



# CK3800

**1/2" CCD COLOR TV CAMERA FOR MICROSCOPES**

## **INSTRUCTION MANUAL**



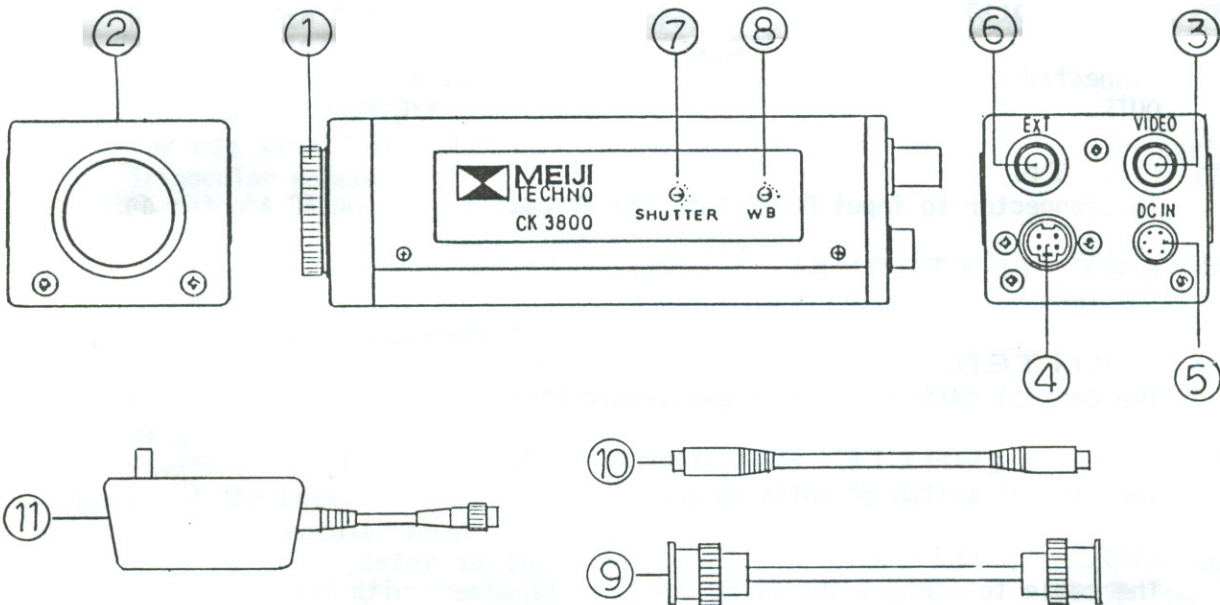
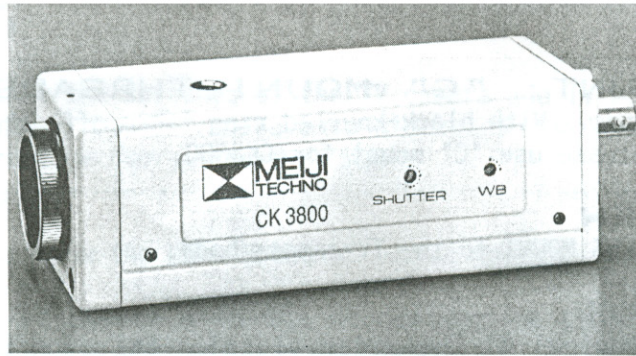
**MEIJI TECHNO CO.,LTD.**

JAPAN



# CK3800 COLOR TV CAMERA

1/2" CCD FOR MICROSCOPES



## SPECIFICATIONS

Model	CK3800N	CK3800P
	High resolution	
<b>CCD</b>	1/2" Interline-Transfer type	
<b>Elements</b>	768(H) x 494(V)	752(H) x 582(V)
<b>TV system</b>	NTSC	PAL
<b>Lens mount</b>	C / CS-Mount	
<b>White balance</b>	3200° K / 4600° K / 5600° K / ATW	
<b>AGC</b>	0 dB ~ 18 dB	
<b>Shutter</b>	1/60 (1/50) ~ 1/10,000	
<b>Power</b>	12V DC ± 10%	
<b>H.resolution</b>	450 TV Lines	

Model	CK3800N	CK3800P
<b>S/N</b>	50 dB	
<b>Video output</b>	VBS (γ=0.45)	
<b>Min. Sensity (AGC ON)</b>	0.3 lux on CCD surface	
<b>External sync</b>	HD/VD, Composite Sync	
<b>Power consumption</b>	4.5W	
<b>Storage temperature</b>	-25° C ~ 60° C	
<b>Operating temperature</b>	0° C ~ 40° C	
<b>Dimensions</b>	51(W) x 43(H) x 128(L) mm	
<b>Net Weight</b>	340g (TV Camera)	

## NAMES OF PARTS AND THEIR FUNCTIONS

- ① **LENS MOUNT: "C" MOUNT-THREADS**  
"C" mount-threads...With black-knurled ring taken off, it can work as "CS" mount. But, please use "C" mount for CK3800.
- ② **SET SCREW**  
It locks the LENS MOUNT to the TV camera body.
- ③ **VIDEO OUT**  
The output terminal of the video signal. By using BNC Cable⑨ this terminal is connected with the VIDEO IN on the TV monitor.
- ④ **Y/C OUTPUT**  
The output terminal of the Y/C separated signal. This terminal is connected to the Y/C IN on the TV monitor by using Y/C Cable ⑩. The Y/C OUTPUT is only usable for the TV monitor having Y/C IN terminal.
- ⑤ **DC IN**  
The connector to input DC12V into the TV camera by using AC Adapter ⑪.
- ⑥ **EXT (EXTERNAL SYNC. INPUT)**  
The terminal to input external synchronized signal into the camera.
- ⑦ **SHUTTER**  
The control switch to change electronic shutter modes.
- ⑧ **W.B. (WHITE BALANCE CONTROL)**  
The control switch of white balance.
- ⑨ **BNC Cable:**  
The cable to connect the VIDEO OUT③ on TV camera with the VIDEO IN on TV Monitor.
- ⑩ **Y/C CABLE**  
The cable to connect Y/C OUTPUT on TV camera with Y/C INPUT on TV monitor. (Only with TV monitor having Y/C INPUT.)
- ⑪ **AC Adapter**  
The Adapter to input DC12V power to the TV camera.

# HOW TO CONNECT WITH MICROSCOPE

## ■ CAUTION

- ◆ Make sure that the switches of the TV camera and TV monitor are OFF.
- ◆ Before mounting the TV camera onto microscope, make necessary adjustment of the microscope for proper function.

1. Remove the Cap from the Lens Mount of the TV camera.
2. Connect the TV camera with the microscope in the following way. The following TV Camera Adapters are required:

### 《 MA151/5N TV Camera Adapter 》

For use with Trinocular Stereo microscopes, such as Models EMZ-2TR, EMZ-5TR, EMTR-1, EMTR-2, EMTR-3, EMTR-4 etc.

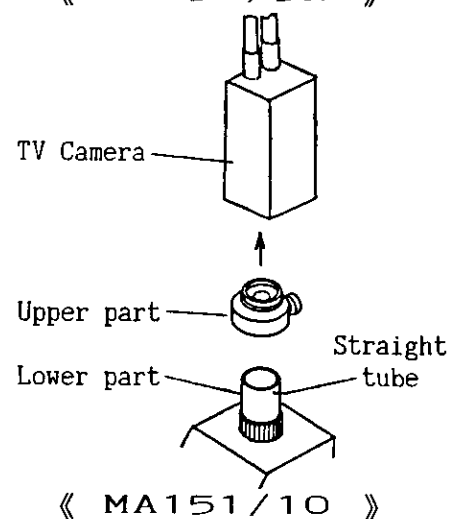
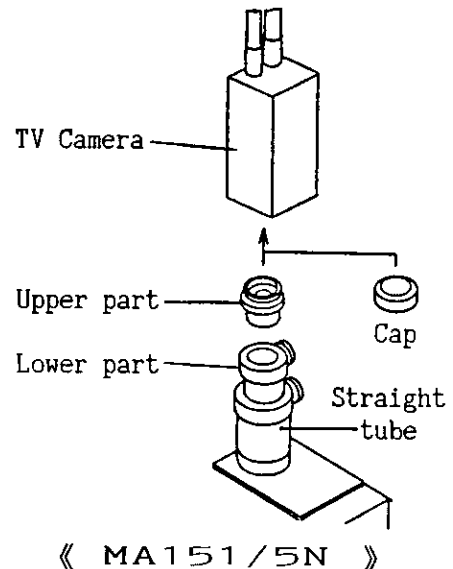
### 《 MA151/10 TV Camera Adapter 》

For use with Trinocular non-Stereo microscopes, such as ML & RM series Trinocular models.

3. Both types of the above TV Camera Adapters comprise Upper and Lower parts. Separate into two parts. (Refer to the illustration)
4. Screw the Upper part into the lens mount① of the TV Camera.
5. Mount the Lower part to the straight tube of the Trinocular head of microscope and tighten it. (Refer to the instruction supplied with "C" Mount adapter as to How To Mount.)
6. Install the TV camera with the Upper part to the microscope straight tube with the Lower part and tighten with the set screw.
7. Connect the cable of AC Adapter ⑪ with the DC IN ⑤ on the top of TV camera.
8. Connect the TV camera with the TV monitor by using BNC Cable⑨ or Y/C cable ⑩ in the following way:

《 To connect by using BNC Cable 》  
Connect one end of the BNC Cable with the VIDEO OUT③ and the other end with the VIDEO IN on the using TV monitor.

《 To connect by using Y/C CABLE 》  
Connect one end of the Y/C Cable ⑩ with Y/C OUTPUT④ on the top of TV camera and the other end with the Y/C IN on the using monitor.

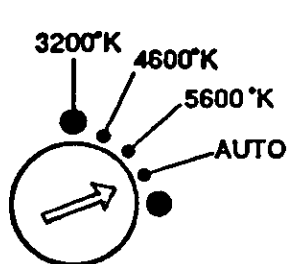


# HOW TO OPERATE

1. Insert the plug of the AC Adapter ⑪ into the power receptacle.
2. Switch on the TV monitor .
3. When the TV camera is fitted onto the straight tube of the Trinocular microscope, pull the beam-splitter-lever on the microscope viewing head to direct the light to the TV camera.
4. Then the image through the microscope is projected on the TV monitor. If the projected image is not in sharp focus, adjust the focusing of the microscope following the instruction manual of the microscope.
5. When the projected image is not bright enough, increase the brightness of the illuminator by using intensity control or when using stereo microscope, adjust the illumination angle for better result.

## HOW TO USE "WHITE BALANCE"

1. The White Balance is set at AUTO MODE for all shipments, but the mode can be changed according to the Color Temperature of the using illuminator.



3200° K : Incandescent or Halogen lamp

4600° K : White fluorescent lamp

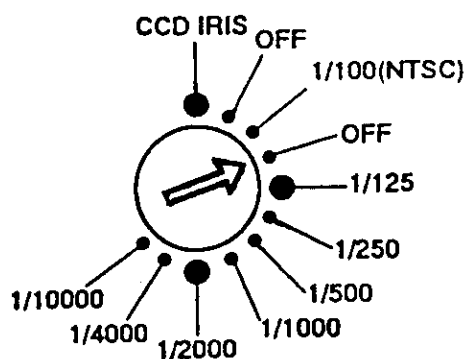
5600° K : Daylight fluorescent lamp

AUTO : As TTL method white balancing is adopted, the brightest spot of the specimen is projected in white.

When illumination is too bright, ND (neutral density) filter is recommended to decrease the brightness, not decreasing the color temperature.

## HOW TO USE "SHUTTER"

1. All the shipments have the Shutter set at OFF. It can be changed according to the conditions as follows:



CCD IRIS : Electronic Shutter speed is automatically changed according to the brightness of the specimen.

OFF : Electronic Shutter is set at OFF (1/60 set)

1/125 ~ 1/10000 : Shutter speeds



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