

Version 1.8

**CCD COLOR CAMERA**  
**CS5260D/CS5260DP**  
**INSTRUCTION MANUAL**

**OWNER'S RECORD**

Enter the blank below Product Serial Number, which is found on bottom/rear chassis of your device. Keep this number for your record.

Serial No. \_\_\_\_\_



Tokyo Electronic Industry Co.,Ltd

## Contents

### GENERAL SAFETY INSTRUCTIONS



1. Product descriptions
2. Features
3. Configuration
4. Rear panel fixture
5. Connection (recommendation)
6. Control of inner selection switches
7. How to set up the camera
8. Specifications
9. How to mount the camera
10. Caution : Operation under heavy vibration
11. Attached drawings : Ex-view of CS5260D/DP
- 12 Maintenance

### BEFORE USING THE CAMERA      GENERAL SAFETY INSTRUCTIONS

This instruction manual contains important information for the operator(user) and/or people around him/her to avoid personal injuries, or property damages against him/her or people around him/her by using your purchase correctly. Prior to use, read this operation manual carefully to fully understand its instructions for correct use.

[Definition of markings]





The meaning of each mark used in this instruction manual is given below.

 <b>DANGER</b>	This mark warns the user that improper use, indicated with this mark, may cause death or severe personal injuries against the user or people around him/her.
 <b>CAUTION</b>	This mark warns the user that improper use, indicated with this mark, may cause personal injuries (*1) or material damages (*2) against the user or people around him/her.






Notes



\*1 : Personal injuries mean wounds, burns, electric shocks, and others for which the person injured need not to be hospitalized nor to be cared for the long term.









\*2 : Material damages mean any direct or consecutive damages related to property or material loss.

	This mark indicates what the user <b>SHOULD NOT DO</b> . The details of things which the user should not do are described near this mark.
	This mark indicates what the user <b>MUST DO</b> . The details of things which the user must do are described near this mark.
	This mark indicates that the user must be alert against a possible <b>DANGER</b> . The details of the <b>DANGER</b> which the user must be aware of are described near this mark.
	This mark indicates that the user are given a <b>CAUTION</b> against possible hazards. The details of the <b>CAUTION</b> which the user are given are described near this mark.

#### Handling precautions

 <b>DANGER</b>	
	In the event that any smoke or smell is observed, do <b>NOT</b> try to continue the use of the camera. To do so in spite of clear signs of malfunction may leads to a fire or an electric shock hazard. In that case, turn the power switch of the system <b>OFF</b> immediately, and then make sure to remove the camera cable from the camera connector. After confirming that the camera emits no new smokes after turning the power off, contact the dealer/distributor from which you purchased the camera. Do <b>NEVER</b> attempt to repair the camera on your own because to do so may cause unexpected hazards.
	Do <b>NOT</b> try to use the camera when it is malfunctioning. (Ex. No images on the monitor) In the event of malfunction, turn the power switch of the system <b>OFF</b> immediately, and then make sure to remove the camera cable from the camera connector. Contact the dealer/distributor from which you purchased the camera for repair service.
	In the event that liquids, small particles, or any other foreign objects get into the camera, do <b>NOT</b> try to continue the use of the camera. To do so may leads to a fire or an electric shock hazard. In that case, turn the power switch of the system <b>OFF</b> immediately, and then make sure to remove the camera cable from the camera connector. Then contact the dealer/distributor from which you purchased the camera.
	Do <b>NOT</b> attempt to repair or modify the camera on your own. To do so may leads to a fire or an electric shock hazard. Contact the dealer/distributor from which you purchased the camera for repair / modification.

	The camera is designed to work only under specified voltage. Do NOT attempt to drive the camera with the power other than DC9V. Operating the camera under power other than DC12V may leads to a fire or a electric shock hazard.
	Do NOT use the camera under high-humidity-condition, such as, a place near a humidifier. To do so may leads to a fire or a electric shock hazard.

 <b>CAUTION</b>	
	If the camera is operated in the electromagnetic field, there may be cases where beat noises (vertical, horizontal, or oblique stripes) may appear in the video output. In that case, take preventive measures on the electromagnetic-wave generating source so that the camera do not receive the interference by the electromagnetic-wave. Take extra precautions against electromagnetic-wave-interference if the camera is used with a servomotor, inverter, or other electromagnetic-wave-generating equipment.
	Do not give a strong impact/shock on the body of the camera. A strong impact/shock may cause breakdown or damages. The camera connector may be broken if the camera is used in the system in which the camera connector is exposed to strong impact/shock. To use the camera and the camera connector under such hard-use condition, use an optional camera connector mounting kit to ensure stable fixing of the connector's plug onto the camera-body.
	When the camera is not in use, put a lens or a lens-cap onto the camera head so that the image pickup plane of CCD is protected from dust, foreign object, or other flaw-causing object. If the glass plane (image pickup plane) gets dirty, clean it with a cotton swab. When it needs to be cleaned with a cleaner, be sure NOT to use any organic solvent other than ethyl alcohol. As a countermeasure against condensation, if and when the camera is moved from a warm place to a cold place, take appropriate precautions to prevent condensation from forming on the camera.
	Do not pull strongly nor swing the camera cable. The stress from pulling or swinging may cause damages or breaks in the cable.
	To avoid breakdown, do not let video output get short-circuited.
	To avoid breakdown, do not expose the camera head to any intensive light (such as sunlight).
	When mounting the lens onto the camera head, be sure to check and confirm that the lens is set properly onto the camera head with no tilt/slant. In addition, confirm that the screw-mounting part is free from flaws or dusts and other foreign objects. Otherwise, it may become impossible to dismount the lens after use.

### **RESTRICTION FOR USE**

- In case malfunction of this equipment (e.g. video output cut-off) can be expected to lead to significant accident, avoid using this equipment for such system build-in use.

### **CASES FOR INDEMNITY**

We shall be exempted from taking responsibility for damages or losses in the following cases.

- In case damages or losses are caused by fire, earthquake, or other acts of Gods, the act by third party, misuse by the user deliberately or erroneously, use under extreme operating conditions.
- In case indirect, additional, consequential damages (loss of expected interest, suspension of business activities) are incurred as results of malfunction or non-function of the equipment, we shall be exempted from responsibility for such damages.
- In case damages or losses are caused by incorrect use which is not in line with the instructions in this operating manual.
- In case damages or losses are caused by malfunction resulting from bad connection with other equipment.
- In case damages or losses are caused by repair or modification by the user.

## **1. Product descriptions**

The CS5260D/DP is a one-piece type (\*) CCD color camera with a ultra-compact & light-weight body.  
[\*One-piece type : One integrated body made up of the camera head & the camera control unit]

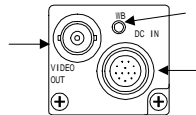
## **2. Features**

- (1) The camera is driven by DC+12V.
- (2) The ultra-compact & light-weight body is best suited for observation and other applications.
- (3) The built-in automatic white-balancing function allows the user to obtain optimal white-balance just with a push on the button.

## **3. Configuration**

- (1) The camera body 1
- (2) Accessories 1  
Instruction manual

## **4. Rear panel fixture**



The rear-view of a CS5260D/DP

### **WB**

Just with one push of this button, the camera will adjust its white-balance. During the time that this button is pressed, the camera performs its white-balancing function. When the button is released, the setting will be fixed.

### **VIDEO OUT**

This is the output connector for composite video signals. Connect this with the video monitor.

### **DC IN**

This is the connector for power supply, video output, and adjustment signals. Connect this with the power supplier or the video monitor.

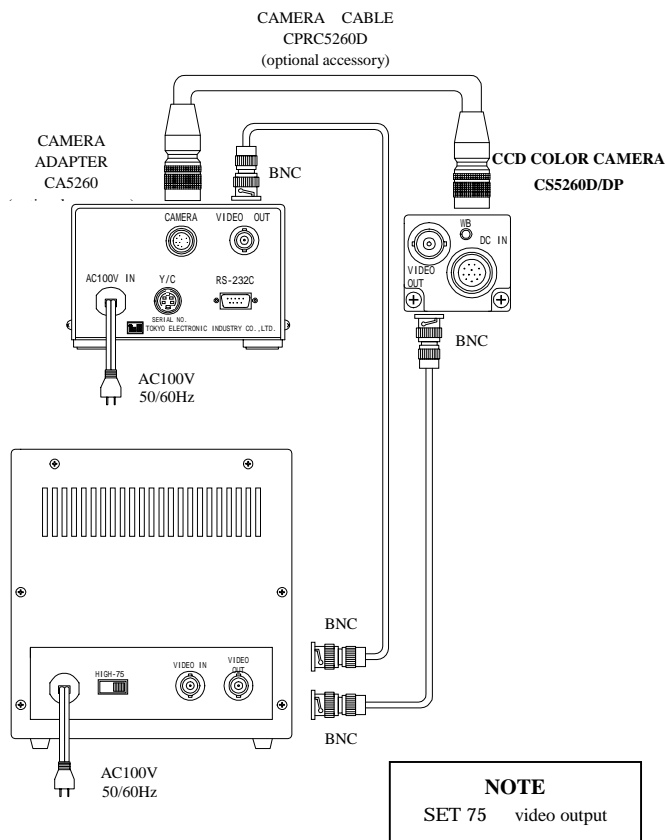
Compatible connector

HR10A-10P-12S (Manufactured by HIROSE DENKI)

Table 1 : Pin assignment

Pin number	Signal name
1	GND
2	+12V
3	GND
4	VIDEO OUT
5	GND
6	SI (Adjustment signal)
7	N.C.
8	C.OUT
9	SO(Adjustment signal)
10	Y.OUT
11	+12V
12	GND

## 5. Connection(recommendation)

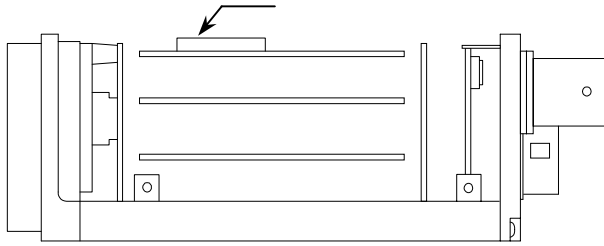


## **6. Control of inner selection switches**

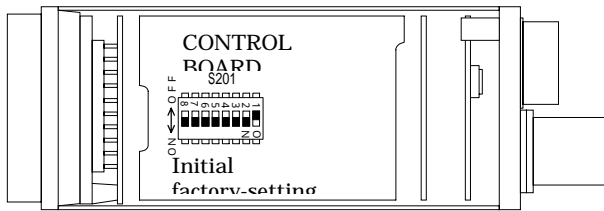
(1)The inner structure

The inner structure of this camera is shown as follows.

The side-view of a CS5260D/DP without the cabinet  
S201



The top-view of a CS5260D/DP without the cabinet



(2)ALC (Automatic Light Control) mode setting

With combined function of ELC (Electronic Light Control) and AGC (Automatic Gain Control), the camera can capture optimal images despite the changes in the ambient lighting condition. With the S201 switch on the CONTROL board, ALC mode setting is available.

(1) For ELC:AUTO & AGC:ON setting, refer to the *table 2* below.

*Table 2*

S201	1	OFF	
	2	OFF	
	3	OFF	ON
		Flicker-less OFF	Flicker-less ON
	4	OFF	ON
		Back-light SW ON	Back-light SW OFF
5	OFF (Electronic iris)		
6	ON		

- Under S201 3 NTSC: Flicker-less ON, the shutter speed is fixed at 1/100s .  
PAL : Flicker-less ON, the shutter speed is fixed at 1/120s.

(2) For ELC:MANU & AGC:ON setting, refer to the *table 3* below.

*Table 3*

S201	1	OFF
	2	ON
	3	Shutter speed setting SW (Refer to <i>table 5</i> )
	4	
	5	
	6	ON

(3) For ELC:MANU & AGC:OFF setting, refer to the *table 4* below.

*Table 4*

S201	1	ON			
	2	ON/OFF			
	3	Shutter speed setting SW (Refer to <i>table 5</i> )			
	4				
	5				
	6	OFF	ON	OFF	ON
	7	OFF	ON	OFF	ON
0dB		12dB	6dB	18dB	

\*The initial factory setting NTSC:Electronic shutter speed 1/60s, Gain 0dB  
PAL :Electronic shutter speed 1/50s, Gain 0dB

*Table 5*

Shutter speed (s)		S201		
CS5260D	CS5260DP	3	4	5
1/60	1/50	OFF	OFF	OFF
1/100	1/120	ON	OFF	OFF
1/250	1/250	OFF	ON	OFF
1/500	1/500	ON	ON	OFF
1/1000	1/1000	OFF	OFF	ON
1/2000	1/2000	ON	OFF	ON
1/4000	1/4000	OFF	ON	ON
1/10000	1/10000	ON	ON	ON

## **7. How to set up the camera**

- (1) Connect the camera, video monitor, and the power supply onto each other.
- (2) Set the power switch of video monitor ON.
- (3) Supply power to the camera.
- (4) After confirming that images appear on the video monitor, adjust the lens aperture to obtain optimal illumination.
- (5) While monitoring images on the video monitor, adjust the focus of lens to obtain the sharpest images.
- (6) Shoot at any white subject, and then push WB button on the rear panel to adjust white-balance.
- (7) Depending on the shooting environment, select ON/OFF of ELC and AGC via inner switch. Refer to section 6 of this manual for information on to how to make settings.

## 8.Specifications

(\*The specs of PAL type which differ from those of NTSC type are shown in [     ].\*)

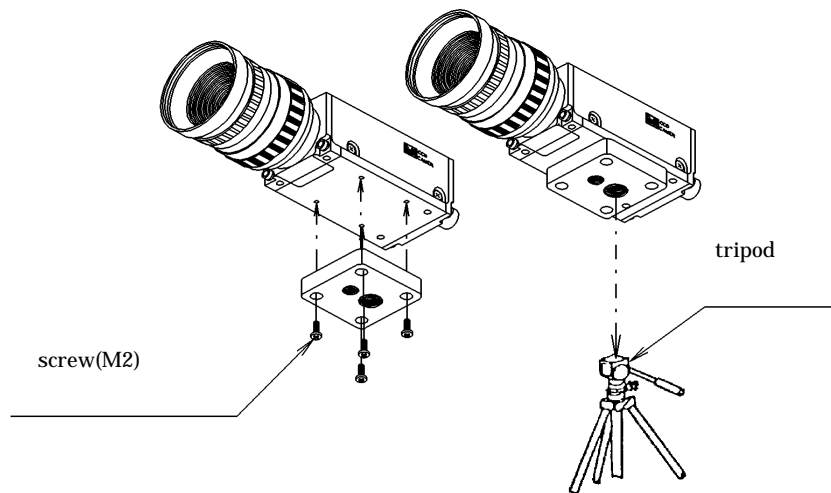
Model	CS5260D	[CS5260DP]
TV system	NTSC	[PAL]
Image sensor	Interline CCD	
Total pixels	811(H) × 508(V)	[795(H) × 596(V)]
Active pixels	768(H) × 494(V)	[752(H) × 582(V)]
Pixel size	8.4 μ m(H) × 9.8 μ m(V)	[8.6 μ m(H) × 8.3 μ m(V)]
Scanning area	6.45(H) × 4.84(V)mm (Equivalent to 1/2 inch optical image size)	[6.47(H) × 4.84(V)mm]
Color filter	Corrective mosaic filter (Ye, Cy, Mg, G)	
CCD integration	Field integration (Field-electrical-charge-storage)	
Scanning lines	525 lines	[625 lines]
Scanning system	2:1 interlace	
Sync system	Internal	
Scanning frequency	15.734kHz(H), 59.94Hz(V)	[15.625kHz(H), 50Hz(V)]
Aspect ratio	4:3	
Sensitivity	2000 lx (F8, 3000K)	[2800 lx (F8, 3000K)]
Minimum subject illumination	8 lx (F1.4, AGC ON, Output level: Approx. 50%)	[4 lx]
Resolution	470 TV lines(H) , 350 TV lines(V)	[470 TV lines(H) , 420 TV lines(V)]
S/N ratio	46dBp-p/rms	
Correction	0.45 (Fixed)	
Resolution	470 TV lines(H) , 350 TV lines(V)	[470 TV lines(H) , 420 TV lines(V)]
S/N ratio	46dBp-p/rms	
Gain (AGC)	ON/OFF selectable Corrective range under ON setting mode : From -6dB through 0dB Corrective range under OFF mode : Selectable among 18dB, 12dB, 6dB, 0dB	
Electronic shutter (ELC)	ON/OFF selectable Corrective range under ON setting : From 0dB through 60dB Corrective range under OFF mode : Refer to table 5 [Shutter speed setting]	
White balance	AUTO/HOLD one-push selectable Corrective range under AUTO mode : From 2800K through 6500K	
Power source	DC+12V ± 10% (Ripple voltage : 50mVp-p)	
Power consumption	Approximately 250mA	
Ambient condition	Temperature: From 0 degrees through 40 degrees Humidity: From 30 through 85% (No condensation)	
Lens mount	C mount lens	
Weight	Approx. 95g	

## **9. How to mount the camera**

There are several alternative ways to fix the camera. Choose your method among the following options.

(1) Option 1: Using a camera tripod fixing kit

Use an optional tripod fixing kit to fix the camera onto the tripod. Use attached screws to affix tripod-mounting hardware to your camera. (See the diagrammatic sketch shown below)



(2) Option 2 : Using the mounting holes (Camera flange)

Put M3 screws through these holes (4 places) to fix the camera. Be sure to use screws which are shorter than 3mm.

(3) Option 3 : Using the mounting holes (Bottom side)

Put M2 screws through these holes (4 places) to fix the camera. Be sure to use screws which are shorter than 3mm. Longer screws may damage the inner circuit board.

\*When fixing the camera using these camera-mounting-holes, it is recommended that you use both of the method (option 2 & 3) to ensure stable fixing.

### **10 Caution : Operation under heavy vibration**

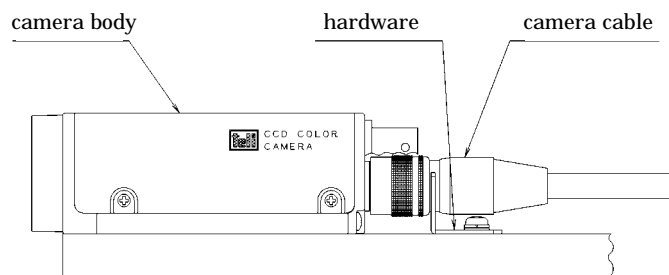
If the camera and the camera cable are used under heavy vibration, it may be possible that the pins of DC IN connector break. To prevent this from happening, fix the camera cable near the connection point, or use the fixing hardware as shown below (option) to eliminate rattling to protect the pins.  
(When using fixing hardware, be sure to check if you are using a right one)

hardware(option)

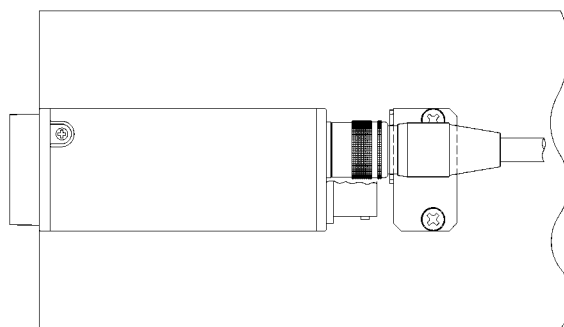


金具 (オプション)

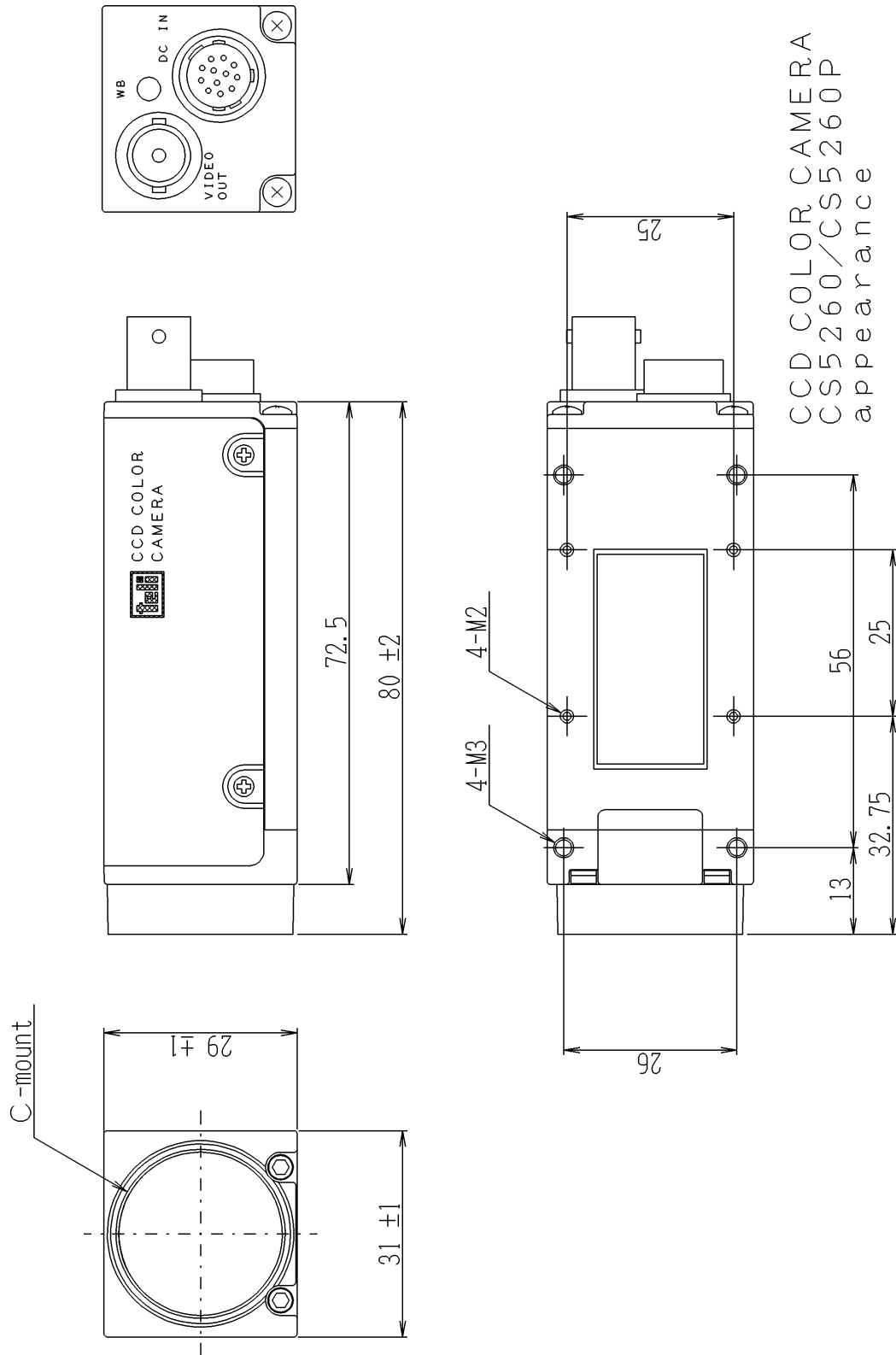
1) The side view



The top view



**11. Attached drawings : Ex-view of CS5260D/DP**



CCD COLOR CAMERA  
CS5260/CS5260P  
appearance

## **12. MAINTENANCE**

- (1) Cleaning should be done only after the battery pack has been removed or other power units have been disconnected.
- (2) When the cabinet is dusty, clean by gently wiping with a soft cloth. And avoid the use of strong cleaning agents such as benzine or alcohol as they may damage the cabinet.
- (3) If malfunctioning occurs, stop using equipment immediately and consult **TELI**-service shop, the dealer purchased from or qualified personnel's.
- (4) Upon completion of any service or repairs, request the service technicians that only Factory Authorized Replacement Parts that have the same characteristics as the original parts were used, and that routine safety checks have been performed to determine that the video product is in safe operating condition. Unauthorized parts may result in fire, electrical shock, or other hazards.
- (5) When you send the product to a service center, you must use the original carton box and packing materials, then insert the original carton box containing the unit into another carton, using more packing materials.
- (6) When requesting services, the following information is necessary.
  - \* Your name, address and telephone number.
  - \* Model number, serial number and date of purchase.
  - \* Explain the damage, malfunction or other symptoms as precisely as possible.
- (7) The minimum availability period for repairs(parts necessary to keep unit functioning) is 8 years after the end of producing the model.
- (8) If you have any question regarding after-sales service, etc., please contact the nearest service center.

**Head Office(Sales Department)**

7-1, Asahigaoka 4-chome, Hino city, TOKYO 191-0065, JAPAN  
Telephone (042)-589-8771  
Facsimile (042)-589-8774

**Kansai Office**

1-2, Sakaemachi-dori 2chome, Chuo-ku, Kobe city 650-0023, JAPAN  
Telephone (078)-321-3461  
Facsimile (078)-321-3463

**Fukuoka Division**

7-21, Hirao 3chome, Chuo-ku, Fukuoka city 810-0014, JAPAN  
Telephone (092)-523-3395  
Facsimile (092)-523-3397

This specification is subject to change without notice.