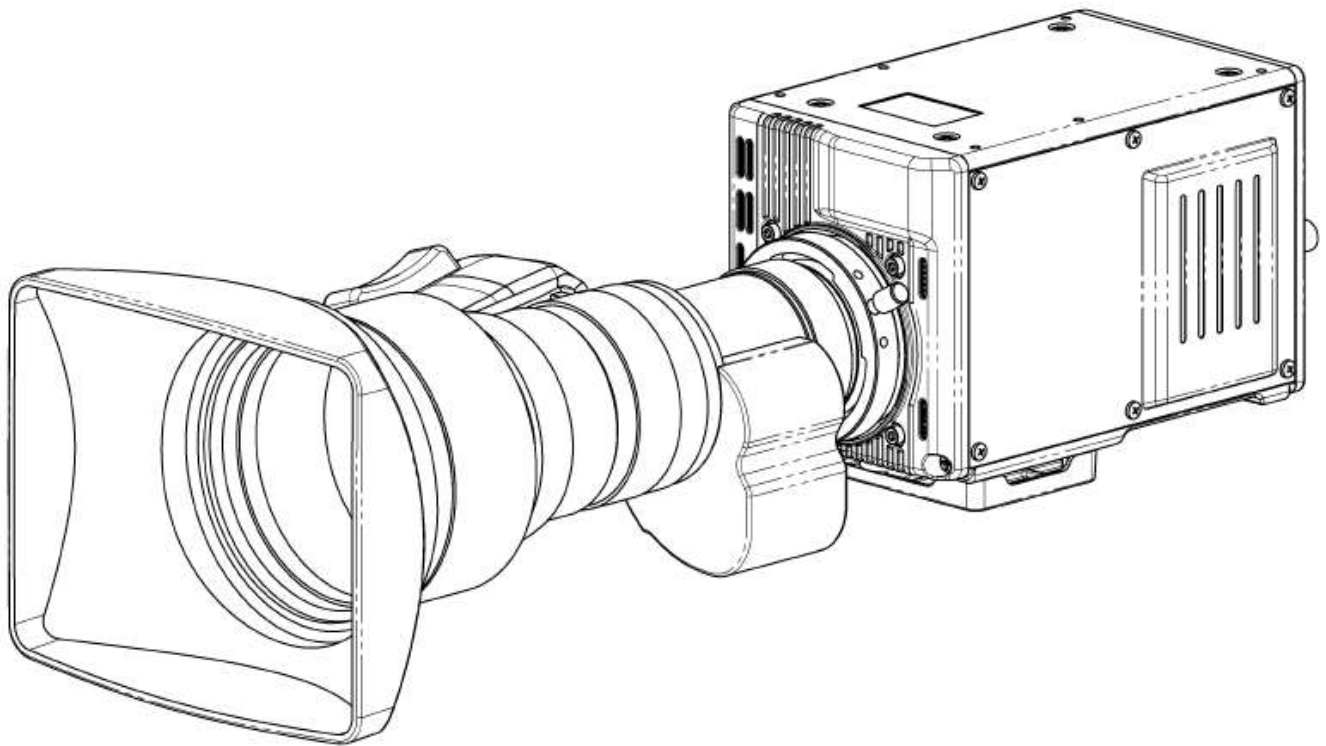


**HITACHI**

***HD COLOR CAMERA***  
**DK-H200**  
***OPERATING INSTRUCTIONS***



Please read these operating instructions carefully for proper operation,  
and keep them for future reference.

**Hitachi Kokusai Electric Inc.**

## Declaration of Conformity

**Manufacturer's Name:** Hitachi Kokusai Electric Inc.  
**Manufacturer's Address:** 4-14-1 Sotokanda, Chiyoda-ku,  
 Tokyo 101-8980, Japan  
  
**Representative(s) Address in the EU:** Hitachi Kokusai Electric Europe GmbH  
 Gruitener Str.3,D-40699 Erkrath,Germany

declares, that the product:

**Product Name:** Color Camera  
**Model Number(s):** DK-H200

conforms to the following Standards:

**EMC:** EN 55103-1:2009 class E3  
 EN 55103-2:2009 class E3

**RoHS :** EN50581 : 2012

**Supplementary Information:**

"The product complies with the requirements the EMC Directive 2004/108/EC."

"Complies with the requirements of the RoHS Directive 2011/65/EU."

Signature:



A.Tomiyama  
 Senior Manager  
 Quality Assurance Department II  
 Quality Assurance Center  
 Hitachi Kokusai Electric Inc.  
 Date: 13 October, 2015



Y.Otsuka  
 Managing Director  
 Hitachi Kokusai Electric Europe GmbH

ET-E060 / RHS-N0-077-E

**Note:** The model and serial numbers of your product are important for you to keep for your convenience and protection. These numbers appear on the nameplate located on the bottom of the product. Please record these numbers in the spaces provided below, and retain this manual for future reference.

**Model No.** \_\_\_\_\_

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

1. 电子产品污染控制标志



此标志是根据 2006 年 2 月 28 日公布的《电子信息产品污染控制管理办法》以及 SJ/T11364-2006《电子信息产品污染控制标识要求》而制定的，是用来表示适用于在中华人民共和国流通的电子信息产品的环保使用期限。

只要遵守此类产品的安全事项以及使用上应注意的问题，从制造日起到此年限内，不会发生产品中的有害物质外泄、突变等，不会对环境、人体以及财产产生严重影响。同时，此年限是除去必须定期交换的保守部品的，是其他产品的环保使用期限。

产品在正常情况下使用完毕要废弃时，请遵守各地区对电子信息产品的回收·再利用的相关各项法律、法规。

另外，从第三者处转买的情况下即使在本期限内也视为失去效力。

2. 产品中有毒有害物质或元素的名称及含量

	部件名称	有毒有害物质或元素					
		铅 (Pb)	水银 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
1	主机	×	○	×	○	○	○
○：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。 ×：表示该有毒有害物质至少在该部件的某一均材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。							

(COLOR CAMERA)

# SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and safety Instructions on your equipment.  
Follow recommended precautions and safe operating practices.

## SAFETY ALERT SYMBOL



This is the "Safety Alert Symbol."

This symbol is used to call your attention to items or operations that could be dangerous to you or other persons using this equipment. Read these messages and follow these instructions carefully.

It is essential that you read the instructions and safety regulations before you attempt to assemble or use this equipment.

The definitions of signal words are as follows:



**WARNING:** Personal danger

Warning notes indicate any condition or practice, which if not strictly observed, could result in personal injury or possible death.




**CAUTION:** Possible damage to equipment

Caution notes indicate any condition or practice, which if not strictly observed or remedied, could result in damage or destruction of the equipment.



**NOTE:** Notes indicate an area or subject of special merit, emphasizing either the product's capabilities or common errors in operation or maintenance.

 **WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS COLOR CAMERA TO RAIN OR MOISTURE.

## AVERTISSEMENT

Afin d'éviter tout risque d'incendie ou d'électrocution, ne pas exposer l'appareil à la pluie ou à l'humidité.

Afin d'écartier tout risque d'électrocution, garder le coffret fermé.

Ne confier l'entretien de l'appareil qu'à un personnel qualifié.

## VORSICHT

Um Feuergefahr und die Gefahr eines elektrischen Schlags zu vermeiden, darf das Gerät weder Regen noch Feuchtigkeit ausgesetzt werden.

Um einen elektrischen Schlag zu vermeiden, darf das Gehäuse nicht geöffnet werden.

Überlassen Sie Wartungsarbeiten stets nur einem Fachmann.

# IMPORTANT SAFETY INSTRUCTIONS

## **1. Read Instructions**

All the safety and operating instructions should be read before the product is operated.

## **2. Retain Instructions**

The safety and operating instructions should be retained for future reference.

## **3. Heed Warnings**

All warnings on the product and the operating instructions should be adhered to.

## **4. Follow Instructions**

All operating and use instructions should be followed.

## **5. Cleaning**

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

## **6. Attachments**

Do not use attachments not recommended by the product manufacturer as they may cause hazards.

## **7. Water and Moisture**

Do not use this product near water - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.

## **8. Accessories**

Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

## **9. Moving**

A product and cart combination should be moved with care.

Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

## **10. Ventilation**

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered.

The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

## **11. Power Sources**

This product should be operated only from the type of power source indicated on the marking label.

If company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

## **12. Grounding or Polarization**

This product is equipped with a three-wire grounding-type plug a plug having a third (grounding) pin.

This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

## **13. Power-Cord Protection**

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plug, convenience receptacles, and the point where they exit from the product.

**14. Lightning**

For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power-line surges.

**15. Overloading**

Do not overload wall outlets, extension cords or integral convenience receptacles as this can result in a risk of fire or electric shock.

**16. Object and Liquid Entry**

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

**17. Inflammable and Explosive Substance**

Avoid using this product where there are gases, and also where there are inflammable and explosive substances in the immediate vicinity.

**18. Heavy Shock or Vibration**

When carrying this product around, do not subject the product to heavy shock or vibration.

**19. Servicing**

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

**20. Damage Requiring Service**

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- a. When the power-supply cord or plug is damaged.
- b. if liquid has been spilled, or objects have fallen into the product.
- c. If the product has been exposed to rain or water.
- d. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- e. If the product has been dropped or damaged in any way.
- f. When the product exhibits a distinct change in performance-this indicates a need for service.

**21. Replacement Parts**

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part.

Unauthorized substitutions may result in fire, electric shock, or other hazards.

**22. Safety Check**

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

**23. Wall or Ceiling Mounting**

The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

**24. Heat**

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

# WICHTIGE SICHERHEITSANWEISUNGEN

## 1. Alle Anweisungen lesen.

Vor Betrieb des Erzeugnisses sollten alle Sicherheits- und Bedienungsanleitungen gelesen werden.

## 2. Die Anweisungen aufbewahren.

Die Sicherheits- und Bedienungsanleitungen sollten fünftigen Bezug aufbewahrt werden.

## 3. Warnungen beachten.

Die Warnungen auf dem Erzeugnis und in den Bedienungsanleitungen sollten beachtet werden.

## 4. Anweisungen befolgen.

Alle Bedienungsanleitung- und

Verwendungsanweisungen sollten befolgt werden.

## 5. Reinigung

Den Stecker des Geräts vor Reinigung aus der Steckdose ziehen. Keine flüssigen Reinigungsmittel oder Aerosolreiniger verwenden. Zum Reinigen einen feuchten Lappen verwenden.

## 6. Zubehör

Nur vom Hersteller des Erzeugnisses empfohlenes Zubehör verwenden, da es sonst zu Störungen kommen kann.

## 7. Wasser und Feuchtigkeit

Dieses Erzeugnis nicht in der Nähe von Wasser verwenden - z.B. in der Nähe einer Badewanne, eines Waschbeckens, einer Küchenspüle, eines Waschzubers, in einem nassen Keller, in der Nähe eines Schwimmbeckens usw.

## 8. Aufstellung

Das Erzeugnis nicht auf einen unstabilen Wagen, Stand, Dreifuß, Träger oder Tisch stellen.

Das Erzeugnis kann sonst herunterfallen und ein Kind oder einen Erwachsenen schwer verletzen.

Außerdem kann das Gerät schwer beschädigt werden. Nur mit einem Wagen, Stand, Dreifuß, Träger oder Tisch verwenden, der vom Hersteller empfohlen oder mit dem Erzeugnis verkauft worden ist. Für jegliche Anbringung sollten die Anweisungen des Herstellers befolgt werden, und das vom Hersteller empfohlene Anbringungszubehör sollte verwendet werden.

## 9. Eine Kombination von Erzeugnis und Wagen sollte vorsichtig bewegt werden.

Schneller Halt, übermäßige Krafteinwirkung und unebene Oberflächen können Umkippen der Kombination von Erzeugnis und Wagen verursachen.

## 10. Ventilation

Schlitze und Öffnungen im Gehäuse dienen der Ventilation. Sie sind für zuverlässigen Betrieb des Gerätes und Schutz vor Überhitzung erforderlich und dürfen nicht blockiert oder abgedeckt werden. Die Öffnungen sollten niemals dadurch blockiert werden, daß, das Gerät auf ein Bett, ein Sofa, einen Teppich oder eine ähnliche Oberfläche gestellt wird.

Das Gerät sollte nur dann in Einbauinstallation wie in einem Bücherschrank oder einem Gestell verwendet werden, wenn angemessene Ventilation vorgesehen ist bzw. Die Anweisungen des Herstellers befolgt worden sind.

## 11. Stromversorgung

Dieses Erzeugnis sollte nur an der auf dem Typenschild angegebenen Stromversorgungsart betrieben werden. Wenn Sie nicht sicher sind, was für eine Stromversorgung Sie haben, so wenden Sie sich bitte an Ihren Erzeugnishändler oder an das lokale Elektrizitätswerk. Beziehen Sie sich für Batteriebetrieb oder andere Stromquellen vorgesehene Erzeugnisse bitte auf die Bedienungsanleitungen.

## 12. Erdung oder Polarisierung

Dieses Erzeugnis ist mit einem Schutzkontaktstecker mit drei Leitern ausgerüstet, mit einem Erdungskontakt. Dieser Stecker paßt nur in eine Schuko-Steckdose. Dies ist eine

Sicherheitsmaßnahme. Wenn Sie den Stecker nicht in die Steckdose stecken können, so wenden Sie sich bitte an Ihren Elektriker, damit er die veraltete Schutz des Schutzkontaktsteckers unwirksam.

## 13. Netzkabelschutz

Netzkabel sollten so verlegt werden, daß möglichst nicht darauf getreten wird und daß sie nicht eingeklemmt werden, mit besonderer Beachtung der Kabel an Stackern, Verlängerungskabeln und dem Austritt des Kabels aus dem Erzeugnis.

#### **14. Blitzschlag**

Für zusätzlichen Schutz des Erzeugnisses während eines Gewitters oder bei Nichtverwendung für lange Zeit den Stecker aus der Steckdose ziehen. Dies verhindert Beschädigung durch Blitzschlag und Netzspannungsstöße.

#### **15. Überlastung**

Wandsteckdosen, Verlängerungskabel und eingebaute Bequemlickeitssteckdosen nicht überlasten, da dies Feuer oder elektrischen Schlag verursachen kann.

#### **16. Eindringen von Fremdkörpern und Flüssigkeit**

Niemals Objekte irgendwelcher Art durch die Öffnungen in das Gerät schieben, da diese unter hoher Spannung stehende Teile berühren oder kurzschließen können, wodurch es zu Feuer oder elektrischem Schlag kommen kann. Niemals Flüssigkeiten irgendwelcher Art auf das Erzeugnis verschütten.

#### **17. Entflammbare und explosive Substanzen**

Vermeiden Sie Verwendung dieses Erzeugnisses an Orten mit Gasen bzw. entflammbaren oder explosiven Substanzen in der direkten Umgebung.

#### **18. Starke stöße oder Vibrationen**

Setzen Sie das Erzeugnis beim Transport nicht starken Stößen oder Vibrationen aus.

#### **19. Wartung**

Versuchen Sie nicht, dieses Erzeugnis selbst zu warten, da Sie sich durch Öffnen bzw. Entfernen von Abdeckungen hohen Spannungen und sonstigen Gefährdungen aussetzen können.

Beziehen Sie sich für jegliche Wartung auf qualifiziertes Wartungspersonal.

#### **20. Beschädigung, die Wartung erfordert**

Ziehen Sie den Stecker dieses Erzeugnisses aus der Steckdose und wenden Sie sich an qualifiziertes Wartungspersonal, wenn eine der folgenden Bedingungen vorliegt:

- a. Wenn das Netzkabel oder der Stecker beschädigt ist.
- b. Bei Eindringen von Flüssigkeit oder Fremdkörpern in das Gerät.
- c. Wenn das Erzeugnis Regen oder Wasser ausgesetzt worden ist.
- d. Wenn das Erzeugnis bei Befolgen der Bedienungsanleitungen nicht normal funktioniert.

Nur die Regelelemente verstellen, die in den Bedienungsanleitungen behandelt werden, da unangemessene Einstellung anderer Regelelemente Beschädigung verursachen kann und oft beträchtliche Arbeit durch einen qualifizierten Techniker erfordert, um das Erzeugnis wieder, zu normalem Betrieb zurückzubringen.

- e. Wenn das Erzeugnis fallen gelassen oder beschädigt worden ist.
- f. Wenn das Erzeugnis eine klare Änderung in der Leistung zeigt - dies weist darauf hin, daß

Wartung erforderlich ist.

#### **21. Ersatzteile**

Wenn Ersatzteile erforderlich sind, darauf achten, daß der Wartungstechniker nur die vom Hersteller festgelegten Ersatzteile oder Teile mit den gleichen Charakteristiken wie die ursprünglichen Teile verwendet. Unautorisierte Ersatzteile können Feuer, elektrischen Schlag oder sonstige Gefährdungen verursachen.

#### **22. Sicherheitsprüfung**

Bitten Sie den Wartungstechniker nach der Vervollendung von Wartung oder Reparaturarbeiten an diesem Erzeugnis um die Durchführung von Sicherheitsprüfungen, um zu bestimmen, daß das Erzeugnis im angemessenen Betriebszustand ist.

#### **23. Anbringung an der Wand oder an der Decke**

Das Erzeugnis sollte nur entsprechend den Empfehlungen des Herstellers an einer Wand oder an der Decke angebracht werden.

#### **24. Wärme**

Das Erzeugnis sollte fern von Wärmequellen wie Radiatoren, Heizwiderständen, Öfen und anderen Wärme erzeugenden Erzeugnissen (einschließlich Verstärkern) aufgestellt werden.



# MISES EN GARDE IMPORTANTES

## 1. Lire les instructions

Lire toutes les instructions de sécurité et de fonctionnement avant de faire fonctionner l'appareil.

## 2. Conserver ces instructions

Conserver les instructions de sécurité et de fonctionnement à des fins de référence ultérieure.

## 3. Tenir compte des avertissements

Tous les avertissements qui figurent sur l'appareil et dans le mode d'emploi devront être respectés.

## 4. Observer les instructions

Observer toutes les instructions de fonctionnement et d'utilisation.

## 5. Nettoyage

Avant de procéder au nettoyage, débrancher l'appareil de la prise secteur. Ne pas utiliser de produits de nettoyage liquides ou en aérosol.

Nettoyer l'appareil avec un chiffon humide.

## 6. Fixations

Ne pas utiliser de fixations non recommandées par le fabricant de l'appareil car elles pourraient être source de danger.

## 7. Eau et humidité

Ne pas utiliser l'appareil à proximité d'eau-par exemple près d'une baignoire, d'un lavabo, d'un évier ou d'un bac à lessive, dans un sous-sol humide, ou près d'une piscine, etc.

## 8. Accessoires

Ne pas placer l'appareil sur un chariot, un socle, un pied, un support ou une table instables

L'appareil pourrait tomber, blessant grièvement des enfants ou des adultes, et étant sérieusement endommagé.

Utiliser exclusivement le chariot, le socle, le pied, le support ou la table recommandés par le fabricant, ou vendus avec l'appareil. Pour tout montage de l'appareil, respecter les instructions du fabricant, et utiliser à cette fin l'accessoire de montage recommandé par le fabricant.

## 9. L'appareil monté sur son chariot devra être déplacé avec précaution.

Des arrêts brusques, une force excessive et des surfaces irrégulières pourraient provoquer le renversement de l'ensemble appareil-chariot.

## 10. Ventilation

Les fentes et les ouvertures du coffret sont prévues pour la ventilation ainsi que pour garantir un fonctionnement en toute sécurité de l'appareil et le protéger de toute surchauffe, et ces ouvertures ne devront donc être ni obstruées ni recouvertes. Ne jamais obstruer les ouvertures en plaçant l'appareil sur un lit, un sofa, un tapis ou toute surface similaire. Ne jamais placer l'appareil dans un support confiné, par exemple une bibliothèque ou une étagère, sans ventilation suffisante ou sans respecter les instructions du fabricant.

## 11. Sources d'alimentation

L'appareil devra être alimenté exclusivement sur le type d'alimentation indiqué sur l'étiquette signalétique. Si l'on n'est pas sûr du type d'alimentation du local, consulter le revendeur de l'appareil ou la compagnie d'électricité locale. Pour les appareils qui fonctionnent sur batterie ou sur d'autres sources, voir le mode d'emploi.

## 12. Mise à la terre ou polarisation

L'appareil est doté d'une fiche trifilaire avec mise à la terre, dont la troisième broche assure la mise à la terre. Cette fiche ne rentrera que dans les prises trifilaires de mise à la terre. Ceci est une mesure de sécurité. Si la fiche ne rentre pas dans la prise, faire remplacer la prise défectueuse par un électricien.

Ne pas rendre vaine la mesure de sécurité assurée par cette prise avec mise à la terre.

## 13. Protection du cordon d'alimentation

Acheminer les cordons d'alimentation de façon qu'on ne risque pas de marcher dessus ou de les coincer sous un objet placé dessus ou contre eux.

Faire particulièrement attention aux fiches des cordons, à la proximité des prises, et à l'endroit où ils ressortent de l'appareil.

#### **14. Foudre**

Pour renforcer la protection de l'appareil pendant un orage, ou si l'on s'en éloigne ou qu'on reste longtemps sans l'utiliser, le débrancher de la source d'alimentation. Ceci permettra d'éviter tout dommage de l'appareil dû à la foudre et aux surtensions de ligne.

#### **15. Surcharge**

Ne pas surcharger les prises, rallonges et prises multiples car cela pourrait entraîner un risque de feu ou de choc électrique.

#### **16. Pénétration d'objets et de liquides**

Ne jamais enfoncer d'objets d'aucune sorte dans les ouvertures de l'appareil car ils pourraient toucher des points de tension dangereuse ou court-circuiter des pièces, ce qui pourrait provoquer un feu ou un choc électrique. Ne jamais renverser de liquide d'aucune sorte sur l'appareil.

#### **17. Substances inflammables et explosives**

Eviter d'utiliser l'appareil en présence de gaz, ainsi qu'à proximité immédiate de substances inflammables et explosives.

#### **18. Chocs ou vibrations violents**

Lorsqu'on transporte l'appareil, ne pas le soumettre à des chocs ou des vibrations violents.

#### **19. Réparations**

Ne pas tenter de réparer l'appareil soi-même car le fait d'ouvrir ou de retirer les caches risque d'exposer l'utilisateur à des tensions dangereuses notamment. Confier toute réparation à un personnel qualifié.

#### **20. Dommages nécessitant réparations**

Débrancher l'appareil de la source d'alimentation et confier les réparations à un personnel qualifié dans les cas suivants:

- a. Lorsque le cordon d'alimentation ou sa fiche sont endommagés
- b. Si du liquide s'est renversé sur l'appareil ou que des objets sont tombés dedans
- c. Si l'appareil a été exposé à la pluie ou à l'eau.
- d. Si l'appareil ne fonctionne pas normalement lorsqu'on observe les instructions d'utilisation.

Ne régler que les commandes couvertes par le mode d'emploi ; en effet, un réglage incorrect des autres commandes pourrait entraîner des dommages et nécessiteront souvent des travaux de réparation coûteux par un technicien qualifié pour remettre l'appareil en état de marche.

- e. Si l'appareil est tombé ou qu'il a été endommagé.
- f. Si l'appareil affiche une nette modification de ses performances, cela signifie qu'il a besoin d'être réparé.

#### **21. Pièces de rechange**

Si l'on a besoin de pièces de rechange, veiller à ce que le technicien de réparation utilise exclusivement les pièces de rechange spécifiées par le fabricant ou des pièces ayant les mêmes caractéristiques que les pièces d'origine. Les pièces de rechange non autorisées risquent de provoquer un feu, un choc électrique et autres dangers.

#### **22. Vérification de sécurité**

Après tout travail d'entretien ou de réparation de l'appareil, demander au technicien de réparation d'effectuer les vérifications de sécurité pour s'assurer que l'appareil est en bon état de marche.

#### **23. Montage au mur ou au plafond**

L'appareil ne pourra être monté au mur ou au plafond que de la manière recommandée par le fabricant.

#### **24. Chaleur**

Eloigner l'appareil des sources de chaleur, telles que radiateurs, appareils de chauffage, cuisinières, et de tout produit engendrant de la chaleur (y compris les amplificateurs).

# IMPORTANT NOTICE

## **For USA**

These products have been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## **WARNING**

Changes or modifications not expressly approved by Hitachi Kokusai Electric responsible for compliance could void the user's authority to operate the equipment.

## **For Canada**

This product does not exceed the class A/class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations.

Le présent appareil n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe A prescrites dans le règlement sur le brouillage radioélectrique édicté par le ministère des communications du Canada.

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# Outline and features

The DK-H200 is a high-performance special application HDTV/SDTV camera is ideal for point of view and remote observation applications. With its new 2.3 million pixels native 1080p 3-MOS, the DK-H200 provides outstanding performance. The camera offers sharper and cleaner HD images due to Hitachi's implementation of the latest digital processing technology. The camera achieves outstanding high sensitivity, no vertical smear specifications and multi format outputs"1080p, 1080i and 720p".

## Features

### ■ Image Sensor

The 2.6 million pixels full HD 2/3-inch MOS image sensor..

### ■ Multi format

Various formats are changed by the camera menu. 1080p/1080i/720p, 59.94 Hz/50 Hz/60 Hz

### ■ High sensitivity and Signal to Noise ratio

Low-noise circuit technology provides a signal to noise ratio of 60dB. Even at high gain, clear images are obtained with little noise.

The standard sensitivity is rated sensitivity should be 59.94 HzF12, 50 HzF13 at 2000 lx.

In addition, the high gain mode can increase the gain up to +36 dB and +36dB frame accumulation mode to reproduce dark images.

### ■ Full Auto

The built-in Automatic Exposure System (AES) and automatic iris maintain the video level even with rapidly changing light intensity.

Full-time Auto White balance (FAW) corrects in real-time for color temperature variations due to changing types of lighting conditions on the scene object.

### ■ Versatile electronic shutter

Three modes of shutter operation are provided:

- Seven PRESET electronic shutter speeds
- VAR(Variable) SCAN to image computer monitors without flicker
- Automatic Electronic Shutter (AES) maintains the video level with the lens iris and shutter speeds.

### ■ Digital processing improves Image Highlight Quality

- Real-time Lens Aberration Correction (RLAC)  
Lens chromatic aberration of magnification is reduced by digital processing with supporting lenses.

- Knee saturation and auto-knee

The auto knee provides a wide dynamic range by dynamically compressing the video level above 100%. Knee saturation restores color saturation to scene highlights above 100%.

### • Auto Chroma

When shooting a bright blue illumination, the Masking function emphasizes the color and then the contour of objects almost disappears. Auto Chroma adjusts masking correction level of saturated color portion automatically.

### • Gray Scale Automatic Setup

This "through the lens" automatic setup is uses a standard gray scale chart to automatically setup gain, gamma, black and flare thus saving the video operator time and effort.

### • Automatic Shading

Automatic shading corrects white vertical shading at the push of a button.

This function provides separate memory of lens' modulation shading characteristics to optimize the X1 and X2 lens extender positions.

### • Skin Tone Detail Circuits

Skin tone detail smoothes and softens facial lines and blemishes without sacrificing overall scene detail, also provides two separate settings that can be used separately or simultaneously. Skin tone detail provides an easy and fast means to optimize Skin tone detail.

### • Variable Detail Boost Frequency

### • 12-Vector and Linear Matrix masking

### • Skin Tone masking

### • Preset masking

### • Ultra Gamma

### • Gamma Table

### • Black Gamma

Black Gamma can adjust only dark portion contrast in the picture. It is possible to stretch and suppress.

### ■ Extensive User-Friendly

#### • Focus assist

Focus assist indicator can be displayed on viewfinder for easy focusing.

#### • Eight Scene Files

Gain, detail, masking, gamma and other settings can be stored in eight scene file memories.

#### • Eight lens files

The lens file is provided to store and recall such as white shading, iris speed, iris open limit, and iris close limit.

#### • ECC (Electric Color Compensating) filter

• Menu access is provided for iris level (fine adjustment).

#### • Peak/average selection for auto iris

### ■ Viewfinder displays

#### • Two mode zebra

Menu selection of over-level or between range zebra is provided.

#### • Safety zone and center mark display

# Warnings and cautions when using

## WARNING

### ■ Viewfinder lens hazard

- Do not point the eyelens toward the sun or other bright light source. There is danger of physical burns and loss of eyesight.
- Do not place the viewfinder with the lens pointed toward the sun. There is risk of burn damage to the viewfinder interior.

## CAUTION

### ■ Power supply

The specified power supply input voltage of this camera is 12VDC. Be sure to use the designated power supply.

### ■ Do not disassemble or modify

The camera contains precision internal components. Do not open the cover or disturb switches and controls other than designated. There is risk of impaired performance and damage.

### ■ Keep foreign object out of interior

Entry of water, metallic or other foreign materials can cause failure and damage.

### ■ Select use and storage locations carefully

Avoid using or storing the equipment in the following types of locations. Impaired performance and damage can be caused.

- Extremely hot or cold locations (exceeding -10 to 45°C), such as in enclosed vehicles.
- Subject to strong vibration.
- Humid or dusty locations.
- Salt spray or corrosive gases.
- Strong electromagnetic fields (e.g., near TV or radio transmitters).
- Where exposed to rain.

### ■ Do not cover or otherwise obstruct camera heat dissipation during operation.

## Note MOS image sensor characteristic phenomena

The following types of phenomena are innate characteristics of a MOS image sensor and are not malfunctions. Be aware of these when using a MOS camera for broadcast or other demanding applications.

### Phenomena by shooting condition

With very bright flash light, picture has very bright portion and very dark portion in one frame like partial exposure. At shooting fast object, the object image might be to wobble.

### Dead pixel

If cosmic rays go through an image sensor, a pixel may have damage, and then a dead pixel will appear on a screen. In high temperature or high gain, it is easier to see dead pixels than in normal conditions.

## Note Damage by laser

Laser light may do damage to image sensor. When you use laser light, be careful not to irradiate it on the image sensor surface. The image sensor breakage by laser light is out of warranty.

(The repair is not free of charge)

## WARNING

### ■ Viewfinder high voltage

- Do not open the viewfinder cover. There is danger of touching internal high voltage components.

## CAUTION

### ■ When connecting and disconnecting

A lens, microphone and other cables, grasp the connector by the body, not the attached cable. Cables can be damaged by pulling on them.

### ■ Note when transporting

When transporting by hand, use the carrying case. If shipping by truck or other means, pack in the carrying case, then use further cushioning and pack in a sturdy carton.

### ■ Tripod

Use a recommended tripod and install the camera correctly.

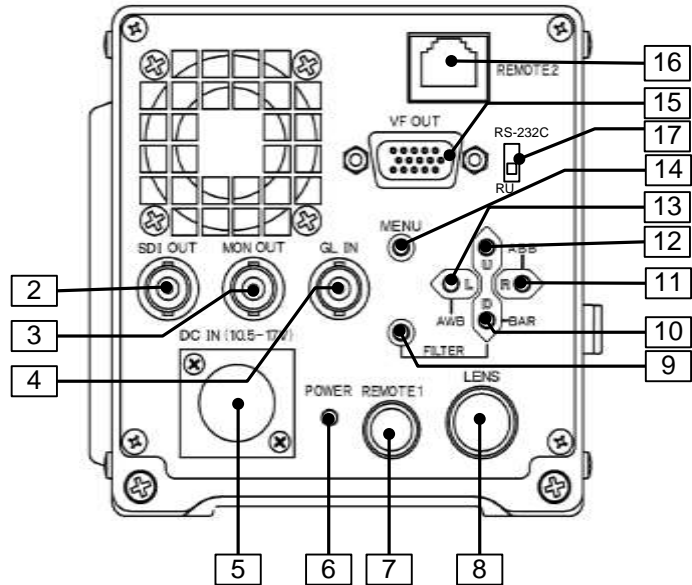
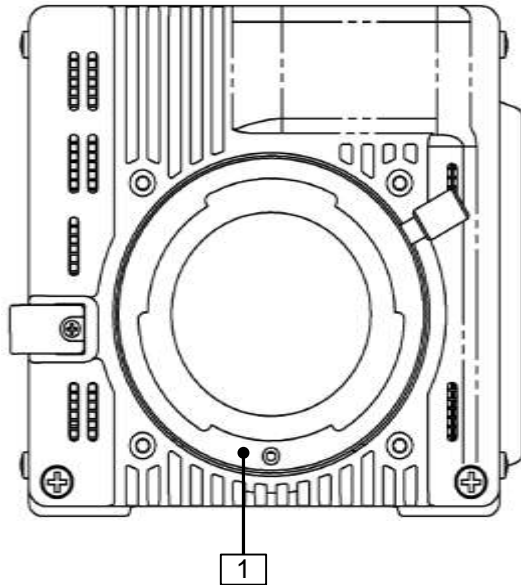
### ■ Cleaning

Use a photographers air blower to clear dust from the lens and filters. Wipe the case with a soft dry cloth. Do not use volatile solvents, as these may deform the materials.

### ■ In event of difficulty

Disconnect from power and contact the nearest Hitachi Kokusai Electric service agency.

# Facility names and functions



## 1. Lens mount

Bayonet type lens mount.

## 2. SDI OUT connector

HD-SDI/SD-SDI signal output.

## 3. MON OUT connector

HD-SDI/SD-SDI signal output with character.

## 4. GL IN connector

External sync signal input  
(Tri-level sync or Black burst)

## 5. DC IN connector

12V DC is supplied.

## 6. POWER LED

Off: Camera power is off.  
Lights (green): Camera power is on.

## 7. REMOTE1 connector

Connection for remote control unit or personal computer.  
Refer to page 20.

## 8. LENS connector

Connection for lens plug.

## 9. FILTER button

It combines with the L/R button, and the ND filter is controlled.

It combines with the U/D button, and the ECC filter is controlled.

## 10. D button

Menu mode: The menu cursor moves down.

Direct mode: Color bar signal output.

## 11. R button

Menu mode: Change the menu data.

Direct mode: Hold the button depressed for longer than 2 seconds for automatic black balance(ABB) adjustment.

## 12. U button

Menu mode: The menu cursor moves up.

Direct mode: Not used

## 13. L button

Menu mode: Change the menu data.

Direct mode: Hold the button depressed for longer than 2 seconds for automatic white balance(AWB) adjustment.

## 14. MENU button

The function menu is displayed.

## 15. VF OUT connector

Connection for viewfinder.

## 16. REMOTE2 connector

RJ-45 connector. DK-H200 can be controlled via LAN. Regarding a network setting. Refer to page15.

## 17. REMOTE1 switch

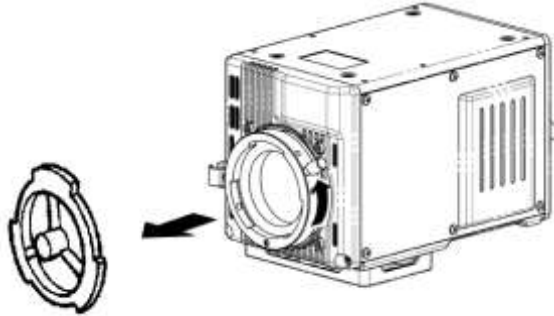
Switch for remote control unit or personal computer. Refer to page20.

# Lens installation

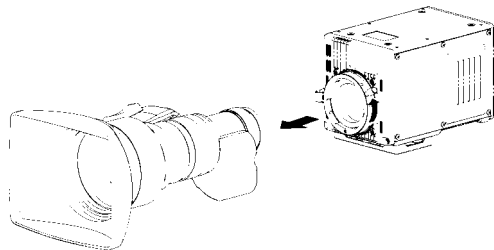
## Lens installation

Install according to the following procedure.

1. Raise the lens lever and remove the mount cap.
3. Lower the lens lever to secure the lens.

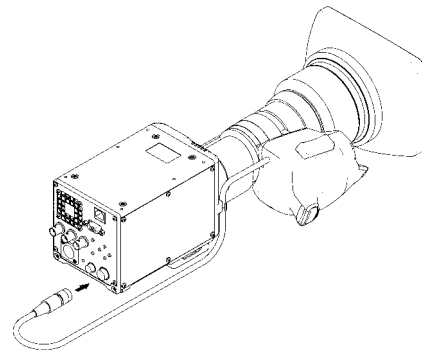


2. Align the lens center mark with the indent at the upper part of the lens mount and install the lens.



4. Engage the cable with the cable clamp and connect it to the lens connector.

**Caution:** Do not make a hot swapping.



### Notes

The following adjustments may be required according to the type of lens.

1. Lens flangeback, 2. Lens white shading.
3. Lens auto iris speed, 4. Lens iris close limit. (AUTO IRIS menu)



# Lens flangeback adjustment

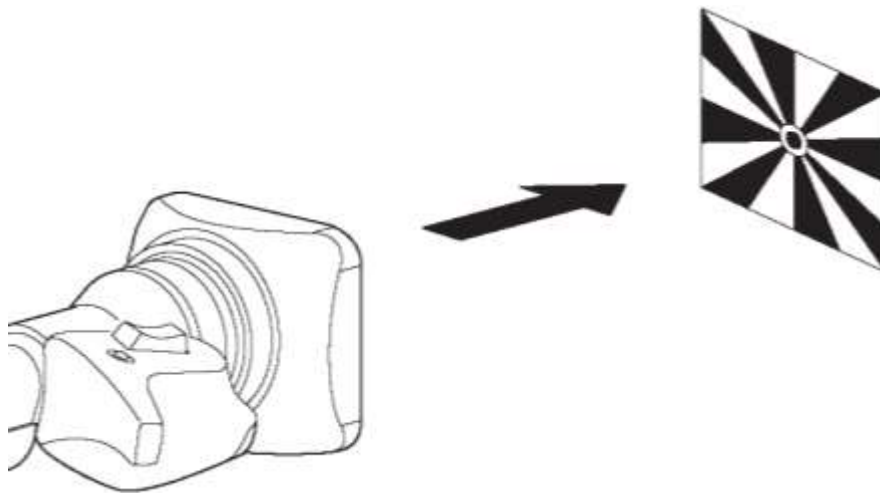
## Lens flangeback adjustment

When operating a zoom lens, if the focus is not precisely aligned at both the telephoto and wide angle extremes of the lens, the flangeback (distance from the lens mounting plane to the focal plane) is adjusted.

This adjustment is generally required only once unless the lens is replaced.

## Adjustment

1. Set the lens iris for manual operation.
2. Set a flangeback adjusting chart about 3 meters distant.



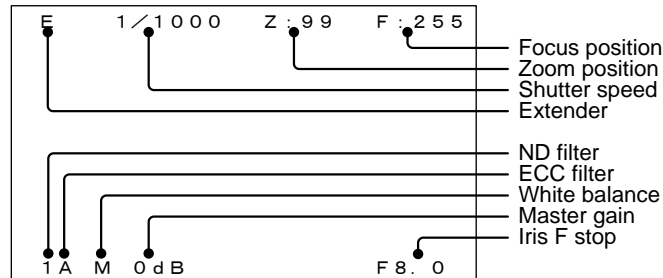
3. Open the iris and adjust the lighting to obtain the correct video output level.  
If the video level is too high, use a ND filter or electronic shutter.
  4. Loosen the FB ring setscrew.
  5. By hand or motor, set the zoom ring to the telephoto position.
  6. Observe the flangeback chart image and turn the distance ring to adjust the focus.
  7. Set the zoom ring to the wide angle position.
  8. Turn the FB ring and adjust the focus. Use care not to turn the distance ring.
  9. Repeat this process until focus is obtained at both telephoto and wide angle settings.
  10. Securely tighten the FB ring setscrew.
- Also, see the lens operating instructions.

# Status display

## Screen Status Menu Display

In addition to the video image, the messages related to camera settings and operating status and other information are displayed.

- When set to on at the setting menu VF DISPLAY menu, setting items are indicated at the top and bottom edges of the screen.
- Messages regarding switch changes and adjustments are shown for about 3 seconds at the center of the screen.



## Display description

Item		Description
Extender	No indication	Either of the following. •When the extender is X1. •The lens cable is not connected.
	E	When the extender is X2.
Shutter	OFF, 1/100(59.94i,59.94p,60i,60p) or 1/60(50i,50p), 1/250, 1/500, 1/1000, 1/2000,1/4000, 1/10000 1.07s to 1/59.94, 60.15 to 1/9633 (59.94i,59.94p,60i,60p) 1.28s to 1/50, 1/50.17 to 1/11250 (50i,50p) AES	OFF PRESET  VAR(Variable)  Auto electronic shutter
	Zoom position	0 to 99
Focus position	0 to 255	Shows the focus position of a lens as a numeric value(0 to 255(infinity)).
ND filter	1 to 4	Displays the type of ND filter currently selected.
ECC filter	A to E	Displays the type of ECC filter currently selected.
White balance	P	Preset mode
	M	Memory mode
	A	Auto mode
Master gain	-3dB, 0dB, 3dB, 6dB, 9dB, 12dB, 15dB, 18dB, 21dB, 24dB, 27 dB, 30dB, 33dB, 36dB	The value of Master Gain set now is displayed.
Iris F stop	F1.4 to F22	Iris value.
	CLS	Iris closed.
	***	The Lens cable is not connected.

# White shading adjustment

## White shading adjustment

White shading adjustment is recommended after replacing the lens.

The adjustment relates to the camera vertical coloration. If the lens includes an extender, the shading can be optimized for both extender on and off modes.

(Vertical coloration refers to an effect whereby the image of an overall white sheet of paper tends toward green at the top and magenta at the bottom, or vice versa.)

## Adjustment

1. Install the lens on the camera.  
Be sure to connect the lens cable.
2. Turn the electronic shutter off and set the gain to L (0 dB).
3. Shoot a whole white object, like cloth or wall if possible use chart viewer of Esser or Porta Pattern, without shading.
3. Set the electronic shutter to off and the gain to L (0 dB).
4. Set the lens extender to off.
5. When notice flicker on the monitor which occurred by fluorescent or mercury lighting, use sunlight or halogen as the light source.  
Using auto iris mode for the lens iris, the iris stop should be between F4 and F11. If necessary, adjust the light source level and keep iris stop position in it (be sure the electronic shutter is off).
6. Open the H SHADING or V SHADING sub menu, and then make flat the Gch waveform manually.

```

H SHADING : <
LENS FILE : LENS 1
EXTENDER  : OFF (x1)
R H SAW   : 0
■ G H SAW : 0
B H SAW   : 0
R H PARA  : 0
G H PARA  : 0
B H PARA  : 0
INITIALIZE :
  
```

```

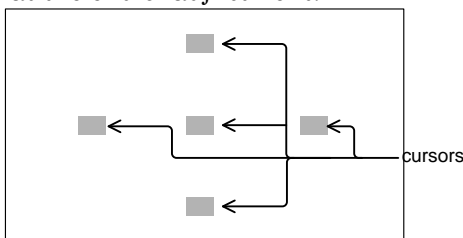
V SHADING : <
LENS FILE : LENS 1
EXTENDER  : OFF (x1)
R H SAW   : 0
■ G H SAW : 0
B H SAW   : 0
R H PARA  : 0
G H PARA  : 0
B H PARA  : 0
INITIALIZE :
  
```

7. Move cursor to WHT SHADING : PUSH > 1 SEC line in the WHT SHADING sub menu.

```

WHT SHADING : <
LENS FILE   : LENS 1
EXTENDER    : OFF (x1)
■ WHT SHADING : PUSH > 1 SEC
H SHADING   : >
V SHADING   : >
  
```

8. Press the R button for about 1 second to adjust white shading. The viewfinder top and bottom cursors flash to indicate automatic white shading adjustment in progress. The cursors extinguish at the end of adjustment.



# White shading adjustment

9. Set the extender (if provided) to on and repeat the above step.
10. Close the Function menu.

White shading adjustment is completed by the above. The adjustment is stored in a nonvolatile memory and ordinarily does not need to be repeated even if the power is switched off.

## Notes

1. Precise adjustment may not be obtainable with some special lenses.
2. Even after adjustment, some coloration may occur near the open iris setting. This is due to lens and optical system characteristics and is not a malfunction.

# Filter selection

## Filter setting

In order to obtaining correct white balance, the sufficient optical filter selection is required accordance with the scene lighting source. The correct optical filter according to the scene light source needs to be selected in order to obtain correct white balance.

## Operation method

Set the FILTER button and the L/R button.

ND Filter

Filter No.	ND Filter
1	Clear
2	1/4ND
3	1/16ND
4	1/64ND

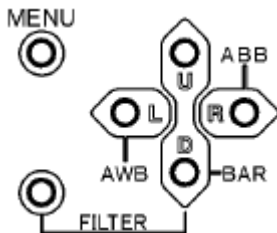
Set the FILTER button and the U/D button.

ECC Filter

Filter No.	ECC Filter
A	3,200 K
B	4,300 K
C	5,600 K
D	6,300 K
E	8,000 K

### Note

ECC filter does not operate when W.BAL MODE is AUTO in WHITE GAIN menu.



FILTER button + L/R button

→ Clear ⇔ 1/4 ND ⇔ 1/16 ND ⇔ 1/64 ND ←

FILTER button + U/D button

→ 3200K ⇔ 4300K ⇔ 5600K ⇔ 6300K ⇔ 8000K ←

# White and black balance adjustment

## White balance adjustment

White balance will be adjusted to the best effort in the sequence of AWB (auto white balance), ABB (auto black balance), and again AWB.

Readjustment is normally not required even at power off/on.

Be sure to adjust the white balance after changes in the lighting conditions.

White and black balance adjustment progress can be observed from the screen.

## Adjustment

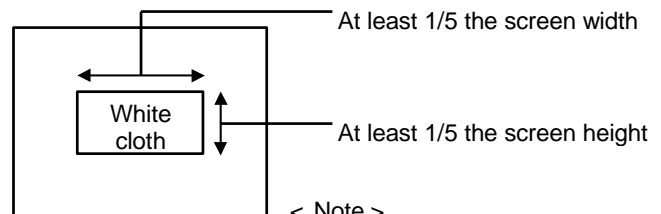
1. Set the W.BAL MODE in the WHITE GAIN menu to MEMORY.

2. Set the FILTER with lighting condition accordingly.

See Optical filter selection in page 9.

3. Place a white pattern at a location subject to the same lighting conditions as the scene. Use zoom function of the lens so that the screen is white.

A white object (e.g., cloth, wall) placed near the scene of interest can be used provided the size is adequate (see figure).



< Note >

Use care a high luminosity light source, such as a spotlight, does not enter the screen area.

4. Adjust the lens iris.

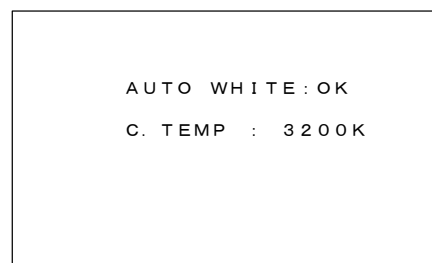
5. Hold the L button depressed for two second. White balance is adjusted automatically.

6. During adjustment, the following messages appear on the screen.

7. Adjustment is completed in several seconds.



Adjustment in progress



Adjustment complete

# White and black balance adjustment

## Auto white balance error messages

When auto white balance adjustment fails, the following error messages will be displayed on the screen for about 6 seconds.

Message	Cause	Correction
AUTO WHITE:NG CHANGE TO CAM TRY AGAIN	The color bar signal is output.	Press the D button to turn off the color bar signal.
AUTO WHITE:NG CHANGE WHITE BAL TO MEM TRY AGAIN	White balance mode is set to PRESET or AUTO.	Open the WHITE GAIN menu. Set the W.BAL MODE to MEMORY.
AUTO WHITE:NG LOW LIGHT TRY AGAIN	Insufficient lighting for adjustment.	Increase the lighting or set the MASTER GAIN to up. In case the manual iris is using at the lens, adjust the iris stop of the lens. Then repeat white balance adjustment.
AUTO WHITE:NG LEVEL HIGH TRY AGAIN	Excessive lighting for adjustment.	Set the MASTER GAIN to down. In case the manual iris is using at the lens, adjust the iris stop of the lens. Then repeat white balance adjustment.
AUTO WHITE:NG C.TEMP.HIGH CHANGE FILTER TRY AGAIN	Color temperature adjustment is too high.	Change ECC filter and readjust.
AUTO WHITE:NG C.TEMP.LOW CHANGE FILTER TRY AGAIN	Color temperature adjustment is too low.	Change ECC filter and readjust.

When the above error messages appear, correct the settings and repeat white balance adjustment.

# White and black balance adjustment

## Black balance adjustment

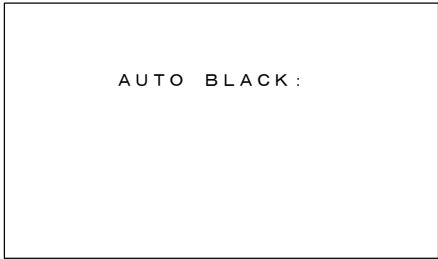
Black balance requires adjustment in the following situations.

- Equipment being used for the first time
- Equipment idle for an extended period
- Large change of ambient temperature
- Gamma setting changed

1. Hold the R button depressed for two second. Black balance is adjusted automatically.

2. The displays the following messages during adjustment.

The lens iris is automatically closed.



AUTO BLACK:

Adjustment in progress



AUTO BLACK:OK

Adjustment complete

3. Adjustment is completed in several seconds and automatically stored in memory.



# White and black balance adjustment

## Auto black balance error messages

When auto black balance adjustment fails, the following error messages appear on the screen for about 6 seconds.

Message	Cause	Correction
AUTO BLACK:NG CHANGE TO CAM TRY AGAIN	The color bar signal is output.	Press the D button to turn off the color bar signal.
AUTO BLACK:NG IRIS NOT CLOSED TRY AGAIN	The Iris is not closed.	See Note 1.
AUTO BLACK:NG ??? TRY AGAIN	Range is exceeded, cannot adjust.	See Note 2.

### Note1

- Observe that the lens connector is engaged and the iris is closed.
- The iris closes automatically to block the light during black balance adjustment.
- During black balance adjustment, the gain circuit is switched automatically.
- Although flicker or noise may appear on the screen, these are not malfunctions.

### Note2

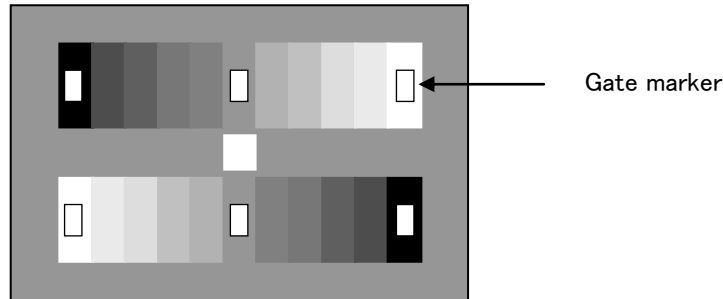
- The lens iris is automatically closed during black balance adjustment. If the iris control is manual, open the iris after adjustment.
- Check the lens connection. If ok, fault is in the lens or the camera. Consult service.

# White and black balance adjustment

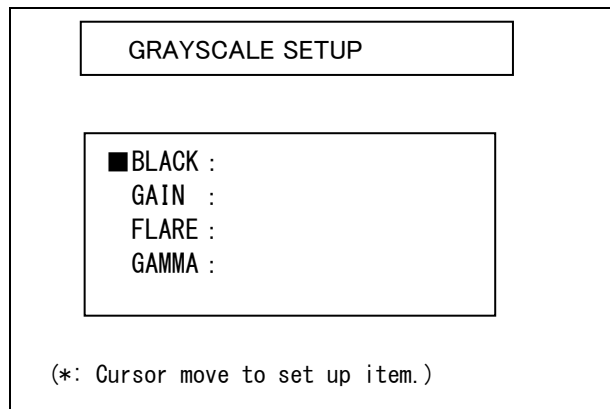
## Gray scale auto set up

BLAK, GAIN, FLARE and GAMMA parameter can be adjusted automatically using with the gray scale chart.

Gray scale chart with gate marker in the screen.



Gray scale auto set up can be accessed from Function menu or the Remote control unit and following message is displayed during auto set up working



Following messages are displayed as an auto set up result.

CHANGE TO CAM	(Error: Change Bar to CAM)
NOT GRAYSCALE	(Not in the gate marker or no gray chart)
SETUP OK!!!	(Finish set up)
BLACK: NG M.BLACK	(Master black setup error)
GAIN(GAMMA/FLARE) NG R	(R CH error)
GAIN(GAMMA/FLARE) NG G	(G CH error)
GAIN(GAMMA/FLARE) NG B	(B CH error)
GAIN(GAMMA/FLARE) NG R/G	(R&G CH error)
GAIN(GAMMA/FLARE) NG R/B	(R&B CH error)
GAIN(GAMMA/FLARE) NG G/B	(G&B CH error)
GAIN(GAMMA/FLARE) NG R/G/B	(R&G&B CH error)
BREAK OFF	

# Electronic shutter setting

## Shutter modes

The selectable electronic shutter modes and speeds are as follows.

Mode	Shutter speeds	Applications
PRESET	1/100(59.94i,59.94p,60i,60p), 1/60(50i,50p), 1/250, 1/500,1/1000,1/2000, 1/4000, 1/10000 second	Clear images of quickly moving objects.
VAR(Variable)	59.94i,59.94p,60i,60p 1/60.15 to 1/9633 second 1.07s(+36dB) to 0.03s(+6dB)  50i,50p 1/50.17 to 1/11250 second 1.28s(+36dB) to 0.04s(+6dB)	When shooting the computer monitor, It's image scroll. Reduce horizontal bar scrolling in images of computer monitor.
AES (Auto Electronic Shutter)		Set to obtain an always fixed video level when the light is greater than the close limit.

### Note

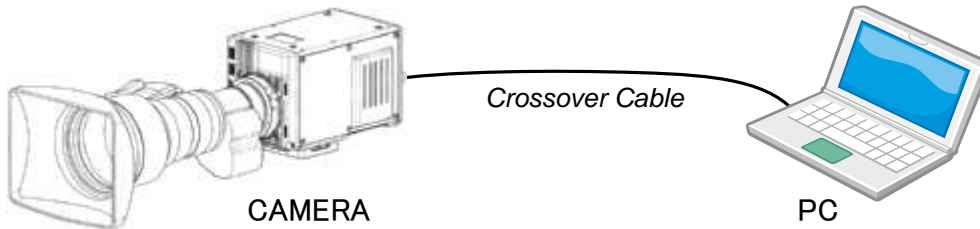
Camera sensitivity declines as shutter speed increases.

An auto iris lens stop opens at increased shutter speed, while the depth of focus is decreases.

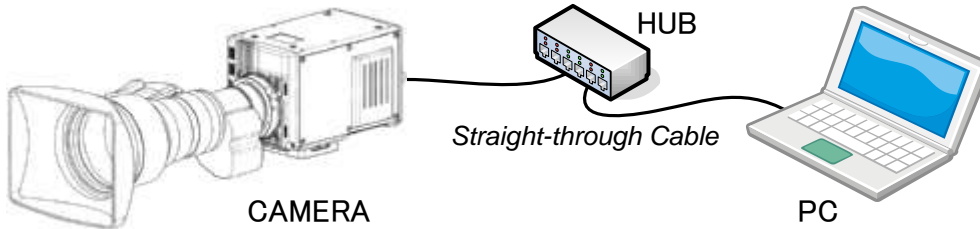
# Network Settings

The camera IP address can be set by a PC.

Use a RJ45 crossover cable.



Use two RJ45 straight-through cables and a hub.



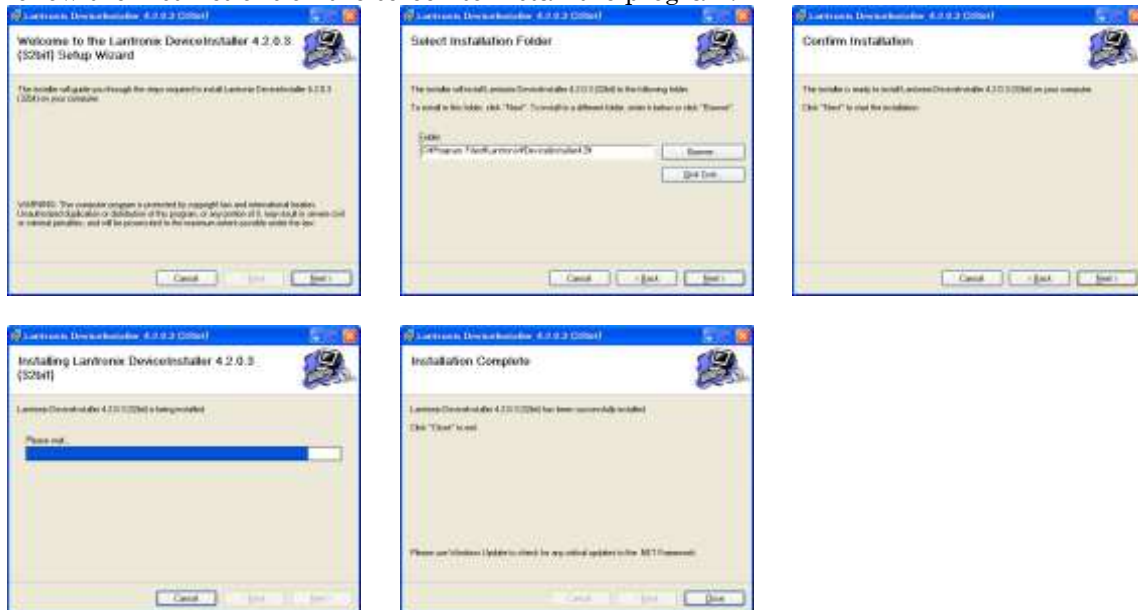
## 1. Install the DeviceInstaller to a PC.

- 1) The DeviceInstaller can be downloaded from the following web site.  
<http://www.lantronix.com/device-networking/utilities-tools/device-installer.html>  
A PC does not have to be connected to the camera at this time.

### Note

Microsoft .NET Framework must be installed on a PC beforehand.  
The Microsoft .NET Framework can be downloaded from the following web site.  
<http://www.microsoft.com/net/>

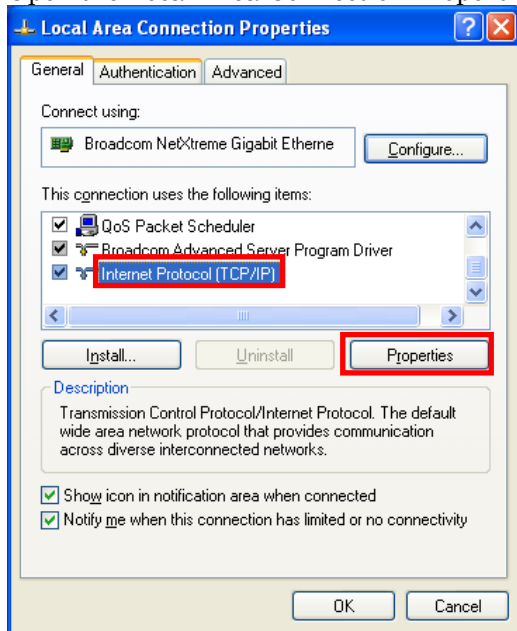
- 2) Follow the instructions on the screen to install the program.



# Network Settings

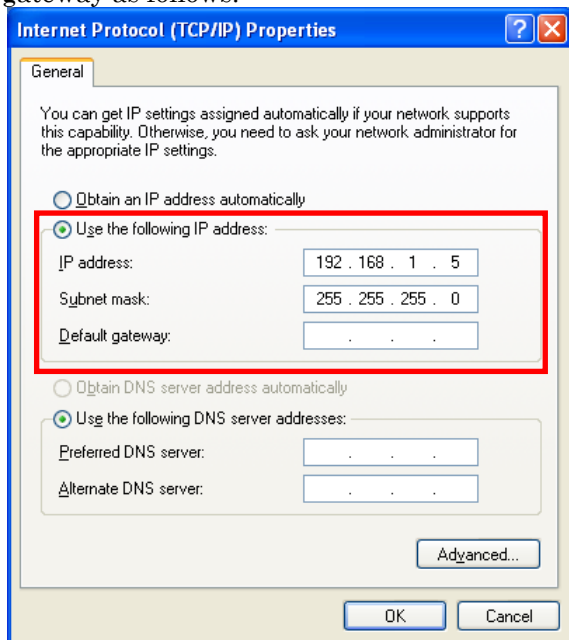
## 2. Setting for a PC.

1) Open the Local Area Connection Properties.



2) Click the “Internet Protocol (TCP/IP)” and click the “Properties” button.

3) Click the “Use the following IP address” and input the IP address, Subnet mask, and Default gateway as follows.

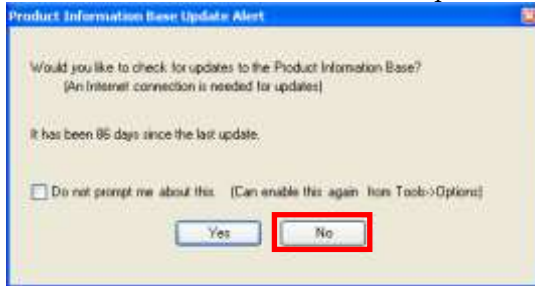


# Network Settings

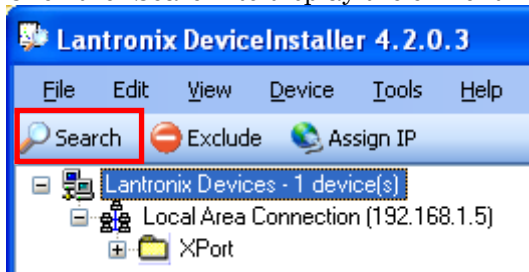
## 3. Setting for the camera.

- 1) Execute the Lantronix DeviceInstaller application by START > ALL PROGRAMS > LANTRONIX > DeviceInstaller 4.2 > DeviceInstaller.

If the "Product Information Base Update Alert" dialog has appeared, then click the "No" button.



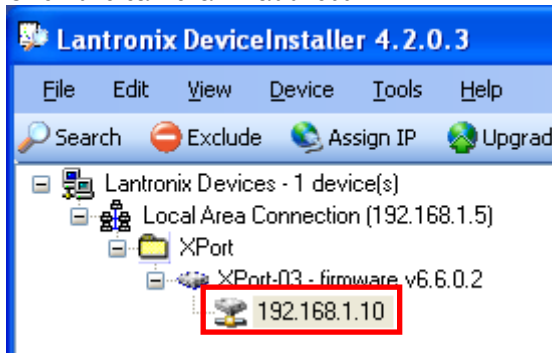
- 2) Click the "Search" to display the current IP address of the camera.



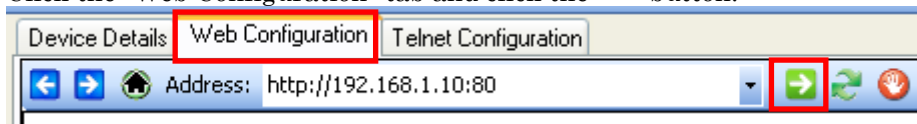
The right pane will show the current IP address of the connected camera.

Type	Name	Group	IP Address	Hardware Address	Status
XPort-03			192.168.1.10	00-20-4A-C9-7A-9D	Online

- 3) Click the camera IP address

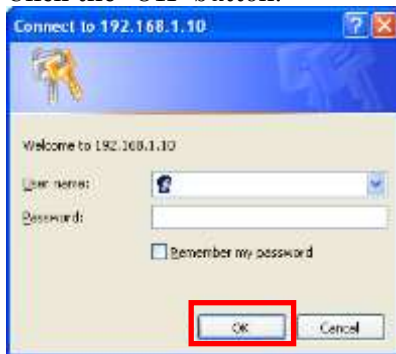


- 4) Click the "Web Configuration" tab and click the "->" button.

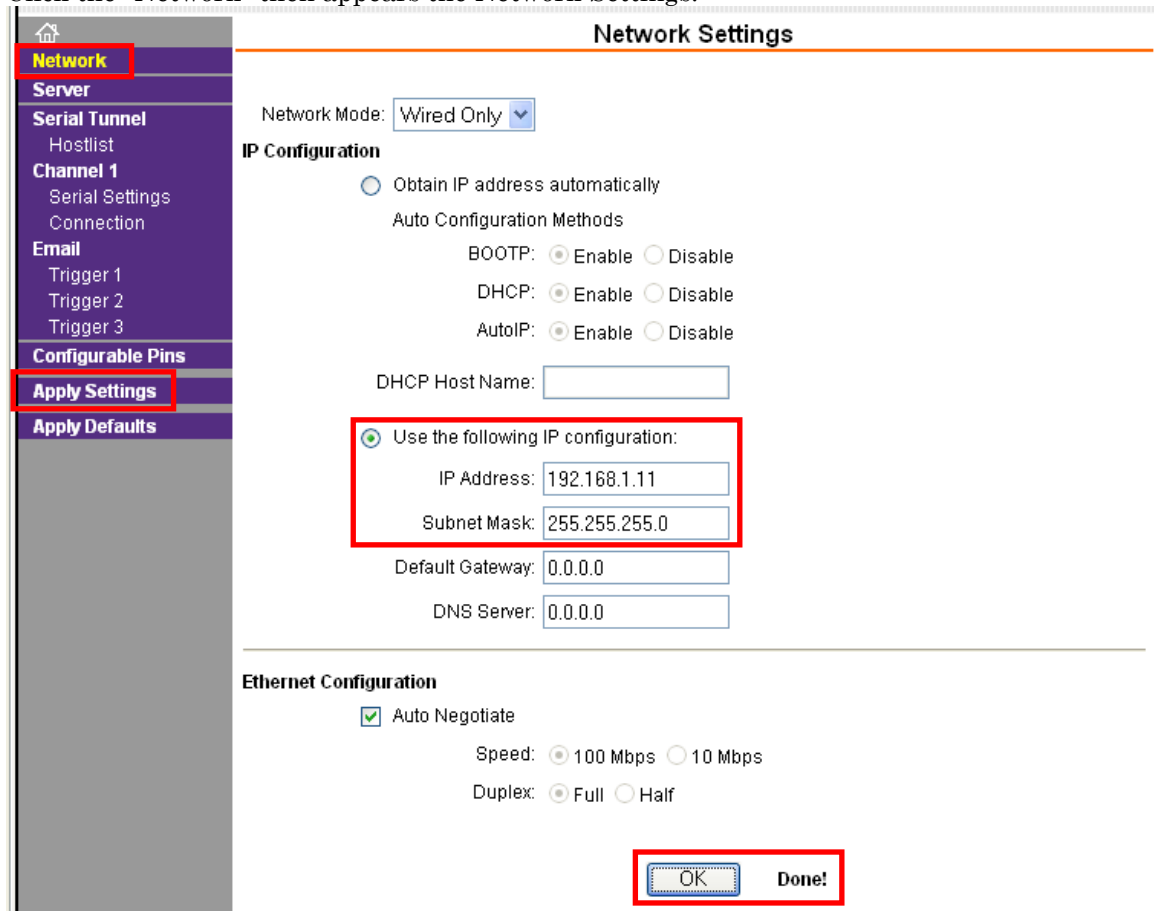


# Network Settings

5) Click the “OK” button.



6) Click the “Network” then appears the Network Settings.



7) Click the “Use the following IP configuration” and input the desired “IP Address” and the “Subnet Mask”.

8) Click the “OK” button and click the “Apply Settings”.

# Network Settings

9) Wait until the message in the figure below appears.

Firmware Version: V6.6.0.2  
MAC Address: 00-20-4A-C9-7A-9D

Please wait while the configuration is saved...  
The unit will reboot in order for the settings to be applied.

Network Connectivity settings have been modified.  
Please point the browser to the new IP address with the correct HTTP Server Port  
in order to continue using the web based configuration manager.

10) Click the "Search" to confirm new IP address.

Lantronix DeviceInstaller 4.2.0.3

File Edit View Device Tools Help

Search Exclude Assign IP

Lantronix Devices - 1 device(s)

Local Area Connection (192.168.1.5)

XPort

The right pane will show the new IP address.

Type	Name	Group	IP Address	Hardware Address	Status
XPort-03			192.168.1.11	00-20-4A-C9-7A-9D	Online



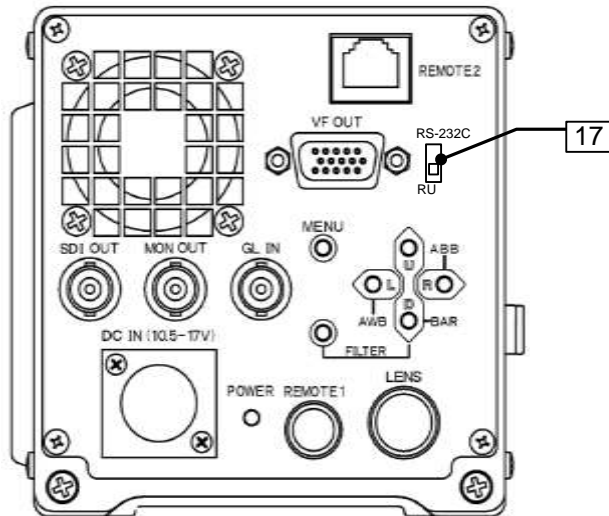
# Serial communication by RS-232C interface

To control the camera by RS-232C interface, set the Rear Panel **17** switch.

For connection with a personal computer, set the Rear Panel **17** switch to the **RS-232C** position.

For connection with a remote control unit (ex.RU-1000VR), set the Rear Panel **17** switch to the **RU** position.

The factory shipment setting is the **RU** position.



# Function menu

## 1. Operation and menu screen

The function menu screen show up by pressing the MENU button. The menu describes the camera functions and structure with multiple pages. First page of structure is named TOP MENU. This TOP MENU screen is appeared (ON) and disappeared (OFF) by pressing the MENU button.

### TOP MENU

Top menu has the major camera function items and the selection cursor in the screen which cursor can be moved by the U or D button. The cursor is located on the left side of the first line item in TOP MENU right after open it.

Move down the cursor to the major item with the U or D button and press the R button, then the screen change to MAIN MENU.

```
TOP MENU
■ COLOR      :>
  DETAIL     :>
  MAINTENANCE:>
  FILE       :>
  VF         :>
```

### MAIN MENU

MAIN MENU is categorized into five for each camera operation and grouping to each control items as possible which individual item has marker ► on right side of it.

This indicate additional menu screen behind of it which is named to SUB MENU.

<pre>■ COLOR MENU MASTER GAIN:&gt; WHITE GAIN:&gt; BLACK/FLARE:&gt; GAMMA      :&gt;&gt;&gt;&gt; KNEE/CLIP  :&gt;&gt;&gt; MASKING    :&gt;&gt;&gt;&gt;</pre>	<pre>■ DETAIL MENU      SCENE 0 DETAIL             :&gt;&gt; SKIN DTL          :&gt;&gt; HIGH CHROMA       :&gt;</pre>	<pre>■ MAINTENANCE MENU AUTO SETUP       :&gt; WHT SHADING     :&gt; AUTO IRIS        :&gt; SHUTTER          :&gt; SYSTEM           :&gt; CHECK            :&gt;&gt; RLAC             :&gt;</pre>
<pre>■ FILE MENU SCENE FILE  &gt; LENS FILE  &gt;</pre>	<pre>■ VF MENU VF OUT SEL  :COLOR VF DETAIL   :&gt; VF MARKER   :&gt; SIDE PANEL  :&gt; VF DISPLAY  :&gt; VF ZEBRA    :&gt; FOCUS IND   :&gt;</pre>	

### SUB MENU

Move the cursor with the U or D button.

First line of sub menu has the cursor and ◀ or ▶ marker.

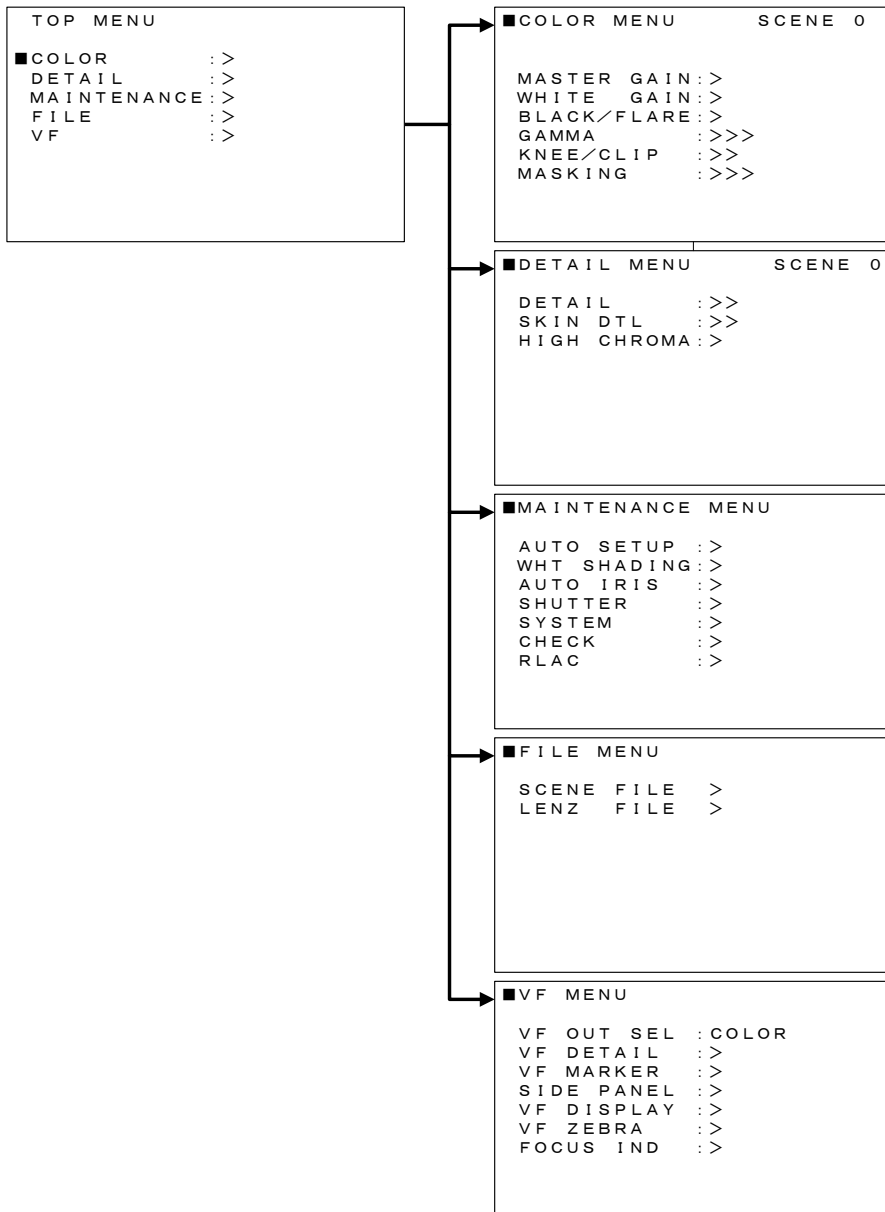
Marker ▶ indicate additional sub menu. Press the R button and next sub menu screen show up.

Marker ◀ indicate no additional sub menu behind. This indicate, can go back to main menu with pressing the L button.

Some control items in sub menu has ▶ marker on right side of it. This marker indicate daughter menu screen behind. Move the cursor with the U or D button to these items and press the R button then open the daughter menu screen.

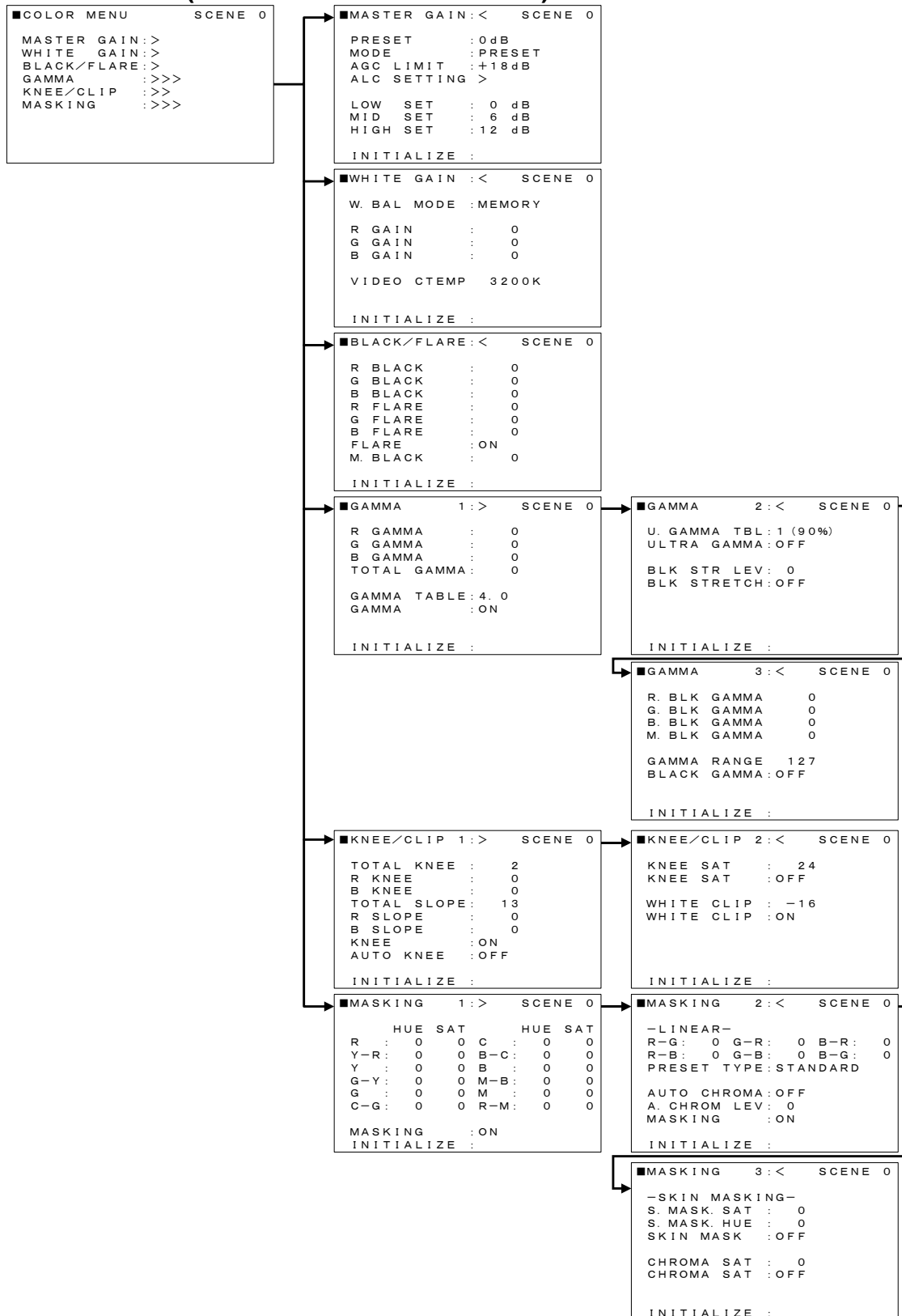
# Function menu

## 2. TOP MENU and MAIN MENU



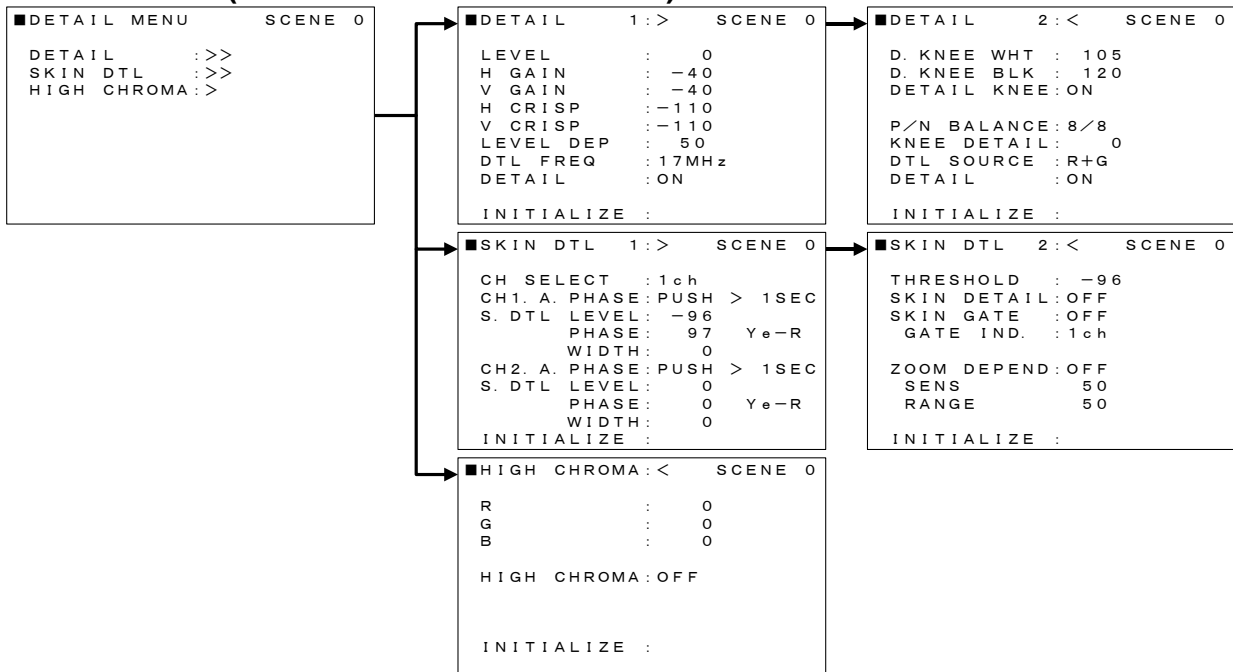
# Function menu

## 3. COLOR MENU (MAIN MENU and SUB MENU)



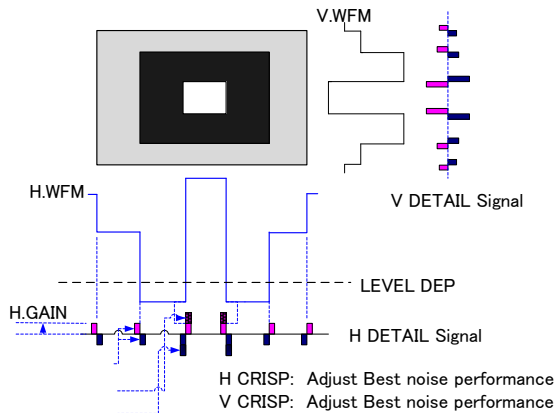
# Function menu

## 4. DETAIL MENU (MAIN MENU and SUB MENU)



### Note

Typical picture for explaining of DTL functions



### Note

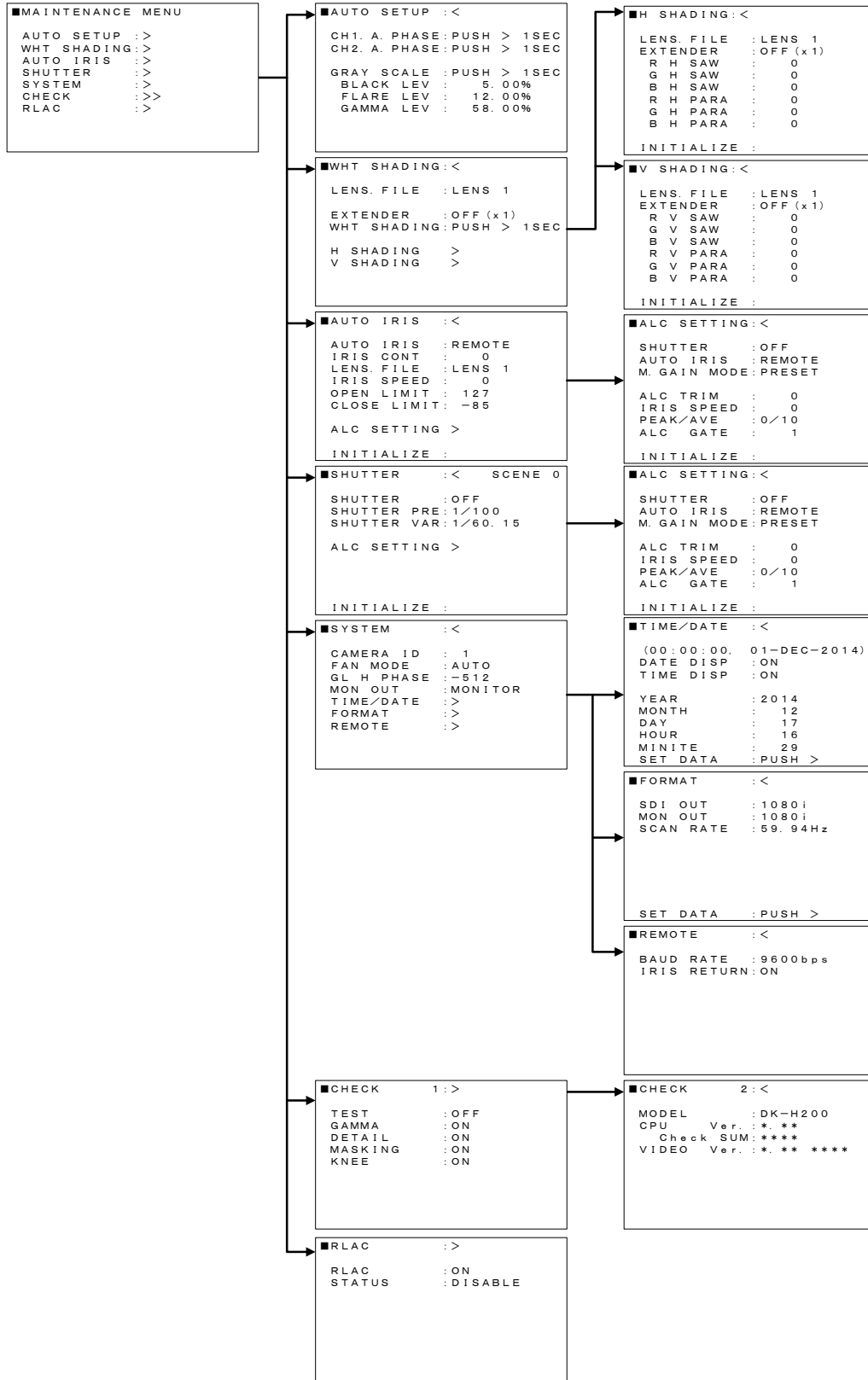
CH1/CH2 A.PHASE adjustment



When selected CH1 or CH2 A.PHASE item, Skin tone DTL phase auto marker is displayed in the center of the picture. Move the camera shooting position where you want to set Skin tone DTL and push function key one second. Automatically detect video phase in the marker area and setting to two persons of different complexions on the same scene.

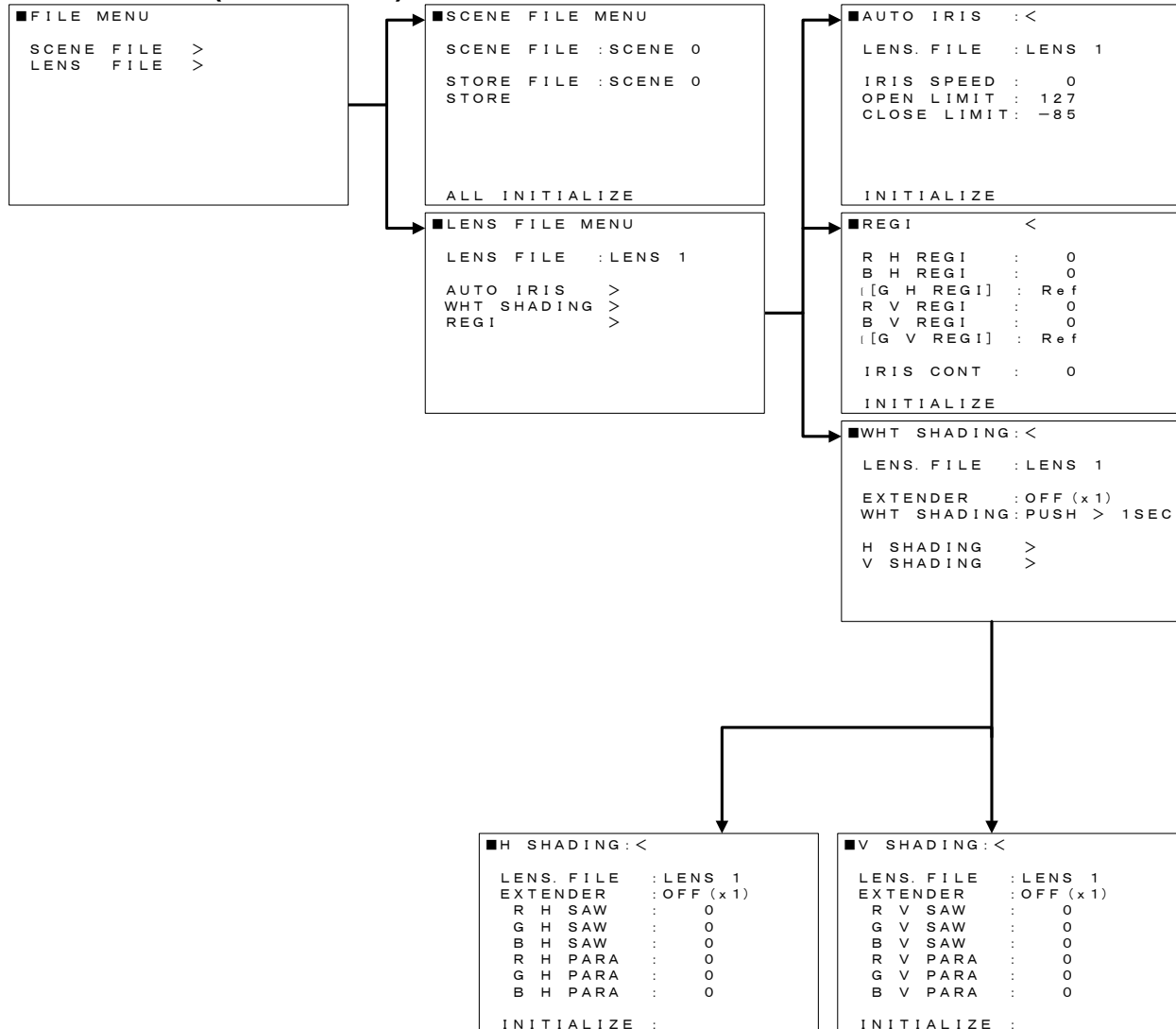
# Function menu

## 5. MAINTENANCE MENU (MAIN MENU and SUB MENU)



# Function menu

## 6. FILE MENU (MAIN MENU)



# Function menu

## 7. VF MENU (MAIN MENU and SUB MENU)

```

■VF MENU
VF OUT SEL :COLOR
VF DETAIL  :>
VF MARKER  :>
SIDE PANEL :>
VF DISPLAY :>
VF ZEBRA   :>
FOCUS IND  :>
    
```

```

■VF DETAIL  :<
VF DETAIL   :ON
DTL LEVEL   : 0
CRISP       :-100
    
```

```

■VF MARKER  :<
USER SEL    :USER 1
MARKER1 SEL:>
MARKER2 SEL:>
CROSS SET   :>
BOX1 SET    :>
BOX2 SET    :>
OTHER SET   :>

MARKER1 SW  :ON
MARKER2 SW  :OFF
    
```

```

■SIDE PANEL :<
SIDE PANEL  :OFF
CONTRAST    :1
BRIGHT     :1
    
```

```

■VF DISPLAY :<
EXTENDER    :OFF
SHUTTER     :OFF
ZOOM        :OFF
FOCUS       :OFF
FILTER      :ON
WHITE BAL   :ON
M. GAIN     :OFF
IRIS        :ON
    
```

```

■VF ZEBRA   :<
ZEBRA TYPE1:OFF
LEVEL       :>100%

ZEBRA TYPE2:OFF
HIGH LEVEL : 75%
LOW LEVEL  : 60%
    
```

```

■FOCUS IND  :<
INDICATOR   :OFF
MARKER      :OFF
PEAK HOLD   :OFF
    
```

```

■MARKER1 SEL :<USER 1
CENTER MARK :ON
SAFETY MARK :ON
SIDE 4:3 :OFF
13:9 :OFF
14:9 :OFF
15:9 :OFF
CROSS :OFF
BOX1 :OFF
BOX2 :OFF
    
```

```

■MARKER2 SEL :<USER 1
CENTER MARK :OFF
SAFETY MARK :OFF
SIDE 4:3 :OFF
13:9 :OFF
14:9 :OFF
15:9 :OFF
CROSS :OFF
BOX1 :ON
BOX2 :ON
    
```

```

■CROSS SET :<USER 1
H POSITION : 5
V POSITION : 5
    
```

```

■BOX1 SET :<USER 1
H POSITION : 30
V POSITION : 25
H SIZE : 15
V SIZE : 10
    
```

```

■BOX2 SET :<USER 1
H POSITION : 222
V POSITION : 228
H SIZE : 15
V SIZE : 10
    
```

```

■OTHER SET :<USER 1
CENTER MARK :TYPE1
SAFETY MARK :TYPE1
SAFETY AREA :90.0%
MARKER LEV :100
    
```



# Function menu

## 8. Each menu item and description

### 8.1 COLOR main menu

```

■COLOR MENU          SCENE 0
MASTER GAIN:>
WHITE GAIN:>
BLACK/FLARE:>
GAMMA :>>>>
KNEE/CLIP :>>
MASKING :>>>
    
```

Item	Description
MASTER GAIN	Change to MASTER GAIN menu.
WHITE GAIN	Change to WHITE GAIN menu.
BLACK/FLARE	Change to BLACK/FLARE menu.
GAMMA	Change to GAMMA menu.
KNEE/CLIP	Change to KNEE/CLIP menu.
MASKING	Change to MASKING menu.

### 8.1.1 MASTER GAIN sub menu (COLOR MENU)

```

■MASTER GAIN:<     SCENE 0
PRESET      : 0dB
MODE        : PRESET
AGC LIMIT   : +18dB
ALC SETTING >

LOW SET     : 0 dB
MID SET     : 6 dB
HIGH SET    : 12 dB

INITIALIZE :
    
```

Item	Setting	Initial setting	Description
PRESET	-3dB to 36dB	0dB	
MODE	PRESET, AGC	PRESET	
AGC LIMIT	+1dB to +36dB	+18dB	
LOW SET	-3dB, 0dB	0dB	
MID SET	0dB to +21dB	+6dB	
HIGH SET	+3dB to +36dB	+12dB	
INITIALIZE			Press the L+R buttons to initialize menu items.

### 8.1.2 WHITE GAIN sub menu (COLOR MENU)

```

■WHITE GAIN:<     SCENE 0
W. BAL MODE : MEMORY

R GAIN      : 0
G GAIN      : 0
B GAIN      : 0

VIDEO CTEMP 3200K

INITIALIZE :
    
```

Item	Setting	Initial setting	Description
W.BAL MODE	PRESET, MEMORY, AUTO	MEMORY	
R GAIN	-128 to 127	0	Adjust Red Gain.
G GAIN	-128 to 127	0	Adjust Green Gain.
B GAIN	-128 to 127	0	Adjust Blue Gain.
VIDEO CTEMP			Display Color Temperature
INITIALIZE			Press the L+R buttons to initialize menu items.

#### Note

When W.BAL MODE is AUTO, the function below does not operate.

R GAIN, G GAIN, B GAIN, ECC Filter

### 8.1.3 BLACK/FLARE sub menu (COLOR MENU)

```

■BLACK/FLARE:<     SCENE 0
R BLACK     : 0
G BLACK     : 0
B BLACK     : 0
R FLARE     : 0
G FLARE     : 0
B FLARE     : 0
FLARE       : ON
M. BLACK    : 0

INITIALIZE :
    
```

Item	Setting	Initial setting	Description
R BLACK	-128 to 127	0	Adjust Red black level.
G BLACK	-128 to 127	0	Adjust Green black level.
B BLACK	-128 to 127	0	Adjust Blue black level.
R FLARE	-128 to 127	0	Adjust Red Flare level.
G FLARE	-128 to 127	0	Adjust Green Flare level.
B FLARE	-128 to 127	0	Adjust Blue Flare level.
FLARE	ON,OFF	ON	FLARE ON and OFF.
M.BLACK	-128 to 127	0	Adjust Master black function.
INITIALIZE			Press the L+R buttons to initialize menu items.

# Function menu

## 8.1.4 GAMMA 1 sub menu (COLOR MENU)

■ GAMMA	1 : >	SCENE 0
R GAMMA	:	0
G GAMMA	:	0
B GAMMA	:	0
TOTAL GAMMA	:	0
GAMMA TABLE	:	4. 0
GAMMA	:	ON
INITIALIZE	:	

Item	Setting	Initial setting	Description
R GAMMA	-128 to 127	0	Adjust Red Gamma
G GAMMA	-128 to 127	0	Adjust Green Gamma
B GAMMA	-128 to 127	0	Adjust Blue Gamma
TOTAL GAMMA	-128 to 127	0	Adjust Total Gamma
GAMMA TABLE	3.0 to 8.0	4.0	Select gamma curve value from table
GAMMA	ON, OFF	ON	GAMMA ON and OFF
INITIALIZE			Press the L+R buttons to initialize menu items.

## 8.1.5 GAMMA 2 sub menu (COLOR MENU)

■ GAMMA	2 : <	SCENE 0
U. GAMMA TBL	:	1 (90%)
ULTRA GAMMA	:	OFF
BLK STR LEV	:	0
BLK STRETCH	:	OFF
INITIALIZE	:	

Item	Setting	Initial setting	Description
U. GAMMA TBL	1(90%), (85%), 3(80%), (75%), 5(70%), 6(65%), 7(50%)	1(90%)	Select ultra gamma curve
ULTRA GAMMA	ON, OFF	OFF	ultra gamma ON and OFF
BLK STR LEV	0 to 11	0	Select gamma curve value from table
BLK STRETCH	ON, OFF	OFF	Black Stretch ON and OFF
INITIALIZE			Press the L+R buttons to initialize menu items.

## 8.1.6 GAMMA 3 sub menu (COLOR MENU)

■ GAMMA	3 : <	SCENE 0
R. BLK GAMMA	:	0
G. BLK GAMMA	:	0
B. BLK GAMMA	:	0
M. BLK GAMMA	:	0
GAMMA RANGE	:	1 2 7
BLACK GAMMA	:	OFF
INITIALIZE	:	

Item	Setting	Initial setting	Description
R. BLK GAMMA	-128 to 127	0	Adjust R. BLK GAMMA
G. BLK GAMMA	-128 to 127	0	Adjust G. BLK GAMMA
B. BLK GAMMA	-128 to 127	0	Adjust B. BLK GAMMA
M. BLK GAMMA	-128 to 127	0	Adjust each ch. BLK GAMMA
GAMMA RANGE	-128 ~ 127	127	Select range of BLK GAMMA
B BLK GAMMA	ON, OFF	OFF	BLK GAMMA ON and OFF
INITIALIZE			Press the L+R buttons to initialize menu items.

### Note

Create high quality of picture, user can choose fixed gamma curve from table and also Black Stretch (BLK STR) function bring out detail from dark portion of the picture without affecting middle level keeping with real black level.

# Function menu

## 8.1.7 KNEE/CLIP 1 sub menu (COLOR MENU)

```

■KNEE/CLIP 1 :> SCENE 0
TOTAL KNEE : 2
R KNEE : 0
B KNEE : 0
TOTAL SLOPE : 13
R SLOPE : 0
B SLOPE : 0
KNEE : ON
AUTO KNEE : OFF

INITIALIZE :
    
```

Item	Setting	Initial setting	Description
TOTAL KNEE	-128 to 127	2	Adjust Total Knee level
R KNEE	-128 to 127	0	Adjust R individual channel knee level
B KNEE	-128 to 127	0	Adjust B individual channel knee level
TOTAL SLOPE	-128 to 127	13	Adjust Total slope level
R SLOPE	-128 to 127	0	Adjust R individual channel slope level
B SLOPE	-128 to 127	0	Adjust B individual channel slope level
KNEE	ON,OFF	ON	Knee function ON and OFF
AUTO KNEE	ON,OFF	OFF	Auto Knee function ON and OFF
INITIALIZE			Press the L+R buttons to initialize menu items.

## 8.1.8 KNEE/CLIP 2 sub menu (COLOR MENU)

```

■KNEE/CLIP 2 :< SCENE 0
KNEE SAT : 24
KNEE SAT : OFF

WHITE CLIP : -16
WHITE CLIP : ON

INITIALIZE :
    
```

Item	Setting	Initial setting	Description
KNEE SAT	-128 to 127	24	Adjust Knee Saturation.
KNEE SAT	ON,OFF	OFF	Knee Saturation function ON And OFF
WHITE CLIP	-128 to 127	0	Adjust White Clip level
WHITE CLIP	ON,OFF	ON	White Clip function ON and OFF
INITIALIZE			Press the L+R buttons to initialize menu items.

### Note

Very bright portion of high light scene is reduced color saturation and changed hue. This Knee Saturation compensates this effect and makes more natural color reproduction.

# Function menu

## 8.1.9 MASKING 1 sub menu (COLOR MENU)

```

■MASKING 1 : > SCENE 0
  HUE SAT HUE SAT
R : 0 0 C : 0 0
Y-R : 0 0 B-C : 0 0
Y : 0 0 B : 0 0
G-Y : 0 0 M-B : 0 0
G : 0 0 M : 0 0
C-G : 0 0 R-M : 0 0

MASKING : ON
INITIALIZE :
    
```

Item	Setting	Initial setting	Description
R HUE, SAT	-64 to +63	0	Adjust Red hue, saturation
Y-R HUE, SAT	-64 to +63	0	Adjust Yellow - Red hue, saturation
Y HUE, SAT	-64 to +63	0	Adjust Yellow hue, saturation
G-Y HUE, SAT	-64 to +63	0	Adjust Green - Yellow hue, saturation
G HUE, SAT	-64 to +63	0	Adjust Green hue, saturation
C-G HUE, SAT	-64 to +63	0	Adjust Cyan - Green hue, saturation
C HUE, SAT	-64 to +63	0	Adjust Cyan hue, saturation
B-C HUE, SAT	-64 to +63	0	Adjust Blue - Cyan hue, saturation
B HUE, SAT	-64 to +63	0	Adjust Blue saturation
M-B HUE, SAT	-64 to +63	0	Adjust Magenta - Blue hue, saturation
M HUE, SAT	-64 to +63	0	Adjust Magenta hue, saturation
R-M HUE, SAT	-64 to +63	0	Adjust Red - Magenta hue, saturation
MASKING	ON,OFF	ON	Masking ON and OFF
INITIALIZE			Press the L+R buttons to initialize menu items.

## 8.1.10 MASKING 2 sub menu (COLOR MENU)

```

■MASKING 2 : < SCENE 0
-LINEAR-
R-G : 0 G-R : 0 B-R : 0
R-B : 0 G-B : 0 B-G : 0
PRESET TYPE : STANDARD

AUTO CHROMA : OFF
A. CHROM LEV : 0
MASKING : ON

INITIALIZE
    
```

Item	Setting	Initial setting	Description
LINEAR R-G	-64 to +63	0	Adjust liner matrix R-G parameter offset
LINEAR R-B	-64 to +63	0	Adjust liner matrix R-B parameter offset
LINEAR G-R	-64 to +63	0	Adjust liner matrix G-R parameter offset
LINEAR G-B	-64 to +63	0	Adjust liner matrix G-B parameter offset
LINEAR B-R	-64 to +63	0	Adjust liner matrix B-R parameter offset
LINEAR B-G	-64 to +63	0	Adjust liner matrix B-G parameter offset
PRESET TYPE	STANDARD, ITU-709, SMPTE-240M, SMPTE-WIDE, NTSC, EBU, OFF	STANDARD	
CHROMA SAT	-64 to +63	0	Adjust liner matrix SAT parameter offset
CHROMA SAT	ON,OFF	OFF	Adjust liner matrix SAT parameter
MASKING	ON,OFF	ON	Masking ON and OFF
INITIALIZE			Press the L+R buttons to initialize menu items.

## 8.1.11 MASKING 3 sub menu (COLOR MENU)

```

■MASKING 3 : < SCENE 0
-SKIN MASKING-
S. MASK. SAT : 0
S. MASK. HUE : 0
SKIN MASK : OFF

CHROMA SAT : 0
CHROMA SAT : OFF

INITIALIZE :
    
```

Item	Setting	Initial setting	Description
S.MASK.SAT	-64 ~ +63	0	Adjust color saturation of the complexion in the scene.
S.MASK.HUE	-64 ~ +63	0	Adjust hue of the complexion in the scene.
SKIN MASK	ON,OFF	OFF	Skin tone masking ON and OFF
CHROMA SAT	-64 ~ +63	0	Adjust Chroma Saturation
CHROMA SAT	ON,OFF	OFF	Chroma Saturation ON and OFF
INITIALIZE			Press the L+R buttons to initialize menu items.

# Function menu

## 8.2 DETAIL main menu

```

■DETAIL MENU          SCENE 0

DETAIL          :>>
SKIN DTL       :>>
HIGH CHROMA    :>
    
```

Item	Setting	Initial setting	Description
DETAIL	—	—	Change screen to DETAIL menu.
SKIN DTL	—	—	Change screen to SKIN DTL menu.
HIGH CHROMA	—	—	Change screen to HIGH CHROMA menu.

### 8.2.1 DETAIL 1 sub menu (DETAIL MENU)

```

■DETAIL 1 :>          SCENE 0

LEVEL          : 0
H GAIN         : -40
V GAIN         : -40
H CRISP        : -110
V CRISP        : -110
LEVEL DEP     : 50
DTL FREQ      : 17MHz
DETAIL        : ON

INITIALIZE :
    
```

Item	Setting	Initial setting	Description
LEVEL	-128 to +127	0	Adjust Detail level
H GAIN	-128 to +127	-40	Adjust H. detail gain
V GAIN	-128 to +127	-40	Adjust V. detail gain
H CRISP	-128 to +127	-110	Adjust H detail crisp
V CRISP	-128 to +127	-110	Adjust V detail crisp
LEVEL DEP	-128 to +127	-50	Adjust level dependent of detail
DTL FREQ	13, 14, 15, 16, 17, 18, 19	17MHz	Set boost frequency of detail
DETAIL	ON,OFF	ON	Detail On and OFF
INITIALIZE	—	—	Press the L+R buttons to initialize menu items.

### 8.2.2 DETAIL 2 sub menu (DETAIL MENU)

```

■DETAIL 2 :<          SCENE 0

D. KNEE WHT   : 105
D. KNEE BLK   : 120
DETAIL KNEE   : ON

P/N BALANCE   : 8/8
KNEE DETAIL   : 0
DTL SOURCE    : R+G
DETAIL        : ON

INITIALIZE :
    
```

Item	Setting	Initial setting	Description
D.KNEE WHT	-128 to +127	105	Positive detail knee adjust
D.KNEE BLK	-128 to +127	120	Negative detail knee adjust
DETAIL KNEE	ON, OFF	ON	DETAIL KNEE ON and OFF
P/N BALANCE	4/8, 5/8, 6/8, 8/8, 8/6, 8/5, 8/4	8/8	Balance adjustment for POS/NEG detail
KNEE DETAIL	-128 to +127	0	Adjust knee detail slope
DTL SOURCE	G,R+G,R+G+B	R+G	Set source signal for detail
DETAIL	OFF, ON	ON	Set On and OFF detail
INITIALIZE	—	—	Press the L+R buttons to initialize menu items.

# Function menu

## 8.2.3 SKIN DTL 1 sub menu (DETAIL MENU)

```

■ SKIN DTL 1 : > SCENE 0
CH SELECT : 1ch
CH1. A. PHASE : PUSH > 1 SEC
S. DTL LEVEL : -96
      PHASE : 97 Ye-R
      WIDTH : 0
CH2. A. PHASE : PUSH > 1 SEC
S. DTL LEVEL : 0
      PHASE : 0 Ye-R
      WIDTH : 0
INITIALIZE :
    
```

Item	Setting	Initial setting	Description	
CH SELECT	1ch, 2ch, 1ch+2ch	1ch	CH selection for skin tone detail	
CH1 A.PHASE	—	—	Set CH1 skin tone detail phase *1	
CH1 S.DTL	LEVEL	-128 to +127	-128	Adjust CH1 skin tone detail level
	PHASE	-128 to +127 R-Mg, Mg-B, B-Cy, Cy-G, G-Ye, Ye-R	97 Ye-R	Set & adjust CH1 skin tone detail phase.
	WIDTH	-128 to +127	0	Range setting of the CH1 skin tone phase
CH2 A.PHASE	—	—	Set CH2 skin tone detail phase. *1	
CH2 S.DTL	LEVEL	-128 to +127	0	Adjust CH2 skin tone detail level
	PHASE	-128 to +127 R-Mg, Mg-B, B-Cy, Cy-G, G-Ye, Ye-R	0 Ye-R	Set & adjust CH2 skin tone detail phase.
	WIDTH	-128 to +127	0	Range setting of the CH2 skin tone phase
INITIALIZE	—	—	Press the L+R buttons to initialize menu items.	

\*1: There is same functions in the AUTO SETUP menu and can be accessed from either menu. Refer to page 32.

## 8.2.4 SKIN DTL 2 sub menu (DETAIL MENU)

```

■ SKIN DTL 2 : < SCENE 0
THRESHOLD : -96
SKIN DETAIL : OFF
SKIN GATE : OFF
GATE IND. : 1ch
ZOOM DEPEND : OFF
SENS : 50
RANGE : 50
INITIALIZE :
    
```

Item	Setting	Initial setting	Description
THRESHOLD	-128 to +127	-96	Threshold level for Skin tone Detail set
SKIN DETAIL	ON, OFF	OFF	Skin tone Detail ON and OFF
SKIN GATE	ON, OFF	OFF	Display ON and OFF for Skin tone Detail gate
GATE IND.	1ch, 2ch	1ch	Set skin tone Detail gate
ZOOM DEPEND	ON, OFF	OFF	Adjust Skin tone Detail Zoom Dependent ON and OFF
SENS	0~99	50	Adjust Skin tone Detail Sens
RANGE	0~99	50	Adjust Skin tone Detail Range
INITIALIZE	—	—	Press the L+R buttons to initialize menu items.

# Function menu

## 8.2.5 HIGH CHROMA sub menu (DETAIL MENU)

■ HIGH CHROMA : <	SCENE 0
R	: 0
G	: 0
B	: 0
HIGH CHROMA : OFF	
INITIALIZE :	

Item	Setting	Initial setting	Description
R	-128 to +127	0	Adjust detail level in high chrominance Red portion in the scene.
G	-128 to +127	0	Adjust detail level in high chrominance Green portion in the scene.
B	-128 to +127	0	Adjust detail level in high chrominance Blue portion in the scene.
HIGH CHROMA	ON, OFF	OFF	High Chroma detail ON and OFF
INITIALIZE	—	—	Press the L+R buttons to initialize menu items.

# Function menu

## 8.3 MAINTENANCE main menu

```

■ MAINTENANCE MENU
AUTO SETUP : >
WHT SHADING : >
AUTO IRIS : >
SHUTTER : >
SYSTEM : >
CHECK : >>
    
```

Item	Description
AUTO SETUP	Change screen to AUTO SETUP menu.
WHT SHADING	Change screen to WHT SHADING menu.
AUTO IRIS	Change screen to AUTO IRIS menu.
SHUTTER	Change screen to SHUTTER menu.
SYSTEM	Change screen to SYSTEM menu.
CHECK	Change screen to CHECK menu.

### 8.3.1 AUTO SETUP sub menu (MAINTENANCE MENU)

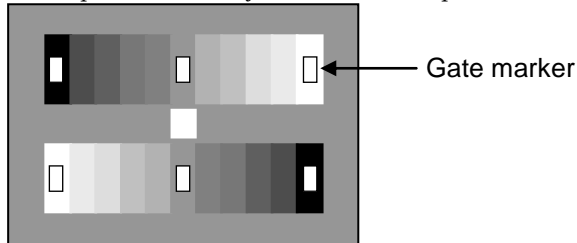
```

■ AUTO SETUP : <
CH1. A. PHASE : PUSH > 1 SEC
CH2. A. PHASE : PUSH > 1 SEC
GRAY SCALE : PUSH > 1 SEC
BLACK LEV : 5.00%
FLARE LEV : 12.00%
GAMMA LEV : 58.00%
    
```

Item	Setting	Initial setting	Description
CH1.A.PHASE			Skin tone Auto CH1 phase set. *1
CH2.A.PHASE			Skin tone Auto CH2 phase set. *1
GRAY SCALE			Gray scale Auto set up *2
BLACK LEV	0.0 to 12.35%	5.0%	Black level set (0.05% step)
FLARE LEV	0.0 to 24.70%	12.0%	Flare level set (0.1% step)
GAMMA LEV	42.20 to 67.70%	58.0%	Gamma level set (0.1% step)

\*1: Displayed gate marker in enter of the picture for Skin tone detail Auto set up. Refer to page 24.

\*2: Displayed 6 gate markers in the picture for Gray scale Auto set up.



Position the gray scale chart to 6 gate markers



# Function menu

## 8.3.2 WHT SHADING sub menu (MAINTENANCE MENU)

```

■WHT SHADING : <
LENS. FILE   : LENS 1
EXTENDER     : OFF (x1)
WHT SHADING : PUSH > 1 SEC
H SHADING    >
V SHADING    >
    
```

Item	Setting	Initial setting	Description
LENS FILE	LENS1~LENS8	LENS1	Load items in LENS1~LENS8 File
EXTENDER	OFF ** x2 x0.8,	OFF,	Display Lens extender position The extender is X1. The lens cable is not connected. The extender is X2 The extender is X0.8.
WHT SHADING			Set Auto WHT SHADING
H SHADING			Display H SHADING menu
V SHADING			Display V SHADING menu

## 8.3.2.1 WHT SHADING sub menu (MAINTENANCE MENU)

```

■H SHADING : <
LENS. FILE   : LENS 1
EXTENDER     : OFF (x1)
R H SAW      : 0
G H SAW      : 0
B H SAW      : 0
R H PARA     : 0
G H PARA     : 0
B H PARA     : 0
INITIALIZE   :
    
```

Item	Setting	Initial setting	Description
LENS FILE	LENS1~LENS8	LENS1	Load items in LENS1~LENS8 File
EXTENDER	OFF ** x2 x0.8,	OFF,	Display Lens extender position The extender is X1. The lens cable is not connected. The extender is X2. The extender is X0.8.
R H SAW	-128 ~ +127	0	Adjust R H SAW
G H SAW	-128 ~ +127	0	Adjust G H SAW
B H SAW	-128 ~ +127	0	Adjust B H SAW
R H PARA	-128 ~ +127	0	Adjust R H PARA
G H PARA	-128 ~ +127	0	Adjust G H PARA
B H PARA	-128 ~ +127	0	Adjust B H PARA.
INITIALIZE			Press the L+R buttons to initialize menu items.

## 8.3.2.2 WHT SHADING sub menu (MAINTENANCE MENU)

```

■V SHADING : <
LENS. FILE   : LENS 1
EXTENDER     : OFF (x1)
R V SAW      : 0
G V SAW      : 0
B V SAW      : 0
R V PARA     : 0
G V PARA     : 0
B V PARA     : 0
INITIALIZE   :
    
```

Item	Setting	Initial setting	Description
LENS FILE	LENS1~LENS8	LENS1	Load items in LENS1~LENS8 File
EXTENDER	OFF ** x2 x0.8,	OFF,	Display Lens extender position The extender is X1. The lens cable is not connected. The extender is X2. The extender is X0.8.
R V SAW	-128 ~ +127	0	Adjust R V SAW
G V SAW	-128 ~ +127	0	Adjust G V SAW
B V SAW	-128 ~ +127	0	Adjust B V SAW
R V PARA	-128 ~ +127	0	Adjust R V PARA
G V PARA	-128 ~ +127	0	Adjust G V PARA
B V PARA	-128 ~ +127	0	Adjust B V PARA.
INITIALIZE			Press the L+R buttons to initialize menu items.

# Function menu

## 8.3.3 AUTO IRIS sub menu (MAINTENANCE MENU)

```

■AUTO IRIS :<
AUTO IRIS : REMOTE
IRIS CONT : 0
LENS. FILE : LENS 1
IRIS SPEED : 0
OPEN LIMIT : 127
CLOSE LIMIT : -85

ALC SETTING >

INITIALIZE :
    
```

Item	Setting	Initial setting	Description
AUTO IRIS	REMOTE, AUTO	REMOTE	Setting of Iris control mode. *1
IRIS CONT	-128 to 127	0	Control of iris position. *2
LENS FILE	LENS1~LENS8	LENS1	Load items in LENS1~LENS8 File
IRIS SPEED	-128 to 127	0	Speed control of the iris response.
OPEN LIMIT	0 to 127	127	Adjust limiter value for Auto Iris open.
CLOSE LIMIT	-128 to -1	-85	Adjust closing limiter value for Auto Iris.
ALC SETTING			Display ALC SETTING menu
INITIALIZE			Press the L+R buttons to initialize menu items.

\*1: Effect only AUTO selected at the lens side selection switch. If it's selected to MANUAL, drive iris directly.

\*2: This item is disabled in the menu when the remote control unit is available.

## 8.3.3.1 ALC SETTING sub menu (MAINTENANCE MENU)

```

■ALC SETTING:<
SHUTTER : OFF
AUTO IRIS : REMOTE
M. GAIN MODE: PRESET

ALC TRIM : 0
IRIS SPEED : 0
PEAK/AVE : 0/10
ALC GATE : 1

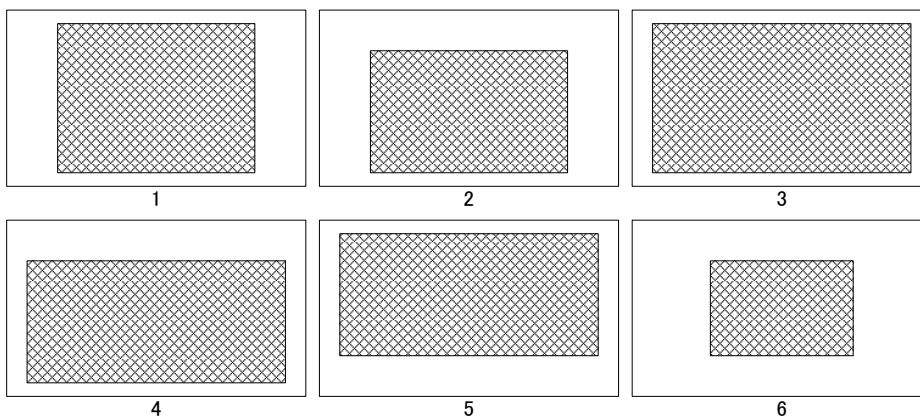
INITIALIZE :
    
```

Item	Setting	Initial setting	Description
SHUTTER	ON, OFF	OFF	SHUTTER ON and PFF
AUTO IRIS	REMOTE, AUTO	AUTO	Setting of Lens Iris control mode. *1
M.GAIN MODE	PRESET, AUTO	PRESET	Setting of M.GAIN MODE
ALC TRIM	-128 to 127	0	Fine adjustment at the auto iris mode. *2
IRIS SPEED	-128 to 127	0	Speed control of the iris response.
PEAK/AVE	0/10, 1/9, 2/8, 3/7, 4/6, 5/5	0/10	Setting of Peak & Average detect for Auto iris.
ALC GATE	1 to 6	1	Setting of Auto Iris gate. *3
INITIALIZE			Press the L+R buttons to initialize menu items.

\*1: Effect only AUTO selected at the lens side selection switch. If it's selected to MANUAL, drive iris directly.

\*2: This item is disabled in the menu when the remote control unit is available.

\*3:



# Function menu

## 8.3.4 SHUTTER sub menu (MAINTENANCE MENU)

```

■ SHUTTER      : <  SCENE 0
SHUTTER       : OFF
SHUTTER PRE   : 1/100
SHUTTER VAR   : 1/60.15

ALC SETTING >

INITIALIZE :
    
```

Item	Setting	Initial setting	Description
SHUTTER	OFF, PRESET, VAR, AES	OFF	
SHUTTER PRE	1/100(59.94i,59.94p,60i,60p) or 1/60(50i,50p), 1/250,1/500, 1/1000, 1/2000, 1/4000, 1/10000,	59.94i,59.94p, 60i,60p 1/100 50i,50p 1/60	
SHUTTER VAR	59.94i,59.94p,60i,60p 1.07s(36dB), 0.53s(30dB), 0.27s(24dB), 0.13s(18dB), 0.07s(12dB), 0.03s(6dB), 1/60.15 ~ 1/9633 50i,50p 1.28s(36dB), 0.64s(30dB), 0.32s(24dB), 0.16s(18dB), 0.08s(12dB), 0.04s(6dB), 1/50.17 ~ 1/11250	59.94i,59.94p, 60i,60p 1/60.15 50i,50p 1/50.17	
ALC SETTING			Display ALC SETTING menu
INITIALIZE			Press the L+R buttons to initialize menu items.

## 8.3.4.1 ALC SETTING sub menu (MAINTENANCE MENU)

```

■ ALC SETTING : <
SHUTTER       : OFF
AUTO IRIS     : REMOTE
M. GAIN MODE  : PRESET

ALC TRIM      : 0
IRIS SPEED    : 0
PEAK/AVE     : 0/10
ALC GATE      : 1

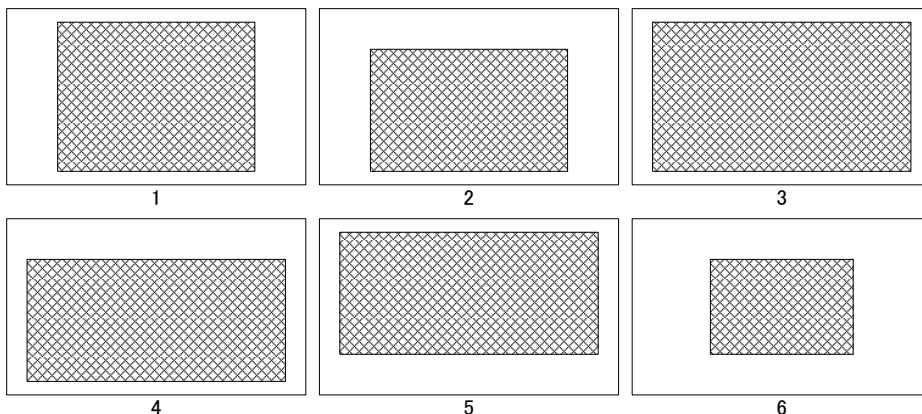
INITIALIZE :
    
```

Item	Setting	Initial setting	Description
SHUTTER	ON, OFF	OFF	SHUTTER ON and OFF.
AUTO IRIS	REMOTE,AUTO O	REMOTE	Setting of Lens Iris Control Mode *1
M.GAIN MODE	PRESET,AUTO	PRESET	Setting of M.GAIN MODE
ALCTRIM	-128 ~ 127	0	Fine adjustment at the auto iris mode. *2
IRIS SPEED	-128 ~ 127	0	Speed control of the iris response.
PEAK/AVE	0/10, 1/9, 2/8, 3/7, 4/6, 5/5	0/10	Setting of Peak & Average detect for Auto iris.
ALC GATE	1 ~ 6	1	Setting of ALC gate. *3
INITIALIZE			Press the L+R buttons to initialize menu items.

\*1: Effect only AUTO selected at the lens side selection switch. If it's selected to MANUAL, drive iris directly.

\*2: This item is disabled in the menu when the remote control unit is available.

\*3:



# Function menu

## 8.3.5 SYSTEM sub menu (MAINTENANCE MENU)

```

■SYSTEM      : <
CAMERA ID   : 1
FAN MODE    : AUTO
GL H PHASE  : -512
MON OUT     : MONITOR
TIME/DATE   : >
FORMAT      : >
REMOTE      : >
    
```

Item	Setting	Initial setting	Description
CAMERA ID	1 to 99	1	Setting of camera number
FAN MODE	OFF,AUTO,LOW,HIGH	AUTO	Setting of FAN mode
GL H PHASE	-512 ~ 511	-512	Adjustment of GL Phase
MON OUT	MONITOR, VF	MONITOR	
TIME/DATE			Display TIME/DATE menu
FORMAT			Display FORMAT menu
REMOTE			Display REMOTE menu

## 8.3.6 TIME/DATE sub menu (MAINTENANCE MENU)

```

■TIME/DATE   : <
(00:00:00, 01-Jan-2000)
DATE DISP    : ON
TIME DISP    : ON

YEAR         : 2000
MONTH        : 1
DAY          : 1
HOUR         : 0
MINUTE       : 0
SET DATA    : PUSH >
    
```

Item	Setting	Initial setting	Description
MODE	DD-MM-YYYY MM-DD-YYYY YYYY-MM-DD	DD-MM-YY	Setting of TIME/DATE mode
DATE DISP	ON, OFF	ON	The date is displayed at the colorbars.
TIME DISP	ON, OFF	ON	The time is displayed at the colorbars.
YEAR	2000 to 2099	-	Not affected by all initialize.
MONTH	1 to 12	-	Not affected by all initialize.
DAY	1 to 31	-	Not affected by all initialize.
HOUR	0 to 23	-	Not affected by all initialize.
MINUTE	0 to 59	-	Not affected by all initialize.
SET DATA			Press the R button to activate the time and date setting

## 8.3.7 FORMAT sub menu (MAINTENANCE MENU)

```

■FORMAT      : <
SDI OUT     : 1080i
MON OUT     : 1080i
SCAN RATE   : 59.94Hz

SET DATA    : PUSH >
    
```

Item	Setting	Initial setting	Description
SDI OUT	1080i,1080p,720p	1080i	
MON OUT	1080i,1080p,720p	1080i	
SCAN RATE	59.94Hz, 50Hz,60Hz	59.94Hz	
SET DATA			Press the R button to set output format.

## 8.3.8 REMOTE sub menu (MAINTENANCE MENU)

```

■REMOTE      : <
BAUD RATE   : 9600bps
IRIS RETURN : ON
    
```

Item	Setting	Initial setting	Description
BAUD RATE	9600bps, 19200bps	9600bps	
IRIS RETURN	OFF, ON	ON	

# Function menu

## 8.3.9 CHECK 1 sub menu (MAINTENANCE MENU)

```

■CHECK          1 : >
TEST           : OFF
GAMMA          : ON
DETAIL         : ON
MASKING        : ON
KNEE           : ON
    
```

Item	Setting	Initial setting	Description
TEST	OFF,ON	OFF	TEST signal ON and OFF
GAMMA	OFF,ON	ON	GAMMA function ON and OFF
DETAIL	OFF,ON	ON	DETAIL function ON and OFF
MASKING	OFF,ON	ON	MASKING function ON and OFF
KNEE	OFF,ON	ON	KNEE function ON and OFF

## 8.3.10 CHECK 2 sub menu (MAINTENANCE MENU)

```

■CHECK          2 : <
MODEL          : DK-H200
CPU Ver.       : *. **
Check SUM     : ****
VIDEO Ver.    : *. ** ****
    
```

Item	Description
MODEL	Display the camera model.
CPU Ver.	Display the firmware version of CPU.
Check SUM	Display the checksum of the CPU firmware.
VIDEO Ver.	Display the firmware version of VIDEO FPGA.

## 8.3.8 RLAC menu (MAINTENANCE MENU)

```

■RLAC          : >
RLAC           : ON
STATUS         : DISABLE
    
```

Item	Setting	Initial setting	Description
RLAC	OFF,ON	OFF	RLAC ON and OFF.
STATUS	DISABLE , ENABLE , READING	—	Display the collective state of the correction data of the chromatic aberration.

# Function menu

## 8.4 FILE main menu

```

■ FILE MENU
SCENE FILE >
LENS FILE >
    
```

Item	Setting	Initial setting	Description
SCENE FILE			Display SCENE FILE menu.
LENS FILE			Display LENS FILE menu.

### 8.4.1 SCNE FILE sub menu (FILE MENU)

```

■ SCENE FILE MENU
SCENE FILE : SCENE 0
STORE FILE : SCENE 0
STORE
ALL INITIALIZE
    
```

Item	Setting	Initial setting	Description
SCENE FILE	0 ~ 8, PRESET	0	Selection of SCENE FILE
STORE FILE	0 ~ 8	1	Setting of scene file memory
STORE			Store scene file data to memory
ALL INITIALIZE			Press the L+R buttons to initialize scene file data

### 8.4.2 LENS sub menu (FILE MENU)

```

■ LENS FILE MENU
LENS FILE : LENS 1
AUTO IRIS >
WHT SHADING >
REGI >
    
```

Item	Setting	Initial setting	Description
LENS FILE	LENS1~LENS8	LENS1	Load items in LENS1~LENS8 File.
AUTO IRIS			Display AUTO IRIS menu. .
REGI			Display REGI menu.
WHT SHADING			Display WHT SHADING menu.

### 8.4.2.1 AUTO IRIS sub menu (FILE MENU)

```

■ AUTO IRIS : <
LENS. FILE : LENS 1
IRIS SPEED : 0
OPEN LIMIT : 127
CLOSE LIMIT : -85
INITIALIZE
    
```

Item	Setting	Initial setting	Description
LENS FILE	LENS1~LENS8	LENS1	Load items in LENS1~LENS8 File.
IRIS SPEED	-128 ~ 127	0	Adjust iris response speed in AUTO IRIS.
OPEN LIMIT	0 ~ 127	127	Adjust iris open limit value of AUTO IRIS.
CLOSE LIMIT	-128 ~ -1	-85	Adjust iris close limit value of AUTO IRIS.
INITIALIZE			Press the L+R buttons to initialize s LENS FILE data.

# Function menu

## 8.4.2.2 WHT SHADING sub menu (FILE MENU)

```

■WHT SHADING : <
  LENS. FILE   : LENS 1
  EXTENDER     : OFF (x1)
  WHT SHADING : PUSH > 1SEC
  H SHADING    >
  V SHADING    >
  
```

Item	Setting	Initial setting	Description
LENS FILE	LENS1~LENS8	LENS1	Load items in LENS1~LENS8 File.
EXTENDER	OFF ** x2 x0.8,		Display Lens extender position When the extender is X1. The lens cable is not connected. When the extender is X2. When the extender is X0.8.
WHT SHADING			Set Auto WHT SHADING. *1
H SHADING			Display H SHADING menu.
H SHADING			Display H SHADING menu.

\*1:Refer page 8.

### 8.4.2.2.1 WHT H SHADING sub menu (FILE MENU)

```

■H SHADING : <
  LENS. FILE   : LENS 1
  EXTENDER     : OFF (x1)
  R H SAW      : 0
  G H SAW      : 0
  B H SAW      : 0
  R H PARA     : 0
  G H PARA     : 0
  B H PARA     : 0
  INITIALIZE   :
  
```

Item	Setting	Initial setting	Description
LENS FILE	LENS1~LENS8	LENS1	Load items in LENS1~LENS8 File.
EXTENDER	OFF ** x2 x0.8,		Display Lens extender position When the extender is X1. The lens cable is not connected. When the extender is X2. When the extender is X0.8.
R H SAW	-128 ~ +127	0	Adjust the R H SAW shading.
G H SAW	-128 ~ +127	0	Adjust the G H SAW shading.
B H SAW	-128 ~ +127	0	Adjust the B H SAW shading.
R H PARA	-128 ~ +127	0	Adjust the R H parabpla shading.
G H PARA	-128 ~ +127	0	Adjust the G H parabpla shading.
B H PARA	-128 ~ +127	0	Adjust the B H parabpla shading.
INITIALIZE			Press the L+R buttons to initialize menu items.

### 8.4.2.2.2 WHT V SHADING sub menu (FILE MENU)

```

■V SHADING : <
  LENS. FILE   : LENS 1
  EXTENDER     : OFF (x1)
  R V SAW      : 0
  G V SAW      : 0
  B V SAW      : 0
  R V PARA     : 0
  G V PARA     : 0
  B V PARA     : 0
  INITIALIZE   :
  
```

Item	Setting	Initial setting	Description
LENS FILE	LENS1~LENS8	LENS1	Load items in LENS1~LENS8 File.
EXTENDER	OFF ** x2 x0.8,		Display Lens extender position When the extender is X1. The lens cable is not connected. When the extender is X2. When the extender is X0.8.
R V SAW	-128 ~ +127	0	Adjust the R V SAW shading.
G V SAW	-128 ~ +127	0	Adjust the G V SAW shading.
B V SAW	-128 ~ +127	0	Adjust the B V SAW shading.
R V PARA	-128 ~ +127	0	Adjust the R V parabpla shading.
G V PARA	-128 ~ +127	0	Adjust the G V parabpla shading.
B V PARA	-128 ~ +127	0	Adjust the B V parabpla shading.
INITIALIZE			Press the L+R buttons to initialize menu items.

# Function menu

## 8.4.2.3 REGI sub menu (FILE MENU)

```

■REGI      <
R H REGI   :    0
B H REGI   :    0
I[G H REGI] : Ref
R V REGI   :    0
B V REGI   :    0
I[G V REGI] : Ref

INITIALIZE
    
```

Item	Setting	Initial setting	Description
R H REGI	-24~+24	0	Adjust the horizontal phase of Rch.
B H REGI	-24~+24	0	Adjust the horizontal phase of B ch.
S V REGI	-24~+24	0	Adjust the vertical phase of Rch.
B V REGI	-24~+24	0	Adjust the vertical phase of B ch.

## 8.5 VF main menu

```

■VF MENU
VF OUT SEL : COLOR
VF DETAIL  : >
VF MARKER  : >
SIDE PANEL : >
VF DISPLAY : >
VF ZEBRA   : >
    
```

Item	Setting	Initial setting	Description
VF OUT SEL	COLOR Y,R,G,B	COLOR	
VF DETAIL			Change to VF DETAIL menu.
VF MARKER			Change to VF MARKER menu.
SIDE PANEL			Change to SIDE PANEL menu.
VF DISPLAY			Change to VF DISPLAY menu.
VF ZEBRA			Change to VF ZEBRA menu.

### 8.5.1 VF DETAIL sub menu (VF MENU)

```

■VF DETAIL : <
VF DETAIL  : OFF
DTL LEVEL  :    0
CRISP      :    0
    
```

Item	Setting	Initial setting	Description
VF DETAIL	ON,OFF	OFF	VF Detail ON and OFF
DTL LEVEL	-128 to +127	0	Adjust VF detail level
CRISP	-128 to +127	0	Adjust VF detail Crisp.

#### Note

When HDF-700H or VF-L9HD is used, VF DTL LEVEL is controlled in Peaking volume of the viewfinder.



# Function menu

## 8.5.2 VF MARKER sub menu (VF MENU)

```

■VF MARKER : <
  USER SEL : USER 1
  MARKER1 SEL : >
  MARKER2 SEL : >
  CROSS SET : >
  BOX1 SET : >
  BOX2 SET : >
  OTHER SET : >

  MARKER1 SW : OFF
  MARKER2 SW : OFF
  
```

Item	Setting	Initial setting	Description
USER SEL	USER1/ 2/3/4	USER1	MARKER1/2 SEL, CROSS SET BOX1/2 SET, OTHER SET These can do the memory.
MARKER1 SEL			Change to MARKER1 menu.
MARKER2 SEL			Change to MARKER2 menu.
CROSS SET			Change to CROSS SET menu.
BOX1 SET			Change to BOX1 SET menu.
BOX2 SET			Change to BOX2 SET menu.
OTHER SET			Change to OTHER SET menu.
MARKER1 SW	ON, OFF	OFF	It is effective only to install VF-HD500.
MARKER2 SW	ON, OFF	OFF	It is effective only to install VF-HD500.

## 8.5.3 MARKER1 SEL/ MARKER2 SEL sub menu (VF MENU)

```

■MARKER1 SEL : <USER 1
  CENTER MARK : OFF
  SAFETY MARK : OFF
  SIDE 4:3 : OFF
  13:9 : OFF
  14:9 : OFF
  15:9 : OFF
  CROSS : OFF
  BOX1 : OFF
  BOX2 : OFF
  
```

```

■MARKER2 SEL : <USER 1
  CENTER MARK : OFF
  SAFETY MARK : OFF
  SIDE 4:3 : OFF
  13:9 : OFF
  14:9 : OFF
  15:9 : OFF
  CROSS : OFF
  BOX1 : OFF
  BOX2 : OFF
  
```

Item	Setting	Initial setting	Description	
CENTER MARK	ON,OFF	ON	Center marker ON and OFF.	
SAFETY MARK	ON,OFF	ON	Safety Marker ON and OFF.	
SIDE	4:3	ON,OFF	OFF	Side 4:3 marker ON and OFF
	13:9	ON,OFF	OFF	Side 13:9 Marker ON and OFF
	14:9	ON,OFF	OFF	Side 14:9 marker ON and OFF
	15:9	ON,OFF	OFF	Side 15:9 marker ON and OFF
CROSS	ON,OFF	OFF	Cross marker ON and OFF.	
BOX1	ON,OFF	OFF	Box1 marker ON and OFF.	
BOX2	ON,OFF	OFF	Box2 marker ON and OFF.	

### Note

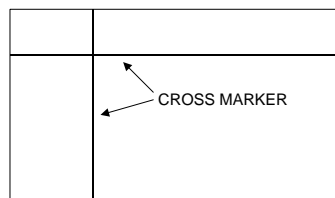
This safety marker is synchronized with aspect ratio (4:3, 13:9, 14:9, 15:9, OFF (16:9) ) of the Side panel.

## 8.5.4 CROSS SET sub menu (VF MENU)

```

■CROSS SET : <USER 1
  H POSITION : 5
  V POSITION : 5
  
```

Item	Setting	Initial setting	Description
H POSITION	0 to 255	5	Adjust Vertical line of Cross Marker horizontally.
V POSITION	0 to 255	5	Adjust horizontal line of Cross Marker vertically.



# Function menu

## 8.5.5 BOX1 SET/BOX2 SET sub menu (VF MENU)

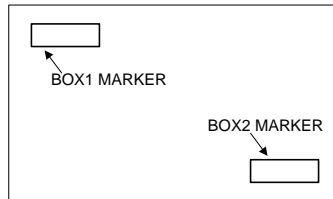
```

■BOX1 SET : <USER 1
H POSITION : 30
V POSITION : 25
H SIZE : 15
V SIZE : 10
    
```

Item	Setting	Initial setting	Description
H POSITION	0 to 255	30	Adjust horizontal position.
V POSITION	0 to 255	25	Adjust vertical position.
H SIZE	0 to 255	15	Adjust H. size of the box.
V SIZE	0 to 255	10	Adjust V size of the box.

```

■BOX2 SET : <USER 1
H POSITION : 222
V POSITION : 228
H SIZE : 15
V SIZE : 10
    
```



## 8.5.6 OTHER SET sub menu (VF MENU)

```

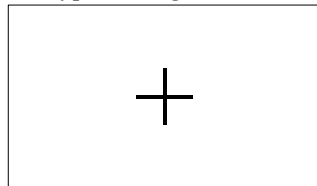
■OTHER SET : <USER 1
CENTER MARK : TYPE1
SAFETY MARK : TYPE1
SAFETY AREA : 90.0%
MARKER LEV : 100
    
```

Item	Setting	Initial setting	Description
CENTER MARK	TYPE1/2/3/4	TYPE1 *1	Type setting of center marker. *3
SAFETY MARK	TYPE1/2/3	TYPE1 *2	Type setting of safety marker. *4
SAFETY AREA	80.0%, 90.0%, 92.5%, 95.0%	90.0%	Setting of safety area
MARKER LEV	0 to 100	100	Adjustment of marker level

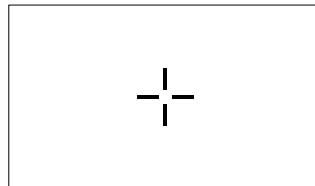
\*1: USER 1:TYPE 1, USER 2:TYPE 2, USER 3:TYPE 3, USER 4:TYPE 4

\*2: USER 1:TYPE 1, USER 2:TYPE 2, USER 3:TYPE 3, USER 4:TYPE 1

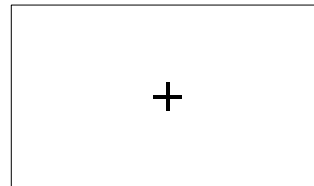
\*3: Type setting of center marker



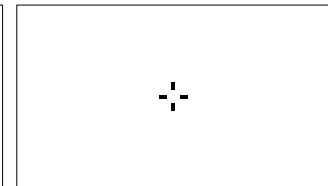
TYPE 1



TYPE 2

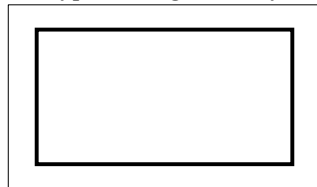


TYPE 3

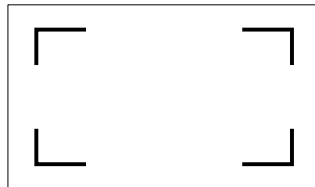


TYPE 4

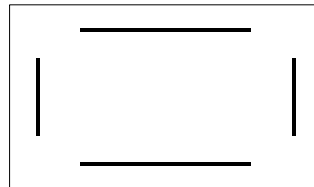
\*4: Type setting of safety marker



TYPE 1



TYPE 2



TYPE 3

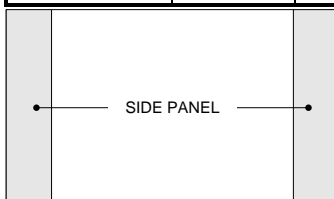
# Function menu

## 8.5.7 SIDE PANEL sub menu (VF MENU)

```

■ SIDE PANEL : <
SIDE PANEL : OFF
CONTRAST   : 1
BRIGHT     : 1
    
```

Item	Setting	Initial setting	Description
SIDE PANEL	OFF, 4:3, 13:9, 14:9, 15:9	OFF	Only when DISP SIZE is 16:9, it is effective.
CONTRAST	1 to 5	1	Set side panel contrast
BRIGHT	1 to 5	1	Set side panel brightness



## 8.5.8 VF DISPLAY sub menu (VF MENU)

```

■ VF DISPLAY : <
EXTENDER    : OFF
SHUTTER     : OFF
ZOOM        : OFF
FOCUS       : OFF
FILTER      : ON
WHITE BAL   : ON
M. GAIN     : OFF
IRIS        : ON
    
```

Item	Setting	Initial setting	Description
EXTENDER	ON,OFF	OFF	Display the Extender indicator in VF, ON and OFF
SHUTTER	ON,OFF	OFF	Display the Shutter indicator in VF, ON and OFF
ZOOM	ON,OFF	OFF	Display the Zoom indicator in VF, ON and OFF
FOCUS	ON,OFF	OFF	Display the Focus indicator in VF, ON and OFF
FILER	ON,OFF	ON	Display the Filter indicator in VF, ON and OFF
WHITE BAL	ON,OFF	ON	Display the white balance mode indicator in VF, ON and OFF
M.GAIN	ON,OFF	OFF	Display the M. Gain indicator in VF, ON and OFF
IRIS	ON,OFF	ON	Display the Iris indicator in VF, ON and OFF

## 8.5.9 VF ZEBRA sub menu (VF MENU)

```

■ VF ZEBRA : <
ZEBRA TYPE1 : OFF
LEVEL       : >100%
ZEBRA TYPE2 : OFF
HIGH LEVEL  : 75%
LOW LEVEL   : 60%
    
```

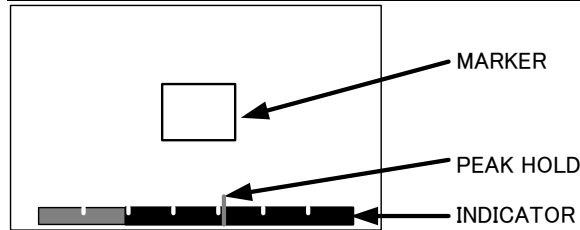
Item	Setting	Initial setting	Description
ZEBRA TYPE1	ON,OFF	OFF	Zebra marker type1 for VF, ON and OFF
LEVEL	75% to 105%	>100%	Adjust limit value of VF zebra type 1
ZEBRA TYPE2	ON,OFF	OFF	Zebra marker type 2 for VF, ON and OFF
HIGH LEVEL	55% to 100%	75%	Adjust maximum value of VF zebra type 2
LOW LEVEL	50% to 99%	60%	Adjust limit value of VF zebra type 2

# Function menu

## 8.5.10 FOCUS IND sub menu (VF MENU)

■ FOCUS IND	: <
INDICATOR	: OFF
MARKER	: OFF
PEAK HOLD	: OFF

Item	Setting	Initial setting	Description
INDICATOR	ON,OFF	OFF	Display the focus assist indicator in VF, ON and OFF.
MARKER	ON,OFF	OFF	Display the detect area marker for the focus assist in VF, ON and OFF.
PEAK HOLD	ON,OFF	OFF	Display a peak position of the indicator. This marker is displayed for about 4 sec.



Integration value of picture edge level is displayed by indicator length.

The peak of indicator is the focal position.

MARKER : Integration area of picture edge level.

PEAK HOLD : Peak value position marker.

The peak hold marker remains for 4 sec on the screen.

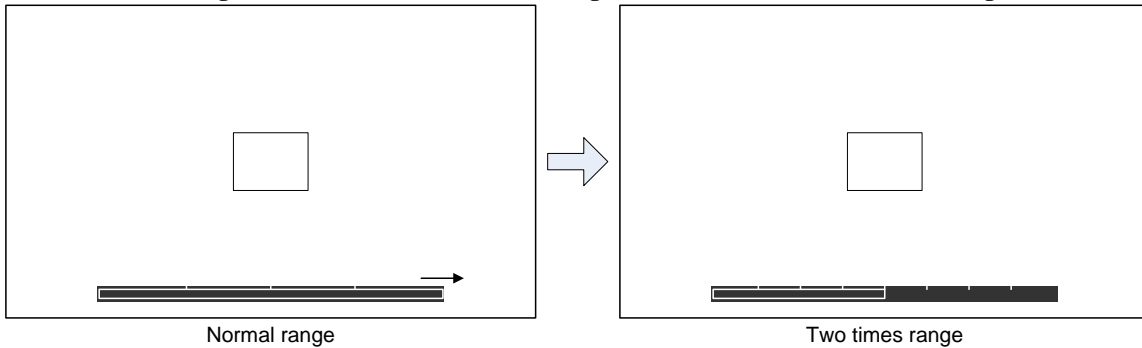
This marker shows the target level of the just focal position.

INDICATOR : Integration value of picture edge.

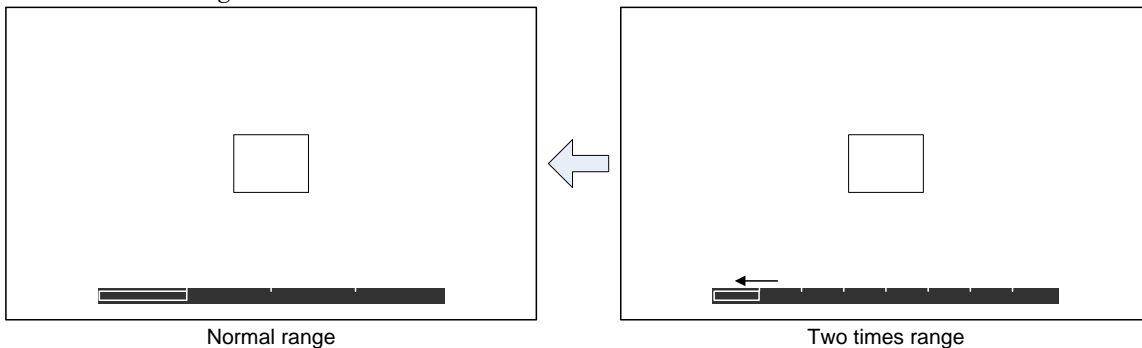
### Focus assist indicator level range

Focus assist range is changed automatically depend on the integration value.

The indicator range will be two times if the integration value exceeds normal range.



The indicator range will rescale to normal if the value will be smaller than the minimum scale.



# Specifications

## DK-H200

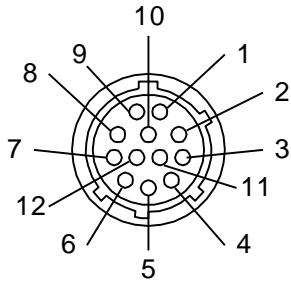
Model name	DK-H200(59.94 Hz) , DK-H200E(50 Hz)
Image sensor	2/3-inch, MOS image sensor Total pixels 2,270 (H) × 1,144(V) 2.6 million pixels Effective pixels 1,974 (H) × 1,100 (V)
Signal format	1080p, 1080i, 720p
Prism	F1.4
Optical Filter	1X motorized filter wheel w/ 4 filter positions (Clear, 1/4 ND, 1/16 ND, 1/64 ND)
ECC Filter	3200 K, 4300 K, 5600 K, 6300 K, 8000 K
Lens mount	B4 Bayonet
HD Resolution	1100TVL
HD SNR	60dB (HD-SDI output decode Y channel)
Std Sensitivity	1080/59.94p, 59.94i, 60p, 60i : F12 @ 2000 lx, 3200 K, 89.9% reflectance 1080/50p, 50i : F13 @ 2000 lx, 3200 K, 89.9% reflectance
Minimum illumination	0.002 lx (at F1.4, 36dB Video Gain+36dB frame accumulation mode)
Vertical Smear	No smear
Gain selection	L (low) -3, 0dB M (medium) 0 to 21dB, 3dB steps. H (high) +3 to 36dB, 3dB steps.
Shutter	Preset mode 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 second (59.94p, 59.94i, 60p, 60i) 1/60, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 second (50p, 50i) VAR(Variable) scan mode 1/60.15 to 1/9633, 0.03 to 1.07 second (59.94p, 59.94i, 60p, 60i) 1/50.17 to 1/11250 , 0.04 to 1.28 second (50p, 50i) AES mode Automatic video level control by shutter speed. AES controls quantities of light in equivalent to 4 lens F-stop.
Geometric distortion	Overall: 0 % (excluding lens characteristics)
Registration Overall	0.01 % (excluding lens characteristics)
Dimensions	99(W) × 105(H) × 155(D) (excluding protrusions)
Power supply voltage	DC 12 V (10.5 V to 17 V)
Operating temperature	-10 °C to +45 °C
Storage temperature	-20 °C to +60 °C
Power Consumption	approx. 18 W (DC12 V)
MASS	approx. 1.3 kg (2.9 lbs)
Input & Output	MON OUT:1X BNC HD-SDI out (Character ON/OFF) SDI OUT:1X BNC HD-SDI out GL IN:1X BNC for Tri-level sync or BB REMOTE1:4-pin Multi connector for remote control panel REMOTE2:8-pin RJ-45 connector for remote control VF OUT:15-pin D-SUB connector for viewfinder LENS:12-pin Multi LENS connector



# Service information

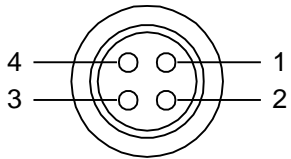
## Connector pin diagrams

LENS connector



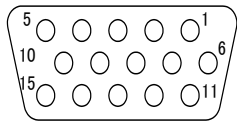
Pin	Signal	Pin	Signal
1	AUX SW	7	IRIS POSITION
2	CALL TRG	8	IRIS A/R
3	GND	9	EXETEND
4	ENF AUTO	10	ZOOM POS
5	IRIS CONTROL	11	F POS / L TX
6	+12V	12	L RX

REMOTE1 connector



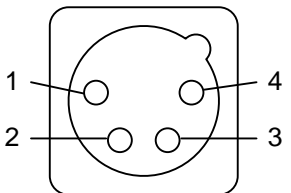
Pin	Signal
1	+12V output
2	SD input
3	SD output
4	SD GND

VF OUT connector



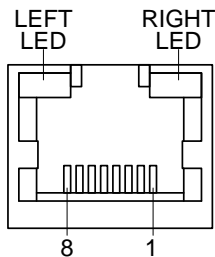
Pin	Signal	Pin	Signal	Pin	Signal
1	Pr OUT	6	GND	11	CPU DATA IN
2	Y OUT	7	Y SHIELD	12	STRB1/R TALLY
3	Pb OUT	8	PEAKING CONT	13	STRB2/G TALLY
4	SYNC OUT	9	+12V OUT	14	CPU DATA OUT
5	VF DET	10	+12V OUT	15	CPU CLK/PEAKING SEL

DC IN connector



Pin	Signal
1	GND
2	NC
3	NC
4	+12V IN

REMOTE2 connector



### LEDs

Color	Link LED (LEFT)	Activity LED (RIGHT)
OFF	No Link	No Activity
Amber	10 Mbps	Half Duplex
Green	100 Mbps	Full Duplex

### Pins

No.	Name	Direction	Function
1	TX+	Out	Transmit data +
2	TX-	Out	Transmit data -
3	RX+	In	Receive data +
4	NC		No connection
5	NC		No connection
6	RX-	In	Receive data -
7	NC		No connection
8	NC		No connection

## Service information

**The solution in the case of having changed into the output mode which the color monitor does not support.**

When it changes to the output mode which the connected color monitor does not support, an image does not appear. And the output mode change by a menu is difficult. Change of the output mode of a camera is in the state which stopped the camera power supply and pushed the rear button, and is possible by switching on a power supply. (Output mode is memorized by the memory.)

Please use it, changing the output mode to which a color monitor corresponds.

Button	Video format
FILTER + LEFT	1080 / 59.94p
FILTER + DOWN	1080 / 59.94i
FILTER + RIGHT	720 / 59.94p
MENU + LEFT	1080 / 50p
MENU + DOWN	1080 / 50i
MENU + RIGHT	720 / 50p

