

VR-616 DIGITAL VIDEO RECORDER

JVC®

DIGITAL VIDEO RECORDER

VR-616

INSTRUCTIONS



JVC®

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Thank you for purchasing this JVC product.
Before operating this unit, please read the
instructions carefully to ensure the best
possible performance.

For Customer Use:
Enter below the serial No. which is
located on the bottom of cabinet. Retain
this information for future reference.

Model No: VR-616

Serial No: _____

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1. IMPORTANT SAFEGUARDS



1. Read all of these instructions.
2. Save these instructions for later use.
3. All warnings on the product and in the operating instructions should be adhered to.
4. Unplug this appliance system from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
6. Do not use this appliance near water " for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
7. Do not place this appliance on an unstable cart, stand, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance.
Use only with a cart or stand recommended by the manufacturer, or sold with the appliance.
Wall or shelf mounting should follow the manufacturer instructions, and should use a mounting kit approved by the manufacturer.
An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
8. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the appliance and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface. This appliance should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
9. This appliance should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For appliance designed to operate from battery power, refer to the operating instructions.
10. This appliance system is equipped with a 3-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 obsolete outlet. Do not defeat the safety purpose of the grounding plug.
11. 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 and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
12. Do not allow anything to rest on the power cord. Do not locate this appliance where the cord will be abused by persons walking on it.
13. Follow all warnings and instructions marked on the appliance.
14. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
15. Never push objects of any kind into this appliance through cabinet slots 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 appliance.
16. Do not attempt to service this appliance yourself as opening or removing covers may touch dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
17. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power cord or plug is damaged or frayed.
 - b. If liquid has been spilled into the appliance.
 - c. If the appliance has been exposed to rain or water.
 - d. If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
 - e. If the appliance has been dropped or the cabinet has been damaged.
 - f. When the appliance exhibits a distinct change in performance this indicates a need for service.
18. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
19. Upon completion of any service or repairs to this appliance, ask the service technician to perform routine safety checks to determine that the appliance is in safe operating condition.

PORTABLE CART WARNING
(symbol provided by RETAC)



S3125A

SAFETY PRECAUTIONS (VR-616U)

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

	ATTENTION RISQUE D'ELECTROCUTION NE PAS OUVRIR	
ATTENTION: POUR EVITER TOUT RISQUE D'ELECTROCUTION NE PAS OUVRIR LE BOITIER. AUCUNE PIECE INTERIEURE N'EST A REGLER PAR L'UTILISATEUR. SE REFERER A UN AGENT QUALIFIE EN CAS DE PROBLEME.		



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



Le symbole de l' éclair a l' intérieur d' un triangle équilatéral est destiné a alerter l' utilisateur sur la présence d' une tension dangereuse non isolée dans le boîtier duproduit. Cette tension est suffisante pour provoquer l' electrocution de personnes



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



Le point d' exclamation a l'intérieur d' un triangle équilatéral est destiné a alerter l' utilisateur sur la présence d' opérations d' entretien importantes au sujet desquelles des renseignements se trouvent dans le manuel d' instructions.
Ces symboles ne sont utilisés qu'aux Etats-Unis.

POWER SYSTEM

Connection to the mains supply
This unit should be used with 120V AC only.

CAUTION:
To prevent electric shocks and fire hazards, DO NOT use any other power.

NOTE:
The rating plate (serial number plate) is on the top of the unit.

This Class A digital apparatus complies with Canadian ICES-003.

INFORMATION

This equipment has 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 equipment 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.

SYSTEME D'ALIMENTATION

Raccordement à la principale source d'alimentation
Ce magnétoSCOPE ne doit être utilisé que sur du courant alternatif en 120V.

ATTENTION:
Afin d'éviter tout risque d'incendie ou d'électrocution, ne pas utiliser d'autres sources d'alimentation électrique.

REMARQUE:
La plaque d'identification (numero de serie) se trouve sur le dessus de l'appareil.

Cet appareil numérique de la Class A est conforme à la norme NMB-003 du Canada.

CAUTION
CHANGES OR MODIFICATIONS NOT APPROVED BY JVC COULD VOID USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

SAFETY PRECAUTIONS(VR-616E)

POWER SYSTEM
Connection to the mains supply
This unit operates on voltage of 220 V to 240 V AC, 50 Hz/60 Hz.

Note:
The rating plate and the safety caution are on the top of the unit.

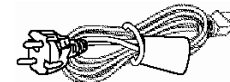
WARNING
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Warning Notice
FOR YOUR SAFETY (Australia)
1. Insert this plug only into effectively earthed threepin power outlet.
2. If any doubt exists regarding the earthing, consult a qualified electrician.
3. Extension cord, if used, must be three-core correctly wired.

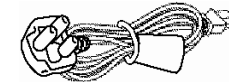
IMPORTANT (In the United Kingdom)
Mains Supply (AC 230 V)
WARNING – THIS APPARATUS MUST BE EARTHED
The wires in this mains lead are coloured in accordance with the following code;
GREEN-and-YELLOW : EARTH
BLUE : NEUTRAL
BROWN : LIVE
As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.
The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the safety earth symbol or coloured GREEN or GREEN-AND-YELLOW.
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or which is coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

Caution for AC Power Cord
FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.
Appropriate AC Power Cord must be used in each local area.

FOR CONTINENTAL EUROPE, ETC.
Not to be used in the U.K.



FOR U.K. ONLY
If the plug supplied is not suitable for your socket outlet, it should be cut off and appropriate one fitted.



SICHERHEITSVORKEHRUNGEN(VR-616E)

SPANNUNGSVERSORGUNG

Anschluss am Netz

Die Betriebsspannung für dieses Gerät beträgt AC220 V bis 240 V, 50 Hz/60 Hz.

Hinweis:

Das Typenschild und die Sicherheitshinweise befinden sich auf der Oberseite des Geräts.

WARNUNG

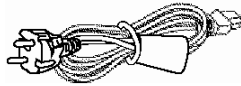
Bei dem Gerät handelt es sich um ein Klasse-A-Produkt. In Haushaltsumgebungen kann ein solches Produkt Funkstörungen verursachen. In einem solchen Fall muss der Benutzer geeignete Maßnahmen ergreifen.

Hinweis zum Netzanschlußkabel

Zu Ihrer Sicherheit lesen Sie bitte das folgende sorgfältig. Verwenden Sie ausschließlich ein in Ihrem Land zulässiges Netzkabel.

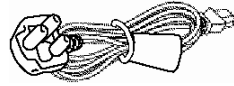
Für Kontinentaleuropa

Nicht für den Gebrauch in Großbritannien.



Nur für Großbritannien

Falls der mitgelieferte Stecker sich nicht für Ihre Steckdose eignet, sollte er abgeschnitten und ein dafür ein passender angebracht werden.



PRECAUTIONS DE SECURITE(VR-616E)

SYSTEME D'ALIMENTATION

Raccordement à la principale source d'alimentation

Cet appareil fonctionne sur une tension courant alternatif de 220 - 240 V, 50 Hz/60 Hz.

Remarque:

La plaque d'identification et les précautions de sécurité se trouvent sur le dessus de l'appareil.

AVERTISSEMENT

Ce produit est un produit de catégorie A. Dans un environnement domestique ce produit peut causer des interférences radio auquel cas, il peut être demandé à l'utilisateur de prendre les mesures qui s'imposent.

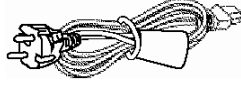
Précaution d'utilisation du cordon de secteur

POUR VOTRE SECURITE, LIRE ATTENTIVEMENT LE TEXTE SUIVANT:

Un cordon d'alimentation CA approprié doit être utilisé dans chaque réseau local.

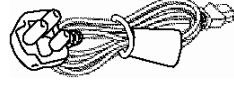
**PRECAUTIONS DE SECURITE
POUR L'EUROPE CONTINENTALE**

Ne pas utiliser au Royaume-Uni.



POUR LE ROYAUME-UNI SEULEMENT

Si la fiche d'alimentation ne correspond pas à la prise secteur, il faut la remplacer par une fiche appropriée.



INSTRUCCIONES DE SEGURIDAD(VR-616E)

SISTEMA ELÉCTRICO

Conexión a la alimentación

Esta unidad funciona bajo una tensión de entre 220 V y 240 V CA, 50 Hz/60 Hz.

Recuerde:

La placa de datos de servicio e instrucciones de seguridad se encuentran en la tapa de la unidad.

ADVERTENCIA

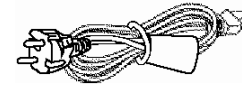
Esto es un producto de Clase A. En un ambiente doméstico, este producto puede ocasionar perturbaciones radioeléctricas, en cuyo caso, puede que el utilizador necesite tomar las medidas adecuadas.

INSTRUCCIONES PARA EL CABLE ELÉCTRICO CA

POR RAZONES DE SEGURIDAD LEA DETENIDAMENTE LAS SIGUIENTES INSTRUCCIONES. Debe utilizarse un Cable de Alimentación AC apropiado en cada área local.

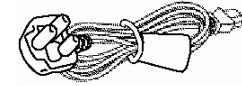
PARA EUROPA CONTINENTAL, ETC.

No se utiliza en Reino Unido.



SÓLO PARA REINO UNIDO

Si el enchufe que se suministra no es el adecuado para su toma, deberá cortarlo y empalmar otro que sea compatible.



NORME DI SICUREZZA(VR-616E)

SISTEMA DI ALIMENTAZIONE

Connessione all'alimentazione principale

L'unità funziona con un voltaggio da 220 V a 240 V, con una frequenza di 50 Hz/60 Hz.

NOTA:

La potenza e le norme di sicurezza sono riportate sulla parte superiore dell'apparecchio.

AVVERTENZA

Questo è un prodotto di Classe A. In un ambiente domestico questo prodotto può causare interferenze radio nel qual caso l'utente deve prendere misure adeguate.

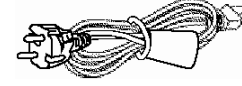
Precauzioni di sicurezza per alimentazione c.a.

PER LA VOSTRA SICUREZZA, LEGGERE ATTENTAMENTE LE SEGUENTI INDICAZIONI.

Deve essere usato un cavo di alimentazione c.a. appropriato in ogni area locale.

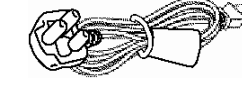
PER L'EUROPA CONTINENTALE

Non è utilizzabile in Gran Bretagna.



SOLO PER LA GRAN BRETAGNA

Se il cavo in dotazione non è adatto per il vostro tipo di presa, deve essere sostituito con uno appropriato.



SAFETY PRECAUTIONS(VR-616U/E)

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

CAUTION
To prevent electric shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified service personnel.

The OPERATE button does not completely shut off mains power from the unit, but switches operating current on and off.

● **Place of storage and use**

Please avoid storing or using this DVR in the following places:

- Extremely hot or cold places beyond the allowable temperature for operation (5°C (41°F) - 40°C (104°F)).
- Humid or dry places beyond the allowable humidity range for operation (30% - 80% RH).
- Dusty or sandy places.
- Places exposed to oil, smoke or steam, such as the kitchen vicinity.
- Vibrating or unstable places.
- Places prone to condensation.
- Places that generates strong magnetic fields, e.g., transformer or motor.
- Places near devices that generate electric waves, e.g., transceiver or mobile phone.
- Places that generate radiation, X-rays or corrosive gases.

● **Handling the unit**

- Please do not place heavy objects on the DVR, like a monitor or TV.
- Please do not block the ventilation openings.
- Avoid violent shocks to the unit. Do not drop the unit.
- Do not stack up the equipment to prevent temperature within from rising.
- Do not stand this equipment vertically during use.
- Handle this equipment with care. Do not subject it to physical shock.
- Do not insert foreign object into this unit as this may cause malfunction or electric shock.
- Please keep the mobile rack into the compartment. As injury may result from fingers getting clamped.

• **Maintaining the unit (Please turn off the power before performing maintenance work.)**

Please wipe the unit with a soft cloth. Do not wipe it with thinner or benzene lest the surface melts or becomes dull.

- For stubborn stains, wipe first with a water-diluted neutral detergent and then wipe dry.
- Please use the supplied power cord. Using a different type or damaged cord may cause fire or electric shock.
 - To save energy, be sure to turn off the system when not in use.
 - Do not use the power cord supplied with this equipment on other devices.

• **Batteries (remote controller)**

- Please use AAA batteries.
- Please use 2 new batteries. (Do not mix new and old batteries.)
- Please load the batteries correctly according to the + and - signs.
- Please read the precautions printed on the batteries.
- If leaked battery fluid gets in eyes, rinse with clean water and consult a doctor.
- If fluid leaks from the battery, please wipe the battery compartment thoroughly.
- If the fluid comes into contact with your body, please rinse the affected parts with water thoroughly.

SICHERHEITSVORKEHRUNGEN(VR-616U/E)

ACHTUNG:
UM DER GEFAHR VON BRÄNDEN UND ELEKTRISCHEN SCHLÄGEN VORZUBEUGEN, DARF DIESES GERÄT WEDER DEM REGEN NOCH HOHER FEUCHTIGKEIT AUSGESETZT WERDEN.

ACHTUNG
Um elektrische Schläge zu vermeiden, das Gehäuse nie öffnen. Im Innern befinden sich keine Teile, die vom Benutzer gewartet werden können. Überlassen Sie die Wartung qualifiziertem Service-Personal.

Mit der Taste OPERATE wird nur die Betriebsspannung des Geräts ein- und ausgeschaltet, jedoch wird dadurch die Spannung nicht vollständig unterbrochen.

● **Aufbewahrung und Betrieb**

Bitte betreiben und lagern Sie das Gerät nicht an folgenden Orten:

- Orte mit höherer oder niedriger Temperatur als 5°C bis 40°C.
- Orte mit einer Luftfeuchtigkeit außerhalb des Bereichs von 30% bis 80%.
- Orte mit Staub oder Schmutzpartikeln.
- Die Küche und ihre Umgebung sowie andere Orte mit ölhaltigem bzw. heißem Dampf.
- Erschütterungsgefährdete und instabile Orte.
- Orte mit Kondensationsniederschlag.
- Orte mit starken elektromagnetischen Feldern (nahe bei Transformatoren, Motoren etc.).
- In der Nähe von Geräten mit elektromagnetischen Wellen (z.B. Funkgerät oder Handy).
- Wo radioaktive und Röntgenstrahlen auftreten oder korrosives Gas vorhanden ist.

● **Rekorderhandhabung**

- Stellen Sie keine schweren Geräte (wie Monitore oder Fernsehgeräte) auf dem DVR ab.
- Decken Sie die Lüftungsöffnungen nicht ab.
- Setzen Sie das Gerät keinerlei Erschütterungen aus. Lassen Sie das Gerät nicht fallen.
- Stapeln Sie keinesfalls mehrere Geräte übereinander, um eine Überhitzung zu vermeiden.
- Stellen Sie das Gerät im Betrieb nicht senkrecht auf.
- Behandeln Sie das Gerät mit Sorgfalt. Setzen Sie es keinerlei Erschütterungen aus.
- Achten Sie darauf, dass keine Fremdgegenstände in das Gerät gelangen. Dies kann zu Fehlfunktionen führen, ferner besteht die Gefahr eines elektrischen Schlags.
- Lassen Sie den Transportrahmen immer im Fach. Andernfalls besteht die Gefahr des Einklemmens der Finger.

• **Pflege (Vor der Reinigung des Gehäuses ist das Gerät vom Strom zu trennen.)**

Reinigen Sie das Gerät mit einem weichen Tuch. Wischen Sie es nicht mit Verdünnung und Reinigungsbenzin ab, da derartige Substanzen die Geräteoberfläche angreifen können.

Bei hartnäckigen Verschmutzungen wischen Sie das Gerät mit in Wasser gelöstem Neutralreiniger ab und reiben es dann trocken.

- Nur das mitgelieferte Spannungskabel verwenden. Die Verwendung eines anderen Kabels oder eines beschädigten Kabels kann zu Bränden bzw. Elektrischen Schlägen führen.
- Um Energie zu sparen, empfehlen wir, das System abzuschalten, wenn es nicht verwendet wird.
- Benutzen Sie das mit diesem Gerät mitgelieferte Netzkabel nicht für andere Geräte.

• **Batterien (Fernbedienung)**

- Trockenbatterien (AAA) verwenden
- Beide Batterien gleichzeitig austauschen. (Nicht eine abgelaufene und eine neue gleichzeitig verwenden.)
- Die + und - Pole der Batterien sind der angezeigten Richtung entsprechend richtig einzusetzen.
- Die auf den Batterien angegebenen Hinweise ebenfalls lesen.
- Falls Batterieflüssigkeit aus der Batterie auswischen ist, das Batterieabteil gut sauberwischen.
- Sollte die Flüssigkeit mit dem Körper in Kontakt geraten sein, die betreffende Stelle gut mit Wasser abspülen.

PRECAUTIONS DE SECURITE(VR-616U/E)

AVERTISSEMENT:
POUR EVITER LE RISQUES D'INCENDIE OU D'ELECTROCUTION, N'EXPOSER L'APPAREIL NI A L'HUMIDITE NI A LA PLUIE.

ATTENTION

Pour éviter les chocs électriques, ne pas ouvrir le coffret. Aucune pièce à l'intérieur n'est à régler par l'utilisateur. Confier les opérations d'entretien au personnel de service qualifié.

La touche OPERATE ne coupe pas complètement l'alimentation secteur de l'appareil, mais comme le courant de fonctionnement sur marche ou arrêt.

●Installation et stockage

Ne pas l'utiliser ni ranger le DVR aux endroits suivants:

- Chaleur ou froid extrême - température en dehors de la plage permise (5 °C à 40 °C).
- Humidité extrême (moins de 30 % à 80 % RH).
- Dans un endroit poussiéreux.
- Exposé à de l'huile, de la fumée ou de la vapeur, par exemple dans une cuisine ou près du sable.
- Endroits instables ou recevant des vibrations.
- Condensation.
- Champ magnétique puissant généré par des transformateurs, moteurs, etc.
- A proximité d'appareils dégageant de puissants champs magnétiques (émetteur de radio, téléphone portable, etc.).
- Dans un endroit exposé aux rayons X et au gaz produit par la décomposition des déchets.

●Manipulation

- Ne pas placer d'objets lourds tels que qu'un moniteur ou une TV sur le DVR.
- Ne pas bloquer les orifices d'aération.
- Éviter les chocs violents sur l'unité. Ne pas la faire tomber.
- Ne pas empiler l'équipement afin d'éviter toute accumulation de la chaleur.
- Ne pas utiliser cet équipement à la verticale.
- Manipuler l'équipement avec soin. Ne pas l'exposer à des chocs.
- N'insérez pas d'objet étranger dans cette unité. Vous risquez de provoquer un mauvais fonctionnement ou un choc électrique.
- Veuillez maintenir le tiroir amovible dans le compartiment, les doigts risquant de se faire coincer et de provoquer des blessures.

• Entretien du châssis (Débrancher l'appareil du secteur.)

Essuyer l'unité avec un chiffon doux. Ne pas l'essuyer avec un diluant de peinture ou de benzène, cela risque de faire fondre ou de ternir le revêtement.

Pour les tâches tenaces, commencer par les essuyer avec un produit détergent neutre dilué dans de l'eau, puis sécher.

- Ne pas utiliser de cordons d'alimentation autres que celui prescrit (fourni). Des cordons endommagés ou différents de celui prescrit peuvent provoquer un incendie ou une électrocution.
- Pour économiser de l'énergie, ne pas oublier de mettre le système hors tension lorsqu'il n'est pas utilisé.
- Ne pas utiliser de rallonge fourni avec cet équipement sur d'autres appareils.

• Les piles (Télécommande)

- Utiliser les piles AAA/R03.
- Remplacer les piles par deux piles neuves. (Ne pas utiliser une pile neuve avec une pile usée)
- Introduire les piles avec la polarité + et - alignée comme indiqué, dans le bon sens.
- Lire également les instructions sur les piles.
- En cas de fuite de liquide d'une pile, essuyer le liquide coulé dans le compartiment.
- Si du liquide coulant d'une pile entre en contact avec le corps, le rincer immédiatement à l'eau.

INSTRUCCIONES DE SEGURIDAD(VR-616U/E)

ADVERTENCIA:
PARA REDUCIR EL RIESGO DE INCENDIO O DESCARGAS ELÉCTRICAS NO EXPONGA ESTE APARATO A LA LLUVIA O A LA HUMEDAD.

¡ATENCIÓN!

Para evitar descargas eléctricas no abra el aparato. El interior no contiene ninguna pieza para su utilización por parte del usuario. Consulte el mantenimiento con técnicos de mantenimiento cualificados.

El botón OPERATE no desconecta por completo la corriente de la unidad, simplemente enciende y apaga la corriente de funcionamiento.

●Lugares de almacenamiento y uso

No almacene o use esta unidad DVR en los siguientes lugares:

- Lugares excesivamente calurosos o fríos que sobrepasen la temperatura aconsejada para su uso (5°C – 40°C).
- Lugares húmedos o secos que sobrepasen el grado de humedad aconsejado para su uso (30 % – 80 % HR).
- Lugares con polvo o arena.
- Lugares expuestos a aceite, humo o vapor, como las inmediaciones de una cocina.
- Lugares oscilantes o inestables.
- Lugares en que se pueda producir condensación.
- Lugares en los que se produzcan fuertes campos magnéticos, como por ejemplo cerca de un transformador o motor.
- Cerca de dispositivos que produzcan ondas eléctricas, como por ejemplo teléfonos móviles o transmisores-receptores.
- Lugares en los que se generan rayos X o gases corrosivos.

●Manejo de la unidad

- Por favor, no coloque objetos pesados en el DVR, como un monitor o una TV.
- Por favor, no bloquee las aberturas de ventilación.
- Evite choques violentos a la unidad. No deje caer la unidad.
- No amontone el equipo para evitar una subida de temperatura.
- Durante la utilización, no coloque el equipo en la vertical.
- Maneje este equipo con cuidado. No le someta a choques físicos.
- No introduzca objetos extraños en esta unidad. Esto puede provocar malfuncionamiento o choque eléctrico.
- Por favor mantenga la ranura móvil en el compartimiento. Pues los dedos puedan quedar presos lo que provocaría una lesión.

• Mantenimiento de la unidad (desconecte la alimentación antes de realizar cualquier operación de mantenimiento.)

Por favor, limpie la unidad con un paño suave. No la limpie con disolvente o benceno a fin de que la superficie no se derrita ni se deslustre.

Contra las manchas difíciles, limpie primero con un detergente neutro diluido en agua y en seguida, enjuague y seque.

- Utilice el cable de alimentación suministrado. El empleo de un tipo de cable diferente o dañado podría ocasionar un incendio o una descarga eléctrica.
- Para ahorrar energía, asegúrese de apagar el sistema cuando no esté siendo utilizado.
- No utilice el cable de alimentación suministrado con este equipo en otros dispositivos.

• Las pilas (Mando inalámbrico)

- Utilice pilas AAA.
- Utilice 2 pilas nuevas. (no mezcle una pila nueva con una usada)
- Coloque las pilas correctamente según los símbolos + y -.
- Lea las precauciones que acompañan a las pilas.
- Si hay fugas en las pilas, limpie a conciencia el receptáculo de las pilas.
- Si el líquido entra en contacto con su cuerpo, limpie la zona afectada con agua abundante.

NORME DI SICUREZZA(VR-616U/E)

AVVERTENZA:
PER RIDURRE IL RISCHIO DI INCENDIO O DI FOLGORAZIONE NON ESPORRE L'APPARECCHIO ALLA PIOGGIA O ALL'UMIDITÀ.

ATTENZIONE!

Per prevenire le scosse elettriche, non aprire il pannello di copertura (o la parte posteriore). All'interno non vi sono parti riparabili dall'utente. Affidare la manutenzione a personale qualificato.

Il tasto OPERATE non elimina completamente la corrente principale dall'apparecchio, ma semplicemente permette (o meno) la circolazione della corrente.

●Custodia ed uso

Evitare di custodire o utilizzare questo DVR nei seguenti luoghi:

- Caldo o freddo estremi: evitare l'uso dell'apparecchio con temperature al di fuori del range di funzionamento (5 °C - 40 °C).
 - Alta umidità o siccità: evitare l'uso dell'apparecchio con range di umidità al di fuori di 30 % - 80 % RH.
 - Polvere e sabbia.
 - Vapori acquei o oleosi (es. in cucina).
 - Vibrazioni o punti instabili
 - Facile condensazione.
 - Vicinanza di campi magnetici (ad es. vicinanza di trasformatori o motori).
 - Vicinanza a sorgenti elettromagnetiche (es. vicinanza di ricetrasmittenti o telefoni cellulari)
 - Emissione di radiazioni, raggi X, gas corrosivi.
- Modalità d'uso**
- Non collocare oggetti pesanti sul DVR, come un monitor o una TV.
 - Non bloccare le aperture per la ventilazione.
 - Evitare urti violenti all'apparecchiatura. Non lasciar cadere l'apparecchiatura.
 - Non impilare l'apparecchiatura per evitare che la temperatura interna aumenti.
 - Non mantenere l'apparecchiatura in posizione verticale durante l'utilizzo.
 - Maneggiare l'apparecchiatura con cura. Non sottoporla a urti.
 - Non inserire oggetti estranei nell'unità, altrimenti potrebbero verificarsi malfunzionamenti o scosse elettriche.
 - Non estrarre il rack mobile dal suo comparto altrimenti potrebbero rimanervi impigliate le dita e ci si potrebbe far male.

- **Pulizia dell'apparecchio (da effettuare dopo aver staccato la presa di alimentazione)**
Pulire l'apparecchiatura con un panno morbido. Non Pulirla con panno più sottile o benzene affinché la superficie non si sciogla o diventi smussata.
Per macchie resistenti, pulire prima con un detergente neutro diluito in acqua e poi ripulire a secco.
- Usare il cavo di alimentazione in dotazione. L'utilizzo di un altro tipo di cavo diverso o di un cavo danneggiato potrebbe causare incendi o scosse elettriche.
- Per risparmiare energia, accertarsi che il sistema sia spento quando non è in uso.
- Non utilizzare il cavo d'alimentazione fornito con questo prodotto per apparecchiature diverse.

• Le batterie (Telecomando)

- Utilizzare sempre le batterie AAA, R03 o equivalenti.
- Non adoperare batterie nuove insieme a batterie già impiegate.
- Posizionare le batterie in modo che corrispondano alle polarità indicate (corrispondenti ai segni + e -).
- Leggere attentamente anche le avvertenze d'uso riportate sulla confezione delle batterie.
- Nel caso di fuoriuscita di liquido dalle batterie, pulire bene il vano batterie.
- Se tali liquidi vengono in contatto con la pelle, sciacquare abbondantemente la parte interessata con acqua.

PRECAUTIONS

WARNING

It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast, or cable programme and in any literary, dramatic, musical or artistic work embodied therein.

• Hard-disk

The hard-disk is a consumable item. Replacement is recommended after 10000 hours of use (if used in a 25°C environment). For information on maintenance planning and costs, consult your nearest JVC dealer.

•Handling of the Hard-disk

- Please do not extract the removable Hard-disk or do not move this equipment for 15 seconds after OPERATE OFF. It may cause a failure of the Hard-disk.
- Do not expose the equipment to physical shock during transport. In particular, do not move the equipment during recording or playback.
 - Please note that we will not provide compensation for any failure during recording or playback due to defects in this equipment or the hard disk drive.
 - TV broadcast or other video (audio) recordings are for personal use only. Unauthorized use of these materials is strictly prohibited.
 - Please note that recorded images will be erased when replacing hard disks or upgrading firmware.
 - To make back-up with CD-RW etc is strongly recommended if the important data seems to be recorded.

* All Product names stated in this manual are trademarks or registered trademarks of their respective companies. Marks such as ©, ® are omitted in this manual.

2. Part Names and Features

2.1 Basic Organization of DVR System

: In this Instructions, Digital Video Recorder is written as "DVR".
Contents and shape can be different.



VR-616



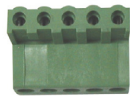
Lock Key
Hard Rack Screw



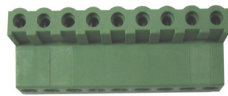
Rack Mount Bracket
Rack Handle



RS-485



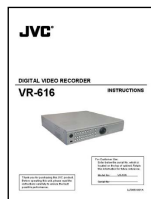
Alarm Out



Alarm In



CD-ROM



User Manual



Rubber Foot



Power Cord



Remote Control Unit
Battery

2.2 Features

- 1) High quality digital recording
Output and playback High quality digital recording by using Wavelet compression.
- 2) Simple operation
Simple operation by jog /shuttle.
- 3) Simple setting
Enables simple installation and operation with basic setting and camera inputs.
- 4) Remote data back up
It is possible to back up and playback by using client program via network.
- 5) Backup (IEEE1394, USB)
Video images may be backed up to a compatible IEEE 1394 device such as an external HDD or CD-RW device. In particular it is possible to extend HDD up to 4 pieces. It is also possible to back up still images by using USB FDD or USB memory via USB port.
- 6) Multi screen monitoring function
Many multi screen monitoring modes are available such as 1/4/6/8/9/13/16 /user/ZOOM screen.
- 7) Remote control/ view
Cameras can be remotely controlled and images can be viewed from anywhere through a web browser over a private line or via the Internet without any special software. If the HDD set to "Backup", you will not be able to use playback (P/B) remote security function.(Live monitoring is possible through a web browser)
- 8) Audio Recording and Playback
One channel of audio may be selected for recording and playback with a video channel.
- 9) Diverse image backup function
Massive amounts of video can be stored in an internal HDD, removable HDD or external IEEE1394 HDD.
- 10) Motion detection and Alarm recording function
Detects optional field, sensitivity, and sensing speed of each channel, and able to record automatic register by connection with an outside sensor.
- 11) Alarm and Search Functions
Recorded images can be searched using search functions based upon time, date, alarm and motion detection functions.
- 12) In/output contact point control
Able to add In/Output Alarms via connection to a contact point In/Output terminal.
- 13) Recording and set-up options
All aspects of recording may be selected such as recording channel, fields per second, image resolution and covert channel recording.
- 14) Diverse recording functions
Recording is possible by Manual, Alarm, and Schedule modes.

15) Automatic check and recovery function

The system is designed for continuous, fault-free operation with built-in, self-monitoring functions that monitor each component of the system and will automatically restart into the previous mode if a system failure is encountered.

16) Camera control of popular dome models

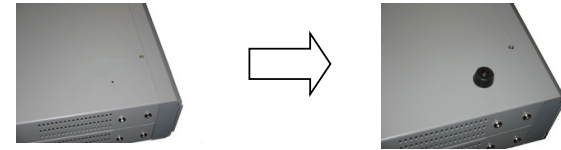
Able to control a multitude of external cameras through the RS-485 port.

2.3 Preparation of installation

■ Putting on a level place

(1) Attach rubber feet.

– Attach 4 rubber feet in the bottom surface of the equipment with 4 screws provided (M3 x 11mm).



■ Mounting to a Rack

(1) Assemble 2 rack-mounting brackets

– Fasten the rack-mounting handle to the rack-mounting angles using 2 screws provided (M4 x 10mm). Assemble 2 brackets in the same procedure.

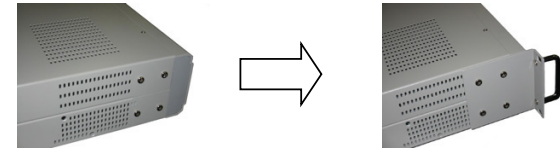
(2) Remove 8 screws





– Remove the 8 screws at the right and left side surface of the equipment. (M4 x 12mm).

(3) Mount the rack-mounting bracket to the equipment

– Fasten 2 rack-mounting bracket (Assembled in the procedure (1)) to the equipment using 8 screws (Removed in the procedure (2)).

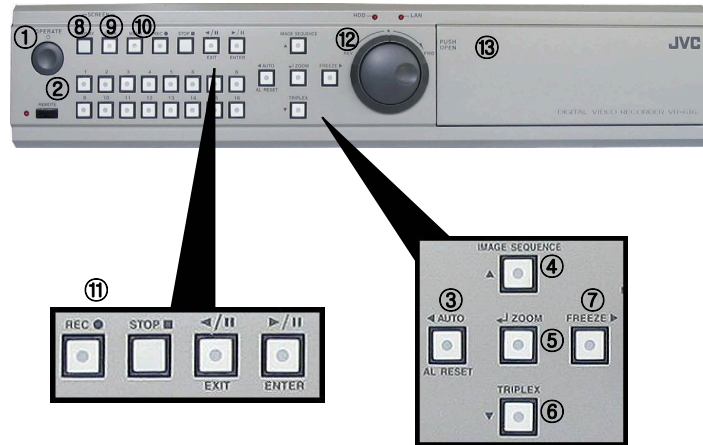
(4) Mount the equipment to the Rack



Provided screws			
	For rack-mounting angle M4 x 12mm (4 EA) (attached to the equipment previously)		For rack-mounting handle M4 x 10mm (4 EA)
	For rubber feet M3 x 11mm (4 EA)		For removable HDD M3 x 8mm (4 EA)

2.4 Part Names and Description

• Front



① Operate Switch

: Operate ON/OFF switch. Operate on/off by pressing this button for about 5 seconds. During system starting, it is displayed "16 CH Digital Video Recorder" and "Preparing system. Please wait a moment." -> "Waiting to detect 1394 HDD...". Please wait for a while to starting.

② Channel Selection Buttons (CH1 – CH16)

: These buttons are used to select the screen monitors and to change the channel settings at the menu etc.

③ AUTO Button

: The input channel is automatically switched in proportion to the speed setting at the menu.

ALARM RESET Button

: This button is to stop the alarm out.

◀ (left) Button

: Menu Navigation Button. Moves cursor to the left.

④ IMAGE SEQUENCE Button

: This button is for replay PB screen to IMAGE SEQUENCE mode.

▲ (up) Button

: Menu Navigation Button. Moves cursor up.

⑤ ZOOM Button

: This is used to zoom a freeze-frame in live or playback mode. Selected screen is X2.

ENTER Button

: This is for selecting set-up Menu.

⑥ TRIPLEX Button

: This button is for replay PB screen to TRIPLEX mode.

▼ (down) Button

: Menu Navigation Button. Moves cursor down.

⑦ Freeze Button

: This button is for seeing monitoring and PB screen as pause screen.

Freeze image backup button

: It is for backup freeze image at external FDD or USB memory.

▶ (right) Button

: Menu Navigation Button. Moves cursor to the right.

⑧ Display Button

: This button is for selection of the various on screen display options available.

⑨ USER Button

: This is for user's screen mode. You can select one split display out of 8 screen then you can organize the screen to your personal preference.

⑩ MENU Button

: The menu button allows scrolling through the available on screen menu.

⑪ REC, STOP, Reverse Playback (EXIT), PLAY Button (ENTER)

REC : This is for recording.

STOP : This is for stop PB.

Reverse Playback (EXIT) : This is for reverse PB. It is also for finishing menu setup, moving to previous menu or erase wrong character.

PLAY Button (ENTER) : This is for playback and set-up menu.

⑫ Jog Shuttle (REV, CUE, Up, Down)

: It is possible to 'quick search' during playback and also used to change the modes of the menu.

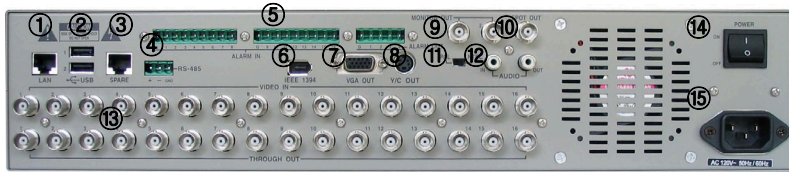
Shuttle : This is for quick search when PB and it is used to change MENU.

JOG : This is for slow search when PB and it is used for moving MENU's cursor.

⑬ Backup HDD (Removable HDD)

: This is removable HDD and it is used for Backup or Main.

• Rear



- ① LAN : Enables screen search and control via Network. (Please use a category 5 cable with a shield.)
- ② USB Port 1,2 : For backup with external FDD or memory stick. It does not work both USB1 & 2 at the same time. Please use one of them.
The USB connector on this equipment corresponds to USB 1.1. A FDD or a flash memory are connectable.
- ⚠ Please turn off the power when you connect external USB with DVR.
- ③ Spare : This terminal is not used.
- ④ RS-485 : For connecting with external Pan/Tilt camera. The maximum cable length of RS-485 is 1.2 km. (Please use a twisted-pair cable with a shield.)
- ⑤ ALARM IN : For alarm input. (Please use a shielded cable.)
ALARM OUT : For alarm output. (Please use a shielded cable.)
- ⑥ IEEE 1394 Port: Possible to extend storage space or backup by adding external IEEE1394 or CDRW.
- ⚠ Please turn off the power when you connect external IEEE1394 with DVR.
- ⚠ If you connect external HDD with external CDRW, impossible to recognize.
- ⑦ VGA OUT : Possible to connect with computer monitor.
(Only CRT can be used when video signal mode is set as PAL.)
Please set-up in Menu before use this connector.
- ⑧ Y/C OUT : Outputs contents of monitor output as a S-VIDEO signal.
- ⑨ MONITOR OUT 1,2 (Composite) : Menu appears at the time of menu setting and displays when screen search or recording.
- ⑩ SPOT OUT (Composite) : Outputs video which is set-up from the menu.
- ⑪ MODE(PAL/NTSC) : Selects input video signal mode.
If you change PAL/NTSC, once it carries out operate-off. Operate-on is carried out, and a message "Video mode was changed!" is displayed and it shows a subsequent message. Select "O.K.", changes video signal mode.
- ⚠ When PAL/NTSC is changed, former record data is deleted!
An administrator password is reset when the PAL/NTSC mode is changed. Please disable a password setting before changing the PAL/NTSC mode.
When PAL/NTSC mode is changed with a password setting enable, please use a default password "1234".
- ⑫ AUDIO : I/O for audio recording/playback.
- ⑬ VIDEO IN BNC & THROUGH OUT (CH1 ~ CH16)
: Inputs asynchronous video signal 1.0Vp-p.(75 ohm)
: Loop out is changed to HI-Z automatically.
- ⑭ POWER Switch
: This is the main power switch.
- ⑮ AC INLET : For connecting with provided power cord.

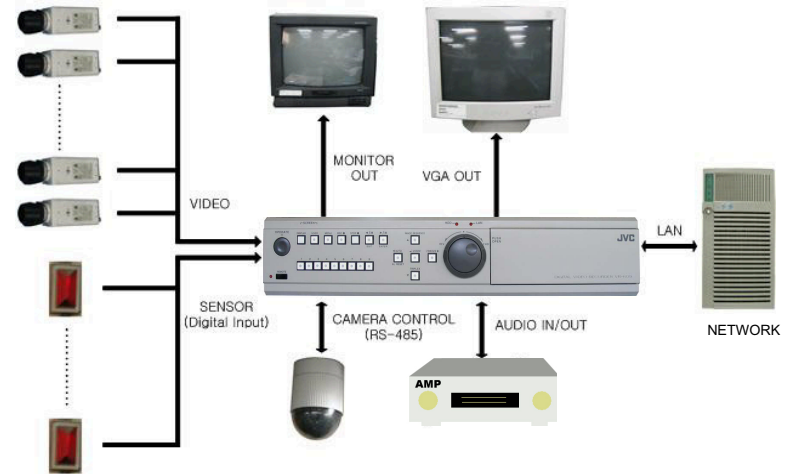
3. Explanation and Application

3.1 Basic Schematic of the DVR System

- : This system can record up to 16 composite video signals.
Ability to check multiple screens during playback by using monitors & VGA units.
It supports screen search, monitor, and remote control through the Network.

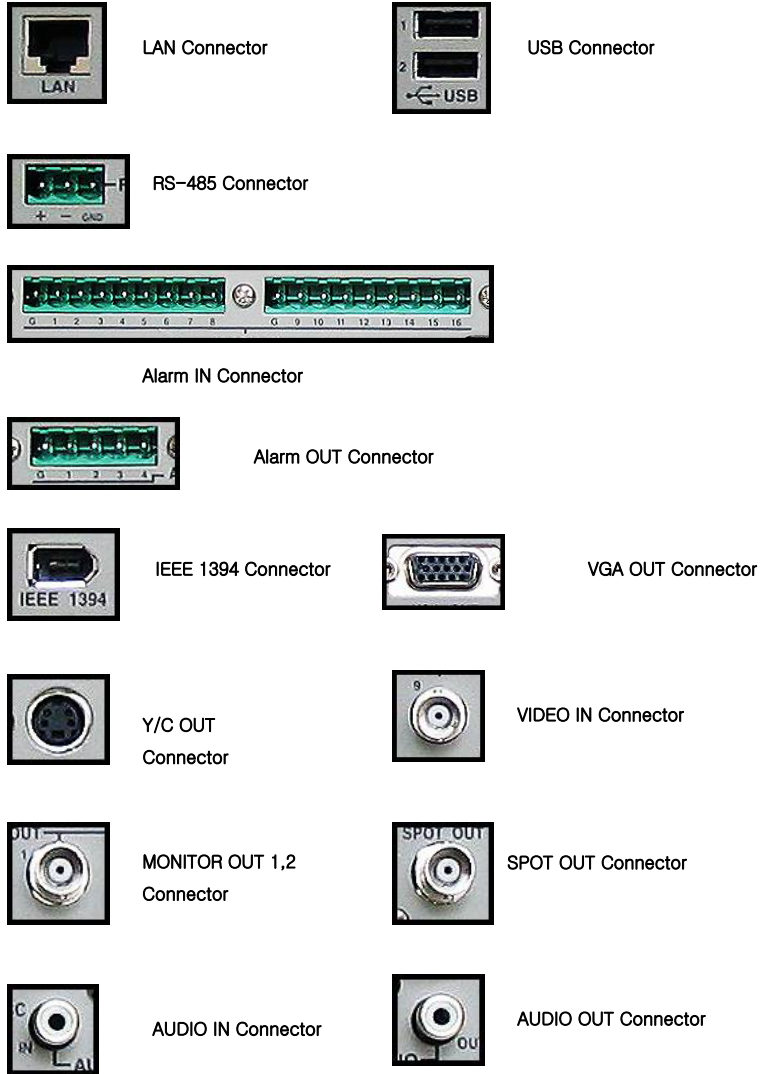
3.1.1 Basic Schematic

- ⚠ A monitor and a VGA monitor are not simultaneously connectable. For using a VGA monitor, a setup is required. (Please refer to Page 76 for more details. (5.7.6 Video Output))
Connect AC INLET to 120V, 50Hz / 60Hz outlet using the provided power cord. (VR-616U)
Connect AC INLET to 220V - 240V, 50Hz / 60Hz outlet using the provided power cord. (VR-616E)



Video signal of the input channel is 1.0 Vp-p on a 75Ω load. THROUGH OUT is changed to Hi-Z Automatically.

3.2 Basic Connections



3.3 Pan/Tilt Camera Connection and Control

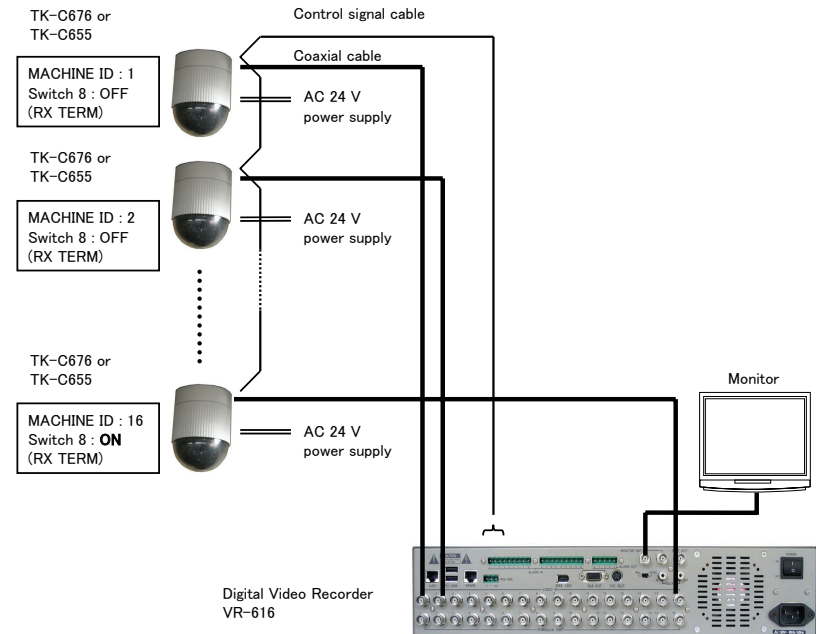
It is possible to control the Pan/Tilt camera without special devices. The Pan/Tilt camera supports RS-485 and is given an ID for parallel connection. Easy to install from the menu screen and possible to control by using the Jog Shuttle.

Recommended Cameras:

Manufacturer	Model
JVC	TK-C676
JVC	TK-C655

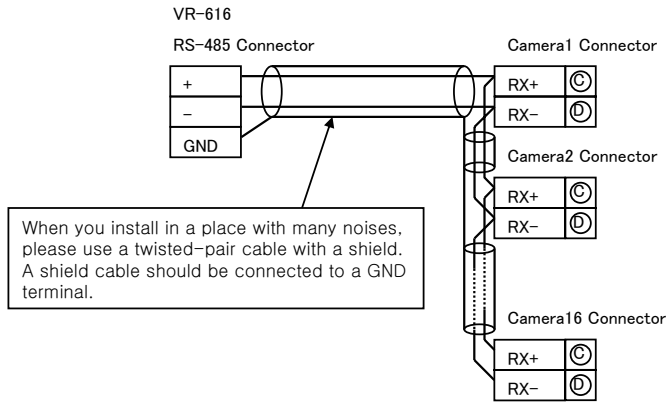
3.3.1 The example of connection with TK-C676 or TK-C655

Linked with a power connection, control terminal connection, and video signal output connection. The following figure is the example of connection with 16 sets of TK-C676 or TK-C655.



- Camera power connection.
- Control terminal connection (RS-485) : Please use a twisted-pair cable. Connect a +terminal (TX+) / -terminal (TX-) of this equipment to the RX+ / RX-terminal of a Pan/Tilt camera. The camera connected at the end should set-up a terminus (110 Ω).
- Video signal connection (Composite)
: Checks video mode (NTSC/PAL) and inputs video signals at each input terminal.

- Connection of RS-485 Control signal cable



3.3.2 Setting values of TK-C676 or TK-C655

Item	Value
Switch 4	ON
Switch 5	ON
Switch 8	Terminal equipment is set to ON. Other equipments are set to OFF.
ID	Install ID value independently.

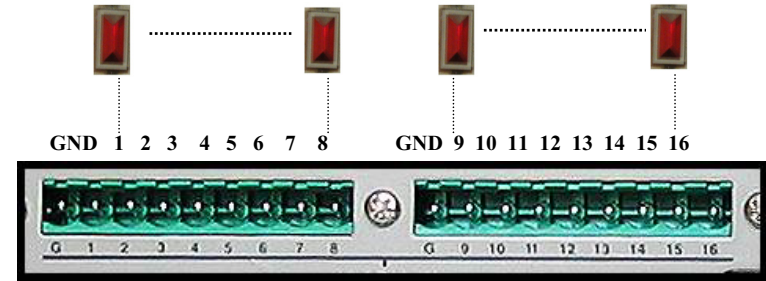
- The functions can be used by this equipment are PAN/TILT/ZOOM/FOCUS/AUTO FOCUS. (A setup of a home position, a preset position, etc. cannot be performed) In addition, in order to perform a home position setup and a camera image setup in advance, it is possible to use and set-up by remote controller of RM-P2580 grade. Please read the Instructions of RM-P2580.
- About setting values of VR-616, please refer to 5.1.2 Camera details and 5.1.3 Pan/Tilt Model Select.

Please use Recommended Cameras.

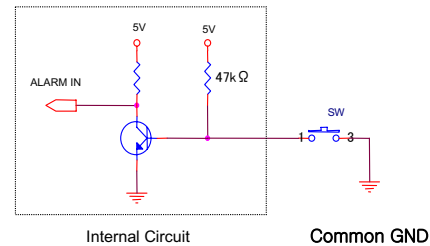
3.4 External Product Connections and Applications

3.4.1 External Product Connection of ALARM INPUT and Application

There are 16 alarm jacks for external devices.
Able to set-up REC ON/ OFF and Digital out motion according to ALARM IN signals.



Connection Diagram

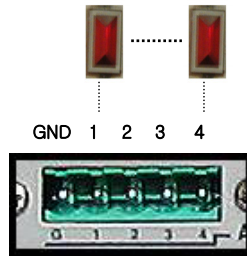


Circuit Diagram

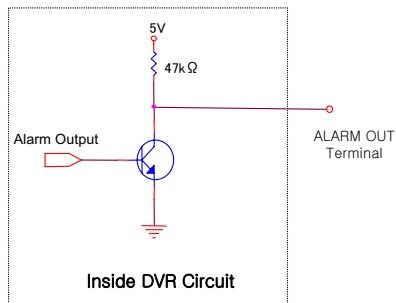
The resistance of a makeup point should be set to 500 ohms or less.

3.4.2 External Product Connection of ALARM OUT and Application

Supports up to 4 separate alarms for motion control or alarms.
Possible to install output-events to each out terminal from the menu.



Connection Diagram



Circuit Diagram

OUTPUT EVENTS

Digital inputs to alarm 1~ 16; Disk Full, Video Loss, Power Off, Admin. PW Changed, Motion Detect.

When connecting to an external device, it is better to connect with the interface circuit.

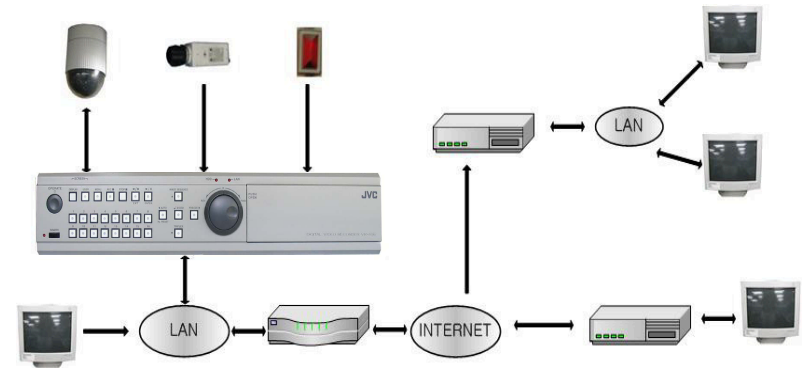
Alarm output terminals are 5V TTL output.

3.5 Installation and Application for Network Interface

3.5.1 Connection and Installation for Remote Control

Supports Web server, remote control, and remote file transfer due to 10/100mega Ethernet I/F.

Remote monitor / playback / operation, depend on network quality. When the network quality is bad, the connection could be cut or the playback could be slower. Please use remote network operation in a sufficient network environment.



Organization of Remote Control

3.5.2 How to Setup Static IP

- 1) Connect Network line, which has a fixed IP, by using the hub.
- 2) set-up system network at the Setup Menu.
Main Menu → System → Administration → Network Setup
- 3) Link web browser which supports JAVA Applets. (MS Internet Explorer 6.0, etc.)

3.5.3 Network Setup

IP Address : _____._____._____._____

Subnet Mask : _____._____._____._____

Gateway : _____._____._____._____

DNS : _____._____._____._____

Web Server Port Number : ____

We highly recommend you consult the Network Manager.

Note

- IP Address : This is the name of the product in TCP/IP.
You can use any IP in one Network.
If you want to link with the Internet, you need an Global IP address to avoid conflict.
- Subnet Mask : It is 32 Bit in length. (= Address Mask)
- Gateway : This is used for connecting to the Network, which has a different structure and Protocol.
- DNS : It is a link system for easy connection to the Internet.
For example, you can use an alphabetic address, e.g. www.company.com instead of a number address.
- We highly recommend you consult the Network Manager.
- Web Server Port Number : This is for connecting external computer from Web Server.
In case of WWW using http, it is used 80 generally.

3.6 Application of Remote Control Software

3.6.1 Using the "remote control software"

This is for viewing live or searching playback screens from a remote location.
[Quality of the live screen depends on the recording quality and Network condition.]

How to Setup

- 1) Start Web browser.
(We highly recommend CPU : over 500MHz, RAM : over 64MB,
OS : Windows 98/ Me/ 2000/ XP, Browser : over Internet Explorer 5.5/ 6.0)
- 2) Enter IP number in the homepage address.
(Use Domain name)



- If the icons are not displayed as change the screen, please check the menu bar on the web site as followings.
Tools → Internet Options → General → Temporary Internet Files Settings → Check for newer versions of stored pages → Automatically
- If Record/Web Select is not selected on the menu, live monitoring is not possible to see on the Web Browser.
- When selecting divided screen, the screen display should delay due to network condition.
- Please set to the "on-line" mode of Internet Explorer. It does not work "off-line mode".

3.6.2 Web Browser

This is for wire internet by using computer.



- When connects to this equipment from a web browser for the first time, a security warning window is displayed. Although asks for permission of installation, choose "Yes" and install.



Web Browser

3.6.3 Live Screen Search



This is for searching 1, 4, 9 or 16 channels simultaneously from a remote location. When there is an alarm input from an Alarm In connector, it is displayed on a screen upper left as "Sensor." When there is a motion detection, it is displayed as "Motion." When the image from DVR is not updated, please press the "update" button of the Web browser. It is possible to control the Pan/Tilt camera, which allows to set-up the position of the Pan/Tilt camera from a remote location.

▶ Pan/Tilt control : Possible to PAN, TILT and ZOOM by clicking the button on the web screen.

! When operating a Pan/ Tilt camera via a network, the amount of operation for every click changes with the numbers of split screens etc. The full screen display is suitable to tune finely.

3.6.4 Playback Screen Search



This is for searching playback screens. It is possible to check date and time.

- !** ● Remote monitoring is limited to 6 persons for assurance of the reliability of the system.
 - Only one person is allowed to see the web playback screen.
 - Possible to restrict remote user by password.
 - Possible to delay because of system status.
 - The reliability of remote monitoring is subject to the reliability of the Internet connection. (Try rebooting in case of Internet malfunctioning.)
 - If the product is being backed up by HDD in use, you will not be able to use the remote control function.(but live monitoring is possible.)
- !** HDD content for backup can not be replayed from remote software.

3.6.5 Client Software

The Client Software is at an attached CD-ROM, and if use this instead of the web browser, more highly efficient operation can be performed. This software has the following functions.

- Live Mode
- Search Mode
- Player Mode
- PTZ camera control
- Download (Back-up) Mode
- Support converting to AVI format to play with Windows Media Player

* Installer/ Menu/ buttons are written in English.

● CD-ROM Content

- Following files and folder are in CD-ROM.
- (1)"VR-616 ClientSW" Folder
Client software. As double click "setup.exe" as start installation.
- (2)"VR-616 ClientSW Manual(Japanese).pdf"
Instructions of this software. (Japanese)
- (3)"VR-616 ClientSW Manual(English).pdf"
Instructions of this software. (English)

● Operating Environment

System Requirements

PC	Type	PC/AT compatible machine
	CPU	Required: Pentium III 866MHz and more Recommended: Pentium 4 1.8GHz and more
	Memory	256MB and more
	Graphic Board	*DirectX support *Direct Draw Video overlay supported VGA(DirectX 7.X, 8.X) *1024 x 768 or better, True color or higher *Graphic Memory 32MB or higher *The on-board video chip cannot be used. Tested with the video card of nVIDIA GeForce FX5700 Ultra.
	HDD	Free space 12MB and more
Compatible OS	Windows 98/ 2000/ Me/ XP	

The PC specification are merely recommended specifications for using the Client Software with ease and is not a guarantee against its operation.

Using on the system that is not fulfilled the system requirements, the response from PC may become slow.

4. Function Explanation and Menu Setting

This system can set-up the motion conditions of the camera, recording conditions, alarms, audio, and system settings from the monitor menu.

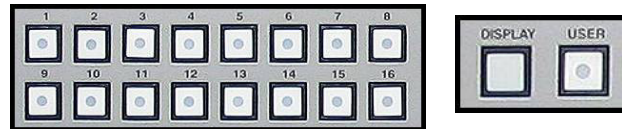
4.1 Front Button Explanation

4.1.1 Before Use

Make sure all the devices are properly connected as described in Chapter 2, then connect to the power source.

- ⚠ Please turn On/Off with a front operate switch. Turn On/Off a power switch on the back in the state of Operation OFF. HDD can be damaged if turns On/Off in the state of Operation ON.

4.1.2 Monitor Out



- It displays the selected channel on the monitor by pressing the INPUT button during live or playback. It is used for selecting INPUT_CH at the MENU.
- Selected monitor configuration is displayed on the monitor "USER" button is for screen configuration, which is set-up from the menu. 1,4,9,16,6,7,10 screen is displayed as pressing the DISPLAY button during live. 1,4,9,16 screen is displayed as pressing the DISPLAY button during playback.

- ⚠ When you record only one channel, please use single picture playback. The image might be distorted if one channel is played back using 16 divided screen.



- Alarm Reset button is for stopping the external alarm motion.
- AUTO Button is ON/OFF. As pressing this buttons, a single screen and a divided screen is switched automatically.

4.1.3 REC



- By pressing this button, recording starts. The REC LED is on while recording. As pressing this button again, recording is stopped. The REC LED blinks during the Alarm record.

4.1.4 PLAY



- Press this button to select playback condition. Play LED is on while playing. (Refer to play mode for more details.)



- DISPLAY : It displays multi-screen when its' monitoring or playback. As pressing this button repeatedly when its' monitoring, divided screen is displayed 1/4/9/16/6/7/10 and as pressing this button repeatedly when its' playback, divided screen is displayed 1/4/9/16.



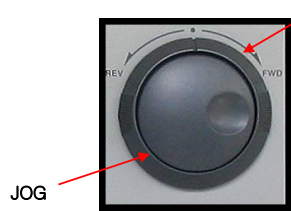
- IMAGE SEQUENCE : One playback screen is displayed with time slice on 4/ 9/ 16 divided screen.



- ZOOM : It can be X2 zoomed at a live mode and a playback mode. Possible to zoom status by using X (◀▶) axis , Y (▲▼) axis and it is possible to move by using direction button in zoom status.



- TRIPLEX : This is overlay screen. Background screen is monitoring screen and overlay screen is playback screen. PB screen and Triplex screen will be displayed repeatedly as pressing Triplex button while it is replaying.



SHUTTLE

- JOG & SHUTTLE can search by frame in play mode by using JOG when it is paused (||) and possible to quick search by an angle of the shuttle.
- At the menu setting, it is possible to move the position or change the value by using JOG .
- Slow playback can be performed by using JOG during playback/Reverse playback. It takes a time for a while, from a SLOW onscreen display " | | | | ► " appear and then a SLOW PLAYBACK image starts. When you press twice the PLAY/Reverse Playback button under shifting, the image changes immediately.
- When in the Pause mode, turn this to enable single picture playback. When the rotation direction is changed in the middle of operation, a reaction is overdue or the recorded picture is skipped. In such a case, please redo once again.
- When the DVR is in PLAY MODE, the buttons have the functions indicated above button mark. (REC, stop (■) / pause (||) / reverse play (◀) / pause (||) / play (▶))
- When the DVR is in menu mode, the buttons have the functions indicated below. (EXIT, ENTER)



! In the play mode if you press the Enter button the DVR will be paused, then you can search field by field using the jog/shuttle control. You can search quickly using the Shuttle and slowly by using the Jog.

4.1.5 Menu Setup



- You can easily change the Camera Setup, Recording Setup, and Audio Setup by the graphical user interface screen.
- If you press the menu button, you can see the next menu screen. It can be moved up and down by using Jog. The Menu is selected by clicking the ENTER button.
- Setup value (symbols, Alphabet Upper case (Capital) letters, lower case letters, numbers and position) of the menu can be changed by using X & Y axis /EXIT/ENTER buttons, and INPUT button.

4.1.6 FREEZE



- By pressing the freeze button then pressing the channel buttons(1~16), the selected screen will display a still image.
- As pressing a Freeze button, changes Freeze LED ON and OFF. Pressing Camera Selection button (its LED is ON) in the state of Freeze LED is ON, it displays freeze screen. It is displayed "FZ" on screen, and blinked the LED of the Camera Selection button. For canceling, press the blinked Camera Selection button again.

4.1.7 Explanation of Image Sequence and Triplex

- **IMAGE SEQUENCE** : One playback channel is replayed to the divided screen field by field in sequence. Press the display button to select the type of display division.



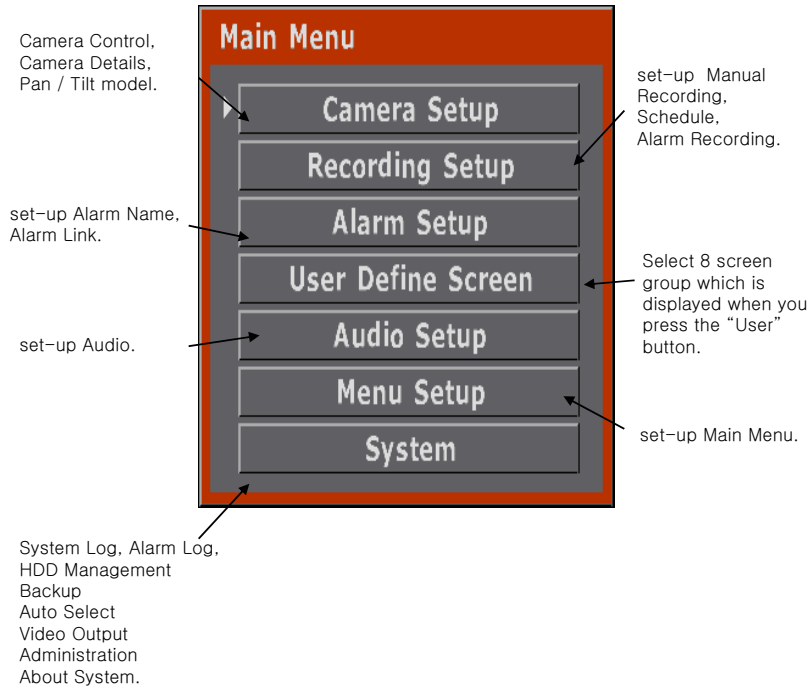
Image Sequence Playback Screen of 16 Channel

- **TRIPLEX** : This is an overlay (picture in picture) screen. You can monitor live screen and playback screen at the same time. It is returned to playback screen as pressing the PLAY button (ENTER button) after setup monitoring channel you want to see. If you want to change playback screen, press the Channel Selection buttons.



TRIPLEX Playback Screen

5. Main Menu



⚠ Possible to change setting value by using Jog and direction buttons. According to cursor position, cursor should move right/left when press up/down buttons.

5.1 Camera Setup

It is possible to set-up image which will connect at input port and able to set-up Pan/Tilt camera which will connect with RS-485.



⚠ A camera title and image adjustment can be set-up to all channels regardless of a Pan/ Tilt camera.

5.1.1 Camera Control

Please use Recommended Cameras.

- 1) RS-485 enables long distance transfer.
- 2) Possible to connect in daisy-chain style.

5.1.1.1 Pan/Tilt Camera



5.1.1.2 How to Use

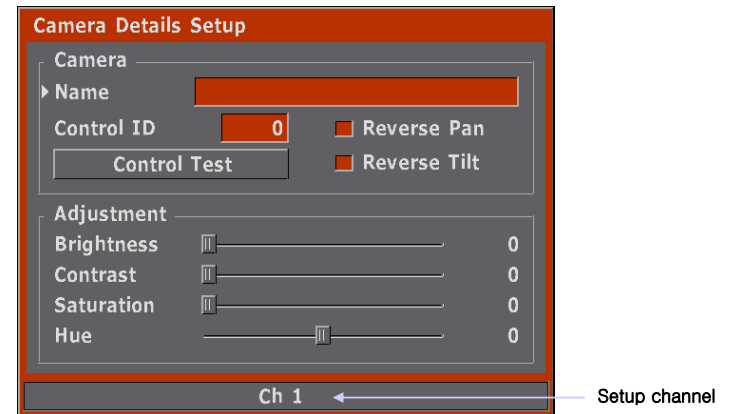


- 1) Checks camera ID setup value from the camera setup menu.
- 2) Selects Pan/Tilt Control from the menu.
- 3) Selects motion by Jog or right/left button.
- 4) Moves shuttle left or right.
Checks whether camera ID and Pan/Tilt camera ID are the same installation if the Pan/Tilt camera does not activate.
Also, checks whether the control line of the Pan/Tilt camera is in the correct location.
- 5) Press the EXIT button to return to the Camera Setup Menu.

● Status on the screen is not updated during camera operation.

⚠ Please use Recommended Cameras.

5.1.2 Camera Details



● Installs Name, Camera ID (Pan/Tilt Camera), Model and Color (Brightness, Contrast, Saturation, Hue) of each channel.

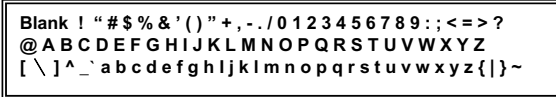
5.1.2.1 How to Setup

- 1) Checks the channel number as indicated at the bottom of the tab, and then checks whether the background is the correct screen.
(The channel number can be changed by pressing the INPUT button.)
- 2) Selects contents which you want to change by jog.
- 3) Possible to change setup status by using the buttons as follows.
ENTER button : Change and complete selected contents.
EXIT button : Make cancellation.
◀ button : Move to left at the Name.
▶ button : Move to right at the Name.
Jog : Can change character and number by jog rotation.
- 4) To return to the preset menu, press the EXIT button.
- 5) If a Pan/Tilt camera is connected, test after setting-up the camera ID.

5.1.2.2 Camera Name

- Name : Possible to create an alphanumeric nickname of up to 16 characters (including symbols) as shown below.
You can see the next character repeatedly by using Jog.

Character Mark



How to Use

- 1) Selects Name by Jog.
- 2) Possible to write and amend if you press the ENTER button.
- 3) Writes and amends by using the RIGHT/LEFT button and Jog.
- 4) Complete by clicking the ENTER button.

! It is NOT possible to display all the characters when the screen is divided into more than 6 pictures. In this case "... " is displayed.

5.1.2.3 Pan/Tilt Camera Setup

● Camera Setting : Camera ID, Reverse Pan, Reverse Tilt, Control Test

- 1) Camera ID : For controlling the Pan/Tilt camera.
Setting ID is for distinguish the Pan/Tilt camera, which is connected in parallel.
Camera ID uses 1~255 number.
(Be sure to check the specifications of the Pan/Tilt cameras.)
- 2) Reverse Pan, Reverse Tilt : It reverses a Pan/Tilt Camera direction.
Usually, the Pan/Tilt direction can be changed depending on the location and mounting of the Pan/Tilt camera.
- 3) Control Test : Possible to test whether Pan/Tilt Camera setup is correct or not.
Useful when checking after setup finishes.

! For the control No., set to the value same as the ID that has been set at the Pan/Tilt camera.

5.1.2.4 Adjustment

- Possible to install each input video color (Brightness, Contrast, Saturation) value as a number 0~100 and Hue can be installed as a number -128~127.
Please, install a proper value for a background checking screen.

● How to Setup

- 1) Move to the desired position by using Jog or up/down buttons.
- 2) If you press the ENTER button, the next image is displayed with video input.
- 3) Jog left or right (or press up/down buttons) for changing the number.
- 4) If you press either the ENTER or EXIT button, setup is finished. After finishing setup, the previous screen is displayed.



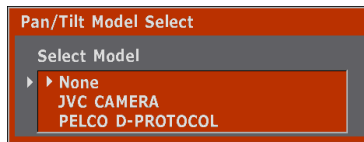
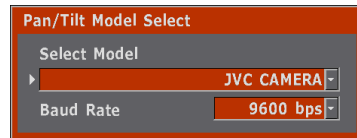
Brightness : Controls brightness.

Contrast : Controls contrast.

Saturation : Controls saturation.

Hue : Controls hue.

5.1.3 Pan/Tilt Model Select

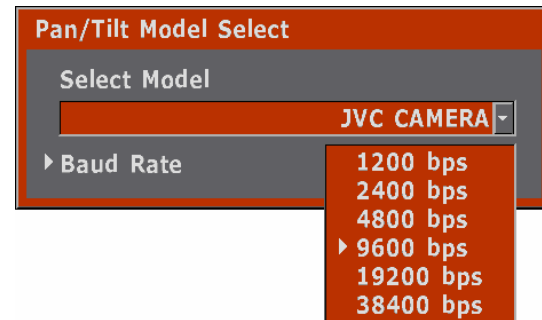


Selects one of Camera driver.

* If you connect with TK-C676/TK-C655, please select "JVC CAMERA"

● How to Setup

- 1) Connect the Pan/Tilt camera to the RS-485 port.
- 2) Select the same drive, which is selected from the "Pan/Tilt Model Select" menu.
- 3) Set-up the Camera ID at "Camera Setting".
- 4) Test it by using Camera Control.



● Selects baud rate for each camera. (Factory default is 9600 bps)

* If you connect with TK-C676/TK-C655, please select "9600 bps"

5.2 Recording Setup



5.2.1 Manual Recording

Manual Recording is for setup recording condition of each channel as pressing REC button when it is not recorded according to schedule.

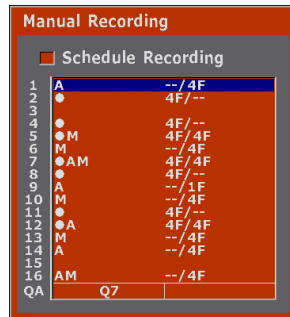


- Possible to control recording for each channel as pressing REC buttons.

! Please do not set-up a channel without video input as record. Please take out all checks, Always, alarm, and motion.

- As pressing Enter button after moving cursor to channel by using Jog, channel for setup will be changed blue bar as blow.

In case Schedule Recording Box is checked, Manual Recording is not working.



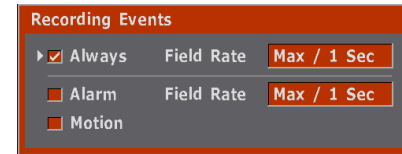
- Each symbol means as below.

! In case Schedule Recording box is checked, recording is started according to schedule regardless of Manual Recording. For using Manual Recording, do not check Schedule Recording box.

- : Always Recording.
- A : Alarm Recording.
- M : Motion Recording.
- fps/fps : The former 'fps' is field rate of Always Recording, the latter 'fps' is filed rate of Alarm Recording/Motion Recording.

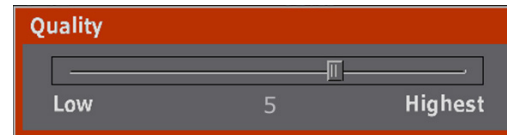
- From the Manual Recording menu, press the Enter button then the below picture (Recording Events) will display.

5.2.1.1 Recording Events



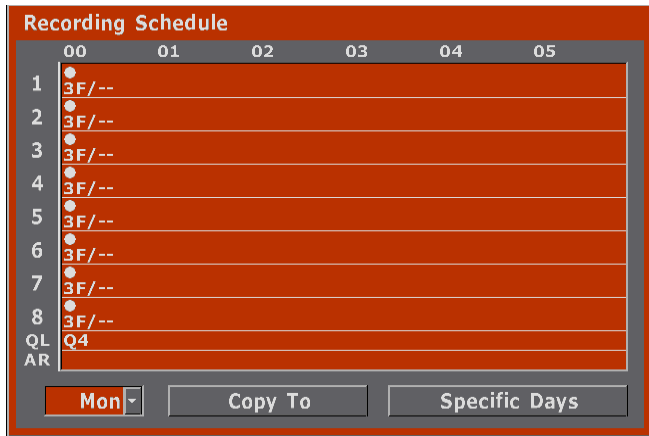
- As press the ENTER button at the selected block, possible to set up Recording Events of block like above picture.
- Always : Records always if it is in Recording Time
- Motion : Recording is started if motion is detected which is in set up screen of Channel
- Alarm : Records when the selected alarm is received.

5.2.1.2 Quality



- As press the ENTER button on the left-side of the QA line, possible to set up Recording Quality like above picture.
- Setup range : 1 ~ 7. (Default setting : 5) (1=Low, 7=the Highest.)
- If set-up the Quality setup to "7", the Web Browser don't refresh the live screen, and the Client Software is not connectable.
- When you place the bar on the right-hand side of the "QA" line and press the Enter button, you will be able to select Audio Recording On and Audio Recording off as below.

5.2.2 Schedule



- Schedules recording by date, time and channels.
- Schedules recording for specific day.
- If it changes from a menu, a clock mark is displayed on the screen lower right, and it will be in the state of TIMER STANDBY or TIMER RECORD. VR-616 does not have a power-saving mode.

! Please do not set-up a channel without video input as record. Please remove all checks such as Always, Alarm, and Motion.

! For enable a timer setup, please check to "Schedule Recording" of a Manual Recording menu.

5.2.2.1 Explanation of Recording Schedule

1) Time



- The above numbers indicate the hour in the day. (00 ~ 23)

2) Channel



- The left numbers indicate the input channel. (1 ~ 16)

3) Quality Level, Audio Recording



- QL indicates quality level as recording.
- AR indicates whether Audio Recording or not.

4) Recording Events



- : Always Recording.

A : Alarm Recording.

M : Motion Recording.

- F/F=fps/fps : The first 'fps' means field rate of Always Recording, The second 'fps' means field rate of Alarm Recording/ Motion Recording.



The left picture indicates it is being Always Recording with recording 3fps.



The left picture indicates it is being Alarm, Motion Recording with recording 4fps.

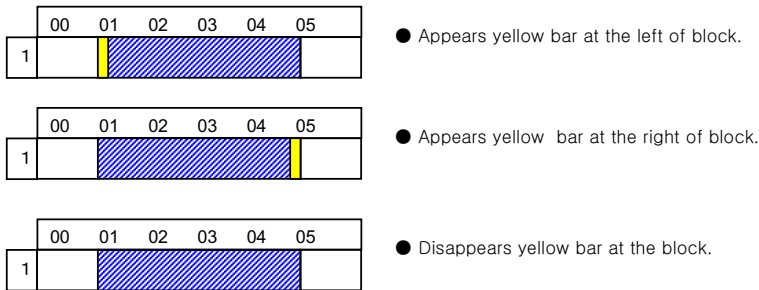
5.2.2.2 How to Setup

- Recording Schedule is set-up in block. Minimum block is an hour.

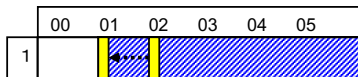
! A time setting cannot be performed from the remote control unit. Please use the front panel buttons.

- How to Setup Recording Schedule Block

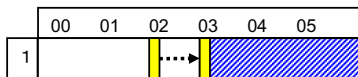
- 1) As using left/right direction button, designates time block at the same channel. As using up/down direction button or jog, designates channel block at the time zone of 0 hour.
- 2) As pressing 'DISPLAY' button at the block to change, the following picture will display in order.



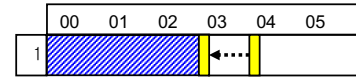
- 3) As pressing the left button in case yellow bar is at the left of the block : The block extends for an hour and extended time is set-up as Recording Schedule of present block.



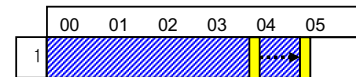
When the yellow bar is located in the left side of the block and you press the right arrow button, then the source configuration in the block will be deleted (reduced) and the configuration in the deleted block will follow the configuration in the left block. (But, if the current block is located in the most left side, then the configuration of deleted block will follow the default setting.)



- When the yellow bar is located in the right side of a specific block and you press the left arrow button, then the source configuration of the block in the right side of the current block will copied (expanded) (But, if the current block is located in the most right side, then the configuration of deleted block will follow the default setting.)

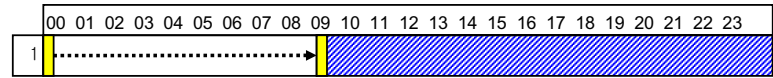


- When the yellow bar is located in the right side of a specific block and you press the right arrow button, then the source configuration of the block in the current block will be copied (expanded) to the right block.

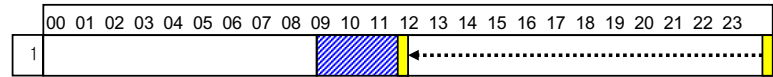


Ex.) Setup the schedule recording at 9:00 - 12:00 and 15:00 - 18:00. (Attention In order to give explanation simply, all are displayed for 00:00- 24:00. On an actual screen, it displays a part of them.)

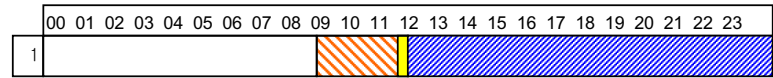
- (1) Press the Enter button when the cursor is on the schedule table.
- (2) Select camera 1 by using JOG or up/down button. Press the display button, and a yellow bar is displayed on the position at 00:00



- (3) Press right button, and move it to the position of 09.
- (4) Press display button and a yellow bar is displayed on the right-hand side of 23 (23:59).



- (5) Press left button, and move it to the position of 12. Press display button, and a yellow bar will disappear.
- (6) Press right button, and move the specific block.
- (7) Press display button, and a yellow bar will be displayed on the left-hand side of a specific block.



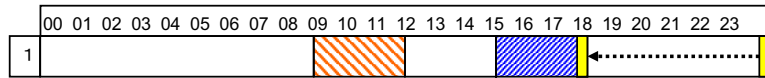
- (8) Once again, press a display button, and a yellow bar will be displayed on the right-hand side of 23 (23:59).
- (9) Press left button, and move it to the position of 15. Press display button, a yellow bar will disappear.



- (10) Press right button, and move the specific block.
- (11) Press display button, and a yellow bar will be displayed on the left-hand side of a specific block.



- (12) Once again, press display button, and a yellow bar will be displayed on the right-hand side of block of 23 (23:59).
- (13) Press left button, and move it to the position of 18. Press display button, and a yellow bar will disappear.

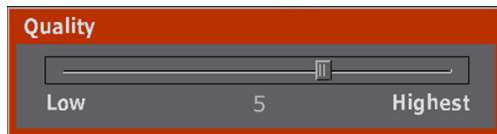


(14) By the above procedure, schedule setup has completed. Moreover, this state seems that one day is divided into five blocks. If a block is chosen with a right/left button and an ENTER button is pressed at it, a record setup of each block can be set-up freely. However, mind that a boundary line will disappear if an adjacent block is set to the same setup.

- If press the ENTER button as block is selected, the below picture (Recording Events) will be displayed then possible to set-up recording option for selected channel.



- The way of setup is the same with Manual Recording.
- After finish setup, press the EXIT button then it is returned to Manual Recording menu.



- As press the ENTER button at the QL, possible to set-up Recording Quality like above picture.
- Set-up range : 1 ~ 7. (Default setting : 5) (1=Low, 7=the Highest.)
- If set-up the Quality setup to "7", the Web Browser don't refresh the live screen, and the Client Software is not connectable.
- This can be set-up for every hour in the same procedure as a Recording Schedule.
- After finish setup QL and each channel, press the EXIT button for out of menu.

5.2.2.3 Audio Recording

- When you place the bar in AR and press the "Enter" button, then you will be able to select Audio Recording On and Audio Recording off as below.



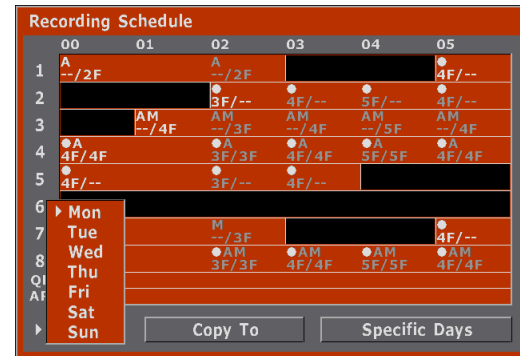
- Audio Recording On



- Audio Recording Off

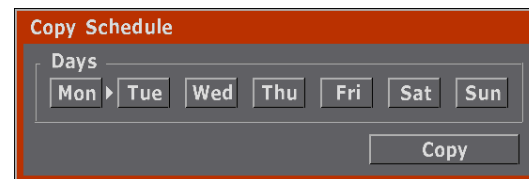
- Audio Recording setup can be set-up for every hour in the same procedure as a Recording Schedule.

5.2.2.4 Setup Days of the Week



- You can select a day to configure the recording schedule using Enter button and Jog dial.

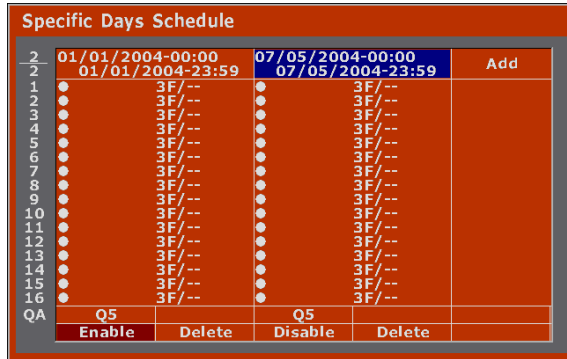
5.2.2.5 Copy Schedule



- You can copy the recording schedule configuration of a specific day of the week to other days of the week. After set-up the day of copy, press the Copy button.

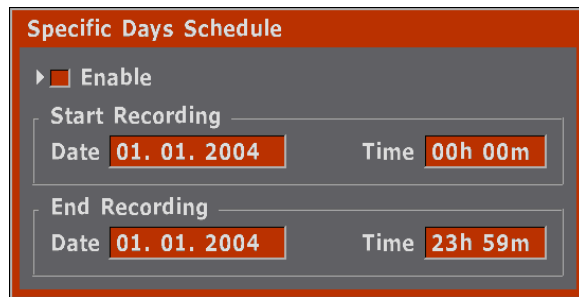
5.2.2.6 Specific Day Schedule

- You can configure the recording schedule of a specific day by pressing "Enter" button in the "Specific Days...".
- If it changes from a menu, a clock mark is displayed on the screen lower right, and it will be in the state of TIMER STANDBY or TIMER RECORD. VR-616 does not have a power-saving mode.



- The fraction displayed on the upper left of the window means the following: a numerator = a number of timer program which is setting now, a denominator = the total number of the timer programs.
- Using the left/right arrow buttons and the "Enter" button and selecting the "Add", you can add and configure new "Specific Day Schedule" up to 16.
- Using the up/down arrow buttons and the "Enter" and Jog dial and selecting the "Disable/Enable", you can decide if you will record it according to the configuration of recording schedule, or not.
- Using the up/down arrow buttons and the "Enter" and Jog dial and selecting the "Delete", you can delete the configured recording schedule.

! Please do not set-up a channel without video input as record. Please remove all checks such as Always, Alarm, and Motion.



- You can set the start and the end time of the schedule recording for the specific day.

! Actual record will be till end time +1 minute.

As each input channel is selected, the maximum recording Field/Sec can be changed as in the below table. (Only for NTSC)

1CH → 30F/S	2CH → 30F/S	3CH → 15F/S	4CH → 15F/S
5CH → 10F/S	6CH → 10F/S	7CH → 7F/S	8CH → 7F/S
9CH → 6F/S	10CH → 6F/S	11CH → 5F/S	12CH → 5F/S
13CH → 4F/S	14CH → 4F/S	15CH → 3F/S	16CH → 3F/S

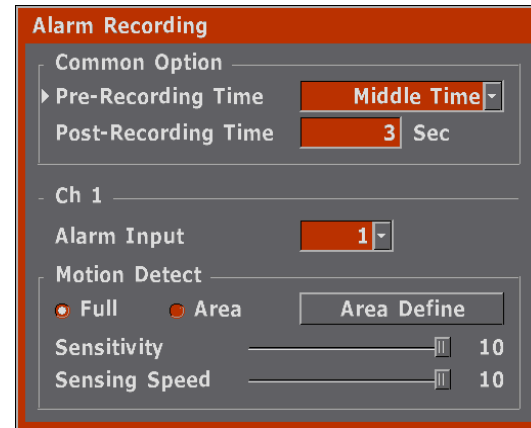
It is NOT possible to be 60 field according to input channel number.
Ex) 16CH → 16*3=48(Field), 5CH → 5*10=50(Field), 1CH → 1*30=30(Field)

As each input channel is selected, the maximum recording Field/Sec is changed as in the below table. (Only for PAL)

1CH → 25F/S	2CH → 25F/S	3CH → 12F/S	4CH → 12F/S
5CH → 8F/S	6CH → 8F/S	7CH → 6F/S	8CH → 6F/S
9CH → 5F/S	10CH → 5F/S	11CH → 4F/S	12CH → 4F/S
13CH → 3F/S	14CH → 3F/S	15CH → 3F/S	16CH → 3F/S




It is NOT possible to be 50 field according to input channel number.
Ex) 16CH → 16*3=48(Field), 5CH → 5*8=40(Field), 1CH → 1*25=25(Field)

5.2.3 Alarm Recording

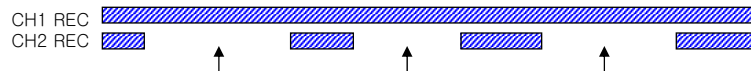


- Set-up recording time which is before event and after event when its' Alarm/Motion Events.
- The RECORD Indication LED and ONSCREEN display might be displayed for several seconds longer than actual record time.
- set-up Alarm Input.(1-16)

- Alarm recording are the time which the alarm terminal is a MAKE up, the Pre-Recording Time before a MAKE up, and the Post-Recording Time after a MAKE up.
- The Pre-Recording Time changes with the quality setup or the content of the image. With high quality setup, when a picture that is difficult to compress is inputted, the time is fixed regardless of the setting.

Long		min = 2sec, max = 11sec
Middle		min = 2sec, max = 7sec
Short		min = 2sec, max = 4sec

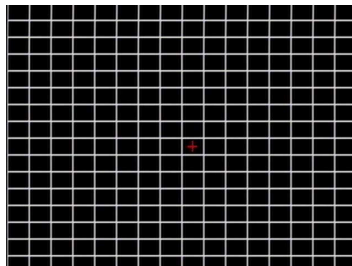
- When replaying the place where record was interrupted, it could be replayed a frozen screen or a black screen. In such a case, please execute a Time search or a Event List search after pressing a stop button.
(ex. Playback of the place pointed out by the arrow on a below figure.)



! If the record is started by alarm / motion detection from the stop mode (the sensor record mode), audio does not record even though it is set to on.




● **Motion Setup**

- Full : Recording (REC) is started when motion is detected on the full screen.
- Area : REC is started when motion is detected on the selected grid. ()
(this grid can be selected by the user.)
- set-up area as pressing the ENTER button at Area Define menu.



● **How to Setup**

- ① Jog direction of field setup.

Jog Direction	X-axis Direction Button	Y-axis Direction Button
		

- ② The user field setup is moved to the place by jogging. The first location and the last location can be selected by clicking ENTER.
- ③ Area field setup is moved to the place by jogging and can check the field by using ENTER.
- ④ After setup is finished, move to the higher level menu by clicking EXIT.

● **Sensitivity**

Sensitivity refers to the sensitivity to motion. Sensing Speed is the speed of motion. Possible to set-up a range from 1 to 10. (1=Low/Slow, 10=High/Fast.)



Motion must be clicked on Recording Events. After detecting motion by Motion Area, Sensitivity and Sensing Speed, recording is started.

How to Setup

- ① Move to Sensitivity or Sensing Speed by using Jog then press the enter button for setup value.
- ② After setup is finished, move to the previous menu by clicking EXIT.

! Sensitivity is detected sensitive changing in proportion to value. Sensing Speed is no reaction to fast changing because renewal speed is slow down as increasing Sensing Speed value. If a setup is completed, please be sure to check real operation.

! When an area setting screen is opened during recording, even if there is no motion in an image. Although the detection log may be recorded, the Motion-Detection Recording does not work.

5.2.4 Recording Duration

- **MODE : NTSC / PAL**
- **Maximum Field Rate : 60 F/S (NTSC)
: 50 F/S (PAL)**
- **Recording Channel Number : 16Ch**
- **Resolution : 720 * 240 (NTSC)
: 720 * 288 (PAL)**

Quality	Field Rate									
	3F/ 1S	2F/ 1S	1F/ 1S	1F/ 2S	1F/ 3S	1F/ 4S	1F/ 5S	1F/ 6S	1F/ 8S	1F/ 16S
Record Condition HDD : 240 Gbyte, Audio Sampling Rate : 8KHz										
7	31	46	93	187	280	374	468	561	748	1497
6	41	62	124	249	374	499	624	748	998	1997
5	52	78	156	312	468	624	780	936	1248	2496
4	52	78	156	312	468	624	780	936	1248	2496
3	62	93	187	374	561	748	936	1123	1497	2995
2	72	109	218	436	655	873	1092	1310	1747	3495
1	104	156	312	624	936	1248	1560	1872	2496	4993
Record Condition HDD : 240 Gbyte, Audio Sampling Rate : NONE										
7	31	46	93	187	280	374	468	561	748	1497
6	41	62	124	249	374	499	624	748	998	1997
5	52	78	156	312	468	624	780	936	1248	2496
4	62	93	187	374	561	748	936	1123	1497	2995
3	72	109	218	436	655	873	1092	1310	1747	3495
2	83	124	249	499	748	998	1248	1497	1997	3994
1	104	156	312	624	936	1248	1560	1872	2496	4993

(Unit : Hour)

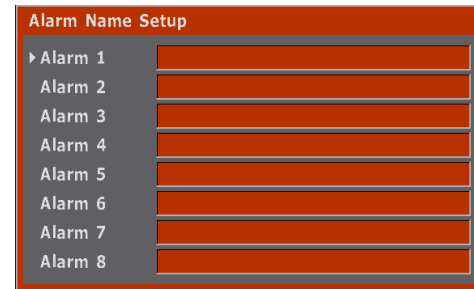
(You can control recording quality from Manual Recording of the Recording Setup.
This record timetable is indicated the minimum guaranteed values.)

5.3 Alarm Setup

Alarm Setup is used for connecting with external devices such as alarm or buzzer.



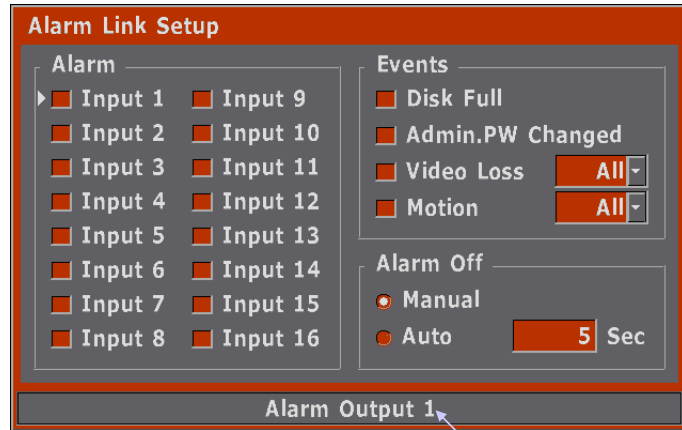
5.3.1. Alarm Name



How to Setup

- a. Select alarm channel by using Jog.
- b. Selects name by using play, right/left, and jog.
- c. As jog is rotated from right to left, characters change.
Possible to write up to 16 alphanumeric and symbolic characters.

5.3.2 Alarm Link Setup



Alarm output number
Present output number is 1

- **Events** : Select condition of Alarm Out.
Alarm inputs are 16EA and Alarm outputs are 4EA.
- **Alarm Link Explanation**
The above menu will display as checking Alarm Link button.
 - 1) **Alarm (left of the above picture)** : Sets up which alarm will be output when alarm occurs. Inputs are 1~16 and possible to select repeatedly.
 - 2) **Events (above of right)** : Sets up events which will be output alarm signal. There are Disk Full, Admin, PW Changed, Video Loss, and Motion. Possible to select repeatedly.
 - 3) **Alarm Off (below of right)** : How to off alarm when alarm occurred.
There are Manual and Auto.
 - 4) **Alarm Output Number** : The part for selecting output port when signal is in according to alarm and event setup. Output ports are in rear of product and able to select one of them.
 - 5) Alarm in/out ports are in rear of product there are 16pcs of input ports and 4pcs of output ports.
Move to previous menu after finish setup by using EXIT button.
- ⚠ **Alarm Output signal is outputted within approximately 2 seconds after various alarms are detected.**
When outputs an Alarm Output, "AL" is displayed on the left of the date display.
The alarm inputs 1-16 follow the alarm input number set-up by Alarm Recording setup.

5.3.2.1 Alarm

Moves by using ▲, ▼ buttons or Jog.

Displays alarmed channel. For selecting channel you want to detect, press ENTER button after moving cursor to detect. Canceling is the same way.

5.3.2.2 Events

- Alarm has occurred according to select events such as Disk Full, Admin PW, Changed Video Loss, Motion Detect.
- Checks event you want to detect from the Events menu by using Jog and ENTER button.
- Each event type is indicated by the following.
Disk Full : When HDD is fully recorded.
Admin.PW Changed : When Admin Password has been changed.
Video Loss : No video image. Possible to select channel number or ALL.
Motion : When motion is detected. Possible to select channel number or ALL.

5.3.2.3 Alarm Off

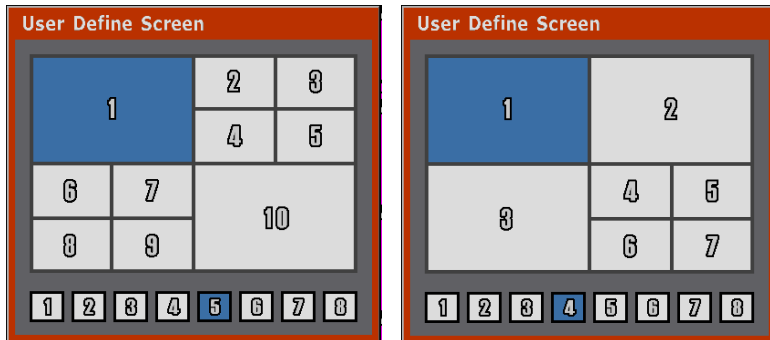
- How to off "Alarm" when alarm has occurred
Auto : Alarm is turned off automatically after setting time.
Manual : As press the Alarm button on the front, alarm is turned off.
Time (Sec) : This is for selecting "Auto". (Unit : Sec)

5.3.2.4 Alarm Output Number

- Select Alarm Output Number by using channel button.(1~4 buttons)
Alarm Output Number is changed according to pressing button.
- Alarm Output port is Open Collector and could be connected to rear port of the product. It has 4 outputs. Refer to External Product Connections and Application for the details.
- For Alarm OUT connector, please refer to P.29

5.4 User Define Screen

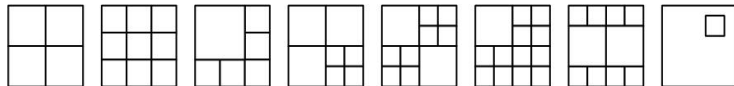
User can organize the screen to your personal preference by using the user button. It is very convenient if you use AUTO function at User Screen.



● How to Setup

1) Select one of 8 variations of multi-screen views by using left/right buttons or Jog.

(NTSC : 8 Screen, PAL : 8 Screen)

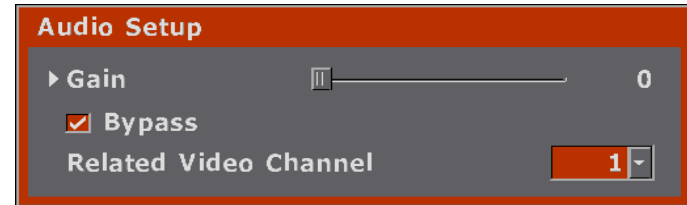


2) As color is changed to blue, change the screen by using Button.

- Ⓐ Change the screen, which color is blue, by selecting the Channel Selection button.
- Ⓑ Move to another screen by using Jog/ up-down button.
- Ⓒ After finishing, select either ENTER or EXIT.

3) After setting end, finish the menu and then press the "USER" button of screen button. User Screen will display as press the INPUT CH on USER SCREEN mode.

5.5 Audio Setup



- Audio is capable of recording one channel.
- Sampling Rate is 8 KHz.
- Bypass is possible to Audio Out as recording Audio.
- Master Gain is from 0 to 5. 0 is standard input status. (-5db)
- Audio can be recorded, provided that Audio of Channel Selection at Recording Setup is checked.

⚠ When the audio input level is large, an audio output may carry out a sound crack. In such a case, please make the audio input level small.

● How to Setup

1) Selecting Audio Setup from the menu, displays the above picture.

2) Select "Bypass Audio".

3) Select "Bypass Audio".
You can hear sound from "Audio Out".

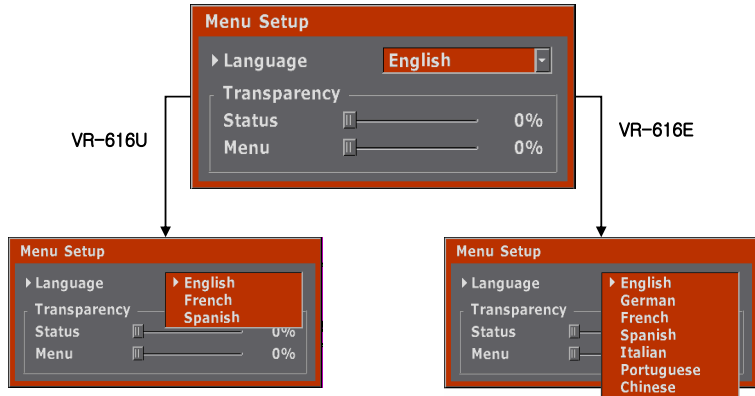
4) For audio recording

- ① Select "Manual Recording" from the Recording Setup.
Check whether Audio is set-up or not.
- ② Select Channel of Related Video Channel from the Audio Setup.
- ③ Check whether Channel of Related Video Channel is set-up or not at Manual Recording of Recording Setup.

5) Finish by using EXIT button.

6) Audio is recording as REC button is on.

5.6 Menu Setup



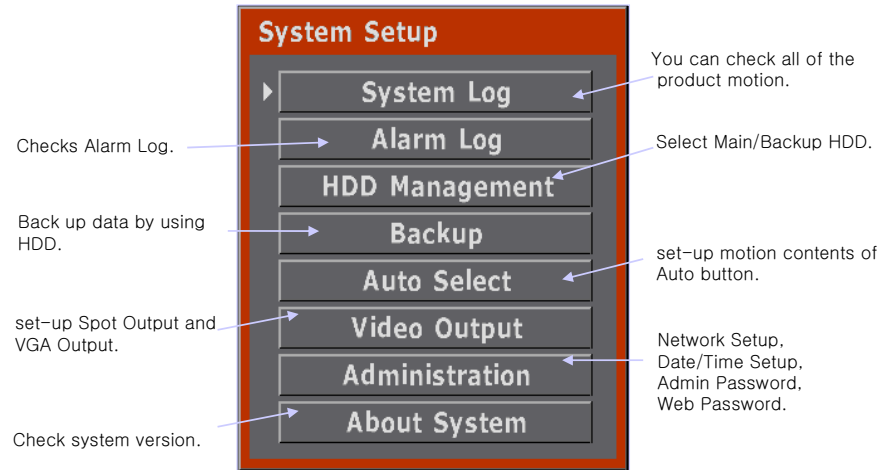
- Language is set-up at English and able to change to French and Spanish on VR-616U. (English, German, French, Spanish, Italian, Portuguese, Chinese are available on VR-616E)
- Status : It controls transparency of present status(channel name, recording status indicator, clock, indicator of HDD recording amount) which is displayed on screen. (0 ~ 80%)
- Menu : It controls transparency of Menu screen. (0 ~ 80%)

! Status on the screen is not updated during the menu setup.

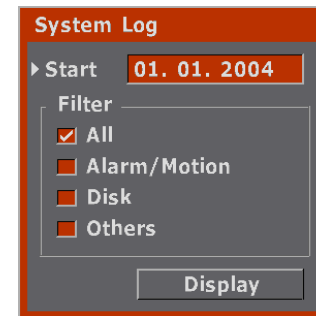
● How to Setup

- 1) Selecting Menu Setup from the menu, displays the above picture.
- 2) Move to the place you want to set-up by Jog.
- 3) For changing language, press the ENTER button at Language and select the language.
- 4) If you change the value by jog after moving to Status and pressing the Enter button, it controls transparency of present status(channel name, recording status indicator, clock, indicator of HDD recording amount) which is displayed on screen.
- 5) If you change the value by jog after moving to Menu and pressing the ENTER button, it controls transparency of Menu screen.
- 6) Finish setup by using EXIT button.

5.7 System Setup



5.7.1 System Log



- Log records actions which occurred on the system while operating.
- Easy to use by using Date/Time or Filter.

- When you specify the log line that is older than the recorded image remains in HDD and press ENTER, it could jump on the latest image if "Overwrite Disk When Disk Full" is checked. If it is not checking to "Auto Repeat" of a Playback menu at this time, it will become the stop mode at the latest image. In such a case, please check to "Auto Repeat" then reproduces the latest pictures and the oldest pictures continuously.
- A system log can be saved to 250,000 per HDD. When exceeded, it is overwritten and deleted.
- A system log is usually aligned in order of time and displayed. When a system log is overwritten exceeding 250,000, a system log could not be aligned in order of time.
- A system log goes on recording after the DISK FULL. When a system log goes on recording exceeding 250,000, the disagreement of a recording image and a system log could occur. For avoiding this, please execute recording with checking "Overwrite Disk When Disk Full".
- When using "Overwrite Disk When Disk Full", the latest image might appear if the search is performed using the log indicating the time when the image is overwritten/erased. When using "Overwrite Disk When Disk Full", select "Auto Repeat".

● **How to Setup**

- 1) Log records actions which occurred on the system while operating.
- 2) You can check "Log" by the following :
 - ① Set-up start date, which will be marked on the LOG, by Jog. Select year/month/day by using the right/left button. Change year/month/day number by using Jog.
 - ② Select "Log Filter" for quick search.
 - ③ Select "Display" button.

 If detects motion when motion recording, the log will not record on a System log.

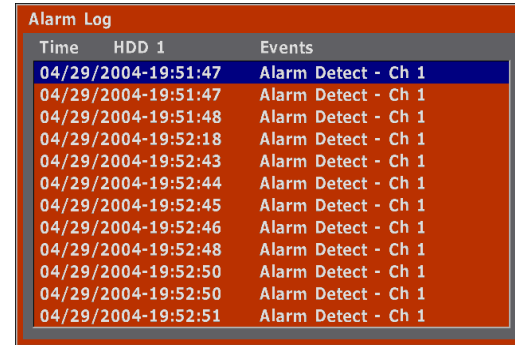
● **Log Screen**

Log screen contents are as follows:

Alarm In 1-16	Disk Full
Video Loss	Power On/Off
Network Access	Menu Setup
Motion Detect	

- On the system log display screen, if you chose a log line by the vertical button or JOG Dial and then press the ENTER button, playback the recorded image starts from the time when the log was recorded. If there was no record image when a log is recorded, playback the recorded image from the nearest position. As pressing a stop button, it will return to a system log screen.

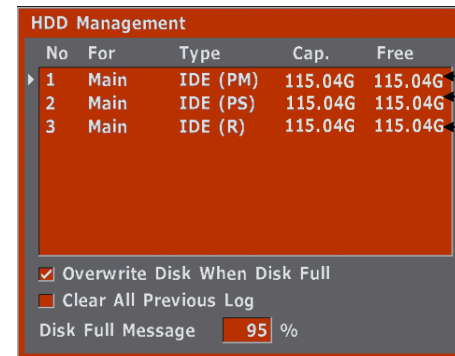
5.7.2. Alarm Log



Time	HDD 1	Events
04/29/2004-19:51:47		Alarm Detect - Ch 1
04/29/2004-19:51:47		Alarm Detect - Ch 1
04/29/2004-19:51:48		Alarm Detect - Ch 1
04/29/2004-19:52:18		Alarm Detect - Ch 1
04/29/2004-19:52:43		Alarm Detect - Ch 1
04/29/2004-19:52:44		Alarm Detect - Ch 1
04/29/2004-19:52:45		Alarm Detect - Ch 1
04/29/2004-19:52:46		Alarm Detect - Ch 1
04/29/2004-19:52:48		Alarm Detect - Ch 1
04/29/2004-19:52:50		Alarm Detect - Ch 1
04/29/2004-19:52:50		Alarm Detect - Ch 1
04/29/2004-19:52:51		Alarm Detect - Ch 1

- Alarm Log displays alarm recording which detects on system such as motion.
- On the alarm log display screen, if you chose a log line by the vertical button or JOG Dial and then press the ENTER button, playback the recorded image starts from the time when the log was recorded. As pressing a stop button, it will return to an alarm log screen.
- An alarm log is displayed according to the time set-up by the System log.

5.7.3 HDD Management



No	For	Type	Cap.	Free
1	Main	IDE (PM)	115.04G	115.04G
2	Main	IDE (PS)	115.04G	115.04G
3	Main	IDE (R)	115.04G	115.04G

Overwrite Disk When Disk Full
 Clear All Previous Log
 Disk Full Message 95 %

The state of the 1st Built-in HDD. Capacity is 120GB, and Free Space is 120GB.

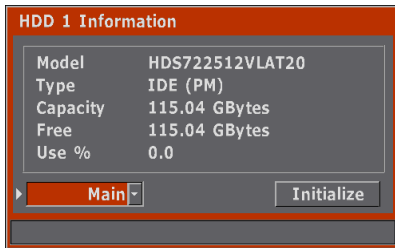
The state of the 2nd Built-in HDD.

The state of the removable HDD.

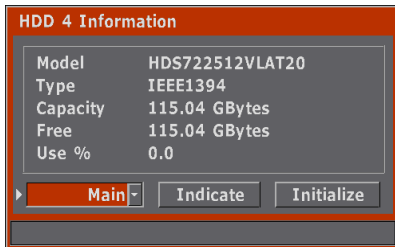
- set-up HDD
Main HDD : Can be used for basic REC.
Backup : For backup HDD.
- set-up REC mode of the main HDD.
- set-up overwrite mode.
- Log clear function.
- set-up HDD using percent.
- Clear All Previous Log

If you check here, and press EXIT button, "Do you want to Update Disk?" is displayed. As pressing "Yes" button, Log information will be deleted.

● HDD Information



● This is for information of Local HDD.



● This is for information of external IEEE 1394 HDD.
As clicking the "Indicate" button, you can know which HDD is.

- Only one HDD can be set-up for backup. If there is another HDD(a) set-up to backup from the first when changing the use of a HDD(b) into backup from main, the use of the HDD(a) will be automatically changed into main.
- HDD of No.1 (PM) You can use it for main.
- The capacity and free space displayed are smaller than the actual capacity as they are calculated based on 1 GB = 1024 x 1024 x 1024 Byte.

■ Initialize

- If you press "Initialize" button at Main HDD, "Data stored in HDDs numbered larger than x will be lost. Are you sure?" is displayed. As pressing "Yes" button, HDD will initialize. Please note all HDD for main after specified HDD is initialized.
- If you press "Initialize" button at backup HDD, "All data in HDD x will be lost. Are you sure?" is displayed. As pressing "Yes" button, HDD will be initialized.



A system log is not deleted even if the HDD is initialized.
When opening a HDD Management menu, network communication stops for a moment. Although an error is displayed when troubles occur in a HDD, since an error message cannot be correctly displayed depending on HDD, please use as a standard. Since the troubled HDD is separated by operate Off/ On, please specify the HDD in question with a "Indicate" button.
Please turn off the power when you connect external IEEE1394 or USB with DVR for the purpose of avoiding damage. After power off, connect IEEE1394 or USB device and then turn on the power.
If you reset DVR, you have to power off the IEEE 1394 or USB device.
When the hard disk configuration is changed, search on event logs recorded after the change may fail. To enable display in this case, alter the specified date/time to a time later than that of the configuration change.



- It is displayed when the capacity specified on the hard disk management screen is exceeded.

● How to Setup New HDD

- 1) Add new HDD.
 - ① When adding a new HDD, you must turn the power off.
 - ② Backup HDD is only one.
 - ③ It is better to clear the data when an HDD is registered for the first time.



MAIN

IDE1 : Master (Internal HDD)



IDE1 : Slave (Internal HDD)



MAIN/
BACKUP

IDE2 : Slave (Removable HDD)




Notice
If you make a mistake during HDD installation or removal, HDD contents can be erased. (Ex. When changing Main HDD to Backup HDD or changing Backup HDD to Main HDD.)

2) Overwrite Disk When Disk Full

Monitor screen displays a similar message as the following according to overwrite on/off.

On **04/29/2004-20:08:18**


Main HDD is full, it starts to overwrite old DATA.

Off **04/29/2004-20:08:18** 

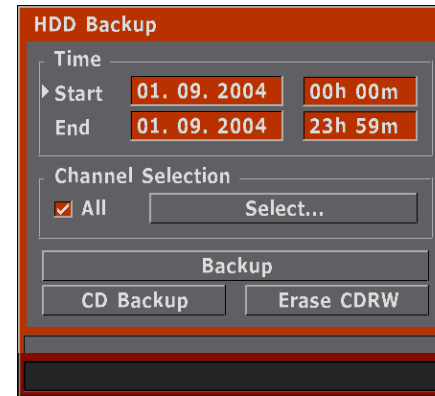
When Main HDD is full (100%), recording is stopped.

3) Clear All Previous Log.

It is the place for initial Log content.
It is better to initiate Log, when HDD or DATA is changed.

 **To make back-up with CD-RW etc should be strongly recommended if the important data seems to be recorded.**


5.7.4 Backup

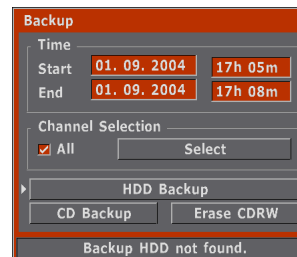


- Record a portion of the main HDD content to a Backup HDD.
- Must have more than one Backup HDD and recording content of setup date.
- Possible to backup HDD and CD.

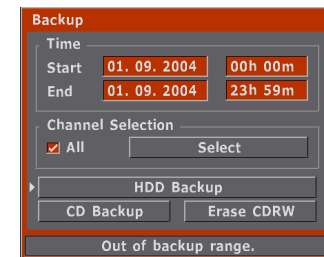
● **How to Setup**

- 1) Set-up start and end dates by using Jog and the right/left button.
- 2) Select Backup and backup will start.
It is possible for this to take a long time depending upon the motion contents of the system.
- 3) If there is no data to backup, "Out of backup range" message will display.
- 4) If there is no HDD to backup, "Backup HDD not found" message will display.
- 5) For CD-R media, cancellation may damage the CD while it is being backup.

 **Please input the time when the image is recorded into Start / End Time section. When backup is performed designating larger capacity than the free space of CD-R/RW or HDD, backup will be ended if the free space is used up.**



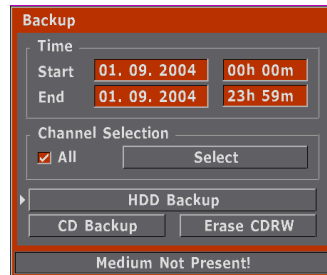
- This message is displayed if there is no Backup HDD.



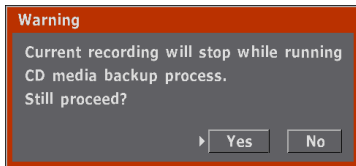
- This message is displayed if there is no date to Backup.



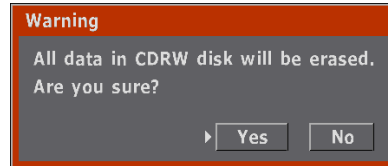
● This message is displayed if there is no CD-recorder when backup at CD.



● This message is displayed if there is no CD for backup when backup at CD.



● This message warns that recording is stopped while data is being backed up to a CD-RW.



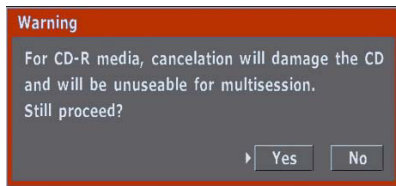
● This message is for warning the data of CD could be lost while erase CD.



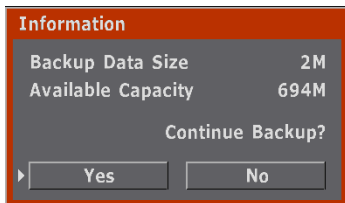
● Decide whether you back up or not after check.



● It means Backup is being progressed.



● This is warning message cancellation will damage the CD while it is being backed up.



● This message is indicated amount of date and space of CD to use when you back up CD.

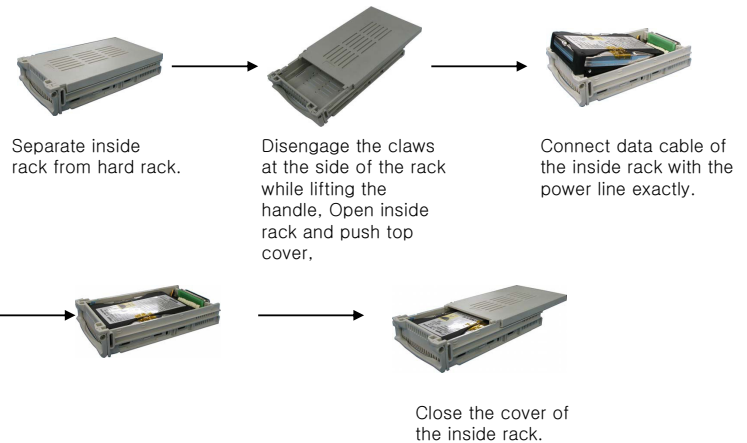


● This message is displayed when Backup is done.

● How to connect removable HDD

About removable HDD / external IEEE1394 equipments
Please consult your nearest JVC dealer about the model of the connectable removable HDD and connectable IEEE1394 equipments.

The jumper of HDD which connects additionally, set-up as slave.
(Refer to HDD's user manual for setup jumper.)

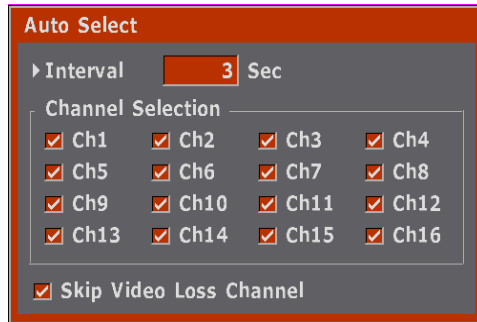


! If Removable HDD is set-up for backup, this HDD's contents are not be able to replay from the remote place.(Monitoring is possible.)

! Notice
If the product is being HDD backed-up, you will not be able to use the playback (P/B) via the Internet. (Live monitoring is possible)

! When add HDD or take HDD, please turn off the power. HDD is possible to damage when its' remove while power is on.

5.7.5 Auto Select



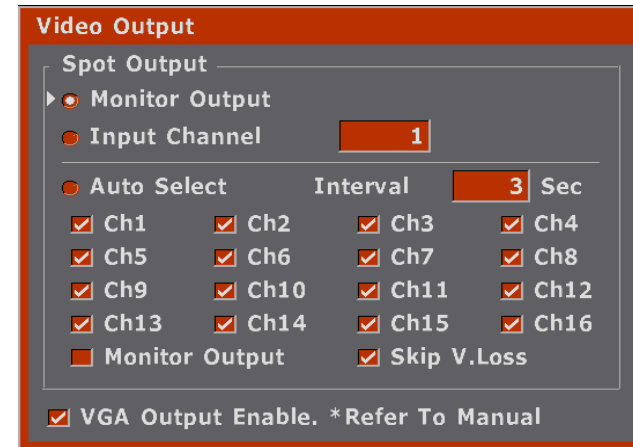
- Select Delay and Skip of the Auto Switch.

● How to Setup

- 1) Auto Select function is for automatic switchover of the Monitor screen.
- 2) Delay of the Auto Switch range is 1 ~ 300sec.
- 3) All Channels are On when the system starts for the first time.
- 4) When select Skip Video Loss Channel, no signal channel is not displayed in case of sequence which is displayed only one channel.
- 5) Auto Select of User Define is automatically switching by mode switching.

! It is not a failure although a screen could be in disorder at the moment of a screen being switched.

5.7.6 Video Output



- Select the Spot Out channel.
- Select VGA output.(If you check the VGA output, monitor screen quality is worse than before.)
- If there is no VGA output on the VGA output port, press the STOP button and DISPLAY button at the front button for about 3sec then VGA output will be on automatically.

● How to Setup

- 1) Select what you want to change by using up/down buttons or Jog.
- 2) When you select Monitor Out, the Spot Out port is the same as the Monitor Out.
- 3) If you select Input Channel, the selected channel is displayed beside Input Channel.
- 4) If you check VGA Output Enable, the image is displayed to VGA port.
- 5) Finish setup by pressing EXIT button.

! If Spot Output is set-up "Auto Select" at the time of Asynchronous inputs, the picture could be unstable. Since an output signal switches input signals directly.

5.7.7 Administration

The Administration menu is shown with the following options and callouts:

- Network Setup**: This is for remote security.
- Date/Time Setup**: set-up date and time.
- Password**: This is for Setting password.
- Web Password**: This is for setting web password.
- Covert Channel**: Covert Channel allows Administrator to select channels that only they can view.
- Mail Notification**: DVR will send an Email upon events selected during set-up.
- Lock Front Button**: This is for locking front button.
- Lock Remote Control**: This is for locking remote controller.

5.7.7.1 Network Setup

The Network Setup screen displays the following configuration:

- IP Address: 192.168.0.1
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.0.1
- DNS Server: 192.168.0.1
- Web Server Port Number: 80

An "Apply" button is located at the bottom of the screen.

- You should install the following items for remote search and control by LAN. (Refer to the Internet setup value you want to install.)

● How to Setup

- 1) Move to the place you want to change the setup by using Jog.
- 2) Select contents to change by using the ENTER button.
- 3) Select place to change by using the right/left button.
- 4) Select the number you want by using Jog.

IP Address : ____ . ____ . ____ . ____

Subnet Mask : ____ . ____ . ____ . ____

Gateway : ____ . ____ . ____ . ____

DNS : ____ . ____ . ____ . ____

Web Server Port Number : ____



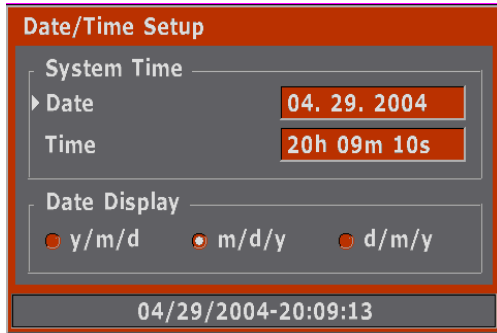
Notice
(Possible to have a Network problem when its installation. To avoid this problem consult the network manager for setup values.)

- 5) If you press the "Apply" button, "To apply, change network configuration. Then restart the system." will be displayed. If presses a "Restart Now!" button here, it will reboot and a setup will be changed.



If Port Number is set-up besides 80, please input the port number into the address input section of a web browser.
ex) http://192.168.0.1:81/
In case of using client program, the port number should be set-up at the client program.

5.7.7.2 Date/Time Setup



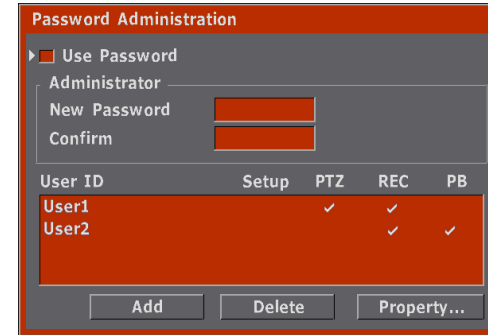
- Set-up Date and Time, which will be used in the system.
- Set-up "Date Display".
- **How to Setup**
 - 1) Move to the place you want to change the setup by using up/down buttons or Jog.
 - 2) Select contents to change by using the ENTER button.
 - 3) Select the place to change by using the right/left button.
 - 4) Select the number you want by using Jog.

Date (year/month/day) : _____._____._____
 Time (hour/minute/second) : _____._____._____
 - 5) Select the type of display.

y/m/d m/d/y d/m/y
 (Default setting is m/d/y (VR-616U) or d/m/y (VR-616E))
 - 6) Setup contents are automatically applied if you move to a previous menu.

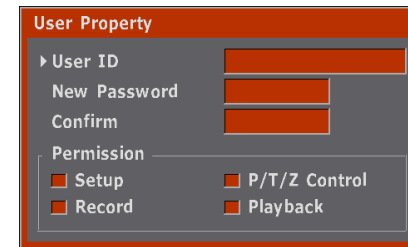
! When the "system time" is changed and then the same time image was recorded, The Playback image is performed in the recorded order. On the searches mode, it should jump to the designated time out of two recorded images.

5.7.7.3 Password



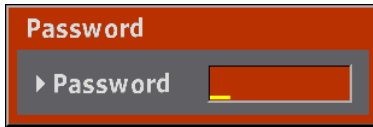
- You can use a password for system security.
- Password mode will display as click the check box.
- The password must 4 digit numbers.
- Enter "New Password" and "Confirm" through Channel Selection buttons. Please use the each 1-9 Channel Selection button.
- Setup : Setup menu, PTZ : Control camera, REC : Recording
PB : It means playback.

! When the "Use Password" on the "Password" menu is checked, a default password will be set-up if it changes the other view from the menu without inputting a password. The default password is "1234".



- As pressing "Add" button, the upper screen will be displayed.
- Each user may have their own unique ID.
- Each user may have their own unique password.
- Each user have a different permission to use. Even user have setup right, some menu can not access. (ex. Administration)
- For input User ID, using right/left buttons and up/down buttons (or JOG).
- Enter "New Password" and "Confirm" through Channel Selection buttons. Please use the each 1-9 Channel Selection button.
- User ID can set up to 8 characters.

! The following setup cannot be changed by the user who checks a "Setup". Camera Details Setup, Pan/Tilt Model Select, Recording Setup, Alarm setup, Audio Setup, HDD Management, Administration. For changing these setup, please open a Menu by Administrator authority. Operation-off can be carried out only by the user of a "Setup" or "PTZ" authority, and Administrator authority.



- It is displayed if there is no User ID.

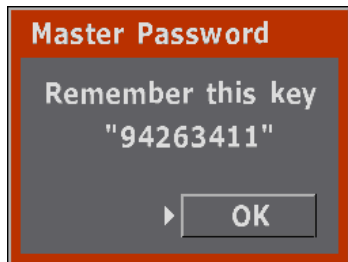
● When the users other than an administrator are registered, the "User" section is displayed on a password certification window. Please choose a user in the following procedure and input a password.

- 1) Press an EXIT button, an up button, and an ENTER button in order, and move to the "User" section.
- 2) Choose a user with vertical buttons, and press an ENTER button.
- 3) Press a lower button and an ENTER button in order, and move to the "Password" section, and input a password.



- It is displayed if there is User ID. Please input a password after choosing a user name.

- This message is displayed when enter "MENU" after setting password.
- Enter the Password.
- If you input wrong password, you can not enter the MENU. If you input wrong password 3 times, MENU screen will disappear. To input password again, please press the MENU button.



! If you operate quickly, possible to miss Master Password. Please be careful.

- It is displayed when set-up Admin Password for the first time. It shows for one time when set-up password after initializing system.
- It is important to remember the Master Password and write down in a secure place.
- Enter Master Password on Password.
- As use Master Password, possible to enter to the menu.

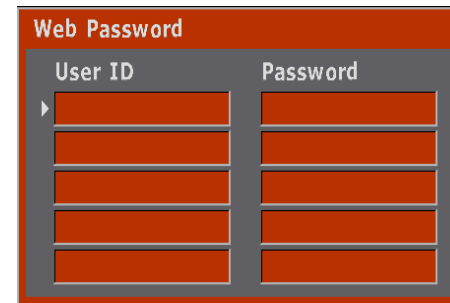
● How to Setup

- 1) Check the box to activate passwords.
- 2) Select a new password and then enter again for confirmation.
- 3) Select a new password by using Jog.
- 4) Enter "New Password" and "Confirm" through Channel Selection buttons. Please use the each 1-9 Channel Selection button.
- 5) As "Setting" select, password is changed.

! Notice

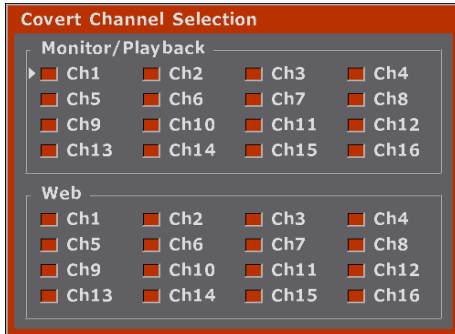
If you forget the password, you can not operate the system! Please be sure to remember the password or write it down in a secure place.

5.7.7.4 Web Password



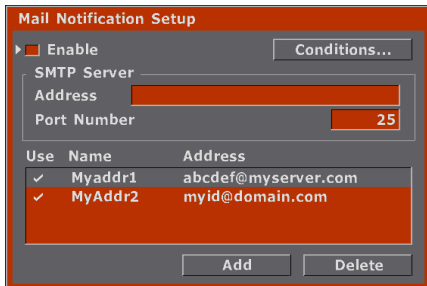
- This is for remote control by using Network.
- A user ID containing 8 numeric characters is possible.
- After selecting by jog, press the ENTER button for setup. Please use the each 1-9 Channel Selection button.
- If the web password is set-up, the Authentication window is displayed at the time of the connection from a web browser or a Client Software. Please input the user name and password.

5.7.7.5 Covert Channel

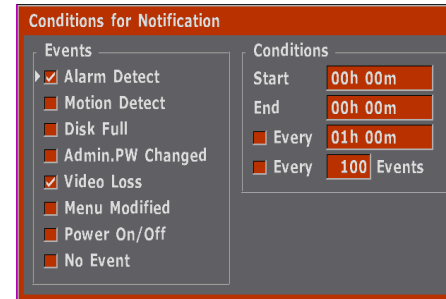


- Covert Channel Selection should be setup to use password.
- The selected channel at Monitor/Playback is only possible to record and live screen or playback screen is displayed with V-Loss. If you want to see playback screen, you must use Administrator Password.
- The selected channel from the Web is not able to see live or playback screen through the Web.
- It is not reflected in SPOT OUT.

5.7.7.6 Mail Notification

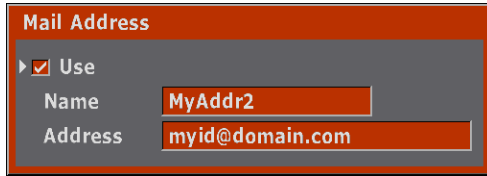


- Events selected at setup can automatically send email notification to event.
- The email address list remains active for all events.
- A list of SMTP and Email address may be set-up initially and updated to send event notification.



- **Events** :DVR will send an email when any of the checked events occur.
- **Conditions** : It sends email at Start and End time as setup.
 - 1) Start/End : Defines the time interval during which emails will be sent based upon the selected events.
 - 2) Every (Time) : Defines that every time a selected event occurs an email will be sent every hour of time.
 - 3) Every (Events): Defines that every time a selected event occurs an email will be sent regardless of time.
 - 4) For sending email, it must be checked both Every except follow condition.
 - 5) Every Events are limited to 100 units so if you set-up Every Events at 100, it sends email as 100 events are happened regardless of time intervals. (Every Time)
- Both Every (Time) and Every (Events) are checked.
 - As events are happened as Every (Events) during Every (Time), send email
- Only Every (Time) is checked.
 - Each setup Every (Time), send email.
- Only Every (Events) is checked.
 - As events are happened as setup at Every (Events), send email.
- In case of nothing checked.
 - Do not send email.

! The maximum number of user that can be set is 6. It can be set to more than 7 users but the operation is not guaranteed. The log generating time of the event mail text should keep in mind that time which is different in the transmitting time of mail being actual is displayed, although the right time is displayed. Although the correct log time of the event mail is displayed, take note that the sending time of the mail which differs from the actual time will be displayed.



- An 8 character ID may be selected to identify a recipient.
- Email address are entered into the menu and can include up to 128 characters.

5.7.7.7 Lock Front Button

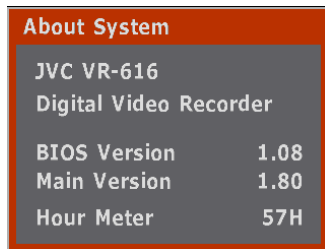
- **Lock Front Button** : This selection will lock the front panel buttons to prevent unauthorized operation. Only the Menu and Operation button will operate.
- When you press the LOCKED button, the message is displayed on "the button is locked" for a moment.

! Although the Front buttons are locked, On/ Off of a VGA Output can be changed by long pressing of a stop button and a display button simultaneously. However, "Locked!" is displayed.

5.7.7.8 Lock Remote Control

- **Lock Remote Control** : This selection will lock out use of the IP remote control to prevent unauthorized operation.
- When you press the LOCKED button, the message is displayed on "the button is locked" for a moment.

5.7.8 About System



- This is Software and Bios version of the System.
- Hour Meter indicates the passage time after DVR is on.

5.7.9 Default in Setup Menu

Camera Setup	Recording Setup	Alarm Setting
Name : Not installed Control ID : the same as a camera No. Reverse Pan : OFF Reverse Tilt : OFF Brightness : 50 Contrast : 50 Saturation : 50 Hue : 0 Select Model : None Baud Rate : 9600bps	Manual Recording : ON Schedule Recording : OFF (Recording Schedule : 00:00 – 23:59) (Specific Days : Not installed) Always : ON, MAX/1 sec Alarm : OFF, MAX/1 sec Motion : OFF Quality : 5 Audio : OFF Pre-Recording Time : Middle Time Post-Recording Time : 3sec Alarm Input : the same as a camera No. Motion Detect : Full (Aria Define : Not installed) Sensitivity : 10 Sensing Speed : 10	Alarm Name : Not installed Alarm Input 1-16 : All OFF Events : All OFF (Video Loss : All) (Motion : All) Alarm Off : Manual (Auto : 5sec)
Audio Setting	Menu Setup	HDD Management
Master Gain : 0 Bypass : ON Related Video Channel : 1	Language : English Transparency (Status) : 0% Transparency (Menu) : 0%	Overwrite Disk : OFF Clear All Previous Log : OFF Disk Full Message : 95%
Auto Select	Video Output	Administration
Interval : 3sec Channel Selection 1-16 : All ON Skip Videl Loss Channel : ON	Spot Output : Monitor Output (Input Channel : 1) (Interval : 3sec) (Ch1-16 : All ON) (Monitor Output : OFF) (Skip V.Loss : ON) VGA Output Enable. : OFF	Web Server Port Number : 80 Date Display : m/d/y (VR-616U) d/m/y (VR-616E) Password : Not installed Web Password : Not installed Covert Channel : Not installed Mail Notification : Not installed Port Number (SMTP Server) : 25 Lock Front Button : OFF Lock Remote Control : OFF

- Design and specifications are subject to change without notice.

5.8 Monitor Display



● Recording Status (According to color)

- 1) GREEN : Camera is Recording. (Always recording)
- 2) RED : It means it is being Event recording by motion detection or alarm input.
- 3) BLUE : It means DVR is on monitoring. (No recording, just for monitoring)
- 4) WHITE : No input signal status.

● Playback Status (According to color)

- 1) GREEN : Replaying the image that was recorded as always recording.
- 2) RED : Replaying the image that was recorded as alarm/ motion recording.

5.9 Playback



- The above picture will be displayed by pressing the PLAY Button.

● How to Setup

- 1) Please enter the date and time.
- 2) Press "Play Start", the playback screen is displayed according to the date value. The menu button can be used as a shortcut key of the "Play Start" button. The PLAYBACK starts without cursor position.
 - Play Audio : You can listen to the recorded audio if input.
 - Auto Repeat : After completing playback, picture returns to the first playback screen automatically.
 - Continuously : After completing playback of video selection, it will restart to replay images from the start of selection.
 - From The Beginning : Replays images beginning at the start of HDD No.1.
 - Backup HDD Search : Search contents of the backup HDD.
 - Backup CD Search : Search contents of the backup CD.
 - Recording Event List : Log screen is displayed which records activity triggered by alarm or Motion. Possible to check recording contents according to Event.
- The number of divided screen during playback is dependent on the number of divided screen during live image display. However, if the screen has been displayed in 6/7/10/13 divided screen or user-specified live screen, 16 divided screen will be displayed.

- ! If you press the PLAY and MENU button together, Play is begun.
- If you press the PLAY button twice, it replays like Continuously condition.
- If you press the STOP button during the play mode, play is stopped.
- The playback speed may not be the consistent with the record speed.
- A motion may become unnatural at the time of playback.
- When a PLAYBACK the image during record with checked to "Auto repeat" on the PLAYBACK menu and then PLAYBACK image was cached up the live recording point, the PLAYBACK image should be jumped to the oldest recorded one. If you replay past time than the time which is recorded on HDD, it is replayed the first recorded screen.
- During replay external IEEE1394 HDD, screen should wave because of data transfer speed.
- If DVR has HDD impact or other damage during replay, screen could be stopped in a moment or different channel could be displayed.
- If the recording is performed continuously with and without audio, the playback sound might be a little off or the image might freeze depending on the setting of the frame rate for recording. This is the characteristic of this unit, not a malfunction.
- Please check to "Auto Repeat " to reproduce the newest record. It may not reproduce if you don't check it.
- Even if the "Auto Repeat" is unchecked, the REV search will return to the latest recording without stopping at the beginning of the HDD when it is reached. Use "From The Beginning" button if playback is to be started from the beginning of the HDD.
- If FWD search or FWD frame-by-frame search is performed without checking the "Auto Repeat", it will perform a latest repeat playback for a few seconds instead of pausing at a latest recording. This is not a malfunction.
- The audio playback operation during slow playback of image is not guaranteed.

● Motion by Mix Button

If you press the Display button and Mode button (Image Sequence, Triplex) during the play mode, the screen format is displayed with Multi/Image Sequence/Triplex.

- 1) DISPLAY : Recording channel is displayed with a 1/4/9/16 screen. Because "Multi" is able to check several channels simultaneously, it is useful to search quickly.
- 2) IMAGE SEQUENCE : Multiple images from a single camera are displayed in order in which they were recorded in a 16 image screen format.
- 3) TRIPLEX : Possible to view playback while monitoring.

● Jog & Shuttle motion

- 1) It is more convenient to search by using Stop, Pause, Replay, Play, Jog, Shuttle.
- 2) Possible to reproduce each frame by using Jog from the pause screen.
- 3) Enable quick search by using Shuttle.

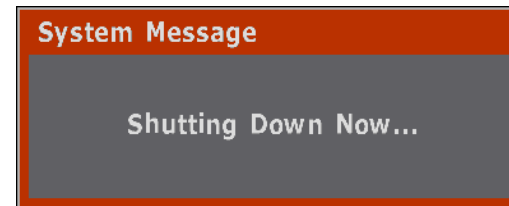
● Backup HDD Search

- 1) Recorded contents of the Backup HDD are displayed.
- 2) You can view recorded contents by using the Jog and ENTER buttons.

● Recording Event List

- 1) Contents of Alarm/Motion are displayed at the Log View.
- 2) You can view recorded contents by using the Jog and ENTER buttons.

5.10 Power Off



- You can power off by using the front operate switch.

- ! If system is to not be used for long periods of time, turn off the rear panel power switch.

- ! You must wait at least 15 seconds after shut down before removing the removable HDD.

6. External Backup

Please operate ON this equipment after turning ON a power switch of all peripheral equipments.
Please turn OFF a power switch of peripheral equipments after Operating OFF this equipment.

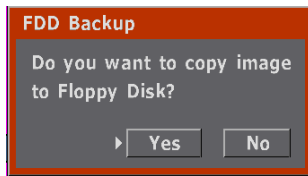
6.1 External USB Port

6.1.1 Connect with External USB Port

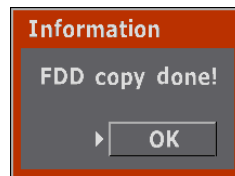
USB1.1 port will allow you to connect to a FDD, Zip Drive or USB memory device to record still images from the DVR.

6.1.2 How to Backup

Connect with external USB port after selecting the image in full screen mode. If there is power on, please turn off the power then connect with USB device.




Format FDD.



backup is done at USB FDD.

● How to Setup

- 1) Pause the full screen after playback you want to backup.
- 2) Press the direction button (▶) then FDD backup menu will display.
- 3) Press the ENTER button for setup.
- 4) Recorded still image could be checked from private Client Program.

 The data file which is stored at USB is showed as like ****.601.

6.2 External IEEE 1394 Port

6.2.1 Connect with External IEEE 1394 Port

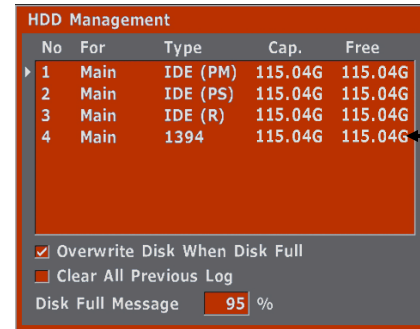
About removable HDD / external IEEE1394 equipments

Please consult your nearest JVC dealer about the model of the connectable removable HDD and connectable IEEE1394 equipments.

The IEEE1394 port is used to connect to external devices as a HDD or CD-RW drive to back-up images.

6.2.2 How to Connect with IEEE 1394 Port

Connect with external IEEE1394 port as blow picture. If there is power on, please turn off the power then connect with IEEE1394 device.





The left picture will appear on HDD Management as connecting HDD with external IEEE 1394.

- As selecting system/HDD Management at Setup Menu, the above picture is displayed.
- After confirmation that status is correct, select HDD and set-up for normal operation.
- IEEE1394 HDD is able to use Main or Backup and possible to playback as well.

* Note

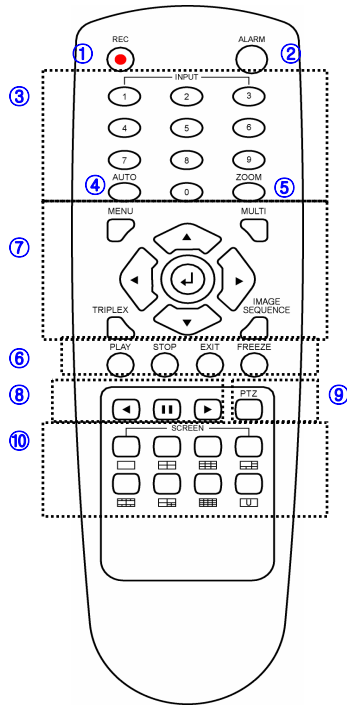
IEEE1394 enables direct connection up to 4 device.

 If you reset DVR, you have to power off the IEEE 1394 or USB device.

 During replay external IEEE1394 HDD, screen could wave because of data transfer speed. In such a case, please reproduce once again.

7. Remote Controller

7.1 Outline



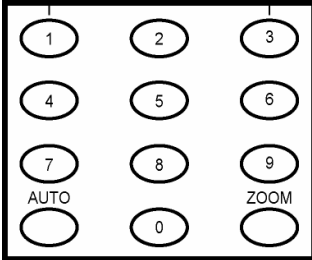


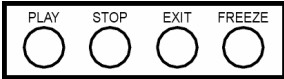


! For the first step, you should give an ID for control DVR by one remote controller.

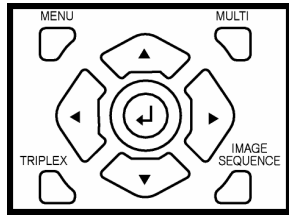
- 1) Press one of INPUT button (1~9) and STOP on DVR at the same time then the number which you pressed will be the ID.
- 2) Press INPUT button (1~9) on remote controller for 3 seconds then remote LED on front panel of DVR will be flickered.
- 3) This DVR has ID by pressed button number.
Make sure there is no same ID as using several DVR.

! If the Camera Selection buttons (1~9) of the remote control is pressed and held, the remote control LED of the DVR with the corresponding ID will light up while the remote control LED of the DVR with other IDs will light off. Only the DVR indicated by the lighted remote control LED is operable. When installing multiple DVRs at a same location, make sure that only the remote control LED of the DVR to be operated lights up before operation.

7.2 Details

- ①  ● REC Button : When the REC LED is on, DVR is recording as per set-up instructions.
- ②  ● ALARM RESET Button : Stops the Alarm Output.
- ③  ● INPUT Button :These buttons are used to select the screen monitors and to change the channel settings at the menu. If you want to change channel, press 01,02,03,...10,11,...16.
- ④  ● AUTO Button : The Input channel is automatically switched in proportion to the speed setting at the menu.
- ⑤  ● ZOOM Button : This is used to zoom a freeze-frame in playback mode. Power is X2.
- ⑥ 
 - PLAY : This button is for playback.
 - STOP : To stop playback.
 - EXIT : To exit the menu after completing setup.
 - FREEZE : For pause the image.

⑦



- **MENU :**
This button is for selecting or canceling the monitor setup menu mode.
- **MULTI :**
This button is for canceling Image Sequence or Triplex mode.
- **TRIPLEX :**
To see live and PB screen at the same time as making replay screen to PIP mode.
- **IMAGE SEQUENCE :**
Changes playback mode to sequence of images from single camera.
- **ENTER :**
For applying setting value.
- **Up/Down/Left/Right Button :**
For moving Menu to Menu. During reproduction, a vertical button can use as a substitute of Shuttle, and a right-and-left button can use as a substitute of a JOG.

⑧

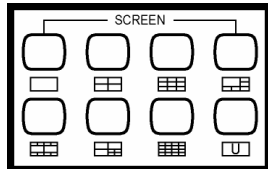


⑨



- **PTZ Button :**
This button is for Camera control.
◀ / ▶ Button : Choose the item.
▲ / ▼ Button : For control.
For ending camera control, press an EXIT button.

⑩



- **SCREEN Button :**
This button changes display mode to the various configurations available. The button that is printed "U" is a User button.

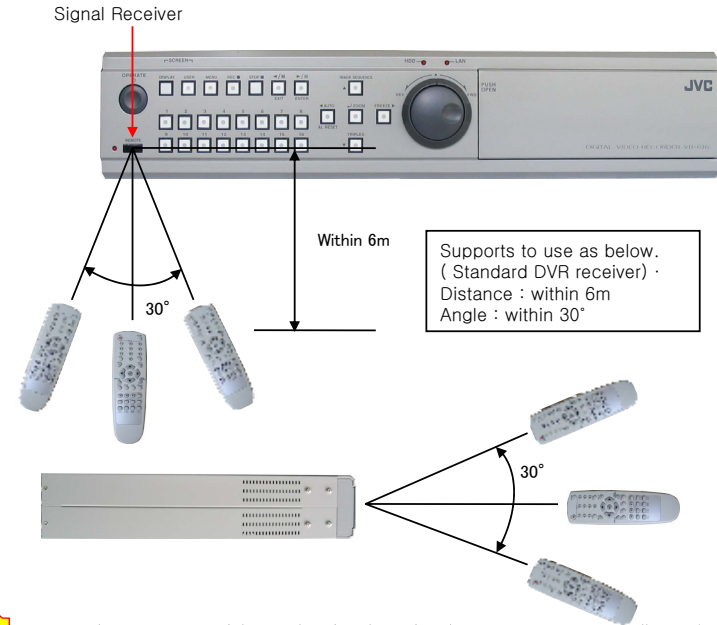


CAUTION
Risk of explosion if remote controller's battery is replaced by an incorrect type.
Size : AAA size, Rating : DC 1.5V



For using remote controller after restarting DVR, operate again from the start.

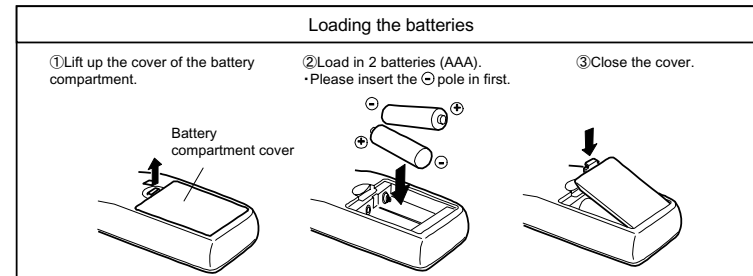
● Working Range of Remote Controller



Do not leave any material near the signal receiver between remote controller and DVR. Remote controller could not be controlled as closing direct light or strong lighting. Do not press DVR and remote controller's buttons at the same time. Disorder is possible. Be careful of the liquid leak of a battery.


• Guide on battery replacement.

When the operatable distance of the remote controller is decreased, the batteries have become exhausted. Please replace to new batteries (AAA, a Manganese dry battery). (Guide for replacement: Approx 10 months based on average usage of 2000 times a day.)



8. Troubleshooting

Symptom	Cause	Action
Power cannot be turned on.	● Is the power cable properly connected?	● Plug the supplied power cable to the outlet
[REC] and [PLAY] buttons do not work.	● Is the Operation Lock turned on?	● Turn off the Operation Lock
REC cannot be started even if pressing [REC] button.	● Is it in the state of Timer Standby?	● Remove the check of "schedule recording".
Playback image is not displayed on the monitor.	● Is the monitor properly connected?	● Connect the monitor properly.
Menu screen is not displayed.	● Does it connect to SPOT OUT?	● Connect to MONITOR OUT.
Unable to play back audio sound.	● Is the audio recording selected when recording setup? ● Is audio volume properly setup when audio recording?	● Select audio recording when set-up recording. ● set-up audio volume properly when set-up audio recording.

 If there's any other problem, contact your nearest JVC dealer.

9. Specifications

Parts	Item	VR-616 U/ E	
Number of Channels	Q'ty (EA)	16	
Camera Input Signal	Video Signal	NTSC	PAL
	Signal Input	Composite 1.0V With Loop Output, BNC	
Input Signal Processor	Compression Type	Wavelet based	
	No. of pixels (H*V)	720*240	720*288
	Compression	7 Mode	
Monitor Output (Composite)	Q'ty (EA)	2	
	Video Level (Vp_p)	1.0	1.0
	Burst Level (Vp_p)	0.286	0.3
Monitor Output (Y / C)	Q'ty (EA)	1	
	Y Level (Vp_p)	1.0	1.0
	C Level (Vp_p)	0.286	0.3
VGA Output	Q'ty, Type	1EA, 15Pin D-SUB JACK	
	No. of pixels, Frequency	640 x 480 60Hz	640 x 480 50Hz
SPOT Output	Q'ty, Type	1EA, Composite 1.0Vp_p 75 Ohm BNC	
Output Display Mode	Live	Full/4/6/7/9/10/16/Zoom	
	User & Live	4/6/7/9/10/13/PIP	
	Playback	Full/4/9/16/Sequence/Zoom	
	Triplex	Live & REC & Simultaneous PB	
	Auto Select Time	AUTO Mode 1-300sec, CH Skip Function	
	Search Mode	4 Mode (Date, Time, Channel, Event)	
Audio Signal Processor	Audio Input	1 channel / Mono, -5dBs RCA Jack	
	Audio Output	1 channel / Mono, -5dBs RCA Jack	
	Sampling rate	8 kHz	
System Control Part	HDD Control	ULTRA DMA IDE Internal & Removable Type	
	HDD Q'ty (EA)	2	2
ID Character Display	Q'ty	Max 16EA/channel	
	Character	Capital/Small Letter, Digit, Symbol	
Time Display	Mode	yy/mm/dd/, mm/dd/yy, dd/mm/yy, hh/mm/ss	
Back_up & Copy	IEEE1394	1EA, HDD, CD-R/RW	
	USB	2EA, Flash Memory, FDD	

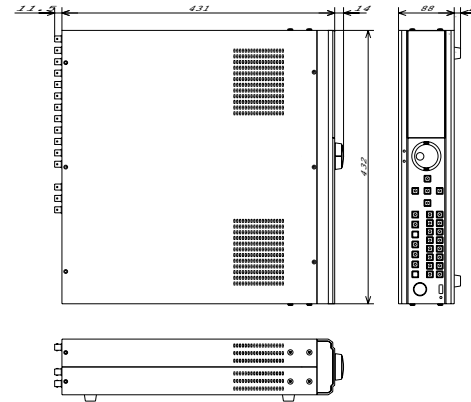
● An Audio Output is -5dBs when an Audio Input is -5dBs and the Master Gain is set-up to 0.

JVC VR-616

Alarm Control	Alarm Input	16EA, Low Active Alarm	
	Alarm Output	4 EA, Low Active Alarm, TTL Level	
	Output Mode	Alarm Input, V-loss, Motion, Disk Full, Admin-PW Changed	
	Log Display	Date & time, CH, Name, Event	
Motion detect	Mode & Grid	Full/Grid(16H*12V)	
	Sensitivity	10 Step	
	Velocity	10 Step	
Network & Camera Control Part	Serial I/O Port	RS-485 (1EA):3P Terminal	
	LAN	1EA, Ethernet 10/100M , RJ-45P	
Record Processor	Mode	Time-Lapse/Motion/Alarm	
	Rec. Rate	Max at 60fps	Max at 50fps
	Time-Lapse Rate	30F/1sec ~ 1F/60sec	25F/1sec ~ 1F/60sec
Recording	Mode	Schedule & Manual	
Schedule Recording	Day setup	7EA, Sun, Mon, Tue, Wed, Thu, Fri, Sat	
	Special Day	Max 16EA	
Power Supply	AC Input (V, Hz)	120V, 50Hz/60Hz (VR-616U), 220V-240V, 50Hz/60Hz (VR-616E)	
	Fuse	T6.3AH 250V	
Current Consumption	A	1.2 A (VR-616U), 0.6 A (VR-616E)	
Operating Humidity	RH	30%RH - 80%RH	
Operating Temperature	°C (°F)	5 °C - 40 °C (41 °F -104 °F)	
Size	W*H*D (mm) (Inch)	432 x 88 x 431 (17 x 3.46 x 17)	
Weight	w/o Packing	9 Kg (19.8 lbs)	
Accessory	Power Cord	1	2
	User Manual	1	1
	Remote Control Unit	1	1
	Battery	2	2
	CD-ROM	1	1
	Lock Key	2	2
	Rack Mount Bracket	2	2
	Rubber Foot	4	4
	Screw	4	4
	I/O connector	4	4
	Rack Handle	2	2
	Screw	4	4
	Screw	4	4

JVC VR-616

<Appearance>



unit : mm



Specifications and appearance of this unit are subject to change for improvement without prior notice.



DIGITAL VIDEO RECORDER
VR-616
Client Software
INSTRUCTIONS



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1. Overview

1.1 In This Manual

This manual describes the features, installation, and how to use of 16ch Embedded DVR (Digital Video Recorder) Client Software (Client SW) to remotely view, search, and download an image.

* All Product names stated in this manual are trademarks or registered trademarks of their respective companies. Marks such as ©, ® are omitted in this manual.

1.2 CD-ROM Content

Following files and folder are in CD-ROM.

- (1)"VR-616 ClientSW" Folder
Client software. As double click "setup.exe" as start installation.
- (2)"VR-616 ClientSW Manual(Japanese).pdf"
Instructions of this software.(Japanese)
- (3)"VR-616 ClientSW Manual(English).pdf"
Instructions of this software.(English)
- (4)"AdobeReader" Folder
For viewing ClientSW Manual, please install Adobe Reader.
As double click "AdbeRdr60_enu_full.exe" as start installation.

1.3 Operating Environment

System Requirements

PC	Type	PC/AT compatible machine
	CPU	Required : Pentium III 866MHz Recommended : Pentium 4 1.8GHz
	Memory	256MB and more
	Graphic Boad	*DirectX support *Direct Draw Video overlay supported VGA (DirectX 7.X, 8.X) *1024 x 768 or better, True color or higher *Graphic Memory 32MB or higher *The on-board video chip cannot be used. *Tested with the video card of nVIDIA GeForce FX5700 Ultra.
	HDD	Free space 12MB and more
Compatible OS	Windows 98/ 2000/ Me/ XP	

- The PC specification are merely recommended specifications for using the Client Software with ease and is not a guarantee against its operation.
- Using on the system that is not fulfilled the system requirements, the response from PC may become slow.
- Remote monitor / playback / operation, depend on network quality. When the network quality is bad, the connection could be cut or the playback could be slower. Please use remote network operation in a sufficient network environment.

1.4 Overview

Installer/ Menu/ buttons are written in English.

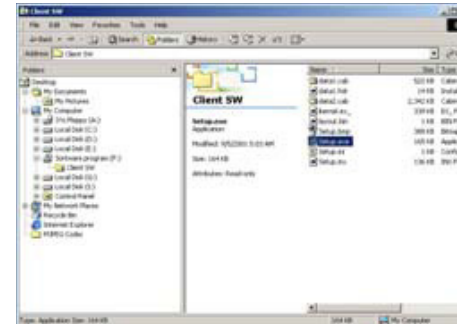
Client SW has the following functions.

- Live Mode
- Search Mode
- Player Mode
- PTZ camera control
- Download(Back-up) Mode
- Support converting to AVI format to play with Windows Media Player

2. Installation

2.1 Installation Procedures

Please insert Client_SW CD to your PC and will be opened installation files.

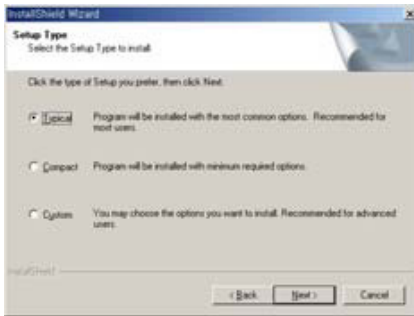


Double Click "Setup.exe" to start installation.

Click Yes button and Installation will be proceeded shown as below.

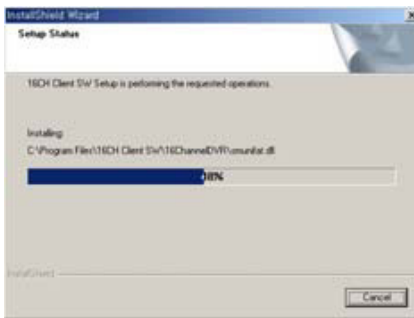


Click Next button to continue it.

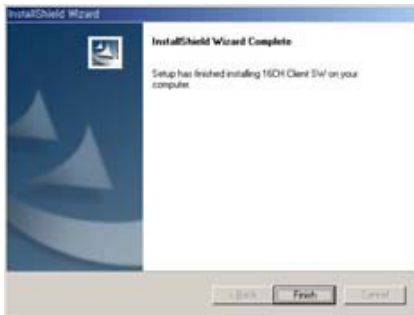


Select a setup type to install.

Typical : Standard (Please usually choose this item.)
 Compact : Minimum
 Custom : For advanced users



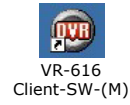
Setup status will be proceeded.



Setup has finished and click Finish button to exit installation.

2.2 Running Procedure

CLIENT SW Icon will be displayed on your desk top



Press the Icon to run DVR Client Live Mode

- If the web password is set-up, the Authentication window is displayed at the time of the connection from a web browser or a Client Software. Please input the user name and password.



3. Client Live Mode (VR-616 Client-SW-(M))

3.1 Functions



- (1) Minimize, Exit Button
- (2) Title/Boarder Display Buttons
- (3) Search Button
- (4) Connect Button
- (5) Display Mode Buttons
- (6) Zoom/Focus Control Buttons
- (7) PTZ Channel Selection Button
- (8) Pan Tilt Control Button
- (9) Channel Selection Buttons

3.2 Descriptions

- (1) Minimize/Exit
Minimize program, exit the Client Live mode program.
- (2) Title/Boarder Display Buttons
Title: Display channel name, recording status(red circle), date, and time
Boarder: Display boarder among each channel.

- Since it is required for checking a display of connection to VR-609, we recommend use in Title ON.



<Title/Boarder On>



<Title/Boarder Off>

- (3) Search
Click Search Button to open Search program mode in another windows.



(4) Connect

Click Connect button to connect to the DVR Client Live mode.

Add a list to connect.

- Type Server Name what you be named.
- Type IP Address and Port Number of the DVR. (Default setting : 80)
- Please input the PORT Number into the "Server" column.
- Click Add button and server name will be added in the server list shown as below.
- Select the DVR you want to connect from a server list and press the "Connection" button, it will connect to the DVR.



Image of channel 1 will be displayed in full screen mode at the first connection as the default.

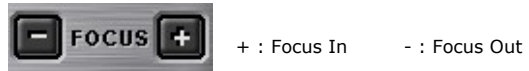
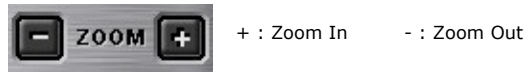


(5) Display Mode

Client SW displays 1,4,9,16ch mode.

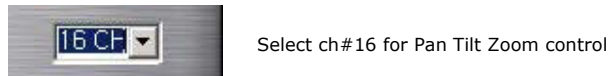
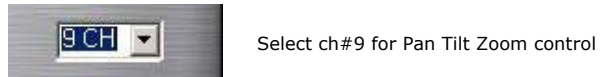
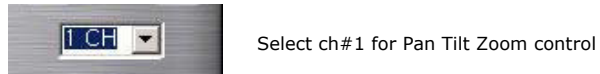


(6) Zoom/Focus Control







* It only works one time at each press.

(7) PTZ Channel Selection



(8) Pan Tilt Control



-  Up Button : A photographic subject moves upward.
-  Down Button : A photographic subject moves downward.
-  Left Button : A camera moves leftward.
-  Right Button : A camera moves rightward.

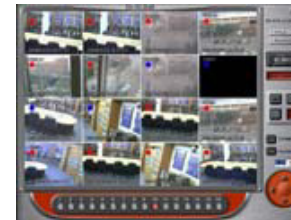
- When operating a Pan/ Tilt camera via a network, the amount of operation for every click changes with the numbers of split screens etc. The full screen display is suitable to tune finely.

(9) Channel Selection



Select a channel to be displayed

Ex) Select ch#10 : Ch#10 will be displayed on top left side of 16ch mode



CH10	CH11	CH12	CH13
CH14	CH15	CH16	CH1
CH2	CH3	CH4	CH5
CH6	CH7	CH8	CH9

4. Client Search Mode (VR-616 Client-SW-(S))

- * In the case to move to Search mode from Live mode, it automatically moves to the site the current Live mode has.
- * Only one user can access to the Search Mode displaying the following message "Server is preoccupied. Please try again later" if more than one users are trying to access to same Search mode of DVR at the same time.

4.1 Functions



- (1) Minimize, Exit Button
- (2) Connection/Disconnect Button
- (3) Time Date Search Button
- (4) Event Search Button
- (5) Playback Control Button
- (6) Download Button
- (7) DVR Player
- (8) Channel Selection Button

4.2 Descriptions

- (1) Minimize / Exit
Minimize program, exit the Client Search mode program.
- (2-1) Connect
Click Connect button to connect to the DVR Client Search mode.
Add a list to connect
 - Type Server Name what you be named.
 - Type IP Address and Port Number of the DVR. (Default setting : 80)
 - Please input the PORT Number into the "Server" column.
 - Click Add button and server name will be added in the server list shown as below.
 - Select the DVR you want to connect from a server list and press the "Connection" button, it will connect to the DVR.



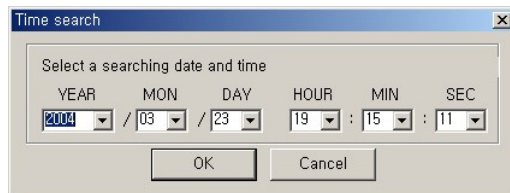
(2-2) Disconnect

Disconnect the current connection to the DVR.
Message 'Please wait a 10 second...' will be displayed.




Please wait a 10 second...

(3) Time/Date Search

Click the Time/Date Search button to search a specific time and date.



* How to use Time/Date Remote Search

- Set up the time you want to search, and click the OK button.
- You can select the both of play or reverse play as you wish.
( Play Button,  Backward Play Button,  Pause Button)
- Select the channel number you want to play back.

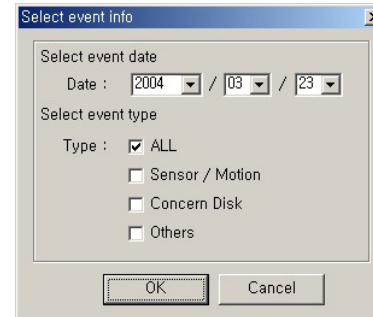


(4) Event Search

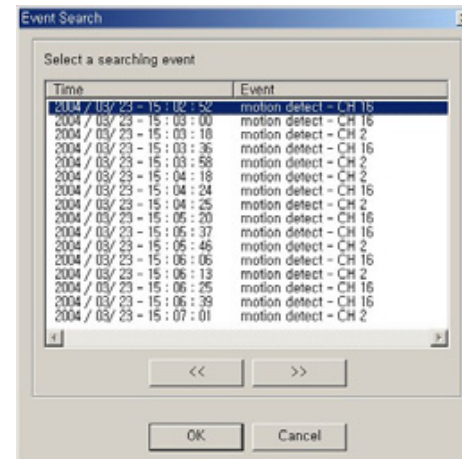
Click the Event Search button to search specific event lists of DVR.




* How to use Event Remote Search

- Click OK button after you select the time and event type you want to search.



- Click OK button after you select the time and list you want to search in the Event List.



- You can select the both of play or reverse play as you wish.
( Play Button,  Backward Play Button,  Pause Button)
- You can select the channel you want to playback.



- (5) Play
Click Play button after searching a specific date & time.



Play Button
The playback speed will be increased as the button is clicked. (5 Speed mode : 0,1,2,3,4 x)



Backward Play Button
The reverse playback speed will be increased as the button is clicked.(5 Speed mode : 0,1,2,3,4 x)



Pause Button

- As shown in "FF:0", the reproduction direction and speed are displayed on the screen lower right.
First half : direction of reproduction (FF/REW)
Second half : Reproduction speed (0/1/2/3/4)

Caution!

While a user is retrieving the image through Web browser like MS Internet Explorer and when another user connects to the same server and tries to retrieve the image through Client S/W at the same time, the Web browser user might meet the program locked-up.

→ This is because the image retrieving from server is only allowed one client at a time. The web browser user will not be warned by any message of it.

(6) Download (Remote Backup)

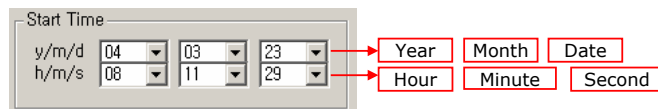
Click Download button for remote backup.

- Message 'Please wait a 10 second...' will be displayed.
- Type IP address of DVR what you want to backup Live or Playback data.
- Choose a channel what you want.

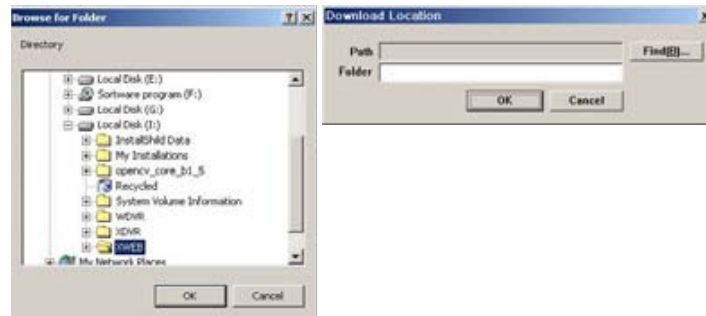
Please wait a 10 second...



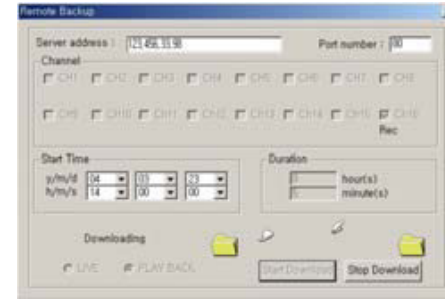
- Select type hour(s) and minute(s) to be backed up (Playback only).
- Select duration time.(Live & Playback mode)
- Click Start Download button to start it.



- Select Download Location by clicking Find button and press O.K button.



- The data will be backed up to the specific folder you choose.



* Caution!

Please set the time when the image is recorded to start/end time of download. When the time which is not recorded is set-up, a progress display may not begin from 0%.

When an obstacle of a network occurs in the middle of download, the download is not ended and the downloading animation is continually displayed. In such a case, please redo download after reconfirming the connection of a network and restarting the Client Software.

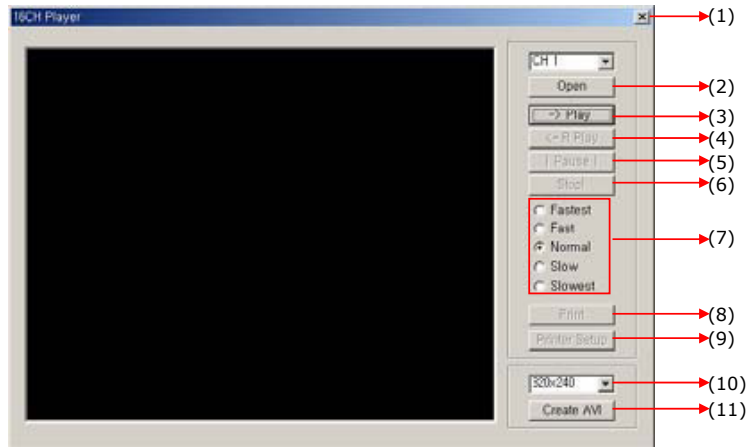
If by chance the user selects a channel of which the image is not transmitted or hidden as a covert channel by the server(VR-616) and tries to download the images, then the downloading animation might not be ended, and keep showing the animation.

➔ This is because the client keeps waiting for the image data from the server, but the server is not setup to transmit the images to the client by the server administrator.

When selecting a folder where the image data is stored, please avoid to designate an folder in external device, like USB memory stick or IEEE1394 devices. Otherwise, the user can meet the system locked-up or unusual error messages.

(7) PLAY (16CH Player)

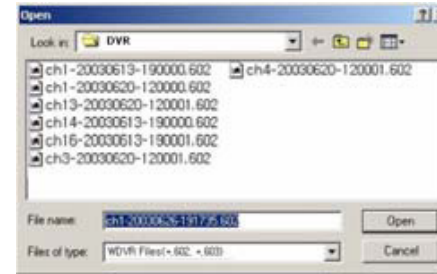
Click PLAY button to play downloaded data from the DVR.



- (1) Exit Button : Exit 16CH Player
- (2) Open Button
- (3) Play Button
- (4) Backward Play Button
- (5) Pause Button
- (6) Stop Button
- (7) Play Speed Selection Button : Select 5 various speed mode to play downloaded data.
- (8) Print Button : Print a current viewing image
- (9) Printer Setup Button
- (10) Resolution Selection Button
- (11) Create AVI Button

1). Open

- Open a downloaded data of the DVR and click O.K button to be played.
- 16channel DVR files : file_name.602 or file_name.603
- Will be converted to AVI format clicking **(5).Create AVI Button**



2). Play

- Click Open, and select and playback the file you want.
- In CDRW Backup, two or more channels can be simultaneously backed up to one file. Please choose a channel with the pull down menu above the "Open" button for reproduction of this file.

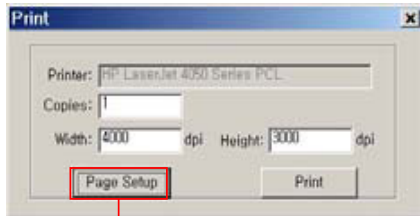


3). Print

- If you want to print out a specific image while playing back, click the Print button then the image will be printed through the printer you setup in print mode.
- Please set-up a printer setup of PC before using a printing function.

4). Printer Setup

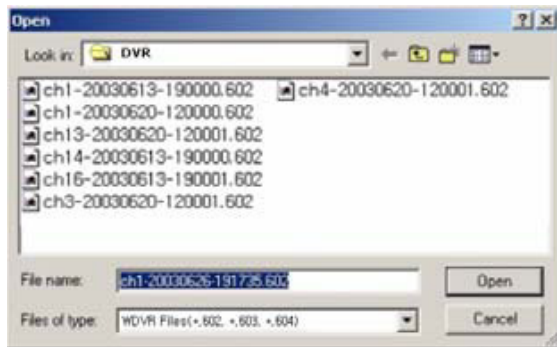
- Click Printer Setup Button to select Page Setup or print a image.
- Type a number of Copies, Width, and Height.



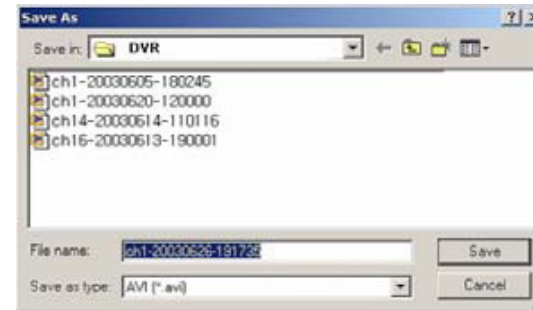
Page Setup: You can select printer, paper size, and all about Printer configuration same way as Windows Printer Configuration.

5). Create AVI

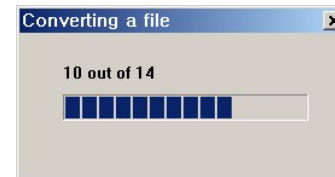
- Click the Resolution Selection Button and select the resolution you want to make with AVI format. (Three mode : 320*240, 400*300, 640*480)
- Select a file to convert to AVI format and click O.K button. If the target file size is 1GByte or more, the file is automatically divided into the 1GByte. The created file should be xxx.avi, xxx_1.avi, and xxx_2.avi.



- Save as AVI file name you want and click Save button.



- File will be converting to AVI format and displayed on Windows Media Player.



(8) Channel Selection



Select a channel to be played.

Ex) Select ch#14 : The recorded data of Ch#14 will be played.



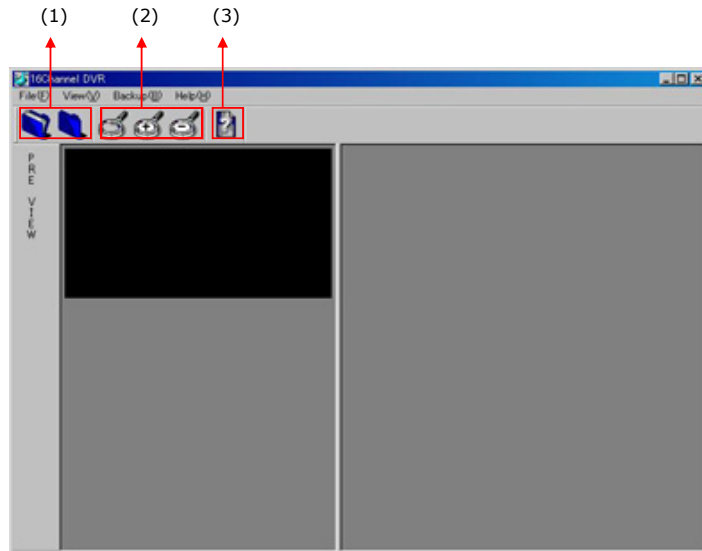
5. 16Channel DVR

The 16Channel DVR program is used to

1. The still picture recorded on FDD or Flash Memory can be displayed.
2. The both of "Remote Backup" and "16CH Player" function can be used.

* For "Remote Backup", please refer to 21 page.

For "16CH Player", please refer to 23 page.



(1) Open / Close

Open: Pressing this button, it is displayed file selection window. In this window selecting file that want to show and press "Open" button, the image will be displayed.

Close: Pressing this button, the display is ended.

(2) Actual Size / Zoom In / Zoom Out

Changes the size of the image. Zoom In, Zoom Out or change to an Actual Size.

(3) Version Information

Shows the Version of this software.

Menu Bar

- "File", "View", "Help": this can use as a substitute of Tool bar Icons.
- "View": Switches On/ Off of showing the Tool bar.
- "Backup": Opens "Remote Backup" or "16CH Player" window.