JVC®

DVD RECORDER

BD-X201M INSTRUCTIONS

DVD R/RW **DOLBY DIGITAL**
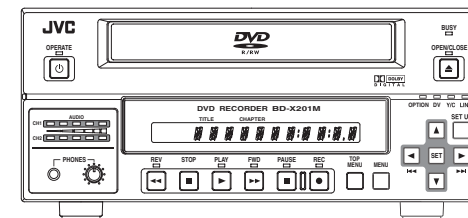
JVC®

Thank you for purchasing this 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 the unit.
Retain this information for future reference.

Model No. BD-X201M

Serial No.

This instruction book is made from 100 % recycled paper.

LLT0073-001A

Printed in Japan
LLT0073-001A

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.

   PORTABLE CART WARNING
   (symbol provided by RETAC)

   S3125A

   Use only with a cart or stand recommended by the manufacturer, or sold with the appliance. Wall or shelf mounting should follow the manufacturer's 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 pro-vided 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 never be placed near or over a radiator or heat register. 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 your 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 expose you to 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.

I

Safety Precautions

| ⚡ | **CAUTION** | ⚠ |
| | RISK OF ELECTRIC SHOCK DO NOT OPEN | |

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

⚡ The lightning flash wish 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.

⚠ 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.

Changes or modifications not approved by JVC could void the user's authority to operate the equipment.

Information for USA
This device complies with Part 15 of the FCC Rules. Changes or modifications not approved by JVC could void the user's authority to operate the equipment.

INFORMATION (FOR CANADA) RENSEIGNEMENT (POUR CANADA)
• This Class B digital apparatus complies with Canadian ICES-003.
• Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

For North America

CLASSIFIED
c (UL) US

MEDICAL ELECTRICAL EQUIPMENT

WITH RESPECT TO ELECTRICAL SHOCK, FIRE,
MECHANICAL AND OTHER SPECIFIED HAZARDS
ONLY IN ACCORDANCE WITH
UL.60601-1, CAN/CSA C22.2 NO.601.1
56PA

| ⚡ | **ATTENTION** | ⚠ |
| | RISQUE D'ELECTROCUTION NE PAS OUVRIR | |

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

⚡ Le symbole de l'éclair à l'intérieur d'un triangle équilatéral est destiné à alerter l'utilisateur sur la présence d'une "tension dangereuse" non isolée dans le boîtier du produit. Cette tension est suffisante pour provoquer l'électrocution de personnes.

⚠ Le point d'exclamation à l'intérieur d'un triangle équilatéral est destiné à 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.

REMARQUE:
La plaque d'identification (numéro de série) se trouve sur le panneau arrière de l'appareil.

WARNING:
The battery used in this DVD recorder must be replaced by a JVC authorized service dealer only.

WARNING:
Disposal of product should follow National, State and Local Laws.

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, broad-cast, or cable programme and in any literary, dramatic, musi-cal or artistic work embodied therein.

WARNING
This apparatus is Medical Equipment.
Please make sure to use "hospital grade" power supply cord specified by JVC.

Classifications
• Class : I
• Type : No applied parts
• Moisture Protection : Ordinary
• AP/APG Category : No
• Operation Mode : Continuous

II

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Beilage

Dieses Gerät ist zum Gestelleinbau und zum Betreiben in unmittelbarer Nähe anderer Geräte und Vorrichtungen geeignet.

Zur Erzielung einer optimalen Betriebsleistung und zur Einhaltung elektromagnetischer Schutzbestimmungen wird die Verwendung von Kabeln empfohlen, die jeweils die angegebene Länge nicht überschreiten sollten:

Anschluss	Kabeltyp	Länge
AC IN	Spezialkabe	2,5 m
Y/C	Abgeschirmtes Kabel	3 m
VIDEO LINE	Abgeschirmtes Kabel	3 m
AUDIO LINE	Abgeschirmtes Kabel	3 m
REMOTE (9P)	Abgeschirmtes Kabel	3 m
DV	Abgeschirmtes Kabel	3 m
PHONES	Abgeschirmtes Kabel	3 m
FOOT SWITCH	Nichtabgeschirmtes Kabel	1,5 m
LAN (FOR SERVICE)	Abgeschirmtes verdrilltes Doppelkabel	10 m
USB	Abgeschirmtes Kabel	1,8 m

Der Einschaltstoßstrom für dieses Gerät beträgt 19 Ampere.

Vorsicht:
■ Bei der Einwirkung starker magnetischer oder elektromagnetischer Felder (z.B. Sendeantennen, Transformatoren, Motoren etc.) können Bild- und Tonbeeinträchtigungen auftreten. In diesem Fall auf ausreichenden Abstand zur möglichen Störquelle achten.

Supplement

This apparatus is designed for rack mounting or is used close to other apparatus.

In order to keep the best performance and furthermore for electromagnetic compatibility we recommend to use cables not exceeding the following lengths:

Port	Cable	Length
AC IN	Exclusive cable	2.5 meters
Y/C	Shielded cable	3 meters
VIDEO LINE	Shielded cable	3 meters
AUDIO LINE	Shielded cable	3 meters
REMOTE (9P)	Shielded cable	3 meters
DV	Shielded cable	3 meters
PHONES	Shielded cable	3 meters
FOOT SWITCH	Non-shielded cable	1.5 meters
LAN (FOR SERVICE)	Shielded Twist Pair cable	10 meters
USB	Shielded cable	1.8 meters

The inrush current of this apparatus is 19 amperes.

Caution:
■ Where there are strong electromagnetic waves or magnetism, for example near a radio or TV transmitter, transformer, motor, etc., the picture and sound may be disturbed. In such a case, please keep the apparatus away from the sources of the disturbance.

Supplément

Ce matériel est conçu pour le montage en baie et peut être utilisé à proximité d'autres appareils.

Afin de maintenir la meilleure performance et notamment pour la compatibilité électromagnétique, nous recommandons l'utilisation de câbles n'excédant pas les longueurs suivantes :

Port	Câble	Longueur
AC IN	Câble exclusif	2,5 mètres
Y/C	Câble blindé	3 mètres
VIDEO LINE	Câble blindé	3 mètres
AUDIO LINE	Câble blindé	3 mètres
REMOTE (9P)	Câble blindé	3 mètres
DV	Câble blindé	3 mètres
PHONES	Câble blindé	3 mètres
FOOT SWITCH	Câble non blindé	1,5 mètres
LAN (FOR SERVICE)	Câble à paire torsadée blindé	10 mètres
USB	Câble blindé	1,8 mètres

L'appel de courant de cet appareil est de 19 ampères.

Attention :
■ Dans les endroits où il y a des ondes électromagnétiques puissantes ou du magnétisme, par exemple près d'un émetteur radio ou TV, d'un transformateur, d'un moniteur, etc., l'image et son peuvent être distordus. Dans ce cas, veuillez éloigner l'appareil des sources de perturbations.

Suplemento

Este aparato está diseñado para su montaje en bastidores o para ser utilizado junto a otro aparato.

Para lograr un mejor rendimiento y, además, conseguir compatibilidad electromagnética, se recomienda utilizar cables que no excedan las siguientes longitudes:

Puerto	Cable	Longitud
AC IN	Exclusive Cable	2,5 metros
Y/C	Cable recubierto	3 metros
VIDEO LINE	Cable recubierto	3 metros
AUDIO LINE	Cable recubierto	3 metros
REMOTE (9P)	Cable recubierto	3 metros
DV	Cable recubierto	3 metros
PHONES	Cable recubierto	3 metros
FOOT SWITCH	Cable no recubierto	1,5 metros
LAN (FOR SERVICE)	Cable recubierto de par trenzado	10 metros
USB	Cable recubierto	1,8 metros

El flujo de corriente adecuado para este aparato es de 19 amperios.

Precaución:
■ En aquellos lugares en los que haya ondas electromagnéticas o magnetismo fuerte, como por ejemplo, cerca de una radio, un emisor de TV, un transformador o un motor, etc., la imagen y el sonido pueden sufrir interferencias. Si esto sucediera, mantenga el aparato alejado de estas fuentes de interferencia.

Supplemento

L'apparecchio è stato ideato per essere posto su un piano ed usato vicino ad altre apparecchiature.

Per mantenere al meglio le prestazioni in particolare ai fini dei requisiti relativi alla compatibilità elettromagnetica, raccomandiamo di usare cavi che non eccedano le seguenti lunghezze:

Presa	Cavo	Lunghezza
AC IN	Cavo Unico	2,5 metri
Y/C	Cavo schermato	3 metri
VIDEO LINE	Cavo schermato	3 metri
AUDIO LINE	Cavo schermato	3 metri
REMOTE (9P)	Cavo schermato	3 metri
DV	Cavo schermato	3 metri
PHONES	Cavo schermato	3 metri
FOOT SWITCH	Cavo non-schermato	1,5 metri
LAN (FOR SERVICE)	Doppino schermato	10 metri
USB	Cavo schermato	1,8 metri

La corrente interna dell'apparecchio è 19 ampere.

Precauzioni:
■ Qualora vi siano forti onde elettromagnetiche o magnetismo, per esempio vicino a trasmettitori radio o TV, trasformatori, motori ecc., le immagini e il suono potrebbero risultare disturbati. In tal caso si prega di porre l'apparecchio lontano dalle sorgenti delle interferenze.

SAFETY PRECAUTIONS

Classifications	
• Class	: I
• Type	: No applied parts
• Moisture Protection	: Ordinary
• AP/APG Category	: No
• Operation Mode	: Continuous

Warning Notice
FOR YOUR SAFETY (Australia)
1. Insert this plug only into effectively earthed three-pin 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.
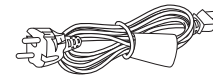
POWER SYSTEM
Connection to the mains supply
This unit operates on voltage of 220 V to 240 V AC, 50 Hz/60 Hz.

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.

Note:
The rating plate (serial number plate) is on the bottom of the unit.
The main power switch is on the back side of the unt.

Changes or modifications not approved by JVC could void the user's authority to operate the equipment.

The use of ACCESSORY equipment not complying with the equivalent safety requirements of this equipment may lead to a reduced level of safety of the resulting system. Consideration relating to the choice shall include:
- use of the accessory in the PATIENT VICINITY
- evidence that the safety certification of the ACCESSORY has been performed in accordance to the appropriate IEC 60601-1 and/or IEC 60601-1-1 harmonized National Standard.

When clean the equipment, please use dry cleaning cloth or wet cleaning cloth with amount alcohol.
Do not spill any liquid into this DVD recorder.
Sterilization is not required.

Caution for AC Mains Lead
FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.
Appropriate mains cable must be used in each local area, since the other type of mains cable is not suitable.
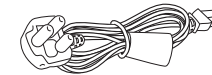
FOR CONTINENTAL EUROPE, ETC. Not to be used in the U.K.	**FOR U.K. ONLY** If the plug supplied is not suitable for your socket outlet, it should be cut off and appropriate one fitted.

Sicherheitsvorkehrungen

Klassifizierungen
Klasse   : I
Typ   : Keine betroffene Teile
Feuchtigkeitsschutz : Gewöhnlich
AP/APG Kategorie : Nein
Betriebsart   : Kontinuierlich

Warnung
FÜR IHRE SICHERHEIT (Australien)
1. Den Stecker nur in eine richtig geerdete 3-polige Steckdose einstecken.
2. Ein qualifizierter Elektriker sollte zu Rate gezogen werden, falls Zweifel bezüglich der Erdung bestehen.
3. Ein Verlängerungskabel muss Drähte mit 3 Phasen haben.

WICHTIG (für England)
230 V Netzspannung
WARNUNG – DIESES GERÄT MUSS GEERDET WERDEN.
Die Drähte der Netzleitung sind mit den folgenden Farben gekennzeichnet;
 GRÜN und GELB : ERDUNG
 BLAU   : NEUTRAL
 BRAUN   : SPANNUNGSFÜHREND
Da die Farben der Drähte im Netzkabel von diesen Farbkennzeichnungen abweichen können, folgendes ausführen.
Der GRÜNGELBE Draht muss an der Klemme angeschlossen werden, der mit dem Buchstaben E oder dem Sicherheits-Erdungssymbol ⏚ gekennzeichnet oder GRÜN bzw. GRÜN-GELB gefärbt ist. Der BLAUE Draht muss an der Klemme angeschlossen werden, die mit dem Buchstaben N gekennzeichnet oder SCHWARZ ist.
Der BRAUNE Draht muss an der Klemme angeschlossen werden, die mit dem Buchstaben L gekennzeichnet oder ROT ist.

SPANNUNGSVERSORGUNG
Anschluss am Netz
Die Betriebsspannung für dieses Gerät beträgt AC 220 V bis 240 V, 50 Hz/60 Hz.

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.

Hinweis:
Das Typenschild (Seriennummerplatte) befindet sich am Unterteil der Einheit.
Der Hauptschalter befindet sich auf der Rückseite der Einheit.

Änderungen oder Modifizierungen die nicht von JVC zugelassen sind können die Gebrauchsvollmacht um die Anlage zu betreiben ungültig machen.

Die Verwendung von ZUBEHÖR Anlagen die den Sicherheitsanforderungen dieser Anlage nicht entgegenkommen kann zu einem verminderten Sicherheitsniveau des resultierenden Systems führen. Die Wahl sollte berücksichtigen:
die Anwendung des Zubehörs in der NÄHE DER PATIENTEN Offenbarung, dass die Sicherheitszertifizierung des ZUBEHÖR gemäss der angebrachten IEC 60601-1 und/oder IEC 60601-1-1 harmonisierten Nationalen Normen erteilt wurde.

Bitte trockene oder mit Alkohol befeuchtete Reinigungstücher zum Reinigen der Anlage verwenden.
Dieses DVD-Aufnehmer nicht mit Flüssigkeiten spüllen. Sterilisierung ist nicht erforderlich.

Hinweis zum Netzkabel
Zu Ihrer Sicherheit lesen Sie bitte den folgenden Text sorgfältig durch.
Am Betriebsort muss das jeweils richtige Kabel verwendet werden, da der andere Netzkabeltyp nicht geeignet ist.
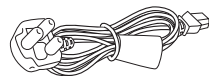
Für Kontinentaleuropa
Nicht für den Gebrauch in Großbritannien.

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

PRECAUTIONS DE SECURITE

Classifications
Classe   : I
Type   : Aucune pièce appliquée
Protection contre l'humidité : ordinaire
Catégorie AP/APG : No
Mode de fonctionnement : continu

Note d'avertissement
pour votre sécurité (Australie)
1. Insérer cette prise uniquement dans une prise secteur à trois broches avec mise à la terre.
2. Si vous avez le moindre doute sur la mise à la terre, consultez un électricien qualifié.
3. Si vous devez utiliser un cordon d'extension, utilisez un cordon à trois fils avec des fiches mises à la terre correctement.

IMPORTANT (Royaume-Uni)
Alimentation principale (230 V CA)
AVERTISSEMENT – CET APPAREIL DOIT ETRE RELIE A TERRE
Les fils du câble d'alimentation de cet appareil sont codés avec les couleurs suivantes :
 VERT-JAUNE : TERRE
 BLEU   : NEUTRE
 MARRON   : PHASE
Les fils du câble d'alimentation de cet appareil peuvent ne pas correspondre aux codes de couleur identifiant les bornes de votre prise. Il faut donc procéder ainsi :
Le fil vert-jaune doit être relié à la borne de la prise portant la lettre E ou le symbole de mise à la terre ⏚ ou de couleur verte ou vert-jaune.
Le fil bleu doit être relié à la borne portant la lettre N ou de couleur noire. Le fil marron doit être relié à la borne portant la lettre L ou de couleur rouge.

SYSTEME D'ALIMENTATION
Cet appareil fonctionne sur une tension courant alternatif de 220 à 240 V, 50 Hz/60 Hz.

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.

Remarque:
La plaque signalétique (plaque du numéro de série) est située au bas de l'appareil.
L'interrupteur d'alimentation principal est situé à l'arrière de l'appareil.

Les changements ou modifications qui ne sont pas approuvés par JVC peuvent annuler l'autorité de l'utilisateur de faire fonctionner cet équipement.

L'utilisation d'ACCESSOIRE non conformes aux exigences de sécurité de cet équipement peut mener à une réduction du niveau de sécurité du système. Les éléments suivants doivent être pris en considération lorsqu'on décide d'utiliser des accessoires ou non: l'utilisation de l'accessoire à PROXIMITÉ DU CLIENT la preuve que la certification de sécurité de l'ACCESSOIRE a été exécutée conformément aux normes nationales harmonisées IEC 60601-1 et/ou IEC 60601-1-1.

Pour nettoyer l'équipement, utiliser un chiffon de nettoyage sec ou un chiffon de nettoyage mouillé avec une petite quantité d'alcool.
Ne pas renverser de liquide dans l'enregistreur DVD.
La stérilisation n'est pas requise.

Précaution d'utilisation du câble d'alimentation
POUR VOTRE SECURITE, LIRE ATTENTIVEMENT LE TEXTE SUIVANT :
Utiliser le câble approprié selon le type de prise de votre pays. Les câbles ne sont pas compatibles l'un avec l'autre.
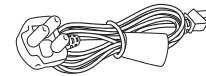
POUR L'EUROPE CONTINENTALE
Ne pas utiliser au Royaume-Uni.
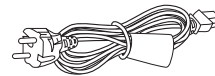
POUR LE ROYAUME-UNI SEULEMENT
Si la fiche d'alimentation ne correspond pas à la prise secteur, il faut la remplacer par une fiche appropriée.

INSTRUCCIONES DE SEGURIDAD

Clasificaciones
Clase : I
Tipo : Sin piezas aplicadas
Protección contra Humedad : Normal
Categoría AP/APG : No
Modo de Funcionamiento : Continuo

Aviso
PARA SU SEGURIDAD (Australia)
1. Introduzca este enchufe en tomas de corriente de tres entradas con una toma de tierra adecuada.
2. Si tiene alguna duda respecto a la toma de tierra, consulte a un electricista cualificado.
3. Si utiliza un cable de prolongación, éste deberá tener tres conductores correctamente conectados.

IMPORTANTE (para el Reino Unido)
Alimentación Eléctrica (230 V`CA)
ATENCIÓN - ESTE APARATO DEBE TENER TOMA DE TIERRA
Los conductores del cable principal de este aparato tienen un color diferente según el siguiente código:
VERDE y AMARILLO : TIERRA
AZUL : NEUTRO
MARRÓN : CON TENSIÓN
Puesto que los colores de los conductores del cable principal de este aparato puede que no se correspondan con las marcas de color que identifican las terminales de su toma de corriente, siga las siguientes instrucciones:
El cable de color VERDE Y AMARILLO se debe conectar al terminal de la toma de corriente marcado con la letra E o con el símbolo de seguridad de toma de tierra ⏚ o de color VERDE o VERDE Y AMARILLO.
El cable de color azul se debe conectar al terminal marcado con la letra N o de color NEGRO. El cable de color MARRÓN se debe conectar al terminal marcado con la letra L o de color ROJO.

SISTEMA ELÉCTRICO
Conexión a la alimentación
Esta unidad funciona bajo una tensión de entre 220 V y 240 V CA, 50 Hz/60Hz.

AVISO:
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.

Nota:
La placa de calificación (placa de número de serie) está en la base de la unidad.
El interruptor principal de alimentación está en la parte trasera de la unidad.

Los cambios o modificaciones no aprobados por JVC podrían anular la autoridad del usuario de hacer funcionar el equipo.
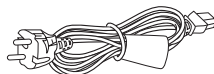
El uso de equipos ACCESORIO que no cumplan con los requisitos equivalentes de seguridad de este equipo puede conllevar a un nivel reducido de seguridad del sistema resultante. La consideración relacionada con la opción incluirá:
el uso del accesorio en la CERCANÍA DEL PACIENTE prueba de que la certificación de seguridad del ACCESORIO se ha efectuado de acuerdo con el Estándar Nacional harmonizado IEC 60601-1 y/o IEC 60601-1-1.

Al limpiar el equipo, por favor utilice un trapo de limpieza seco o paño de limpieza humedecido con una cantidad de alcohol.
No vierta ningún líquido dentro de esta grabadora de DVD.
No es obligatoria la esterilización.

Instrucciones para el cable principal CA
POR RAZONES DE SEGURIDAD LEA DETENIDAMENTE LAS SIGUIENTES INSTRUCCIONES.
Se deben utilizar los cables principales compatibles con las instalaciones de cada zona geográfica, puesto que cualquier otro tipo de cable principal no es adecuado.

PARA EUROPA CONTINENTAL, ETC.	SÓLO PARA REINO UNIDO
No se utiliza en Reino Unido.	Si el enchufe que se suministra no es el adecuado para su toma, deberá cortarlo y empalmar otro que sea compatible.
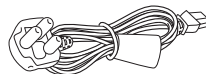
NORME DI SICUREZZA

Classificazioni
Classe : I
Tipo : Nessuna parte applicata
Protezione dall'umidità : Comune
Categoria AP/APG : No
Modalità operativa : Continua

Per l'Australia: ATTENZIONE!
Per la vostra sicurezza:
1. Inserire la spina dell'apparecchio solo in una presa a tre ingressi, collegata ad un impianto di messa a terra.
2. In caso di dubbi circa la messa a terra consultate un elettricista qualificato.
3. Se dovessero venire usate delle prolunghe, queste devono essere composte da cavi a tre conduttori

Per la Gran Bretagna: IMPORTANTE!
Alimentazione principale (AC 230 V `)
ATTENZIONE! L'UNITÀ DEVE ESSERE COLLEGATA ALL'IMPIANTO DI MESSA A TERRA
I fili di questi cavi vengono colorati secondo la seguente codifica:
VERDE e GIALLO : TERRA
BLU : NEUTRO
MARRONE : CONDUTTORE
Se i colori dei fili nei cavi principali di questo apparecchio non dovessero corrispondere ai contrassegni colorati che identificano i terminali della vostra spina attenetevi alle istruzioni riportate di seguito.
Il filo VERDE E GIALLO deve essere collegato al terminale della spina siglato dalla lettera E o dal simbolo di sicurezza della presa a terra ⏚, oppure di colore VERDE o VERDE E GIALLO. Il filo BLU deve essere collegato al terminale marcato dalla lettera N, o di colore NERO. Il filo di colore MARRONE deve essere collegato al terminale marcato con la lettera L o di color ROSSO.

SISTEMA DI ALIMENTAZIONE
Connessione all'alimentazione principale
L'unità funziona con un voltaggio da 220V a 240V, con una frequenza di 50Hz/60Hz.

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 componenti che possono essere riparati dall'utente. Affidare la manutenzione a personale qualificato.

Nota:
La piastra delle classificazioni (piastra del numero di serie) si trova sul fondo dell'apparecchio.
L'interruttore dell'alimentazione elettrica si trova sul retro dell'apparecchio.

Cambiamenti o modifiche non approvate da JVC possono annullare il diritto dell'utente di mettere in funzione l'apparecchiatura.

L'uso di apparecchiature ACCESSORIE, che non siano conformi ai requisiti di sicurezza equivalenti a quelli di questa apparecchiatura, potrebbe comportare un livello di sicurezza ridotto del sistema risultante. Le seguenti considerazioni devono essere tenute presenti quando si effettua una scelta:
uso dell'accessorio in PROSSIMITÀ DEL PAZIENTE prova che la certificazione di sicurezza dell'ACCESSORIE sia stata effettuata in conformità con gli appositi Standard Nazionali armonizzati IEC 60601-1 e/o IEC 60601-1-1.

Quando si esegue la pulizia dell'apparecchiatura, si prega di usare un panno asciutto o un panno bagnato con un po' di alcol.
Non versare alcun liquido dentro questo registratore DVD.
Non è necessario effettuare la sterilizzazione.

Avvertenze relative al cavo di alimentazione CA
PER LA VOSTRA SICUREZZA, LEGGERE ATTENTAMENTE LE SEGUENTI INDICAZIONI.
Utilizzare il cavo appropriato in base alla località (l'altro non potrà essere usato).

PER L'EUROPA CONTINENTALE	SOLO PER IL REGNO UNITO
Non è utilizzabile nel Regno Unito.	Se il cavo in dotazione non è adatto per il vostro tipo di presa, deve essere sostituito con uno appropriato.

Thank you for purchasing
this DVD Recorder.

These instructions are for the BD-X201ME and BD-X201MU.

Main Features

● Recording of DVD-R and DVD-RW (video mode only) .

● Composite video, YC separate, and DV signals are supported as video inputs; furthermore, analog or DV signals are supported as audio inputs.

● A keyboard can be used as an alternative to front panel buttons.

● The title and chapter menus can be created either automatically or manually.

● NTSC / PAL selectable

● Dual mode foot switch terminal available.
Recording can be turned ON/OFF and insertion of chapter/index are possible using the external switch terminal.

● Equipped with an index search feature.
Allows automatic playback upon locating a specific index position.

Trademarks & Copyrights

● ▯▯ **DOLBY DIGITAL**, Dolby and the Double "D" symbols are trademarks of Dolby Laboratories.

● The copying, broadcasting, screening, or rental of copyrighted material without the authorization of the copyright holder is prohibited by law.

Copyright Protection Technology

This DVD recorder utilizes copyright protection technology and is protected by US patents and intellectual property as owned by Macrovision and other copyright holders. The permission of Macrovision is required in order to use this copyright protection technology, and except in situations where special permission has been granted by that company, said technology is restricted to domestic usage and for certain other viewing purposes. The disassembly and/or modification of this DVD recorder is also prohibited.

Copyrights

● The recording, dubbing, or playing of software containing a copyright protection signal is not possible on this DVD recorder.

● The usage of audio or video discs created using this DVD recorder either for financial gain or in broadcasting for widespread viewing may result in the legally-enforceable rights of the copyright holder being infringed.

● Unless the permission of the copyright holder has been obtained, audio or video discs created using this DVD recorder are to be used for personal enjoyment only.

Contents

Introduction

Overview of Functions

■ Video and audio signals from this DVD recorder's input terminals can be recorded to DVD-R or DVD-RW (video mode only). (☞ Page 29)

The types of signals that can be used are as follows.
Video: Composite video, YC separate, or DV signals (including audio)
Audio: Analog audio or DV signals (including video)

■ A wide range of recording methods are supported. The appropriate method is to be selected in accordance with the intended mode of use.

- The REC, PAUSE, and STOP buttons on the front panel can be used for standard operations. (☞ Page 38)
- Recording operations can be carried out using the REC CONTROL panel. Furthermore, a keyboard can also be used when recording via this panel. (☞ Page 40)
- Recording can be operated via the external switch that is connected to the foot switch terminal. (☞ Page 39)

■ The title and chapter menus can be created either automatically or manually. (☞ Page 43)

Five different patterns have been provided as display styles for the title and chapter menus. Each of these patterns is characterized by different thumbnail characteristics (i.e., number, position, and size) and background images displayed on the title and chapter menu screens.
When a display style is selected during the recording of content to a DVD, this DVD recorder will automatically create the title and chapter menus in accordance with this style.
The DVD MENU screen can be used to modify the thumbnail and background display characteristics of each of the display styles.
In addition, the THUMBNAIL EDIT screen and the CHAPTER MENU EDIT screen can be used to modify the display style and thumbnail images for chapter menus, and also to input chapter names and comments. The input of names or comments is carried out using a keyboard connected to one of the recorder's USB terminals.
The TITLE MENU EDIT screen can be used to modify the display style for the title menu and to enter title names.

■ This DVD recorder can be used to play discs that it has created. (☞ Page 53)

- Once a disc has been finalized, it can also be played on other DVD players.

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Precautions for DVD Recorder Use

■ Storage & Usage Locations

The storage and usage of this DVD recorder in the following types of location should be avoided.

- Areas at temperatures which deviate by a significant degree above or below the permitted service temperature range (i.e., 5°C to 35°C).
- Areas at humidities which deviate by a significant degree above or below the permitted service humidity range (i.e., 20% to 80% RH).
- Areas where a large amount of dust or sand is present.
- Areas where the DVD recorder may come into contact with oily smoke or steam, such as in kitchens or in their immediate vicinity.
- Areas that are unstable or where significant vibration occurs.
- Areas where condensation occurs readily.
- Areas where strong magnetic fields are generated by transformers, motors, or the like.
- Areas where transceivers, mobile phones, and other wireless-communication devices are present.
- Areas that are subjected to X-ray irradiation or where corrosive gases are present. (This precaution must be strictly observed.)

■ Handling

- Ensure that this DVD recorder is placed on a flat, horizontal surface for use.
- Do not place heavy objects such as a monitor on top of the DVD recorder.
- Do not insert foreign objects into the disc tray opening.
- Be careful not to get your fingers clamped when loading the disc to prevent injury.
- Do not block the fan's ventilation holes.
- Avoid knocking or dropping this DVD recorder.
- When the DVD recorder is to be moved, ensure that any DVD it contains is removed in advance.
- If the DVD recorder is not to be used for an extended period of time, please set the POWER switch to OFF to avoid wasting electricity.

■ Cleaning the Exterior (with the power off)

Use a soft cloth when cleaning the outside of this DVD recorder.
Do not use paint thinners or organic solvents as cleaning agents.
Failure to observe these precautions can result in discoloration or melting of exterior surfaces.
When stubborn dirt is present, wipe away using a cloth soaked in a dilute neutral solvent.

■ Always use the power cord provided with this DVD recorder.

The usage of a different type of cord or a damaged cord can result in the outbreak of fire or electric shocks.

■ The power cord supplied with this DVD recorder should not be used with any other device.

■ Before connecting this DVD recorder to other devices, turn those devices off and then carry out setup procedures as described in the corresponding user's manuals.

■ The DVD drive unit is an expendable part. Although the service life of the DVD drive unit differs depending on the usage environment of the customer, replacement every 1000 hours as a guide is recommended. (☞ Page 63 "TOTAL RECORDING TIME")

Precautions Regarding Condensation

■ Condensation
When cold water is poured into a glass and droplets of water form on its outer surface, this moisture is referred to as "condensation".

■ When condensation occurs
Condensation can cause water droplets to adhere to the DVD recorder's internal lens, thus making normal operation impossible.

■ Condensation occurs easily in the following situations, and the appropriate care should be taken.
• When the DVD recorder is moved from a cold location into a warm room.
• When the room containing the DVD is rapidly heated.
• When an air conditioner's air duct is pointing straight at the DVD recorder.

■ In situations where it is likely that condensation will occur, remove any DVD that may be present in this DVD recorder and then turn the power on. As the interior heats up, condensation will be less likely to occur.

■ Condensation is a principal cause of the inability to play discs and other similar problems. In this type of situation, allow the DVD recorder to remain inactive with its power on for several hours. If the problem persists after this period of time has elapsed, contact either the store where this DVD recorder was purchased or your JVC Authorized dealer.

Extended Periods of Inactivity

Performance may deteriorate over extended periods of inactivity; for this reason, the power should be turned on and the DVD recorder should be operated at regular intervals.

Compensation for Damaged Content

■ JVC accepts no responsibility whatsoever for damages incurred as a result of an inability to play or record audio and video content in the rare event that this DVD recorder, a disc fails to operate correctly.

■ It is recommended that discs containing important content be backed up at regular intervals (i.e., on a yearly basis). Although digital signals do not deteriorate, storage environments can have an effect on a disc's aging characteristics, and this may result in an inability to play or record.

■ If a disc should break, there will be no way to recover data from it.

■ Proper playback of discs recorded using this DVD recorder on all devices is not guaranteed.

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Introduction

Precautions for Disc Usage

Care of Discs to Ensure High-Quality Playback

■ Fingerprints, dust, or any other similar contamination of the surface of a disc can lead to distortion in the playback of recorded video and audio. For this reason, it is good practice to wipe each disc with a soft cloth before use.

■ **Looking After Discs**
● Using a soft cloth, wipe the disc gently from the inside to the outside.

● If stubborn dirt is present on the surface of a disc, wipe first using a slightly wet cloth and then using a dry cloth.
● Paint thinners, organic solvents, analog record cleaning agents, anti-static sprays, and the like must never be used. Failure to observe this precaution can lead to discs being permanently damaged.

■ **Handling Discs**
● Removing a disc   ● Placing a disc in its case

● Correct method for holding a disc

Your hands or fingers should not come into contact with the recording surface when holding a disc.

Additional Notes on Disc Handling

■ Never wipe a disc using paint thinners, organic solvents, alcohol, or record-cleaning fluid.
■ Do not use disc protectors or scratch guards.
■ Stickers and other types of paper label should not be applied.
■ Do not use discs from which stickers or labels have been removed.
■ Do not use discs on which illustrations or text has been printed using a commercially-available label printer. First create a disc using the unit before printing.
■ The use of non-circular discs (i.e., heart or rectangular shaped), warped discs, and cracked discs can lead to breakage of the DVD recorder.

Storing Discs

■ Avoid storing discs in any of the following locations.
• Areas with high levels of humidity or dust, or areas where mold is present.
• Areas exposed to direct sunlight or close to heating equipment.
• Vehicle interiors during summer months.
■ Take care to avoid dropping or knocking discs.
■ Place discs in cases and stack these cases for storage.
■ Discs can be deformed or cracked as a result of stacking, leaning, or dropping when not inside a case.

Details Regarding Discs

Discs for Recording & Playback

The following shows the discs that can be recorded to and played using this DVD recorder, in addition to the corresponding display marks or logos.

DVD-R	DVD R 4.7	12 cm: 4.7 GB General Version 2.0 (video mode)
DVD-RW	DVD RW	12 cm: 4.7 GB Version 1.1 or later (video mode)

* Certain characteristics and properties of a disc can render them unsuitable for recording or playback.

```
Recommended manufacturers
DVD-R   : JVC, Maxell  2×, 4×, 8×
DVD-RW : JVC  2×, 4×
```

DVD-R and DVD-RW Details

DVD-R : Only discs that conform with DVD-R Standard 2.0 (video mode) can be used.
DVD-RW : Discs of Version 1.1 or later can be used. Although Version 1.1 of the DVD-RW Standards allows the selection of either video mode or VR mode for recording, this DVD recorder performs recording in video mode only.
   * Version 1.0 of the DVD-RW Standards does not support video-mode recording, and for this reason, the corresponding discs cannot be used.
In terms of recording characteristics, DVD-R and DVD-RW (video mode) differ as follows.

■ **DVD-R**
• Each disc can be recorded only one. Accordingly, these discs are recommended for use in archiving or long-term storage.
• Once a disc has been finalized, it can also be played on other DVD players.

■ **DVD-RW (video mode)**
• After viewing a disc, all data can be erased and it can be used to record new content.
• Once a disc has been finalized, it can also be played on other DVD players.
• It is possible to cancel the finalization and add a recording.

Finalizing

When a DVD-R or a DVD-RW (video mode) has been finalized, it can be played in the same way as any other DVD using a standard DVD player. (☞ Page 42)

■ **Recording to unused sections of a disc and the modification of titles or display styles can be carried out as required before a disc is finalized.**

• In the case of both DVD-Rs and DVD-RWs, it is impossible to overwrite previously recorded content with new data, even if the disc in question has not yet been finalized. The deletion of specific sections of data is also impossible.
• Regardless of whether or not finalization has been carried out, it will not be possible to use this DVD recorder to record new content to a DVD-R or DVD-RW that has been recorded using other devices.

■ **Once a disc has been finalized, it can be used as a standard DVD and its recorded audio and video can be played on this and other DVD players.**

• After finalizing, a disc's titles can be selected from the top menu.
• Additional recording will not be possible after finalizing.
• In the case of a DVD-RW, it is possible to cancel the finalization and add a recording.
• Although a finalized disc may in principle be played on other DVD players, certain characteristics of the disc and its recording conditions may make this impossible.

Playing Discs on this DVD recorder

This DVD recorder is capable of playing any discs that it has created and finalized.

● The following conditions may occur when attempting to play discs recorded using other devices on this DVD recorder.
   • Inability to play
   • Block-type noise (i.e., mosaic)
   • Interruptions in audio and/or video
   • Unintentional stopping during playback
● Commercially-available DVD-Videos and DVD-ROMs cannot be used.

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Introduction

Details Regarding Discs (continued)

DVD Data Configuration

Generally speaking, the content recorded on a DVD is separated into large units referred to as "titles". A unique number called a "title number" is assigned to each of these titles, and as a result, any title can be immediately accessed using its title number. In addition, each title can be divided into smaller units referred to as "chapters". Similarly, a unique number called a "chapter number" is assigned to each of these chapters, and this allows any chapter to be immediately accessed using its chapter number.

Each recording made to a disc is stored as a single title. In this, each pressing of the STOP button to leave Recording mode constitutes a different recording. (This action is also referred to as "title closing".)

It is also possible to insert chapter marks to partition titles at the desired points by pressing the REC button while recording. It is possible to automatically add a chapter mark when recording is temporarily stopped by pressing the PAUSE button. (Set from the menu.) In addition, this DVD recorder can also be used to automatically insert chapter marks at regular intervals. (CHAPTER CREATION menu settings will be required for this function.)

Disc			
Title 1			Title 2
Chapter 1	Chapter 2	Chapter 3	Chapter 1	Chapter 2
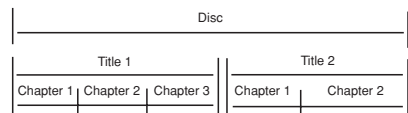
- Before a title is closed, it will be possible to modify the style used for chapter menu display, to change the thumbnails used, and to input thumbnail names.
- Before a disc is finalized, it will be possible to modify the style used for the title menu and to input title names.

Region Codes

One of six numbers referred to as "region codes" is assigned to DVD content to control the global regions in which this content may be viewed. If a DVD's region code does not correspond to the region code of the DVD player being used, it will not be possible to play the disc.

- This DVD recorder assigns the region code "ALL" to the discs that it records.
- It will not be possible to play discs to which region codes have been assigned.

Screen Sizes

This DVD recorder is capable of recording video content for wide-screen TVs (i.e., with a 16:9 aspect ratio).

In addition, signals for normal content with a 4:3 aspect ratio, for squeezed content (i.e., where the left and right are compressed), and for letterbox content (i.e., where the top and bottom of the screen are black) can be recorded as is.

- Thumbnail creation method for use in the title/chapter menu during wide-signal input can be selected in THUMBNAIL FORM of the DVD MENU screen. (☞ Page 65)

Component Names & Functions

Front Panel
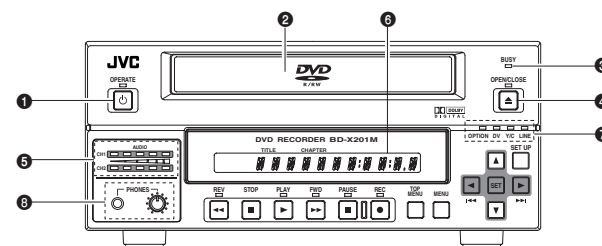
❶ OPERATE button and indicator
- This button is used to make it ready for use. Press again to disable operation (Operate OFF mode).
- The indicator's lighting condition depends on the condition of the DVD recorder and can be one of the following.
  Lit in green   : Operate ON.
  Lit in orange   : Operate OFF.

  Notes
  - The OPERATE button will have no effect if pressed while the DVD recorder is in either Recording or Recording Pause mode. This is also the case when performing finalizing or erasing.
  - The DVD recorder continues to use a small amount of power even after it has been turned off using the OPERATE button. If it will not be used for an extended period of time, please set the POWER switch to OFF to avoid wasting electricity.
  - Do not turn the power off when in Operate On mode as this can result in the DVD recorder being damaged.
  - Malfunction may occur when switching to OPERATE ON while pressing a key on a connected USB keyboard.

❷ Disc tray
The purpose of the disc tray is to hold DVDs.
This tray opens automatically when the OPEN/CLOSE button is pressed. In addition, the OPEN/CLOSE button can be pressed again to close the tray.

  Notes
  - Do not push the disc tray as it is opening or closing.
  - Do not place objects other than discs on the disc tray.
  - Do not press down on the disc tray

❸ BUSY indicator
This indicator flashes when the DVD recorder is in Recording Pause mode or when it is performing time-consuming operations such as title closing, finalizing, and erasing. None of the DVD recorder's buttons will have any effect if pressed while the BUSY indicator is flashing.

❹ OPEN/CLOSE button and indicator
This button is used to open and close the disc tray.
In addition, the OPEN/CLOSE indicator is lit up while the disc tray is opening, and also when it is open.

Note
The OPEN/CLOSE button will have no effect if pressed while the DVD recorder is in either Recording or Recording Pause mode. This is also the case when performing finalizing or erasing.

❺ Audio level indicator
These meters are used to indicate the current level of audio on Channel 1 and Channel 2.
Specifically, the audio level meters indicate the audio recording levels when the DVD recorder is in Recording mode, and the audio playback levels when it is in Playback mode.
(Adjustment of the audio recording levels: ☞ Page 32.)

❻ LCD display
The LCD display is used to present important information. During recording or playback, for example, the title, chapter number, and elapsed time are indicated on the LCD display. (☞ Page 14 for more details.)

❼ Video input indicators

■ **OPTION indicator**
This indicator is lit up or flashes when INPUT SELECT from the INPUT SELECT MENU screen has been set to OPTION. (This setting cannot be carried out using the DVD recorder alone.)

■ **DV indicator**
This indicator is lit up or flashes when INPUT SELECT from the INPUT SELECT MENU screen has been set to DV. Specifically, the indicator is lit up when an input signal is present, and it flashes when no signal is present.

■ **Y/C indicator**
This indicator is lit up or flashes when INPUT SELECT from the INPUT SELECT MENU screen has been set to Y/C. Specifically, the indicator is lit up when an input signal is present, and it flashes when no signal is present.

■ **LINE indicator**
This indicator is lit up or flashes when INPUT SELECT from the INPUT SELECT MENU screen has been set to LINE. Specifically, the indicator is lit up when an input signal is present, and it flashes when no signal is present.

❽ Phones jack and volume adjuster
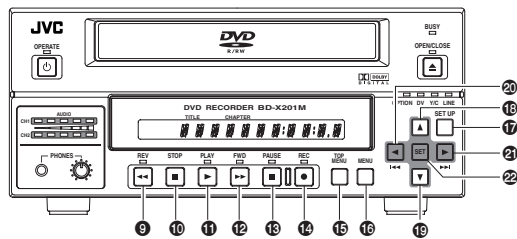The phones jack allows headphones to be connected to the DVD recorder for monitoring of audio levels; in addition, the headphone volume can be adjusted using the volume adjuster. Note that this adjuster has no effect on the actual recording levels.

Component Names & Functions

⑨ REV button and indicator
- Press this button during playback or fast-forward mode to start fast-reverse play. If pressed during fast-reverse play, this button toggles the speed of fast-reverse play between low speed and high speed.
- Press this button in still mode or during slow-forward play to start slow-reverse play. If pressed during slow-reverse play, this button toggles the speed of slow-reverse play between low speed and high speed.
- The REV indicator is lit up during fast-reverse and slow-reverse play.

⑩ STOP button
- This button has the following effect when pressed in Recording or Recording Pause mode.
  If EDIT MENU from the DVD MENU screen is set to DISABLE, the DVD recorder stops recording (i.e., it performs title closing).
  If EDIT MENU from the DVD MENU screen is set to ENABLE, the DVD recorder stops recording and the THUMBNAIL EDIT screen is displayed. It will then be possible to modify the chapter menu.
- When the STOP button is pressed in Playback mode, the DVD recorder stops playback.

⑪ PLAY button and indicator
- If this button is pressed together with the REC button while a recordable disc is inserted into the DVD recorder, recording will be started.
- When the PLAY button is pressed in Recording Pause mode, the DVD recorder restarts recording.
- When an unfinalized disc is inserted and this button is pressed, playback of the most recent title starts.
- The PLAY indicator is lit up in Recording and Playback modes.

⑫ FWD button and indicator
- Press this button during playback or fast-reverse mode to start fast-forward play. If pressed during fast-forward play, this button toggles the speed of fast-forward play between low speed and high speed.
- Press this button in still mode or during slow-reverse play to start slow-forward play. If pressed during slow-forward play, this button toggles the speed of slow-forward play between low speed and high speed.
- The FWD indicator is lit up during fast-forward and slow-forward play.

⑬ PAUSE button and indicator
- When this button is pressed while recording, the recorder enters the recording pause mode.
- If this button is pressed during playback, the DVD recorder switches to Still mode and freezes playback. If the PAUSE button is then pressed again in Still mode, the DVD recorder will advance playback by a single field.
- The PAUSE indicator is lit up in Recording Pause and Still modes.

⑭ REC button and indicator
- If this button is pressed together with the PLAY button in Stop mode, recording will be started.
  - If the current disc is blank or title closing has been carried out, a new title will be created and recording will start at Chapter 1.
- When this button is pressed during recording, a new chapter and index will be setup within the continuous video data.
- Press this button during playback to write index.
- If this button is pressed and held for more than 2 seconds while the DVD recorder is stopped or inserted with no disc, input signal encoded/decoded in MPEG will be output via the VIDEO OUT terminal on the rear panel. This will continue for as long as the button is held, and it allows the DVD recording quality to be confirmed. Audio will be muted at this time.
- The REC indicator is lit up in Recording and Recording Pause modes.

⑮ TOP MENU button
If this button is pressed while the DVD recorder is in a playback condition, the current DVD's top menu (or title menu) will be displayed on the monitor screen.
If the DVD does not contain a title menu, nothing will be displayed when the TOP MENU button is pressed.

⑯ MENU button
If this button is pressed while the DVD recorder is in a playback condition, the chapter menu for the currently selected title will be displayed on the monitor screen.
If the DVD title does not contain a chapter menu, nothing will be displayed when the MENU button is pressed.

⑰ SET UP button
- This button can be pressed to display the Setup Menu on the monitor. A wide range of different menu settings can then be made via the Setup Menu. (☞ Page 58)
  In addition, the SET UP button can be pressed again to hide the Setup Menu.
- If the SET UP button is pressed in Recording or Recording Pause mode, setting data relevant to recording (i.e., video bit rate and audio encoding format) will be displayed on-screen. In addition, the SET UP button can be pressed again to hide this information.
- Press this button when in the Playback mode to display the INDEX MANAGER screen.
  When the INDEX MANAGER screen is displayed, press this button to return to the original screen. (☞ Page 56)

⑱ [▲] button
- This button is used to select menu items or setting values when the Setup Menu is displayed.
- Press this button during playback to playback the next title.
- If a title menu or chapter menu is displayed, this button can be used to select a menu number for playback. Specifically, pressing of this button moves the selection position upward.
- The ▲ button can be used to adjust the audio recording levels when the DVD recorder is stopped or in Recording Pause mode.
  - If AUDIO REC VOLUME MODE from the RECORDER MENU (2/2) screen is set to BOTH and this button is pressed while either the ◄ or ► button is being held, the audio recording levels for both Channel 1 and Channel 2 will increase.
  - If AUDIO REC VOLUME MODE from the RECORDER MENU (2/2) screen is set to INDEPENDENCE and this button is pressed while the ◄ button is being held, the audio recording level for Channel 1 will increase. Similarly, if the ▲ button is pressed while the ► button is being held, the audio recording level for Channel 2 will increase.

⑲ [▼] button
- This button is used to select menu items or setting values when the Setup Menu is displayed.
- Press this button during playback to playback the previous title.
- If a title menu or chapter menu is displayed, this button can be used to select a menu number for playback. Specifically, pressing of this button moves the selection position downward.
- The ▼ button can be used to adjust the audio recording levels when the DVD recorder is stopped or in Recording Pause mode.
  - If AUDIO REC VOLUME MODE from the RECORDER MENU (2/2) screen is set to BOTH and this button is pressed while either the ◄ or ► button is being held, the audio recording levels for both Channel 1 and Channel 2 will decrease.
  - If AUDIO REC VOLUME MODE from the RECORDER MENU (2/2) screen is set to INDEPENDENCE and this button is pressed while the ◄ button is being held, the audio recording level for Channel 1 will decrease. Similarly, if the ▼ button is pressed while the ► button is being held, the audio recording level for Channel 2 will decrease.

⑳ [◄] button
- If a title menu or chapter menu is displayed, this button can be used to select a menu number for playback. Specifically, pressing of this button moves the selection position to the left.
- This button can be pressed while the DVD recorder is playing to move playback to the start of the current chapter.
- The ◄ button can be used to adjust the audio recording levels when the DVD recorder is stopped or in Recording Pause mode.
  - If AUDIO REC VOLUME MODE from the RECORDER MENU (2/2) screen is set to INDEPENDENCE and either the ▲ or ▼ button is pressed while this button is being held, the audio recording level for Channel 1 will be adjusted accordingly.
  - If AUDIO REC VOLUME MODE from the RECORDER MENU (2/2) screen is set to BOTH and either the ▲ or ▼ button is pressed while this button is being held, the audio recording levels for both Channel 1 and Channel 2 will be adjusted accordingly.
  - If this button is pressed together with the ► button, the audio recording levels will be returned to their default settings (i.e., unity gain).

㉑ [►] button
- If a title menu or chapter menu is displayed, this button can be used to select a menu number for playback. Specifically, pressing of this button moves the selection position to the right.
- This button can be pressed while the DVD recorder is playing to move playback to the start of the next chapter.
- The ► button can be used to adjust the audio recording levels when the DVD recorder is stopped or in Recording Pause mode.
  - If AUDIO REC VOLUME MODE from the RECORDER MENU (2/2) screen is set to INDEPENDENCE and either the ▲ or ▼ button is pressed while this button is being held, the audio recording level for Channel 2 will be adjusted accordingly.
  - If AUDIO REC VOLUME MODE from the RECORDER MENU (2/2) screen is set to BOTH and either the ▲ or ▼ button is pressed while this button is being held, the audio recording levels for both Channel 1 and Channel 2 will be adjusted accordingly.
  - If this button is pressed together with the ◄ button, the audio recording levels will be returned to their default settings (i.e., unity gain).

㉒ SET button
- This button is used to confirm the selection of menu items or setting values when the Setup Menu is displayed.
- When this button is pressed during normal screen display, the counter from the DVD recorder's LCD display will switch to display of either the elapsed recording/playback time or the remaining disc/title time.

10

11

Component Names & Functions
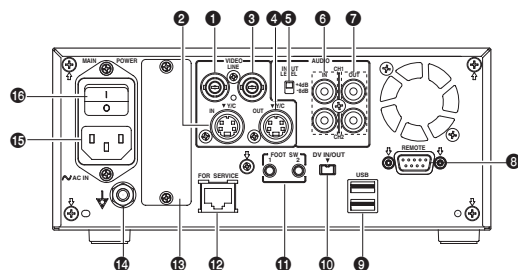
❶ **VIDEO LINE IN terminal (BNC)**

This terminal allows composite video signals to be input to the DVD recorder.

In order to select these signals for input, set INPUT SELECT from the INPUT SELECT MENU screen to LINE.

● SETUP from the SYSTEM MENU (1/2) screen should be set in accordance with whether or not this input signal is a setup signal. (NTSC only)

❷ **VIDEO Y/C IN terminal (4-pin)**

This terminal allows YC separate video signals to be input to the DVD recorder.

In order to select these signals for input, set INPUT SELECT from the INPUT SELECT MENU screen to Y/C.

● SETUP from the SYSTEM MENU (1/2) screen should be set in accordance with whether or not this input signal is a setup signal. (NTSC only)

● This terminal's specification (i.e., S1 or S2) can be selected using Y/C TERMINAL MODE from the SYSTEM MENU (2/2) screen.

❸ **VIDEO LINE OUT terminal (BNC)**

This terminal is used to connect the DVD recorder to a monitor.

● When the DVD recorder is in Stop or Recording mode, the video input signal is output on the E-E screen as a composite video signal.

● If the REC button is pressed and held for at least 2 seconds while the DVD recorder is stopped, the input signal will be subjected to MPEG encode/decode processing and output via the VIDEO LINE OUT terminal. This will continue for as long as the REC button is held, and it allows the DVD recording quality to be confirmed.

● Playback from the DVD is output as a composite signal when in Playback mode.

● The Setup Menu, title menu, chapter menus, and other setting and control screens are displayed on the monitor connected to this terminal.

● Status and alarm information is also displayed on-screen. (The DISPLAY MENU screen can be used to indicate which items are to be displayed.)

❹ **VIDEO Y/C OUT terminal (4-pin)**

For output of YC separate video signals.

● Information that is the same as that of the VIDEO LINE OUT terminal is being output.

● This terminal's specification (i.e., S1 or S2) can be selected using Y/C TERMINAL MODE from the SYSTEM MENU (2/2) screen.

❺ **AUDIO INPUT LEVEL switch**

This switch is used to set the standard level for audio input.

+4dB : The standard level is set to +4 dB.

−8dB : The standard level is set to −8 dB.

❻ **AUDIO IN terminals (RCA × 2)**

These terminals allow analog audio signals to be input to the DVD recorder.

● In order to select these signals for input, set INPUT SELECT from the INPUT SELECT MENU screen to LINE or Y/C.

❼ **AUDIO OUT terminals (RCA × 2)**

These terminals allow analog audio signals to be output from the DVD recorder.

● When the DVD recorder is in Stop or Recording mode, the audio input signals (i.e., E-E signals) are output via these terminals.

● Audio from the DVD is output when in Playback mode.

❽ **RS-232C REMOTE terminal (D-sub 9-pin female)**

Operation of this unit can be controlled externally by connecting to an RS-232C control device.

❾ **USB terminals (2)**

For connecting to a USB-supported keyboard.

A keyboard can be used as an alternative to the DVD recorder's buttons when using setting and control screens. The input of text in setting screens is carried out using a keyboard.

● It is not be possible to operate devices other than a keyboard by connecting them to the USB terminal.

● Set KEYBOARD STYLE from the SYSTEM MENU (1/2) screen in accordance with the keyboard's input language.

Recommended manufacturers: Logitech

❿ **DV IN/OUT terminal**

This I/O terminal for digital signals conforms with IEEE1394 specifications.

● In order to select this terminal's audio and video signals for input, set INPUT SELECT from the INPUT SELECT MENU screen to DV.

● REMOTE SELECT from the REMOTE MENU screen is used to select a control method for this terminal as follows.

DV(SLAVE) : The DVD recorder operates as a slave device and is controlled by commands from a master device.

DV(TRIGGER) : The DVD recorder performs recording in response to operation of the trigger button on a camera capable of DV triggering (i.e., a GY-DV5000 from JVC).

⓫ **FOOT SW 1/2 terminal**

FOOT SW 1 : For controlling the Record/Record Pause functions of this unit by connecting to an external switch (foot switch, etc.).

FOOT SW 2 : For adding chapters or indexes according to switch signals by connecting to an external switch (foot switch, etc.).

For selecting the method of control by this terminal using the FOOT SW1/2 items on the REMOTE menu screen. (☞ Page 69)

⓬ **FOR SERVICE terminal (RJ-45)**

● Connect this terminal to a PC that has been installed with utilities for this unit, such as application software for creating title/chapter menus.

● NETWORK settings must be carried out using the NETWORK MENU screen

⓭ **Optional-board slot cover**

This cover is removed to allow commercially-available optional boards to be installed.

⓮ **Equipotential Terminal**

Ensure proper connection of the equipotential terminal for each device when connecting this unit to other devices.

⓯ **AC IN terminal (3P)**

For connecting to the power outlet using the power cord supplied.
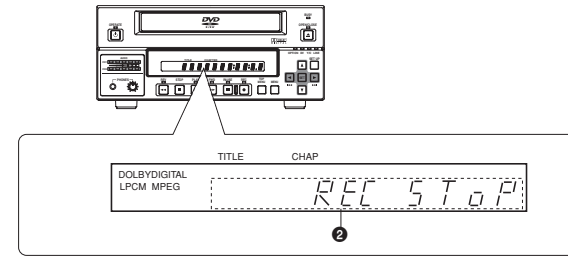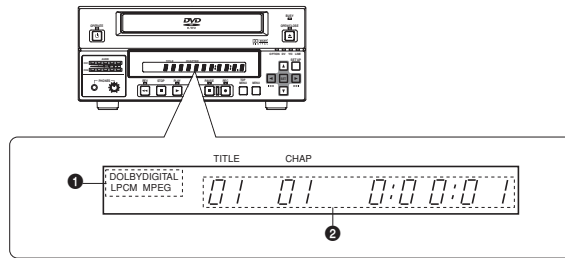
⓰ **MAIN POWER switch**

Switch for turning ON/OFF the power.

● When the power is turned ON, operating mode can be selected using the AC IN MODE item on the SYSTEM MENU (2/2) screen. (☞ Page 64)

LCD Display and On-Screen Content

LCD Display

The following information and data is presented on the DVD recorder's LCD display.

No.	Description
❶	**Encoding format for audio recordings (LPCM / DOLBY DIGITAL / MPEG) …… MPEG can only be selected when in the PAL mode** Recording mode : The encoding format set using AUDIO ENCODE from the RECORDER MENU (1/2) screen is displayed. This will not be displayed when the AUDIO ENCODE item is set to NO AUDIO. Playback mode : The encoding format used for audio on the current disc is displayed. This will not be displayed during playback of a recorded disc with the AUDIO ENCODE item set to NO AUDIO.
❷	Information relevant to the current mode. ■**Title number / Chapter number / Index number / Counter** Display details can be selected using the LCD item on the DISPLAY menu screen. ● Displays the title no., chapter no. and elapsed time of a title when the LCD item is set to TITLE+CHAPTER. ● Displays the index no. and elapsed time of a title when the LCD item is set to INDEX. Press the SET button to alternate counter display between elapsed time and remaining time. Remaining Time: Displays the remaining time of the disc (hr: min) during recording and remaining time of the title during playback. ■**When the LCD item is set to TITLE+CHAPTER** ■**When the LCD item is set to INDEX** ┌─ Memo ────────────────── ● The remaining disc and title time depend on the amount of data comprising video, and for this reason, they should be taken as being a general indication and not an exact figure. ● When the PLAYBACK & 232C TYPE item on the SYSTEM MENU [1/2] screen is set to VTR, the elapsed time and index no. will represent the total time and total number respectively as accumulated from Title 1. (☞ Page 63)

No.	Description
❷	■**Indication of the current operating mode** PLEASE WAIT : The DVD recorder is starting up. OPERATE OFF : The DVD recorder is preparing to shut down. NO DISC : The DVD recorder currently contains no disc. LOADING : A disc is being loaded into the DVD recorder. DVD-R : The current disc is a non-finalized DVD-R. (Approximately 3 seconds) DVD-RW : The current disc is a non-finalized DVD-RW. (Approximately 3 seconds) DVD : The current disc is a finalized DVD-R or DVD-RW. (Approximately 3 seconds) REC PAUSE : The DVD recorder is switching from Recording mode to Recording Pause mode. REC STOP : The DVD recorder is switching from Recording mode to Stop mode. MENU EDIT : A title menu or chapter menu is currently being edited. EJECT : The current disc is being ejected. TITLE CLOSE : The DVD recorder is performing title-close processing. FINALIZE : The DVD recorder is finalizing the disc. QUICK ERASE : The DVD recorder is erasing data from a DVD-RW disc. FULL ERASE : The DVD recorder is erasing data from a DVD-RW disc. INDEX WRITE : Displayed when index is written. (Approximately 3 seconds) INDEX ERASE : Displayed when index is erased. (Approximately 3 seconds) TOP MENU : The disc's top menu is being played. MENU : A menu is being played. ENCODE XX : Encoded video is being output. (XX : Encode quality (UXP, XP, SP, EP, DLP, DEP)) RESTORE XX : Displayed when executing disc recovery. XX: Progress (%) ■**Display of the Setup Menu** Menu items and setting values from the Setup Menu are displayed. (☞ Page 58) ■**Event messages** Messages relating to incorrect operation and the like are displayed for approximately 3 seconds. (☞ Page 18) ■**Alarm messages** Alarms are displayed when the DVD recorder cannot obey a command. (☞ Page 19)

Within TITLE+CHAPTER display: SET Button · Title No. · Chapter No. · Title Recording Elapsed Time (hr: min: sec) · Disc Remaining Time (hr: min)

Within INDEX display: SET Button · Index No. (4 digits)

14

15

LCD Display and On-Screen Content
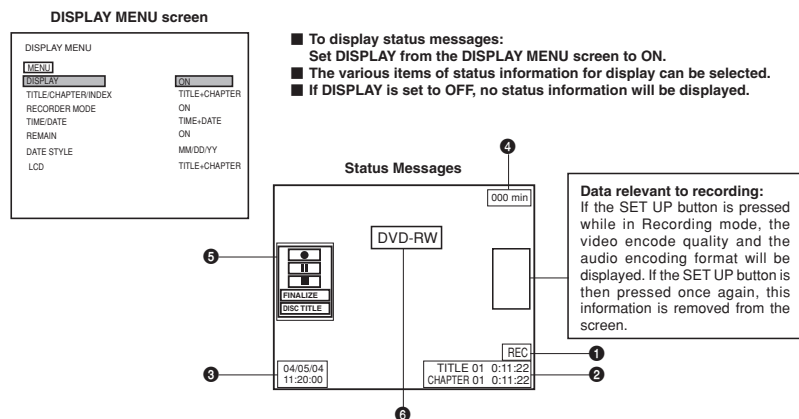
On-Screen Content

In addition to E-E and playback screens, the monitor connected to the DVD recorder's VIDEO LINE OUT terminal can display the following.
● Status messages
● Event messages
● Alarm messages
● The Setup Menu (☞ Page 58)
● Recording-operation control screens: REC CONTROL panel (☞ Page 40)

Status Messages

The DVD recorder's setting condition and operation status are indicated by status messages, and these messages are displayed on E-E or playback screens.
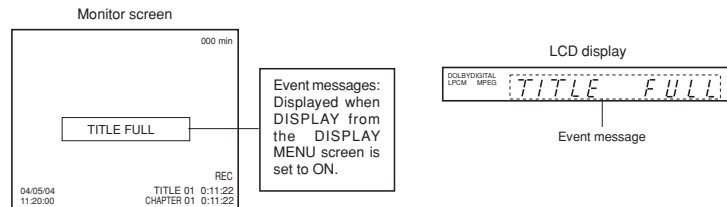The DISPLAY MENU screen can be used to indicate whether or not status messages are to be displayed.

DISPLAY MENU screen

```
DISPLAY MENU
MENU
DISPLAY              ON
TITLE/CHAPTER/INDEX  TITLE+CHAPTER
RECORDER MODE        ON
TIME/DATE            TIME+DATE
REMAIN               ON
DATE STYLE           MM/DD/YY
LCD                  TITLE+CHAPTER
```

■ **To display status messages:**
Set DISPLAY from the DISPLAY MENU screen to ON.
■ **The various items of status information for display can be selected.**
■ **If DISPLAY is set to OFF, no status information will be displayed.**

Status Messages

❹
000 min

DVD-RW

❺

FINALIZE
DISC TITLE

Data relevant to recording:
If the SET UP button is pressed while in Recording mode, the video encode quality and the audio encoding format will be displayed. If the SET UP button is then pressed once again, this information is removed from the screen.

REC ❶

❸
04/05/04
11:20:00

TITLE 01 0:11:22
CHAPTER 01 0:11:22 ❷

❻

No.	Item	Description
❶	Operation Mode	This area indicates the DVD recorder's current mode of operation. Use RECORDER MODE from the DISPLAY MENU screen to indicate whether or not this is to be displayed. NO DISC : The DVD recorder currently contains no disc. EJECT : The current disc is being ejected. STOP : Stop mode REC : Recording mode REC PAUSE : Recording Pause mode PLAY : Playback mode STL : Still mode FWD >> : Fast-forward playback (low speed) FWD >>> : Fast-forward playback (high speed) REV << : Fast-reverse playback (low speed) REV <<< : Fast-reverse playback (high speed) SLOW FWD >>> : Slow-forward playback (high speed) SLOW FWD >> : Slow-forward playback (low speed) SLOW REV <<< : Slow-reverse playback (high speed) SLOW REV << : Slow-reverse playback (low speed) LOADING : A disc is being loaded. RESTORE : Disc recovery in progress. (☞ Page 41)

No.	Item	Description
❷	Title number / Chapter number / Index number / Counter	Use TITLE/CHAPTER / INDEX from the DISPLAY MENU screen to indicate whether or not this is to be displayed. OFF : No information is displayed TITLE+CHAPTER : Title no., chapter no. and elapsed time of a title (hr: min: sec) are displayed. INDEX+TITLE : Index no. and elapsed time of a title (hr: min: sec) are displayed. * When the PLAYBACK & 232C TYPE item on the SYSTEM MENU (1/2) screen is set to VTR, the elapsed time and index no. will represent the total time and total number respectively as accumulated from Title 1. (☞ Page 63)
❸	Date / Time	Use TIME/DATE from the DISPLAY MENU screen to select the way in which the date and time are displayed. OFF : No information is displayed. DATE : Only the date is displayed. TIME : Only the time is displayed. TIME+DATE : Both date and time are displayed. ● The date display style can be changed using DATE STYLE from the DISPLAY MENU screen. Recording mode : The date and time from the internal clock are displayed. Playback mode : The date and time of disc recording are displayed.
❹	Remaining time	Use REMAIN from the DISPLAY MENU screen to indicate whether or not this is to be displayed. Recording mode : The amount of video that can still be recorded on the current disc is displayed (in minutes). Playback mode : Not displayed * Remaining time is to be used as a general guide, not as an exact figure.
❺	REC CONTROL panel	Provided that a recordable disc has been inserted, this panel will be displayed whenever REC CONTROL from the REMOTE menu screen is set to ON. The REC CONTROL panel can be used to control recording operations. (☞ Page 43) ● This is displayed even when the DISPLAY item is set to OFF.
❻	DISC STATUS / Index display	When a disc is inserted into the DVD recorder, one of the following disc status is displayed on the monitor screen (Approximately 3 seconds) DVD-R : The current disc is a non-finalized DVD-R. DVD-RW : The current disc is a non-finalized DVD-RW. DVD : The current disc is a finalized DVD-R or DVD-RW. INVALID DISC : The current disc is neither DVD-R or DVD-RW. (Displayed while being inserted.) ● The following will be displayed when index is recorded or erased. (3 seconds) INDEX WRITE : Displayed when writing index. (This is not displayed if TITLE/CHAPTER/INDEX item from the DISPLAY MENU screen is set to INDEX+TITLE or LCD item is set to INDEX.) INDEX ERASE : Displayed when erasing index. This is not displayed if DISPLAY item from the DISPLAY MENU screen is set to OFF.

LCD Display and On-Screen Content
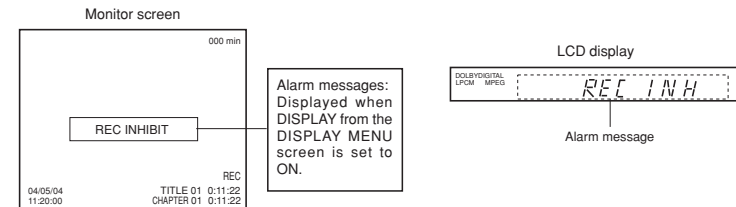
Event Messages

Event messages are displayed on the DVD recorder's LCD display and on the monitor when incorrect operations are attempted. These messages will remain on-screen for approximately 3 seconds.

Monitor screen

000 min

TITLE FULL

04/05/04
11:20:00

REC
TITLE 01 0:11:22
CHAPTER 01 0:11:22

Event messages: Displayed when DISPLAY from the DISPLAY MENU screen is set to ON.

LCD display

DOLBYDIGITAL
LPCM   MPEG

TITLE FULL

Event message

Monitor message	LCD display message	Description
INVALID TV	INVALId TV	A signal of an invalid format has been input. Alternatively, an attempt has been made to play a disc containing signals of an invalid format.
TITLE FULL	TITLE FULL	Recording was attempted on a disc already containing 99 titles.
INDEX FULL	INdEX FULL	An attempt was made to add a index to a title already containing 99 index.
CHAPTER FULL	CHAP FULL	An attempt was made to add a chapter to a title already containing 99 chapter.
NOT FINALIZE	NoT FINAL	An attempt was made to eject a disc before it was finalized.
———	A L-xxxx-R	Set value is displayed when changing the recording level of analog audio.
———	d L-xxxx-R	Set value is displayed when changing the recording level of digital audio.
OPE LOCK	oPE LoCK	This is displayed when buttons on this unit are operated while the Operation Lock is activated. Operation Lock can be canceled by setting the OPERATION LOCK item on the SYSTEM MENU (2/2) screen to OFF.

Alarm Messages

Alarm messages are displayed on the DVD recorder's LCD display and on the monitor when the recorder cannot obey a command. These messages will remain on-screen until the next operation is carried out.

Monitor screen

000 min

REC INHIBIT

04/05/04
11:20:00

REC
TITLE 01 0:11:22
CHAPTER 01 0:11:22

Alarm messages: Displayed when DISPLAY MENU screen is set to ON.

LCD display

DOLBYDIGITAL
LPCM   MPEG

REC INH

Alarm message

Monitor message	LCD display message	Description
INVALID DISC	INVALId dISC	The current disc is not a DVD-R or DVD-RW.
NOT SUPPORT DISC	NoT SUPPoRT	A disc recorded using a different DVD recorder was inserted or played.
REC INHIBIT	REC INH	● Recording was attempted using a disc on which no more data can be recorded. ● The current disc is a non-finalized disc to which no more data can be recorded.
COPY INHIBIT	CoPY INH	Recording of a copy-protected signal was attempted.
DISC FULL	dISC FULL	All remaining space on the disc is used up during recording.
CELL OVER	CELL oVER	The number of cells for a single title exceeded 255. This will be displayed when the recording time for a single title is exceeded as a result of setting ENCODE QUALITY to a low quality, recording content with little movement, or other similar factors.
OVERHEATING!	oVERHEATING	Displayed when the internal temperature of the set rises due to fan malfunction, etc. In this case, immediately turn off the power and discontinue use. The power will automatically shut down in about 20 minutes after the OVERHEATING display.
INVALID SYNC	INVALId SYNC	This is displayed if recording is discontinued when signals are interrupted and out of sync during recording.
———	ERRoR	This is displayed when playback or recording is stopped due to dirt or damage on the disc. In this case, either clean the disc or replace it.
FAN STOP	FAN SToP	This is displayed when the fan stops.

CAUTION

If alarm messages such as "INVALID DISC" are displayed several times when a disc recorded using this DVD recorder or a blank disk is inserted, there is a possibility that the disc itself has been damaged. In such a case, the damaged disc should be replaced with a new one.
If the alarm messages continue to appear after replacing the disc, the problem may lie within the DVD recorder, and in such a case, you are recommended to contact either the store where this DVD recorder was purchased or your JVC authorized dealer.

Preparation

Signal Connections

■ **Audio and video signals**
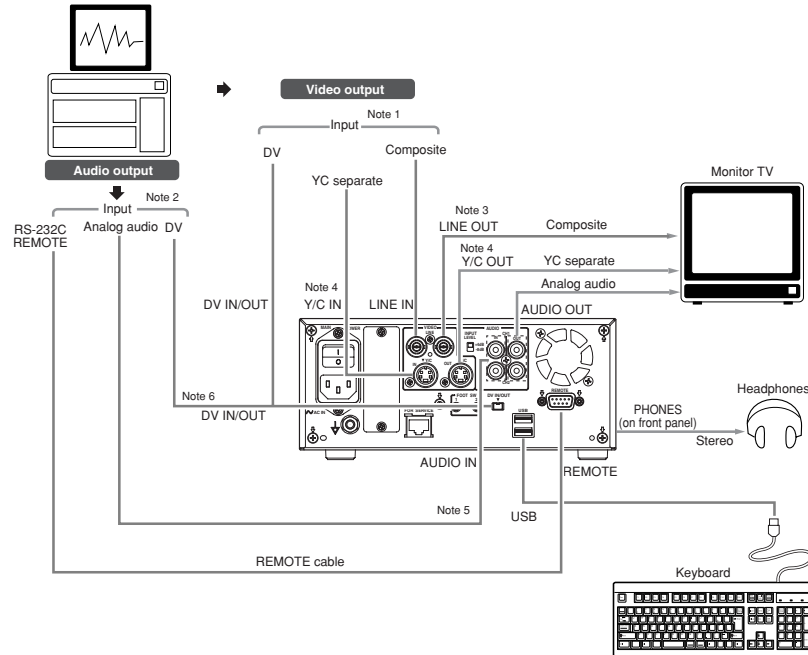
Note 1: The video signal for input is selected using INPUT SELECT from the INPUT SELECT MENU screen.
Note 2: The audio signals for input are selected using INPUT SELECT from the INPUT SELECT MENU screen.
When either LINE or Y/C is set for INPUT SELECT, the analog audio signals from the AUDIO IN terminals will be selected for input.
When DV is set for INPUT SELECT, the DV audio signals from the DV IN/OUT terminal will be selected for input.
Note 3: When the DVD recorder is in Stop or Recording mode, the video input signal is output on the E-E screen as a composite video signal.
In addition, the Setup Menu and other setting screens are also displayed on the monitor connected to this terminal. The DVD recorder's operation status and other relevant information are displayed on-screen when DISPLAY from the DISPLAY MENU screen has been set to ON.
Note 4: The Y/C IN/OUT terminal's specification (i.e., S1 or S2) can be selected using Y/C TERMINAL MODE from the SYSTEM MENU (2/2) screen. The same information as with the VIDEO LINE OUT terminal is output from the Y/C OUT terminal.
Note 5: The standard input level for audio signals input via the AUDIO IN terminals (i.e., +4 dB or –8 dB) can be selected using the AUDIO INPUT LEVEL switch on the rear panel.
Note 6: Use the following cable as the DV cable.
VC-VDV204 (2m, 4P-4P) from JVC
VC-VDV206 (2m, 4P-6P) from JVC

Power Connections

Connect the Power cord (included) to the DVD recorder.

1. **Connect the Power cord (included) to the DVD recorder's AC IN terminal.**
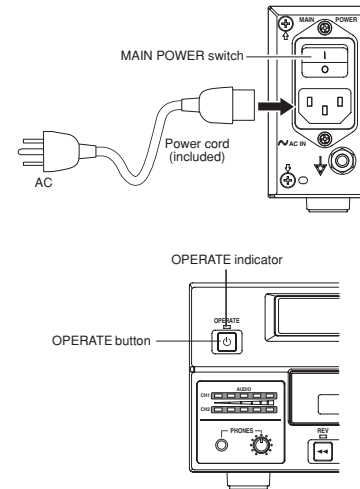
2. **Connect the power cord (included) into an electrical outlet.**

3. **Set the MAIN POWER switch to ON.**
   ● Power will be supplied to the DVD recorder and the OPERATE indicator will be lit up in green. (Operate On mode)
   ● The AC IN MODE item on the SYSTEM MENU (2/2) screen can be used to specify whether to start up in the Operate ON or OFF mode when the power switch is turned ON. (☞ Page 64)

CAUTION
● Always use the AC cord provided with the DVD recorder. The use of other power cord should be avoided.
● Do not turn the power off during recording or playback. In the case of DVD-R discs, failure to observe this precaution will result in the discs becoming unusable. In the case of DVD-RW discs, it will be necessary to erase all data from the disc and to start recording again from the beginning.

Turning the Power On

■ **While in Operate Off mode (i.e., the OPERATE indicator is lit up in orange), press the OPERATE button.**
   ● The power will turn on, the color of the OPERATE indicator will change to green, and the DVD recorder will become ready for use. (Operate On mode)

Note
● A period of 45 seconds may pass before the DVD recorder adopts Operate On mode as it prepares for operation.
● A small amount of current will be required by the DVD recorder when in Operate Off mode.

Turning the Power Off

■ **Stop the DVD recorder.**
   (It is recommended that you eject the disc at this time.)

1. **Press the OPERATE button.**
   ● The DVD recorder will adopt Operate Off mode and the color of the OPERATE indicator will change to orange.

2. **If the DVD recorder will not be used for an extended period of time, set the MAIN POWER switch to OFF.**
   ● When disconnecting the power cord, remove the power cord from the electrical outlet first.

Notes
● Pressing the OPERATE button will have no effect in Recording mode or Recording Pause mode.
● Pressing this button also has no effect during finalizing and erasing.

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Preparation

Inserting & Removing Discs

Disc tray

OPEN/CLOSE indicator
OPEN/CLOSE button
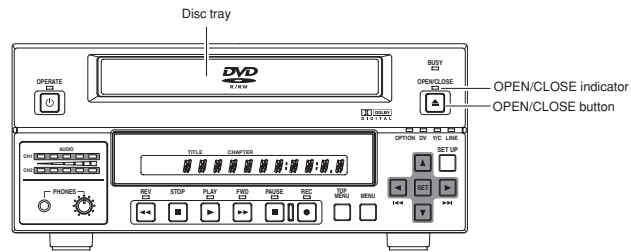
Inserting a Disc

■ Press the OPERATE button to activate Operate On mode.

1. Press the OPEN/CLOSE button.
- The disc tray will open automatically.
  While the disc tray is open, the OPEN/CLOSE indicator will be lit up.

2. Place the disc on the disc tray.
Ensure that the disc is inserted correctly into the tray's recess with the printed side facing upward.
- Carefully place the disc in the tray so as not to hit the front panel.

3. Press the OPEN/CLOSE button.
- The disc tray will close automatically.

┌─ **Notes** ─────────────────────
- When a disc is inserted, information about that disc is displayed on-screen. (☞ Page 17)
- When either a new DVD-RW or one that has been erased on another machine is inserted, quick erase starts up. (☞ Page 28)
- When the AUTO CANCEL DISC FINALIZE item on the DISC menu screen is set to ON, finalization will be automatically canceled when a DVD-RW that is finalized using this unit has been inserted. (☞ Page 61)
└────────────────────────────

Removing a Disc

■ Stop the DVD recorder.

1. Press the OPEN/CLOSE button.
- The disc tray will open automatically.
  While the disc tray is open, the OPEN/CLOSE indicator will be lit up.
- If the current disc has not been finalized, the message "NOT FINALIZE" will appear on both the monitor and LCD display.

2. Remove the disc from the disc tray.
Be sure to wait until the disc tray has opened fully before removing the disc.

3. Press the OPEN/CLOSE button.
- The disc tray will close automatically.

┌─ **Notes** ─────────────────────
- If the DVD recorder is in either Recording mode or Recording Pause mode, the disc tray will not open when the OPEN/CLOSE button is pressed.
- Pressing this button also has no effect during finalizing and erasing.
- When the AUTO FINZALIZE item on the DISC menu screen is set to ON, finalization will be executed when ejecting an unfinalized disc. (When the EDIT MENU item on the DVD MENU screen is set to DISABLE.)
└────────────────────────────

┌─ **Precautions regarding the disc tray** ─────
- Do not push the disc tray as it is opening or closing.
- Do not place objects other than discs on the disc tray.
- Do not press down on the disc tray.
└────────────────────────────

Using a Keyboard

Menu settings, the title and chapter settings, and other DVD recorder settings are carried out from setting screens displayed on the TV or monitor. In addition, recording operations can also be carried out from similar screens.
Although the DVD recorder's buttons are used in setting and operation screens, a keyboard can be used as an alternative.

■ Connections
Connect a USB keyboard to the USB terminal on the back of the DVD recorder.
This DVD recorder has the two USB terminals.
Recommended manufacturers: Logitech

┌───
Attach the provided ferrite core

- Attach the ferrite core as shown in the diagram to reduce unwanted electromagnetic emissin.
- Attach the ferrite core as shown in the diagram to this DVD recorder as near as possible.

The provided ferrite core

The wire clamp

Wind the cable once around the ferrite core.
└───

USB terminal
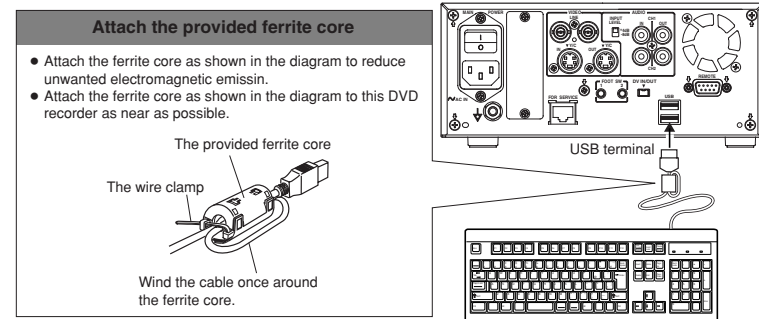
■ Procedure
The following functions can be controlled using the keyboard.

Function	Front panel	Keyboard
Selection of menu items or setting values	▶ button ◀ button ▲ button ▼ button	→ key ← key ↑ key ↓ key
Confirmation of settings	SET button	Enter key

┌─ **Note** ─────────────────────
Unless otherwise specified, this user's manual describes procedures carried out from the DVD recorder itself.
└────────────────────────────

The entry of names and comments for the title and chapter menus is carried out using the keyboard. (Set KEYBOARD STYLE from the SYSTEM MENU (1/2) screen in accordance with the keyboard's input language.)

Preparation

Setting & Displaying the Date & Time

Use the following procedure to set the internal clock's date and time. Even when the DVD recorder's power is turned off, the clock's date and time settings are stored using the internal battery.
Note that these settings are used to write the current date and time to a disc being recorded.
The DISPLAY screen can be used to indicate whether or not the date and time are to be displayed on-screen.

▲ button
SET UP button
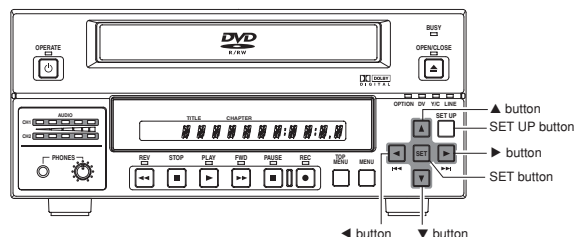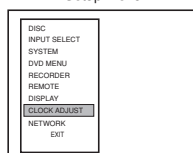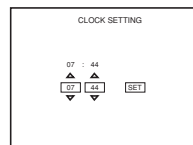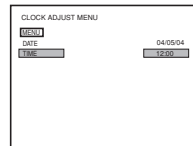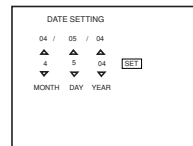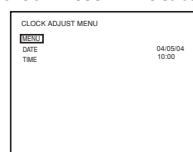◀ button
SET button

◀ button   ▼ button

Setup Menu

DISC
INPUT SELECT
SYSTEM
DVD MENU
RECORDER
REMOTE
DISPLAY
CLOCK ADJUST
NETWORK
EXIT

CLOCK ADJUST MENU screen

CLOCK ADJUST MENU
MENU
DATE   04/05/04
TIME   10:00

DATE SETTING
04 / 05 / 04
▲   ▲   ▲
4   5   04   SET
▼   ▼   ▼
MONTH DAY YEAR

CLOCK ADJUST MENU
MENU
DATE   04/05/04
TIME   12:00

CLOCK SETTING
07 : 44
▲   ▲
07 44   SET
▼   ▼

Setting the Date and Time

Setting of the date and time is carried out using the CLOCK ADJUST MENU screen. During this procedure, the monitor connected to the VIDEO LINE OUT terminal is used to monitor the setting of data.

■ **Turn on the power and ensure that the DVD recorder is stopped.**

1. **Press the SET UP button to display the Setup Menu.**

2. **Open the CLOCK ADJUST MENU screen.**
① Use the ▲ and ▼ buttons to select CLOCK ADJUST. (The currently selected menu item is displayed as highlighted.)
② Press the SET button to open the CLOCK ADJUST MENU screen.

3. **Set the date and time as required.**
① Use the ▲ and ▼ buttons to select either DATE or TIME. Then press the SET button.
② Use the ▶ and ◀ buttons to select the digit to be changed. (The currently selected digit is displayed as highlighted text.)
③ Use the ▲ and ▼ buttons to change the value of the selected digit.
④ Repeat steps ② through ③ to make all of the required settings, and then press the SET button.

> **Note**
> It is not possible to set the time in units of seconds. After setting the minutes, press the SET button in sync with a time signal.

4. **After completing all of the required settings, return to the Setup Menu.**
To do this, use the ▲ or ▼ buttons to select MENU and then press the SET button.

5. **Return to the normal screen display.**
● To do this, press the SET UP button
  or
● Select EXIT from the Setup Menu and press the SET button.

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Setting & Displaying the Date & Time (continued)

DISPLAY MENU screen

DISPLAY MENU
MENU
DISPLAY   ON
TITLE/CHAPTER/INDEX TITLE+CHAPTER
RECORDER MODE   ON
TIME/DATE   TIME+DATE
REMAIN   ON
DATE STYLE   MM/DD/YY
LCD   TITLE+CHAPTER

Displaying the Date and Time

Use the DISPLAY MENU screen to indicate whether or not the date and time are to be displayed on-screen and to set a display style. (☞ Page 71 for details regarding setting methods.)

DISPLAY MENU Screen Makeup

■ **DISPLAY: This parameter is used to indicate whether or not data is to be displayed on-screen.**
ON : Data will be displayed on-screen. The following parameters can be used to indicate which data is to be displayed.
OFF : No data is displayed on-screen.

■ **TIME/DATE: This parameter is used to set the way in which the date and time are displayed.**
OFF   : Neither date or time are displayed.
TIME   : Only the time is displayed.
DATE   : Only the date is displayed.
TIME + DATE : Both date or time are displayed.

■ **DATE STYLE: This parameter is used to select the way in which the date is to be displayed.**
YY/MM/DD : Year, month, day
MM/DD/YY : Month, day, year
DD/MM/YY : Day, month, year

On-screen display

000 min

REC
04/05/04   TITLE 01 0:11:22
11:20:00   CHAPTER 01 0:11:22
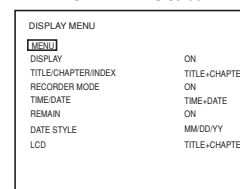
TIME/DATE

To display date and time information on-screen;

● Set DISPLAY to ON.
● Set TIME/DATE to anything other than OFF.
Date and time information is displayed as follows.
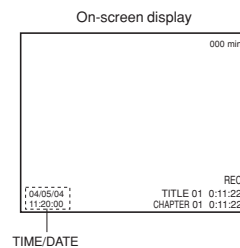
Mode	Displayed information
Recording or Stop	The value of the internal clock
Playback	The date and time at which the current disc was recorded.

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Settings & Controls for Recording

DVD Recording

DVD recording is carried out using the following procedure.

Pre-Recording Settings

Preparation of the DVD-R or DVD-RW (video mode only).	● Insert a new DVD-R or DVD-RW (video mode) or alternatively, a similar disc that has been recorded on using the DVD recorder. ● If the recording on a DVD-RW is to be performed once again from the beginning, erase the disc's data using ERASE from the DISC MENU screen. (☞ Page 28)
On-screen settings	Use the setting screens to select the appropriate recording signal, setup the recording conditions, and make other necessary settings. (☞ Page 29)
Adjustment of audio recording levels.	Audio recording levels can be adjusted in one of two different ways. (☞ Page 32)
Selection of styles for the title and chapter menus	The title and chapter menus are used during playback of a disc to select the section of the disc to be viewed. A total of five different display styles have been made available for these menus, and these can be selected using the DVD MENU screen. In addition, the DVD recorder also allows you to freely modify these display styles. (☞ Page 35)

Recording Operations (☞ Page 37)

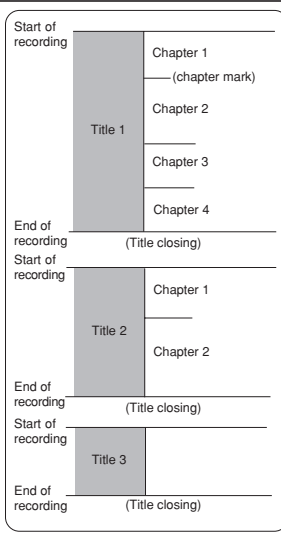|	
Start of recording Chapter 1 (chapter mark) Chapter 2 Title 1 Chapter 3 Chapter 4 End of recording (Title closing) Start of recording Chapter 1 Title 2 Chapter 2 End of recording (Title closing) Start of recording Title 3 End of recording (Title closing)	● The section between the start of recording using the REC and PLAY buttons and the end of recording using the STOP button constitutes a single recording title, and each title is assigned a unique number. A single disc can contain up to 99 different titles. ● Each title can be separated into a number of different chapters by inserting chapter marks at the appropriate points. Unique numbers are also assigned to chapters, and a single title can contain up to 99 different chapters. ● **Adding chapters** If the REC button is pressed while recording, chapter mark and index will be inserted. In addition, CHAPTER CREATION from the RECORDER MENU (1/2) screen can also be used to setup the automatic or manual insertion of chapter marks and indexes. When the INDEX CREATION item on the RECORDER MENU (2/2) screen is set to AUTO, indexes will be inserted automatically together with chapters at the record start point and recording pause point. ● Thumbnails (i.e., the frame at the start of recording) and backgrounds are automatically created for the title and chapter menus using the style selected using STYLE from the DVD MENU screen. If EDIT MENU from the DVD MENU screen is set to ENABLE before the start of recording, it will be possible to modify the chapter menu's style and thumbnails and to insert chapter names and comments whenever recording is stopped (i.e., whenever title closing is performed). ● Once title closing has been carried out, it will not be possible to modify the chapter menu. ● The REC CONTROL panel can be used to perform recording operations with a keyboard. (REC CONTROL from the REMOTE MENU screen must be set to ON.) ● If EDIT MENU from the DVD MENU screen is set to ENABLE, it will be possible to modify the title menu's style and to input title names when the disc is being finalized.

Processing After Recording (☞ Page 42)

If additional recording is to be performed:	**If the disc is to be played on this DVD recorder or on a different DVD player:**
Press the OPEN/CLOSE button and remove the disc.	Finalize the disc. To do this, select FINALIZE from the DISC MENU screen. * When a disc has been finalized, it will not be possible to record more content to it or to modify its menu styles.

Preparing a Disc for Recording

■ This DVD recorder is capable of recording to DVD-R and DVD-RW (in video mode).
DVD-R : Only discs that conform with DVD-R Standard 2.0 (video mode) can be used.
DVD-RW : Discs of Version 1.1 or later can be used.
Although Version 1.1 of DVD-RW standards allows the selection of video mode and VR mode for recording, this DVD recorder performs recording in video mode only.
* Version 1.0 of the DVD-RW standards does not support video-mode recording, and for this reason, the corresponding discs cannot be used.

■ In terms of recording characteristics, DVD-R and DVD-RW (video mode) differ as follows.
DVD-R : Each disc can be recorded only once. Erasing of data and re-recording are not possible.
DVD-RW (video mode) : After viewing a disc, all data can be erased and it can be used to record new content.

The condition of the disc being used will dictate the available recording options as follows.

Disc condition		Recording operations
DVD-R	Blank disc	New content can be recorded. A new title is created and recording starts from that title's first chapter.
	A disc recorded on using this DVD recorder but not yet finalized.	A new title is created in the unused section of the disc, and recording starts from that title's first chapter.
DVD-RW	Blank disc	New content can be recorded. A new title is created and recording starts from that title's first chapter.
	A disc recorded on using this DVD recorder but not yet finalized.	A new title is created in the unused section of the disc, and recording starts from that title's first chapter.
	A recorded disc from which data is to be erased.	Erase the recorded data (as described below), and then record new content.

Notes
● If data has been erased from a disc using a different DVD recorder, it may not be possible to record new content to it using this recorder. To avoid this type of situation, ensure that this DVD recorder is used to erase recorded data.
● New content cannot be recorded to discs that have been finalized.
It is possible to cancel the finalization and add a recording to a DVD-RW finalized on this machine.
● Regardless of whether or not finalization has been carried out, it will not be possible to use this DVD recorder to record new content to a disc that has been recorded on using other devices.

Settings & Controls for Recording

Erasing All Data From a DVD-RW Disc
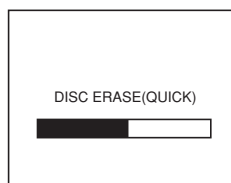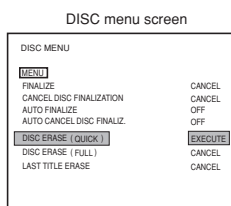
DISC menu screen

```
DISC MENU

[MENU]
FINALIZE                        CANCEL
CANCEL DISC FINALIZATION        CANCEL
AUTO FINALIZE                   OFF
AUTO CANCEL DISC FINALIZ.       OFF
DISC ERASE ( QUICK )            EXECUTE
DISC ERASE ( FULL )             CANCEL
LAST TITLE ERASE                CANCEL
```

```
DISC ERASE(QUICK)
[▮▮▮▮▮▮▮        ]
```

1. **Insert the DVD-RW from which data is to be erased.**

2. **Press the SET UP button to display the Setup Menu.**

3. **Use the ▼ and ▲ buttons to select DISC item and then press the SET button.**
   ● The DISC menu screen will appear.

4. **Press the ▼ or ▲ button, select either the DISC ERASE (QUICK) item or the DISC ERASE (FULL) item, then press the SET button.**
   ● The setting value list box is displayed.
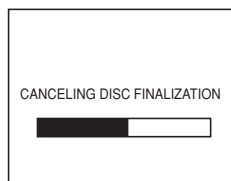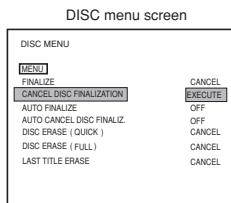   **DISC ERASE (QUICK):** Only the disc control area is erased. (Quick Erase) Compared with Full Erase the time to erase is shorter.
   DISC ERASE (FULL): All areas of the disc are erased. (Full Erase) This setting is recommended for repeated use of a disc.

5. **Use the ▼ and ▲ buttons to select EXECUTE from the list and then press the SET button.**
   ● The erasing of data will begin.
   The message "DISC ERASE" appears and the state of progress is displayed using a progress bar.
   ● When all data has been erased, the progress bar will disappear.

Note
When either a new DVD-RW or one that has been erased on another machine is inserted, quick erase starts up.

CAUTION
● All of the data recorded to the disc will be erased in this process. Before starting, therefore, confirm that no important data is stored on this disc.
● Under no circumstances should the power be turned off or the power cord disconnected while data is being erased.

Canceling the Finalization of a DVD-RW

When adding an extra recording to a finalized DVD-RW, cancel the finalization.

DISC menu screen

```
DISC MENU

[MENU]
FINALIZE                        CANCEL
CANCEL DISC FINALIZATION        EXECUTE
AUTO FINALIZE                   OFF
AUTO CANCEL DISC FINALIZ.       OFF
DISC ERASE ( QUICK )            CANCEL
DISC ERASE ( FULL )             CANCEL
LAST TITLE ERASE                CANCEL
```

```
CANCELING DISC FINALIZATION
[▮▮▮▮▮▮▮        ]
```

1. **Insert the DVD-RW whose finalization you want to cancel.**

2. **Press the SET UP button and the set up top menu screen will be displayed.**

3. **Press the ▼ or ▲ button to select the DISC item, then press the SET button.**
   ● The DISC menu screen is displayed.

4. **Press the ▼ or ▲ button, and select the CANCEL DISC FINALIZATION item, then press the SET button.**
   ● The setting value list box is displayed.

5. **Press the ▼ or ▲ button, select EXECUTE from the list box, then press the SET button.**
   ● Cancellation of finalization starts.
   Execution status will be displayed on a progress bar.
   ● When complete, the progress bar disappears.

Notes
● When canceling finalization the TOP MENU created when finalizing is deleted.
● Discs finalized on another machine cannot be cancelled.

Pre-Recording Settings

■ **Recorder switch settings**
Use the AUDIO INPUT LEVEL switch on the DVD recorder's rear panel to select the reference input level for analog audio (i.e., +4 dB or –8 dB).

■ The following screens are used to make settings relevant to recording. (Screen setting methods: ☞ Page 58)

● **INPUT SELECT MENU screen**
This screen is used to select the audio and video signals to be used. For more details, refer to page 62.

● **SYSTEM MENU screen**
The SYSTEM MENU screen contains two different pages of parametes.

SYSTEM MENU (1/2) screen
• **SET UP (NTSC only)**
This parameter is set when an analog video signal (i.e., composite or YC separate) is being input to the DVD recorder. Specifically, a setting is made to reflect whether or not the input signal is a setup signal. SETUP should be set to ON if it is a setup signal, or to OFF if it is not.
• **TEST SIGNAL**
Set this parameter to ON when the color bar output by the DVD recorder's internal signal generator is to be recorded.

SYSTEM MENU (2/2) screen
• **SYNC SYSTEM Item**
For selecting the synchronization method for this unit.
• **TV TYPE Item**
For selecting the NTSC or PAL mode.
This unit will be rebooted when settings are changed.
• **Y/C TERMINAL MODE**
This parameter indicates whether the Y/C IN terminal's specification is S1 or S2. (Specifically, it selects the recording method for the wide-screen discrimination signal.)

● **DVD MENU screen**
• **EDIT MENU**
This parameter indicates whether or not a screen for menu editing is to be displayed during title closing and finalizing.
• **STYLE**
This screen is used to select the arrangement and background style for thumbnails displayed on the tops menu. This DVD recorder can store eight individual style type (i.e., TYPE1 through TYPE8), and the most suitable type should be selected here.
• **THUMBNAIL FORM**
This parameter selects the method to be used for thumbnail conversion when recording a wide-screen signal.
• **DISC IN ACTION Item / TITLE END Item / DVD MENU TYPE Item**
This is used to set the status of a disc created when finalizing. Set this before recording to a blank disc. (☞ Refer to pages 65 and 66.)

● **RECORDER MENU screen**
The RECORDER MENU screen contains two different pages of parameters.

RECORDER MENU (1/2) screen
• **CHAPTER CREATION**
This parameter indicates whether chapters are to be created automatically or manually.
• **SET INTERVAL**
This parameter is set the time interval for automatic chapter creation and is set in units of minutes.
• **AUTO CHAPTER (REC PAUSE) Item**
Set whether to automatically insert a chapter when recording is paused.

• **ENCODE QUALITY**
This parameter is used to set the quality for encoding (or compressing) video data.
• **AUDIO ENCODE**
This parameter is used to set the format for encoding (or compressing) audio data.

For more details regarding the encoding of audio and video, refer to pages 31.

RECORDER MENU (2/2) screen
• **AUDIO CHANNEL (DV)**
This parameter is to be set when recording an audio signal from the DV IN/OUT terminal.
Specifically, it indicates whether the signals from channels 1 and 2 or from channels 3 and 4 are to be recorded. (Only with sampling frequency of 32 kHz)
• **AUDIO REC VOLUME MODE**
This parameter is used to select the method for adjustment of audio recording levels. Specifically, both channels can be adjusted while maintaining the same level (BOTH), or each channel can be adjusted independently (INDEPENDENCE). For more details regarding methods for the adjustment of audio recording levels, refer to page 32.
• **ASPECT**
This parameter is used to set the aspect for recorded video. (AUTO, 4:3, LETTER, or SQUEEZE)
• **INDEX CREATION:**
Set whether to insert indexes automatically at record start points and recording pause point.

● **REMOTE MENU screen**
• **REMOTE SELECT**
This parameter should be set to OFF when not controlling the DVD recorder via the DV IN/OUT terminal.
• **REC CONTROL**
This parameter indicates whether or not the REC CONTROL panel is to be displayed constantly on-screen when a recordable disc has been inserted.
Set this to ON when using a keyboard.
• **FOOT SW1 Item**
Set this to any mode other than OFF when turning ON/OFF recording using an external switch that is connected to the FOOT SW1 terminal at the rear of this unit.
• **FOOT SW2 Item**
Set this to any mode other than OFF when writing chapters or indexes using an external switch that is connected to the FOOT SW2 terminal at the rear of this unit.
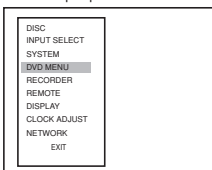Please see page 69 for details
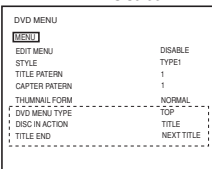
Settings & Controls for Recording

Specifying the Disc Status Created when the Disc was Finalized

It is possible to specify the action when a finalized disc is inserted into this machine or a DVD player, or the operation when playback of a title is finished. Also, it is possible to select whether to create a title menu (TOP MENU) or chapter menu (MENU) when finalizing or closing a title. It is necessary to carry out the setting before recording to a blank disc. The setting is carried out with the DISC IN ACTION Item, TITLE END Item or DVD MENU TYPE Item of the DISC MENU screen.

Set up top menu screen

```
DISC
INPUT SELECT
SYSTEM
DVD MENU
RECORDER
REMOTE
DISPLAY
CLOCK ADJUST
NETWORK
      EXIT
```

DVD MENU screen

```
DVD MENU
MENU

EDIT MENU          DISABLE
STYLE              TYPE1
TITLE PATERN       1
CAPTER PATERN      1
THUMBNAIL FORM     NORMAL
DVD MENU TYPE      TOP
DISC IN ACTION     TITLE
TITLE END          NEXT TITLE
```

Operation

■The disc should be not inserted, or a blank disc should be inserted.

1. Display the DVD MENU screen
① Press the SET UP button and the set up top menu screen will be displayed.
② Press either the ▲ or ▼ button to select the DVD MENU item, then press the SET button.

2. Set the DVD MENU menu screen
① With the ▲ or ▼ buttons, select Item, press the SET button and the setting value list box will be displayed.
② With the ▲ or ▼ buttons, select the setting value, press the SET button to confirm the setting value.

3. Finish the Setting
Carry out either of the following operations.
• Select the MENU item, press the SET button to return to the set up top menu screen.
• Press the SET UP button to return to the normal screen.

■ **DVD MENU TYPE Item**
This is for selecting whether to create a title menu (TOP MENU) or a chapter menu (MENU) when finalizing or closing a title.

■ **DISC IN ACTION Item**
This is to set the operation when a finalized disc is inserted into this machine or a DVD player.
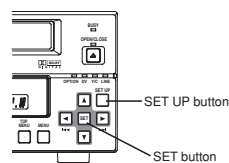
■ **TITLE END Item**
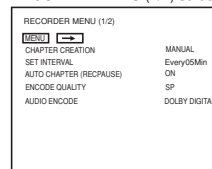This is to set the operation when playback of a title is finished.

* Settings cannot be changed after the title is recorded. Setting is possible only when there is no disc inserted or when a blank disc is inserted. Please see page 66 for details.

Setting the Encoding Format for Audio & Video

The setting of encoding formats for audio and video is carried out from the RECORDER MENU (1/2) screen as described below.

SET UP button

SET button

RECORDER MENU (1/2) screen

```
RECORDER MENU (1/2)
MENU

CHAPTER CREATION        MANUAL
SET INTERVAL            Every05Min
AUTO CHAPTER (RECPAUSE) ON
ENCODE QUALITY          SP
AUDIO ENCODE            DOLBY DIGITAL
```

Setting Encoding Formats

■Stop the DVD recorder.

1. Open the RECORDER MENU (1/2) screen.
① Press the SET UP button to display the Setup Menu.
② Select RECORDER using the ▲ and ▼ buttons and then press the SET button.

2. Make the required settings on the RECORDER MENU (1/2) screen.
① Select the parameter to be set using the ▲ and ▼ buttons, and then press the SET button to display a list of possible settings.
② Select the required setting using the ▲ and ▼ buttons, and then press the SET button to adopt it.

3. Complete the setting process.
To do so, carry out one of the following procedures.
• Select MENU and press the SET button to return to the Setup Menu.
• Press the SET UP button to return to the normal screen display.

Video Encoding

Item	Description
ENCODE QUALITY	For setting the recording quality. Recording quality and time vary with the set values as follows: (For a 4.7 GB disc)

Set Value	Recording Time	Picture	Quality Upload Size
UXP (NOT DVD VIDEO)	40 mins	High	D1: NTSC= 720 x 480 dots
XP	60 mins	↑	PAL = 720 x 576 dots
SP	120 mins	Normal	
LP	180 mins		
EP	240 mins	↓	
DLP (Double LP)	360 mins	Low	HalfD1: NTSC = 352 x 480 dots
DEP (Double EP)	480 mins	↓	PAL = 352 x 576 dots

* Only UXP, XP or SP can be selected when the AUDIO ENCODE item is set to LPCM.

Audio Encoding

■AUDIO ENCODE
This parameter is used to set the encoding format for audio data.
NO AUDIO   : Do not record audio sound.
LPCM   : Linear PCM encoding
DOLBY DIGITAL : Dolby AC3 encoding.
MPEG   : MPEG encoding (Effective only when the TV TYPE item from SYSTEM MENU (2/2) screen is set to PAL.)

Note
If the SET UP button is pressed while in Recording mode, the video encode quality and audio encoding format will be displayed on-screen. Press the SET UP button once again to hide this information.
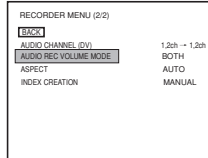
Settings & Controls for Recording

Adjusting of Audio Recording Levels

This DVD recorder's audio recording levels can be adjusted using two different methods, and AUDIO REC VOLUME MODE from the RECORDER MENU (2/2) screen indicates the method to be used. In addition, it is also possible to return the audio recording levels to their default settings (i.e., unity gain).

Note: The AUDIO INPUT LEVEL switch on the DVD recorder's rear panel can be used to select the reference input level for analog audio (i.e., +4 dB or –8 dB).

Selecting the Adjustment Method

RECORDER MENU (2/2) screen

```
RECORDER MENU (2/2)
BACK
AUDIO CHANNEL (DV)        1,2ch → 1,2ch
AUDIO REC VOLUME MODE     BOTH
ASPECT                    AUTO
INDEX CREATION            MANUAL
```

1. Open the RECORDER MENU (2/2) screen.
To do this, select → button from the RECORDER MENU (1/2) screen and press the SET button.

2. Make the required setting using AUDIO REC VOLUME MODE from the RECORDER MENU (2/2) screen.

BOTH : Audio levels are adjusted while both the CH1/CH2 are maintained at the same volume.

INDEPENDENCE : The CH1/CH2 are adjusted separately.

Adjusting the Audio Recording Levels

Audio level indicator

Buttons used
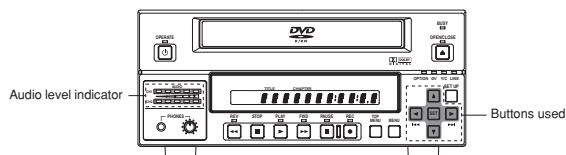
■Return from setting screens to the normal display.
■Recording levels can be adjusted in either Stop or Recording mode. Be sure to monitor the front panel's audio level indicator as the levels are being adjusted. Adjust the level so that the LED on the far right does not light.

Adjusting both channels together (BOTH)	Adjusting both channels separately (INDEPENDENCE)
■**To raise the recording level** Press the ▲ button while holding the ◄ or ► button to raise the audio recording levels for Channel 1 and Channel 2 simultaneously.	■**To adjust the Channel 1 level** **Press either the ▲ or ▼ button while holding the ◄ button.** Pressing the ▲ button raises the recording level. Pressing the ▼ button lowers the recording level.
■**To lower the recording level** Press the ▼ button while holding the ◄ or ► button to lower the audio recording levels for Channel 1 and Channel 2 simultaneously.	■**To adjust the Channel 2 level** **Press either the ▲ or ▼ button while holding the ► button.** Pressing the ▲ button raises the recording level. Pressing the ▼ button lowers the recording level.

Returning Audio Recording Levels to Default Settings (UNITY MODE)

■Press and hold the ◄ and ► buttons simultaneously to return the audio recording levels to their default settings (i.e., unity gain).
● Both of the audio recording levels will be fixed at the default setting.

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Checking the Video Input

Use the monitor connected to the VIDEO LINE OUT or Y/C OUT terminal to confirm that the input video signal is as required. The following procedure will allow you to monitor the quality at which the video will be recorded to a DVD.

VIDEO LINE OUT terminal

Monitor screen
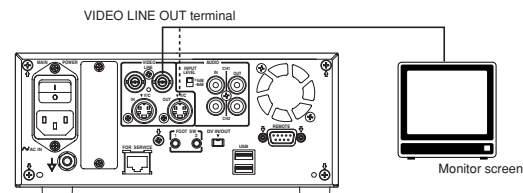
Signal Connections

Connect the VIDEO LINE OUT or Y/C OUT terminal to the monitor.

Procedure

■ **Press and hold the REC button for at least 2 seconds while the DVD recorder is stopped or inserted with no disc. While this button is being held, input signal encoded/decoded in MPEG will be output via the VIDEO OUT or Y/C OUT terminal on the rear panel.**
● This function allows the quality of the video to be confirmed before recording to a DVD.

REC button
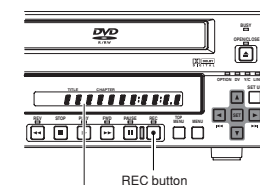
The setting value of the ENCODER QUALITY is indicated on the LCD display.

```
ENCODE XX
```

UXP, XP, SP, LP, EP, DLP, DEP

Note
Audio will be muted at this time.

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Settings & Controls for Recording

Title & Chapter Menus

This DVD recorder can automatically create title and chapter menus in response to recording operations and can save these to the disc being recorded.

When the disc is subsequently played, these title and chapter menus can be used to access specific sections of stored video and audio.

● When recording is stopped using the STOP button or a similar action (i.e., disc closing), a title number and a thumbnail (corresponding to the frame at the start of recording) will be created to form part of the disc's title menu. A single disc can contain up to 99 different titles.

● Similarly, if a chapter mark is inserted during recording, a chapter number and a thumbnail (corresponding to the frame at the chapter mark) will be created to form part of the title's chapter menu. Chapter marks are used as targets for skipping during playback. Each title can contain up to 99 chapters. In addition, indexes will be inserted together with chapters. (Please see page 56 for details on indexes.)
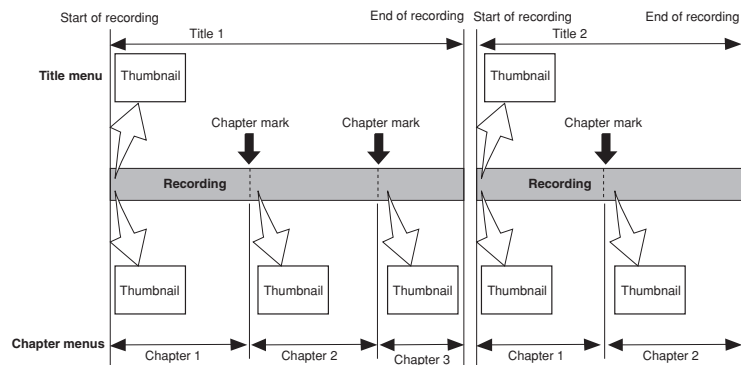
■Display Styles

A total of eight different display styles can be used with title and chapter menus. The DVD MENU screen can be used to select the type of style to be used in the creation of title and chapter menus.

In addition, each of the display styles can be modified as required. (☞ Page 36)

Depending on the style used and the number of menu items, title and chapter menus may extend over more than one page.

Notes

● This DVD recorder can store a total of six different display patterns for title and chapter menus.
At the time of purchase, this DVD recorder will contain five different template files. Any of the stored display patterns can be selected to change the styles applied to each of the title and chapter menus.

■Modifying Chapter Menus

A chapter menu's display style and thumbnails can be edited at the end of recording (i.e., during title closing); furthermore, titles and comments for the chapter menu can also be input at this time. (EDIT MENU from the DVD MENU screen must be set to ENABLE for this to be possible.) (☞ Page 43)

■Modifying the Title Menu

The style used for the title menu and the text input for the title name may both be modified before finalizing is carried out. (EDIT MENU from the DVD MENU screen must be set to ENABLE for this to be possible.) (☞ Page 49)

Notes

● Thumbnail of the title menu will be the top thumbnail of the chapter menu.
● Once a title is closed, it will no longer be possible to modify the chapter menu.
● No modifications whatsoever will be possible when the disc has been finalized.
● When a disc is finalized, its title menu will be used to create the top menu.
● Thumbnail creation method during wide-signal recording can be selected in THUMBNAIL FORM of the DVD MENU screen.

Selecting Styles for Title & Chapter Menu

Each recorded DVD contains title and chapter menus that provide information relating to its titles and chapters.

Whenever recording is carried out, title numbers, chapter numbers, and thumbnails are automatically generated in order to create the title and chapter menus.

Specifically, the frames from the start of individual recordings are used as thumbnails for the title menu.

In a similar way, the frames at which chapter marks have been inserted are used as thumbnails for chapter menus. (These thumbnails may be modified later on.) The title menu will become the top thumbnail of the chapter menu.

The term "style" is used to refer to a combination of thumbnail characteristics for the title and chapter menus. This DVD recorder can store eight different style types, and the DVD MENU screen is used to indicate which of these types is to be used.

Making Settings in the DVD MENU screen

Setup Menu
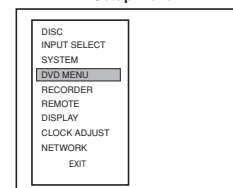
DVD MENU screen
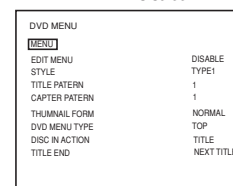
STYLE screen
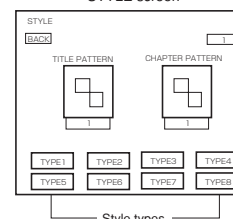
1. **Press the SET UP button to display the Setup Menu.**

2. **Select DVD MENU from the Setup Menu and then press the SET button.**
● The DVD MENU screen will appear. Within this screen, the STYLE parameter indicates the style type currently selected for the title and chapter menus.

3. **Confirm the settings for the currently selected style.**
Select STYLE and then press the SET button to display the corresponding STYLE screen.
TITLE PATTERN : The display pattern currently selected for the title menu. Each display pattern uses different numbers, positions, and sizes for thumbnails, in addition to different backgrounds.
CHAPTER PATTERN : The display pattern currently selected for chapter menus. Each display pattern uses different numbers, positions, and sizes for thumbnails, in addition to different backgrounds.

4. **Use the cursor buttons (▲, ▼, ►, and ◄) to select one of the eight style types and display the corresponding STYLE screen.**

5. **To use a specific style, select the corresponding type number and then press the SET button.**
This type number will then be stored by the DVD recorder.
Following this, the screen's BACK button will be highlighted. The SET button can now be pressed to return to the DVD MENU screen.

■ **If BACK is used to exit the STYLE screen without the SET button being pressed for the newly selected type, the style setting will not be updated.**

Notes

● The STYLE settings for chapter menus can be freely modified until title closing is carried out. (☞ Page 43)
● The STYLE settings for the title menu can be freely modified until the DVD is finalized. (☞ Page 49)
● Each style can be freely modified and stored in the DVD recorder's memory. In addition, it is also possible to freely select and modify display patterns (i.e., the number, position, and size of thumbnails in addition to the background). For more details regarding modification of STYLE, refer to page 36.
● In certain cases, the frames used for chapter menu thumbnails may differ slightly from the exact frames at which the corresponding chapter marks were inserted.

Settings & Controls for Recording

Changing Styles for Title & Chapter Menus

The DVD MENU screen can be used to change the styles used for displaying title and chapter menus. One of eight different types of style can be selected for each of the title and chapter menus.

This DVD recorder can also store a total of six different display patterns for title and chapter menus. At the time of purchase, this DVD recorder will contain five different template files. Any of the stored display patterns can be selected to change the styles applied to each of the title and chapter menus.

DVD MENU screen

```
DVD MENU
┌──────┐
│ MENU │
└──────┘
EDIT MENU           DISABLE
STYLE               TYPE1
TITLE PATERN        1
CAPTER PATERN       1
THUMBNAIL FORM      NORMAL
DVD MENU TYPE       TOP
DISC IN ACTION      TITLE
TITLE END           NEXT TITLE
```

TITLE PATTERN screen

TITLE PATTERN
BACK ← →   1

TITLE PATTERN
BACK ← →   1

TITLE PATTERN
BACK ← →   4

1. Open the DVD MENU screen.
This screen allows patterns to be modified for the style indicated by the STYLE parameter.

TITLE PATTERN : Shows the pattern number for the current title-menu display style as indicated by the STYLE parameter.

CHAPTER PATTERN : Shows the pattern number for the current chapter-menu display style as indicated by the STYLE parameter.

When the STYLE parameter's number setting is changed, the patterns used for title and chapter menus in the new style will be displayed by TITLE PATTERN and CHAPTER PATTERN respectively.

2. Change the display patterns for the title and chapter menus as required.
For example, let's change the title menu's display pattern from 1 to 4. Select TITLE PATTERN from the DVD MENU screen and press the SET button.
● The TITLE PATTERN screen will appear.

3. Use the cursor buttons (▶, ◀, ▲, and ▼) to select the fourth pattern on the TITLE PATTERN screen, and then press the SET button.
● The title menu's display pattern changes to No. 4, and the BACK button becomes highlighted.

4. With the BACK button highlighted, press the SET button and return to the DVD MENU screen.

■ If BACK is used to exit the TITLE PATTERN screen without the SET button being pressed for the newly selected pattern, the pattern setting will not be updated.
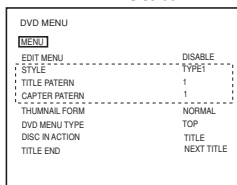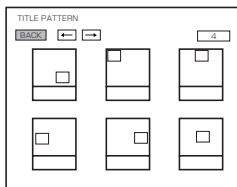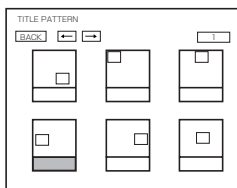
To change the display pattern for chapter menus, select CHAPTER PATTERN from the DVD MENU screen and then proceed in the same way as described above.

── Note ──
The TITLE PATTERN screen and CHAPTER PATTERN screen show the patterns that are currently stored in this DVD recorder.
Display pattern: A combination of thumbnail characteristics (i.e., position, quantity, and size) and the type of menu background used.

Recording

Recording Sequence

Use the following sequence as a reference when performing recording.
● Input settings: ☞ Page 62.
● Video and audio quality settings: ☞ Page 31.
● Navigation settings (i.e., DISC IN ACTION , TITLE END and DVD MENU TYPE): ☞ Page 63

REC button + PLAY button
Start of recording

REC button

REC button

PAUSE button *1
Recording Pause

PLAY button or PAUSE button
Resumption of recording

PAUSE button *1
Recording Pause

STOP button
End of recording - - - - - - - - Processing time: 30 seconds maximum

Chapter menu modification possible*2 (☞Page 43)

Title closing - - - - Processing time: several seconds ~ several minutes

Title menu modification possible*2 (☞Page 49)

Recording of a new title

Finalizing - - - - Processing time: 20 minutes maximum

Playback possible (Other DVD player) *3

Index 1 *4
Chapter 1
Index 2
Chapter 2
Index 3
Chapter 3
Title 1
Index 4 *4
Chapter 4

*1 It is possible to select whether to automatically insert a chapter mark when there is a pause in the recording using the AUTO CHAPTER (REC PAUSE) item of the RECORDER MENU (1/2) screen.

*2 Title and chapter menu modification will be possible when EDIT MENU from the DVD MENU screen has been set to ENABLE.

*3 It is possible to playback a disc that has been recorded on this machine even before finalizing it.

*4 When the INDEX CREATION item on the RECORDER MENU (2/2) screen is set to AUTO, indexes will be inserted automatically together with chapters at the record start point and recording pause point.

Recording

Recording with the Front Panel

This DVD recorder recording operations can be carried out in two different ways — namely, using the buttons provided on the front panel and using the on-screen REC CONTROL panel. In the latter case, furthermore, recording operations can be performed using a keyboard. The following section, however, will provide a description of recording using the front panel buttons.

On a DVD, the section of video recorded between the start of recording and pressing of the STOP button to end recording is stored as a single title, and a unique title number is assigned to each of these sections. A single disc can contain up to 99 different titles. In addition, each title can be separated into a number of different chapters by inserting chapter marks at the appropriate points, and each title can contain up to 99 chapters.

Information relating to titles and chapters is stored on a disc in the form of title and chapter menus. When the disc is being played, therefore, the title and chapter menus can be used to access specific sections of stored video and audio.

LCD display

OPEN/CLOSE button

STOP button

PAUSE button

REC button

Remaining time

Monitor display

000 min

REC
TITLE 01 0:11:22
CHAPTER 01 0:11:22

04/05/04
11:20:00

Title and chapter numbers

Notes
- A maximum of 10 minutes will be required to complete title closing.
- The remaining time available for recording on a disc will be displayed on the monitor. Note that this is to be used as a general guide, not as an exact figure. (DISPLAY and REMAIN from the DISPLAY MENU screen must both be ON for this figure to be displayed.)
- During the recording process, the current title number and chapter number are displayed on the monitor. (ONSCREEN will be displayed when the DISPLAY item is ON and the TITLE/ CHAPTER/INDEX item is set to TITLE+CHAPTER.)

■ Insert a disc that can be recorded on.

1. **With the DVD recorder stopped, make all of the required settings and adjust the audio recording levels.**

2. **Start recording.**
   This is done by pressing the REC and PLAY buttons simultaneously.

3. **Pause recording.**
   This is done by pressing the PAUSE button.
   - The recording pause mode is entered.
     When the AUTO CHAPTER (REC PAUSE) item of the RECORDER [1/2] screen is set to ON, a chapter mark is automatically inserted when the recording pause mode is entered.
     A number of different methods can also be used for the manual or automatic insertion of chapter marks. (☞ Page 39)

4. **Restart recording.**
   Press the PLAY or PAUSE button.
   - Recording will begin once again and a new chapter will be created in the current title.

5. **End recording (i.e., close the title)**
   Press the STOP button when either recording or paused.
   - The action of the DVD recorder following the end of recording depends on the setting of EDIT MENU from the DVD MENU screen.
     DISABLE : Recording is ended and the chapter menu is created using preset settings (i.e., the title is closed).
     ENABLE : The THUMBNAIL EDIT screen will appear. This screen can be used to modify the chapter menu's display style, to change the thumbnails used, to input chapter names, and to perform other similar functions. For more details, refer to page 44.

■ **If additional recording is to be carried out, repeat steps *1* through *5* above.**
   - In such a case, the subsequent recording is stored as a new title.

Recording with the Front Panel (continued)

Note
When recording is stopped or a title is closed, the state of progress will be indicated on-screen using a progress bar.

Recording stopped

REC STOP

Title closing

TITLE CLOSE

Progress bar

6. **End recording and remove the disc.**
   Depending on how the disc will be used, one of two different procedures is implemented at this time.
   - **If more content will be recorded to the disc using this DVD recorder:**
     Simply press the OPEN/CLOSE button and remove the disc. (Do not finalize the disc before it is removed.)
     * The AUTO FINALIZE item on the DISC menu screen will have to be set to OFF.
   - **If the disc is to be played on a different DVD player:**
     Finalize the disc, press the OPEN/CLOSE button, and then remove the disc. For more details regarding finalizing, refer to page 42.

Inserting Chapter Marks Manually or Automatically

RECORDER MENU (1/2) screen

RECORDER MENU (1/2)

MENU

CHAPTER CREATION   MANUAL
SET INTERVAL   Every05Min
AUTO CHAPTER (RECPAUSE)   ON
ENCODE QUALITY   SP
AUDIO ENCODE   DOLBY DIGITAL

■ It is possible to insert a chapter mark either manually or automatically. Indxes are written together with chapter marks.
   The actual method to be used is determined by CHAPTER CREATION and SET INTERVAL from the RECORDER MENU (1/2) screen.
   - If chapter marks are to be inserted manually at any point, set CHAPTER CREATION to MANUAL.
     Chapter marks and indexes can then be inserted by pressing the REC button while recording.
   - If chapter marks are to be inserted automatically, first of all set CHAPTER CREATION to AUTO. Then use SET INTERVAL to set a time (in minutes) for chapter mark insertion.
     The DVD recorder will insert chapter marks and indexes at the corresponding intervals during recording.
■ Whether a chapter mark is automatically inserted or not during a recording pause is set with the AUTO CHAPTER (REC PAUSE) item.
   ON : Insert a chapter mark.
   OFF : Do not insert a chapter mark.

Notes
- When the INDEX CREATION item on the RECORDER MENU (2/2) screen is set to AUTO, indexes will be inserted together with chapters at the record start point and reording pause point.
- The frame at which a chapter mark is inserted will be used for the corresponding thumbnail in the chapter menu. When EDIT MENU from the DVD MENU screen is set to ENABLE, the frames used for thumbnails can be modified on the THUMBNAIL EDIT screen that appears automatically at the end of recording.
- Each title can contain up to 99 chapters.
- In certain cases, the frames used for chapter menu thumbnails may differ slightly from the exact frames at which the corresponding chapter marks were inserted.
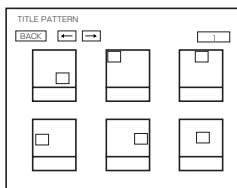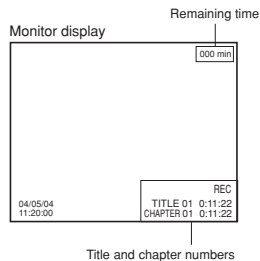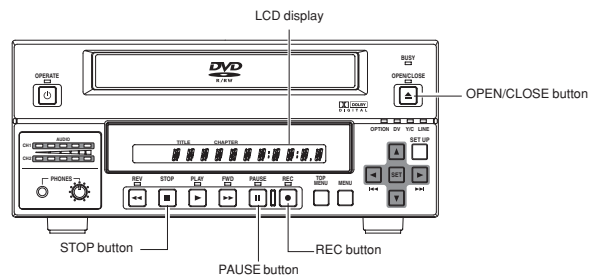- Indexes can be added or deleted when in the Playback mode.

Using the Foot Switch to Perform Recording

Operations such as recording and writing chapter marks (indexes) can be performed using the external switch that is connected to the foot switch terminal at the rear of this unit.
- Use the FOOT SW1 terminal to turn ON/OFF recording. The FOOT SW1 item on the REMOTE menu screen can be used to specify whether to use the FOOT SW1 terminal as well as to specify conditions for using the terminal. (☞ Page 69)
- Use the FOOT SW2 terminal to write chapter marks (indexes). The FOOT SW2 item on the REMOTE menu screen can be used to specify whether to use the FOOT SW2 terminal as well as to specify conditions for using the terminal. (☞ Page 69)
- It is necessary to set this unit to the Recording mode or Recording pause mode in advance when using the FOOT SW1 terminal.

Recording

Using a Keyboard to Control Recording

Recording operations of this DVD recorder can be carried out using the REC CONTROL panel displayed on the monitor. In addition, a keyboard can also be used when working with this panel.

REMOTE MENU screen

REC CONTROL panel

Notes
● DISC TITLE from the REC CONTROL panel can be selected to allow a name to be input for the disc. This type of name proves useful when managing discs using a PC. Note that disc names are not displayed on the monitor or the DVD recorder.
  Characters allowed for the disc title are alphanumerical characters and underscore (_) only. Space and other symbols may not be used.
● FINALIZE and DISC TITLE from the REC CONTROL panel cannot be used while recording.
● The Record (●) button from the REC CONTROL panel can be activated or clicked to insert chapter marks (indexes) and thumbnails during recording.

Signal Connections
Connect a keyboard to the USB terminals on the back of the DVD recorder.

Settings
● If the REC CONTROL panel is to be displayed on-screen, set REC CONTROL from the REMOTE MENU screen to ON.
  This panel will be displayed in Stop, Recording, and Recording Pause mode.
■ To open the Setup Menu, press the DVD recorder's SET UP button. Or, press the ESC key on the keyboard, and the set up menu will be displayed.

Procedure

1. Start recording.
  Keyboard : Use the arrow keys (←, →, ↑, and ↓) to select Record (●) from the REC CONTROL panel, and then press the Enter key.

2. Pause recording.
  Keyboard : Use the arrow keys (←, →, ↑, and ↓) to select Pause (II) from the REC CONTROL panel, and then press the Enter key.
  ● The DVD recorder will adopt Recording Pause mode; in addition, a chapter mark (index) and thumbnail will be inserted at the current position.

3. Restart recording.
  Keyboard : Use the arrow keys (←, →, ↑, and ↓) to select either Record (●) or Pause (II) from the REC CONTROL panel, and then press the Enter key.

■ **Steps 2 and 3 can be repeated to create a single, partitioned title.**

4. End recording (i.e., close the title)
  Select Stop (■) from the REC CONTROL panel and press the Enter key.
  ● The action of the DVD recorder following the end of recording depends on the setting of EDIT MENU from the DVD MENU screen.
    DISABLE : Recording is ended and the chapter menu is created using standard settings (i.e., the title is closed).
    ENABLE : The THUMBNAIL EDIT screen will appear. This screen can be used to modify the chapter menu's display style, to change the thumbnails used, to input chapter names, and to perform other similar functions. For more details, refer to page 43.

■ **If additional recording is to be carried out, repeat steps 1 through 4 above.**
  ● In such a case, each subsequent recording will be stored as a new title.

5. End recording and remove the disc.
  Depending on how the disc will be used, one of two different procedures is implemented at this time.
  ● **If more content will be recorded to the disc using this DVD recorder:**
    Simply press the DVD recorder's OPEN/CLOSE button and remove the disc. (Do not finalize the disc before it is removed.)
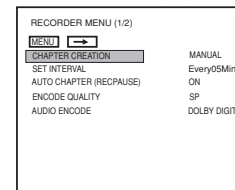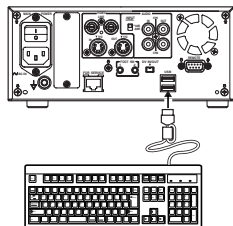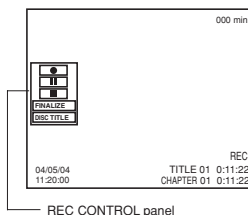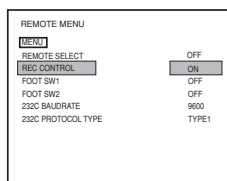 ● **If the disc is to be played on a different DVD player:**
    Use FINALIZE from the REC CONTROL panel to finalize the disc before it is ejected.
    For more details regarding finalizing, refer to page 42.

Erasing the Last Title

Only the last title of an unfinalized disc that is recorded using this unit will be erased.

DISC MENU screen
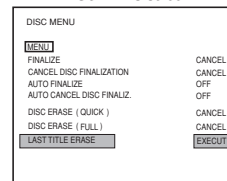
1. Insert the DVD-R/DVD-RW.

2. Press the SET UP button to display the Setup Menu.

3. Use the ▼ and ▲ buttons to select DISC item and then press the SET button.
  ● The DISC menu screen will appear.

4. Press the ▼ or ▲ button, select either the LAST TITLE ERASE item, then press the SET button.
  ● The setting value list box is displayed.

5. Use the ▼ and ▲ buttons to select EXECUTE from the list and then press the SET button.
  ● The last title will be erased.

Note
In the case of DVD-R, erasing a title will not create more disc space.

Caution
Under no circumstances should the power be turned off or the power cord disconnected while data is being erased.

Disc Repair Feature

When the power supply is cut off during recording or other operations on this unit, there is a feature to repair the disc.
After the power supply is cut off during recording or other operations, the disc repair (RESTORE) will automatically start when the power is supplied again.

Cautions
● Do not switch off or plug out the power cord during disc repair.
● The repair might not be possible depending on the disc.

Recording

Finalizing (for Playback on Other DVD Players)

Finalize a disc recorded using this DVD recorder as described below in order to ensure that it can be played on other DVD players. In the case of DVD-RWs, playback will be possible on DVD players that support video mode.

After finalizing a disc;
- No additional recording will be possible.
- The title menu cannot be changed.
- The titles created before finalizing will be displayed as the top menu.

Finalizing

The process of finalizing can be carried out in two different ways.
- Select DISC MENU and then FINALIZE from the Setup Menu.
- Select FINALIZE on the REC CONTROL panel when this is being used for recording.

Setup Procedure: Insert the disc to be finalized.

1. **If using the Setup Menu:**

```
DISC MENU

MENU
FINALIZE                    EXECUTE
CANCEL DISC FINALIZATION    CANCEL
AUTO FINALIZE               OFF
AUTO CANCEL DISC FINALIZ.   OFF
DISC ERASE (QUICK)          CANCEL
DISC ERASE (FULL)           CANCEL
LAST TITLE ERASE            CANCEL
```

① Press the SET UP button to display the Setup Menu, and then select DISC.
② Set FINALIZE from the DISC MENU screen to EXECUTE and then press the SET button.

1. **If using the REC CONTROL panel:**

```
                              000 min

          DVD-RW

          FINALIZE button

                              REC
04/05/04              TITLE 01  0:11:22
11:20:00              CHAPTER 01  0:11:22
```

Select FINALIZE and then press the keyboard's Enter key.

The screen that will now be displayed depends on the setting of EDIT MENU from the DVD MENU screen.
When DISABLE is set, finalization starts.	If this is set to ENABLE, a screen for editing title menus will appear. Use this screen to confirm that the title menu is as required, to modify the display style, and to input title names. (☞ Page 49)

Progress screen

```
          FINALIZE
```

- A bar showing the state of progress will be displayed during finalizing.
- The progress bar will disappear when finalization has been completed and the normal screen display will then be restored. (The REC CONTROL panel will not be displayed.)
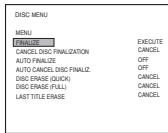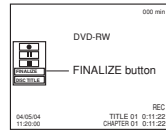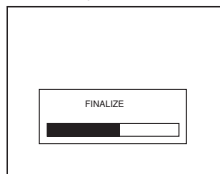- ■ Select NO from the confirmation screen to cancel finalizing and return to the previous screen.

Notes
- A maximum of 20 minutes will be required to complete finalizing.
- When finalizing is carried out, all of the disc's recorded video and audio are stored in accordance with the DVD Video Standard; accordingly, this content can also be replayed as DVD video.
- Although a disc finalized using this DVD recorder may in principle be played on other DVD players, there is no guarantee that all of its content will be playable.
- When the AUTO FINALIZE item on the DISC menu screen is set to ON, finalization will be automatically performed when ejecting the disc. (When the EDIT MENU item on the DVD MENU screen is set to DISABLE.)
- In the case of a DVD-RW, it is possible to cancel the finalization and make an additional recording. (☞ page 28.)

Title & Chapter Menu Settings

Changing Chapter Menus (THUMBNAIL EDIT Screen)

This DVD recorder can automatically create title and chapter menus as recording operations are started and stopped. Title and chapter menus are created using the following.
- Chapter thumbnails : The frames at which chapter marks have been inserted are used as thumbnails.
- Title thumbnails : The frames at the start of individual recordings are used as thumbnails. As a result, a title's thumbnail is the same as that of its first chapter.
- Display style : Menus are created using the style set using the DVD MENU screen. (Styles determine factors such as thumbnail positioning and background)

After chapter menus have been created in this way, it will be possible to modify thumbnails and styles, or to insert new names and comments.
In specific terms, the editing of chapter menus is carried out using the THUMBNAIL EDIT screen that appears when recording of a title is ended.

Opening the THUMBNAIL EDIT Screen

DVD MENU Screen

```
DVD MENU

MENU
EDIT MENU            ENABLE
STYLE                TYPE1
TITLE PATTERN        1
CAPTER PATTERN       1
THUMNAIL FORM        NORMAL
DVD MENU TYPE        TOP
DISC IN ACTION       TITLE
TITLE END            NEXT TITLE
```
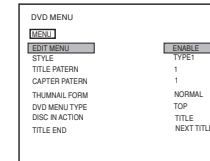
■ **Set EDIT MENU from the DVD MENU screen to ENABLE.**
- The THUMBNAIL EDIT screen will appear automatically whenever moving to Stop mode from Recording mode or Recording Pause mode.

Note
If EDIT MENU from the DVD MENU screen is set to DISABLE, the THUMBNAIL EDIT screen will not be displayed. In such a case, title and chapter menus are created using preset settings.

■ **THUMBNAIL EDIT screen**
When initially displayed, the THUMBNAIL EDIT screen contains thumbnails for up to six recorded chapters in the order that they were recorded. The seventh and subsequent thumbnails are displayed on the following pages.
- This initial screen can be used to change a chapter's thumbnail or to input names and comments.
- Operations on this screen can be carried out using the front panel buttons or a keyboard.
  Front panel : Select using the ▶, ◀, ▲, and ▼ buttons, and confirm the selection using the SET button.
  Keyboard : Select using the arrow keys and confirm the selection using the Enter key. The input of names and comments is also carried out using the keyboard.

Displays the previous page

Displays the next page

This button is used to close a disc's titles when editing has been completed. As such, it should not be used until all other operations have been completed.
When title close processing has ended, the display will return to the E-E screen, and subsequent editing of chapter menus will not be possible.

```
THUMBNAIL EDIT

TITLE CLOSE    ◁  ▷         1 - 6

AAA       BBB       CCC
  1         2         3

DDD       EEE       FFF
  4         5         6

CHAPTER MENU  TEXT LOAD  TEMP LOAD
```

Thumbnail

Chapter number:
This number is used during description of operation. It will not appear on the actual screen.

Highlighted item:
The currently selected item is displayed in highlight.

This is used for importing a template using the "EasyMenu" menu template editing software.

Displays the CHAPTER MENU EDIT screen. Specifically, this screen is used to check and change display styles.

Reads title text that has been created using an external application.

Title & Chapter Menu Settings

Changing & Naming Thumbnails for Chapter Menus

The modification of chapter menu thumbnails and the entry of names and comments are carried out as described below using the THUMBNAIL EDIT screen.

Changing Thumbnails

THUMBNAIL EDIT screen
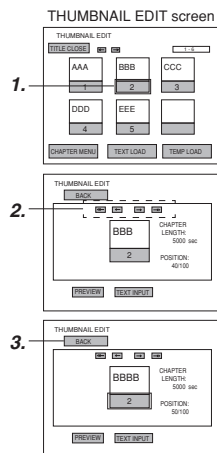
For example, let's change the thumbnail for the second chapter.

1. **Select the second chapter and press the SET button.**
- The thumbnail screen for this chapter will be displayed.
  The CHAPTER LENGTH item displays the chapter length (sec.).
  The denominator of the POSITION item is the range in which the thumbnail can be changed. The numerator shows the current display position.

2. **Select the thumbnail to be used for the second chapter.**
Thumbnails can be selected using the → and ← buttons found on this screen.
- If you select → and press the SET button, the image* recorded after the selected thumbnail will be displayed. Each time the SET button is pressed, a subsequent image will be displayed. (*Image after 15 frames)
  By selecting the →→ item and pressing the SET button, the display moves forward by 10 frames.
- If you select ← and press the SET button, the image recorded before the selected thumbnail will be displayed. Each time the SET button is pressed, a previous image will be displayed.
  By selecting the ←← item and pressing the SET button, the display moves backward by 10 frames.

3. **Select BACK and press the SET button to change that chapter's thumbnail.**
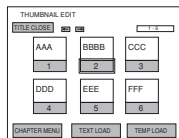
- The initial THUMBNAIL EDIT screen is displayed once again.
  The thumbnail for the second chapter will have changed to that just selected.

* Thumbnail of the title menu will be the top thumbnail of the chapter menu.

Checking Thumbnails
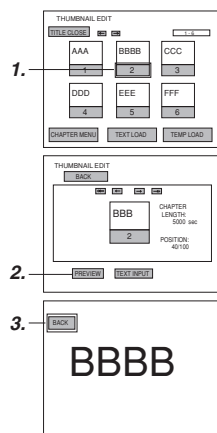
Use the following procedure to confirm that thumbnails are as desired by displaying them in full-screen mode.
For example, let's look at the thumbnail for the second chapter.

1. **Select the second chapter and press the SET button.**
- The thumbnail screen for this chapter will be displayed.

2. **Select PREVIEW and then press the SET button.**
- The thumbnail image for this chapter will be displayed in full-screen mode.

**3.** **Select BACK and press the SET button to return to the THUMBNAIL EDIT screen.**

Changing & Naming Thumbnails for Chapter Menus (continued)

Entering Names and Comments for Chapter Menus
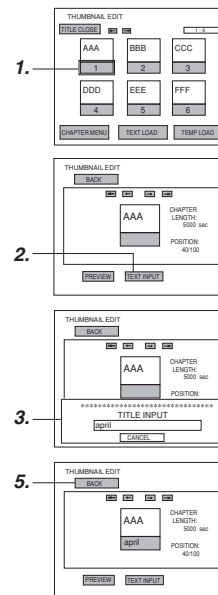
Use the following procedure to apply names to the thumbnails used in chapter menus, and also to add comments to be displayed on a chapter menu screen.
■**Names and comments are entered using a keyboard.**
Set KEYBOARD STYLE from the SYSTEM MENU (1/2) screen in accordance with the keyboard's input language.
■The following description assumes that all operations are carried out by keyboard.

For example, let's now apply a name to the first chapter.

1. **Use the arrow keys to select the first chapter from the THUMBNAIL EDIT screen, and then press the Enter key.**
- The thumbnail screen for this chapter will be displayed.

2. **Select TEXT INPUT using the arrow keys and then press the Enter key.**
- A box for inputting text will appear.

3. **Enter a name or comment into the text box.**
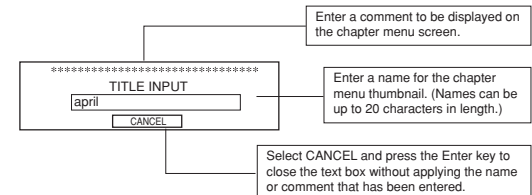
Enter a comment to be displayed on the chapter menu screen.

Enter a name for the chapter menu thumbnail. (Names can be up to 20 characters in length.)

Select CANCEL and press the Enter key to close the text box without applying the name or comment that has been entered.

Notes
- The ¥ mark will become a backslash.
- If text cannot be entered, press the CTRL key (right side) on the keyboard.

4. **After the required text has been entered, press the Enter key.**
- The text box will close.
  The name just entered will be applied to the selected chapter.
- * The text that has been input will be displayed on the chapter menu screen.

5. **Select BACK and then press the Enter key.**
- The initial THUMBNAIL EDIT screen will again be displayed, and the name or comment will be shown for the first chapter.

Display Characters

The characters displayed in title and chapter menus depend on the title or chapter pattern that has been selected. A preview allows actual display characters to be confirmed. Note that at the time of purchase, display characters will be as follows.

PATTERN No.	Display characters
1	17 x 2 (34)
2	17 x 2 (34)
3	32 x 4 (128)
4	50 (Included Title No.)
5	25 (Included Title No.)
6	—

Note

If you select TEXT LOAD from the THUMBNAIL EDIT screen and then press the SET button, title text created using an external application will be read into the DVD recorder for use as a thumbnail name.

TEXT LOAD

44

45

Title & Chapter Menu Settings

Changing & Checking Chapter Menu Styles

Although display styles for chapter menus are created using settings from the STYLE item of the DVD MENU screen as described above, the following procedure can be used to modify these styles at the end of title recording. In addition, it will also be possible at this time to confirm that chapter menus are as required.

These actions are carried out by selecting and confirming CHAPTER MENU from the THUMBNAIL EDIT screen.

Changing the Display Style
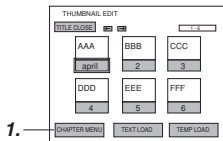
THUMBNAIL EDIT

PRESET STYLE MENU screen

1. Select CHAPTER MENU from the THUMBNAIL EDIT screen and press the SET button.
● The CHAPTER MENU EDIT screen will appear.
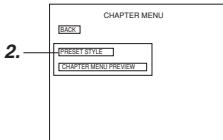
2. Select PRESET STYLE from the CHAPTER MENU EDIT screen and then press the SET button.
● The PRESET STYLE MENU screen will appear.
The style number set using the PRESET STYLE parameter will be displayed in this screen.

3. To change the display PATTERN;
Select PATTERN and then press the SET button.
Turn to page 36 for details regarding the editing procedure.

* TITLE PATTERN and CHAPTER PATTERN changed here are also reflected in DVD MENU of the SETUP MENU.
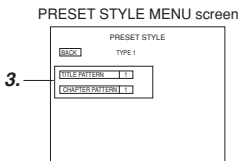
Checking the Chapter Menu Screen

Use the following procedure to see how the chapter menu looks when the selected display style is used.

THUMBNAIL EDIT START screen

CHAPTER MENU EDIT screen

CHAPTER MENU PREVIEW screen

The denominator shows the total number of thumbnails, and the numerator shows the number of thumbnails currently created.

1. Select CHAPTER MENU from the THUMBNAIL EDIT START screen and press the SET button.
● The CHAPTER MENU EDIT screen will appear.

2. Select CHAPTER MENU PREVIEW from the CHAPTER MENU EDIT screen and press the SET button.
● The CHAPTER MENU PREVIEW screen will appear. Here, it will be possible to preview the first page of the chapter menu.

3. Confirm that the other pages are as required.
Select → from the CHAPTER MENU PREVIEW screen and press the SET button to move to the next page.
Select ← and press the SET button to move to the previous page.
→→ and ←← can be used in combination with the SET button to skip forward or back in units of ten pages.

4. Complete the preview process.
To do this, select BACK from the CHAPTER MENU PREVIEW screen and press the SET button.
● The CHAPTER MENU EDIT screen will reappear.
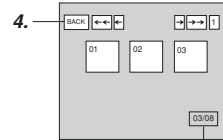
5. Select BACK from the CHAPTER MENU EDIT screen and press the SET button to return to the THUMBNAIL EDIT screen.

Notes
● Up to 20 seconds per page will be required to create preview displays. More time may be required depending on the number of thumbnails per page.
● During creation of preview displays, jump by selecting the →→ button can only be made to the page being created.
● A maximum of 33 pages can be created for the Chapter Menu.

Title & Chapter Menu Settings

Ending the Editing of Chapter Menus

Once all of the necessary changes and checks have been made using the THUMBNAIL EDIT screen, title closing must be carried out.
Please ensure that title closing is performed as the last stage of chapter menu editing.
Even if the chapter menu is to be left unchanged, title closing must be carried out to leave the THUMBNAIL EDIT screen. Note that when title closing has been completed, chapter menu details will be permanently set.

1.

THUMBNAIL EDIT
TITLE CLOSE ⬅ ➡

AAA	BBBB	CCC

april

DDD	EEE	FFF

CHAPTER MENU   TEXT LOAD   TEMP LOAD

2.

THUMBNAIL EDIT
TITLE CLOSE ⬅ ➡

AAA	BBBB	CCC

april

TITLE CLOSE
YES   NO

CHAPTER MENU   TEXT LOAD   TEMP LOAD

Select NO and then press the SET button to close the confirmation window.
The title will not be closed in this case.

1. Select TITLE CLOSE from the THUMBNAIL EDIT screen and press the SET button.
● A confirmation window will appear.

2. If you wish to proceed with title closing, select YES and then press the SET button.
● Title closing will begin. The state of progress during title closing is displayed using a progress bar.
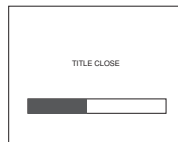
TITLE CLOSE

■ **When title closing has been completed, the progress bar will disappear.**

Notes
● A maximum of 10 minutes will be required to complete title closing.
● If EDIT MENU from the DVD MENU screen is set to DISABLE, title closing will be carried out automatically whenever recording is ended by, for example, pressing the STOP button. In such a case, title and chapter menus are created using preset settings.

Changing & Checking Title Menu Styles & Names

If EDIT MENU from the DVD MENU screen is set to ENABLE, the TITLE MENU EDIT screen will be displayed upon disc finalizing. Using this screen, it will be possible to change the title menu's display style, to enter title names, and to confirm that the title and chapter menus are as required.
● Thumbnail of the title menu will be the top thumbnail of the chapter menu.

Opening the TITLE MENU EDIT Screen

TITLE MENU EDIT screen

TITLE MENU
FINALIZE

PRESET STYLE
TITLE TEXT INPUT
TITLE MENU PREVIEW
EXIT
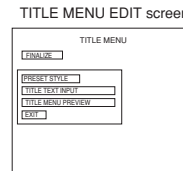
Settings

Set EDIT MENU from the DVD MENU screen to ENABLE.

Procedure

The TITLE MENU EDIT screen will be displayed when finalizing of the disc is started.

Changing the Display Style

TITLE MENU EDIT screen

1.

TITLE MENU
FINALIZE

PRESET STYLE
TITLE TEXT INPUT
TITLE MENU PREVIEW
EXIT

PRESET STYLE screen

2.

PRESET STYLE
BACK   TYPE 1
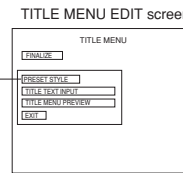
TITLE PATTERN   1

1. Select PRESET STYLE from the TITLE MENU EDIT screen and press the SET button.
● The PRESET STYLE screen will appear.

2. To change the display PATTERN;
Select TITLE PATTERN and then press the SET button.
For more details regarding the editing procedure, refer to page 36.

* The TITLE PATTERN changed here is also reflected in DVD MENU of the SETUP MENU.
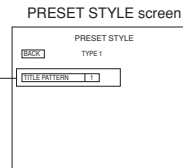
Title & Chapter Menu Settings

Changing & Checking Title Menu Styles & Names (continued)

Checking the Title Menu Screen

TITLE MENU EDIT screen

1.
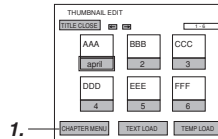
TITLE MENU PREVIEW screen

3.

TITLE MENU EDIT screen

4.
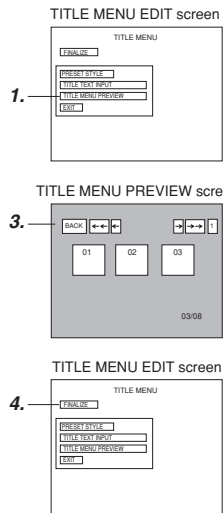
1. Select TITLE MENU PREVIEW from the TITLE MENU EDIT screen and press the SET button.
● The TITLE MENU EDIT screen will appear.

2. Confirm that the other pages are as required.
● Select → from the TITLE MENU PREVIEW screen and press the SET button to move to the next page. Starting with the first page of the title menu, the display will move forward through the pages each time → is selected and the SET button is pressed.
● Select ← and press the SET button to move to the previous page.
● →·→ and ←·← can be used in combination with the SET button to skip forward or back in units of ten pages.

Displays the previous page — Displays the next page

Thumbnail
Background
Displays the page number

The denominator shows the total number of thumbnails, and the numerator shows the number of thumbnails currently created.

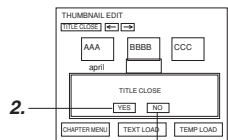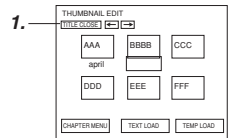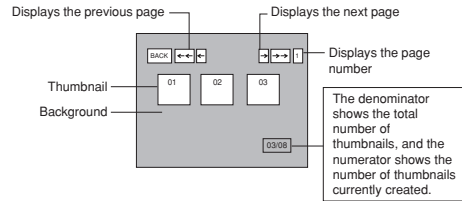**3. Complete the preview process.**
To do this, select BACK from the TITLE MENU PREVIEW screen and press the SET button.
● The TITLE MENU EDIT screen will reappear.

4. If you wish to finalize the disc, select FINALIZE from the TITLE MENU EDIT screen and then press the SET button.
(☞ Page 52)

┌─ Notes ─
● Up to 20 seconds may be required per page to display the PREVIEW screen. More time may be required depending on the number of thumbnails per page.
● During creation of preview displays, jump by selecting the →·→ button can only be made to the page being created.
● A maximum of 33 pages can be created for the Title Menu.

Changing Names for the Title Menu
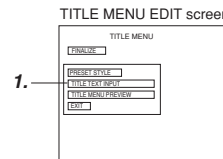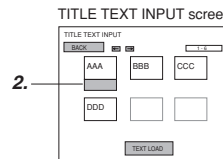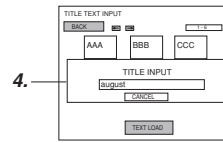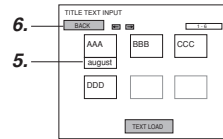
TITLE MENU EDIT screen

1.

TITLE TEXT INPUT screen

2.

4.

6.

5.

Each title will be automatically assigned with a recording date/time and ENCODE QUALITY.
Use the following procedure to enter manually names for titles in the title menu.
■ **Names and comments are entered using a keyboard.**
Set KEYBOARD STYLE from the SYSTEM MENU (1/2) screen in accordance with the keyboard's input language.
■ The following description assumes that all operations are carried out by keyboard.

1. Select TITLE TEXT INPUT from the TITLE MENU EDIT screen and press the Enter key.
● The TITLE TEXT INPUT screen is displayed.

2. Use the arrow keys to select the title for which text is to be input.
● The currently selected title is highlighted.

3. Press the Enter key.
● A box for inputting text will appear.

4. Change the default name in the text box.

Enter a name for the title. (Names can be up to 20 characters in length.)

Select CANCEL and press the Enter key to close the text box without applying the name or comment that has been entered.

┌─ Notes ─
● The ¥ mark will become a backslash.
● If text cannot be entered, press the CTRL key (right side) on the keyboard.

5. After the required text has been entered, press the Enter key.
● The text box will close.
The name just entered will be applied to the selected title.

6. Select BACK and then press the Enter key.
● The TITLE MENU EDIT screen will reappear.

┌─ Note ─

TEXT LOAD

If you select TEXT LOAD from the TITLE MENU screen and then press the SET button, title text created using an external application will be read into the DVD recorder for use as a title name.
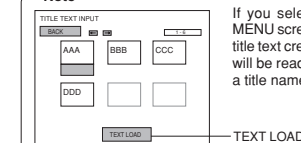
┌─ **Display Characters** ─
The characters displayed in title and chapter menus depend on the title or chapter pattern that has been selected. A preview allows actual display characters to be confirmed. Note that at the time of purchase, display characters will be as follows.

PATTERN No.	Display characters
1	17 x 2 (34)
2	17 x 2 (34)
3	32 x 4 (128)
4	50 (Included Title No.)
5	25 (Included Title No.)
6	—

Title & Chapter Menu Settings

Changing & Checking Title Menu Styles & Names (continued)

Finalizing Discs

TITLE MENU EDIT screen

1.

TITLE MENU
FINALIZE
PRESET STYLE
TITLE TEXT INPUT
TITLE MENU PREVIEW
EXIT

Confirmation screen

2.

FINALIZE
YES   NO

Progress screen
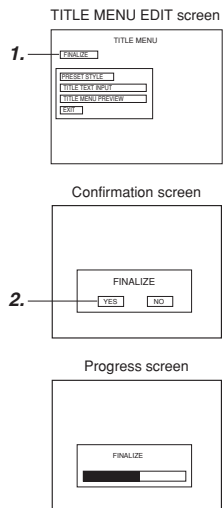
FINALIZE

1. **Select FINALIZE from the TITLE MENU EDIT screen and press the SET button.**
● A confirmation window will appear.

2. **Select YES and then press the SET button.**
● The disc finalizing process will begin.
  The state of progress during finalizing is displayed using a progress bar.

■ When the disc has been finalized, the progress bar will disappear and the E-E screen will return.

Notes
● A maximum of 20 minutes will be required to complete finalizing.
● When finalizing is carried out, all of the disc's recorded video and audio are stored in accordance with the DVD Video Standard; accordingly, this content can then also be replayed as DVD video.
● Although a disc finalized using this DVD recorder may in principle be played on other DVD players, there is no guarantee that all of its content will be playable.
● The action to be taken by this DVD recorder when a finalized disc is inserted or when playback of a title has ended is specified by DISC IN ACTION and TITLE END respectively from the DVD MENU screen.
● Select EXIT from the TITLE MENU EDIT screen and then press the SET button to return to the E-E screen without finalizing the disc.

Playback

Playing Back a Disc

It is possible to playback a disc recorded on this DVD recorder.
Playback operation may vary according to whether finalization has been performed.

Playing Back a Disc before Finalizing

STOP button   PAUSE button
PLAY button

Clearing Resume Data
● When the PLAYBACK&232C TYPE item on the SYSTEM MENU (1/2) screen is set to DVD, resume data will be cleared and the stop position will return to the beginning of the last title if the STOP button is pressed when in the Stop mode.
● When the PLAYBACK&232C TYPE item is set to VTR, resume data will not be cleared even if the STOP button is pressed when in the Stop mode.
● Resume data will be cleared upon ejecting the disc.

Operation

1. **Insert the disc.**

2. **Play the disc.**
Press the PLAY button.
● The final title is played.

3. **Select still mode.**
Press the PAUSE button.
● The machine enters still mode.
● If the PAUSE button is then pressed again in Still mode, the DVD recorder will advance playback by a single frame.

4. **Restart the play.**
Press the PLAY button.

■ **Upon reaching a title end, it will automatically jump to the next title and play back all titles.**

■ **When disc end is reached it will automatically enter stop mode.**
Stop position may vary according to settings of the PLAYBACK&232C TYPE item on the SYSTEM MENU (1/2) screen.

When set to DVD : Beginning of last title
When set to VTR : 3 seconds before end position

5. **To manually stop playback press the STOP button.**
When the STOP button is pressed, the stop position will be registered and the next playback will start from the same position. (Resume feature)

Playing Back a Finalized Disc

When a disc is finalized, its title menu will be used to create the top menu.
The action taken by this DVD recorder when a disc it has finalized is inserted or when playback of a title has ended will depend on the settings of DISC IN ACTION and TITLE END as set on the DVD MENU screen during recording.
* Playback may not proceed smoothly with discs recorded using different devices, regardless of whether or not they have been finalized.

Cursor buttons

STOP   PAUSE   SET button
PLAY button

1. **Insert a disc.**
Depending upon the DISC IN ACTION item settings of the DVD MENU screen during recording, the operation will differ. Operate in accordance with the table below.

Playback

DISC IN ACTION setting made during recording	
MENU	**TITLE**
The title menu (TOP MENU) will appear **2. Select the number of the title to be played.** Use the ►, ◄, ▼, and ▲ buttons to select the title number for playback. **3. Press the SET button to begin playback.**	Playback starts automatically from the first title.

4. Set to Still mode.
  This is done by pressing the PAUSE button.
  ● The DVD recorder enters Still mode.
  ● If the PAUSE button is then pressed again in Still mode, the DVD recorder will advance playback by a single frame.

5. Restart playback.
  Press the PLAY button.

■ **The DVD recorder will behave as follows when title playback has ended.**
  These actions will depend on the setting made for TITLE END from the DVD MENU screen during recording.

TITLE END item setting during recording			
Set to MENU	**Set to REPEAT**	**Set to STOP**	**Set to NEXT TITLE**
Enters stop mode and the title menu (TOP MENU) is displayed.	Repeats playback within the title.	Enters the stop mode. The title menu (TOP MENU) is not displayed. Stops at the beginning of the first title.	Next title is played. When playback of the final title finished, the first title is played. (Disc repeat playback)

6. Stop playback.
  This is done by pressing the STOP button.
  ● The DVD recorder enters Stop mode.
  ● When the STOP button is pressed, the stop position will be registered and the next playback will start from the same position. (Resume feature)

┌─ Clearing Resume Data ─────────────────
● When the STOP button is pressed while in the Stop mode, resume data will be cleared and the stop position will return to the beginning of the first title.
● Resume data will be cleared upon ejecting the disc.
└──────────────────────────────────────

A Disc Set with No Menu

■ If a disc with DVD MENU TYPE item of the DVD MENU screen set to NONE is inserted, the title 1 will automatically play.
■ When the end of the title is reached the next title will be played.

┌─ Precaution regarding the playback ─────────
● During playback of a disc, if the input setting is DV then the sound can be delayed. In this case, change the input setting to LINE or Y/C.
● If the disc is dirty or damaged good playback may not be possible. In this case either clean the disc or change it.
● When playing back an unfinalized disc containing mixed data such as screen aspect ratio of 4:3, squeezed, and letterbox format or a menuless disc, the wide information is not always correctly output.
└──────────────────────────────────────
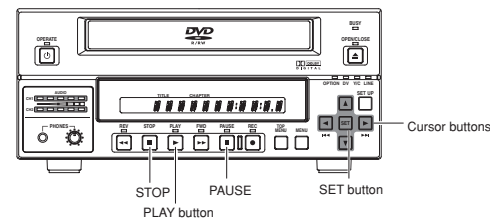
Fast & Slow Playback

REV button   FWD button
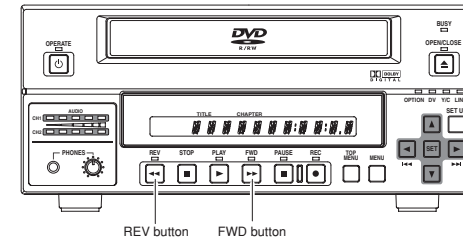
Fast-Forward & Fast-Reverse Play	**Slow-Forward & Slow-Reverse Play**
■ **Fast-forwarding** ● Press the FWD button during playback or fast-reverse play to start fast-forward play. If the FWD button is pressed during fast-forward playback, the machine toggles between fast- and slow-forward playback. ■ **Fast-reversing** ● Press the REV button during playback or fast-forward play to start fast-reverse play. If the REV button is pressed during fast-reverse playback, the machine toggles between fast- and slow-reverse playback.	■ **Slow-forwarding** ● Press the FWD button in Still mode or during slow-reverse play to start slow-forward play. If the FWD button is pressed during slow-forward playback, each time it is pressed the slow-forward playback speed changes from HIGH (>>>) → LOW (>>) → HIGH (>>>). ■ **Slow-reversing** ● Press the REV button in Still mode or during slow-forward play to start slow-reverse play. If the REV button is pressed during slow-reverse playback, each time it is pressed the slow-reverse playback speed changes from HIGH (<<<) → LOW (<<) → HIGH (<<<).

┌─ **Note** ──────────────────────────────
The DVD recorder can be returned to Playback mode during fast-forward, fast-reverse, slow-forward, or slow-reverse play by pressing the PLAY button. Still mode can be activated by pressing the PAUSE button. Stop mode is activated by pressing the STOP button.
└──────────────────────────────────────

Playing the Previous or Next Chapter
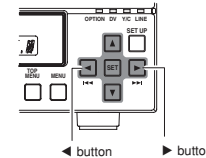
◄ button   ► button

■ Press the ► button while the DVD recorder is playing to move playback to the start of the next chapter.
■ Press the ◄ button while the DVD recorder is playing to move playback to the start of the current chapter.
  When the ◄ button is pressed within 1 second of a chapter mark, playback from the beginning of the previous chapter starts.
  * The ► button is deactivated during playback of the final chapter.

Playing the Previous or Next Titles
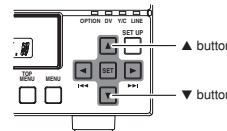
▲ button

▼ button

■ During playback, press the ▲ button and the next title will be played.
■ During playback, press the ▼ button and previous title will be played.
* During playback of the first title the ▼ button is ineffective.
  During playback of the final title the ▲ button is ineffective.

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Playback

Index Writing and Index Search

Indexes are used to locate the beginning of specific positions when in the Playback mode. (Index search)
Viewing of index information (index no. and counter data) and index search can be performed on the INDEX MANAGER screen.

Writing Index

Chapter points registered during the Recording mode are used as index values.
When recording is executed with the INDEX CREATION item on the RECORDER MENU (2/2) screen set to AUTO, record start points and recording pause points will be used as indexes.
Additionally, indexes can also be written to any position when in the Playback mode. Indexes can only be written for unfinalized discs.

1. **Play back an unfinalized disc.**

2. **Select a position and press the REC button accordingly.**
   ● Index will be written to the disc. When doing so, an "INDEX WRITE" message will be displayed on the panel of the main unit as well as onscreen for approximately 3 seconds.

> **Notes**
> ● Up to 99 indexes can be written for each title.
> ● When the FOOT SW2 item on the REMOTE menu screen is set to any mode other than OFF, indexes can be written via operation of the switch that is connected to the FOOT SW2 terminal of this unit.

Performing Index Search and Erasing Indexes

Index search and erasing of indexes can be performed upon starting up the INDEX MANAGER screen.

1. **Starting up the INDEX MANAGER screen.**
   Press the SET UP button on the front panel when in the Playback mode (PLAY or STILL mode).
   ● The INDEX MANAGER screen will be displayed on the monitor.
   * The INDEX MANAGER screen will not be displayed if the Top Menu or Menu of a finalized disc is currently displayed.

Title Selection Buttons
← : Move to the previous title
◄◄ : Move 10 titles backwards

Title No. Display Area
Displays the selected title no..

Title Selection Buttons
→ : Move to the next title
►► : Move 10 titles forward

INDEX LIST Scroll Buttons
▲:For scrolling the index no. at the topmost part of the INDEX LIST in the des-cending direction.
▼:For scrolling the index no. at the bottommost part of the INDEX LIST in the ascending direction.

```
                        INDEX MANAGER

    Title No    ◄◄   ←   01   →   ►►

           Index No   Counter Data
      ▲
           0001:    00:05:00:00          0001
      ▼
           0002:    00:05:00:01
           0003:    00:05:00:02
           0004:    00:05:00:03          PLAY
           0005:    00:05:00:04
           0006:    00:05:00:05          ERASE
           0007:    00:05:00:06
           0008:    00:05:00:07          ALL ERS
           0009:    00:05:00:08
           0010:    00:05:00:09
```

Index No. Display Area
Displays the selected index no..

For searching and playing back a selected index.

For erasing a selected index.

For erasing all indexes in a selected title.

INDEX LIST
Displays indexes of a selected title.
• When the PLAYBACK&232C TYPE item on the SYSTEM MENU (1/2) screen is set to VTR, an index value as accumulated from Title 1 will be displayed. (☞Page 63)

Index Writing and Index Search (continued)

2. **Selecting an index to search or erase.**
   Upon starting up the INDEX MANAGER screen, the title and index of the point for which its screen is called up will be selected.

   ■ **When selecting a title no.**
   ① Press the cursor buttons (→ / ← / ↑ / ↓) on the main unit to highlight the title selection buttons (→ / ← / ►► / ◄◄) on the INDEX MANAGER screen.
   ② Press the SET button on the main unit to select the title no.. The title no. changes each time the SET button is pressed. The selected title no. will be displayed on the Title No. Display Area.

   ■ **When selecting an index no.**
   ① Press the cursor buttons (→ / ← / ↑ / ↓) on the main unit to move within the INDEX LIST and highlight a specific index no..
   ② Press the SET button on the main unit and the highlighted index no. will be selected.
      ● The selected index no. will be displayed on the Index No. Display Area.

   * To scroll the INDEX LIST automatically, highlight the ▲ / ▼ buttons on the INDEX MANAGER screen, followed by pressing the SET button on the main unit.

3. **Performing index search**
   ① Press the cursor buttons (→ / ← / ↑ / ↓) on the main unit to highlight the PLAY button on the INDEX MANAGER screen.
   ② Press the SET button on the main unit to execute index search.
      ● The unit will automatically search for the index position and play back accordingly.
      ● The INDEX MANAGER screen disappears.

4. **Erasing indexes**
   Select an index according to the procedure in 2. above.
   ① Press the cursor buttons (→ / ← / ↑ / ↓) on the main unit to highlight the ERASE button on the INDEX MANAGER screen.
   ② Press the SET button on the main unit to display the confirmation dialog box.
   ③ Once erase is executed via the confirmation dialog box, the selected index will be deleted.
      ● When doing so, an "INDEX ERASE" message will be displayed on the panel of the main unit as well as onscreen for approximately 3 seconds.
      ● INDEX LIST on the INDEX MANAGER screen will be sorted.

   ■ **When erasing all indexes in a title,**
   there is no need to select the indexes.
   ① Select the ALL ERS button on the INDEX MANAGER screen, followed by pressing the SET button on the main unit.
      ● A confirmation dialog box will be displayed.
   ② Once erase is executed via the confirmation dialog box, all indexes of the selected titles will be deleted.

5. **Quitting the INDEX MANAGER screen**
   Press the SET UP button on the main unit.

> **Note**
> Arrow keys (→ / ← / ↑ / ↓) and the Enter key on the keyboard can also be used as a substitute to the cursor and SET buttons on the main unit respectively.

Setup Menu

Setting the Setup Menu

Settings made in the setup menus are stored in this DVD recorder's internal memory and will be retained even when the power is turned off. It is also possible to return to default settings whenever so required.
In addition to the buttons on the front panel, a keyboard can also be used to perform operations on these menus. The following section, however, will describe operations performed using the front panel buttons.
Keyboard : Select using the arrow keys (↑ and ↓), and confirm the selection using the Enter key.

Cursor buttons
(▲, ▼, ◄ and ►)

SET UP button

SET button

Setup Menu

DISC
INPUT SELECT
SYSTEM
DVD MENU
RECORDER
REMOTE
DISPLAY
CLOCK ADJUST
NETWORK
EXIT

RECORDER MENU (1/2) screen

RECORDER MENU (1/2)
MENU →
CHAPTER CREATION   MANUAL
SET INTERVAL   Every05Min
AUTO CHAPTER (RECPAUSE)   ON
ENCODE QUALITY   SP
AUDIO ENCODE   DOLBY DIGITAL

RECORDER MENU (1/2)
MENU →
CHAPTER CREATION   MANUAL
SET INTERVAL   AUTO
AUTO CHAPTER (RECPAUSE)
ENCODE QUALITY   SP
AUDIO ENCODE   DOLBY DIGITAL

Setting list

Settings

Setup menu operations are carried out while monitoring the display on the monitor connected to the VIDEO LINE OUT or Y/C OUT terminal. In addition, setup menu content also appears on the LCD display.

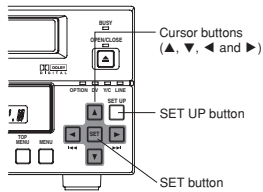■ Stop the DVD recorder.

1. Open the Setup Menu screen.
To do this, press the SET UP button

2. Open the setup menu in which settings are to be modified.
① Use the ▲ and ▼ buttons to select the required screen.
② Press the SET button
 * The EXIT option can be selected to return to the normal screen display.

3. Make the required settings in the setup menu.
① Use the ▲ and ▼ buttons to select the parameter to be set.
② Press the SET button
 ● A list of setting values will appear.
③ Use the ▲ and ▼ buttons to select the required value from the list and then press the SET button.
 ● The setting value will be modified accordingly.
④ Repeat steps ① through ③ until all of the required settings have been made.

■ To return to the Setup Menu, select MENU and press the SET button.
■ To move to the next menu screen, select the → button at the top of the current screen and press the SET button.
■ To return to the original menu screen, select either MENU or BACK and press the SET button.

4. Use either of the following methods to return to the normal screen display.
Press the SET UP button.
or
Select EXIT from the Setup Menu and press the SET button.
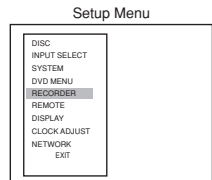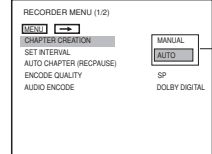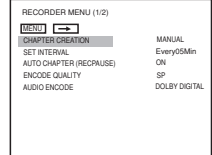
Restoring to Default Settings

SYSTEM MENU screen

SYSTEM MENU (1/2)
MENU →
SETUP   OFF
TEST SIGNAL   OFF
FACTORY SETTING   EXECUTE
KEYBOARD STYLE   ENGLISH
PLAYBACK & 232C TYPE   DVD

TOTAL RECORDING TIME   5 Hour 30 Min
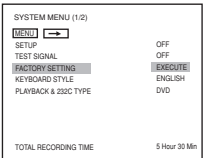
All settings from the various setup menus can be returned to the corresponding default settings by setting FACTORY SETTING from the SYSTEM MENU screen to EXECUTE and by then pressing the SET button.

* The current set values for the TV TYPE item on the SYSTEM MENU (2/2) screen will not be erased.

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Setup Menu Configuration

The Setup Menu screen is displayed on both the monitor and LCD display. As shown below, this screen is used to access this DVD recorder's setup menus.

DISC MENU screen (☞ Page 61)

DISC MENU
MENU
FINALIZE   CANCEL
CANCEL DISC FINALIZATION   CANCEL
AUTO FINALIZE   OFF
AUTO CANCEL DISC FINALIZ.   OFF
DISC ERASE (QUICK)   CANCEL
DISC ERASE (FULL)   CANCEL
LAST TITLE ERASE   CANCEL

INPUT SELECT MENU screen (☞ Page 62)

INPUT SELECT MENU
MENU
INPUT SELECT   LINE

SYSTEM MENU (1/2) screen (☞ Page 62)

SYSTEM MENU (1/2)
MENU →
SETUP   ON
TEST SIGNAL   OFF
FACTORY SETTING   CANCEL
KEYBOARD STYLE   ENGLISH
PLAYBACK & 232C TYPE   DVD

TOTAL RECORDING TIME   5 Hour 30 Min

SYSTEM MENU (2/2) screen (☞ Page 64)

SYSTEM MENU (2/2)
BACK
AC IN MODE   ON
SYNC SYSTEM   AUTO
TV TYPE   NTSC
VBID OUT(WIDE)   OFF
Y/C TERMINAL MODE   S1
OPERATION LOCK   OFF

Setup Menu (☞ Page 60)

DISC
INPUT SELECT
SYSTEM
DVD MENU
RECORDER
REMOTE
DISPLAY
CLOCK ADJUST
NETWORK
EXIT

DVD MENU screen (☞ Page 65)

DVD MENU
MENU
EDIT MENU   DISABLE
STYLE   TYPE1
TITLE PATTERN   1
CHAPTER PATTERN   1
THUMBNAIL FORM   NORMAL
DVD MENU TYPE   TOP
DISC IN ACTION   TITLE
TITLE END   NEXT TITLE

RECORDER MENU (1/2) screen (☞ Page 67)

RECORDER MENU (1/2)
MENU →
CHAPTER CREATION   MANUAL
SET INTERVAL   Every05Min
AUTO CHAPTER (REC PAUSE) ON
ENCODE QUALITY   SP
AUDIO ENCODE   DOLBY DIGITAL

RECORDER MENU (2/2) screen (☞ Page 68)

RECORDER MENU (2/2)
BACK
AUDIO CHANNEL (DV)   1,2ch → 1,2ch
AUDIO REC VOLUME MODE   BOTH
ASPECT   AUTO
INDEX CREATION   MANUAL

DISPLAY MENU screen (☞ Page 71)

DISPLAY MENU
MENU
DISPLAY   ON
TITLE/CHAPTER/INDEX   OFF
RECORDER MODE   OFF
TIME/DATE   OFF
REMAIN   OFF
DATE STYLE   MM/DD/YY
LCD   TITLE+CHAPTER

REMOTE MENU screen (☞ Page 69)

REMOTE MENU
MENU
REMOTE SELECT   OFF
REC CONTROL   OFF
FOOT SW1   OFF
FOOT SW2   OFF
232C BAUDRATE   9600
232C PROTOCOL TYPE   TYPE1

CLOCK ADJUST MENU screen (☞ Page 72)

CLOCK ADJUST MENU
MENU
DATE   04/12/04
TIME   10:00

NETWORK MENU screen (☞ Page 72)

NETWORK MENU
MENU
HOST NAME   bdx201m
IP ADDRESS SETTING   STATIC
IP ADDRESS   192.168.0.2
SUBNET MASK   255.255.255.0
DEFAULT GATEWAY   192.168.0.254

MAC ADDRESS   xx.xx.xx.xx.xx

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Setup Menu

The following table identifies and describes the parameters that may be set using the Setup Menus.
Top half   : Appearance on monitor screen
Bottom half : Appearance on LCD display

Option	Description
DISC dISC	This button opens a menu that allows settings to be made for finalizing and other similar disc processes.
INPUT SELECT INPUT SEL	This button opens a menu that allows input audio and video signals to be selected.
SYSTEM SYSTEM	This button opens a SYSTEM MENU screen containing two different pages of parameters. This button opens a menu that allows settings to be made for the DVD recorder itself.
DVD MENU dVd MENU	This button opens a menu that allows settings to be made for title-menu and chapter-menu display styles.
RECORDER RECoRdER	This buttons opens a RECORDER MENU screen containing two different pages of parameters. The RECORDER MENU (1/2) screen allows settings to be made for the chapter creation method and the encoding of audio and video. The RECORDER MENU (2/2) screen allows the settings required for recording to be made.
REMOTE REMoTE	This button opens a menu that allows settings to be made for remote operations via the DVD recorder's FOOT SW, RS-232C or DV terminal. In addition, this menu also allows indication of whether or not the REC CONTROL panel is to be displayed.
DISPLAY dISPLAY	This button opens a menu that allows settings to be made for the display of status and alarm information on the TV or monitor screen.
CLOCK ADJUST CLoCK	This button opens a menu that allows setting of the internal clock's date and time.
NETWORK NETWoRK	This button opens a menu that allows network settings to be made for FOR SERVICE terminal usage.
EXIT EXIT	This button is selected to return to the normal screen display.

DISC MENU Screen

The following table identifies and describes the parameters that may be set using the DISC MENU screen.
Top half   : Appearance on monitor screen
Bottom half : Appearance on LCD display
[   ]   : Default setting

Parameter	Possible settings	Description
FINALIZE FINAL	[CANCEL] EXECUTE [CAN] EXE	This parameter indicates whether or not the recorded disc is to be finalized. If a disc recorded using this DVD recorder is to be played on a DVD player, it must first be finalized. Once finalizing has been carried out, no addition recordings can be made on the disc. **CANCEL** : Finalizing is not to be carried out. **EXECUTE** : Finalizing is to be carried out. * A maximum of 20 minutes will be required to complete finalizing.
CANCEL DISC FINALIZATION CAN FIN	[CANCEL] EXECUTE [CAN] EXE	Select whether to cancel the finalization of a finalized DVD-RW. To add a recording to a finalized DVD-RW set to EXECUTE. A DVD-RW finalized on another machine cannot be canceled. **CANCEL** : Do not cancel the finalization. **EXECUTE** : Cancel the finalization. The TOP MENU created during finalization is deleted.

AUTO FINALIZE
AFINAL
	[OFF]
	ON
	
	[oFF]
	oN
		For selecting whether to finalize automatically when ejecting the recorded disc using the OPEN/CLOSE button.
		OFF : Do not finalize
		ON : Finalize
		            * Finalization processes may take up to 20 minutes to complete.
		            * The disc will be ejected without being finalized if the EXIT item on the Title Menu Edit screen is selected.

AUTO CANCEL DISC FINALIZ. ACAN FI	[OFF] ON [oFF] oN	For selecting whether to cancel finalization automatically when a finalized DVD-RW disc is inserted. Set this to ON when recording additional data to a finalized DVD-RW disc. Cancellation is not possible for DVD-RW discs that are finalized using other devices. **OFF** : Do not cancel finalization **ON** : Cancel finalization The Top Menu that has been created during the finalization process will also be erased.
DISC ERASE (QUICK) q ERASE	[CANCEL] EXECUTE [CAN] EXE	Select whether to do a quick erase on a DVD-RW. A quick erase only deletes the DVD-RW disc control area. The time required is shorter than a full erase, and the disc data is deleted. **CANCEL** : Do not do a quick erase. **EXECUTE** : Do a quick erase. The disc can be newly recorded from the beginning.
DISC ERASE (FULL) F ERASE	[CANCEL] EXECUTE [CAN] EXE	Select whether to carry out a full erase on a DVD-RW. All areas of a DVD-RW disc are deleted. If a disc is to be used repeatedly delete using this item. **CANCEL** : Do not do a full erase. **EXECUTE** : Do a full erase. The disc can be newly recorded from the beginning.
LAST TITLE ERASE TERASE	[CANCEL] EXECUTE [CAN] EXE	For selecting whether to erase the last title. This can only be selected when an unfinalized DVD-R/DVD-RW disc recorded using this unit is inserted. **CANCEL** : Do not erase. **EXECUTE** : The last title will be erased. In the case of DVD-R, erasing a title will not create more disc space.
MENU MENU		This button is used to return to the Setup Menu screen.

Setup Menu

The following table identifies and describes the parameters that may be set using the INPUT SELECT MENU screen.
Top half   : Appearance on monitor screen
Bottom half : Appearance on LCD display
[ ]   : Default setting

Parameter	Possible settings	Description
INPUT SELECT INPUT	[LINE] Y/C DV [LINE] YC dV	This parameter is used to select the audio and video input signals. LINE : The composite video signal from the VIDEO LINE IN terminal and the analog audio signals from the AUDIO IN terminals are to be used. Y/C : The YC separate signal from the Y/C IN terminal and the analog audio signals from the AUDIO IN terminals are to be used. DV : The digital video and audio signals from the DV IN/OUT terminal are to be used. * The front-panel indicator corresponding to the type of input signal selected on this screen will light up or start to flash. Setting of this parameter will not be possible when REMOTE SELECT from the REMOTE MENU screen has been set to DV(SLAVE), or DV(TRIGGER). DV signals will be used for input at these times
MENU MENU		This button is used to return to the Setup Menu screen.

SYSTEM MENU Screen

The following table identifies and describes the parameters that may be set using the SYSTEM MENU screen.
Top half   : Appearance on monitor screen
Bottom half : Appearance on LCD display
[ ]   : Default setting

SYSTEM MENU (1/2) screen

Parameter	Possible settings	Description
SETUP SETUP	OFF [ON] oFF [oN]	This parameter is used to indicate whether or not a setup signal is to be added to analog video (i.e., composite or YC separate) during the recording process. The actual setting depends on whether the input analog signal contains a setup signal. (NTSC only) OFF : This setting should be made when the input analog signal does not contain a setup signal. ON : This setting should be made when the input analog signal contains a setup signal.
TEST SIGNAL TEST S	[OFF] ON [oFF] oN	This parameter is used to indicate whether or not the color bar output by the DVD recorder's internal signal generator is to be displayed. OFF : The color bar is not displayed and video from the VIDEO LINE IN terminal is output to the monitor. ON : The color bar is displayed. Use this setting when the color bar is to be recorded.
FACTORY SETTING FACTRY	[CANCEL] EXECUTE [CAN] EXE	This parameter is used to indicate whether or not all setup menu parameters are to be returned to their default settings. CANCEL : Default settings are not to be restored. EXECUTE : Default settings are to be restored. However, the current set values for the TV TYPE item on the SYSTEM MENU (2/2) screen will not be erased. — Note — The system must be restarted after this parameter is changed.
KEYBOARD STYLE KboARd	[ENGLISH] FRENCH ITALIAN GERMAN SPANISH JAPANESE [ENG] FRN ITL GER ESP JPN	This parameter is set when using a USB keyboard, and its purpose is to indicate the keyboard's layout (or language) as one of the following. ENGLISH FRENCH ITALIAN GERMAN SPANISH JAPANESE — Note — The system must be restarted after this parameter is changed.

Parameter	Possible settings	Description
PLAY BACK &232C TYPE 232C	[DVD] VTR [dVd] VTR	For selecting whether to set DVD playback actions and display of a title's elapsed time /index number to the VTR or DVD mode. Actions via RS-232C control will vary accordingly with this setting. Please see the following table for details.

Action	When Set to VTR	When Set to DVD
■Playback Playback till end point of the last title.	Searches and stops at the point that is 3 seconds prior to the end point.	Searches and stops at the beginning of the last title.
Index Search	Accepts index of points that exist in the disc.	Accepts index of points that exist in the current title.
STOP Operation in Stop Mode (Unfinalized Discs)	Resume data will not be cleared.	Resume data will be cleared. Searches and stops at the beginning of the last title.
■LCD / Onscreen Elapsed Time Display of a Title	Displays total time as accumulated from the first title.	Displays elapsed time of the current title.
Index Value Display	Displays total number as accumulated from the first title. [Range: 0 - 9801]	Displays index value of the current title. [Range: 0 - 99]

Parameter	Possible settings	Description
TOTAL RECORDING TIME —	— —	This button displays the total time for recording and erasing operations. (xHour xxMin)
➡ SYS2		This button is used to display the SYSTEM MENU (2/2) screen.
MENU MENU		This button is used to return to the Setup Menu screen.

Setup Menu

<div style="display:flex">

SYSTEM MENU (2/2) screen

Parameter	Possible settings	Description
AC IN MODE	[POWER ON] POWER OFF	For selecting whether to start up in the Operate ON or OFF mode when the MAIN POWER switch at the rear of this unit is turned ON.
AC	[oN] oFF	**POWER ON** : Start up in Operate ON mode **POWER OFF** : Start up in Operate OFF mode
SYNC SYSTEM	[AUTO] INTERNAL	For selecting the synchronization method for this unit. **AUTO** : Switches automatically between internal and external synchronization
SYNC	[AUTo] INTE	**INTERNAL** : Set to internal synchronization
TV TYPE	[NTSC] PAL	For selecting the signal system during recording and playback. **NTSC** : When recording/playing back in the NTSC mode **PAL** : When recording/playing back in the PAL mode
TV	[NTSC] PAL	This unit will automatically be rebooted when this setting is changed. Upon reboot, all menu items except the date/time data and hour meter will be restored to their default values.
VBID OUT (WIDE)	[OFF] ON	For selecting whether to add the JCPX-1204 standard-compliant VBID (Video Blanking ID) signals to the analog video signals output from this unit. (NTSC only) **OFF** : Do not add VBID signals (Copyguard signals will be added.)
Vbid	[oFF] oN	**ON** : Add VBID signals
Y/C TERMINAL MODE	[S1] S2	This parameter is used to set the specification for the DVD recorder's VIDEO Y/C INPUT and OUTPUT terminal in order to enable the recording of wide-screen discrimination signals. **S1** : S1 terminal mode is to be adopted. A discrimination signal for normal video with a 4:3 aspect ratio and squeezed video is to be recorded.
Y C TM	[S1] S2	**S2** : S2 terminal mode is to be adopted. A discrimination signal for normal video with a 4:3 aspect ratio, squeezed video, and letterbox video is to be recorded. Squeezed video : 16:9 wide-screen content with the left and right sides compressed for normal aspect screens. Letterbox video : Content with the top and bottom of the screen blackened out.
OPERATION LOCK	[OFF] ON	For selecting whether to enable operation lock. **OFF** : Operation lock turns OFF and all operation buttons on the main unit are enabled **ON** : Operation lock turns ON and operation buttons on the main unit are disabled
oPLoCK	[oFF] oN	However, the CLOSE/OPEN, SET UP, SET and cursor buttons will not be disabled.
BACK		Returns to the SYSTEM MENU (1/2) Screen
bACK		

DVD MENU Screen

The following table identifies and describes the parameters that may be set using the DVD MENU screen.
Top half : Appearance on monitor screen
Bottom half : Appearance on LCD display
[ ] : Default setting

Parameter	Possible settings	Description
EDIT MENU	ENABLE [DISABLE]	This parameter is used to indicate whether or not a screen for editing the title and chapter menus is to be displayed when title closing or finalizing is performed. **ENABLE** : The menu editing screen is to be displayed. Upon title closing, the THUMBNAIL EDIT screen will be displayed for the corresponding chapter menu. (☞ Page 43)
EdIT	oN [oFF]	Upon finalizing, the TITLE MENU EDIT screen will be displayed for the title menu. (☞ Page 49) **DISABLE** : The menu editing screen is not to be displayed.
STYLE	[TYPE1] TYPE2 TYPE3 TYPE4 TYPE5 TYPE6 TYPE7 TYPE8 BACK	This parameter is used to select one of the eight different display styles that have been provided for title and chapter menus. (☞ Page 35) **BACK** : returns to the DVD MENU screen. Default settings TYPE / TITLE PATTERN / CHAPTER PATTERN 1 / 1 / 1 2 / 2 / 2 3 / 3 / 3
STYLE	[T1] T2 T3 T4 T5 T6 T7 T8 bACK	4 / 4 / 4 5 / 5 / 5 6 / 1 / 1 7 / 2 / 2 8 / 3 / 3
TITLE PATTERN	[1] to 6 BACK	This parameter is used to open the TITLE PATTERN screen. That screen can then be used to select a display pattern for the title menu. **BACK** : Returns to the DVD MENU screen.
TITL P	[1] to 6 bACK	* 6 cannot be selected when setting for factory shipment.
CHAPTER PATTERN	[1] to 6 BACK	This parameter is used to open the CHAPTER PATTERN screen. That screen can then be used to select a display pattern for the chapter menus. **BACK** : Returns to the DVD MENU screen.
CHAP P	[1] to 6 bACK	* 6 cannot be selected when setting for factory shipment.
THUMBNAIL FORM	[NORMAL] V-CUT H-CUT V+H CUT	Thumbnail creation method for chapter and title menus during wide-signal recording is selected. **NORMAL** : The input signal is to be converted into thumbnails without modification. If the input video has an aspect ratio of 4:3, the corresponding thumbnails are also to have this aspect ratio. **V-CUT** : In this case, the top and bottom of the video content is to be removed to form thumbnails.
THUMb	[NoR] VCUT HCUT V+H	**H-CUT** : In this case, the left and right of the video content is to be removed to form thumbnails. (SQUEEZE) **V+H CUT** : In this case, the top, bottom, left, and right of the video content is to be removed to form thumbnails. (LETTER BOX)

</div>

Setup Menu

The following table identifies and describes the parameters that may be set using the RECORDER screen.
Top half   : Appearance on monitor screen
Bottom half   : Appearance on LCD display
[ ]   : Default setting

RECORDER MENU (1/2) screen

Parameter	Possible settings	Description
DVD MENU TYPE	TOP+MENU [TOP] NONE	Select whether to create a TOP MENU or MENU in a completed disc (finalized disc). This is set before inserting a disc or when a blank disc is inserted. **TOP+MENU** : When finalizing a TOP MENU is created. When closing a title a MENU is created.
MENU T	T+M [ToP] NoNE	**TOP** : When finalizing a TOP MENU is created. When closing a title a MENU is not created. **NONE** : Neither a TOP MENU nor a MENU is created. The disc will be without a menu.
DISC IN ACTION	MENU [TITLE]	Select the action when a completed disc (finalized disc) is inserted into this machine or a DVD player. This is set before inserting a disc or when a blank disc is inserted.
dISC IN	MENU [TITL]	**MENU** : Displays the TOP MENU (title menu) **TITLE** : Starts to playback TITLE1
TITLE END	MENU REPEAT STOP [NEXT TITLE]	Select the action to be taken when playback within a title of a completed disc (finalized disc) is finished. This is set before inserting a disc or when a blank disc is inserted. **MENU** : Display the TOP MENU (title menu) **REPEAT** : Repeat playback within a title. **STOP** : Enter stop mode. The TOP MENU is not displayed.
TI ENd	MENU REPT SToP [NEXT]	**NEXT TITLE** : Start to playback the next title. In the case of playback of the final title, start to playback the first title.
MENU		This button is used to return to the Setup Menu screen.
MENU		

Note
Settings on this page will change accordingly with the disc information when a recorded disc is loaded.

RECORDER MENU (1/2) screen

Parameter	Possible settings	Description
CHAPTER CREATION	[MANUAL] AUTO	This parameter is used to indicate whether or not chapters are to be created automatically at set intervals while recording. **MANUAL** : Chapters are not to be created automatically. Use this setting when chapters are to be set manually.
CHAPTR	[MANU] AUTo	**AUTO** : Chapters are to be created at set intervals during recording. The SET INTERVAL parameter below is used to specify this interval.
SET INTERVAL	Every01min ⟨ [Every05min] ⟨ Every59min	This parameter becomes active whenever CHAPTER CREATION has been set to AUTO. It is used to set the time interval for automatic chapter creation and is set in units of minutes.
INTERV	1 ⟨ [5] ⟨ 59	
AUTO CHAPTER (REC PAUSE)	OFF [ON]	Select whether to automatically insert a chapter mark during a recording pause. **OFF** : Do not insert a chapter mark. **ON** : Insert a chapter mark.
ATCHAP	oFF [oN]	
ENCODE QUALITY	UXP (NOT DVD VIDEO) XP [SP] LP EP DLP DEP	For setting the recording quality. Recording quality and time vary with the set values as follows: (When using a 4.7 GB disc)
qUALTY	UXP XP [SP] LP EP dLP dEP	* Only UXP, XP or SP can be selected when the AUDIO ENCODE item is set to LPCM.
AUDIO ENCODE	NO AUDIO LPCM [DOLBY DIGITAL] MPEG	This parameter is used to set the encoding format for audio data. **NO AUDIO** : Do not record audio sound. The recording time will be longer as sound recording is not performed. **LPCM** : Linear PCM encoding (Non-compressed) **DOLBY DIGITAL** : Dolby AC3 encoding (Compressed) **MPEG** : MPEG encoding (Compressed)
A ENC	oFF LPCM [dd] MPEG	—Notes— ● Only UXP, XP or SP on the ENCODE QUALITY item can be selected when the AUDIO QUALITY item is set to LPCM. ● The MPEG set values can be displayed and selected when the TV TYPE item on the SYSTEM MENU (2/2) screen is set to PAL.

Encoding quality table:

Set Value	Recording Time	Picture Quality	Upload Size
UXP (NOT DVD VIDEO)	40 mins	High	D1: NTSC = 720 x 480 dots PAL = 720 x 576 dots
XP	60 mins	↑	
SP	120 mins	Normal	
LP	180 mins		
EP	240 mins	↓	
DLP	360 mins	Low	HalfD1: NTSC = 352 x 480 dots
DEP	480 mins	↓	PAL = 352 x 576 dots

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Setup Menu

Parameter	Possible settings	Description
➡		This button is used to display the RECORDER MENU (2/2) screen.
REC2		
MENU		This button is used to return to the Setup MENU screen.
MENU		

RECORDER MENU (2/2) screen

Parameter	Possible settings	Description
AUDIO CHANNEL (DV)	[1,2ch → 1,2ch] 3,4ch → 1,2ch	This parameter is to be set when recording an audio signal from the DV IN/OUT terminal. Specifically, it indicates whether the signals from channels 1 and 2 or from channels 3 and 4 are to be recorded. (Only available for 32 kHz)
dV CH	[1 2] 3 4	**1,2ch → 1,2ch** : Channels 1 and 2 are to be recorded. **3,4ch → 3,4ch** : Channels 3 and 4 are to be recorded.
AUDIO REC VOLUME MODE	[BOTH] INDEPENDENCE	This parameter is used to select the method for adjustment of audio recording levels. Specifically, both channels can be adjusted while maintaining the same level, or each channel can be adjusted independently.
VRModE	[boTH] INdE	**BOTH** : Both channels are to be adjusted while maintaining the same level. **INDEPENDENCE** : Both channels are to be adjusted independently.
ASPECT	[AUTO] 4:3 LETTER SQUEEZE	The screen aspect distinction signal of recorded video is selected. **AUTO** : Aspect distinction signal is recorded according to the screen aspect ratio of the input video. **4:3** : Constantly records aspect distinction signal of 4:3 aspect ratio. **LETTER** : Constantly records aspect distinction signal of letterbox video. (Content at the top and bottom of the screen is blackened out.)
ASPECT	[AUTo] 4 3 LETT SqUE	**SQUEEZE** : Constantly records aspect distinction signal of squeezed video. (Content at the left and right of the screen is compressed.) — Note — Setting this item to LETTER or SQUEEZE will not change the output image during recording and is reflected only in the recording to the disc.
INDEX CREATION	[MANUAL] AUTO	For selecting whether to insert indexes automatically at record start points and recording pause point. **MANUAL** : Index will not be automatically inserted. **AUTO** : Index automatically inserted.
INdEX	[MANU] AUTo	— Note — The writing of index at the recording pause point is valid when the AUTO CHAPTER (REC PAUSE) item is set to ON.
BACK		This button is used to return to the RECORDER MENU (1/2) screen.
bACK		

REMOTE MENU Screen

The following table identifies and describes the parameters that may be set using the REMOTE MENU screen.

Top half : Appearance on monitor screen
Bottom half : Appearance on LCD display
[ ] : Default setting

Parameter	Possible settings	Description
REMOTE SELECT	[OFF] DV(SLAVE) DV(TRIGGER)	This parameter is used to select a method for controlling external devices connected via the DV IN/OUT terminal). **OFF** : Control is not to be carried out via the DV IN/OUT terminal. This is the standard setting for normal operation.
REMoTE	[oFF] dVS dVT	**DV (SLAVE)** : This DVD recorder will become the slave device and will be controlled by the master device. **DV(TRIGGER)** : This setting is made when this DVD recorder is connected to a DV camera featuring a DV record triggering function, and it allows this DVD recorder to record video from the camera in response to operation of its trigger button.
REC CONTROL	[OFF] ON	This parameter is used to indicate whether or not the REC CONTROL panel is to be displayed on the monitor screen. **ON** : The REC CONTROL panel is to be displayed only when a recordable disc has been inserted and the DVD recorder is in Stop, Recording, or Recording Pause mode.
REC	[oFF] oN	**OFF** : The REC CONTROL panel not to be displayed.
FOOT SW1	[OFF] LOW EDGE HIGH EDGE LOW LEVEL	Set this item when connecting an external switch (foot switch, etc.) to the FOOT SW1 terminal. Set this unit to the Record Pause or Recording mode when using an external switch (foot switch, etc.) in the LOW EDGE or HIGH EDGE setting. **OFF** : Set to this when an external switch is not used
FSW1	[oFF] LE HE LL	**LOW EDGE** : Switch between recording and record pause actions using the low edge of external switch signals **HIGH EDGE** : Switch between recording and record pause actions using the high edge of external switch signals **LOW LEVEL** : Use the low level and high level of external switch signals for recording and record pause respectively
FOOT SW2	[OFF] LOW EDGE HIGH EDGE BOTH EDGE	Set this item when connecting an external switch (foot switch, etc.) to the FOOT SW2 terminal. **OFF** : Set to this when an external switch is not used **LOW EDGE** : Add chapter marks and indexes using the low edge of external switch signals
FSW2	[oFF] LE HE bE	**HIGH EDGE** : Add chapter marks and indexes using the high edge of external switch signals **BOTH EDGE** : Add chapter marks and indexes using the low and high edges of external switch signals
232C BAUDRATE	[9600] 19200	For setting the communication speed of the RS-232C terminal. **9600** : Communicate at a rate of 9600 bps **19200** : Communicate at a rate of 19200 bps
Bps	[96] 192	

Setup Menu

Parameter	Possible settings	Description
232C PROTOCOL TYPE	**[TYPE1]** **TYPE2** **TYPE3** **TYPE4** **TYPE5** **TYPE6** **TYPE7** **TYPE8**	Set this item according to the type of controller connected when performing remote control using the RS-232C terminal. **TYPE1** : Standard operation mode **TYPE2** : For customized use **TYPE3** ~ **TYPE8** : Spare
232C	**[T1]** **T2** **T3** **T4** **T5** **T6** **T7** **T8**	
MENU		This button is used to return to the Setup Menu screen.
MENU		

DISPLAY MENU Screen

The following table identifies and describes the parameters that may be set using the DISPLAY screen.
Top half   : Appearance on monitor screen
Bottom half : Appearance on LCD display
[ ]   : Default setting

Parameter	Possible settings	Description
DISPLAY	**OFF** **[ON]**	This parameter is used to indicate whether or not status and alarm information is to be displayed on the monitor screen. **OFF** : No such data is to be displayed on-screen. **ON** : Data is to be displayed on-screen.
dISPLY	**oFF** **[oN]**	When this parameter has been set to ON, the following parameters can be used to indicate which types of status information will be displayed
TITLE/CHAPTER/ INDEX	**[OFF]** **TITLE+CHAPTER** **INDEX+TITLE**	For selecting whether to display the title/chapter/index information of a DVD disc onscreen during recording or playback. **OFF** : Do not display onscreen **TITLE+CHAPTER** : Display title and chapter onscreen
TITLE	**[oFF]** **T+C** **I+T**	**INDEX+TITLE** : Display index and title onscreen These will not be displayed onscreen when the DISPLAY menu item is set to OFF.
RECORDER MODE	**[OFF]** **ON**	This parameter is used to indicate whether or not the DVD recorder's current status is to be displayed on-screen. **OFF** : The status is not to be displayed on-screen.
ModE	**[oFF]** **oN**	**ON** : The status is to be displayed on-screen. Note, however, that nothing will be displayed when OFF has been set for the DISPLAY parameter.
TIME/DATE	**[OFF]** **DATE** **TIME** **TIME+DATE**	This parameter is used to indicate whether or not the current date and/or time are to be displayed on-screen. **OFF** : No such information is to be displayed on-screen. **DATE** : Only the date is to be displayed. **TIME** : Only the time is to be displayed. **TIME+DATE** : Both date and time are to be displayed.
dATE	**[oFF]** **dATE** **TIME** **T+d**	● When the DVD recorder is stopped or recording, data from the internal clock is displayed. When playing a disc, the date and time of disc recording are displayed. ● Even if DATE, TIME, or DATE+TIME have been selected, nothing will be displayed when OFF has been set for the DISPLAY parameter.
REMAIN	**[OFF]** **ON**	This parameter is used to indicate whether or not the disc's remaining time (in minutes) is to be displayed on-screen. **OFF** : No such data is to be displayed on-screen. **ON** : This data is to be displayed on-screen. ● During recording, the remaining space available for recording is displayed (in minutes). During playback, the time remaining in the current title is displayed.
REMAIN	**[oFF]** **oN**	● Nothing will be displayed when OFF has been set for the DISPLAY parameter. — **Note** — The remaining space available for recording will depend on factors such as the number of titles recorded and the data encoding method; accordingly, this value should be treated as an estimate and not as an exact value.
DATE STYLE	**YY/MM/DD** **[MM/DD/YY]** **DD/MM/YY**	This parameter is used to select the display style for dates. **YY/MM/DD** : Dates are to be displayed in year, month, and day sequence. **MM/DD/YY** : Dates are to be displayed in month, day, and year sequence. **DD/MM/YY** : Dates are to be displayed in day, month, and year sequence.
dSTYLE	**YMd** **[MdY]** **dMY**	**Default Setting** : MM/DD/YY (NTSC) DD/MM/YY (PAL)
LCD	**[TITLE+CHAPTER]** **INDEX**	For selecting the DVD disc information to display (title/chapter/index) on the LCD during recording or playback. **TITLE+CHAPTER** : Display title and chapter on LCD
LCd	**[T+C]** **INd**	**INDEX** : Display index on LCD
MENU		This button is used to return to the Setup Menu screen.
MENU		

Setup Menu

CLOCK ADJUST MENU Screen

The following table identifies and describes the parameters that may be set using the CLOCK ADJUST MENU screen.
Top half : Appearance on monitor screen
Bottom half : Appearance on LCD display
[ ] : Default setting

Parameter	Possible settings	Description
DATE		This parameter is used to set the date.
dATE		
TIME		This parameter is used to set the time.
TIME		For more details regarding date and time settings, refer to page 24.
MENU		This button is used to return to the Setup Menu screen.
MENU		

NETWORK MENU Screen

The following table identifies and describes the parameters that may be set using the NETWORK MENU screen.
Top half : Appearance on monitor screen
Bottom half : Appearance on LCD display
[ ] : Default setting

Parameter	Possible settings	Description
HOST NAME	[bdx201m] CANCEL	This parameter is used to enter this DVD recorder's network name using a keyboard. The name cannot be input from this DVD recorder. (Names may be up to 20 characters in length. Alphanumerical characters and hyphen (-)) CANCEL : Cancel setting the host name.
HoST		
IP ADDRESS	[192.168.0.2]	This parameter is used to set the IP address. It is important to ensure that no two devices on a single network share the same IP address.
IP Add	[192]	
SUBNET MASK	[255.255.255.0]	This parameter is used to set the subnet mask. Connected DVD recorders should have the same network setting.
SUbNET	[255]	
DEFAULT GATEWAY	[192.168.0.254]	This parameter is used to set the gateway address. Connected DVD recorders should have the same address.
GATE	[192]	
MENU		This button is used to return to the Setup Menu screen.
MENU		

* The IP ADDRESS SETTING item cannot be selected.

Others

Easymenu: Freeware for Editing Menu Templates

The freeware application Easymenu can be used to create original DVD menus on your PC.
Menu templates created with this application can then be transferred to this DVD recorder using a network cable, thus allowing you to make imaginative and creative DVDs with the minimum of effort.
Easymenu can be downloaded from the following web page. Please refer to the software manual for details regarding usage and precautions.
http://www.jvc-victor.co.jp/english/pro/prodv/

Create menu patterns on your PC   Transfer the patterns via a network

■ **Main Specifications (Please refer to the above-mentioned home page for the most up-to-date information.)**
OS : Windows XP
Properties set : Thumbnail number, size, and position; background image (per page), and chapter comments.
Thumbnail highlighting format and color; navigation button design and layout.
Readable image files : BMP and JPEG
Layout size : 720 × 480 (NTSC)
720 × 576 (PAL)

Importing a Template Using "EasyMenu"

THUMBNAIL EDIT START screen
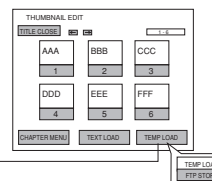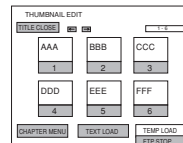
In stop mode, the template can always be imported from the EasyMenu software.
In addition, by using the thumbnail edit start screen, the import is also possible with the following procedures.

1. **Select the TEMP LOAD item on the thumbnail edit start screen, and press the SET button.**
● Below the TEMP LOAD item "FTP STOP" is displayed.

■ In this state it is possible to import a template using the "EasyMenu" menu template edit software.

2. **When importing the template is finished, press the SET button and the "FTP STOP" display will disappear.**

Others

Changing the Signal System (NTSC / PAL)

This DVD recorder supports both the NTSC and PAL signal systems.
The signal system can be altered at the TV TYPE item on the SYSTEM(2/2) menu screen, or via the following procedure.
The signal system can be changed even when the monitor is not connected.
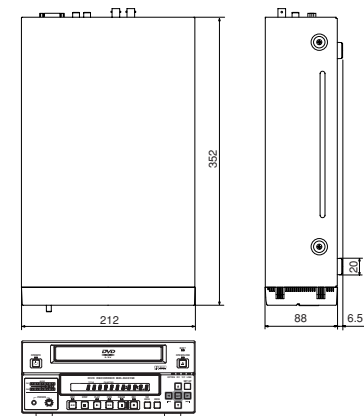
Operation Procedure

1. Set this unit to the Stop mode.

2. Press and hold the SETUP and STOP buttons simultaneously for approximately 3 seconds.

● This changes the signal system. When this is done, the unit will turn off automatically and rebooted.

This product uses partial third-party software.
For information concerning the software used, login via FTP by inputting the following into the unit and view the readme.txt file:
User: anonymous
Password: None
(If the IP address of the unit is set to 192.168.0.2, FTP connection can be established by entering ftp://196.168.0.2 in the address bar of Internet Explorer.)

Specifications

Recording format	:	DVD Video Version 1.1
Disc format	:	ISO9660-compatible UDF
Recordable media	:	DVD-R For General Version 2.0
		DVD-RW Version 1.1
Recording signals	:	Must conform to DVD Video Format

■ Video Signals

Line input	:	1.0 V(p-p), 75 Ω unbalanced
Y/C input	:	Y signal = 1.0 V(p-p), 75 Ω unbalanced
		C signal = 0.286 V(p-p), 75 Ω unbalanced (NTSC)
		C signal =0.3 V (p-p), 75 Ω unbalanced (PAL)
Line output	:	1.0 V(p-p), 75 Ω unbalanced
Y/C output	:	Y signal = 1.0 V(p-p), 75 Ω unbalanced
		C signal = 0.286 V(p-p), 75 Ω unbalanced (NTSC)
		C signal = 0.3 V(p-p), 75 Ω unbalanced (PAL)
Encoding format	:	ISO/IEC13818-2 (MPEG-2 video)
Quantization	:	8 bit
Sampling rate	:	13.5 MHz

■ Audio Signals

Line input	:	−8 dBs, 10 kΩ minimum, unbalanced
		+4 dBs, high impedance, unbalanced
Line output	:	−8 dBs, 1 kΩ minimum, unbalanced
Standard level	:	−20 dBFS
Dynamic range	:	85 dB
Recording format	:	LPCM / DOLBY DIGITAL / MPEG (PAL only)
Quantization	:	16 bit
Sampling rate	:	48 kHz
Number of channels:		2

■ DV Interface

I/O	:	IEEE1394

■ General

FOOT SWITCH terminal:		3.5 mm Monaural mini jack
		(OPEN/SHORT control
		Operation follows menu settings.)
Network terminal	:	RJ-45 (Category5),
		100 BASE-Tx
USB terminal	:	USB 1.1 × 2
Power supply	:	AC 100V to 240 V ∿, 50 Hz / 60 Hz
Power consumption :		1.0 A to 0.45 A
Weight	:	4.8 kg (device only)
Dimensions	:	212 mm (w) × 352 mm (d) × 88 mm (h)
		(not including feet and other protrusions)
Permissible operating temperature :		5 °C to 35 °C
Permissible operating humidity	:	20 % to 80 % RH
Permissible storage temperature	:	−20 °C to 60 °C
Permissible storage humidity	:	5 % to 80 % RH

■ Accessories

Instruction manual .... ×1
Power cord .... ×2
Ferrite core (for USB cable) .... ×1
(☞ Page 23)

■ **External Dimensions (Unit: mm)**

352

212

88   6.5

20

* Design and specifications are subject to change without notice.

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For Model BD-X201ME

Supplement for medical Use

MEDICAL ELECTRICAL EQUIPMENT needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in the Accompanying documents.

Portable and mobile RF communications equipment can affect MEDICAL ELECTRICAL EQUIPMENT.

WARNING : The use of ACCESSORIES, transducers and cables other than those specified,with the exception of transducers and cables sold by the manufacturer of the EQUIPMENT or SYSTEM as replacement parts for internal components ,may result in increase EMISSIONS or decreased IMMUNITY of the EQUIPMENT or SYSTEM.

Information of Cables and Accessories

Make sure to use specified Accessories as described below, in order to complied with IEC60601-1-2.

Note : Please refer to a part of "SAFETY PRECAUTIONS" (page Ⅲ) and "Accessories (page 75) in the Instructions.

WARNING : The EQUIPMENT or SYSTEM should not be used adjacent to or stacked with other equipment and that if adjacent or stacked use is necessary,the EQUIPMENT or SYSTEM should be observed to verify normal operation in the configuration in which it will be used.

WARNING : The use of ACCESSORY, transducer and cable with EQUIPMENT and SYSTEM other than those specified may result in increase EMISSIONS or decreased IMMUNITY of the EQUIPMENT or SYSTEM.

Guidance or Manufacturer's declaration-electromagnetic emissions

The Model **BD-X201ME** is intended for use in the electromagnetic environment specified below.
The customer or the user of the Model **BD-X201ME** should assure that it is used in such an environment.

Emission Test	Compliance	Electromagnetic environment-guidance
RF emissions CISPR11/EN55011	Group 1	The Model **BD-X201ME** uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR11/EN55011	Class B	The Model **BD-X201ME** is suitable for use in all establishments,including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC/EN 61000-3-2	Class A	
Voltage Fluctuations/ Flicker emissions IEC/EN 61000-3-3	Complies	

Guidance or Manufacturer's declaration-electromagnetic immunity

The Model **BD-X201ME** is intended for use in the electromagnetic environment specified below.
The customer or the user of the Model **BD-X201ME** should assure that it is used in such an environment.

Immunity Test	IEC/EN 60601 Test Level	Compliance Level	Electromagnetic environment-guidance
Electrostatic discharges(ESD) IEC/EN 61000-4-2	+/- 6 kV:Contact +/- 8 kV:Air	+/- 6 kV:Contact +/- 8 kV:Air	Floor should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast Transients/burst IEC/EN 61000-4-4	+/- 2 kV:AC mains +/- 1 kV:Signal lines	+/- 2 kV:AC mains +/- 1 kV:Signal lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC/EN 61000-4-5	+/- 2 kV :Common mode +/- 1 kV :Differential mode	+/- 2 kV :Common mode +/- 1 kV :Differential mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC/EN 61000-4-11	<5 % Ut (>95 % dip in 100 V and 240 V) : for 0.5 cycle 40 % Ut (60 % dip in 100 V and 240 V) : for 5 cycles 70 % Ut (30 % dip in 100 V and 240 V) : for 25 cycles <5 % Ut (>95 % dip in 100 V and 240 V) : for 5 s	<5 % Ut (>95 % dip in 100 V and 240 V) : for 0.5 cycle 40 % Ut (60 % dip in 100 V and 240 V) : for 5 cycles 70 % Ut (30 % dip in 100 V and 240 V) : for 25 cycles <5 % Ut (>95 % dip in 100 V and 240 V) : for 5 s	Mains power quality should be that of a typical commercial or hospital enviroment. If the user of the Model **BD-X201ME** requires continued operation during power mains interruptions, it is recommended that the Model **BD-X201ME** be powered from an uninterruptible power supply or a battery.
Power frequency (50 Hz/60 Hz) Magnetic Field IEC/EN 61000-4-8	3 A/m	3 A/m	If image distortion occurs, it may be necessary to position the Model **BD-X201ME** further from sources of power frequency magnetic fields or to install magnetic shielding. The power frequency magnetic field should be measured in the intended installation location to assure that it is sufficiently low.

Note : Ut is the nominal a.c. mains voltage.

Guidance or Manufacturer's declaration-electromagnetic immunity

The Model **BD-X201ME** is intended for use in the electromagnetic environment specified below.
The customer or the user of the Model **BD-X201ME** should assure that it is used in such an environment.

Immunity Test	IEC/EN 60601 Test Level	Compliance Level	Electromagnetic environment-guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the Model **BD-X201ME**, including cables than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance**
RF Common mode/ Conducted Susceptibility IEC/EN 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	$d = 1.2\,\sqrt{P}$
Radiated RF Electromagnetic Fields IEC/EN 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	$d = 1.2\,\sqrt{P}$: 80 MHz to 800 MHz $d = 2.3\,\sqrt{P}$: 800 MHz to 2.5 GHz
			Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,[a] should be less than the compliance level in each frequency range. [b] Interference may occur in the vicinity of equipment marked with the following symbol: (((•)))

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Model **BD-X201ME** is used exceeds the applicable RF compliance level above, the Model **BD-X201ME** should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Model **BD-X201ME**.

[b] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Recommended separation distance between portable and mobile RF communications equipment and the Model BD-X201ME

The Model **BD-X201ME** is intended for use in the electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Model **BD-X201ME** can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Model **BD-X201ME** as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter	separation distance according to frequency of transmitter m		
W	150 kHz to 80 MHz $d = 1.2\,\sqrt{P}$	80 MHz to 800 MHz $d = 1.2\,\sqrt{P}$	800 MHz to 2.5 GHz $d = 2.3\,\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watt (W) according to the transmitter manufacturer.
NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

LLT0090-001A
(BD-X201ME)

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