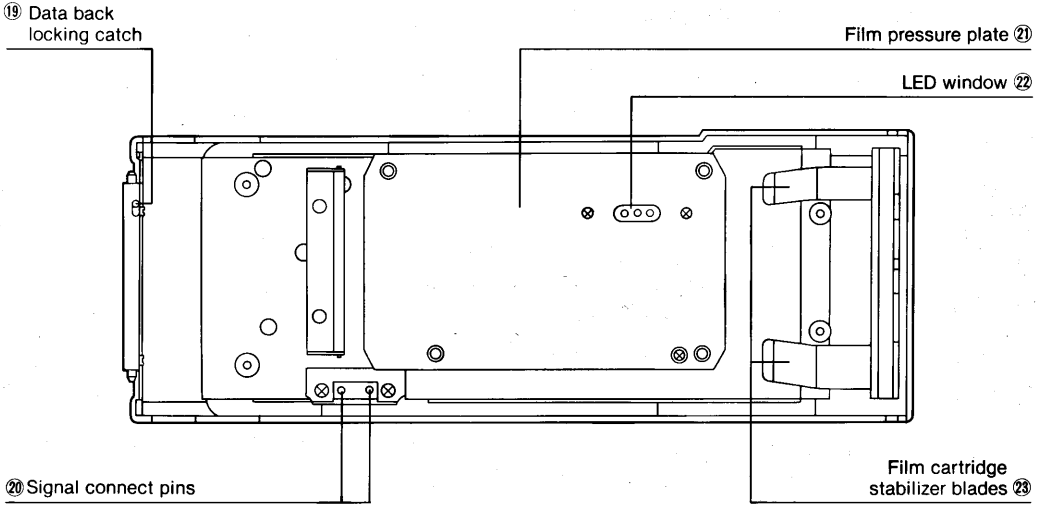
**Control Panel**




**Types of Displays**




⑲ Data back
locking catch
Film pressure plate ㉑
LED window ㉒
⑳ Signal connect pins
Film cartridge
stabilizer blades ㉓

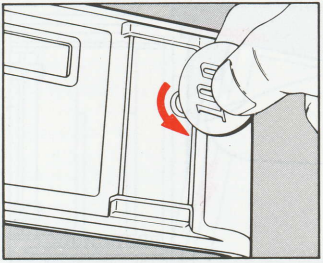
# FOREWORD

The Nikon Data Back MF-16 has a liquid crystal display (LCD) which shows your choice of either Year / Month / Day, Day / Hour / Minute or Picture Counting, and imprints this data on your photo for lasting records. By simply replacing the standard back of your Nikon FM2, FE2 or FA camera with the MF-16, you can record either the date, time, number of frames or any desired number from −2 to 2000. In addition, the MF-16's built-in clock has an alarm function which beeps at a previously set time.

Even though the MF-16 is extremely easy to use, to get the most out of this fine instrument, it is recommended that you familiarize yourself thoroughly with this instruction manual, as well as your camera's instruction manual, before actually using the product.

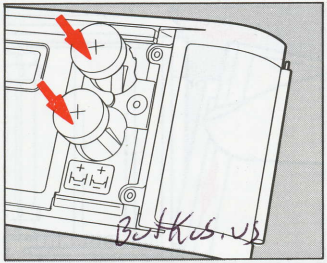
**The Data Back MF-16 cannot be used with the Nikon FM or FE camera, as these cameras do not have data back contacts.**

# INSERTING THE BATTERIES



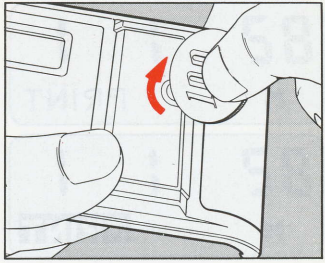
**1. Open the battery chamber.**
Using a coin, unscrew the locking screw ⑰ of the battery chamber lid ⑱ and detach the lid.

**Caution:**
Keep batteries away from infants and small children. In case a battery is accidentally swallowed, call a doctor immediately as the material inside the batteries can cause serious problems.



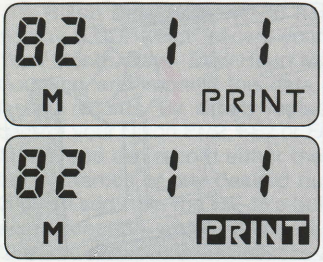
**2. Insert the batteries.**
Before inserting the batteries, gently wipe both sides clean with a soft cloth or tissue. Without touching either the top or bottom, set the two 1.55V SR-44 type silver-oxide batteries in the battery chamber with the "+" signs facing up.

**Note:**
The alarm might beep during battery loading—this is not a malfunction.



**3. Close the battery chamber.**
Reattach the lid by screwing the locking screw firmly.

# INSERTING THE BATTERIES—continued



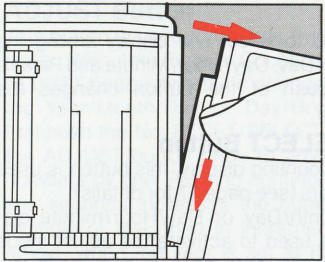

**4. Check the display.**

**8211**, "M" ⑧ and the blinking data imprint indicator ⑬ (alternately blinking PRINT and PRINT) will appear in the LCD display.

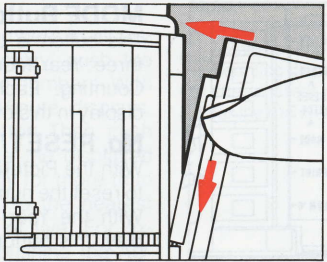
**Note:**

1) If the above display data does not appear after several seconds, check that the batteries are set properly and the battery chamber lid is attached correctly.
2) When the batteries are inserted, the MF-16's built-in clock starts working as of 0:00, January 1, 1982.

# ATTACHING THE DATA BACK

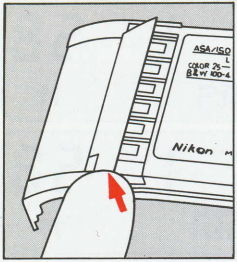


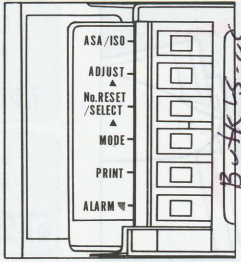
**1. Detach the camera back.**
Push the camera's locking catch on the hinge to detach the back.



**2. Attach the data back.**
Attach the MF-16 to the camera by first pushing the MF-16's locking catch ⑲, then simply fitting the MF-16 into place.

# SETTING THE DATA




Open the control panel cover ⑮ by lifting the bottom of the lid with your fingertip. Do not apply unnecessary pressure to the cover. There are six buttons on the panel. Among these buttons, the MODE button ④, No. RESET/SELECT button ③ and ADJUST button ② are used to set data.

## MODE Button

This button is used to select one display among the three: Year/Month/Day, Day/Hour/Minute and Picture Counting. Each push of the button changes the display in this order.

## No. RESET/SELECT Button

With the Picture Counting display, this button is used to reset the numbers (see page 17 for details).

With the Year/Month/Day or Day/Hour/minute display, this button is used to activate the adjust mode to select year, month, day, hour or minute, in the following sequences:

Year/Month/Day → Year → Day ← Month ←

Day/Hour/Minute → Day → Minute ← Hour ←

## ADJUST Button

This button is used to change the numbers in all displays. With the Picture Counting display, push the ADJUST button directly to change the numbers. With the Year/Month/Day or Day/Hour/Minute displays, first push the No. RESET/SELECT button. Then, push the ADJUST button once to advance the displayed numbers by one. Pushing continuously for more than two seconds increases the number to the nearest multiple of five, then in increments of five. For example, when the year is set at 82, pushing the ADJUST button continuously changes the number first to 83, then to 85, 90, 95, etc.

**Year:** 00 → 05 → 10 → ••• → 90 → 95

**Month:** 1 → 5 → 10

**Day:** 1 → 5 → 10 → ••• → 25 → 30

**Hour:** 0 → 5 → 10 → 15 → 20

**Minute:** 00 → 5 → 10 → ••• → 50 → 55

**Picture Counting:**

−2 → −1 → 0 → 5 → ••• → 1990 → 1995 → 2000

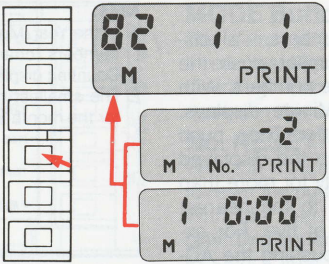
**Note:**

1) In the Year/Month/Day and Day/Hour/Minute displays, the numbers change in rotation. However, in the Picture Counting display, the numbers stop at 2000.
2) The smallest number for the year, hour and minute is 0; for the month and day, the smallest number is 1.

# SETTING THE DATA—continued

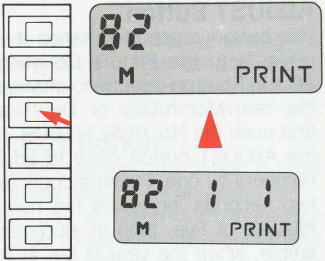
## Adjusting Date and Time

Although you may adjust either the date or the time first, we will adjust the date first here, using 16:45, July 19, 1984, as an example.



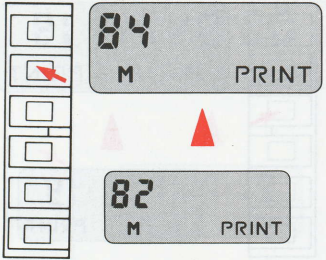

**1. Make sure that the display shows Year/Month/Day.**

If it shows Day/Hour/Minute (identified by a blinking colon ⑩ in the display) or Picture Counting (with "No." ⑨ lettered on the bottom of the display), change the display by pushing the MODE button.

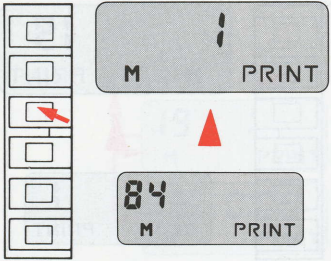



**2. Set the year.**

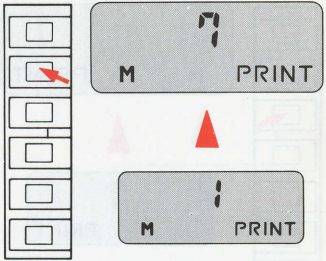
Push the No. RESET/SELECT button to activate the adjust mode to select the year.




Push the ADJUST button to set the year at "84."

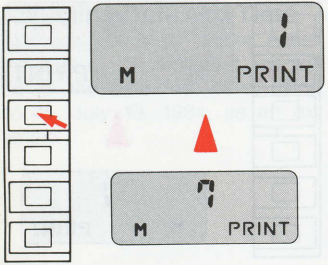



**3. Set the month.**
Push the No. RESET/SELECT button again to activate the adjust mode to select the month.

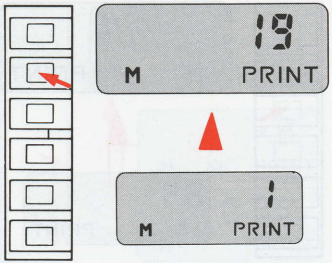



Push the ADJUST button to set the month at "7" (for July).

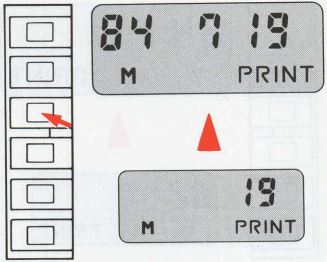
# SETTING THE DATA—continued



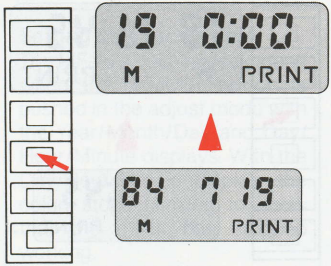

**4. Set the day.**
Push the No. RESET/SELECT button to activate the adjust mode to select the day.




Push the ADJUST button to set the day at "19."

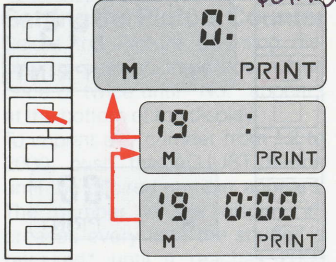



**5. Push the No. RESET/SELECT button to cancel the adjust mode.**
The display will now read: **84 7 19** (for July 19, 1984).



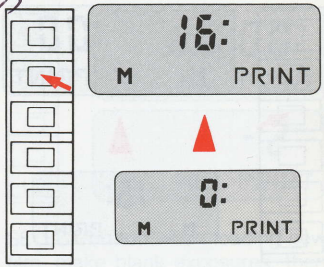

## 6. Change the display to Day/Hour/Minute.

Push the MODE button to switch the display to Day/Hour/Minute. Note that the day "19" previously set is now at the left of the display and the blinking colon appears.




## 7. Set the hour.

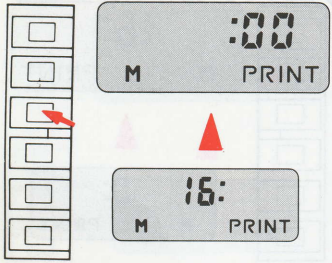
Push the No. RESET/SELECT button to activate the adjust mode to select the day. Because the day is already set in this example, push the button again to activate the adjust mode to select the hour.



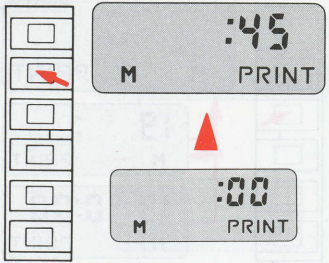

Push the ADJUST button to set the hour at "16."*

*The MF-16's built-in clock is a 24-hour type: 4:45 is a.m., and 16:45 is 4:45 p.m.

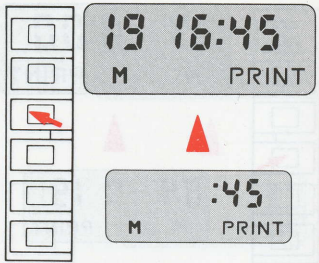
# SETTING THE DATA—continued




**8. Set the minute.**
Push the No. RESET/SELECT button to activate the adjust mode to select the minute.




Push the ADJUST button to set the minute to "45."




**9. Push the No. RESET/SELECT button to cancel the adjust mode.**
The display will now read **19 16:45** (for the 19th, 16:45).

**Setting the precise time**

The MF-16's built-in clock stops when the ADJUST button is pushed in the adjust mode with the Year/Month/Day and Day/Hour/Minute displays. With the Day/Hour/Minute display, the colon stops blinking to show that the clock has stopped working.

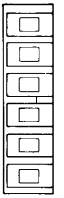
To set the time to the precise second, advance the time one minute ahead of actual time. When the actual time coincides precisely with the time set (i.e., at the tone of a radio/TV program), push the No. RESET/SELECT button to complete the time setting.

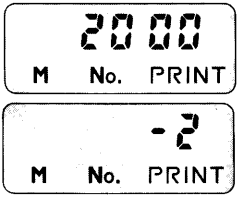
## Setting the Picture Counter

Select the Picture Counting display by pushing the Mode button once or twice until "No." appears at the bottom of the display.

To imprint any number from −2 to 2000, push the ADJUST button until the desired number appears. The number in the display increases every time the shutter is released* until it reaches 2000 (whether the MF-16 is set to imprint data or not) and then stops even if you continue pushing the ADJUST button. To reset the counter or to imprint a smaller number than that displayed, push the No. RESET/SELECT button and the number will return to −2.

Return to −2 every time you start a new roll of film to begin imprinting from "1" on the first frame. To number several rolls of film consecutively, push the No. RESET/SELECT button when loading new film, make blank exposures, then push the ADJUST button to return the counter to the next consecutive number you wish imprinted.

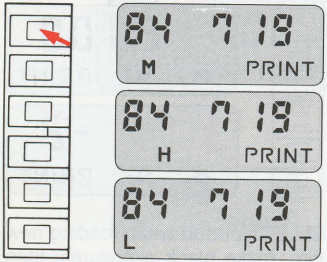





Number adjustment is possible with the data back either opened or closed.

*The number on the camera's frame counter will increase every time the film advance lever is stroked; therefore, there may be a difference of one number between the camera's frame counter and the Picture Counting display.

# ADJUSTING FILM SPEED



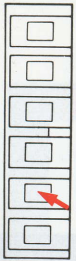

| ASA/ISO | L | M | H |
|---|---|---|---|
| COLOR | 25——64 | 80–160 | 200–400 |
| B & W | 100–400 | ——— | ——— |

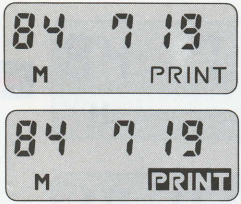
Each time the ASA/ISO button ① is pushed, either "M," "H" or "L" appears on the bottom of the display in this order. Check the table ⑭ as to whether the appropriate letter for the film in use is displayed. If not, push the button until the correct letter appears.

**Note:**

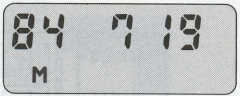
1) Do not use films with ASA/ISO speeds not covered by the table as data cannot be imprinted properly.
2) When using special film or using techniques to increase or decrease image density, make test shots first.

# IMPRINTING DATA





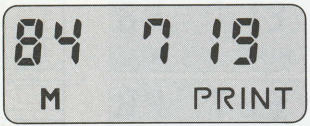

**"PRINT" blinks during imprinting**

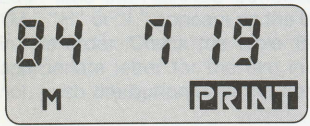



**No imprinting**

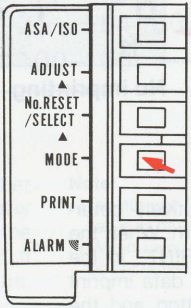
Pushing the PRINT button ⑤ consecutively determines imprinting and no imprinting in turn. When the batteries are inserted, the blinking "PRINT" in the display shows data will be imprinted. If data imprint is not necessary, push the PRINT button and the blinking "PRINT" will disappear.

# IMPRINTING DATA—continued

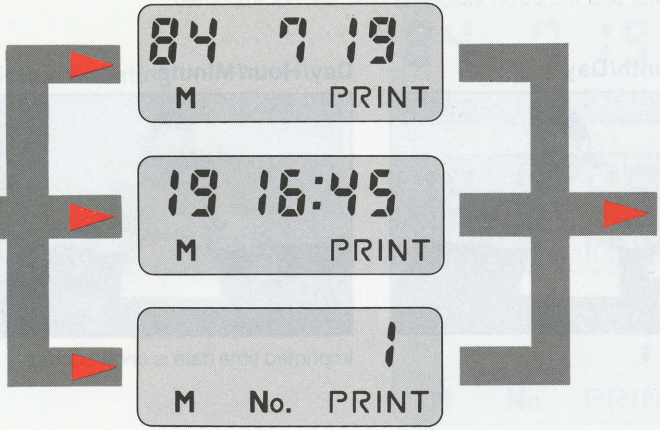


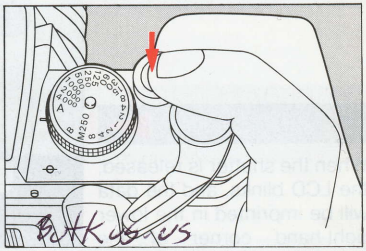




1. Make sure the blinking data imprint indicator is shown in the display.




2. Choose the desired imprinted data—Year / Month / Day, Day / Hour / Minute or Picture Counting—by pushing the MODE button.



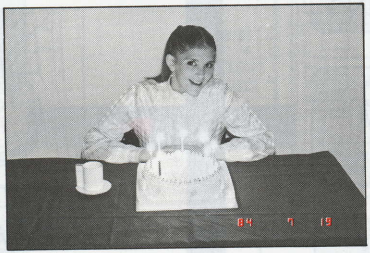
3. Take a picture.

# IMPRINTING DATA—continued

The film speed indicator, data imprint indicator, picture counting indicator and the colon indicating time are not imprinted.

When the shutter is released, the LCD blinks, and the data will be imprinted in the lower right-hand corner of the frame.

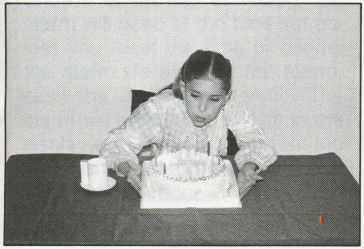
**Year/Month/Day**



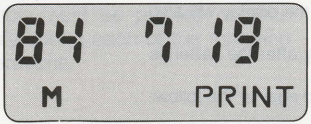

**Day/Hour/Minute**

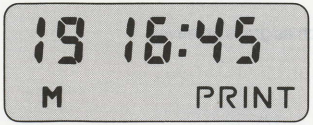

Imprinted time data is underscored.

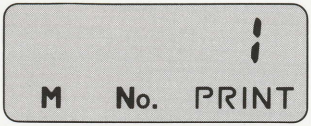
**Picture Counting**



**LCD's**




**Actual imprint data for each of the three modes.**



# IMPRINTING DATA—continued

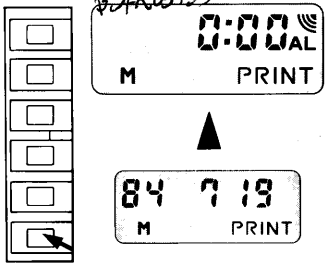
**Note:**

1) Do not attempt to imprint figures in the adjust mode. Figures other than those appearing in the display will also be imprinted.
2) Do not release the shutter immediately after the batteries are inserted. Wait for about 10 seconds.
3) Imprinted data might be difficult to read against the following:
    a. White or bright background
    b. Red coloration
    c. Finely detailed background, such as grass or leaves

# ALARM FUNCTION

The MF-16's built-in clock has an alarm function. When the batteries are inserted, the alarm time is automatically set at 0:00 but the alarm function is not activated. Once it is set and activated, the alarm will beep at the time set unless you reset the time or cancel the alarm. To activate the alarm, push the ALARM button ⑥. The alarm set indicator ( 🔔 ) ⑪ in the display enables you to confirm the alarm is activated. To cancel, push the ALARM button.

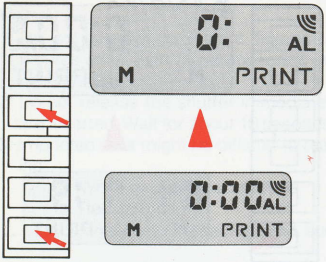
Set the alarm, using 6:15 as an example. Note that the ALARM button must be pushed continuously during each of the following operations.



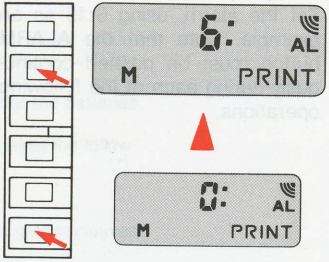

**1. Push the ALARM button to activate the alarm mode.**

Push this button and the display for alarm will appear with the alarm mode indicator ("AL") ⑫, no matter which of the three displays—Year/Month/Day, Day/Hour/Minute or Picture Counting—was previously shown.

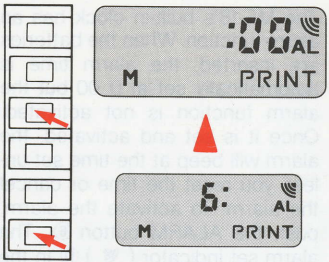
# ALARM FUNCTION—continued



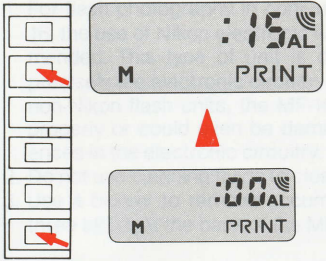

**2. Set the hour for alarm.**
While pushing the ALARM button, push the No. RESET/SELECT button to activate the adjust mode to select the hour.



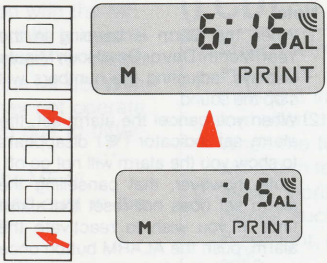

Keep pushing the ALARM button and set the hour to "6" by pushing the ADJUST button.




**3. Set the minute for alarm.**
While pushing the ALARM button, push the No. RESET/SELECT button to activate the adjust mode to select the minute.

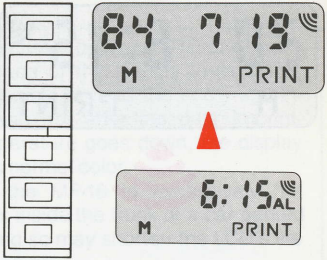



Keep pushing the ALARM button and set the minute to "15" by pushing the ADJUST button.




**4. Cancel the adjust mode.**

While pushing the ALARM button, push the No. RESET/SELECT button one more time to cancel the adjust mode. The display will now read 6:15.




**5. Remove your finger from the ALARM button.**

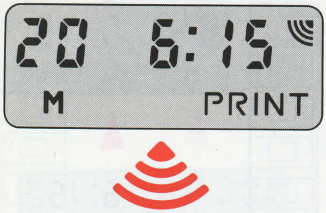
The display will change to what was shown just before you pushed the ALARM button. Check that the alarm set indicator ( ) appears in the display.

If it does not, push the ALARM button again.

**Note:**

It might take a few seconds for the display to change to the previous one.

# ALARM FUNCTION—continued




**6. The alarm will beep at the time you set.**

The sound will continue for 20 seconds. If you wish to stop it, push the ALARM button. Note that this action does not cancel the alarm activation, thus leaving the alarm set indicator ( ) displayed.

**Note:**

1) When the alarm is beeping in the Year/Month/Day or Day/Hour/Minute displays, adjusting the numbers will stop the sound.
2) When you cancel the alarm set, the alarm set indicator ( ) disappears to show you the alarm will not go off. Note, however, that cancelling the alarm set does not reset the alarm time. If you wish to reactivate the alarm, push the ALARM button once more and it will beep at the time previously set.
3) When you take pictures with the alarm display and when the data imprinting indicator is blinking (indicating data imprinting condition), the data of the previous display will be imprinted. The numbers in the alarm display cannot be imprinted.
4) Neither the alarm set indicator ( ) nor alarm mode indicator "AL" is imprinted.

# TIPS ON DATA BACK CARE

1. For flash photography in conjunction with the MF-16, the use of Nikon electronic flash units is recommended. This type of unit is designed to match precisely the electronic circuitry of the MF-16. With non-Nikon flash units, the MF-16 may not operate properly or could even be damaged due to differences in the electronic circuitry.
2. Do not use cleaning fluids to clean the MF-16.
3. Use a blower to remove accumulated dust in the three LED's at the back of the MF-16.

# LIQUID CRYSTAL DISPLAY (LCD)

1. At high temperatures (approx. 60°C or above), the whole surface of the display turns black, making it impossible to read the numerical information though not affecting data imprint. When the temperature goes down, the display will return to its normal color.
2. Avoid storing the MF-16 in excessively hot places, such as inside the trunk of a car parked in sunlight; doing so may shorten the LCD's life span.
3. When the temperature drops below freezing, the LCD's response time slows down but data imprint is not affected. When the temperature rises, the display works normally.
4. Although the MF-16's LCD is of the highest quality, contrast may deteriorate and the display information may become difficult to see after six or seven years of normal use. Should this occur, please contact an authorized Nikon dealer or service facility to have the display replaced at a nominal charge.

# CHANGING THE BATTERIES

If the MF-16's LCD begins to blink, the batteries must be replaced with a fresh set. When battery replacement is complete, reset the display data.
In low temperatures of −10°C or below, the LCD may blink, even with new batteries, due to the inner resistance of the batteries. In this case, push the PRINT button ⑤ to stop the LCD's blinking. The batteries will recover their capacity when the temperature returns to normal.

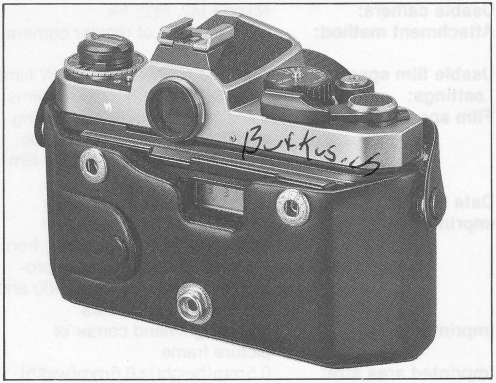
**Note:**

1) You can check the battery power of the MF-16 with the LCD every time data is imprinted. In low temperatures, the LCD might blink after data imprinting to alert you that voltage is temporarily low.
2) The life span of the batteries for the MF-16 is approximately one year under conditions of normal use, e.g., 5 rolls of 36-exposure film per month or the equivalent, and with the ASA/ISO setting at "L."
3) Do not use any other type of battery except the 1.55V SR-44 type silver-oxide cell.
4) When replacing the batteries, change both together. Changing only one shortens the life span of both batteries and may cause a malfunction.
5) Do not replace batteries in strong sunlight or bright illumination.
6) Do not dispose of batteries by burning. Also, for safety's sake, do not disassemble batteries when disposing of them.
7) Keep batteries away from infants and small children. In case a battery is accidentally swallowed, call a doctor immediately as the material inside the batteries can cause serious problems.

# ACCESSORIES

**Camera Case Base Portions CF-27D and CF-30D**

When used in place of the lower portion of the case for the Nikon FM2, FE2, or FA camera with the MF-16 attached, the CF-27D houses the FM2 or FE2, while the CF-30D is for the FA. Each case has "windows" that let you see the MF-16's display and operate the data back using the MODE, PRINT and ALARM buttons.



# SPECIFICATIONS

| | |
|---|---|
| **Usable camera:** | Nikon FM2, FE2, FA |
| **Attachment method:** | Used in place of regular camera back |
| **Usable film speed settings:** | ASA/ISO 100~400 for B&W films<br>ASA/ISO 25~400 for color films |
| **Film speed adjustment:** | 3 positions available by pushing the ASA/ISO film speed button; exposure time controlled by film speed button |
| **Data imprint type:** | By 7-segment, 6-digit LED's |
| **Imprinted data:** | Year/Month/Day, Day/Hour/Minute, or Picture Counting from −2 to 2000; automatically programmed until the year 2100 and adjusted for leap years |
| **Imprinted area:** | Lower right-hand corner of picture frame |
| **Imprinted area size:** | 0.5mm(height)×6.6mm(width) when all 6 figures appear |
| **Data imprint decision:** | By pushing the PRINT button. |
| **Data adjustment:** | By pushing the ADJUST button, year, month, day, hour, minute and picture counter are separately set |
| **Alarm function:** | Daily alarm is provided |
| **Imprint signal:** | Through camera body contact |
| **Data display:** | By 7-segment, 6-digit LCD |
| **Power source:** | Two 1.55V silver-oxide (SR-44 type) batteries |
| **Battery life:** | Approx. one year under conditions of normal use, e.g., 5 rolls of 36-exposure film per month or the equivalent and with ASA/ISO setting at "L"; built-in 24-hour type clock starts from 0:00, January 1, 1982, every time batteries are inserted. |
| **Clock:** | Built-in, 24-hour type |
| **Timing accuracy:** | Within ±30 seconds a month (at 25°C) |
| **Temperature:** | −10°C~ +40°C in use; −20°C~ +55°C in storage |
| **Usable motor drive:** | Nikon Motor Drive MD-12, MD-15 |
| **Dimensions (W×H×D):** | Approx. 142.5mm×53mm×26.5mm |
| **Weight:** | Approx. 90g (without batteries) |