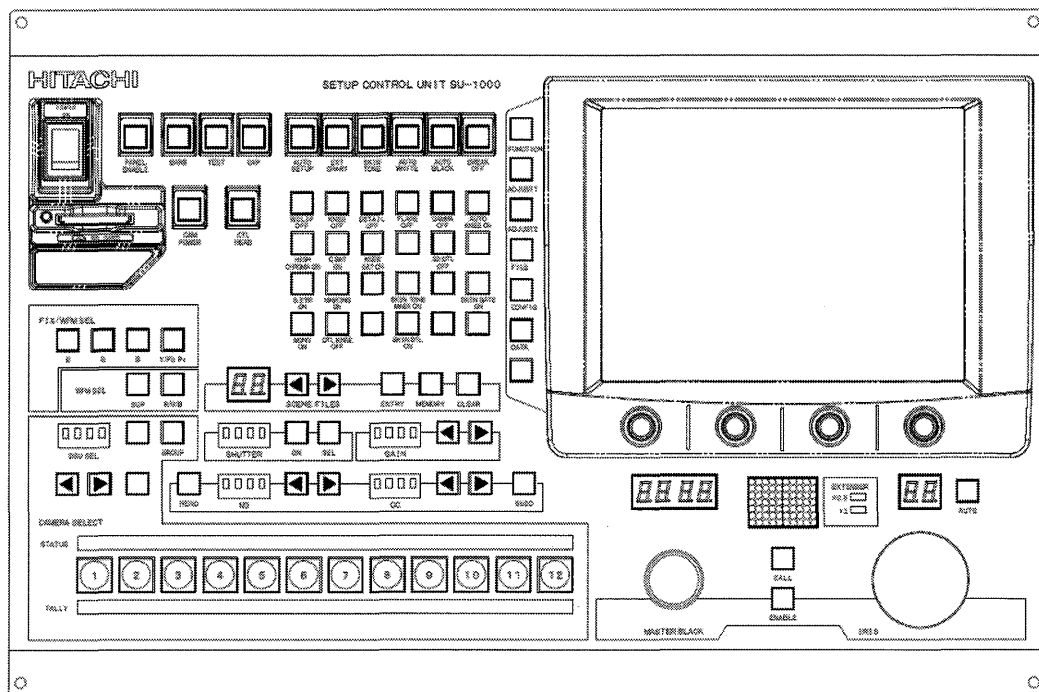


HITACHI

HD COLOR CAMERA SYSTEM SETUP CONTROL UNIT SU-1000

OPERATING INSTRUCTIONS



Please read this operating instruction carefully for proper operation, and keep it for future reference.

Hitachi Kokusai Electric

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 bottom of the product. Please record these numbers in the spaces provided below, and retain this manual for future reference.

Model No. _____

Serial No. _____

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
 Siemensstr. 9, D-63263 Neu-Isenburg,
 Germany

Hitachi Kokusai Electric U.K. Ltd.
 Windsor House, Britannia Road, Waltham Cross,
 Herts. EN8 7NX, United Kingdom

declares, that the product:

Product Name: Setup Control Unit
 Model Number(s): SU-1000

Product Name: View Finder
 Model Number(s): VF-L9HD

conforms to the following Standards:

EMC: EN 55103-1:1997 class E3
 EN 55103-2:1997 class E3

LVD: EN 60065:1998 + Amd1

Supplementary Information:

"The product complies with the requirements of the Low Voltage
 Directive 2006/95/EC and the EMC Directive 2004/108/EC."

Signature:

 
 Y. Yamada on behalf of M. Katou

Senior Manager
 Quality Assurance Department II
 Quality Assurance Center
 Hitachi Kokusai Electric Inc.

Managing Director
 Hitachi Kokusai Electric GmbH
 Hitachi Kokusai Electric U.K. Ltd.

Date: 23 April, 2009

ET-E043

ES-E016

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 Waschzubehörs, in einem nassen Keller, in der Nähe eines Schwimmbeckens usw.

8. Aufstellung

Das Erzeugnis nicht auf einen instabilen 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 Netzspannungsschläge.

15. Überlastung

Wandsteckdosen, Verlängerungskabel und eingebaute Bequemlichkeitssteckdosen 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 applicable aux appareils numériques de classe A prescrites dans le rVglement sur le brouillage radioélectrique édicter par le ministère des communications du canada.

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Outline and features

1. General

The setup control unit SU-1000 provides centralized control of SK-HD1000 series high-definition CCD cameras offering abundant camera adjustment functions.

The compact and lightweight SU-1000 features Color LCD indicators in the display section and other functions for easy use. The SU-1000 can be used for various purposes, including being mounted on a broadcast OB Van

2. Features

(1) Abundant camera control functions

Up to 12 cameras can be controlled using the internal data line switcher (DSU).

The main control items are:

- Auto setup execution
- Data file (PRESET, SCENE FILE) selection, save, and clear
- Analog manual adjustment using the rotary encoder
- Maintenance on/off control
- PIX and WFM video output select

(2) Compact and lightweight

The SU-1000 has been made compact, lightweight, and thin so it can easily be mounted on a broadcast relay car.

(3) Improved operability

High-visibility Color LCD indicators are used on the display panel to provide a detailed display of the camera status.

Warnings and cautions when using

CAUTION

■ 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.

■ When connecting and disconnecting cables, grasp the connector by the body, not the attached cable. Cables can be damaged by pulling on them.

■ Fuse replacement

Important: Although spare fuses are provided, the fuse must be replaced only by a qualified service technician.

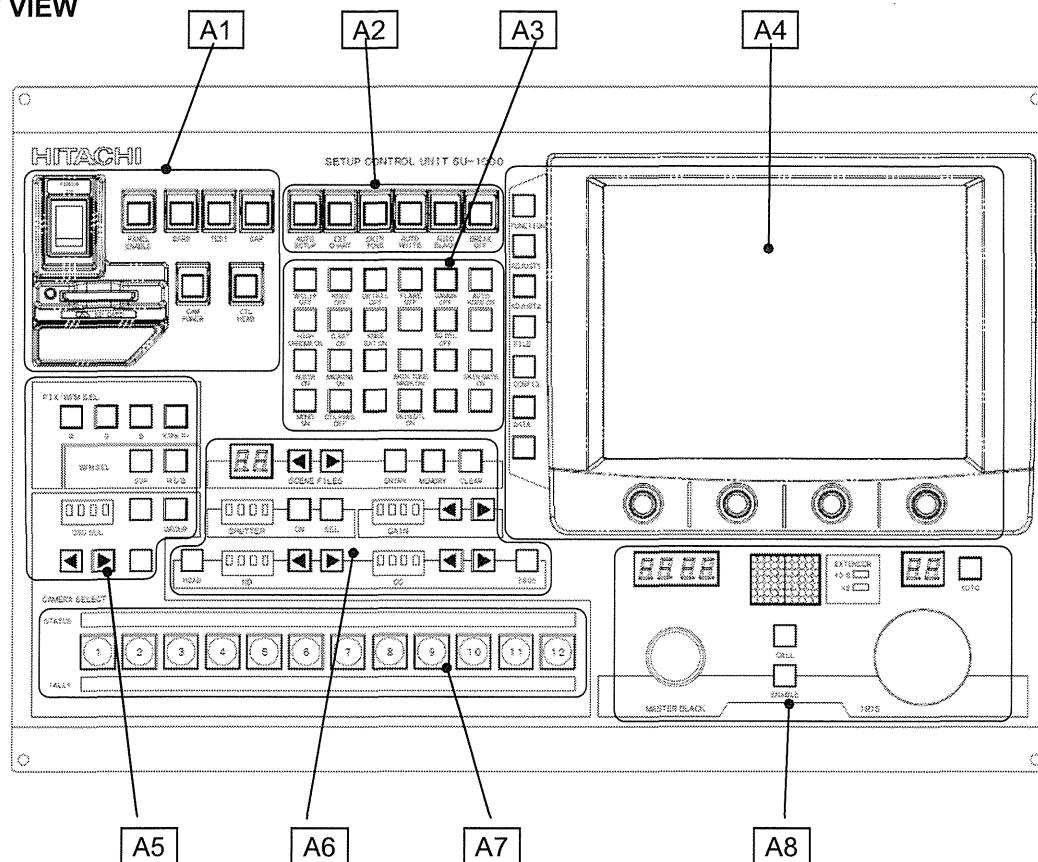
■ In event of difficulty

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

Facility names and functions (Front)

3. Facility names and functions

3.1 FRONT VIEW



A1 POWER SWITCH section

A2 AUTO SETUP section

A3 ON/OFF SWITCH section

A4 LCD DISPLAY

A5 PIX SEL/WFM SEL

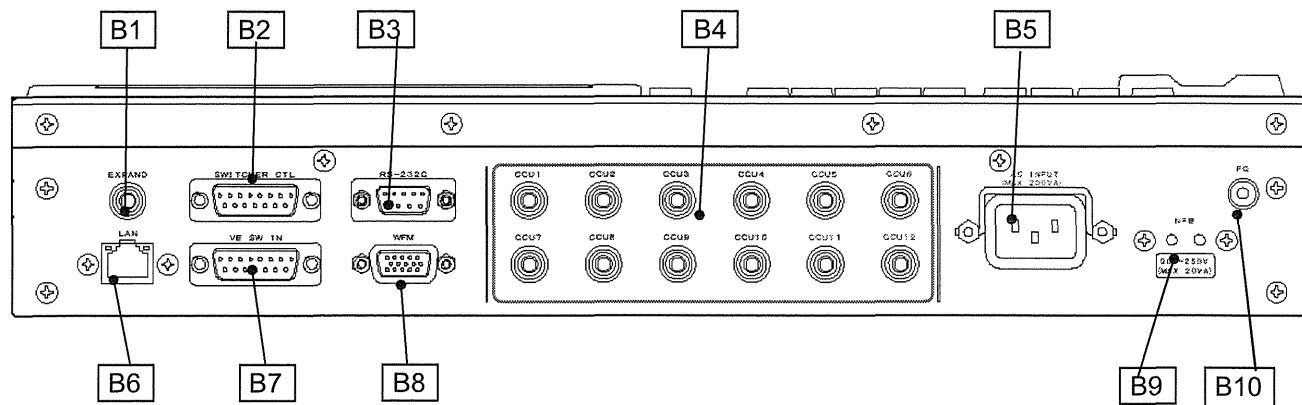
**A6 SCENE FILES
SHUTTER / GAIN / ND/CC FILTER**

A7 CAMERA SELECT

A8 MASTER BLACK / IRIS

Facility names and functions (Rear)

3.2 REAR VIEW



B1 EXPAND data connector

For future function

B2 SWITCHER CTL connector (15 pin)

Use for parallel control switcher.
See Service information section.

B3 RS-232C data connector (9 pin)

Use for serial control switcher.
See Service information section.

B4 CCU connector (4 pin Hirose)

Connect to CCU .
See Service information section.

B5 AC power input connector

Input of AC 90V to 230V.

B6 LAN connector

Not used.

B7 VE SW IN connector (15 pin)

Camera can be selected from Video Engineer console via this connector.
See Service information section.

B8 Wave Form Monitor (WFM) control connector (15 pin)

This connector is used to select the display mode of the waveform monitor.
See Service information section.

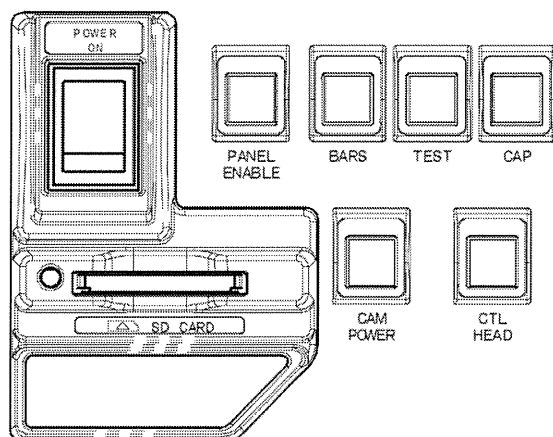
B9 NO FUSE BREAKER(NFB)

B10 FG terminal

Frame ground terminal.

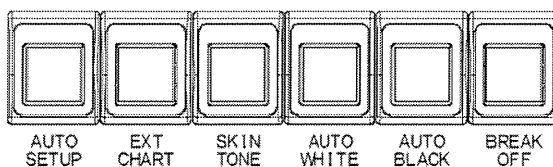
Facility names and functions (Front)

A1 POWER switch on/off

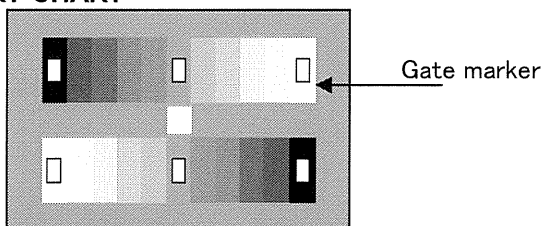


- **POWER ON** : Set SCU Power switch to on.
- **PANEL ENABLE** : Enable or disable of control.
- **BARS** : CCU Color BAR on/off
- **TEST** : Camera head TEST signal on/off
- **CAP** : Lens CAP on/off
- **SD CARD** : SD CARD slot
- **CAM POWER** : Camera power on/off
 - On: Press this button and turn on LED.
 - OFF: Press this button for some seconds.
- **CTL HEAD** : Cameraman control enable

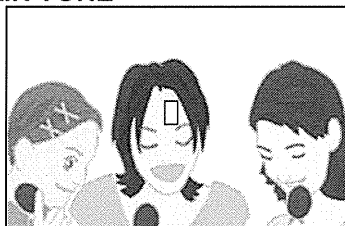
A2 AUTO SETUP SELECTION



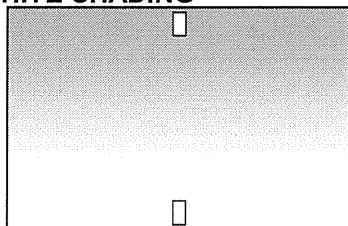
EXT CHART



SKIN TONE



WHITE SHADING



- Auto setup selection switch:** External chart, Skin tone, Auto white shading, Auto white & black and Break OFF for stop the auto set up process
- **AUTOSETUP** : Executes auto setup of Gray scale setup, Skin tone setup, or White shading setup.
 - **EXT CHART** : Displays marker for Gray scale setup
 - **SKIN TONE** : Displays marker for Skin tone or white shading for auto setup
 - **AUTO WHITE** : Executes auto white balance
 - **AUTO BLACK** : Executes auto black balance
 - **BREAK OFF** : Cancels auto setup execution

Auto setup instruction

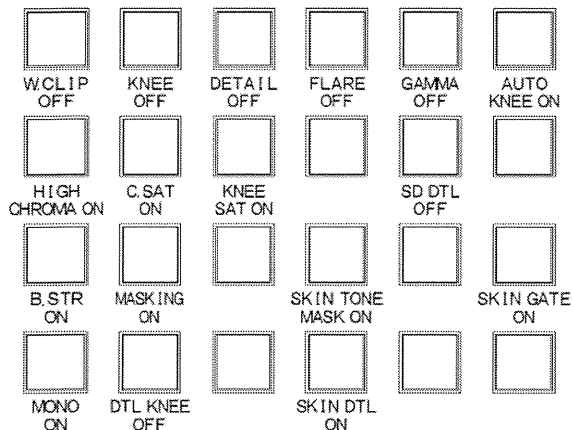
- 1) Display marker and set marker position as shown in left by moving camera position and direction.
- 2) Press the AUTO SETUP button.
- 3) After finishing the auto setup, press EXT CHART button or SKIN TONE button to turn off the marker.

Caution

During auto setup execution, **CALL** button and **BREAK OFF** button are only able to operate.

Facility names and functions (Front)

A3 Each type on/off control



Each button has LED lamp.

During a LED is turned on, the meaning is as below.

xxx ON button : the function is working.

xxx OFF button : the function is not working

* Blank button does not have any function.

1st row

- W.CLIP OFF : White Clip off button
- KNEE OFF : Knee off button
- DETAIL OFF : Detail off button
- FLARE OFF : Flare off button
- GAMMA OFF : Gamma off button
- AUTO KNEE ON : Auto knee on button

2nd row

- HIGH CHROMA ON : High chroma detail on button
- C.SAT ON : Chroma saturation on button
- KNEE SAT ON : Knee saturation on button
- SD DTL OFF : Detail for SDTV signal off button

3rd row

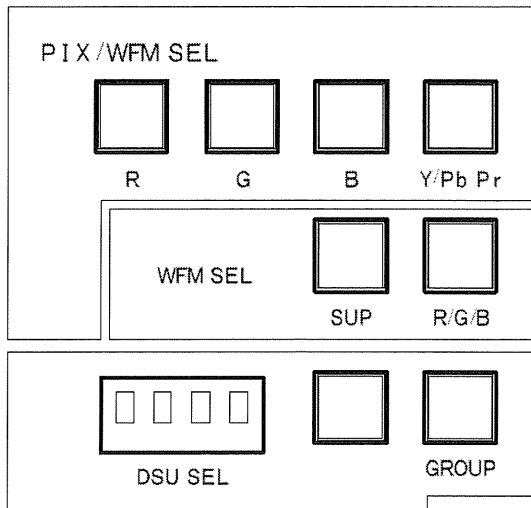
- B.STR ON : Black stretch on button
- MASKING ON : Masking on button
- SKIN TONE MASK ON : Skin tone masking on button
- SKIN GATE ON : Skin tone gate on button

4th row

- MONO ON : Mono chroma on button
- DTL KNEE OFF : Detail knee off button
- SKIN DTL ON : Skin tone detail on button

Facility names and functions (Front)

A5 PIX / WFM select



- R, G, B, and Y/PbPr:

Selects signal of a CCU PIX and WFM output.

When the Y/PbPr is selected, the output is VBS signal.

- **SUP:** R, G, and B waveforms are super imposed from CCU.
- **R/G/B:** R, G, and B waveforms are super imposed from CCU.
- **WFM CONTROL**

WFM CONTROL output is changed by the switch operation.

The output configuration is as below.

MODE	PIX OUT	WFM OUT	CTL 0	CTL 1	CTL 2	CTL 3	CTL 4	CTL 5	CTL 6	CTL 7
R	R	R	Lo	Hi	Hi	Hi	Hi	Hi	Hi	Hi
G	G	G	Hi	Lo	Hi	Hi	Hi	Hi	Hi	Hi
B	B	B	Hi	Hi	Lo	Hi	Hi	Hi	Hi	Hi
ENC	ENC	ENC	Hi	Hi	Hi	Lo	Hi	Hi	Hi	Hi
SUP	ENC	SUP	Hi	Hi	Hi	Hi	Lo	Hi	Hi	Hi
SEQ	ENC	SEQ	Hi	Hi	Hi	Hi	Hi	Lo	Hi	Hi

- **GROUP:** Simultaneous camera control

Turn on GROUP then select cameras.(see Camera select)

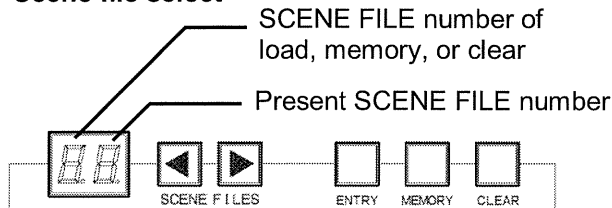
After selected, simultaneous camera control is available.

- **DSU SEL**(Future function)

This is a select indicator for a system that has 13 cameras or more.

A6 Scene file select / Shutter,GAIN,ND,CC select

Scene file select



- **Changes to another SCENE FILE setting**

- 1) Select SCENE FILE number.
- 2) Press ENTRY during the number is blinking, then the setting will be set.

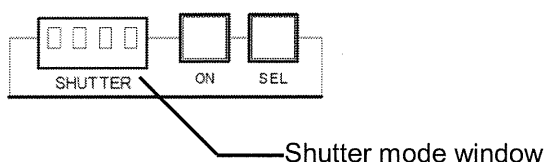
- **Writes setting to SCENE FILE**

- 1) Selects SCENE FILE to write in.
- 2) Press MEMORY, then the button will be blinking.
- 3) Press ENTRY, then setting is written to the file.

- **Clears SCENE FILE data**

- 1) Selects SCENE FILE to clear data.
- 2) Press CLEAR, then the button will be blinking.
- 3) Press ENTRY, then the file will be clear.

Electronic Shutter select



- **ON button**

During the button is turned on, shutter is working.

- **Selects shutter mode**

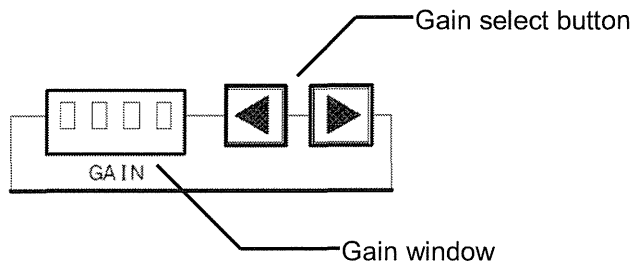
As often as pressing the SEL button, shutter mode will be changed as below.

- CC frame – 1/100(1/60 at 50Hz) – 1/250 – 1/500 – 1/1000 – 1/2000 – Variable – AES – CC frame

* In the AES mode, variable shutter speed is displayed at shutter mode window.

Facility names and functions (Front)

Gain select



- Gain window

Present Gain is displayed.

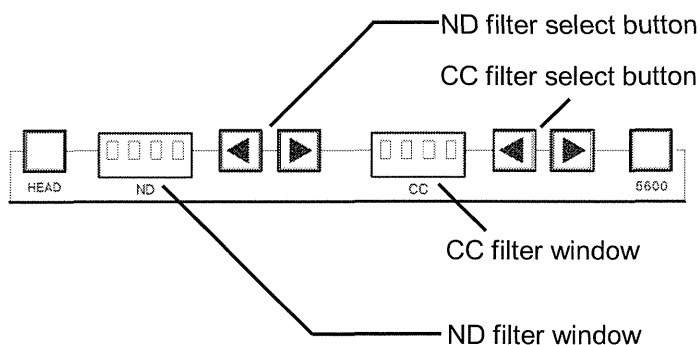
- Selects Gain

Press right or left arrow gain select button.

Gain is changed as below

-3dB – 0dB – +3dB – +6dB – +9dB – +12dB –
+15dB – +18dB – +21dB – +24dB

ND, CC filter select



- HEAD button

During the button is turned on, a cameraman can control ND and CC filter at camera side. Even HEAD is on, SU can control these filters.

- Selects ND filter

Press right or left arrow ND select button. Selected filter is displayed on the ND filter window.

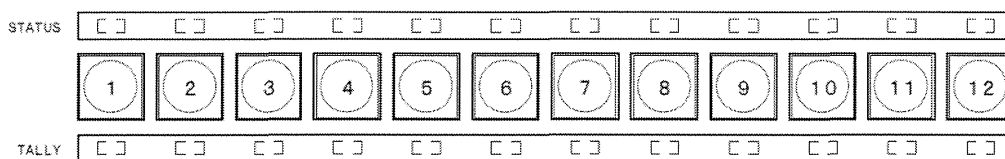
- Selects CC filter

Press right or left arrow CC select button. Selected filter is displayed on the CC filter window.

- 5600 button

During the button is turned on, CC filter position is 5600K.

A7 Camera select



Selects a camera

Press camera select button, then the SU-1000 is connected to a selected camera.

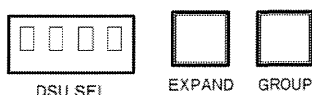
When a camera is selected, the button LED is turned on, and all of setting is sent from the camera to the SU-1000.

Lamp action

STATUS OFF: not connected, Yellow: camera power off, Green: camera power on (normal state)

TALLY OFF: no tally, Red: red tally on, Green: green tally on, Yellow: both red and green tally on

GROUP CONTROL



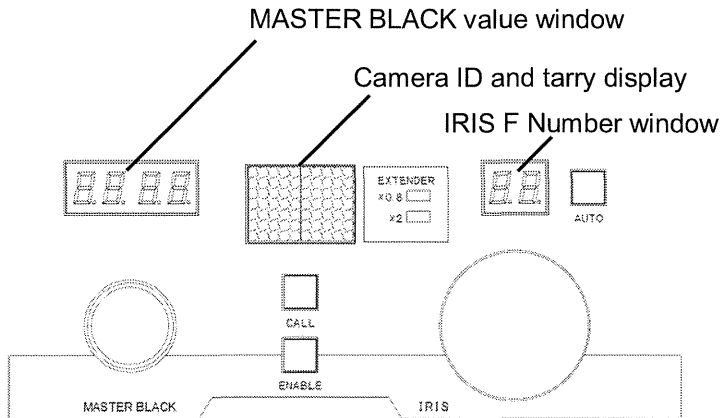
Press GROUP button, then select camera for simultaneous control.

Selected camera's button (LED Lamp) is turned on.

All of control is available simultaneously, except Adjust-2 system timing menu.

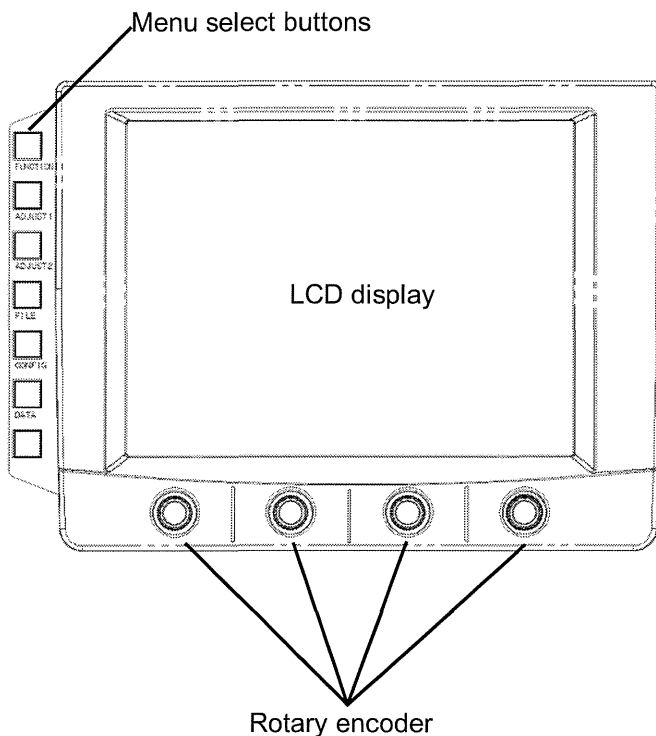
Facility names and functions (Front)

A8 Iris, Master black control, camera number display and call bottom.



- **MASTER BLACK**
Adjusts black level of video signal
- **IRIS**
Controls lens iris position
- **ENABLE**
MASTER BLACK and IRIS control enable
- **Camera ID and tarry display**
Selected camera ID is displayed.
*LED color means tarry action.
Orange: no tarry Red: red tarry
Green: green tarry
left Red, right green: red and green tarry
- **EXTENDER**
Lens extender or shrinker status lamp
x0.8 : Lens shrinker(ratio converter) is active.
X2 : Lens extender is active.
- **AUTO**
Auto iris control on/off button
- **CALL**

A4 LCD Display



- **Menu select button**
Select display menu by left side buttons.
- **LCD display**
Each menu item is selected by pressing LCD display. (Touch panel)
- **Rotary encoder**
Each item is adjusted by rotary encoder knobs.

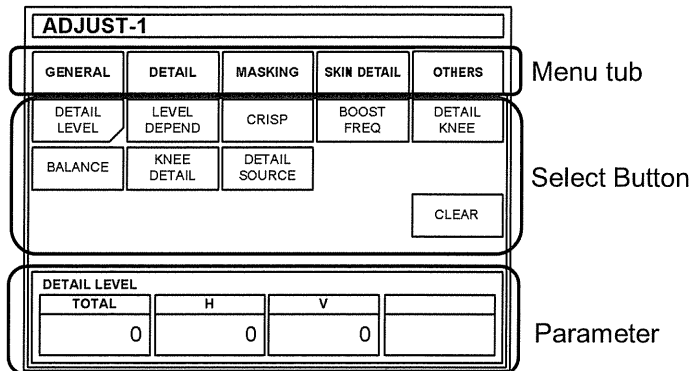
LCD menu operation

4.1 Basic LCD menu operation

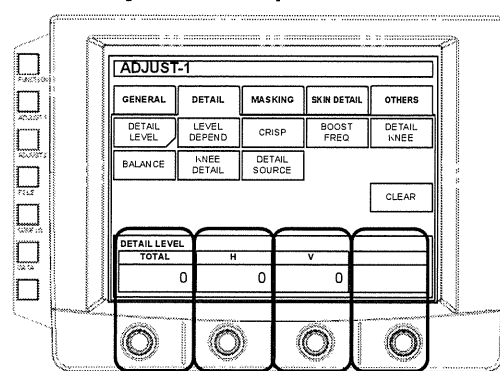
4.1.1 Menu operation

SU-1000's menu is displayed on LCD with touch panel.
 Menu tub and Select button are controlled by pressing LCD.
 Pressing is operated by finger, pen, or something like them.
 Selected item color is changed to yellow, and then parameters appear.
 Parameters are controlled by turning rotary encoders.
 Each rotary encoder can control one parameter (see figure as below) .

LCD menu



Rotary encoder operation

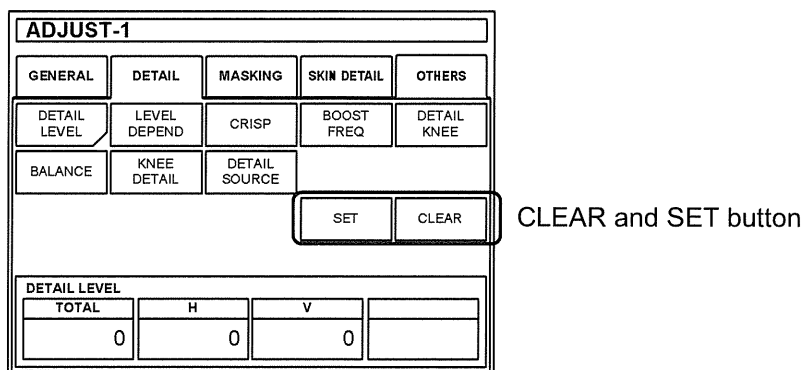


4.1.2 CLEAR operation

Changed parameter value can be set to previous value by using CLEAR button.

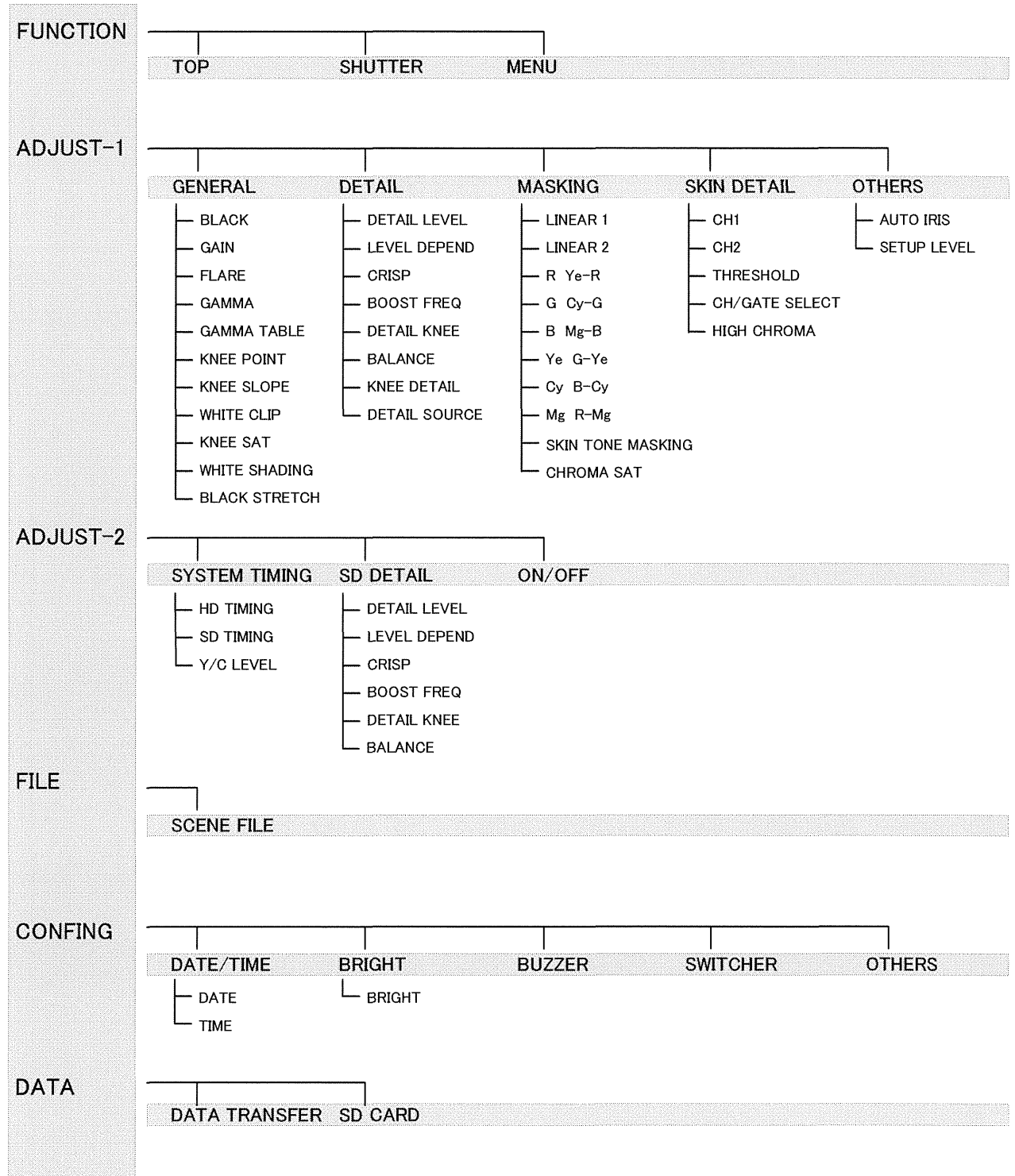
- 1) Press CLEAR button, then SET button appears.
- 2) Press SET button, then previous setting data are set again.

*If the parameter disappeared before CLEAR operation, the previous value can not be recalled.



LCD menu operation

4.2 MENU structure



LCD menu

5.1 FUNCTION MENU

5.1.1 OPERATION menu (FUNCTION) & description.

FUNCTION

TOP SHUTTER MENU

CAM ID:01
SK-HD1000

TOP

ND	CC	MASTER GAIN	SHUTTER
CLEAR	3200K	15dB	OFF

Item	Setting	Description
ND	ND 1: CLEAR ND 2: CROSS ND 3: 1/16ND ND 4: 1/64ND	Selects ND filters
CC	CC A: 3200K CC B: 4300K CC C: 5600K CC D: 6300K CC E: 8000K	Selects CC(ECC) filters
MASTER GAIN	-3dB, 0dB, 3dB ~ +21dB, +24dB	Selects the Master gain
SHUTTER	CC FRM ⇄ 100/60 ⇄ 250 ⇄ 500 ⇄ 1000 ⇄ 2000 ⇄ VARIABLE ⇄ AES ⇄ OFF	Selects the shutter mode and speed

5.1.2 SHUTTER menu (FUNCTION) & description.

FUNCTION

TOP SHUTTER MENU

SHUTTER ON

CLEAR

SHUTTER

SHUTTER	VARIABLE		
2000	59.94		

Item	Setting	Description
SHUTTER	CC FRM ⇄ 100/60 ⇄ 250 ⇄ 500 ⇄ 1000 ⇄ 2000 ⇄ VARIABLE ⇄ AES	Selects shutter mode
VARIABLE	60Hz: 59.94 ~ 1983 50Hz: 50.00 ~ 2000	Adjusts shutter speed
SHUTTER	ON, OFF	Shutter on/off button

5.1.3 MENU menu (FUNCTION) & description.

FUNCTION

TOP SHUTTER MENU

MENU

BARS

UP

DOWN

RIGHT

LEFT

LEFT RIGHT

BAR

Item	Setting	Description
MENU	ON, OFF	
UP▲, DOWN▲	-	Selects menu item.
RIGHT◀, LEFT▶	-	Changes setting of menu item.
LEFT RIGHT◀▶	-	To operate LEFT and RIGHT button simultaneous pressing. At initializing in a menu, press this button over 2 sec.
BARS	ON, OFF	Displays color bars.

LCD menu

5.2 ADJUST-1 MENU

5.2.1 GENERAL menu (ADJUST-1) & description.

ADJUST-1				
GENERAL	DETAIL	MASKING	SKIN DETAIL	OTHERS
BLACK	GAIN	FLARE	GAMMA	GAMMA TABLE
KNEE POINT	KNEE SLOPE	WHITE CLIP	KNEE SAT	WHITE SHADING
BLACK STRETCH				CLEAR

BLACK			
R	G	B	
0	0	0	

GAIN			
R	G	B	
-69	+119	-18	

FLARE			
R	G	B	
0	+2	+4	

GAMMA			
R	G	B	
+11	+1	+3	

GAMMA TABLE			
TOTAL			
4.0			

KNEE POINT			
R	TOTAL	B	
0	0	0	

KNEE SLOPE			
R	TOTAL	B	
0	+6	0	

WHITE CLIP			
TOTAL			
+20			

KNEE SATURATION			
TOTAL			
0			

WHITE SHADING V-SAW			
R	G	B	
0	0	0	

BLACK STRETCH			
LEVEL			
16			

Item	Setting	Description
BLACK		
R	-128 to +127	Adjusts the black balance manually.
G	-128 to +127	
B	-128 to +127	
GAIN		
R	-128 to +127	Adjusts the white balance manually.
G	-128 to +127	
B	-128 to +127	
FLARE		
R	-128 to +127	Adjusts the flare correction manually.
G	-128 to +127	
B	-128 to +127	
GAMMA		
R	-128 to +127	Adjusts the gamma balance manually.
G	-128 to +127	
B	-128 to +127	
GAMMA TABLE TOTAL	3.0,3.5,4.0,4.5,5.0,5,5,	Selects gamma curve table.
KNEE POINT		
R	-128 to +127	Adjusts the knee point level.
TOTAL	-128 to +127	
B	-128 to +127	
KNEE SLOPE		
R	-128 to +127	Adjusts the knee slope.
TOTAL	-128 to +127	
B	-128 to +127	
WHITE CLIP TOTAL	-128 to +127	Adjusts the white clip level.
KNEE SATURATION TOTAL	-128 to +127	Adjusts the knee correcting area saturation level.
WHITE SHADING V-SAW		
R	-128 to +127	Adjusts the white shading, that cause by optical characteristic, manually (vertical saw).
G	-128 to +127	
B	-128 to +127	
BLACK STRETCH LEVEL	-128 to +127	Adjusts the black(dark area) stretch level.

LCD menu

5.2.2 DETAIL menu (ADJUST-1) & description.

ADJUST-1				
GENERAL	DETAIL	MASKING	SKIN DETAIL	OTHERS
DETAIL LEVEL	LEVEL DEPEND	CRISP	BOOST FREQ	DETAIL KNEE
BALANCE	KNEE DETAIL	DETAIL SOURCE		
				CLEAR
DETAIL LEVEL				
TOTAL	H	V		
0	0	0		

LEVEL DEPEND			
POINT			
0			

CRISP			
H	V		
0	0		

BOOST FREQUENCY			
FREQ			
17MHz			

DETAIL KNEE			
WHITE	BLACK		
0	0		

BALANCE			
POS/NEGA			
8/8			

KNEE DETAIL			
LEVEL			
0			

DETAIL SOURCE			
SOURCE			
R+G			

Item	Setting	Description
DETAIL LEVEL		Adjusts the detail level.
TOTAL	-128 to +127	Horizontal (H) and Vertical (V)
H	-128 to +127	detail level can be adjusted
V	-128 to +127	independently or together.
LEVEL DEPEND		Adjusts the level depend point
POINT	-128 to +127	of detail to decrease dark
		objects or scene noise.
CRISP		Adjusts the crisp level to
H	-128 to +127	decrease slight detail signal.
V	-128 to +127	
BOOST		Adjusts the detail boost
FREQUENCY	13MHz,14MHz,	frequency.
DETAIL KNEE		Adjusts the detail knee point.
WHITE	-128 to +127	Detail knee can compress
BLACK	-128 to +127	large detail signal.
BALANCE	4:8,5:8,6:8	Selects the detail balance of
POGI/NEGA		positive and negative.
KNEE DETAIL		Adjusts the knee detail level.
LEVEL	-128 to +127	Knee detail is a detail signal
		for knee corrected area.
DETAIL SOURCE		Selects the detail source
SOURCE	G, R+G, R+G+B	signal.

LCD menu

5.2.3 MASKING menu (ADJUST-1) & description.

ADJUST-1				
GENERAL	DETAIL	MASKING	SKIN DETAIL	OTHERS
LINEAR 1	LINEAR 2	R Ye-R	G Cy-G	B Mg-B
SKIN TONE MASKING	CHROMA SAT	Ye G-Ye	Cy B-Cy	Mg R-Mg
				CLEAR
LINEAR 1				
R-G	R-B	G-R		
0	0	0		

LINEAR 2			
G-B	B-R	B-G	
0	0	0	

R		Ye-R	
SAT	HUE	SAT	HUE
0	0	0	0

G		Cy-G	
SAT	HUE	SAT	HUE
0	0	0	0

B		Mg-B	
SAT	HUE	SAT	HUE
0	0	0	0

Ye		G-Ye	
SAT	HUE	SAT	HUE
0	0	0	0

Cy		B-Cy	
SAT	HUE	SAT	HUE
0	0	0	0

Mg		R-Mg	
SAT	HUE	SAT	HUE
0	0	0	0

SKIN TONE MASKING			
SAT	HUE		
0	0		

CHROMA SATURATION			
TOTAL			
0			

Item	Setting	Description
LINEAR 1		
R-G	-64 to +63	Adjusts the linear masking part 1.
R-B	-64 to +63	
G-R	-64 to +63	
LINEAR 2		
G-B	-64 to +63	Adjusts the linear masking part 2.
B-R	-64 to +63	
B-G	-64 to +63	
R Ye-R		Adjusts the 12 vector masking of R area and Ye-R area. SAT: Color saturation HUE: Color hue
R SAT	-64 to +63	
R HUE	-64 to +63	
Ye-R SAT	-64 to +63	
Ye-R HUE	-64 to +63	
G Cy-G		Adjusts the 12 vector masking of G and Cy-G area. SAT: Color saturation HUE: Color hue
G SAT	-64 to +63	
G HUE	-64 to +63	
Cy-G SAT	-64 to +63	
Cy-G HUE	-64 to +63	
B Mg-B		Adjusts the 12 vector masking of B and Mg-B area. SAT: Color saturation HUE: Color hue
B SAT	-64 to +63	
B HUE	-64 to +63	
Mg-B SAT	-64 to +63	
Mg-B HUE	-64 to +63	
Ye G-Ye		Adjusts the 12 vector masking of Ye and G-Ye area. SAT: Color saturation HUE: Color hue
Ye SAT	-64 to +63	
Ye HUE	-64 to +63	
G-Ye SAT	-64 to +63	
G-Ye HUE	-64 to +63	
Cy B-Cy		Adjusts the 12 vector masking of Cy and B-Cy area. SAT: Color saturation HUE: Color hue
Cy SAT	-64 to +63	
Cy HUE	-64 to +63	
B-Cy SAT	-64 to +63	
B-Cy HUE	-64 to +63	
Mg R-Mg		Adjusts the 12 vector masking of Mg and R-Mg area. SAT: Color saturation HUE: Color hue
Mg SAT	-64 to +63	
Mg HUE	-64 to +63	
R-Mg SAT	-64 to +63	
R-Mg HUE	-64 to +63	
SKIN TONE MASKING		Adjusts the skin tone masking.
SAT	-64 to +63	
HUE	-64 to +63	
CHROMA SATURATION		Adjusts the chroma saturation.
TOTAL	-64 to +63	

LCD menu

5.2.4 SKIN DETAIL menu (ADJUST-1) & description.

ADJUST-1				
GENERAL	DETAIL	MASKING	SKIN DETAIL	OTHERS
CH1	CH2	THRESHOLD	CH/GATE SELECT	HIGH CHROMA
				CLEAR
CH1				
LEVEL	PHASE	PHASE FINE	WIDTH	
0	Ye-R	0	0	
CH2				
LEVEL	PHASE	PHASE FINE	WIDTH	
0	Ye-R	0	0	
THRESHOLD				
LEVEL				
0				
CH/GATE SELECT				
CH	GATE			
CH1+2	CH1			
HIGH CHROMA				
R	G	B		
0	0	0		

Item	Setting	Description
CH1 LEVEL PHASE PHASE FINE WIDTH	-128 to +127 Ye-R,R-Mg,Mg-B,B-Cy,Cy-G,G-Ye -128 to +127 -128 to +127	Adjusts the CH1 skin tone detail parameter manually.
CH2 LEVEL PHASE PHASE FINE WIDTH	-128 to +127 Ye-R,R-Mg,Mg-B,B-Cy,Cy-G,G-Ye -128 to +127 -128 to +127	Adjusts the CH2 skin tone detail parameter manually.
THRESHOLD LEVEL	-128 to +127	Adjusts the threshold level of the skin tone detail.
CH/GATE SELECT CH GATE	OFF,CH1,CH2,CH1+2 CH1,CH2	Selects the Channel of the skin tone detail and gate.
HIGH CHROMA R G B	-128 to +127 -128 to +127 -128 to +127	Adjusts the detail of high saturation color area.

5.2.5 OTHERS menu (ADJUST-1) & description.

ADJUST-1				
GENERAL	DETAIL	MASKING	SKIN DETAIL	OTHERS
AUTO IRIS	SETUP LEVEL			
				CLEAR
AUTO IRIS				
GATE	PEAK/AVE	SPEED		
1	2/8	0		
SETUP LEVEL				
BLACK	FLARE	GAMMA		
5.00%	12.00%	58.00%		

Item	Setting	Description
AUTO IRIS GATE PEAK/AVE SPEED	1,2,3,4,5,6 0/8 1/8 ... 4/8 -128 to +127	Selects the auto iris gate pattern and the peak/average ratio Adjusts the auto iris speed.
SETUP LEVEL BLACK FLARE GAMMA	0.0% ... 12.35% 0.0% ... 24.70% 42.20% ... 67.70%	Adjusts the black setup level the flare reference level the gamma cross point

* When the AUTO IRIS menu is selected, an IRIS GATE is displayed on the PIX output of the CU-HD1000.

LCD menu

5.3 ADJUST-2 MENU

5.3.1 SYSTEM TIMING menu (ADJUST-2) & description.

ADJUST-2			
SYSTEM TIMING	SD DETAIL	ON/OFF	
HD TIMING	SD TIMING	Y/C LEVEL	
			CLEAR
HD TIMING			
H PHASE			
0			
SD TIMING			
SDI H PHASE	VBS H PHASE	SC COARSE	SC FINE
0	0	0°	0
Y/C LEVEL			
Y	C		
0	0		

Item	Setting	Description
HD TIMING H PHASE	-128 to +127	Adjusts the HDTV horizontal timing for external sync
SD TIMING SDI H PHASE VBS H PHASE SC COARSE SC FINE	-128 to +127 -128 to +127 0° 90° 180° 270° -128 to +127	Adjusts the SDTV timing for Genlock signal.
Y/C LEVEL Y C	-128 to +127 -128 to +127	Adjusts Y and C signal level of CCU output.

5.3.2 SD DETAIL menu (ADJUST-2) & description.

ADJUST-2			
SYSTEM TIMING	SD DETAIL	ON/OFF	
DETAIL LEVEL	LEVEL DEPEND	CRISP	BOOST FREQ
BALANCE			DETAIL KNEE
			CLEAR
DETAIL LEVEL			
TOTAL	H	V	
0	0	0	
LEVEL DEPEND			
POINT	SLOPE		
0	0		
CRISP			
H	V		
0	0		
BOOST FREQUENCY			
FREQ			
6MHz			
DETAIL KNEE			
WHITE	BLACK		
0	0		
BALANCE			
POS/NEGA			
8/8			

Item	Setting	Description
DETAIL LEVEL TOTAL H V	-128 to +127 -128 to +127 -128 to +127	Adjusts detail level Total : Horizontal and Vertical H : Horizontal V : Vertical
LEVEL DEPEND POINT SLOPE	-128 to +127 -128 to +127	Adjusts level depend POINT : Threshold point SLOPE : correction ratio
CRISP H V	-128 to +127 -128 to +127	Adjusts crisp threshold H : Horizontal V : Vertical
BOOST FREQUENCY	4MHz, 5MHz, 6MHz	Selects Boost frequency
DETAIL KNEE WHITE BLACK	-128 to +127 -128 to +127	Adjusts detail knee point.
BALANCE POGI/NEGA	8/4, 8/5, 8/6, 8/7, 8/8 7/8, 6/8, 5/8, 4/8	Adjusts detail balance.

LCD menu

5.3.3 ON/OFF menu (ADJUST-2) & description.

ADJUST-2		
SYSTEM TIMING	SD DETAIL	ON/OFF
ASPECT 16:9	COMB FILTER ON	HD MODE 1080i

Item	Setting	Description
ASPECT	16:9 4:3	Selects aspect ratio.
COMB FILTER	ON OFF	Selects comb filter on/off.
HD MODE	1080i 720P	Selects HDTV scan mode.

LCD menu

5.4 FILE MENU

5.4.1 SCENE FILE select description.

FILE				
SCENE FILE				
SCENE 0	SCENE 1	SCENE 2	SCENE 3	SCENE 4
	SCENE 5	SCENE 6	SCENE 7	SCENE 8
SCENE PRESET			MEMORY	SCENE CLEAR
SCENE FILE				
SCENE				
	2			

Press SCENE0,1,...,8, or PRESET, then the file data is set to a camera immediately.

5.4.2 SCENE FILE memory description.

FILE				
SCENE FILE				
SCENE 0	SCENE 1	SCENE 2	SCENE 3	SCENE 4
	SCENE 5	SCENE 6	SCENE 7	SCENE 8
SCENE PRESET		SET	MEMORY	SCENE CLEAR
SCENE FILE				
SCENE	MEMORY			
	2	1		

(ex. The SCENE2 data is memorized to the SCENE1)

(1)Press the SCENE2, then the SCENE2 file is selected.

(2)Press MEMORY, then press the SCENE1.

(3)Press SET, then the data is memorized to the SCENE1.

If MEMORY is pressed again before the SET is pressed, the memory action is canceled.

5.4.3 SCENE FILE clear description.

FILE				
SCENE FILE				
SCENE 0	SCENE 1	SCENE 2	SCENE 3	SCENE 4
	SCENE 5	SCENE 6	SCENE 7	SCENE 8
SCENE PRESET		SET	MEMORY	SCENE CLEAR
SCENE FILE				
SCENE				
	3			

(1) Press SCENE CLEAR.

(2) Press SET, then the SETUP FILE is memorized to the selected SCENE FILE. If the CLEAR button is pressed again before the SET is pressed, the clear action is canceled.

LCD menu

5.5 CONFIG MENU

5.5.1 DATE/TIME menu (CONFIG) & description.

CONFIG				
DATE/TIME	BRIGHT	BUZZER	SWITCHER	OTHERS
DATE	TIME			
SET				
DATE				
YEAR	MONTH	DAY		
2009	1	29		
TIME				
HOUR	MINUTE			
21	24			

Item	Setting	Factory setting	Description
YEAR	From 2000 to 2100	2000	
MONTH	From 1 to 12	1	
DAY	From 1 to 31	1	
HOUR	From 00 to 23	00	24 hours indication only
MINUTE	From 00 to 59	00	

To adjust date and time

- 1) Adjust date and time by control knob.
- 2) After adjustment, press SET to be active the date and time.

Notes

Date and Time are not stored even if the SET is not pressed after adjusting.

5.5.2 BRIGHT menu (CONFIG) & description.

CONFIG				
DATE/TIME	BRIGHT	BUZZER	SWITCHER	OTHERS
BRIGHT				
BRIGHT				
LCD	LED			
8	8			

Item	Setting	Factory setting	Description
LCD	From 1 to 17	8	Adjusts LCD back light brightness
LED	From 1 to 16		Adjusts LED brightness

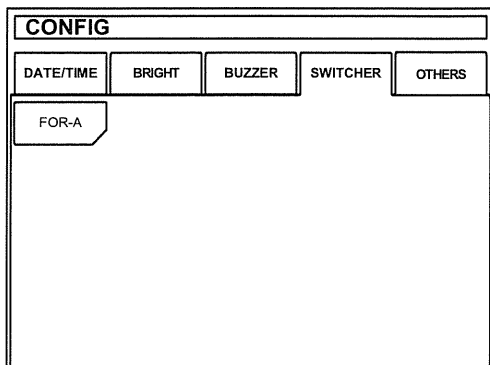
5.5.3 BUZZER menu (CONFIG) & description.

CONFIG				
DATE/TIME	BRIGHT	BUZZER	SWITCHER	OTHERS
FAULT OFF	CALL OFF	BEEP OFF		

Item	Setting	Factory setting	Description
FAULT	ON, OFF	ON	Auto setup fault alarm ON/OFF
CALL	ON, OFF	ON	CALL sound ON/OFF
BEEP	ON, OFF	ON	Button pressing sound ON/OFF

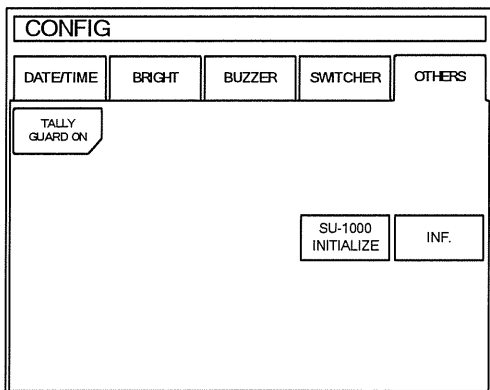
LCD menu

5.5.4 SWITCHER menu (CONFIG) & description.



Switcher select for serial control (RS-232C) input.

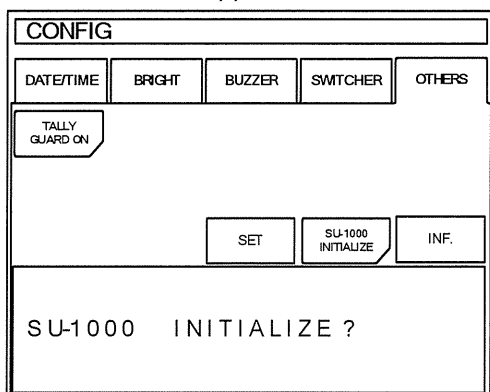
5.5.5 OTHERS menu (CONFIG) & description.



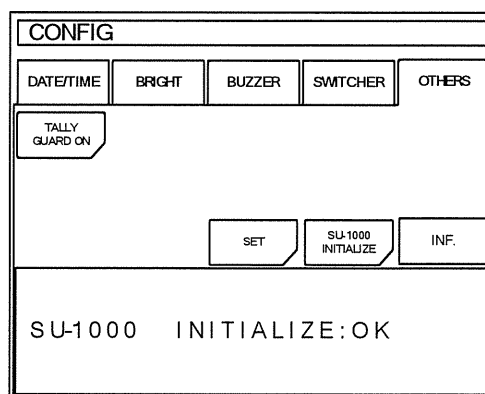
Item	Setting	Factory setting	Description
TALLY GUARD ON	ON, OFF	OFF	If this setting is ON, the SU-1000 does not output any auto setup command to the selected camera that is on tally.
SU-1000 INITIALIZE		—	Initialize of SU-1000 config setting.
INF.		—	Displays version information

SU-1000 initializing

Press SU-1000 INITIALIZE button, then SET button appears.



Press SET button, then SU-1000 is initialized.



LCD menu

5.6 DATA MENU

5.6.1 Data transfer

One camera setting data can be transferred to the other cameras.

The data (Item) is selectable as below.

These contents can not be selected one by one. All of contents in Item are transferred.

Camera or CCU	Item	Item contents
Camera	COLOR BALANCE	BLACK、GAIN、FLARE、GAMMA、 GAMMA TABLE、KNEE POINT、KNEE SLOPE、 WHITE CLIP、KNEE SAT、BLACK STRETCH
	DETAIL	DETAIL LEVEL、LEVEL DEPEND、CRISP、BOOST FREQ、BALANCE、DETAIL KNEE、KNEE DETAIL、 DETAIL SOURCE
	MASKING	LINEARE MASKING、12VECTOR MASKING、 SKIN TONE MASKING、CHROMA SATURATION
	SKIN DETALE	CH1 SETTING、CH2 SETTING、THRESHOLD、 CH/GATE SELECT、HIGH CHROMA
CCU	SD DETAIL	DETAIL LEVEL、LEVEL DEPEND、CRISP、BOOST FREQUENCY、DETAIL KNEE、BALANCE

DATA TRANSFER menu

DATA

DATA TRANSFER		SD CARD	
COLOR BALANCE	DETAIL	MASKING	SKIN DETAIL
SD DETAIL			
FROM	TO	START	

FROM:CAMERA NO. 3 TRANSFER FINISHED

TO :CAMERA NO.

1	2	4	5	6	7	8	9	10	11	12
OK	OK	OK	NG	OK	OK	NG	OK	OK	OK	OK

LCD menu

The method of data transfer

- 1) When the DATA menu is displayed, message is displayed about source camera select, destination camera select, and item select.

```
FROM:SELECT SOURCE CAMERA NO.  
TO   :SELECT DESTINATION CAMERA NO.  
      SELECT TRANSFER ITEMS
```

- 2) Press **FROM** , then choose source camera with a camera select button **1** to **12** .
- 3) Press **TO** , then choose destination cameras with a camera select button **1** to **12** .

```
FROM:CAMERA NO.  
  3  
TO   :CAMERA NO.  
  1  2  4  5  6  7  8  9 10 11 12
```

- 4) Select transfer item. The selected item button is colored with yellow.

- 5) Press **START** to begin transferring data from the source to destination cameras.

```
FROM:CAMERA NO.      BEING TRANSFER  
  3  
TO   :CAMERA NO.  
  1  2  4  5  6  7  8  9 10 11 12  
OK OK OK NG OK OK
```

- 6) If transfer was success, "OK" appears under camera number.
If transfer was fail, "NG" appears under camera number. Check the communication line, please.

LCD menu

5.6.2 SD CARD

Camera system setting data can be stored to an SD card memory.

The SU-1000 can store 48 setting, and stored setting can be transferred to camera system.

Notes

- 1) Maximum memory size is 2GB.
- 2) If no SD card is inserted, "NO CARD" is displayed on LCD.
- 3) If the SD card has some problem, "SD CARD ERR" is displayed on LCD.

SD CARD menu

DATA	
DATA TRANSFER	SD CARD
SAVE	LOAD
CLEAR FILE	
START	
1:SK-HD1000 #01, CU-3300 #01 08/12/15 8:02	
2:	
3:SK-HD1000 #05, CU-HD1000 #02 09/01/12 22:47	
TO :CAMERA NO.	
1 2 3 4 5 6 7 8 9 10 11 12	
LOADING...	
BACK PAGE <<	NEXT PAGE >>
▲ ▼	

The method of SAVE to SD card

- 1) Select file number by pressing ▲ or ▼ button.

To role up or down page, press BACK PAGE or NEXT PAGE button.

The selected file is displayed with reverse.

Notes: If the selected number has already data, the data will be overwritten.

- 2) Press SAVE , then choose the camera with a camera select button 1 to 12 .
- 3) Press START to begin saving data from the selected camera to SD card.

1:SK-HD1000 #01, CU-3300 #01 08/12/15 8:02
2:
3:SK-HD1000 #05, CU-HD1000 #02 09/01/12 22:47
FROM:CAMERA NO.
3
SAVING...

← Selected file number (reversed)

- 4) If saving was success, "OK" appears under the camera number, and file information is displayed.
The information has camera type, CCU type, date, and time.
Date and time are stored by the SU-1000's clock setting.
If saving was fail, "NG" appears under the camera number.

LCD menu

The method of LOAD from SD card

- 1) Insert an SD card that has already be stored SK-HD1000 camera system data.
- 2) Press **LOAD** , then choose the cameras with a camera select button **1** to **12** .
- 3) Select the SD card data by pushing **▲** or **▼** button and **BACK PAGE** or **NEXT PAGE** button.

The reversed file is the selected data.

- 4) Press **START** to begin loading data from SD card to the selected cameras.
- 5) If the loading was success, "OK" appears under the camera number.

If the loading was fail, "NG" appears under the camera number.

1:SK-HD1000 #01,CU-3300 #01												
08/12/15 8:02												
2:												
3:SK-HD1000 #05,CU-HD1000 #02												
09/01/12 22:47												
TO :CAMERA NO.												
1	2	3	4	5	6	7	8	9	10	11	12	
LOADING...												

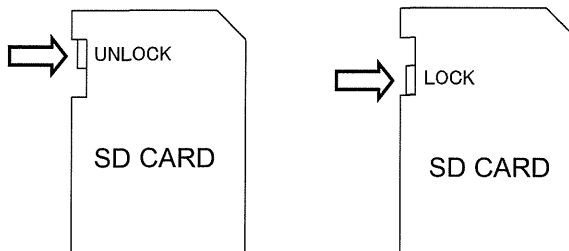
← Selected data number (reversed)

1:SK-HD1000 #01,CU-3300 #01												
08/12/15 8:02												
2:												
3:SK-HD1000 #05,CU-HD1000 #02												
09/01/12 22:47												
TO :CAMERA NO.												
1	2	3	4	5	6	7	8	9	10	11	12	
OK	OK	OK	OK	OK	OK	OK	NG	OK	OK	OK	OK	

← OK: success NG: fail

SD CARD writing protection

SD CARD has a lock to protect stored data.



- 1) UNLOCK
SAVE and LOAD are available.
- 2) LOCK
LOAD is available. If SAVE is executed with LOCK, "SD CARD ERR" message appears on LCD.

Specifications

6. Specifications

(1) Number of controllable cameras

- Internal DSU only: 12

(2) GROUP control

- GROUP POWER ON/OFF
- GROUP AUTO SETUP

(3) Analog manual adjustment using the rotary encoder

(4) On/off control

(5) Display using an LCD display panel

The large LCD display panel can display items such as a camera model name, a camera No., a camera status, adjustment items and percentage indication.

(6) File handling

- PRESET FILE
- SCENE FILE (0 to 8)

The above files can be called, saved, and cleared.

(7) Auto setup operations

- External shooting chart auto setup (*1)
- Auto skin tone
- Auto Shading
- Auto white
- Auto black
- Auto setup interrupt (break off)

*1: A gray scale chart is used for chart auto setup.

(8) Monitor picture selection

R, G, B, ENCR, WF SUP, and WF SEQ

(9) TALLY display

R TALLY and G TALLY display

(10) Passing control authority

- CTL HEAD: Passes control to the camera head.

Specifications

(11) SCU FUNCTION restriction

All control items are inhibited when the PANEL ENABLE SWITCH is off:

(12) External VIDEO SWITCHER control

An external VIDEO SWITCHER switching signal is output in conjunction with a camera select section.

(13) Built-in VE switch input interface

A camera can be selected in conjunction with switching of a VE switch.

(14) Built-in SD card interface

Camera adjustment data (SCENE files) for up to 48 cameras can be saved.

Rating

(1) Dimensions: 385 (W) x 255 (D) x 65 (H) mm

(2) Mass: 4.1 kg

(3) Power input: 100/117/220/240 V 50/60 Hz Switching not required

Power consumption: Approx. 33 VA

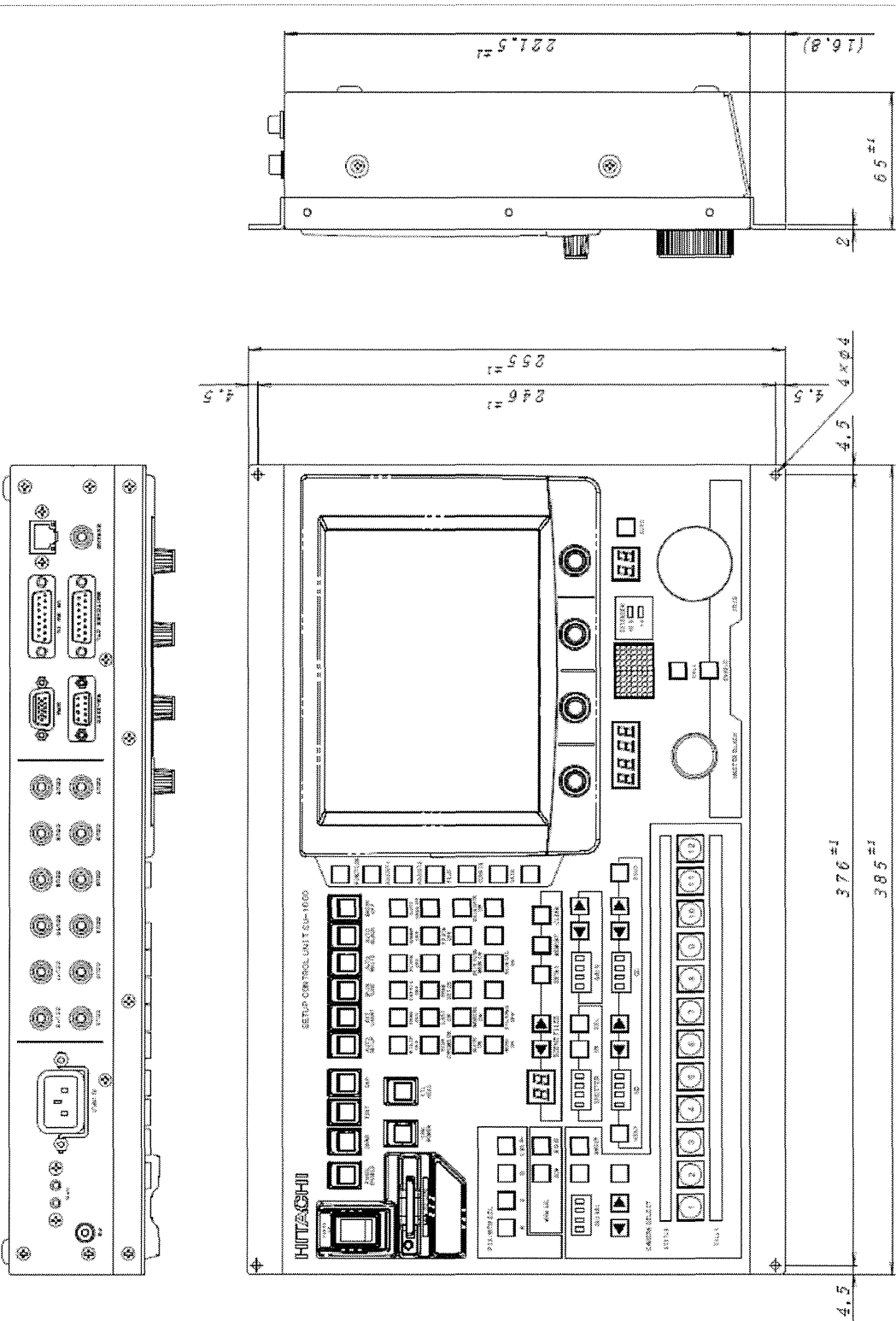
(4) Input signal

- VE SW IN: Contact input

(5) Ambient temperature: 0 to +40 °C

Specifications

Dimensions

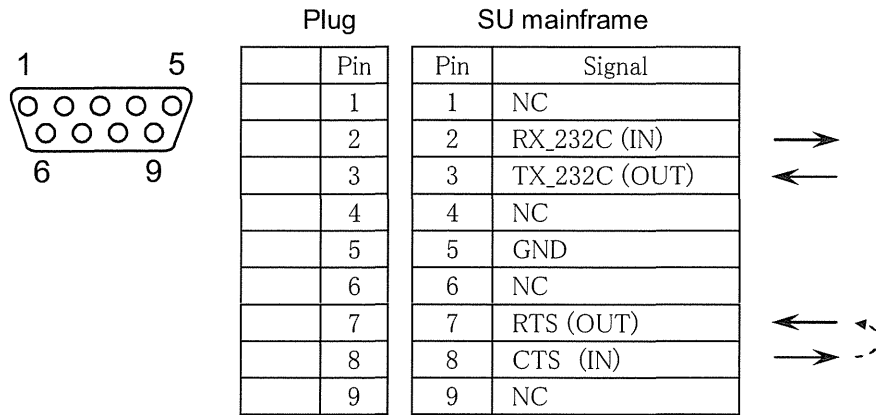


Unit : mm

Service information

Connector pin diagram

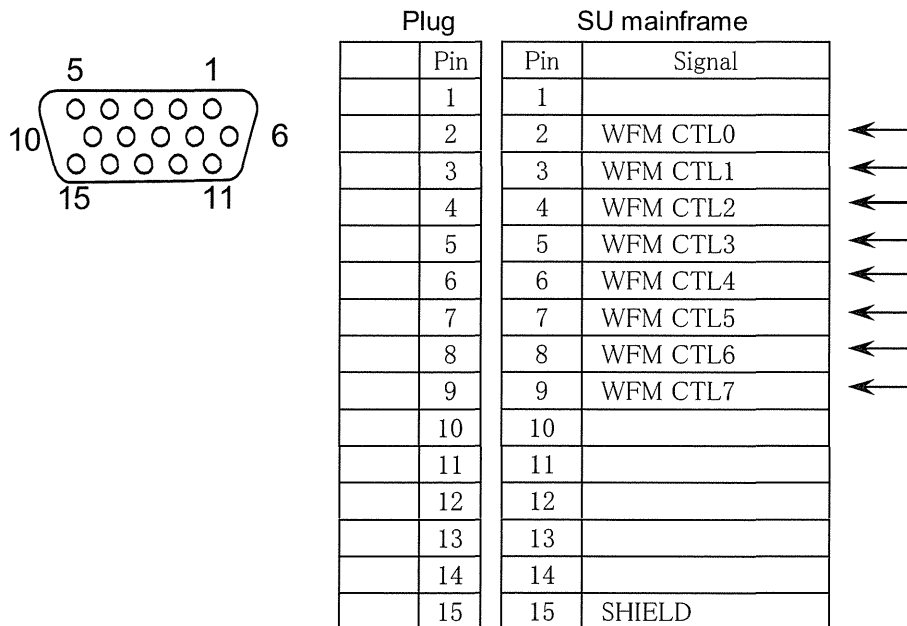
RS-232C(9pin D-sub male:RDED-9P-LNA(4-40)(55))



*RTS:Request To Send

*CTS:Clear To Send

WFM CONTROL (15pin female:YKF42-8043N)

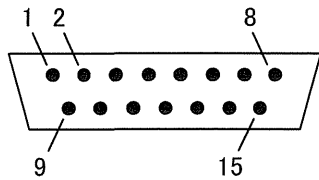


MODE	PIX OUT	WFM OUT	CTL0	CTL1	CTL2	CTL3	CTL4	CTL5	CTL6	CTL7
R	R	R	Lo	Hi	Hi	Hi	Hi	Hi	Hi	Hi
G	G	G	Hi	Lo	Hi	Hi	Hi	Hi	Hi	Hi
B	B	B	Hi	Hi	Lo	Hi	Hi	Hi	Hi	Hi
ENC	ENC	ENC	Hi	Hi	Hi	Lo	Hi	Hi	Hi	Hi
SUP	ENC	SUP	Hi	Hi	Hi	Hi	Lo	Hi	Hi	Hi
SEQ	ENC	SEQ	Hi	Hi	Hi	Hi	Hi	Lo	Hi	Hi

Service information

SWITCHER CTL

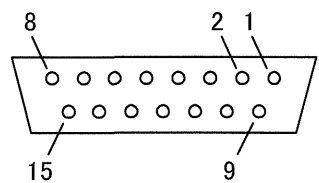
HDAB-15P(05)



Pin	Signal
1	SWER SEL 1
2	SWER SEL 2
3	SWER SEL 3
4	SWER SEL 4
5	SWER SEL 5
6	SWER SEL 6
7	SWER SEL 7
8	SWER SEL 8
9	SWER SEL 9
10	SWER SEL 10
11	SWER SEL 11
12	SWER SEL 12
13	NC
14	SWER SEL C
15	SWER SEL C

VE SW IN

HDAB-15S(05)

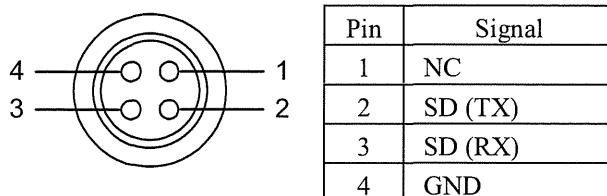


Pin	Signal
1	VE SEL 1
2	VE SEL 2
3	VE SEL 3
4	VE SEL 4
5	VE SEL 5
6	VE SEL 6
7	VE SEL 7
8	VE SEL 8
9	VE SEL 9
10	VE SEL 10
11	VE SEL 11
12	VE SEL 12
13	NC
14	VE SEL COM
15	VE SEL COM

Service information

CCU 1-12 (4 pin female:HR10A-7R-4S(73))

Combined connector: HR10A-7P-4P

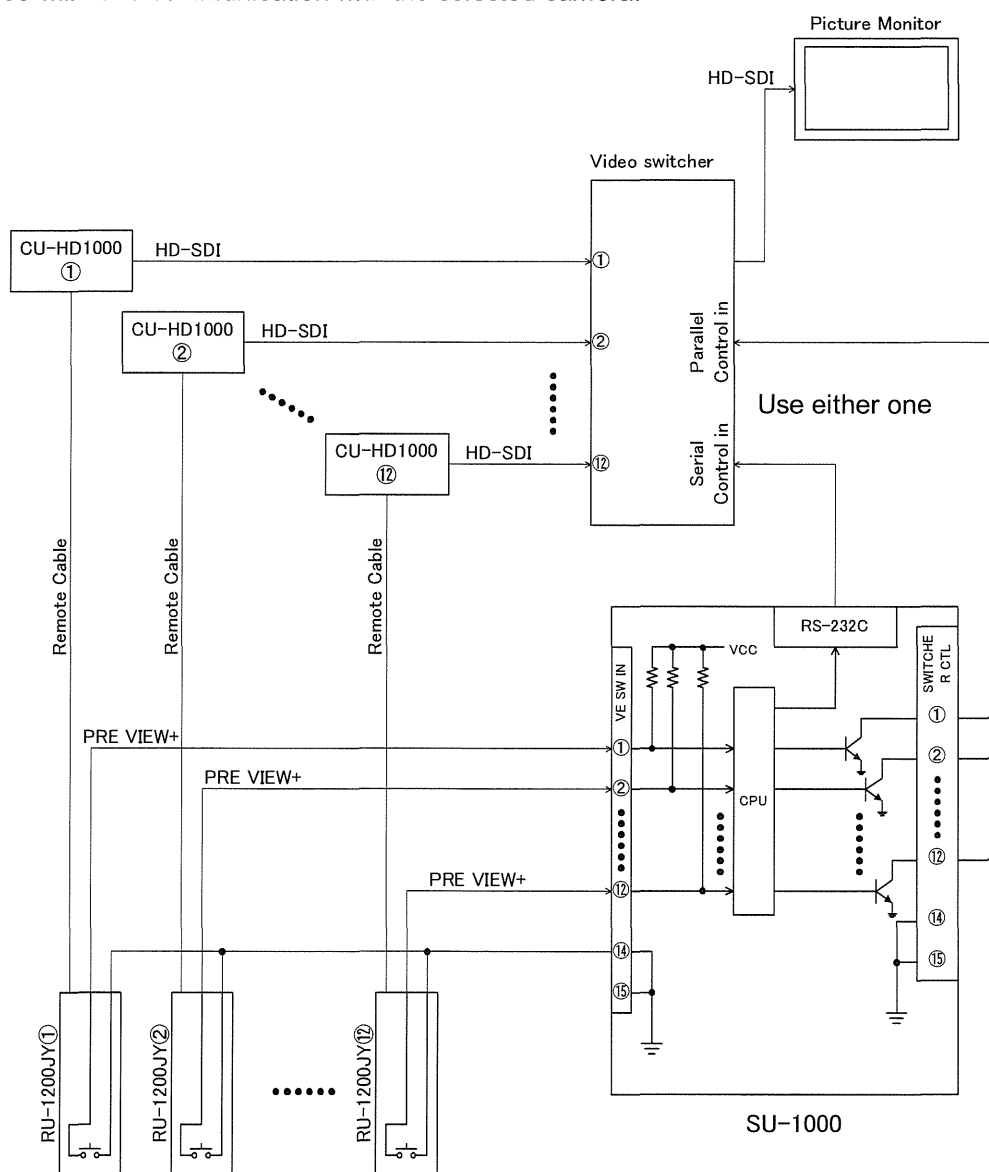


SU-1000 switcher control system

The SU-1000 can control video switcher by RS-232C and parallel signal (open collector).

The RU-1200JY's PRE VIEW switch can be connected to the SU-1000's VE SW IN.

When a PRE VIEW switch is pressed, the selected camera's picture appears on a picture monitor, and the SU-1000 will have communication with the selected camera.



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