DVD733K DVD733K /691 /781





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COMPACT

DIGITAL

# Service Manual

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<sup>(B)</sup> 3122 785 11230







### 1. Technical Specifications

### **S**pecifications

PLAYBACK SYSTEM			CONNECTIONS	
DVD Video			Y Output	Cinch (green)
Video CD & SVCD			Pb/Cb Output	Cinch (blue)
CD (CD-Recordable and CD	D-Rewritable)		Pr/Cr Output	Cinch (red)
DVD+RW			S-Video Output	Mini DIN, 4 pins
MP3			Video Output	Cinch (yellow)
			Audio L+R output	Cinch (white/red)
OPTICAL READOUT S	YSTEM		Subwoofer output	Cinch (black)
Lasertype	Semiconductor AlG	aAs	Digital Output	I coaxial, I optical
Numerical Aperture				IEC736 IOT CODA / LFCM IEC1927 for MEEC1/2, Dalby Digital and DTS
Mayolongth	650 pm (DVD)		Haadahana	63 mm lack
* vavelengen	780 nm (VCD/CD)		Microphone	$2 \times 6.3$ mm lack
DVD DISC FORMAT			CABINET	
Medium	Optical Disc		Dimensions (w $\times$ h $\times$ d)	435 x 92 x 320 mm
Diameter	12cm (8cm)		Weight	Approximately 4 Kg
Playing time	One layer	2.15 h*		
(12cm)	Dual layer	4 h*	GENERAL FUNCTION	NALITY
	Iwo side	4.30 h*	Stop / Play / Pause	
	Single layer	0.1.*	Fast Forward / Backward	
	Iwo side	8 h*	Lime Search	
	Dual layer		Step Forward / Backward	
			Slow Motion	-
	10 -		I Itie / Chapter / Irack Selec	
Signal bandling	Components		Repeat (Chapter / Title / All	I) or (Track ( All)
Digital Compression	MPEC2 for DVD			I) OF (TRACK / All)
Digital Compression	MPEG1 for VCD		Shuffle	
			Scan	
TV STANDARD	(PAL/50Hz) (NTSC/60Hz)		New enhanced user graphic	cal interface
Number of lines	625	525	Perfect Still with digital mult	i-tap filter
Playback	Multistandard	(PAL/NTSC)	Zoom (xl.33, x2, x4) with p	victure enhancement
		· · · ·	Smart Picture for convenier	nt personal color setting
DVD			NTSC/PAL Conversion	
Horizontal Resolution	720 pixels	720 pixels	Screen Saver (Dim 75% afte	er 15 minutes)
Vertical Resolution	576 lines	480 lines	3D Sound (TruSurround)	
			Virtual Jog Shuttle	
VCD	252 pixels	252 pixels	Audio and video bit rate inc	dicator
Vertical Resolution	288 lines	240 lines		Y
vertical Resolution 266 lines 240 lines		Multi-angle Selection	•	
VIDEO PERFORMANCI	E		Audio Selection (one out o	f maximum eight languages)
Video output	1 Vpp into 75 ohm		Subtitles Selection (one out	t of maximum 32 languages)
S-Video output	Y: 1 Vpp into 75 ohr	n	Aspect Ratio conversion (1	6:9, 4:3 Letterbox, 4:3 Pan Scan)
	C: 0.3 Vpp into 75 c	hm	Parental Control and Child	Lock
Component video output	Y: 1 Vpp into 75 ohr	n	Disc Menu support (Title M	1enu and Access Control)
	Рв/Св Pr/Cr: 0.7 Vpp	o into 75 ohm	Resume (5 discs) after stop	/ standby
Black Level Shift	On/Off		Programming Titles/chapter	s with Favorite Track Selection
Video Shift	Left/Right			
AUDIO FORMAT			Playback Control for VCD 2	
Digital	MPEG	Compressed Digital	Child Lock	
0	DTS/Dolby Digital		Resume (5 discs) after stop	/ standby
	PCM	16, 20, 24 bits	Programming Tracks with Fa	avorite Track Selection
		fs, 44.1, 48, 96 kHz	0 0	
Analog Sound Stereo			AUDIO CD FUNCTIO	NALITY
Dolby Pro Logic downmix fro	om Dolby Digital multi	channel sound	Time Display (Total / Track /	/ Remaining Track Time)
3D Sound (TruSurround) for	virtual 5.1 channel sou	und on 2 speakers	Full audio functionality with	remote control
	_		Programming with Favorite	Track Selection
AUDIO PERFORMANC	E			×
DA Converter	∠4 DITS fc 94 L/H→		Time Display (Track)	T
	15 70 KMZ fc 48 VH-	コ ロム - ココ Kロム 4 Hz - 22 kHz	Album and Track Solartion	
Video CD	13 TO NI IZ fc 44 1 レロー	4 Hz - 20 kHz	Repeat (Disc / Album / Trac	-6)
CD	fs 44.1 kHz	4 Hz - 20 kHz	Nepear (Disc / Album / Ifac	n)
Signal-Noise (1kHz)	13 T.I NTZ	100 dB	KARAOKE FUNCTION	NALITY
Dynamic Range (1kHz)		97 dB	2 microphone inputs	· · · ·
Crosstalk (1kHz)		110 dB	Echo control	
Distortion and Noise (1kHz)		88 dB	Key control	
MPEG MP3		MPEG Audio L3	Vocal Cancel/Fader	
Headphone	30mW at 32 Ohm	oad,	Mode Selection for VCD ar	nd DVD
	headphone imp. 8-2	k Ohm		

\* typical playing time for movie with 2 spoken languages and 3 subtitle languages

Specifications subject to change without prior notice

(NL

(ESD).

verminderen

apparaat.

 $\bigcirc$ 

ditzelfde potentiaal.

2.

WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn

gevoelig voor elektrostatische ontladingen

Onzorgvuldig behandelen tijdens reparatie

Zorg ervoor dat u tijdens reparatie via een

hetzelfde potentiaal als de massa van het

polsband met weerstand verbonden bent met

Houd componenten en hulpmiddelen ook op

**AVVERTIMENTO** 

La loro longevita potrebbe essere fortemente

ridatta in caso di non osservazione della piu

Durante le riparazioni occorre quindi essere

collegato allo stesso potenziale che quello

della massa dell'apparecchio tramite un

Assicurarsi che i componenti e anche gli

utensili con quali si lavora siano anche a

grande cauzione alla loro manipolazione.

Tutti IC e parecchi semi-conduttori sono

sensibili alle scariche statiche (ESD).

kan de levensduur drastisch doen

### Warnings And Laser Safety Instructions 2.



### WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.

Keep components and tools also at this potential.



### ATTENTION

Tous les IC et beaucoup d'autres semiconducteurs sont sensibles aux décharges statiques (ESD)

Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise a leur manipulation.

Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.

Veiller a ce que les composants ainsi que les outils que l'on utilise soient également a ce potentiel.

### (GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.



Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt terug gebracht en dat onderdelen, identiek aan de gespecifieerde worden toegepast.







Alle IC und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD)

Unsorgfältige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern. Sorgen sie dafür, das Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.

Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerats darf nicht verandert werden Fur Reparaturen sind Original-Ersatzteile zu verwenden.

braccialetto a resistenza.

questo potenziale.

 $(\mathbf{I})$ 

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati pezzi di ricambiago idetici a quelli specificati.

Les normes de sécurité exigent que l'appareil soit remis a l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

### SHOCK, FIRE HAZARD SERVICE TEST:

**CAUTION:** After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom,

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before return to user/customer.

Ref.UL Standard NO.1492.

### NOTE ON SAFETY:

Symbol  $\bf{A}$ : Fire or electrical shock hazard. Only original parts should be used to replace any part with symbol  $\bf{A}$ Any other component substitution(other than original type), may increase risk or fire or electrical shock hazard.

### LASER SAFETY

This unit employs a laser. Only a qualified service person should remove the cover or attempt to service this device, due to possible eye injury.

### LASER DEVICE UNIT

Type: Wave length: SemiconductorlaserGaAlAs 650 nm (DVD) 780 nm (VCD/CD) 7 mW (DVD) 10 mW (VCD/CD) 60 degree

Beam divergence:

Output Power:



### USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURE OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

### AVOID DIRECT EXPOSURE TO BEAM

### WARNING

The use of optical instruments with this product will increase eye hazard. Repair handling should take place as much as possible with a disc loaded inside the player

### WARNING LOCATION: INSIDE ON LASER COVERSHIELD

CAUTION VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AVO ID EXPOSURE TO BEAM ADVARSEL SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING UNDGÅ UDSÆTTELSE FOR STRÅLING ADVARSEL SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN VARNING SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD BETRAKTA EJ STRÅLEN VARO! AVATT AESSA OLET ALTTIINA NÄKYVÄLLE JA NÄKYMÄTT ÖMÄLLE LASER SÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN VORSICHT SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETSEN DANGER VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AVO ID DIRECT EXPOSURE TO BEAM ATTENTION RAYO NNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE EXPOSITION DANGEREUSE AU FAISCEAU

### Warning for powersupply on position 1005

The primary side of the powersupply including the heatsink carries live mains voltage when the player is connected to the mains even when the player is swiched off !

This primary area is not shielded so it is possible to touch copper tracks and/or components when servicing the player. Service personnel have to take precautions to prevent touching this area or components in this area .

The primary side of the powersupply has been indicated with a lightning stroke and a stripe-marked printed on the printed wiring board

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### 2.1 Notes

### 2.1.1 DVD-Module

For repair of the DVD-module SD3, the service manual 3122 785 11010 has to be used.

### 2.1.2 ComPair

For assistance with the repair process of the monoboard an electronic Fault finding guidance has been developed , this program is called ComPair.

This ComPair program is available on CDROM.

The Version of the CDROM for repair of the monoboard is V1.3 or higher and can be ordered with codenumber : 4822 727 21637.

This is an update CDROM , so when the COMPAIR CDROM is used for the first time , one has to install the ComPair ENGINE CDROM V1.2 first.

The V1.2 CDROM can be ordered with codenumber 4822 727 634 and has to registered after installation, the procedure for registration is explained in the help file of the

program and in the booklet from the CDROM. The cable to connect the monoboard with a PC can be ordered with codenumber 3122 785 90017.

All the hardware and software requirements of the systems necessary for working with ComPair is described on the CDROM.

2.

### Philips DVD Video Introduction

conforming to the universal DVD Video standard. The unique features on DVD Video, such as selection of sound track subtitle languages and different camera angles (again In addition to DVD Video discs, you will be able to play all Your Philips DVD Video player will play digital video discs depending on the disc), are all supported. Video CDs and Audio CDs.

### DVD Video

You will recognize DVD Video discs by the logo shown. Depending on the material on the disc (a movie, video clips, a drama series etc.) the disc may have one or more Titles.



### Video CD

COMPACT CONSTANT CONS You will recognize Video CDs by the logo hown

# Super Video CD (SVCD)

SVCDs are based on the SuperVCD IO Standard, referring to the Standard of Electronics Industry of the People's Republic of China.

### Audio CD

You will recognize Audio CDs by the logo shown. Audio CDs contain music tracks only

# MP3 (MPEG Audio Layer-3)

This player supports the MP3 format which contains compressed music tracks.

Only the first session of multisession discs is supported. Note:

### Unpacking

First check and identify the contents of your DVD Video You should have the following items. player package.

- DVD Video player Remote Control with batteries
  - - Audio cable Video cable
- Instructions for use
- If any item is damaged or missing, contact your retailer or Philips.

Seep the packaging material for future transportation.

### **Remote Control Battery** Installation

dsilgn∃

Insert batteries as indicated inside the battery compartment. Caution: Do not mix old and new batteries. Never mix different types of batteries (standard, alkaline, etc.).



# **Environmental Information**

and reused if disassembled by a specialized company. Please observe the local regulations regarding the disposal of packaging materials, exhausted batteries and old equipment Your system consists of materials which can be recycled •

# **Safety Information**

- Do not expose the system to excessive moisture, rain, sand, or heat sources.
- Place the player on a firm, flat surface. .
- Keep the player away from domestic heating equipment and direct sunlight.
- In a cabinet, allow about 2.5 cm (1 inch) of free space all •
- around the player for adequate ventilation. If the DVD Video player cannot read CDs/DVDs correctly. use a commonly available cleaning CD/DVD to clean the lens before taking the DVD Video player to be repaired. .
- Other cleaning methods may destroy the lens. Always keep the tray closed to avoid dust on the lens. suddenly moved from cold to warm surroundings. Playing a CD/DVD is not possible then. Leave the power on for The lens may cloud over when the DVD Video player is •
  - about one hour with no disc in the unit until normal playback is possible.

system

# **Cleaning Discs**

- Do not use solvents such as benzine, thinner, commercially When a disc becomes dirty clean it with a cleaning cloth. available cleaners, or anti-static spray intended for analog discs. Wipe the disc from the center out, in a straight line. • .
- E

# Functional Overview



# Caution: Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.

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0

DIGT ALADD OUT 

6 FUNCTIONAL OVERVIEW

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INTRODUCTION

3

3.

**Directions For Use** 

		Connecting to Optional Equipment Connecting to an amplifier equipped with two channel analog stereo or Dolby Surround	<ol> <li>Connect the Left and Right AUDIO OUT jacks of the DVD player to the audio left and right in jacks on your amplifiet. receiver or stereo system using the supplied audio cable (A).</li> <li>Connecting to an amplifier equipped with Audio/Video receiver equipped with Audio/Video receiver equipped with an Audio/Video receiver equipped with a</li> </ol>	<ul> <li>multi-channel decoder (Dolby Digital <sup>TM</sup>, MPEG 2 or DTS)</li> <li>1 Connect the player's digital audio out jack (optical G or coaxial F) to the corresponding digital audio in on your amplifier. Use an optional digital (optical G or coaxial F) audio cable</li> <li>2 You will need to activate the player's digital output (see</li> </ul>	"Personal Preferences"). <b>Digital Mutit-channel sound</b> The ignal mutit-channel sound an unit-channel Audio/ Video receiver that supports one or more of the audio/ Video receiver that supports one or more of the audio format supported by your DVD player (MPEG 2, Dolby format supported by your DVD player (MPEG 2, Dolby form
General Notes	<ul> <li>Depending on your TV and other equipment you wish to connect, there are various ways you could connect the pilyer. Use only one of the connections described below, lease refer to the manuals of your TV/VCR. Stereo System or other devices as necessary to make the best, connections.</li> <li>For better sound reproduction, connect the pilyer's audio out jacks for the audo in jacks of your amplifier receiver, stereo or audo/video equipment. See "Connecting to Optional Equipment.</li> <li>Mate sure the DVD pilyer is connected directly to the to the correct the pilyer's audio out jack to the TV to the correct video input the sure connect the pilyer's audio out jack to bother and the pilyer's audio out jack to bother a surface the pilyer'</li></ul>	the phono in jack of your audio system. - Do not connect your DVD player to the TV via your VCR. The DVD image could be distorted by the copy protection system. Connecting to a TV Make one of the following connections, depending on the capabilities of your existing equipment.	<ul> <li>Component Video (Pa/Ca Pa/Ca Y) connection</li> <li>Connect the Pn/Ca Pa/Ca Y WDEO OUT jacks on the DVD player to the convegording in jacks on the TV using an optional Pn/Ca Pa/Ca Y cable (Z).</li> <li>Connect the Left and Right AUDIO OUT jacks of the DVD player to the audio left/right in jacks on the TV (A).</li> </ul>	<ol> <li>S-Video (Y/C) connection</li> <li>Connect the Y/C S-VIDEO OUT jack on the DVD player to the S-Video in jack on the IV using an optional S-Video cable (Y).</li> <li>Connect the Left and Right AUDIO OUT jacks of the DVD player to the audio left/right in jacks on the TV (A).</li> </ol>	<ul> <li>CVBS connection</li> <li>Connect the (CVBS) VIDEO OUT jack on the DVD player to the video in jack on the TV using the video cable supplied (X).</li> <li>Connect the Left and Right AUDIO OUT jacks of the DVD player to the audio left/right in jacks on the TV (A).</li> </ul>
ųs	POWER Ó POWER Ó standby-on mode a standby-on mode - select numbered items in a menu DISPLAY	SYSTEM MENU SYSTEM MENU SYSTEM MENU - access or remove the player's menu - search forward* / go to the next chapter or track		AUDIO     - select an audio language     KARAOKE (∠)     - to switch ONVOFF karaoke mode     KEY     - changing key of vocal range	VOCAL - select various vocal support mode MODE - select between VCD/DVD karaoke disc
Remote Control	- go back to previous menu / to continue playback after play was stopped bisc MENU − access menu of a DVD disc	- (left/right/up/down) select an item in the menu <b>OK</b> - acknowledge menu selection - search backward* / go to a previous chapter or track	- starts playback - starts playback - starts playback - starts playback - starts playback - pause playback temporarily / - pause playback temporarily /	- repeat chapter, track, title, disc <b>REPEAT</b> (A-B) - repeat a specific segment SHUFFLE - play tracks in random order	- play the first 10 seconds of each track/chapter within a disc

# Preparation

3.

st Press and hold key for about two seconds

bass sound effect (e.g. explosions, the rumble of spaceships, etc.). Be sure to follow the instructions supplied with the 1 Connect the active subwoofer to the SUBWOOFER OUT audio out jack (C). The subwoofer reproduces just the low subwoofer



### Note-

- If the audio format of the digital output does not match the capabilities of your receiver, the receiver will produce a strong, Six Channel Digital Surround Sound via digital connection can only be obtained if your receiver has a Digital Multidistorted sound or no sound at all. channel decoder.
  - To see the selected audio format of the current DVD in the Status Window, press SYSTEM MENU.

# NTSC/PAL Settings

- You can switch the NTSC/PAL setting of the DVD player to setup modes. You may select either NTSC or PAL To change the DVD player setting to PAL or NTSC follow the the television's on-screen display that shows the stop and match the video signal of your TV. This setting only affects steps below.
- Press and hold  $\blacksquare$  and  $\blacksquare$  on the front of the DVD player. Press the POWER ON/OFF button on the front panel of the DVD player to turn OFF the DVD player. 2
- After PAL or NTSC appears on the display of the DVD While holding 
  and 
  by the press POWER ON/OFF. m
  - To change the setting, press PVM within three seconds. The player, release ■ and ▶▶ at the same time. The PAL or NTSC indicator that appears on the display indicates the current setting. 4
- new setting (PAL or NTSC) will appear on the display.

# NTSC/PAL Conversion

feature to convert the video output of the disc to match your TV system. The conversions supported are as below: This player is equipped with a NTSC/PAL conversion

	isc	õ	utput form	at
Type	Format	Se	lected mor	de
		NTSC	PAL	AUTO
DVD	NTSC	NTSC	PAL	NTSC
	PAL	Not Supported	PAL	PAL
VCD	NTSC	NTSC	PAL	NTSC
	TVA	NTSC	PAL	PAL

### Press ▲ or ▼ to select PAL, NTSC or AUTO. 1 In the Preference Menu, select **TV System** ы

- AUTO can only be selected when using a TV that has both Notes:
- This is applicable for CVBS output on cinch and SCART only
   Slight picture distortions may occur due to this conversion.
   This is normal.Thus, the AUTO format is most suitable for the the NTSC and PAL systems. best picture quality.

# **General Explanation**

## About this manual

occurs, the symbol  $\overleftarrow{X}$  appears on the TV screen, indicating that the operation is not permitted by the player or the This manual gives the basic instructions for operating the DVD player. Some DVDs require specific operation or allow only limited operation during playback. When this

# **Remote control operation**

•

disc.

remote control. Always point the remote control directly at the player making sure there are no obstructions between Corresponding keys on the front panel of the player can Unless stated, all operations can be performed by the the remote and the player.

also be used.

## Menu bar operation

•

- on the screen. The menu bar can be accessed by pressing A number of operations can be done with the menu bar
  - the cursor keys on the remote control. Pressing SYSTEM MENU while the menu bar is displayed will clear the menu bar from the screen. The selected item will be highlighted, and the appropriate
- cursor keys to operate it will be displayed below the icon. The symbols < or > indicate more items are available at the left/right of the menu bar. Press  $\triangleleft$  or  $\blacktriangleright$  to select these tems.

10 PREPARATION

6

PREPARATION

### English dsilgn∃

As there are multiple menu bars, the items on the menu bar are arranged according to usage and availability of direct access keys. Pressing the SYSTEM MENU keys epeatedly will toggle through menu bar 1, menu bar 2, menu bar 3 and OFF

Menu Bar/Status Window

### Step by step playback Personal Preferences Subtitle Language Audio Language Slow motion Sound Color Menu bar 2 Menu bar 1 **₽**0⊻®⊉

- Fast motion Angle
- Zoom \$ ▲ \$ \7 ⊕
- Menu bar 3 Title ⊢∪€,⊵
- Favorite Track Selection (FTS) Time Search Chapter

# Temporary Feedback Field



# **Personal Preferences**

3.

'ou can set your own personal preferences on the player.

## General operation:

- Press SYSTEM MENU on the remote control. Select 🔝 in the menu bar.
- Use the  $\blacktriangleleft \blacktriangleright \blacktriangle$  keys to toggle through the menus. ➡ The Personal Preferences menu appears.
- remote control) to operate the item are displayed next to ➡ When a menu item is selected, the cursor keys (on the submenus and submenu options. •
  - Press OK to confirm and return to the main menu. the item. •
    - The following items can be adapted:

### Picture

### TV Shape

top and bottom of the screen, or Pan Scan, for a full-height Letterbox for a wide-screen picture with black bars at the picture with the sides trimmed. If a disc supports the f you have a regular (4:3) TV, select 4:3. f you have a 4:3 TV, you can also select between: f you have a wide screen (16:9) TV, select 16:9. ormat, the picture will be shown accordingly.

# Black level shift (NTSC users only)

Select ON for adapting the color dynamics to obtain richer contrasts.



# Video shift

The factory centers the video on your TV screen. Use this setting to personalize the position of the picture on your IV by moving it to the left or right.



	Operation	
<b>ysi</b>	Loading Discs	General Features
o and subure language.	<ul> <li>Thress OPEN/CLOSE on the front of the player to open the disc tray.</li> <li>Load your chosen disc in the tray, label side up.</li> <li>Press OPEN/CLOSE again to dose the tray.</li> </ul>	Note: - Uhless stated, all operations described are based on remote control use. Some operations can be carried out using the menu bor on the screen.
owing features: s set to ON, a 4-digit code	◆ RE.R.II appears in the status window and on the player display, and playback starts automatically. Note:	Moving to another title/
y discs. nditional viewing of DVDs rmation (see 'Access	<ul> <li>If Child Lock's set to ON and the disc inserted is not authorized, the 4-digit code must be entered and/or the disc must be authorized (see Access Control).</li> </ul>	When a disc has more than one title or chapter,you can move to another title/chapter as follows: Press SYSTEM MENU, then select <b>a</b> or <b>a</b> in the menu bar.
e player and appears with	Playing a DVD Video and Video CD	Press A or ▼ to select a true/chapter. Slow Motion
ack is scopped, it is usplayed ield' in the default screen. tion.	Playing a disc	<ul> <li>Select ID (SLOW MOTION) in the menu bar.</li> <li>Use the ▼ keys to enter the SLOW MOTION menu.</li> </ul>
t OFF to suppress display of	After inserting the disc and closing the trax playback starts automatically. The compared to the compared of the compared	<ul> <li>Trayback with paper.</li> <li>Use the cursor keys </li> <li>-1/2, -1/4 or -1/8 (backward), or +1/8, +1/4, +1/2 or +1</li> </ul>
60 ▼ 184 jau 5.4523 0.00.34	status whook on the payer repay shows the type of disc loaded, as well as the disc's information and blaying time. The disc may invite you to select an item from a menu. If the selections are numbered, press (distrat. <u>VDED</u> )	(roward). Select 1 to play the disc at normal speed again. ● If <b>II</b> is pressed, the speed will be set to zero (PAUSE). To exit slow motion mode, press ➤ or ▲.
	The appropriate numerical keyr in not, use the	Still Picture and Frame-by-frame playback
video and audio, as well as s is only applicable during cs.	<ul> <li>The annover on the current, the and ordepter are obspace.</li> <li>Playback may stop at the end of the Title and you may return to the DVD disc menu. To go to the next title, press</li> </ul>	<ul> <li>Select ■ (&gt; 1 ∈ V) in the menu part</li> <li>Use the Y key to enter the step by step menu.</li> <li>Playback will pause.</li> </ul>
7	<ul> <li>Io stop playback, press =</li> <li>The default screen will appear giving information about the current status.</li> </ul>	<ul> <li>Use the cursor keys ◀► to select the previous or next picture frame.</li> <li>To exit step by step playback, press ► or ▲.</li> </ul>
1111 =	<ul> <li>You can resume playback from the point at which you stopped playback. Press P : when you see the Resume icon</li> <li>To the screen players P again</li> <li>The RESI MR F serving another not only to the clier in the</li> </ul>	You can also step forward by pressing <b>II</b> repeatedy on the remote control.
cribes the icons selected. Jure the help text.	player but also to the last four discs your have played. Simply player but also to the last four discs you have played. Simply reload the disc and press RESUME on the remote control. Or, press, P when you see the Resume icon P on the screen, then press P again.	Scanning plays the first 10 seconds of each 000000
	Note: – DVDs may have a region code. Your player will not play discs that have a region code different from the region code of your player.	Tructor continue playback at your chosen chapter/tradk press SCAN again or press ►.

### - Color settings

You can select one of five predefined sets of color settings and one set (Personal) which you can define yourself.



### - Personal color

Allows you to fine-tune the selected color settings saturation, brightness and contrast.

### Sound

 Digital output Factory setting:ALLThis means coaxial output is on.If you are not connecting to equipment with a dgital input, change

the setting to OFF. If your equipment doesn't include a digital multi-channel decoder, set the digital output to PCM only (Pulse Code Modulation).



### Analog output

Select Stereo, Dolby Surround or 3D Sound (TruSurround) to match your system's playback capability.



# Subwoofer cut-off

The frequency of the subwoofer output can be set to HIGH (200Hz) or LOW (100Hz) to match your system's playback sound quality.

### Night Mode

Optimizes the dynamics of the sound for low volume playback.

Select the required Menu, Audio and Subtitle language. Audio language and Subtitle language can also be adapted using the Menu bar.

Language

### Features

### - Access Control

Access Control contains the following features: Child Lock - When Child Lock is set to ON, a 4-digit or must be attered in onchor to play discs. Parental control - Allows the conditional viewing of DV containing Parental Control information (see 'Access Control).

### Status Window

Displays the current status of the player and appears with the menu bar. When disc playback is stopped it is displayed with the Temporary Feeback Field' in the default screen. See 'On-Screen Display' information. The factory setting is ON. Select OFF to suppress display of the Status Window.



## Bit Rate Indicator

When activated, the bit rate for video and audio, as well as the total bit rate is displayed. This is only applicable during playback of DVD and SVCD discs.



### - Help text

When set to ON, help text describes the icons selected. Select OFF if you no longer require the help text.

# PREPARATION 11

12 **OPERATION** 

GB 9

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- Select 🎦 (FAST MOTION) in the menu Use the ▼ keys to enter the FAST bar. •
- Use the ▲ ▶ keys to select the required speed: -32, -8 or -4 (backward), or +4, +8, +32 (forward). MOTION menu.
  - Select 1 to play the disc at normal speed again. •
- To exit FAST MOTION mode, press > or . •

# To search forward or backward through different speeds, you can also hold down I▲▲ or ♥♥!.



- Repeat chapter/title/disc
- To repeat the current chapter, press REPEAT. •
- ◆ REPEAT CHPT appears on the player display. To repeat the current title, press REPEAT a second time. •
  - ➡ REPEAT TITL appears on the display. To repeat the entire disc, press REPEAT a third time.
    - •
- → REPEAT appears on the display. To exit Repeat mode, press REPEAT a fourth time. •

### Repeat track/disc Video CDs

- To repeat the current track, press REPEAT.
- ◆ REFEAT THK appears on the player display.
   To repeat the entire disc, press REPEAT a second time.
   ◆ REPEAT appears on the display and the TV screen. •
  - - To exit Repeat mode, press REPEAT a third time. •

### Repeat A-B

- To repeat a specific portion of a title: Press REPEAT A-B at your chosen starting •
- point.
- ▲ appears briefly on the screen.
   Press REPEAT A-B again at your chosen end point.
   ◆ REPEAT A-B appears briefly on the display and the repeat sequence begins. (REPEAT A-B is displayed on the front panel
  - of the player) To cancel the sequence and continue playback, press REPEAT A-B. •

### Shuffle

- **DVD Video discs**
- This shuffles the playing order of chapters within a title, if the title has more than one chapter. Press SHUFFLE during playback •
- → SHUFFLE appears on the TV screen for about two
  - To return to normal playback, press SHUFFLE again.
    - Video CDs •
- Press SHUFFLE during playback. → SHUFFLE appears on the TV screen for about two seconds.
  - To return to normal playback, press SHUFFLE again.

## Time search

The Time Search function allows you to start playing at any Select 🖾 (TIME SEARCH) in the menu bar chosen time on the disc.

Press

•

- ➡ A time edit box appears on the screen, showing the Playback will pause.
- Enter hours, minutes and seconds from left to right in the Use the numeric keys to enter the required start time. elapsed playing time of the current disc. •
- ➡ Each time an item has been entered, the next item will XOC
  - be highlighted. Press OK to confirm the start time.
- ➡ The time edit box will disappear and playback starts from the selected time on the disc. •



### Zoom

The Zoom function allows you to enlarge the video image and to pan through the enlarged image. Select 🖾 (ZOOM) •

- Press A/V to activate the ZOOM function and select the •
  - required zoom factor: 1.33 or 2 or 4. Playback will pause.
- → The selected zoom factor appears below the Zoom icon in the menu bar and 'Press OK to pan' appears below the
  - menu bar.
  - ➡ The picture will change accordingly. Press OK to confirm the selection. •
- Use the  $\blacktriangleleft \blacktriangleright \, \widecheck{\,\,} \, \checkmark \, \checkmark \,$  keys to pan across the screen ➡ The panning icons appear on the screen.
- When OK is pressed only the zoomed picture will be To exit **ZOOM** mode: shown on the screen.
  - Press > to resume playback.

•



### dsilgn∃

English

FTS-Video

### The FTS-Video function allows you to store your favorite titles and chapters (DVD) and favorite tracks and indexes (VCD) for a particular disc in the player memory • •

- A programmed FTS will be placed on top of the list when playback is activated. When the list is full, a new program FTS program can contain 20 items (titles, chapters etc.).
  - The program can be selected and played at any time. will replace the last program on the list.

•

# Storing an FTS-Video Program

While playback is stopped, select  $\textbf{VIDEO FTS} \ensuremath{\overline{\textbf{M}}}$  in the menu bar

•

- Press ▼ to open the menu.
- → The VIDEO FTS menu appears. Press ▶ or ▲ to select ON or OFF. •

## Storing titles/tracks

- Use ▶ and ▲ to select the required title. Press V to select TITLES. •
- ➡ The title number will be added to the list of selections. Press OK if you wish to store the entire title. •



# Storing chapters/indexes

- ➡ The title number will be marked and the highlight moves Press lacksquare on the selected title number. •
  - Use ▶ and ▲ to select the required chapter number. to the first available chapter number for this title.
    - Press OK to confirm the selection.
      → The title/chapter selection will be added to the list of selections. • •
- menu. Press SYSTEM MENU to exit the VIDEO FTS 🗹 •

# **Erasing an FTS-Video Program**

- While playback is stopped, select **VIDEO FTS** of in the
  - Use 
    to select PROGRAM. menu bar.

Select (....) (SUBTITLE) in the menu bar. Press SUBTITLE or A/T repeatedly to see the different

subtitles

• •

Subtitles

- Use ▶ and ▲ to select the required number. Press OK to erase the selection.
- Press SYSTEM MENU to exit.

## Erasing all selections

- While playback is stopped, select VIDEO FTS 🗹 in the •
  - menu bar: Use ▼ to select CLEAR ALL.
    - Press OK.
    - ➡ All selections will be erased.
      - Press SYSTEM MENU to exit.

### OPERATION 4

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OPERATION

# **Special DVD Features**

3.

GB 10

## Checking the contents of DVD Video discs: Menus

DVDs may contain menus to navigate the disc and access special features. To use the menu, press the appropriate numerical key or use the  $\checkmark, \blacktriangle, \blacktriangleright, \blacklozenge, \blacktriangleleft$  keys to highlight your selection, then press OK.

### Title/Disc menu

DVD733K /691/781

## Press DISC MENU

- •
- ➡ If the current title has a menu, the menu will appear on the screen. Otherwise, the disc menu will be displayed. •
  - The menu can list camera angles, spoken language and subtitle options, and chapters for the title. To remove the title menu, press **DISC MENU** again.

•

### Camera Angle

camera angles, the angle icon appears, showing the number of available angles and the angle being shown currently. You If the disc contains sequences recorded from different can then change the camera angle if you wish. Use the  $\Delta/\overline{\Psi}$  keys to select the required angle.

**Directions For Use** 

➡ After a while, playback changes to the selected angle. The angle icon remains displayed until multiple angles are no longer available. •



# Changing the audio language

Select ((f. (AUDIO) in the menu bar. Press AUDIO or A/Y repeatedly to see the different

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languages.

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<list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item>	<list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><text></text></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item>		Use $\blacktriangleright$ or $\triangleleft$ to select tracks from the list.	RM radio 64 kbps 20:1 20 hrs
<text><text><text><list-item><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></list-item></text></text></text>	<text><text><text><text><list-item><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></list-item></text></text></text></text>		To go directly to any track, enter the track number using the numerical keys (0.9)	Near-CD %6 kdps 15:1 15.hrs butterier bound optimity CD-like 128 kdps 10:1 10.hrs - compression rate
<text><text><text><text><list-item><list-item><section-header><section-header><section-header><section-header><section-header><text></text></section-header></section-header></section-header></section-header></section-header></list-item></list-item></text></text></text></text>	<text><text><text><text><list-item><list-item><section-header><section-header><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></section-header></section-header></list-item></list-item></text></text></text></text>	Þ	strementarina (0-7). Store earth track hiv prescrime OK	CD* 256 ktpps 5 :1 5 hrs Compression rate low Total 23-14 3 hrs = 9 stagest to play CDs instead
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				(DAM).only Digital Audio music will play.
<list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item>	<section-header><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><section-header><section-header><section-header></section-header></section-header></section-header></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></section-header>		Switching FIS ON/OFF	Note:
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<list-item><ol> <li>Les du to steat du rander, vou wint los erased frantads.</li> <li>Les du steat du rander vou wint los erased frantads rander vou wint los erased vou wint lo</li></ol></list-item>	<list-item><ol> <li>Use y to go to the list of selected track.</li> <li>Use a for obselect the track number you with to erask.</li> <li>The track number woun with to enack number woun with the reak number of reak number is a constraint.</li> <li>The track number woun with the enack number of reak number is a constraint.</li> <li>The track number of reak number is a constraint.</li> <li>The select CLEARALL then press of the constraint of the select of the output the previous or next Track.</li> <li>The select CLEARALL then press of the constraint of the displayer.</li> <li>The select CLEARALL then press of the constraint of the displayer.</li> <li>The select CLEARALL then press of the displayer.</li> <li>The select the displayer.</li> <li>The displayer.<td></td><td>Erasing a track from an FIS Program</td><td>This feature allows you to view and select the next or</td></li></ol></list-item>		Erasing a track from an FIS Program	This feature allows you to view and select the next or
<ol> <li>Such and for select the track number you with to ease of number with the track number with the track number with the track number with the track number and track n</li></ol>	<list-item><ol> <li>Use A and 4 to select the track humber you with to ensage from the track humber you with to ensage from the track humber you with the track humber you with the track humber you with the track humber and track is the track</li></ol></list-item>	-	Use $\checkmark$ to go to the list of selected tracks.	previous MP3 disc Album/Title.
<ul> <li>The solution the list of selected from the list of select the device from the list of select the transformer of t</li></ul>	<ol> <li>Thes of X</li> <li>Thes of X</li> <li>The track number will be eased from the list of select the track number of reach and the previous or next frack.</li> <li>The complete program</li> <li>The program</li> <li>The</li></ol>	2	Use $\blacktriangleright$ and $\blacktriangleleft$ to select the track number you wish to erase.	1 Press $A/P$ to scroll through the previous or next Album.
<ul> <li>The tack number will be eased from the list of sleeted throw the dist between the tack number will be eased from the list of sleeted throw the dist of shear and throw the dist of the di</li></ul>	<ul> <li>The tack number will be eased from the list of sleeted the tack number will be eased from the list of sleeted tack.</li> <li>Faring the complete FIS flog and for the disk number of red tack number of red t</li></ul>	m	Press OK.	2 Press At to scroll through the mexicine on next Track
<ul> <li>The state of the derivation of the deri</li></ul>	<ul> <li>The complete program</li> <li>Leasing the complete program</li> <li>Leasing the complete FTS Program for the disk will be displayed.</li> <li>Lease LEARALL then press OK.</li> <li>Lease LEARALL the displayed.</li> <li>Lease LEARALL the displayed.</li></ul>		→ The track number will be erased from the list of selected	
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MP3 Disc Features       In STOP mode: numbers are used for MBM stection.         Support following MP3-CD formats (ISO9660 format):       In STOP mode: numbers are used for TRACK stection.         Support following functions are possible for MP3 disc.       In PLAK mode: numbers are used for TRACK stection.         Max ab charaters       In STOP mode: numbers are used for TRACK stection.         Max ab charaters       In PLAK mode: numbers are used for TRACK stection.         Max ab charaters       In PLAK mode: numbers are used for TRACK stection.         Max ab charaters       In PLAK mode: numbers are used for TRACK stection.         Max netted directory is 8 levels       In PLAK mode: numbers are used for TRACK stection.         Supported VBI bit-rates       In PLAK mode: numbers are used for TRACK stection.         Supported VBI bit-rates       In PLAK mode: numbers are used for TRACK stection.         Supported Start at Start	MP3 Disc Features       In STOP mode: numbers ore used for MBUM selection.         Support following MP3-CD formats (ISO9460 format);       In STOP mode: numbers ore used for TRACK selection.         Support following functions is 8 levels.       In STOP mode: numbers ore used for TRACK selection.         Max ab charaters:       In STOP mode: numbers ore used for TRACK selection.         Max nested directory is 8 levels.       In R-XM mode: numbers ore used for TRACK selection.         Supported VBI bir-rate       Supported VBI bir-rate         Supported VBI bir-rate       Supported SIR bir-rates of MP3 disc are: 32, 64, 94, 128, 192, 155, 156, 49, 128, 192, 155, 156, 49, 128, 192, 155, 156, 49, 128, 192, 155, 156, 49, 128, 192, 155, 156, 49, 128, 192, 155, 156, 44, 141, 44, 444         Supported BIR-rates of MP3 disc are: 32, 64, 94, 128, 192, 155, 156, 49, 128, 192, 155, 156, 44, 141, 44, 444       In Rest Annale and abum, press REPEAT a second time.         Supported BIR - rates of MP3 disc are: 32, 41, 41, 44, 444       In Rest Annale appears on the display.       In rest An appears on the display.         Supported BIR - rates of MP3 disc are: 30, 41, 41, 44, 444       In Rest Annale appears on the display.       In rest And Appears on the player display.         Supported BIR - rates of MP3 disc are: 30, 41, 41, 41, 41, 41, 41, 41, 41, 41, 41			Note
Support following (machers)       Colly the following functions are possible for MP3 disc.         First 30 distracters       SizDo P (LAY / PAUSE)         Max 30 distracters       SizDo P (LAY / PAUSE)         Max mested directory is 8 levels       SizDo P (LAY / PAUSE)         Supported sampling frequencies for MP3 disc.       SizDo P (LAY / PAUSE)         Supported varbers is 32       SizDo P (LAY / PAUSE)         Supported sampling frequencies for MP3 disc.       SizDo P (LAY / PAUSE)         Supported sampling frequencies for MP3 disc.       SizDo P (LAY / PAUSE)         Supported sampling frequencies for MP3 disc.       SizDo P (LAY / PAUSE)         Supported sampling frequencies for MP3 disc.       SizDo P (LAY / PAUSE)         Supported sampling frequencies for MP3 disc.       SizDo P (LAY / PAUSE)         Supported sampling frequencies for MP3 disc.       SizDo P (LAY / PAUSE)         Supported sampling frequencies for MP3 disc.       SizDo P (LAY / PAUSE)         SizDo F (ktpps)       SizDo P (LE + M3U / DISC)         Dilowing formats curv the supported       Ameter an album press REPEAT a second time.         The files like +WMA, *AAC, *DLF, *M3U + PLS       To repeat an album press REPEAT a prior display.         The max-scion closed disc.       The max-scion closed disc.         The max-scion closed disc.       The max-scin closed disc.         The d	<ul> <li>Support following (Inclusions are possible for MP3 disc.</li> <li>Max. 30 characters</li> <li>Max. 40 cha</li></ul>		MP3 Disc Features	<ul> <li>In STOP mode: numbers are used for ALBUM selection.</li> <li>In DI AV mode: numbers are used for TRACK selection.</li> </ul>
format;       Connot;       Conno;       Connot;       Connot;	format;       Connot;       Conno;       Connot;       Connot;		Support following MP3-CD formats (ISO9660	
<ul> <li>Max. 30 characters</li> <li>Max. Asset defectory is 8 levels</li> <li>The max. AlB number is 32</li> <li>Supported VBR bit-rates</li> <li>Supported sampling frequencies for MP3 disc area 32 kHz, 41 kHz. 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz. 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz. 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz. 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz. 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz. 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz. 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz. 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz. 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz. 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 10 kmz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 10 kmz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 10 kmz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 10 kmz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 10 kmz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 10 kmz</li> <li>Retex mana appears on the piayer display.</li> <li>The disc recorded under UDF format</li> </ul>	<ul> <li>Max 30 characters</li> <li>Max nested effectory is 8 levels</li> <li>The max-XLB number is 32</li> <li>Supported VBR bit-rate</li> <li>Supported sampling frequencies for MP3 disc area 32 kHz, 431 kHz.</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 431 kHz, 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 431 kHz, 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 431 kHz, 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 431 kHz, 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 431 kHz, 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 431 kHz, 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz, 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz, 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz, 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz, 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz, 41 kHz, 48 kHz</li> <li>Supported Bit-rates of MP3 disc area 32 kHz</li> <li>Supported Bit-rates of MP3 disc area 40 kHz</li> <li>Supported Bit-rates of MP3 disc area 40 kHz</li> <li>Supported Bit-rates area</li></ul>		format):	Chily the following tunctions are possible for MP3 discs:     CTO Find AV PANIET
Max nested directory is 8 levels       - REFEAT (TRACK / ALBUM / DISC)         The max ALB number is 32       Supported vanping frequencies for MP3 disc are: 32 kHz, 44 kHz       - REFEAT (TRACK / ALBUM / DISC)         Supported ampling frequencies for MP3 disc are: 32 kHz, 44 kHz       - REFEAT (TRACK / ALBUM / DISC)         Supported ampling frequencies for MP3 disc are: 32 kHz, 48 kHz       - REFEAT max oppears on the display.         Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 256 (kbps)       - REFEAT max appears on the display.         The files like *WMA, *AAC, *DLF,*/M3U,*PLS       - REFEAT and preas on the display.         The files like *WMA, *AAC, *DLF,*/M3U,*PLS       - REFEAT as conditione.         The files like *WMA, *EAC. *DLF,*/M3U,*PLS       - REFEAT as conditione.         The files like *COMD accord to the display.       - REFEAT as conditione.         The files like *COMD accord to the display.       - REFEAT as conditione.         The diss recorded dists       - ReFEAT as conditione.         The diss recorded under UDF format       - ReFEAT appears on the player display.	Max nested directory is 8 levels       - REFEAT (TRACK / AIBUM / DISC)         The max ALB number is 32       Supported vanping frequencies for MP3 disc are: 32 kHz, 44 kHz       - REFEAT (TRACK / AIBUM / DISC)         Supported vanping frequencies for MP3 disc are: 32 kHz, 44 kHz       - REFEAT (RACK / AIBUM / DISC)         Supported vanping frequencies for MP3 disc are: 32 kHz, 48 kHz       - REFEAT was verse REFEAT         Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 256 (kbps)       - REFEAT area on the display.         Disported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 256 (kbps)       - REFEAT area on the display.         Disported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 256 (kbps)       - REFEAT area on the display.         Disported Bit-rates of MP3 disc are: 30, 0, 128, 192, 256 (kbps)       - REFEAT area on the display.         Disported Bit-rates of MP3 disc are: 30, 0, 128, 192, 256 (kbps)       - REFEAT area on the display.         Disported       - REFEAT area on the player display.         Disported       - REFEAT area on the player display.         The insereconded distres       - ReFEAT area on the pl	•	Max. 30 characters	
<ul> <li>The max ALB number is 32</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 256 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kpps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kpps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kpps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kpps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kpps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 356 (kpps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 366 (kpps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 366 (kpps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 366 (kpps)</li> <li>Sup</li></ul>	<ul> <li>The max ALB number is 32</li> <li>Supported VBN bit-rate Supported Bit-rates of MP3 disc are: 32, 64, 96, 128, 192, 192, 192, 192, 192, 192, 192, 192</li></ul>	•	Max. nested directory is 8 levels	- REPEAT (TRACK / ALBUM / DISC)
<ul> <li>Supported BR thir-rate</li> <li>Supported BR thir-rates of MP3 disc are: 32 kHz.</li> <li>Supported BR-rates of MP3 disc are: 32, 64, 96, 128, 192, 256 (kbps)</li> <li>Supported BR-rates of MP3 disc are: 32, 64, 96, 128, 192, 256 (kbps)</li> <li>Supported BR-rates of MP3 disc are: 32, 64, 96, 128, 192, 256 (kbps)</li> <li>Supported BR-rates of MP3 disc are: 32, 64, 96, 128, 192, 256 (kbps)</li> <li>Supported BR-rates of MP3 disc are: 32, 64, 96, 128, 192, 256 (kbps)</li> <li>Supported BR-rates of MP3 disc are: 32, 64, 96, 128, 192, 256 (kbps)</li> <li>Supported BR-rates of MP3 disc are: 32, 64, 96, 128, 192, 256 (kbps)</li> <li>The files BR-VMA, *AAC. */DLF, */M3U, */PLS</li> <li>The files BR-VMA, *AAC. */DLF, */M3U, */PLS</li> <li>The files are conded under UDF format</li> </ul>	<ul> <li>Supported VBR bit-rate</li> <li>Supported Stimm/TrackUDisc</li> <li>Supported Bit-rates of MP3 disc are: 32 kHz, 441 Hiz, 48 Hz</li> <li>To repeat an album press REPEAT a second time.</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 95, 128, 192, 256 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 95, 128, 192, 256 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 95, 128, 192, 256 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32, 64, 95, 128, 192, 256 (kbps)</li> <li>The files IBit = VMNAi, *AAC. * DLFi *M3U, *PLS</li> <li>The files IBit = VMNAi, *AAC. * DLFi *M3U, *PLS</li> <li>The non-session doed discs</li> <li>The disc recorded under UDF format</li> </ul>	•	<ul> <li>The max.ALB number is 32</li> </ul>	
<ul> <li>Supported Structures for MP3 disc are: 32 kHz, 41 HA: 48 kHz.</li> <li>Supported Structures of MP3 disc are: 32, 64, 96, 128, 192, 256 (dobs)</li> <li>Supported Structures of MP3 disc are: 32, 64, 96, 128, 192, 256 (dobs)</li> <li>Supported Structures of MP3 disc are: 32, 64, 96, 128, 192, 256 (dops)</li> <li>Supported Structures of MP3 disc are: 32, 64, 96, 128, 192, 256 (dops)</li> <li>Supported Structures of MP3 disc are: 32, 64, 96, 128, 192, 256 (dops)</li> <li>Supported Structures of MP3 disc are: 32, 64, 96, 128, 192, 256 (dops)</li> <li>Supported Structures of MP3 disc are: 32, 64, 96, 128, 192, 256 (dops)</li> <li>The files like *:WMA, *AAC, *:DLF, */M3U, *PLS</li> <li>The files like *:WMA, *AAC, *:DLF, */M3U, *PLS</li> <li>The disc recorded under UDF format</li> </ul>	<ul> <li>Supported Simuling frequences for MP3 disc are: 32. kHz, 44.1 kHz-48 kHz.</li> <li>Supported Bit-rates of MP3 disc are: 32. 64, 96, 128, 192, 256 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32. 64, 96, 128, 192, 192, 155 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32. 64, 96, 128, 192, 192, 155 (kbps)</li> <li>Supported Bit-rates of MP3 disc are: 32. 64, 96, 128, 192, 192, 192, 192, 192, 192, 192, 192</li></ul>	•	Supported VBR bit-rate	MP3 Discs - Alhum/Track/Disc
Hart Art Art Art Art Art Art Art Art Art A	Hart Art. The Art.     The Art. The Art.     The Art. The Art.     The Art. The Art.     Supported Bir-tates of MP3 disc are: 33, 64, 96, 128, 192,     To repeat an album, press REPEAT a second time.     The files like *\WMA, *AC, *.DLF, */M3U, *,PLS     The files like *\WMA, *\WMA, *\WMA, *\WMA, *\WMA, *	•	<ul> <li>Supported sampling frequencies for MP3 disc are: 32 kHz,</li> </ul>	
<ul> <li>Subpred pictages of Mr a disc are: 34, 04, 94, 126, 174, 1</li> <li>Signal States of Mr a disc are: 34, 04, 94, 126, 126, 126, 126, 126, 126, 126, 126</li></ul>	<ul> <li>Subpred bit-rades or Intra disc are: 34, 04, 76, 128, 174, 198</li> <li>Subpred bit-rades or Intra disc are: 34, 04, 34, 34, 34, 34, 34, 34, 34, 34, 34, 3</li></ul>		44.1 kHz, 48 kHz	<ul> <li>Io repeat a track, press KEPEAI.</li> </ul>
<ul> <li>The fills grants can't be supported</li> <li>The fills like *V/NA, *AAC, *JDLT,*M3U, *PLS</li> <li>The fills like *V/NA, *AAC, *JDLT,*M3U, *PLS</li> <li>The fills like *V/NA, *AAC, *JDLT,*M3U, *PLS</li> <li>The non-session doeed discs</li> <li>The disc recorded under UDF format</li> </ul>	<ul> <li>The first set of the supported</li> <li>The first site *V/VIA, *AAC. *LDL*,*M3U, *PLS</li> <li>The first set of the entire dist.</li> </ul>		<ul> <li>Supported bit-fates of I*IF3 disc are: 32, 64, 76, 126, 172, 356 (three)</li> </ul>	<ul> <li>TEPEAT TRK appears on the display.</li> <li>To reneat an album press REPEAT a second time</li> </ul>
Following formats can't be supported <ul> <li>The files like *VV1A, *AAC, *DLF, *,M3U, *PLS</li> <li>The files like *VV1A, *AAC, *DLF, *,M3U, *PLS</li> <li>Chinese file and</li> <li>The non-session closed discs</li> <li>The discs recorded under UDF format</li> </ul>	Following formats can't be supported <ul> <li>The files like *VV1A, *AAC, *DLF, *JM3U, *PLS</li> <li>The files like *VV1A, *AAC, *DLF, *JM3U, *PLS</li> <li>Chinese file rame</li> <li>The non-session closed discs</li> <li>The discs recorded under UDF format</li> </ul> <ul> <li>The discs recorded under UDF format</li> </ul>			REPEAT ALBM appears on the player display.
The files like *.VVMA, *AAC. *.DLF,*.M3U, *.PLS     The refear to be appears on the player display.     The non-session closed diss     The diss recorded under UDF format	<ul> <li>The files like *.WMA, #AAC. *.D.F.*.M3U. #.PLS</li> <li>A REFEAT DISC appears on the player display.</li> <li>The non-reasion closed discs</li> <li>The discs recorded under UDF format</li> </ul>		Following formats can't be supported	<ul> <li>To repeat the entire disc, press REPEAT a third time.</li> </ul>
<ul> <li>Chinese flename</li> <li>The non-session closed discs</li> <li>The discs recorded under UDF format</li> </ul>	<ul> <li>Chinese filename</li> <li>The non-session closed discs</li> <li>The discs recorded under UDF format</li> </ul>	•	The files like *.WMA. *AAC. *.DLF *.M3U. *.PLS	REPEAT DISC appears on the player display.
The diss recorded under UDF format	The diss recorded under UDF format			
The discs recorded under UDF format	The discs recorded under UDF format		The population closed discs	
		•	The discs recorded under UDF format	
		•		

total time 5.29.78 otaltracks time 2.34 Clear all repeat/shuffle

∎ Play

### ysi

Press IAA or PVI briefly during playback to go to the

•

• .

**Moving to another track** 

Special Video CD & SVCD

Features

Eng

Storing an FTS Program

Downloading MP3 files from the Internet or copying songs from your own legal discs is a delicate process.

- next track or to return to the beginning of the current
  - Press I A twice briefly to step back to the previous track 이이 미 [ 이이 ① 이이 ① [ 이이 미 [ To go directly to any track, enter the track number using the numerical keys (0-9). track

# Shuffle

menu consists of a list of titles, you can select a title directly.

Enter your choice with the numerical keys (0-9). Press RETURN to go back to the previous menu. You may also select **PBC OFF** under Personal

• • Preferences.

Go through the menu with the keys indicated on the TV screen until your chosen passage starts to play If a  $\mbox{PBC}$ 

Load a Video CD with PBC and press ▶.

•

Playback Control (PBC)

- Press SHUFFLE during playback. • •
- → The playing order of the tracks is changed. To return to normal playback, press SHUFFLE again.

## Repeat track/disc

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- To repeat the current track, press REPEAT → REPEAT TRK appears on the display. To repeat the entire disc, press REPEAT a •
- second time.

If the TV is on, the Audio CD screen appears. The number of tracks and the total playing time of the disc

After loading the disc, playback starts automatically.

•

• •

Playing an Audio CD

During playback, the current track number and its elapsed

will be shown on the TV screen.

playing time will be shown on the TV screen and on the

To exit Repeat mode, press REPEAT a third time. ➡ REPEAT appears on the display. •

### Repeat A-B

To repeat a specific portion of a track: Press REPEAT A-B at your chosen starting

•

To stop playback at any other time, press

Playback will stop at the end of the disc.

• •

player display.

- → A- appears on the player display. point.
- Press REPEAT A-B again at your chosen end point. **A -B** appears on the display and the sequence begins to .
  - play repeatedly. To cancel the sequence and continue playback, press •

total time 5.29.78

time 2.34

.

REPEAT A-B.

### Scan

- Scanning plays the first 10 seconds of each track on the disc. Press SCAN.
- To continue playback at your chosen track press SCAN again or press P.

# Favorite Track Selection (FTS)

- To search forward or backward through hold down A or PPI for about one the disc at four times the normal speed, second during playback. •
- ◆ Search begins, and sound is partially muted. To step up to eight times the normal speed, press into or even again. •
  - ➡ Search goes to eight times the speed, and the sound is
    - To return to four times the normal speed, press  $| \mathbf{A} \mathbf{A} |$  or •
- If the TV is on, search speed and direction are indicated on Negain. •
- To end the search, press > to resume playback or press the screen each time A or P is pressed. to stop playback. •



To return to playback, press 🕨

Search

Press III during playback.

•

Pause





- The FTS Program allows you to store your favorite tracks for a particular disc in the player memory. Each FTS Program can contain 20 tracks. Program
- muted.

### OPERATION 16 15 OPERATION

GB 11



# Setting up Karaoke

- Set the **LEVEL 1 & 2** control to the minimum level to prevent acoustic feedback (e.g. a loud howling sound) Load a karaoke disc into the player.
  - Connect a microphone to MIC 1 or MIC 2 or to both before connecting the microphone.
    - sockets.
      - Press > to start playback
- Adjust the LEVEL 1 & 2 control to the preferred level.
- Press KARAOKE  $\swarrow$  on the remote control to switch ON the karaoke mode •
  - Karaoke menu bar appears. ~
- → Move to the function you want to change using ( $\blacktriangle$  or  $\checkmark$ ) then use ( $\blacktriangleleft$  or  $\triangleright$ ) to scroll to your preferred option.
- 9 Adjust the KEY CONTROL \$ to change the key of your Adjust the ECHO of the level you desire. 8
- 10 Select the different MODE SELECTION  $\operatorname{Im}(^\sim$  you desire vocal range.
  - 11 Select the different VOCAL ((1)) options you desire (see (see Karaoke - General Features).
    - 12 Press Karaoke button to exit the menu screen. Karaoke - General Features).



# Mode Selection (⊴(~)

- Works correctly only on karaok disc. Only two channels are available.
  - ForVCD karaoke disc,
- Selection between L+R / L / R
  - Left + Right - Left 4
- Right \_ ~
- For DVD karaoke disc,

1

- Selection between M1 / M2 / V1 / V2 M1 AI channels M2 Music channels only V1 Vocal 1 output V2 Vocal 2 output
- In the karaoke disc, karaoke L (Left channel), R (Right Note:
- channel), M1 (all channels), M2 (music channels only), V1 (vocal 1 output), V2 (vocal 2 output) are recorded. In some discs, the M1, M2,V1,V2 may not be recorded in the disc.
- Vocal ((()))
- normal mode, all music and vocals are played. Available options for vocal are: Z 1 •

# **General Features**

- removes original vocals when you start singing

– cancel original vocals. FADE

1

CANCEL

t

through the microphone.

- Karaoke ON/OFF (2)
- To switch karaoke features ON/OFF mode •
- Only analog output supported in Karaoke mode

## Echo Control (

Can be adjusted in the range of {0.....+7} •

## Key Control (1)

Can be adjusted in the range of {-7....0....+7}

### Once More

To repeat track one more time after it has ended.

### **Access Control: Child Lock** (DVD Video and Video CD) dsilgn∃

Access Control

### English

# Activating/deactivating the Child Lock

- **CONTROL** in the features menu using the ▲/▼ keys. When disc playback is stopped, select ACCESS
  - Enter a 4-digit code of your own choice.
    - Enter the code a second time.
- Move to "CHILD LOCK" using the ▲/▼ keys.
- Move to LOCK/UNLOCK using the 
  key.
  - Select LOCK using the ▲/▼ keys. Ś
- Press OK or ◀ to confirm, then press ◀ again to exit the menu.
- Now unauthorized discs will not be played unless the 4-digit code is entered.

## Select UNLOCK to deactivate the CHILD LOCK α

- The code is entered for the very first time (see above),
   The code is changed (see Changing the 4-digit code'),
   The code is cancelled (see Changing the 4-digit code'). Note: Confirmation of the 4-digit code is necessary when:
- œ •►

### Authorizing discs

Once 'or 'Playback Aways' If you select 'Playback Once', the disc can be played as long as it is in the player and the player is ON. If you select 'Playback Always', the disc will You will be asked to enter your secret code for 'Playback ➡ The 'child protect' dialog will appear. Insert the disc. See 'Loading discs'. •

# even if the Child Lock is set to ON.

become child safe (authorized) and can always be played

### ('Child safe') disc titles. A disc will be placed in the list when Each time a 'child safe' disc is played, it will be placed on - The player memory maintains a list of 120 authorized Multi-volume VCDs may have a different ID for each Playback Always' is selected in the 'child protect' dialog. authorized. Notes:

- top of the list When the list is full and a new disc is added, the last disc in the list will be removed from the list. Double-sided DVDs may have a different ID for each side. In order to make the disc 'child safe', each side has to be
  - volume. In order to make the complete set 'child safe', each volume has to be authorized.

# ince for deletion, disk from

# Deauthorizing discs

- Insert the disc. See 'Loading discs'.
  - ➡ Playback starts automatically. Press while ③ is visible.
- ➡ The ③ will appear and the disc is now deauthorized. •

## Control (DVD Video only) Access Control: Parental

Control' feature allows you to prevent discs from being played by your children or to have certain discs played with to 8, and alternative, more suitable scenes are available on the disc. Ratings are country dependent. The Parental children. Therefore, diss may contain Parental Control' information which applies to the complete disc or to certain scenes on the disc. These scenes are rated from 1 Movies on DVDs may contain scenes not suitable for alternative scenes.





3.

Look for the specific symptom(s).Then perform	
	only the actions listed to remedy the specific symptom(s).
Symptom	Remedy
No power	<ul> <li>Make sure the power cord is properly connected.</li> <li>Check if there is power at the AC outlet by plugging in another appliance.</li> </ul>
No picture	<ul> <li>Check if the TV is switched on.</li> <li>Check the video connection.</li> </ul>
Distorted picture	<ul> <li>Check the disc for fingerprints and clean the disc with a soft doth, wiping from the center to the edge in a straight line.</li> <li>Sometimes a small amount of picture distortion may appear. This is not a malfunction.</li> </ul>
Completely distorted picture or no color with player menu	<ul> <li>If the picture is distorted completely or if the picture rolls vertically makes are the NTSCPAL setting at the DVD player matches the video signal of your relevision.</li> <li>If your Video signal is NTSC, select the NTSC setting at the DVD player If your video signal is PAL, select the PAL setting - See NTSC/PAL SETTIN(</li> </ul>
Distorted or black/white picture with DVD or Video CD	<ul> <li>The disc format does not match your TV's video signal (PALINTSC).</li> </ul>
No sound	<ul> <li>Check audio connections.</li> <li>If you are using a Hifi amplifier, try another sound source.</li> </ul>
Distorted sound from HiFi amplifier	<ul> <li>Check to make sure that no audio connections are made to the amplifier's phono input.</li> </ul>
No audio at digital output	<ul> <li>Check the dgital connections</li> <li>Check the settings menu to make sure the digital output is set to ALL or</li> <li>PCM</li> <li>Check if the audio format of the selected audio language matches your receiver capabilities</li> </ul>
Disc can't be played	<ul> <li>Ensure the disclabel is facing up.</li> <li>Clean the disc.</li> <li>Clean the disc.</li> <li>Check if the disc is defective by trying another disc.</li> <li>Check to see if the disc is defective, badly scratched or warped (not flat).</li> </ul>
No return to start-up screen when disc is removed	<ul> <li>Reset the unit by switching the player off then on again.</li> <li>Check to see if the program requires another disc to be loaded</li> </ul>
The player does not respond to the remote control	<ul> <li>Aim the remote control directly at the sensor on the front of the player.</li> <li>Remove any obstades between the player and the remote control.</li> <li>Inspect or replace the batteries in the remote control.</li> </ul>
Buttons do not work	<ul> <li>In order to completely reset the player unplug the AC cord from the AC outlet. (Please ensure that the set is not in Initial Setup mode.)</li> </ul>
Player does not respond to some operating commands during playback	<ul> <li>Operations may not be permitted by the disc Refer to the instructions of the disc.</li> </ul>

When disc playback is stopped select ACCESS CONTROL in the features menu using the ▲V keys. There the old code. There the old code. There the Net AVGE CODE using the ★ key these the ▶ key. There the new 4-digit code. There the code a second time and reconfirm by pressing ACCESS CONTROL in the features menu using the AV keys. The 4-digit code can be cancelled by pressing ■ four times the AV keys. The 4-digit code can be cancelled by pressing ■ four times the A-digit code. The 4-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by the set maker and and properties the PARENTAL CONTROL system and and not been settled between set makers and the disc industries. The dubtit please make sure the disc player control go for the A-disk for the player. The dubtit please make sure the disc player and the player. The dubtit please make sure the player. The dubtit please make sure the store blayer. The dubtit please make sure the player. The dubtit please make sure the disc player and the player. The dubtit please make sure the store blayer. The dubtit please make sure the store blayer. The dubtit please make sure the disc player and the player. The dubtit please make sure the disc player and th	When disc playback is stopped, select ACCESS CONTRNOL in the features menu using the ▲Ve keys, there the old code. The code as conditioned and reconfirm by pressing there the new 4-digit code. The the new 4-digit code. The the new 4-digit code. The the code a second time and reconfirm by pressing the the code as second time and reconfirm by pressing the the code as second time and reconfirm by pressing the transmission of the code as the confirm by pressing the transmission of the code as the code as second time and reconfirm by pressing the A-digit code as the cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancelled by pressing ■ four times the A-digit code can be cancel above the A-digit code cancel above the A-digit code can be cancel above the A-digit code can be cancel above the A-digit code cancel above the A-digit code cancel above the A-dis above be cancel above the A-dis above be canc
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our PARENTAL CONTROL settings before you allow ildren access to the player.	aur <b>PARENTAL CONTROL</b> settings before you allow bildren access to the player.

# Activating/Deactivating Parental Control

- When disc playback is stopped, select ACCESS CONTROL in the features menu using the ▲/▼ keys.
   Enter your 4-digit code. If necessary, enter the code a
- second time.

m

- 0 m 4 n 9 Move to **Parental Control** using the  $\Delta/\nabla$  keys.
  - Move to VALUE ADJUSTMENT (1-8) using the key. ŝ 4
- Then use the  ${\Bbb A}/{\Bbb A}$  keys or the numerical keys on the remote control to select a rating from 1 to 8 for the disc inserted.

~

Rating 0 (displayed as '- -): Parential Control is not activated.The Disc will be played in full.

- 4

Ratings 1 to 8: The disc contains scenes not suitable for children. If you set a rating for the payyer all scenes with the same rating or not will be payed. Higher rated scenes will not be played unless an alternative is valiable on the disc. The alternative must have the same rating or a lower one. If no suitable alternative is found, playback will stop and the 4-digit code has to be entered.

4 m

# Press OK or $\blacktriangleleft$ to confirm, then press $\blacktriangleleft$ again to exit the •

menu.

arental level

### Country

- **CONTROL** in the features menu using the  $\Delta/\nabla$  keys. 1 When disc playback is stopped, select ACCESS
  - Enter the 4-digit code.
- Move to **CHANGE COUNTRY** using the  $\blacktriangledown$  key.
  - Press the **>** key.
    - Select a country using ▲/▼. ŝ
- 6 Press OK or  $\triangleleft$  to confirm, then press  $\triangleleft$  again to exit the menu.

ACCESS CONTROL

### 4. **Mechanical Instructions**

### **Dismantling Instructions** 4.1



CL 16532007\_097.eps 260401

Mechanical Instructions DVD733K /691/781

CL 16532007\_029.eps 020201

4.

### **Exploded Views** 4.2



Item number correspond to part list



GB 16 4.

DVD733K /691/781

Mechanical Instructions DVD733K /691/781 4. GB 17



### 4.3 Service Position

See figure 4-1 for the service position

- **1.** Remove the cables from the cable tie housing.
- 2. Remove 4 screws that mount the DVD module to the bottom frame.
- **3.** Move the DVD module backward slightly and flip the module over, so that the component side of the board faces upwards, and the module is in the service position.



Figure 4-1

### 5. Diagnostic Software Descriptions And Troubleshooting

### 5.1 Dealerscript

### 5.1.1 Purpose Of Dealer Script

The dealer script can give a diagnosis on a standalone DVD player; no other equipment is needed to perform a number of hardware tests to check if the DVD player is faulty. The diagnosis is simply a "error" or "pass" message; no indication is given of faulty hardware modules. Only tests within the scope of the diagnostic software will be executed hence only faults within this scope can be detected.

### 5.1.2 Contents Of Dealer Script

The dealer script executes all diagnostic nuclei that do not need any user interaction and are meaningful on a standalone DVD player.

The nuclei called in the dealer script are the following (the number after each nucleus name corresponds with the number being on the local display when the nucleus is executed during the dealer script):

Nucleus		Description
VideoColSetupComm	7	Checks the I2C interface with the RGB video processor on the Audio/Video
		board (only for DVD players with RGB video processor).
PapChksFl	6	Calculate and verify checksum of FLASH memory.
PapI2cDisp	5	Checks the I2C interface with the slave processor on the display PCB.
PapS2bEcho	4	Checks the I2C interface to the basic engine.
Papl2cNvram	3	Checks the I2C interface with the NVRAM.
PapNvramWrR	2	Pattern test of all locations in the NVRAM
CompSdramWrR	1	Pattern test of all locations in the SDRAM(s).
	•	

CL06532096\_001.eps 050700

### Figure 5-1



CL 96532065\_004.eps 120799

### 5.2 Player Script

### 5.2.1 Purpose Of Player Script

The Player script will give the opportunity to perform a test that will determine which of the DVD player's modules are faulty, to read the error log and error bits and to perform an endurance loop test. To successfully perform the tests, the DVD player must be connected to a tv set to check the output of a number of nuclei. For DVDv2b a multi-channel amplifier, a set of 6 boxes and an external video source are necessary to test. To be able to check results of certain nuclei, the player script expects some interaction of the user (i.e. to approve a test picture or a test sound). Some nuclei (e.g. nuclei that test functionality of the Basic Engine module) require that the DVD player itself is opened, to enable the user to observe moving parts and approve their movement visually. Only tests within the scope of the diagnostic software will be executed hence only faults within this scope can be detected.

### 5.2.2 Contents Of Player Script

The player script contains all nuclei that are useful on a DVD player that is connected to a tv-set and help to determine which module of the DVD player is faulty, as well as to read out the contents of the error logs.

### 5.2.3 Structure Of Player Script

The player script consists of a set of nuclei testing the three hardware modules in the DVD player: the Display PWB, the Digital PWB and the Basic Engine.

Nuclei run by the player test need some user interaction; in the next paragraph this interaction is described. The player test is done in two phases:

- Interactive tests: this part of the player test depends strongly on user interaction and input to determine nucleus results and to progress through the full test. Reading the error log and error bits information can be useful to determine any errors that occurred recently during normal operation of the DVD player.
- The loop test will loop through the list of nuclei indefinitely, till the NEXT key is pressed. The list of nuclei is as follows:
  - VideoColSetupComm
  - VideoScartSwComm
  - PapChksFlash
  - Papl2cNvram
  - CompSdramWrR
  - PapS2bEcho
  - Papl2cDisp

For DSW version 1.6 and above. the DSW version number will be displayed on the local display. Press NEXT to continue to the display test.

The display should look like the following:



Figure 5-3





**GB 21** 

### 5.3 **Display PCB**

### 5.3.1 **Display Test**

The display test is performed by nucleus DispDisplay. By putting a series of test patterns on the local display, the local display is tested. To step through all different patterns, the user must either press PLAY (pattern is ok) or PAUSE (pattern was incorrect) to proceed to the next pattern. The display of patterns is continued in a cyclic manner until the user presses NEXT. If the user presses NEXT before all display patterns are tested, the DispDisplay nucleus will return TRUE (display test successful).

### 5.3.2 Led Test

The LED(s) on the DVD player is (are) tested by nucleus DispLed. The user must check if the LED(s) is (are) lighted; if it is, press PLAY, if it is not, press PAUSE. By pressing NEXT the script will proceed to the next test. If the user presses NEXT before PLAY or PAUSE, the DispLed nucleus will return TRUE (LED test successful).



Figure 5-5

### 5.3.3 Keyboard Test

The keyboard of the DVD player is tested by nucleus DispKeyb. The user is expected to press all keys on the local keyboard once. The code of the key pressed is shown on the local display (1 hexadecimal digit) immediately followed by a (hexadecimal) number indicating how many times that key has been pressed. Example of the local display during this test:



### Figure 5-6

The key-codes displayed on the local display will scroll from right to left when the display gets full, the text "tb-" will remain on display.

key id.	key
0	PLAY
1	NEXT
2	PREVIOUS
3	PAUSE
4	STOP
5	OPEN/CLOSE
6	3D-SURROUND
7	KEY- (Mic Control)
8	Once More (Mic Control)
9	KEY+(Mic Control)
А	STAND BY

CL16532007\_007.eps 300101

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### Figure 5-7

If any keys are detected more than once (due to hardware error), the key-code is displayed twice (or more), with the second digit increased by 1.

If the user does not press all keys minimally once (in any order), the DispKeys nucleus will return FALSE and cause an error in the overall result of the player script.

The test will also pass if all buttons, except the microphone key buttons, are pressed.

The user can leave the keyboard test by pressing the NEXT key on the local display of the DVD player for at least one full second.

The result of the keyboard test is shown on local display as follows:



Figure 5-8



### Figure 5-9

Pressing NEXT on the local keyboard again will proceed to the next text.

### **Remote Control TestT** 5.3.4

The remote control of the DVD player is tested by nucleus DispRc. The user must press any key on the remote control just once. The codes of the key pressed will be shown on the local display in hexadecimal format. Example:



### Figure 5-10

In this example 23 is the hexidecimal code of the pressed RC key. The user can leave the remote-control test by pressing NEXT on the local keyboard of the DVD player. The remote

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control test is successful if a code was received before the user pressed the NEXT key; pressing the NEXT key before pressing a key on the remote control gives an error in the remote control test (note that the remote control test will also fail if a key on the remote control was pressed but no code was received). The remote control test does not check upon the contents of the received code, that is it will not be checked if the received code matches the key pressed. If desired, the user can manually check this code by using a code-table for the remote control key-codes.

1..

1

C Key Id	Hexadecimal code
STANDBY	0C
STOP	31
PLAY	2C
PLAY BACKWARD	2D
PAUSE	30
STEP FORWARD	F6
STEP BACKWARD	F5
FORWARD	28
FORWARD 4X	DF
FORWARD 8X	E0
BACKWARD	29
BACKWARD 4X	DE
BACKWARD 8X	DD
SLOW	22
SLOW 2	D9
SLOW BACKWARD	23
SLOW BACKWARD 2	DA
NEXT	20
PREVIOUS	21
CURSOR UP	58
CURSOR DOWN	59
CURSOR LEFT	5A
CURSOR RIGHT	5B
OK	5C
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
TOGGLE	C8
ANGLE	85
AUDIO	4E
SUBTITLES	4B
SUBTITLE ON/OFF	E3
ROOT MENU	54
TITLE MENU	71
MENU	D1
SETUP MENU	82
OSD ON/OFF	F
RETURN	83
RESUME	D7
SCAN	2A
SHUFFLE	1C
REPEAT	1D
A/B REPEAT	3B
TOGGLE SCART	43
OPEN/CLOSE	42
FTS	FB
KARAOKE	E4
OPTION	FA
	CL06532096_003.eps



### Figure 5-12





### Figure 5-13

Pressing NEXT on the local keyboard again will proceed to the next test.

### P50 Loop-Back Test 5.3.5

For the P50 loop-back test, the user must first press a key to decide if the test is to be performed. The display will show the following message:



### Figure 5-14

If the user presses PAUSE, the P50 test will be skipped. If the user presses PLAY, the P50 test is performed and the result is displayed as follows:

Test successfull:





Test fails:



### Figure 5-16

Press the NEXT key to continue to the next text

### Figure 5-11

After pressing NEXT, the result of the remote control test is displayed on the local display of the DVD player as follows:

### 5.4 **Mono PCB Digital Part**

### **Picture Test** 5.4.1

The picture test is performed by putting a predefined picture (colour bar) on the display (nucleus VideoColDencOn) and asking the user for confirmation. The display will show the following message:



### Figure 5-17

By pressing PLAY the user confirms the test, pressing PAUSE will indicate the picture was invisible or incorrect. Pressing NEXT will proceed to the next test

### 5.4.2 Sound 1 & SCART DVD Test

The first soundtest is performed by starting a pink noise sound that needs confirmation from the user (nucleus AudioPinkNoiseOn); the display will show the following message very shortly:



### Figure 5-18

This sound will only be audible from version cut3.1 of Sti5505(item7503 on mono board) onwards. After starting up sound 1, SCART loop-trough will be simultaneously active during this test. SCART loop-trough will be measured with the aid of an external video source.

When entering the SCART loop-trough, the local display indicates:



### Figure 5-19

On the TV screen a colour bar (generated by nucleus VideoColDencOn) is visual and the internally generated pinknoise is audible. By pressing PLAY the user confirms the test, pressing PAUSE will indicate the sound was inaudible or incorrect. Pressing NEXT will proceed to the next test; if the user presses NEXT without pressing PLAY or PAUSE first, the result of this test will be TRUE (sound ok). By pressing the NEXT button there will be switched over to the external source, this must become now visible on the TV screen (using the SCART). The local display indicates:



The internally generated colour bar is still available on the CVBS and Y/C outputs. And the pinknoise-signal is still available on the cinch audio outputs. By pressing the PREV button, the internal generated colour bar becomes visual again.

The test can be left by pressing the NEXT key for more than one second.

### 543 Sound 2 Test

The second soundtest is performed by producing a sine sound (nucleus AudioSineOn). The signal can be stopped by pressing the STOP-key. The display will show the following message:



### Figure 5-21

By pressing PLAY the user confirms the test, pressing PAUSE will indicate that something went wrong. Pressing NEXT will proceed to the next; if the user presses NEXT without pressing PLAY or PAUSE first, the result of this test will be TRUE (sound ok).

### 5.4.4 Colour Setup Test

up ok).

The colour setup test is performed by putting the internally generated colour bar in different settings on the TV screen. The first colour bar will be displayed in setting 1. the display will show the following message:



### Figure 5-22

By pressing the NEXT button, you can go to the second setting. The local display indicates:



### Figure 5-23

By pressing the PREVIOUS button, the colour bar with the first setting becomes visual again.

By pressing PLAY the user confirms the test, pressing PAUSE will indicate that something went wrong. The test can be left by pressing the NEXT key for more than one second; if the user presses NEXT without pressing PLAY or PAUSE first, the result of the test will be TRUE )colour set-

Figure 5-20

GB 23

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### 5.5 Basic Engine

### 5.5.1 Version Number

In the basic engine tests, the version number of the Basic Engine will be shown first, as the following example:



Figure 5-24

By pressing the NEXT key, the Basic Engine tests are started.

### 5.5.2 Tray Test

First, the tray is tested. The purpose of this test is also to give the user the opportunity to put a disc in the tray of the DVD player. Some tests on the Basic Engine require that a disc(e.g. DVD MPTD test disc) is present in the player. At the end of the Basic Engine tests this tray test will be repeated solely to enable the user to remove the disc in the tray. The local display will look as follows:

]0-36	ТҢҢү
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### Figure 5-25

By pressing PLAY or PAUSE the user can toggle the position of the tray. Note that this test will not contribute to the test result of the Basic Engine. Pressing NEXT will proceed to the next test, after the tray has been closed (by the software) if it was open.

### 5.5.3 Sledge Test (Visual Test)

The second Basic Engine test tests the sledge; the user can move the sledge as many times as desired by using PLAY (nucleus BeSledgeOut) and PAUSE (nucleus BeSledgeIn). Pressing NEXT on the local keyboard proceeds to the next test. Note that this test will not contribute to the test result of the Basic Engine. The local display will look as follows during the sledge test:





### 5.5.4 Disc Motor Test (Visual Test)

The third Basic Engine test tests the disc motor (nucleus BeDiscMotorOn); the local display looks as follows:



### Figure 5-27

By pressing PLAY the user confirms that the disc motor is running; pressing PAUSE indicates the disc motor does not work. Pressing NEXT proceeds to the next test, after a reset of the disc motor (nucleus BeDiscMotorOff). If the user presses NEXT before pressing PLAY or PAUSE, the result of this test will be TRUE (disc motor is running).

### 5.5.5 Focus Test (Visual Test)

The fourth Basic Engine test tests the focussing; first focussing is turned on by calling nucleus BeFocusOn. The display will look as follows:



### Figure 5-28

By pressing PLAY the user confirms that the focussing was succesful; pressing PAUSE indicates a focussing failure. Pressing NEXT proceeds to the next test after a reset of the focussing (nucleus BeFocusOff); if NEXT is pressed before PLAY or PAUSE, the result of this test will be TRUE (focus successful).

### 5.5.6 Radial Test (Visual & Listening Test)

The fifth Basic Engine test tests the radial functionality (nucleus BeRadialOn); the local display looks as follows:



### Figure 5-29

By pressing PLAY the user confirms that the radial function worked; pressing PAUSE indicates the function does not work. Pressing NEXT proceeds to the next test, after a reset of the radial (nucleus BeRadialOff). If the user presses NEXT before pressing PLAY or PAUSE, the result of this test will be TRUE (radial successful).

### 5.5.7 Jump Test (Listening Test)

The sixth and last Basic Engine test tests the jumping by calling nuclei BeGroovesIn, BeGroovesMid and BeGroovesOut. During this test, the local display looks as follows:

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GB 25



### Figure 5-30

The user can switch between the three different types of groove settings by pressing PLAY (forward to next nucleus in the list In-Mid-Out) or PAUSE (backward in the list In-Mid-Out). This is done in a cyclic manner; note that this test will not contribute to the test result of the Basic Engine. Pressing NEXT proceeds to the next test, after the disc motor has been shut off with a call to nucleus BeDiscMotorOff.

### 5.5.8 Tray Test

As a last action for the Basic Engine tests, the tray test is repeated. The local display will look as follows:



### Figure 5-31

This test is meant to give the user the opportunity to remove the disc in the tray. The tray position can be toggled using the PLAY and PAUSE key. The tray will be closed (by the software, if it is open) before proceeding to the next test when the user presses the NEXT key.

### 5.5.9 Error Log (See Table On Page 30)

Reading the error log and error bits information can be useful to determine any errors that occurred recently during normal operation of the DVD player. Reading the error log is done by nucleus LogReadErr. The display during the errorlog readout looks as follows :



### Figure 5-32

By pressing PLAY or PAUSE the user can move forward or backward (respectively) through the logged error codes. The highlighted number indicates which errorcode is currently on display (in the example above, errorcode number 4 is displayed). If "0000" is displayed at all positions, the error log is empty. Display of the logged errors is done in a cyclic manner. The errorcode with the lowest highlighted number is the most recent. By pressing NEXT on the local keyboard, the user can proceed to the next test.

### 5.5.10 Error Bits (See Table On Page 30)

Reading the error bits is done by nucleus LogReadBits. The display during the errorbits readout looks as follows:



### Figure 5-33

Only the set errorbits will be shown by their (decimal) number. Refer to the appropriate documentation for the explanation of each bit number. If the display only shows "EB-0", no error bits were set. By pressing NEXT the user can continue to the next test.

### 5.6 Loop Test (See Table Below)

At the start of the loop test, the display will show the result of the interactive player test:



Figure 5-34

The left side of the display contains a 3-digit code, which can have a value between 000 and 111. These values are to be interpreted as follows:

Displayed Value	Indication for each module		
	Basic Engine	Mono PCB	Display PCB
000	ok	ok	ok
001	ok	ok	faulty
010	ok	faulty	ok
011	ok	faulty	faulty
100	faulty	ok	ok
101	faulty	ok	faulty
110	faulty	faulty	ok
111	faulty	faulty	faulty

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### Figure 5-35

The loop test will perform the same nuclei as the dealer test, but it will loop through the list of nuclei indefinitely. The display of the DVD player will display not only the three digits indicating correct/faulty modules and the last found error code (as mentioned, faults are detected as far as they can be within the scope of the diagnostic software), but also a loop counter indicating how many times the loop has been gone through. Example:



### Figure 5-36

The number after the hyphen indicates the number of times the loop test has been performed; the 4 digits at the right side of the display show the last error that was found when running the loop test: the leftmost two digits of this code

5.

indicate which nucleus resulted in a fault; the rightmost two digits refer to the faultcode within that nucleus. For further explanation of this error code, see list of error codes below.

### ERROR CODES LOOP TEST

ERROR CODE	NUCLEUS NUMBER	ERROR DESCRIPTION
0601	6	Calculated checksum of FLASH is not correct
1101	11	I2C bus busy before start
1102		NVRAM access time-out
1103		No NVRAM Acknowledge
1104		NVRAM reply time-out
1201	12	I2C bus busy
1202		I2C bus not working
1203		Slave controller not responding
1204		Slave response is not correct
1301	13	Parity error from basic engine to serial
1302		Parity error from serial to basic engine
1303		No communication between serial and basic engine
1304		Communication time-out error
1601	16	The SDRAM is faulty
5201	52	I2C bus busy
5202		Error sending I2C command to COLOR SETUP IC
5203		Colour setup IC not responding
5204		Colour setup IC response is not correct
5401	54	I2C bus busy
5402		Error sending I2C command to SCART SWITCH IC
5403		SCART Switch is not responding
5403		SCART Switch response is not correct
		CL06532096_006.eps 050700

### Figure 5-37

Error log / bits table	Read ERROR LOG in player script	Read ERROR BITS in player script
Basic engine errors	Value:	Value:
Command to the Basic Engine not allowed in this state or unknown command	150101	8
Parameter(s) from the command to the Basic Engine is not valid	150102	7
Sledge could not be moved to the inner home position	150103	6
Focus failure	150104	5
Turntable motor speed could not be reached within timeout	150105	4
Radial servo could not get on track on the disc	150106	3
PLL could not lock in the accessing or tracking state	150107	2
Subcode or sector information could not be read	150108	1
requested subcode could not be found	150109	16
Tray could not be closed or opened completely	15010A	15
TOC could not be read within timeout	15010B	14
The requested seek on the disc could not be executed	15010C	13
A requested lead-in is not on the disc	15010D	12
A non existing burst cutting area is requested	15010E	11
S2b communication error	1501F0	10
S2b communication error	1501F1	9
S2b communication error	1501F3	24
S2b communication error	1501F4	23
S2b communication error	1501F5	22
Digital PWB errors		
Communication error with the Sti 5505	90000	32
Communication error with the Sti 5505	90001	31
Disply processor errors		
Communication error with the display processor	190000	40

### 5.6.1 Servicing DVD Loader

The DVD Loader / mechanism, VAL6011, has to be exchanged completely in case of failure. A new mechanism can be ordered with codenumber 9305 023 61101.

### 5.6.2 Reprogramming Of New Mono Boards.

### Caution

This information is confidential and may not be distributed. Only a qualified service person should reprogram the mono board.

After reset of NV-memory or repair of the mono board, all the customer settings and also the region code will be lost.

Reprogramming of the mono board will put the player back in the state in which it has left the factory, i.e. with the default settings and the allowed region code. Reprogramming is limited to 25 times When the counter reaches 25, reprogramming is not possible anymore Reprogramming will be done by way of the remote control. Put the player in stop mode, no disc loaded. Press the following keys on the remote control: <**PLAY**> followed by numerical keys <**1**> **<5**> **<9**> The display shows: "-------" Press now successively the following keys :

Press <**PLAY**> again.

The TV screen will become BLUE during a short time to confirm that the mono board has been reprogrammed.

CL 16532007\_108.eps 020501

### Figure 5-38

### 5.6.3 Reset Of Virgin Mode

After the player has been powered up for test by the dealer, it would have gone through the Virgin Mode. It is possible to reset the settings made during that mode before the delivery of player to the customer. This can be done as shown in the following diagram:



CL 96532065\_034.eps 070700

Figure 5-39

### TRADE MODE

When the player is in Trade Mode, the player cannot be controlled by means of the front key buttons, but only by means of the remote control.



GB 27

5.

### 5.7 **Test Instruction Audio/Video Board**

These test instructions can be used for all versions of the A/ V board which has the following outputs:

- Audio L/R
- 5.1 Audio output

5.

- Subwoofer output •
- Optical / Coaxial digital output
- CVBS
- Y/G\_vid,U/B\_vid,V/R\_vid output
- S-video
- Scart output .

### 5.7.1 General

•

- All the waveforms measurement carried out in these test instruction will be base on the testpoint indicated in the A/ V board schematic diagram in the Service manual.
- Impedance of the measuring-equipment should be >  $1M\Omega$
- Most of the tests can be done using either the Diagnostic software "Player script" which can be found in the chapter "Diagnostic Software description and troubleshooting" or the Menu interface using the Service PC with a terminal emulation program (e.g. Window Hyperterminal ) where it is possible to control the execution of the Diagnostic Nuclei
- Setup for the measurement will be done in set level with all modules connected as shown in the Wiring Block diagram.

### **General Start-Up Measurement** 5.7.2

### Supply check:

Before starting the measurement, ensure that all power supply are connected to the A/V board.

Pin nbr	Supply
1010-9	-5V(-Vcc)
1010-10	+5V
1010-11	+5V

The supply currents can be measured using a Tektronics AM503B current probe or equivalent.

Supply	Power consumption (AVG)
+5VA	+5V ± 3% I = 200mA
+5Vvid	+5V ± 3% I = 200mA
-5V	-5V ± 3% I = 200mA

### **Clock Check**

Ensure the present of the clock to the DAC

Clock Name	Testpoint	Frequency
PCM_CLK	TP10	11.2896MHz ± 0.02% tolerance

### Audio Mute Check

Measure the Audio mute voltage input at pin 12 of connector 1010

Status	Value
AudioMuteOn	4.7V ± 10%
AudioMuteOff	-8V ± 10%

To toggle between ON and OFF, use the following commands:

Ref.#	Command Name	Remarks
19a	AudioMuteOn	Audio Mute On
19b	AudioMuteOff	Audio Mute Off

### 5.7.3 Audio DAC And Amplifier

Ensure that the Audio mute signal is OFF To check the DAC and buffer amplifier, send the following commands:

Ref.#	Command Name	Remarks	Audio output
21a	AudioSineOn	Audio Sine signal ON	Sine,1Khz on stereo
	Press stop button	Audio Sine signal OFF	No waveform
20a	AudioPinkNois eOn	Audio Pinknoise ON	Pink Noise on 6 channels
20b	AudioPinkNois eOff	Audio Pinknoise OFF	No waveform

The audio signal ( sine or pink noise ) will also be present on the digital output (SPDIF). This can be checked by connecting digital signal to an amplifier with digital input. Check the I2S and audio signal at the following testpoints:

Name	Testpoint
LRCLK	TP8
SCLK	TP9
PCM_CLK	P10
PCM_OUT0	TP7
PCM_OUT1	TP27
PCM_OUT2	TP28
SPDIF	TP11
Front L/R out-Audio cinch	TP13
H/P L/R out	TP20
Analog out -Audio cinch	TP25

All waveforms can be refer to the waveform diagram in the chapter "Diagnostic software description and troubleshooting".

### Video Output And Buffer Amplifier 5.7.4

Check DC output-level at all video cinch output : 1.0V DC  $\pm$ 10%

Generate a color bar using the following software commands:

Ref.#	Command Name	Remarks
23a	VideoColDencOn	Colour DENC ON
61a	VideoColOutRGB	RGB Colourbar
61b	VideoColOutYUV	YUV Colourbar
23b	VideoColDencOff	Colourbar DENC OFF

Check the video outputs at the following testpoints:

Name	Testpoint
B_VID	TP1
G_VID	TP2
R_VID	TP3
CVBS out	TP14
S-Video-C out	TP15
S-Video-Y out	TP16
Y out	TP17
U out	TP18
V out	TP19

All waveforms can be refer to the waveform diagram in the chapter "Diagnostic Software description and troubleshooting".

### 5.7.5 Play And 16/9 Detection

Check DC voltage at S-Video-chroma output (pin 4) with a 6K8 ohm load and Scart connector (pin 8) and change the 0/6/12 input (1010-8) using the following commands:

Ref.#	Command Name	Remarks	Chroma output
25a	VideoScartLo	Sends out 0V ± 0.5V	<0.1V
25b	VideoScartMi	Sends out 6V ± 10%	2.0V ± 10% with load
			5.0V ± 10% without load
25c	VideoScartHi	Sends out 12V ± 10%	<0.1V

### 5.7.6 Kill Circuit

To check the functionality of the Kill circuitry,the audio outputs has to be present by the following command:

Ref.#	Command Name	Remarks	Audio output
21a	AudioPinkNois	Audio Pinknoise	Pink Noise on 6
	eOn	ON	channels

Check the audio outputs at the audio cinch of the A/V board : Pink Noise

Activate the Kill circuit by using the following command:

Ref.#	Command Name	Remarks
19a	AudioMuteOn	Audio Mute On

Check the audio outputs at the audio cinch of the A/V board : No waveform

Switch off the kill circuit by using the following command:

Ref.#	Command Name	Remarks
19b	AudioMuteOff	Audio Mute Off

Check the audio outputs at the audio cinch of the A/V board : Pink Noise

### 5.8 Test Instructions Display Board

### 5.8.1 Introduction

These test instructions are written for all versions of the display PCBAS.

The contents of the PCB can be split up into next blocks:



Figure 5-41

### 5.8.2 Functionality Description:

The essential component of the display PCB is the  $\mu$ P (slave). This slave works on an 8MHz resonator and has a reset circuit that is triggered by the +5Vstby. After the reset pulse, the standby control line will release the reset of the host  $\mu$ P. This host  $\mu$ P will then initialise the slave. In addition, when going to stand-by, the slave will put the host  $\mu$ P in reset. When the slave receives the right IR or key code to leave the standby mode, the reset of the host  $\mu$ P will be released. Other slave functions are:

- Square signal generator to generate the filament voltage, which is required for an AC FTD.
- Generates the grid and segment scanning for the FTD.
- Generates a scanning grid for the keys (separated from display scanning).
- Has inputs for RC (RC5 and RC6) and P50 (P50 controller is built in).

### 5.8.3 General

- Oscilloscope measurements have been carried out using a Philips PM3392A.
- Impedance of measuring-equipment should be > 1MΩ.
- To do correct measurements we recommend to use supply 3122 427 22600.

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### 5.8.4 Reset

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Check next reset timing with an oscilloscope at pin 10 of the microprocessor.



Figure 5-42

Timing: 400msec < T1 > 700msec. CH1: +5Vstby voltage at power on. CH2: Voltage at pin 10.

### 5.8.5 **Display Steering**

Check next timing and level for all grid-lines (G1 r G14).





- Check level A: +4V5 +/-10% for grid lines 1 => 11 1.
- Check level A: +4V0 +/-10% for grid lines 12 => 14 2.

З. Check level B: -33V +/-10%

Check timing and levels of segment-lines P1 => P10: 4



Figure 5-44

Level A:+4V5 +/-10%

Level B:-33V +/-10%

The data on these segment lines depend on the characters that are displayed.

The characters can be set by sending I2C commands to the display.

See the Slave URS how to send a display command.

### 5.8.6 Key-Matrix

Connect a extra 10k $\Omega$  pull-up to pin 36 en 37 of the  $\mu P$  and check next matrix scanning at these pins.



### Figure 5-45

Level A: 5.0V +/-7% Level B: 0V +/-200mV Check matrix scanning from pin 26 until 33 of the  $\mu$ P. The results should be the same as the diagram above.

### 5.8.7 I.R. Receiver

Check at pin 23 of the  $\mu$ P if this line switches from low (< 0.3V) to high (> 4.5V), while pressing a key on a Philips RC5 or RC6 remote control.

### 5.8.8 Karaoke Interface

The karaoke interface (4 lines) is a single direction communication.

This means that it consists of four µP output lines. The interface can be checked by setting or resetting these output-ports via the I2C bus.

Send next command via the I2C bus: Address 0x70 : Command byte 0x24 Data byte : xxxxabcd Where : a = Karaoke reset. : b = Karaoke data. c = Karaoke clock. d = Karaoke strobe.

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### 5.8.9 P50 Interface

P50 is a bi-directional serial interface, which is used for communication between video equipment. For European sets, this communication goes via pin 10 of the scart-bus. In other regions, it can be a cinch bus at the back of the set.

- 1. Keep the  $\mu$ P in reset by short-circuiting emitter and collector of transistor 7108, via resistor 3100 and 3104 transistor 7101 is switched on.
- 2. Check the voltage at the P50 output connector 1118-5: < 200mV.

When the reset is released the  $\mu \text{P}$  output-pin becomes low and transistor 7101 is switched off.

- Check the voltage at the P50 output connector 1118-5: 1. 4V9 +/-5%.
- 2. Check also the  $\mu$ P P50 input ( $\mu$ P pin 20): 5V +/-5%.
- 3. Connect the P50 line (connector 1118-5) to ground.
- 4. Check again the  $\mu$ P P50 input ( $\mu$ P pin 20): <0V3.

### 5.9 Troubleshooting

### Troubleshooting A/V board 5.9.1

Testing of A/V board can be done using diagnostic software "PLAYER SCRIPT". MONO board is used to generate a sound with the sound

tests SND-1 and SND-2 or a VIDEO signal with the picture PIC-1. See description in the chapter of "DIAGNOSTIC SOFTWARE: SCRIPT INTERFACES".

### AUDIO PART OF AUDIO/VIDEO BOARD 3139 243 30261



### AUDIO WAVEFORM MEASUREMENT





050201

### AUDIO PART OF AUDIO/VIDEO BOARD 3139 243 30261



CH1 200mV~

TP 21: DIGITAL OUT

MTB 200ns

CL 16532007\_112.eps 090501 5.

VIDEO PART OF AUDIO/VIDEO BOARD 3139 243 30261



### VIDEO WAVEFORM MEASUREMENT









TP 2 : VIDEO G

РМЗЗ9



















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	TP 18 :	U_VI	D OUT							

### TROUBLESHOOTING POWER SUPPLY UNIT VFM WR



### 8. Alignments

No electrical alignments available

### 9. Circuit Descriptions And List Of Abbreviations

### 9.1 Current Mode Power Supply

### 9.1.1 Introduction

The switch mode power supply (SMPS) is mains isolated. The control IC 7145 (UC 3842A) produces pulses to drive the power switch, Mosfet 7125. Power supply regulation is achieved by using duty cycle control at fix frequency ,of approximately 58KHz ,determined by the RC timing components.

### 9.1.2 General Description of UC 3842C

The UC 3842 is a high performance fixed frequency current mode controller that is specifically designed for off-line and

### 9.1.3 Block Diagram

DC-to-DC converter application. This integrated circuit feature a trimmed oscillator for precise duty cycle control, a temperature compensated reference, high gain error amplifier, current sensing comparator and a high current totem pole output ideally suited for driving a power MOSFET. Also included are protective features consisting of input and reference undervoltage lockouts each with hysteresis, cycle by cycle current limiting, programmable output deadtime and a latch for single pulse metering.

A representative Block diagram and Pin function description is shown in Fig 9-1 and Fig 9-2 respectively.



Figure 9-1

### 9.1.4 **Pin Function Description**

9.

Pin			
8–Pin	14–Pin	Function	Description
1	1	Compensation	This pin is Error Amplifier output and is made available for loop compensation.
2	3	Voltage Feedback	This is the inverting input of the Error Amplifier. It is normally connected to the switching power supply output through a resistor divider.
3	5	Current Sense	A voltage proportional to inductor current is connected to this input. The PWM uses this information to terminate the output switch conduction.
4	7	R <sub>T</sub> /C <sub>T</sub>	The Oscillator frequency and maximum Output duty cycle are programmed by connecting resistor $R_T$ to $V_{ref}$ and capacitor $C_T$ to ground. Operation to 500 kHz is possible.
5	-	Gnd	This pin is the combined control circuitry and power ground (8-pin package only).
6	10	Output	This output directly drives the gate of a power MOSFET. Peak currents up to 1.0 A are sourced and sunk by this pin.
7	12	Vcc	This pin is the positive supply of the control IC.
8	14	V <sub>ref</sub>	This is the reference output. It provides charging current for capacitor $C_{T}$ through resistor $R_{T}\!\!\!\!\!\!$
-	8	Power Ground	This pin is a separate power ground return (14-pin package only) that is connected back to the power source. It is used to reduce the effects of switching transient noise on the control circuitry.
-	11	vc	The Output high state (V <sub>OH</sub> ) is set by the voltage applied to this pin (14-pin package only). With a separate power source connection, it can reduce the effects of switching transient noise on the control circuitry.
-	9	Gnd	This pin is the control circuitry ground return (14-pin package only) and is connected back to the power source ground.
-	2,4,6,13	NC	No connection (14-pin package only). These pins are not internally connected.
			CL06532096_011.eps 060700

### Figure 9-2

### 9.1.5 **Pin Connection**



### Figure 9-3

### **Output Voltages** 9.1.6

- +12V (For Display board, Monoboard, A/V board ) created via D6241, C2240, L5240, C2232 (This voltage is also present during standby)
- +5V\_stdby (For Display board, Standby PCB, Monoboard ) created from +6V via R3233 and D6233 (This voltage is also present during standby)
- +6V\_stdby (Reserve) created from D6230, C2230, L5231 (This voltage is also present during standby)
- +5V (For Monoboard, A/V board) derive from +6V stdby via Mosfet 7238, C2239 and it will be switch off via R3235, T7235 during Standby.
- -5V (For Monoboard, A/V board) created from D6250, C2250, C2259, L5222, R3259, T7255 regulator circuit and will switch off via R3258, T7257 during standby (control signal Standby is HIGH)

- 3V3 (For Monoboard, A/V board ) The 3V3 power supply is regulated by the control loop comprising of 7201, 7131 and 7145 of the switch mode PSU. This voltage is also present during standby
- -40V (For Display board) created via D6261,R3260, L5260, C2260 This will not be present during standby

### 9.2 **Control Cicuitry**

### **Mains Input Circuit** 9.2.1

The mains voltage is rectified by bridge rectifier (D6118 to D6121) and filter by C2121. The DC voltage across C2121is the DC input voltage ,approximately 300V, is the DC input to pin 1 of transformer T5131. The mains input also consists of a lighting protection R3120.

### 9.2.2 Start-Up And Takeover Circuitry

The start-up circuitry consist R3123, R3134, R3111, D6129, C2134 and with the mains voltage input, the C2134 will charge via R3123 and R3134. When the voltage at pin 7 of IC7145 reaches the start-up threshold of min 14.5V, IC7145 will start-up and the control circuit start to operate. After start-up, the max sinking current of 17mA is required by IC7145 which is not able to be delivered by the start-up circuitry, so the takeover circuitry must be present. If the takeover circuit does not occurred, the supply voltage at pin 7 will decrease gradually till it reaches the IC7145 minimal operating voltage of 8.5Vand the IC will switch off. The whole operation cycle will repeat itself with audible hiccup sound if takeover is not present.

The takeover circuit comprises of D6133, R3135, I5135, C2134. During the control circuit start-up, the voltage across winding pin 7 and 9 will gradually built up and charged C2134

via D6133, R3135 which will takeover the supply voltage of T7145 at pin 7.

### 9.2.3 Secondary Voltage Sensing

The secondary voltage regulating circuit comprise of the opto-coupler 7131 which isolate the error signal from the control IC7145 ,on the primary side, and a reference component 7201 (TL431). The 7201 can be represented by two components:

- A very stable and accurate reference diode
- A high gain amplifier





When the output voltage increases, due to a reduction in the load, the voltage across R3205 and R3206 increases to above the internal reference voltage of about 2.5V then TL431 conduct. The current through the opto-coupler 7131 will increase due to the fact that the series resistor in 7201 decreases. This result in a increase of voltage to pin 2 of IC7145, thus reducing the on-time of FET 7125. In the event of a decrease in output voltage (increase in load ),the control circuit will operate in the opposite way to the explaination above.

### 9.2.4 Primary Current Sensing

The current through the FET 7125 resulting in a voltage drop across R3126,R3127,R3128 which is couple to pin 3 of IC7145, current sense input. The higher the input voltage, the more the primary current is limited. In this way the maximum output power of the power supply is limited.

### 9.2.5 Undervoltage Protection

Two undervoltage lockout comparators have been incorporated to guarantee that the IC7145 is fully functional before the output stage is enable. The supply voltage at pin 7 and reference voltage at pin 8 of IC7145 are each monitored by separate comparators with built-in hysteresis. If the supply voltage at pin 7 of IC7145 drops below 10V ( typical ), due to a secondary voltage is short-circuit or excessive load, the drive pulse at pin 6 of IC7145 will be disabled and the controller will switch off the complete SMPS.

Remarks : In the event of the overvoltage situation remaining present, the SMPS will go in sequence of protection, start- up cycle, protection and the cycle repeats. This effect is highly audible.

### 9.2.6 Overvoltage Protection

The overvoltage circuitry comprising of D6141,R3139, R3150, R3141, T7141, T7150 which is used to detect an over voltage situation on the secondary side of the transformer. After start-up, when the voltage across C2135 exceeds 18V, the overvoltage circuit will trigger the internal latch circuit, pin 1 of IC7145 and the output buffer is disabled and it goes into the overvoltage protection and a complete restart sequence is required.

### 9.3 **List Of Abbreviations**

В	Buffered Video input Blue from DVD
BC_AUX	Blue or Chroma input from AUX-
	Blue or Chrome output to TV coart
C_ENC	Buffered Chroma input from DVD monoboard
CVBS	Buffered Composite video input from DVD monoboard
DC_OFF	Control signal to switch off û8Vstby and +12Vstby during standby
	Digital out
	East blanking input from ALIX agent
FBIN_AUX	
FBOUI_IV	Fast blanking output to IV-scart
G	DVD monoboard
GIN AUX	Video input Green from AUX-scart
GOUT TV	Video output Green to TV-scart
HP I	Audio output left to headphone and
· · · _ <b>E</b>	audio couput left to fleadphone and
HP_R	Audio output right to headphone and
	audio scart switch TEA6420
KILL	Kill control signal for audio outputs
	and for soft mute of DAC
LIN AUX	Audio input left from ALIX-scart
	Audio input left from TV-scart
	Audio autout left to ALIX soort
	Audio output left to AOA-scart
	Audio output left to TV-scart
LRCLK	Left/Right clock
PCM_CLK	Audio system clock for DAC
PCM_OUT0	Audio serial output data
R	Buffered Video input Red from DVD monoboard
RCIN TV	Red or Chroma input from TV-scart
BCOUT TV	Bed or Chroma output to TV-scart
	Audio input right from ALIX-scart
	Audio input right from TV-scart
	Audio autout right to ALIX apart
	Audio output right to TV seart
ROUI_IV	Audio output right to IV-scart
SCL	I2C bus clock
SCLK	Audio serial bit clock
SDA	I2C bus data
SELECT	Control signal for video scart
	switches; high = TV ,low = AUX
SELECT_HIGH	Control signal for switching fast
	blanking and slow blanking signals;
	high = TVlow = AUX
SLB AUX	Slow blanking control signal from
—	AUX-scart
SLB TV	Slow blanking control signal to TV-
012_11	scart
STANDBY	Control signal from STI5505 used to
on meet	swith off û9Vetby and 12Vetby
	during standby
STERES I	Audio sinch autout left
STEREO_L	Audio cinch output leit
STEREO_R	Audio cinch output right
Y_ENC	Buffered Luma input from DVD
	monoboard
YCVBSIN_AUX	Luma or CVBS input from AUX-scart
YCVBSIN_TV	Luma or CVBS input from TV-scart
YCVBSOUT_AUX	Luma or CVBS output to AUX-scart
YCVBSOUT TV	Luma or CVBS output to TV-scart
0/6/12	Scart switch control signal A/V
	board, OV : loop through (AUX to
	TV) 6V : play 16:9 format 12V : play
	4:3 format
	T.O IOIIIIat

### 10. Spare Parts List

Mech	nanical		2217	4822 126 14305	100nF 10% 16V 0603	3150	4822 117 12968	820Ω 5% 0.62W
Vario	16		2218	4822 126 14494	22nF 10% 25V 0603 22nF 10% 25V 0603	3151	4822 051 30472	4k7 5% 0.062W 680Ω 5% 0.062W
variot	13		2220 2221	4822 124 40207 4822 126 14305	100µF 20% 25V 100nF 10% 16V 0603	3202 3203	4822 051 30681 4822 051 30681	680Ω 5% 0.062W 680Ω 5% 0.062W
0010	3139 247 53081	CAB FRONT DVD733K/	2222	3198 017 41050	0603 10V 1µF COL R	3204	4822 116 52195	47Ω 5% 0.5W
0015	4822 459 10887		2223	4822 126 14494 4822 126 14494	22nF 10% 25V 0603 22nF 10% 25V 0603	3205	4822 051 30472	4k7 5% 0.062W
0030	3139 247 53141	WINDOW DVD733K/69X PPT	2225	4822 124 40207	100μF 20% 25V	3207	4822 117 11152	4Ω7 5% 10k 5% 0.062W
0035	3139 247 50950	RING DVD751/00X PNT	2227	4822 124 11947	10μF 20% 16V	3210	4822 051 30103	10k 5% 0.062W
0040	3139 247 50880	BTN CONTROL DVD751/	2228	3198 016 31020 4822 122 31765	0603 25V 1nF 100pE 2% 63V	3211 3212	4822 051 30272	2k7 5% 0.062W
0045	2120 240 00020		2230	3198 016 31020	0603 25V 1nF	3213	4822 051 30272	2k7 5% 0.062W
0045	3139 247 50940	DOOR DVD751/00X PNT	2231 2232	4822 126 14305 4822 124 11947	100nF 10% 16V 0603 10uF 20% 16V	3214 3215	4822 051 30333 4822 051 30681	33k 5% 0.062W 680Ω 5% 0.062W
0060	3139 241 20110	PRT DOOB SPBING	2233	4822 122 33777	47pF 5% 63V	3216	4822 051 30272	2k7 5% 0.062W
0200	3139 247 53291	FRONT ASSY DVD733K/	2234 2235	4822 126 14305 4822 122 33777	100nF 10% 16V 0603 47pF 5% 63V	3217 3219	4822 051 20008 4822 051 30333	0Ω jumper . (0805) 33k 5% 0.062W
0205	3139 247 53161	69X BTN POWEB DVD733K/	2236	4822 124 40207	100μF 20% 25V	3220	4822 051 30681	680Ω 5% 0.062W
		69X PPT	2237	4822 124 80791	470μF 16V 20% 105C DXH=8X11.5	3221	4822 116 52263 4822 051 20008	2k7 5% 0.5W 0Ω jumper . (0805)
0208 0224	3139 247 53881 3139 247 53341	BACK PLATE DVD733K PP1	2240	4822 126 14305	100nF 10% 16V 0603	3223	4822 051 30272	2k7 5% 0.062W
0000	0100 017 50001		2241	4822 120 14303	10μF 20% 16V	3226	4822 051 30103	10k 5% 0.062W
0232	313924753221	PPT	2243 2244	4822 124 80231	47μF 20% 16V 100pE 10% 16V 0603	3227 3228	4822 051 30272	2k7 5% 0.062W
0244	3139 247 50750	FOOT ASSY DVD711	2245	4822 124 11947	10μF 20% 16V	3229	4822 051 30272	2k7 5% 0.062W
0245	4822 321 11139	POWER CORD	2246 2247	4822 124 80231 4822 126 14305	47μF 20% 16V 100nF 10% 16V 0603	3230 3231	4822 051 30103 4822 117 12902	10k 5% 0.062W 8k2 1% 0.063W 0603
0381	2422 076 00304	CABLE CINCH/CINCH	2248	4822 124 80231	47μF 20% 16V	3232	4822 051 30472	4k7 5% 0.062W
0384	3139 228 87041	PROD.ASSY RC19137001/	2249 2250	4822 126 14305 4822 124 40207	100nF 10% 16V 0603 100uF 20% 25V	3233 3234	4822 051 30103 4822 051 30101	10k 5% 0.062W 100Ω 5% 0.062W
0387	3139 246 10861	01 PACKED	2251	5322 126 11578	1nF 10% 50V 0603	3235	4822 051 30101	100Ω 5% 0.062W
1014	4822 320 12674	CWAS FFC BD 22P 14P	2252 2253	5322 126 11578 4822 124 40207	1nF 10% 50V 0603 100μF 20% 25V	3236	4822 051 30689	68Ω 5% 0.063W 0603 RC21 RST SM
1018	3139 110 34230	FFC FOIL 16P/105/16P BD B	2254	5322 126 11578	1nF 10% 50V 0603	3237	4822 117 11152	4Ω7 5%
1022	3139 110 35501	FFC FOIL 08P/180/08P	2255	4822 126 14305	100HF 10% 16V 0603	3238	4822 051 30472 4822 117 13632	4k7 5% 0.062W 100k 1% 0603 0.62W
		1MMP BD				3240 3241	4822 051 30271	270Ω 5% 0.062W
	WB		3101	4822 051 30101	1000 5% 0.062W	3242	4822 051 30759	75Ω 5% 0.062W
	W B		3102	4822 051 30103	10k 5% 0.062W	3243 3244	4822 117 12968 4822 051 30682	820Ω 5% 0.62W 6k8 5% 0.062W
Variou	IS		3103 3104	4822 051 30101 4822 051 30682	100Ω 5% 0.062W 6k8 5% 0.062W	3245	4822 051 30222	2k2 5% 0.062W
1000	2422 025 16525	CON BM V 16P F 1 00 FEC	3105	4822 117 12968	820Ω 5% 0.62W	3246 3247	4822 051 30472 4822 051 30681	4k7 5% 0.062W 680Ω 5% 0.062W
1000		0.3 R	3106 3107	4822 051 30222 4822 051 30472	2k2 5% 0.062W 4k7 5% 0.062W	3248	4822 051 30759	75Ω 5% 0.062W
1003 1005	4822 267 10994 2422 026 05047	4P, MDIN CON BM CINCH H 6P F	3108	4822 051 30681	680Ω 5% 0.062W	3249 3250	4822 051 30222 4822 051 30103	10k 5% 0.062W
1000		RDWHYE B	3110	4822 051 30223	2k2 5% 0.062W	3251	4822 116 52238	12k 5% 0.5W
1006	2422 026 05049 2422 025 16526	CON BM CINCH H 3P F CON BM V 22P F 1.00 FFC	3112	4822 117 12902	8k2 1% 0.063W 0603	3253	4822 051 30479	47Ω 5% 0.062W
1011	4000 007 01700	0.3 R	3114	4822 051 30223	75Ω 5% 0.062W	3254 3255	4822 051 30101	100Ω 5% 0.062W 100Ω 5% 0.5W
1011	4822 267 31729		3115 3116	4822 051 30101	100Ω 5% 0.062W 270Ω 5% 0.062W	4xxx	4822 051 10008	0Ω 5% 0.25W (1206)
1013	4822 267 10574	CON BM V 8P 2.50	3117	4822 051 30759	75Ω 5% 0.062W	4xxx	4822 051 20008	0Ω 5% 0.25W (0805)
1014	2422 023 10333	0.3 B	3118 3119	4822 051 30101 4822 051 30222	100Ω 5% 0.062W 2k2 5% 0.062W			
			3120	4822 051 30682	6k8 5% 0.062W	5100	1000 040 10750	D00000 00//50001M100
⊣⊩			3121	4822 051 30472	4k7 5% 0.062W	5100	4822 242 10756 4822 242 10756	DSS306-92Y5S221M100 DSS306-92Y5S221M100
2100	4822 124 40184	1000μF 20% 10V	3123	4822 051 30681	680Ω 5% 0.062W	5102 5200	4822 242 10756	DSS306-92Y5S221M100
2102	4822 124 40207	0603 10V 470hF COL 100μF 20% 25V	3125	4822 051 30759	75Ω 5% 0.062W	5200	4822 242 10756	DSS306-92Y5S221M100
2104	4822 126 13883	220pF 5% 50V	3126 3127	4822 051 30222 4822 051 30271	2k2 5% 0.062W 2700 5% 0.062W	5202	4822 242 10756	DSS306-92Y5S221M100
2105	4822 126 13883	100μF 20% 25V	3128	4822 051 30101	100Ω 5% 0.062W	→⊢		
2109	4822 124 40207	100μF 20% 25V 100μF 20% 25V	3129 3130	4822 051 30682 4822 051 30101	6k8 5% 0.062W 100Ω 5% 0.062W			
2112	4822 124 40207	100μF 20% 25V	3131	4822 051 30759	75Ω 5% 0.062W	6100 6101	4822 130 11522 4822 130 11522	UDZ15B UDZ15B
2200 2201	4822 126 14305 4822 124 81286	100nF 10% 16V 0603 47uF 20% 16V	3132	4822 117 12968 4822 051 30222	2k2 5% 0.062W	6102	4822 130 11522	UDZ15B
2202	4822 124 81286	47μF 20% 16V	3134	4822 051 30472	4k7 5% 0.062W	6103	4822 130 11522 4822 130 11522	UDZ15B UDZ15B
2203 2204	4822 126 14305 4822 124 40207	100nF 10% 16V 0603 100μF 20% 25V	3136	4822 051 30081	270Ω 5% 0.062W	6203	4822 130 11522	UDZ15B
2205	4822 124 40207	100µF 20% 25V	3137 3138	4822 051 30101	100Ω 5% 0.062W 6k8 5% 0.062W	0204	4022 130 11522	002150
2206	4822 124 81286 4822 126 14305	47μF 20% 16V 100nF 10% 16V 0603	3139	4822 117 12968	820Ω 5% 0.62W	-®E		
2208	4822 124 11947	10µF 20% 16V	3140 3141	4822 051 30101 4822 051 30759	100Ω 5% 0.062W 75Ω 5% 0.062W	7200	9352 640 7/119	
2210	4822 126 14305	100nF 10% 16V 0603	3142	4822 051 30222	2k2 5% 0.062W	. 200		(PHSE) R
2211 2212	4822 124 40207	100μF 20% 25V 0603 25V 1nF	3143 3144	4822 051 30472 4822 051 30681	4κ7 5% 0.062W 680Ω 5% 0.062W	7201 7202	4822 209 30095 4822 209 30095	LM833D LM833D
2213	4822 126 14305	100nF 10% 16V 0603	3145	4822 051 30271	270Ω 5% 0.062W	7203	4822 209 16978	LF33CV
2214 2215	4822 122 31765 3198 016 31020	100pF 2% 63V 0603 25V 1nF	3146	4822 051 30153 4822 051 30271	13k 5% 0.062W 270Ω 5% 0.062W	7204 7205	4822 130 10845 4822 209 30095	GP1F321 LM833D
2216	4822 124 11947	10μF 20% 16V	3148	4822 051 30101	100Ω 5% 0.062W	7206	9352 670 99118	IC SM UDA1361TS/N1
			3149	4022 001 30682	UND 3 70 U.UDZVV			(FUSE) K

7410	4822 130 60511	BC847B	3118	4822 051 30103	10k 5% 0.062W			
7411	4822 130 60511	BC847B	3119	4822 051 30103	10k 5% 0.062W			
7412	4822 130 60511	BC847B	3120	4822 051 30471	470Ω 5% 0.062W			
7413	4822 130 60373	BC856B	3121	4822 051 30472	4K7 5% 0.062W	3111	4822 116 521/6	10Ω 5% 0.5W
7414	4022 130 00511	BC847B BC847B	3122	4622 051 30109	10k 5% 0.062W	31204	2122 550 00147	VDR DC 1M A/423V S MAX
7416	4822 130 60511	BC847B	3125	4822 051 30109	100.5% 0.062W	3122	4822 117 13515	207 3W AC03 WW
7417	4822 130 60373	BC856B	3130	4822 051 30109	10Ω 5% 0.062W	3123	4822 116 52264	27k 5% 0.5W
7418	4822 130 60511	BC847B	3132	4822 051 30331	330Ω 5% 0.062W	3125	4822 051 20223	22k 5% 0.1W
7419	4822 130 60511	BC847B	3133	4822 051 30109	10Ω 5% 0.062W	3126	4822 116 81801	3Ω6 5% 0.5W
7420	4822 130 60373	BC856B	3134	4822 051 30331	330Ω 5% 0.062W	3127	4822 116 80176	1Ω 5% 0.5W
7421	4822 130 60511	BC847B	3135	4822 051 30221	220Ω 5% 0.062W	3128	4822 116 80176	1Ω 5% 0.5W
7422	4822 130 60511	BC847B	3136	4822 051 30102	1K 5% 0.062W	3131	4822 051 10274	270k 2% 0.25W
7423 7494	4822 130 60573	BC847B	3137	4822 051 30103	4700 5% 0.062W	31324	4822 052 11108	112 5% 0.5W
7425	4822 130 60511	BC847B	3139	4822 051 30472	4k7 5% 0.062W	3135	4822 116 52182	15Ω 5% 0.5W
7426	4822 130 60511	BC847B	3140	4822 051 30103	10k 5% 0.062W	3136	4822 051 10274	270k 2% 0.25W
7427	4822 130 60373	BC856B	3142	4822 051 30331	330Ω 5% 0.062W	3137	4822 117 10837	100k 1% 0.1W
7501	4822 130 42804	BC817-25	3143	4822 051 30103	10k 5% 0.062W	3139	4822 051 20479	47Ω 5% 0.1W
7502	4822 130 42804	BC817-25	3144	4822 117 13632	100k 1% 0603 0.62W	3140	4822 116 52226	560Ω 5% 0.5W
7503	4822 130 60511	BC847B BC817.25	3146	4822 051 30103	10k 5% 0.062W	3141	4822 117 11507	6K8 1% 0.1W
7504	4822 130 42004	BC847B	3147	4822 051 30103	1000 5% 0.062W	3143	1822 117 10065	30K 5% 0.1W 0805
7506	4822 130 42804	BC817-25	3149	4822 051 30101	100Ω 5% 0.062W	3145	4822 117 10903	56k 1% 0 1W
7507	4822 130 42804	BC817-25	3151	4822 051 30101	100Ω 5% 0.062W	3150	4822 117 11139	1k5 1% 0.1W
7508	4822 130 60511	BC847B	3157	4822 051 30008	0Ω jumper	3153	4822 116 83933	15k 1% 0.1W
7509	4822 130 60373	BC856B	3158	4822 051 30008	0Ω jumper	3154	4822 117 11139	1k5 1% 0.1W
7510	4822 130 60511	BC847B	3159	4822 051 30472	4k7 5% 0.062W	3155	4822 116 52219	330Ω 5% 0.5W
7511	4822 130 60511	BC847B				3156	4822 051 20339	33Ω 5% 0.1W
7512	4822 130 42804	BC817-25	-▶ -			3201	4822 116 521/6	1002 5% 0.5W
						3202	4822 051 20479	470 5% 0 1W
Fron	t PWB		6101	9965 000 04709	UDZ6.2BTE-17	3204	4822 117 11504	270Ω 1% 0.1W
-	-		6102	4822 130 10837	UDZS8.2B	3205	4822 117 11145	4k7 1% 0.1W
Vario	IC .		6200	4822 130 11397		3206	4822 051 20391	390Ω 5% 0.1W
variot	15		0200	4022 130 02970	LIE-TORFE-F	3207	4822 051 10102	1k 2% 0.25W
0002	3139 244 01321	FTD HOLDER DVD712		عم		3233	4822 052 10228	2Ω2 5% 0.33W
1100	4822 276 13775	SWITCH	₩			3235	4822 116 83933	15k 1% 0.1W
1101	4822 276 13775	SWITCH	7104	2104 102 04522		3255	4822 001 30223	22K 5% 0.062W
1102	4822 276 13775	SWITCH	7104	3104 123 94552	V2 18-DVDSI AVE	5255	5522 117 15049	BC22H
1106	4822 276 13775	SWITCH	7105	4822 130 40981	BC337-25	3256	4822 051 30681	680Ω 5% 0.062W
1107	4822 276 13775	SWITCH	7106	4822 130 40854	BC327	3257	5322 117 13053	6k8 1% 0.063W 0603
1100	4822 276 13775	SWITCH	7107	4822 130 60511	BC847B			RC22H
1110	2422 540 98423	RES CER 8MHz	7108	4822 130 60511	BC847B	3258	4822 051 30103	10k 5% 0.062W
		CSTS*MHz 03	7109	4822 130 60373	BC856B	3259	4822 051 20102	1k 5% 0.1W
			7440	1000 100 10105	0.0411001/0	0000	4000 054 00404	1000 50/ 0 114/
1113	3139 240 50051	FTD 11-MT-126GNYK	7110	4822 130 10165	GP1U28XP	3260	4822 051 20101	100Ω 5% 0.1W
1113	3139 240 50051	FTD 11-MT-126GNYK DVD702	7110 7112	4822 130 10165 4822 209 31257	GP1U28XP MC79L24ACP	3260 3262 3263	4822 051 20101 4822 116 83872 4822 116 52249	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0 5W
1113 1115	3139 240 50051 2422 025 12482	FTD 11-MT-126GNYK DVD702 CON BM V 6P M 2.50 EH B	7110 7112	4822 130 10165 4822 209 31257	GP1U28XP MC79L24ACP	3260 3262 3263 4xxx	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206)
1113 1115 1117 1118	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637	FTD 11-MT-126GNYK DVD702 CON BM V 6P M 2.50 EH B 4P 85B-PH-K (5P)	7110 7112 <b>PSU</b>	4822 130 10165 4822 209 31257 <b>PWB</b>	GP1U28XP MC79L24ACP	3260 3262 3263 4xxx 4xxx	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805)
1113 1115 1117 1118 1120	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637 2422 128 02939	CON BM V 6P M 2.50 EH B 4P B5B-PH-K (5P) SWI PUSH 2P 100MA 30V	7110 7112 <b>PSU</b>	4822 130 10165 4822 209 31257 <b>PWB</b>	GP1U28XP MC79L24ACP	3260 3262 3263 4xxx 4xxx	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805)
1113 1115 1117 1118 1120	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637 2422 128 02939	CON BM V 6P M 2.50 EH B 4P B5B-PH-K (5P) SWI PUSH 2P 100MA 30V SPEC12 B	7110 7112 PSU Variou	4822 130 10165 4822 209 31257 PWB	GP1U28XP MC79L24ACP	3260 3262 3263 4xxx 4xxx	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805)
1113 1115 1117 1118 1120 1205	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637 2422 128 02939 4822 267 10567	CON BM V 6P M 2.50 EH B 4P B5B-PH-K (5P) SWI PUSH 2P 100MA 30V SPEC12 B 4P	7110 7112 PSU Variou	4822 130 10165 4822 209 31257 PWB	GP1U28XP MC79L24ACP	3260 3262 3263 4xxx 4xxx	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805)
1113 1115 1117 1118 1120 1205	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637 2422 128 02939 4822 267 10567	CON BM V 6P M 2.50 EH B 4P B5B-PH-K (5P) SWI PUSH 2P 100MA 30V SPEC12 B 4P	7110 7112 <b>PSU</b> Variou	4822 130 10165 4822 209 31257 <b>PWB</b> Is 4822 265 20723	GP1U28XP MC79L24ACP B2P3-VH	3260 3262 3263 4xxx 4xxx 5121	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 157 53348	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY
1113 1115 1117 1118 1120 1205	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637 2422 128 02939 4822 267 10567	CON BM V 6P M 2.50 EH B 4P B5B-PH-K (5P) SWI PUSH 2P 100MA 30V SPEC12 B 4P	7110 7112 PSU Variou 0101A 0120A	4822 130 10165 4822 209 31257 <b>PWB</b> Is 4822 265 20723 4822 265 11253	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P	3260 3262 3263 4xxx 4xxx 5121 <b>A</b>	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 157 53348	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3
1113 1115 1117 1118 1120 1205 <b>-II-</b>	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637 2422 128 02939 4822 267 10567	CON BM V 6P M 2.50 EH B 4P B5B-PH-K (5P) SWI PUSH 2P 100MA 30V SPEC12 B 4P	7110 7112 PSU Variou 0101A 0120A 0205	4822 130 10165 4822 209 31257 <b>PWB</b> Is 4822 265 20723 4822 265 11253 2422 025 08333	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH	3260 3262 3263 4xxx 4xxx 5121 <b>A</b> 5125	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 157 53348 4822 157 53348	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z
1113 1115 1117 1118 1120 1205 <b>-II-</b> 2105	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637 2422 128 02939 4822 267 10567 4822 126 14549	00510 MII 200 FTD 11-MT-126GNYK DVD702 CON BM V 6P M 2.50 EH B 4P B5B-PH-K (5P) SWI PUSH 2P 100MA 30V SPEC12 B 4P 33nF 16V O6O3	7110 7112 <b>PSU</b> Variou 0101A 0120A 0205	4822 130 10165 4822 209 31257 <b>PWB</b> IS 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B	3260 3262 3263 4xxx 4xxx 5121 <b>A</b> 5125 5131 <b>A</b>	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 157 53348 4822 157 53348 4822 157 11411 3128 138 39631	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4
1113 1115 1117 1118 1120 1205 <b>-II-</b> 2105 2106	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637 2422 128 02939 4822 267 10567 4822 126 14549 4822 126 14549 4822 126 14549	33nF 16V O6O3           100µF 20% 25V	7110 7112 <b>PSU</b> Variou 0101 <u>A</u> 0120 <u>A</u> 0205 0209	4822 130 10165 4822 209 31257 <b>PWB</b> IS 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2 5A)	3260 3262 3263 4xxx 4xxx 5121 <b>A</b> 5125 5131 <b>A</b>	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 157 53348 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27uH
1113 1115 1117 1118 1120 1205 <b>-II-</b> 2105 2106 2107	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637 2422 128 02939 4822 267 10567 4822 126 14549 4822 126 14549 4822 124 40207 3198 024 44730	33nF 16V O6O3           100µF 20% 25V           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603	7110 7112 <b>PSU</b> 0101 <b>A</b> 0120 <b>A</b> 0205 0209 1120 <b>A</b>	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A)	3260 3262 3263 4xxx 4xxx 5121 <b>A</b> 5125 5131 <b>A</b> 5135 5210	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27μH IND FXD LHL08 S 6U8
11113 1115 1117 1118 11205 -II- 2105 2106 2107 2108	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730	33nF 16V O6O3           100µF 20% 25V           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603	7110 7112 PSU Variou 0101A 0120A 0205 0209 1120A	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 20723 2422 025 08333 2422 025 08333 2422 025 12482 4822 253 30383	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A)	3260 3262 3263 4xxx 4xxx 5121 <b>A</b> 5125 5131 <b>A</b> 5135 5210	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27μH IND FXD LHL08 S 6U8 PM20 A
1113 1115 1117 1118 11205 -II- 2105 2105 2107 2108 2109 2110	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10567 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730	33nF 16V O6O3           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603	7110 7112 PSU Variou 0101A 0205 0209 1120A HH	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A)	3260 3262 3263 4xxx 4xxx 5121 <b>A</b> 5125 5131 <b>A</b> 5135 5210 5222 <b>A</b>	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27μH IND FXD LHL08 S 6U8 PM20 A 47 μH
11113 1115 1117 1118 1120 1205 <b>-II-</b> 2105 2106 2107 2108 2109 2110 2111	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10567 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730	33nF 16V O6O3           100µF 20% 25V           4P           85B-PH-K (5P)           SWI PUSH 2P 100MA 30V           SPEC12 B           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603	7110 7112 PSU Variou 0101A 0205 0209 1120A -II- 2120A	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383 4822 121 10711	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A)	3260 3262 3263 4xxx 5121 <b>A</b> 5125 5131 <b>A</b> 5135 5210 5222 <b>A</b> 5231	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27μH IND FXD LHL08 S 6U8 PM20 A 47 μH IND FXD LHL08 S 6U8
1113 1115 1117 1118 1120 1205 <b>-II-</b> 2105 2106 2107 2108 2109 2110 2111 2114	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10567 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730	33nF 16V O6O3           33nF 16V O6O3           100µF 20% 25V           47nF 50V 06O3	7110 7112 <b>PSU</b> Variou 0101 <b>A</b> 0205 0209 1120 <b>A</b> -II- 2120 <b>A</b> 2121	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383 4822 121 10711 2222 151 90017	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF	3260 3262 3263 4xxx 4xxx 5121 <b>A</b> 5125 5131 <b>A</b> 5135 5210 5222 <b>A</b> 5231	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27μH IND FXD LHL08 S 6U8 PM20 A 47 μH IND FXD LHL08 S 6U8 PM20 A 1 μH 20% 4X9 8MM 4XIAL
1113 1115 1117 1118 11205 <b>-II-</b> 2105 2106 2107 2108 2107 2108 2109 2110 2111 2114 2115	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730	33nF 16V O6O3           30µF 16V O6O3           100µF 20% 25V           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           22pF 5% 50V           22pF 5% 50V	7110 7112 PSU Variou 0101A 0205 0209 1120A -II- 2120A 2121	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383 4822 121 10711 2222 151 90017	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B	3260 3262 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 5240 5260	4822 051 20101 4822 116 83872 4822 116 83872 4822 051 20008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195	$\begin{array}{c} 100\Omega\ 5\%\ 0.1W\\ 220\Omega\ 5\%\ 0.5W\\ 1k8\ 5\%\ 0.5W\\ 0\Omega\ 5\%\ 0.25W\ (1206)\\ 0\Omega\ 5\%\ 0.25W\ (0805)\\ \end{array}$
1113 1115 1117 1118 11205 1205 1105 2105 2106 2107 2108 2109 2110 2111 21114 2115 2116	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10567 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44750 3198 024 44750 3198 024 44750 3198 024 44750 3198 026 026 026 026 026 026 026 026	33nF 16V O6O3           4P           85B-PH-K (5P)           SWI PUSH 2P 100MA 30V           SPEC12 B           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           22pF 5% 50V           22pF 5% 50V           33nF 16V 0603	7110 7112 PSU Variou 0101A 0120A 0205 0209 1120A -II- 2120A 2121 2127	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383 4822 121 10711 2222 151 90017 4822 122 50116	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV	3260 3262 3263 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 5231 5240 5240	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 11517	$\begin{array}{c} 100\Omega\ 5\%\ 0.1W\\ 220\Omega\ 5\%\ 0.5W\\ 1k8\ 5\%\ 0.5W\\ 0\Omega\ 5\%\ 0.25W\ (1206)\\ 0\Omega\ 5\%\ 0.25W\ (0805)\\ \end{array}$
1113 1115 1117 1118 1120 1205 -II- 2105 2106 2107 2108 2109 2110 2111 2114 2115 2116 2123	3139 240 50051 2422 025 12482 4822 267 1065 4822 267 10637 2422 128 02939 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 122 33761 4822 122 13454	33nF 16V O6O3           4P           33nF 16V O6O3           100µF 20% 25V           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           22pF 5% 50V           33nF 16V O6O3           100µF 20% 25V	7110 7112 PSU Variou 0101A 0205 0209 1120A -II- 2120A 2121 2127 2130A	4822 130 10165 4822 209 31257 <b>PWB</b> IS 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383 4822 121 10711 2222 151 90017 4822 122 50116 4822 126 13841	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B 9181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V	3260 3262 3263 4xxx 4xxx 5121 5125 5131 5135 5210 5222 5222 52231 5240 5260	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 11517	$\begin{array}{c} 100\Omega\ 5\%\ 0.1W\\ 2200\ 5\%\ 0.5W\\ 1k8\ 5\%\ 0.5W\\ 0\Omega\ 5\%\ 0.25W\ (1206)\\ 0\Omega\ 5\%\ 0.25W\ (0805)\\ \end{array}$
1113 1115 1117 1118 1120 1205 <b>-II-</b> 2105 2106 2107 2109 2110 2111 2114 2115 2116 2122 2123	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10565 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 122 33761 4822 122 33761 4822 122 33761 4822 122 33761 4822 122 44749 4822 126 14549 4822 126 14549 4822 126 14549 4822 124 40207 3198 024 42200	33nF 16V O6O3           4P           33nF 16V O6O3           100µF 20% 25V           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           22pF 5% 50V           22pF 5% 50V           33nF 16V O6O3           100µF 20% 25V	7110 7112 PSU Variou 0101A 0120A 0205 0209 1120A 2121 2127 2130A 2131A	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 08333 2422 025 12482 4822 253 30383 4822 125 12482 4822 125 110711 2222 151 90017 4822 122 50116 4822 126 13841 4822 124 11565	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 1nF 20% 250V 1nF 20% 250V	3260 3262 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 52231 52240 52260 →⊢	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 11517	$\begin{array}{c} 100\Omega\ 5\%\ 0.1W\\ 2200\ 5\%\ 0.5W\\ 1k8\ 5\%\ 0.5W\\ 0\Omega\ 5\%\ 0.25W\ (1206)\\ 0\Omega\ 5\%\ 0.25W\ (0805)\\ \end{array}$
11113 1115 1117 1118 1120 1205 2105 2106 2107 2108 2109 2110 2111 2114 2115 2116 2122 2123 2124	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10637 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549	33nF 16V O6O3           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           33nF 16V O6O3           33nF 16V 0603           47nF 50V 0603           33nF 16V O6O3           47nF 50V 0603           33nF 16V O6O3           33nF 16V O6O3           22pF 5% 50V           23nF 16V O6O3           30nF 16V O6O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A	7110 7112 PSU Variou 0101A 0120A 0205 0209 1120A -IL- 2120A 2121 2127 2130A 2131A 2134 2135	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383 4822 121 10711 2222 151 90017 4822 122 50116 4822 126 13841 4822 126 13841 4822 124 11566 4822 124 22652	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 1nF 20% 250V 47μF 20% 50V 2 2μE 20% 50V	3260 3262 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 52231 5240 5260 →⊢ 6118	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 11517 4822 130 31603	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27 $\mu$ H IND FXD LHL08 S 6U8 PM20 A 47 $\mu$ H IND FXD LHL08 S 6U8 PM20 A 1 $\mu$ H 20% 4X9.8MM AXIAL 10 $\mu$ H 5% 2.3X3.4
11113 1115 1117 1118 1120 1205 2105 2106 2107 2108 2107 2110 2110 2111 2114 2115 2122 2123 2124 2125	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10567 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549	33nF 16V O6O3           4P           33nF 16V O6O3           5B-PH-K (5P)           SWI PUSH 2P 100MA 30V           SPEC12 B           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           33nF 16V O6O3           22pF 5% 50V           33nF 16V O6O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V	7110 7112 PSU Variou 0101A 0205 0209 1120A -II- 2120A 2121 2127 2130A 2131A 2134 2135 2141	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383 4822 121 10711 2222 151 90017 4822 122 50116 4822 126 13841 4822 124 11566 4822 124 22652 4822 124 22652	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 1nF 20% 250V 47μF 20% 50V 2.2μF 20% 50V	3260 3262 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 5231 5240 5260 →⊢ 6118 6119	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 11517 4822 130 31603 4822 130 31603	$\begin{array}{c} 100\Omega\;5\%\;0.1W\\ 220\Omega\;5\%\;0.5W\\ 1k8\;5\%\;0.5W\\ 0\Omega\;5\%\;0.25W\;(1206)\\ 0\Omega\;5\%\;0.25W\;(0805)\\ \end{array}$
1113 1115 1117 1118 1120 1205 2105 2106 2107 2108 2107 2110 2111 2114 2115 2122 2123 2124 2125 2126	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10567 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 126 14549 4822 126 14549	33nF 16V O6O3           4P           85B-PH-K (5P)           SWI PUSH 2P 100MA 30V           SPEC12 B           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           33nF 16V O6O3           37nF 50V 0603           47nF 50V 0603           37nF 16V 06O3           33nF 16V 06O3           22pF 5% 50V           33nF 16V 06O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           10µF 20% 16V	7110 7112 PSU Variou 0101A 0205 0209 1120A -II- 2120A 2121 2127 2130A 2131A 2134 2134 2134 2134	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 08333 2422 025 12482 4822 253 30383 4822 121 10711 2222 151 90017 4822 122 50116 4822 126 13841 4822 126 13841 4822 124 11566 4822 124 22652 4822 124 22652 4822 124 1265	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 1nF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 100nF 10% 50V	3260 3262 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 5231 5240 5260 →⊢ 6118 6119 6120	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 11517 4822 157 31603 4822 130 31603 4822 130 31603	$\begin{array}{c} 100\Omega\ 5\%\ 0.1W\\ 2200\ 5\%\ 0.5W\\ 1k8\ 5\%\ 0.5W\\ 0\Omega\ 5\%\ 0.25W\ (1206)\\ 0\Omega\ 5\%\ 0.25W\ (0805)\\ \end{array}$
11113 1115 1117 1118 11205 1205 2105 2105 2106 2107 2108 2107 2110 2111 2114 2115 2112 2122 2123 2124 2125 2126 2128	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10565 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 126 14549 4822 126 14549	33nF 16V O6O3           33nF 16V O6O3           30µF 20% 25V           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           33nF 16V O6O3           33nF 16V 0603           22pF 5% 50V           23nF 16V O6O3           30nF 16V 0603           47nF 50V 0603           22pF 5% 50V           23nF 16V 06O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           10µF 20% 16V           1nµF 10% 50V 0603	7110 7112 PSU Variou 0101A 0205 0209 1120A -II- 2120A 2121 2127 2130A 2131A 2134 2134 2134 2134 2134	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 08333 2422 025 12482 4822 253 30383 4822 125 12482 4822 125 10171 4822 126 13841 4822 126 13841 4822 124 11566 4822 124 22652 4822 126 14585 5322 126 10223	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 1nF 20% 250V 1nF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 100nF 10% 63V	3260 3262 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 5231 5240 5260 → ⊢ 6118 6119 6120 6121	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195 4822 157 11517 4822 130 31603 4822 130 31603 4822 130 31603	$\begin{array}{c} 100\Omega\ 5\%\ 0.1W\\ 2200\ 5\%\ 0.5W\\ 1k8\ 5\%\ 0.5W\\ 0\Omega\ 5\%\ 0.25W\ (1206)\\ 0\Omega\ 5\%\ 0.25W\ (0805)\\ \end{array}$
11113 1115 1117 1118 11205 1205 2105 2105 2106 2107 2108 2107 2108 2107 2108 2107 2111 2114 2115 2111 2114 2122 2123 2124 2125 2126 2128 2129	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10565 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 126 14549 4822 126 14549	33nF 16V O6O3           33nF 16V O6O3           300µF 20% 25V           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603           22pF 5% 50V           23nF 16V O6O3           33nF 16V 06O3           22pF 5% 50V           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           10µF 20% 16V           1nF 10% 50V 0603           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           10µF 20% 16V           1nF 10% 50V 0603           EL 5MM 35V 22µF PM20           COL A           COL A           COL A           COL A           COL A           COL A	7110 7112 <b>PSU</b> 0101 <b>A</b> 0205 0209 1120 <b>A</b> -II- 2120 <b>A</b> 2121 2127 2130 <b>A</b> 2131 <b>A</b> 2134 2134 2135 2141 2143 2144 2145 2146	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383 4822 125 12482 4822 126 13841 4822 126 13841 4822 126 13841 4822 126 13841 4822 126 13841 4822 126 13841 4822 126 13841	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 1nF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V	3260 3262 3263 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 5240 5260 → 6118 6119 6120 6121 6129	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 20008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195 4822 157 11517 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 31603 9322 107 43685	$\begin{array}{c} 100\Omega\ 5\%\ 0.1W\\ 220\Omega\ 5\%\ 0.5W\\ 1k8\ 5\%\ 0.5W\\ 0\Omega\ 5\%\ 0.25W\ (1206)\\ 0\Omega\ 5\%\ 0.25W\ (0805)\\ \end{array}$
11113 1115 1117 1118 11205 1205 2105 2106 2107 2108 2107 2108 2107 2108 2107 2118 2119 2111 2114 2115 2112 2123 2124 2125 2126 2128 2129 2130	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10565 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 126 14549 4822 124 14549 4822 124 140207 3198 028 42290 4822 124 33761 4822 124 11947 5322 126 11578 3198 028 42290	33nF 16V 06O3           4P           B5B-PH-K (5P)           SWI PUSH 2P 100MA 30V           SPEC12 B           4P           33nF 16V 06O3           100µF 20% 25V           47nF 50V 06O3           47nF 50V 06O3           47nF 50V 06O3           47nF 50V 06O3           22pF 5% 50V           33nF 16V 06O3           22pF 5% 50V           33nF 16V 06O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           100µF 20% 16V           1nF 10% 50V 06O3           47nF 50V 06O3           22pF 5% 50V           33nF 16V 06O3           100µF 20% 16V           100µF 20% 16V           1nF 10% 50V 0603           EL 5MM 35V 22µF PM20           COL A           42vF 20% 50V	7110 7112 PSU Variou 0101A 0205 0209 1120A -II- 2120A 2121 2127 2130A 2131A 2134 2134 2134 2135 2141 2145 2146 2150	4822 130 10165 4822 209 31257 <b>PWB</b> <b>IS</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383 4822 121 10711 2222 151 90017 4822 122 50116 4822 124 13566 4822 124 13841 4822 124 13566 4822 124 22652 4822 124 12652 4822 126 14585 5322 126 10223 4822 126 14585 4822 126 14585	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 1nF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 100nF 10% 50V 100nF 10% 50V	3260 3262 3263 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5125 5210 5222▲ 5231 5240 5260 →⊢ 6118 6119 6121 6129 6132	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 53348 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195 4822 157 51195 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 31603	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27µH IND FXD LHL08 S 6U8 PM20 A 47 µH IND FXD LHL08 S 6U8 PM20 A 1 µH 20% 4X9.8MM AXIAL 10µH 5% 2.3X3.4 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006
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1113 1115 1117 1118 1120 1205 <b>-II-</b> 2105 2106 2107 2108 2109 2110 2111 2115 2112 2122 2123 2124 2125 2126 2128 2129 2130	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10565 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 122 11578 3198 028 42290 4822 124 41751 4822 126 14549	33nF 16V O6O3           4P           33nF 16V O6O3           5B5-PH-K (5P)           SWI PUSH 2P 100MA 30V           SPEC12 B           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           22pF 5% 50V           22pF 5% 50V           23nF 16V O6O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           23nF 16V 06O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           1nF 10% 50V 0603           EL 5MM 35V 22µF PM20           COL A           47µF 20% 50V           33nF 16V 06O3	7110 7112 <b>PSU</b> 0101 <b>A</b> 0120 <b>A</b> 0205 0209 1120 <b>A</b> 2120 <b>A</b> 2121 2127 2130 <b>A</b> 2131 <b>A</b> 2134 2135 2141 2135 2141 2145 2145 2145 2145 2156 2157 2202 2210	4822 130 10165 4822 209 31257 <b>PWB</b> <b>IS</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 08333 2422 025 12482 4822 253 30383 4822 125 12482 4822 125 12482 4822 125 12482 4822 126 13841 4822 124 11566 4822 124 22652 4822 124 22652 4822 124 22652 4822 124 14585 5322 126 14585	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 47μF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V 63V 470P PM5 63V 470P PM5 100nF 10% 50V EL YK 10V S 2200μF PM20	3260 3262 3263 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 5231 5240 5260 →⊢ 6118 6119 6120 6121 6122 6133 6140 6150	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 20008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195 4822 157 51195 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 30842	$\begin{array}{c} 100\Omega\ 5\%\ 0.1W\\ 2200\ 5\%\ 0.5W\\ 1k8\ 5\%\ 0.5W\\ 0\Omega\ 5\%\ 0.25W\ (1206)\\ 0\Omega\ 5\%\ 0.25W\ (0805)\\ \end{array}$
11113 1115 1117 1118 1120 1205 2105 2106 2107 2108 2109 2110 2110 2111 2114 2112 2122 2123 2124 2125 2126 2128 2129 2130 2201	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10565 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 126 14549 4822 126 14549 4822 126 14549 4822 122 33761 4822 126 14578 3198 028 42290 4822 124 41751 4822 126 14549	33nF 16V O6O3           4P           33nF 16V O6O3           5B-PH-K (5P)           SWI PUSH 2P 100MA 30V           SPEC12 B           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           22pF 5% 50V           22pF 5% 50V           33nF 16V O6O3           30nF 16V O6O3           33nF 16V O6O3           22pF 5% 50V           22pF 5% 50V           22pF 5% 50V           20µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           10µF 20% 16V           1nF 10% 50V 0603           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           33nF 16V O6O3           20µF 20% 50V           33nF 16V 0603           21 5M 35V 22µF PM20           COL A           47µF 20% 50V           33nF 16V O6O3	7110 7112 <b>PSU</b> 0101 <b>A</b> 0120 <b>A</b> 0205 0209 1120 <b>A</b> 2120 <b>-II-</b> 2120 <b>A</b> 2121 2127 2130 <b>A</b> 2131 <b>A</b> 2134 2134 2134 2135 2141 2145 2145 2156 2157 2202 2210	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 08333 2422 025 12482 4822 253 30383 4822 125 12482 4822 125 12482 4822 125 12482 4822 124 10711 4822 124 50116 4822 124 50116 4822 124 126 13841 4822 124 126 13841 4822 124 126 13841 4822 124 22652 4822 124 22652 4822 124 22652 4822 124 12655 5322 126 14585 5322 126 14585	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 47μF 20% 250V 47μF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V 63V 330pF PM5 63V 470P PM5 100nF 10% 50V EL YK 10V S 2200μF PM20 B	3260 3262 3263 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 52231 52240 5220 5222▲ 6118 6119 6120 6121 6122 6133 6140 6140 6150 6210	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 20008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195 4822 157 51195 4822 157 11517 4822 130 31603 4822 130 31603 4822 130 31603 9322 107 43685 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 11148	$\begin{array}{c} 100\Omega\ 5\%\ 0.1W\\ 2200\ 5\%\ 0.5W\\ 1k8\ 5\%\ 0.5W\\ 0\Omega\ 5\%\ 0.25W\ (1206)\\ 0\Omega\ 5\%\ 0.25W\ (0805)\\ \end{array}$
11113 1115 1117 1118 1120 1205 2106 2107 2108 2107 2108 2107 2108 2110 2111 2114 2112 2122 2123 2124 2125 2126 2128 2129 2130 2201 	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10565 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14578 3198 028 42290 4822 124 41751 4822 126 14549 4822 126 14549 4822 126 14549	33nF 16V O6O3           4P           33nF 16V O6O3           5B-PH-K (5P)           SWI PUSH 2P 100MA 30V           SPEC12 B           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           22pF 5% 50V           22pF 5% 50V           33nF 16V O6O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           10µF 20% 16V           1nF 10% 50V 0603           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           33nF 16V O6O3           20µF 20% 16V           1nF 10% 50V 0603           EL 5MM 35V 22µF PM20           COL A           47µF 20% 50V           33nF 16V O6O3           47µF 20% 50V           33nF 16V O6O3           4.7µ 50% 50V           33nF 16V O6O3	7110 7112 <b>PSU</b> 0101 <b>A</b> 0120 <b>A</b> 0205 0209 1120 <b>A</b> 2120 <b>A</b> 2121 2127 2130 <b>A</b> 2131 <b>A</b> 2131 <b>A</b> 2134 2134 2134 2145 2146 2156 2157 2202 2210 2230	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 08333 2422 025 12482 4822 253 30383 4822 125 12482 4822 125 110711 2222 151 90017 4822 122 50116 4822 124 1261 4822 124 1261 4822 124 12652 4822 124 22652 4822 124 22652 4822 124 22652 4822 124 22652 4822 126 14585 5322 122 31863 5322 122 3268 4822 126 14585 2020 012 93728	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V 63V 330pF PM5 63V 470P PM5 100nF 10% 50V EL YK 10V S 2200μF PM20 B EL YK 10V S 1000μF PM20	3260 3262 3263 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 5231 5240 5260 → ⊢ 6118 6119 6120 6121 6122 6133 6140 6141 6150 6210 6220	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 20008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195 4822 157 51195 4822 157 11517 4822 130 31603 4822 130 31603 9322 107 43685 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 11152 4822 130 11154 4822 130 11584	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27 $\mu$ H IND FXD LHL08 S 6U8 PM20 A 47 $\mu$ H IND FXD LHL08 S 6U8 PM20 A 1 $\mu$ H 20% 4X9.8MM AXIAL 10 $\mu$ H 5% 2.3X3.4 1N4006 1
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11113 1115 1117 1118 11205 1205 2106 2107 2108 2107 2108 2107 2110 2111 2114 2115 2122 2123 2124 2125 2126 2128 2129 2120 2100 210	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10565 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 11578 3198 028 42290 4822 126 11578 3198 028 42290 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549	33nF 16V 0603           4P           B5B-PH-K (5P)           SWI PUSH 2P 100MA 30V           SPEC12 B           4P           33nF 16V 0603           100µF 20% 25V           47nF 50V 0603           33nF 16V 0603           22pF 5% 50V           23nF 16V 0603           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           10µF 20% 16V           1nF 10% 50V 0603           EL 5MM 35V 22µF PM20           COL A           47µF 20% 50V           33nF 16V 0603           20L 5% 0603           47µF 20% 50V           33nF 16V 0603	7110 7112 <b>PSU</b> 0101A 0120A 0205 0209 1120A <b>H</b> 2120 2121 2127 2130A 2121 2127 2130A 2131A 2134 2134 2134 2135 2141 2145 2146 2157 2202 2210 2230 2232 2235	4822 130 10165 4822 209 31257 <b>PWB</b> <b>18</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 08333 2422 025 12482 4822 253 30383 4822 125 12482 4822 125 110711 2222 151 90017 4822 122 50116 4822 126 13841 4822 126 13841 4822 124 12652 4822 124 12652 4822 126 14585 5322 126 14585 5322 126 14585 5322 122 31863 5322 122 3268 4822 126 14585 5322 122 3268 4822 126 14585 532 126 14585 532 127 328 532 127 328 532 127 328 532 128 328 532	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 1nF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V 63V 330pF PM5 63V 470P PM5 100nF 10% 50V EL YK 10V S 2200μF PM20 B EL YK 10V S 1000μF PM20 B 100μF 20% 16V 33nF 16V 0603 100μF 20% 16V	3260 3262 3263 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 5231 5240 5260 → ⊢ 6118 6119 6120 6121 6129 6133 6140 6141 6150 6233 6241 6251	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 10008 4822 051 20008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195 4822 157 51195 4822 157 11517 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 11584 4822 130 41602 4822 130 4174 4822 130 42488 4822 130 42606	$\begin{array}{c} 100\Omega\ 5\%\ 0.1W\\ 220\Omega\ 5\%\ 0.5W\\ 1k8\ 5\%\ 0.5W\\ 1k8\ 5\%\ 0.5W\\ 0\Omega\ 5\%\ 0.25W\ (1206)\\ 0\Omega\ 5\%\ 0.25W\ (0805)\\ \end{array}$
11113 1115 1117 1118 11205 1205 2106 2107 2108 2107 2108 2107 2108 2107 2110 2111 2114 2122 2123 2124 2125 2126 2128 2129 2130 2201 	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10565 2422 128 02939 4822 267 10567 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 11578 3198 028 42290 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549	33nF 16V 06O3           4P           B5B-PH-K (5P)           SWI PUSH 2P 100MA 30V           SPEC12 B           4P           33nF 16V 06O3           100µF 20% 25V           47nF 50V 06O3           22pF 5% 50V           33nF 16V O6O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           33nF 16V O6O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22µF 5% 50V           33nF 16V O6O3           100µF 20% 50V           33nF 16V O6O3           200µF 20% 50V           22µF 5% 50V           33nF 16V O6O3           COL A           47µF 20% 50V           33nF 16V O6O3           47µF 20% 50V           33nF 16V O6O3           4.70 5% 0603 0.0016W           202 5% 0603           4.70 5% 0603 0.0016W           202 5% 0603           4.70 5% 0603 0.0016W           202 5% 0603	7110 7112 <b>PSU</b> 0101A 0205 0209 1120A -II- 2120A 2121 2127 2130A 2131A 2134 2134 2134 2134 2134 2135 2141 2145 2146 2150 2156 2157 2202 2210 2230 2232 2238 2238	4822 130 10165 4822 209 31257 <b>PWB</b> <b>IS</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 12482 4822 253 30383 2422 025 12482 4822 125 10017 4822 125 10017 4822 126 13841 4822 124 11566 4822 124 12652 4822 124 12652 4822 126 14585 5322 126 14585 2020 012 93757 4822 124 81021 4822 124 181021 4822 124 81021	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 1nF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 300nF 10% 50V 63V 330pF PM5 63V 470P PM5 100nF 10% 50V EL YK 10V S 2200μF PM20 B EL YK 10V S 1000μF PM20 B 100μF 20% 16V 33nF 16V G603 100μF 20% 16V 30nF 10% 50V	3260 3262 3263 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5125 5210 5222▲ 5231 5240 5222▲ 5231 5240 5260 →⊢ 6118 6119 6121 6129 6132 6132 6133 6141 6150 6210 6233 6241 6250 6261 400 6250 6261 6250 6261 6250 6261 6250 6261 6250 6261 6250 6261 6250 6261 6250 6261 6250 6261 6250 6261 6250	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 20008 4822 051 20008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195 4822 157 51195 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 1152 4822 130 11584 4822 130 41602 4822 130 4174 4822 130 42488 4822 130 42488 4822 130 42488	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27µH IND FXD LHL08 S 6U8 PM20 A 47 µH IND FXD LHL08 S 6U8 PM20 A 1 µH 20% 4X9.8MM AXIAL 10µH 5% 2.3X3.4 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 UDZ22B BAV21 BAV21 BAV21 SAV21 BAV21 SAV21 SAV21 BAV21 SAV2
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11113         11115         11117         1118         11205         11205         2105         2106         2107         2108         2110         2111         2112         2112         2122         2123         2124         2125         2126         21201	3139 240 50051 2422 025 12482 4822 267 10657 2422 128 02939 4822 267 10567 4822 267 10567 4822 128 02939 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 124 40207 3198 028 42290 4822 122 33761 4822 126 14549 4822 126 14549 4822 126 14578 3198 028 42290 4822 124 41751 4822 126 14549 4822 117 13608 4822 117 13608 4822 117 13613 4822 051 30472 4822 051 30472 4822 051 30472	33nF 16V 06O3           4P           33nF 16V 06O3           5B5-PH-K (5P)           SWI PUSH 2P 100MA 30V           SPEC12 B           4P           33nF 16V 06O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           22pF 5% 50V           33nF 16V 06O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           33nF 16V 06O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           33nF 16V 06O3           100µF 20% 16V           1nF 10% 50V 0603           EL 5MM 35V 22µF PM20           COL A           47µF 20% 50V           33nF 16V 06O3           4.7Ω 5% 0603 0.0016W           2Ω2 5% 0603           4.7Ω 5% 0603 0.0016W           2Ω2 5% 0603           4.7Ω 5% 0.062W           4k7 5% 0.062W           4k7 5% 0.062W           4k7 5% 0.062W	7110 7112 <b>PSU</b> 0101 <b>A</b> 0205 0209 1120 <b>A</b> 7 <b>IF</b> 2120 <b>A</b> 2121 2127 2130 <b>A</b> 2131 <b>A</b> 2135 2141 2135 2141 2135 2141 2135 2140 2156 2157 2202 2210 2220 2210 2230 2232 2235 2238 2239 2240 2250	4822 130 10165 4822 209 31257 <b>PWB</b> <b>IS</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 08333 2422 025 12482 4822 253 30383 4822 125 12482 4822 125 12482 4822 125 12481 4822 126 13841 4822 124 11566 4822 124 22652 4822 124 22652 4822 124 22652 4822 124 1266 4822 124 14585 5322 126 14585 2020 012 93757 4822 124 81021 4822 124 11767 4822 124 11767 4822 124 41545	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 1nF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V 63V 470P PM5 100nF 10% 50V EL YK 10V S 2200μF PM20 B EL YK 10V S 1000μF PM20 B I00μF 20% 16V 33nF 16V 0603 100μF 20% 16V 470μF 20% 16V 470μF 20% 16V	3260 3262 3263 3263 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5125 5210 5222▲ 5231 5240 5222▲ 5231 5240 52260 →⊢ 6118 6119 6120 6121 6129 6132 6133 6140 6141 6150 62210 6230 6241 6250 6261 6261 6250 6261 6261 6250 6261 6250 6261 6250 6261 6250 6261 6250 6261 6250 6261 6250 6261 6261 6250 6261 6250 6261 6250 6261 6250 6261 6261 6250 6261 6261 6261 6261 6261 6261 6270 6	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 20008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 53348 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195 4822 157 51195 4822 157 51195 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 11152 4822 130 111584 4822 130 11584 4822 130 42606	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27µH IND FXD LHL08 S 6U8 PM20 A 47 µH IND FXD LHL08 S 6U8 PM20 A 1 µH 20% 4X9.8MM AXIAL 10µH 5% 2.3X3.4 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 1N4006 2X79-B4V7 BYW98-200-C1 BYW98-200-C1 BYW98-200-C1 BYW98-200-C1 BYW98-200-C1 BYW98-200-C1 BYW98-200-C1 BYW98-200-C1 BYW98-200-C1 BYW98-200-C1 BYW98-200-C1 BYW93C
11113         11115         11117         1118         11205         11205         2105         2106         2107         2108         2110         2111         2112         2112         2122         2123         2124         2125         2120         2130         2201         113         3103         3105         3108         3109         3111         3113	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10565 2422 128 02939 4822 267 10567 4822 267 10567 4822 128 02939 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 124 40207 3198 028 42290 4822 122 33761 4822 126 14549 4822 126 14549 4822 126 14549 4822 124 41757 3198 028 42290 4822 124 41751 4822 126 14549 4822 117 13608 4822 117 13608 4822 117 13613 4822 051 30472 4822 051 30472 4822 051 30472 4822 051 30472	33nF 16V O6O3           4P           33nF 16V O6O3           5B-PH-K (5P)           SWI PUSH 2P 100MA 30V           SPEC12 B           4P           33nF 16V O6O3           100µF 20% 25V           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           47nF 50V 0603           22pF 5% 50V           22pF 5% 50V           23nF 16V O6O3           100µF 20% 25V           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           10µF 20% 16V           1nF 10% 50V 0603           EL 5MM 35V 22µF PM20           COL A           22pF 5% 50V           33nF 16V O6O3           10µF 20% 16V           1nF 10% 50V 0603           EL 5MM 35V 22µF PM20           COL A           22pF 5% 00V           33nF 16V O6O3           4.7Ω 5% 0603 0.0016W           2Ω2 5% 0603           4.7Ω 5% 0.062W           4k7 5% 0.062W           4k7 5% 0.062W           4k7 5% 0.062W           4k7 5% 0.062W	7110 7112 <b>PSU</b> 0101 <b>A</b> 0120 <b>A</b> 0205 0209 1120 <b>A</b> 2120 2121 2127 2130 <b>A</b> 2131 <b>A</b> 2131 <b>A</b> 2133 2131 <b>A</b> 2135 2141 2135 2141 2135 2141 2156 2156 2156 2157 2200 2250 2230 2232 2235 2238 2239 2240 2250 2250	4822 130 10165 4822 209 31257 <b>PWB</b> <b>1</b> 8 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 08333 2422 025 12482 4822 253 30383 4822 125 12482 4822 125 12482 4822 125 12481 4822 126 13841 4822 124 11566 4822 124 22652 4822 124 22652 4822 124 22652 4822 124 1266 5322 126 14585 5322 126 14585 2020 012 93757 4822 124 81021 4822 124 81021 4822 124 81021 4822 124 41545 4822 124 81021	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 1nF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V 63V 470P PM5 100nF 10% 50V 63V 470P PM5 100nF 10% 50V EL YK 10V S 2200μF PM20 B EL YK 10V S 1000μF PM20 B 100μF 20% 16V 33nF 16V 0603 100μF 20% 16V 470μF 20% 16V 470μF 20% 16V 470μF 20% 16V	3260 3262 3263 3263 3263 4xxx 4xxx 5121▲ 5125 5131▲ 5135 5210 5222▲ 5231 5240 5220 5222▲ 6118 6119 6120 6121 6129 6132 6132 6133 6140 6141 6150 6210 6233 6241 6250 6261  7125	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 20008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195 4822 157 51195 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 1152 4822 130 11584 4822 130 41602 4822 130 42606 4822 130 11417	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27µH IND FXD LHL08 S 6U8 PM20 A 47 µH IND FXD LHL08 S 6U8 PM20 A 1 µH 20% 4X9.8MM AXIAL 10µH 5% 2.3X3.4 1N4006 STP3NB60EP
1113 1115 1117 1118 1120 1205 2106 2107 2108 2107 2109 2110 2110 2111 2114 2122 2123 2124 2125 2126 2129 2130 2201 	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10565 2422 128 02939 4822 267 10567 4822 267 10567 4822 128 02939 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 122 33761 4822 126 14549 4822 124 40207 3198 028 42290 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 126 14549 4822 127 13608 4822 117 13608 4822 117 13603 4822 051 30472 4822 051 30472 4822 051 30472 4822 051 30472 4822 051 30472 4822 051 30472 4822 051 30472	$\begin{array}{c} 33nF 16V 0603\\ 4P\\ B5B-PH-K (5P)\\ SWI PUSH 2P 100MA 30V\\ SPEC12 B\\ 4P\\ \end{array}\\ \begin{array}{c} 33nF 16V 0603\\ 100\mu F 20\% 25V\\ 47nF 50V 0603\\ 22pF 5\% 50V\\ 33nF 16V 0603\\ 33nF 16V 0603\\ 33nF 16V 0603\\ 100\mu F 20\% 16V\\ 1nF 10\% 50V 0603\\ EL 5MM 35V 22\mu F PM20\\ COL A\\ 47\mu F 20\% 50V\\ 33nF 16V 0603\\ EL 5MM 35V 22\mu F PM20\\ COL A\\ 47\mu F 20\% 50V\\ 33nF 16V 0603\\ 4.7\Omega 5\% 0.063\\ 4.7\Omega 5\% 0.062W\\ 4k7 $	7110 7112 <b>PSU</b> 0101 <b>A</b> 0120 <b>A</b> 0205 0209 1120 <b>A</b> 2120 2121 2127 2130 <b>A</b> 2131 <b>A</b> 2131 <b>A</b> 2134 2135 2141 2143 2145 2145 2145 2156 2157 2202 2210 2230 2230 2232 2238 2238 2239 2240 2259 2250 2259 2260	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 08333 2422 025 12482 4822 253 30383 4822 125 10017 4822 122 50116 4822 124 50116 4822 124 13841 4822 124 13861 4822 124 22652 4822 124 22652 4822 124 22652 4822 124 22652 4822 124 14585 5322 126 14585 2020 012 93757 4822 124 81021 4822 124 11767 4822 124 41545 4822 124 81021 4822 124 41545	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 47μF 20% 250V 47μF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V 63V 330pF PM5 63V 470P PM5 100nF 10% 50V EL YK 10V S 2200μF PM20 B EL YK 10V S 1000μF PM20 B 100μF 20% 16V 33nF 16V O6O3 100μF 20% 16V 470μF 20% 16V 220μF 20% 16V 470μF 20% 16V 220μF 20% 16V 220μF 20% 16V 220μF 20% 16V 100μF 20% 16V	3260 3262 3263 3263 3263 3263 3263 3263 3263 5222 5121▲ 5125 5131▲ 5125 5210 5222▲ 5221 5222▲ 5224 5220 5222▲ 5224 5220 5222▲ 5224 5220 5222▲ 5220 5222▲ 5222 6118 6129 6120 6120 6121 6120 6120 6120 6120 6132 6130 6140 6140 6140 6150 625	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 20008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195 4822 157 51195 4822 157 11517 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 31603 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 11584 4822 130 41584 4822 130 42606	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27µH IND FXD LHL08 S 6U8 PM20 A 47 µH IND FXD LHL08 S 6U8 PM20 A 1 µH 20% 4X9.8MM AXIAL 10µH 5% 2.3X3.4 1N4006 2N2 2N2 2N2 2N2 2N2 2N2 2N2 2N
11113         11115         11117         1118         11205         1110         1205         2106         2107         2108         2110         2111         2112         2112         2112         2122         2123         2124         2125         2126         2129         2130         2105         3103         3105         3100         3110         3111         3111         3111         31114	3139 240 50051 2422 025 12482 4822 267 10565 4822 267 10565 2422 128 02939 4822 267 10567 4822 267 10567 4822 128 02939 4822 267 10567 4822 126 14549 4822 124 40207 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 3198 024 44730 4822 126 14549 4822 126 14578 3198 028 42290 4822 126 14578 3198 028 42290 4822 127 13608 4822 117 13608 4822 117 13613 4822 051 30472 4822 051 30472 4822 051 30472 4822 051 30472	$\begin{array}{c} 33nF 16V 0603\\ 4P\\ B5B-PH-K (5P)\\ SWI PUSH 2P 100MA 30V\\ SPEC12 B\\ 4P\\ 4P\\ 33nF 16V 0603\\ 100\mu F 20% 25V\\ 47nF 50V 0603\\ 33nF 16V 0603\\ 22pF 5% 50V\\ 22pF 5\% 50V\\ 33nF 16V 0603\\ 33nF 16V 0603\\ 33nF 16V 0603\\ 100\mu F 20\% 16V\\ 1nF 10\% 50V 0603\\ EL 5MM 35V 22\mu F PM20\\ COL A\\ 47\mu F 20\% 50V\\ 33nF 16V 0603\\ EL 5MM 35V 22\mu F PM20\\ COL A\\ 47\mu F 20\% 50V\\ 33nF 16V 0603\\ 4.7\Omega 5\% 0603 0.0016W\\ 2\Omega 25\% 0603\\ 4.7\Omega 5\% 0.062W\\ 4k7 5\% 0.062W\\ 5$	7110 7112 <b>PSU</b> 0101 <b>A</b> 0120 <b>A</b> 0205 0209 1120 <b>A</b> 2120 <b>A</b> 2121 2127 2130 <b>A</b> 2131 <b>A</b> 2131 <b>A</b> 2134 2134 2134 2134 2135 2141 2145 2146 2150 2156 2157 2202 2210 2230 2230 2232 2238 2239 2240 2259 2260 2259 2260 2259	4822 130 10165 4822 209 31257 <b>PWB</b> 4822 265 20723 4822 265 11253 2422 025 08333 2422 025 08333 2422 025 12482 4822 253 30383 4822 125 12482 4822 125 12482 4822 125 12481 4822 126 13841 4822 124 11566 4822 124 22652 4822 124 1585 5322 122 31863 5322 122 3268 4822 126 14585 2020 012 93757 4822 124 81021 4822 124 81021	GP1U28XP MC79L24ACP B2P3-VH FUSE HOLDER 2P CON BM V 12P M 2.50 EH B CON BM V 6P M 2.50 EH B 19181 (2,5A) 100nF 20% 275V EL 151 400V S 100μF PM20 B 470pF 10% 1KV 1nF 20% 250V 1nF 20% 250V 47μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 2.2μF 20% 50V 100nF 10% 50V 4.7nF 10% 63V 100nF 10% 50V 63V 330pF PM5 63V 470P PM5 100nF 10% 50V EL YK 10V S 2200μF PM20 B EL YK 10V S 1000μF PM20 B EL YK 10V S 1000μF PM20 B 100μF 20% 16V 33nF 16V 06O3 100μF 20% 16V 100μF 20% 16V 220μF 20% 16V 220μF 20% 16V 22μF 50V 63V 22nF PM10 R	3260 3262 3263 3263 3263 3263 3263 3263 3263 5222 5121▲ 5125 5131▲ 5125 5210 5222▲ 5221 5222▲ 5220 5222▲ 5220 5222▲ 5220 5222▲ 5220 5222▲ 5220 5222▲ 5220 5222 5220 5222 5220 5200 5220 5200 52	4822 051 20101 4822 116 83872 4822 116 52249 4822 051 20008 4822 051 20008 4822 051 20008 4822 157 53348 4822 157 11411 3128 138 39631 4822 157 70698 2422 535 94638 4822 156 20966 2422 535 94638 4822 157 51195 4822 157 51195 4822 157 51195 4822 157 11517 4822 130 31603 4822 130 31603 9322 107 43685 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 30842 4822 130 11584 4822 130 11584 4822 130 11584 4822 130 42488 4822 130 42486	100Ω 5% 0.1W 220Ω 5% 0.5W 1k8 5% 0.5W 0Ω 5% 0.25W (1206) 0Ω 5% 0.25W (0805) TER CHOKE ASSY CU15D3 100mH z SM TRANSFORMER - CT282D4 27µH IND FXD LHL08 S 6U8 PM20 A 47 µH IND FXD LHL08 S 6U8 PM20 A 1 µH 20% 4X9.8MM AXIAL 10µH 5% 2.3X3.4 1N4006 1N4005 BAV21 BAV3 BYU98-200-C1 BYW98-200-C1 BYD33D BYD33J

 GB 62
 10.
 DVD733K /691/781
 Spare Parts List

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 DVD733K /691/781
 10.
 GB 63

7141	4822 130 44568	BC557B	3228	4822 051 30105	1M 5% 0 062W
7145	9322 145 88682	UC3842A	3229	4822 051 30271	270Ω 5% 0.062W
7150	4822 130 44257	BC547	3230	4822 117 11817	1k2 1% 1/16W
7201	4822 209 81397	TL431CLPST	3231	4822 051 30682	6k8 5% 0.062W
7235	4822 130 42/05	BC847	3232	4822 051 30102	1k 5% 0.062W
7255	4822 130 11197	BC337	3233	4822 051 30682	6k8 5% 0 062W
7256	5322 130 42756	BC857C	3235	4822 051 30102	1k 5% 0.062W
7257	5322 130 42756	BC857C	3236	4822 117 11817	1k2 1% 1/16W
			3237	4822 051 30472	4k7 5% 0.062W
N/1:		<b>_</b>	3238	4822 051 30472	4k7 5% 0.062W
IVIIC+		В	3239	4822 051 30102	1k 5% 0.062W
			3240	4822 051 30102	10kX2 20% 0.025W
Variou	us		3242	4822 101 21199	10kX2 20% 0.025W
1000	0400 000 04000		3244	4822 116 52283	4k7 5% 0.5W
1000	2422 020 04309	B	3245	4822 116 52283	4k7 5% 0.5W
1001	2422 026 04309	SOC PHONE H 1P F 6.3 ST	4xxx	4822 051 10008	0Ω 5% 0.25W (1206)
		В	4xxx	4822 051 20008	0Ω 5% 0.25W (0805)
1003	4822 267 31453				
1200	4822 267 10573	CON BM H 8P 2.50			
			5200	4900 157 11005	
⊣⊢			5200	4022 137 11233	Δ
0000	4000 400 44000	10-5	5201	4822 157 11235	22µH LANO2TB220J PM5
2200	4822 126 11663	12pF			A
2201	4822 126 14305	100nF 10% 16V 0603			
2203	4822 126 14305	100nF 10% 16V 0603	-▶⊢		
2204	5322 126 11578	1nF 10% 50V 0603			
2205	4822 126 11663	12pF	6200	4822 130 30621	1N4148
2206	4822 126 14305	100nF 10% 16V 0603	6201	4822 130 30621	1N4148
2207	5322 126 11578	100pE 2% 62V	6202	4822 130 30621	1N4148 1N4148
2208	4822 122 31765	100pF 2% 63V	0203	4022 130 30021	1114 140
2210	3198 017 44740	0603 10V 470nF COL	~ <u>~</u>	חחחר	
2211	3198 017 44740	0603 10V 470nF COL	<b>Tex 5</b> 55	0000	
2212	4822 122 33777	47pF 5% 63V	7200	4822 130 60511	BC847B
2213	4822 126 14305	100nF 10% 16V 0603	7201	4822 130 60511	BC847B
2214	4822 124 40248	100nE 10% 16V 0603	7202	4822 130 60511	BC847B
2216	5322 126 11578	1nF 10% 50V 0603	7203	4822 130 60511	BC847B
2217	3198 017 41050	0603 10V 1µF COL R	7204	4822 130 60511	BC847B
2218	4822 122 31765	100pF 2% 63V	7205	4822 130 60511	BC817-25
2219	4822 122 31765	100pF 2% 63V	7200	4022 100 42004	BC817-25
	2109 111 / 44 / 41			4822 130 42804	D0011 E0
2220	2100 017 44740	0603 10V 470nF COL	7800	4822 130 42804 4822 209 83357	NJM4560M JRC
2220 2221 2222	3198 017 44740 3198 017 44740 4822 122 33777	0603 10V 470nF COL 0603 10V 470nF COL 47nF 5% 63V	7800 7801	4822 130 42804 4822 209 83357 4822 209 83357	NJM4560M JRC NJM4560M JRC
2220 2221 2222 2223	3198 017 44740 3198 017 44740 4822 122 33777 4822 126 14305	0603 10V 470hF COL 0603 10V 470hF COL 47pF 5% 63V 100hF 10% 16V 0603	7800 7801 7802	4822 130 42804 4822 209 83357 4822 209 83357 4822 209 62059	NJM4560M JRC NJM4560M JRC TCA0372DP1
2220 2221 2222 2223 2224	3198 017 44740 3198 017 44740 4822 122 33777 4822 126 14305 4822 124 40248	0603 10V 470nF COL 0603 10V 470nF COL 47pF 5% 63V 100nF 10% 16V 0603 10μF 20% 63V	7800 7801 7802	4822 130 42804 4822 209 83357 4822 209 83357 4822 209 62059	NJM4560M JRC NJM4560M JRC TCA0372DP1
2220 2221 2222 2223 2224 2225	3198 017 44740 3198 017 44740 4822 122 33777 4822 126 14305 4822 124 40248 4822 126 14305	0603 10V 470hF COL 0603 10V 470hF COL 47pF 5% 63V 100nF 10% 16V 0603 10μF 20% 63V 100nF 10% 16V 0603	7800 7801 7802	4822 130 42804 4822 209 83357 4822 209 83357 4822 209 62059	NJM4560M JRC NJM4560M JRC TCA0372DP1
2220 2221 2222 2223 2224 2225 2226	3198 017 44740 3198 017 44740 4822 122 33777 4822 126 14305 4822 124 40248 4822 126 14305 5322 126 11578	0603 10V 470nF COL 0603 10V 470nF COL 47pF 5% 63V 100nF 10% 16V 0603 10μF 20% 63V 100nF 10% 16V 0603 1nF 10% 50V 0603 1nF 10% 50V 0603	7800 7801 7802 VAL	4822 130 42804 4822 209 83357 4822 209 83357 4822 209 62059 6011	NJM4560M JRC NJM4560M JRC TCA0372DP1
2220 2221 2222 2223 2224 2225 2226 2226 2227 2228	3198 017 44740 3198 017 44740 4822 122 33777 4822 126 14305 4822 124 40248 4822 126 14305 5322 126 14305 5322 126 11578 3198 017 41050	0603 10V 470nF COL 0603 10V 470nF COL 47pF 5% 63V 100nF 10% 16V 0603 10μF 20% 63V 100nF 10% 16V 0603 1nF 10% 50V 0603 0603 10V 1μF COL R 0603 10V 1μF COL R	7800 7801 7802 VAL	4822 209 83357 4822 209 83357 4822 209 62059 6011	NJM4560M JRC NJM4560M JRC TCA0372DP1
2220 2221 2222 2223 2224 2225 2226 2227 2228 2229	3198 017 44740 3198 017 44740 4822 122 33777 4822 126 14305 4822 126 14305 5322 126 14305 5322 126 14305 5322 126 14305 3198 017 41050 3198 017 41050 3198 017 41050	0603 10V 470nF COL 0603 10V 470nF COL 47pF 5% 63V 100nF 10% 16V 0603 10μF 20% 63V 100nF 10% 16V 0603 1nF 10% 50V 0603 0603 10V 1μF COL R 0603 10V 1μF COL R 470pF 5% 50V	7800 7801 7802 VAL Vario	4822 209 83357 4822 209 83357 4822 209 62059 6011	NJM4560M JRC NJM4560M JRC TCA0372DP1
2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2232	3198 017 44740 4822 122 33777 4822 126 14305 4822 126 14305 5322 126 14305 5322 126 11578 3198 017 41050 3198 017 41050 4822 126 13881 4822 122 31765	0603 10V 470nF COL 0603 10V 470nF COL 47pF 5% 63V 100nF 10% 16V 0603 10μF 20% 63V 100nF 10% 16V 0603 1nF 10% 50V 0603 0603 10V 1μF COL R 0603 10V 1μF COL R 470pF 5% 50V 100pF 2% 63V	7800 7801 7802 VAL Vario	4822 209 83357 4822 209 83357 4822 209 62059 6011 us 9305 023 61101	NJM4560M JRC NJM4560M JRC TCA0372DP1 VAL6011/01
2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2232 2233	3198 017 44740 4822 122 33777 4822 126 14305 4822 124 40248 4822 126 14305 5322 126 11578 3198 017 41050 3198 017 41050 4822 122 31765 3198 017 41050	0603 10V 470hF COL 47pF 5% 63V 100nF 10% 16V 0603 10μF 20% 63V 100nF 10% 16V 0603 1nF 10% 50V 0603 0603 10V 1μF COL R 470pF 5% 50V 100pF 2% 63V 0603 10V 1μF COL R	7800 7801 7802 VAL Vario	4822 209 83357 4822 209 83357 4822 209 62059 6011 us 9305 023 61101	NJM4560M JRC NJM4560M JRC TCA0372DP1 VAL6011/01
2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2232 2233 2234	3198 017 44740 4822 122 33777 4822 126 14305 4822 124 40248 4822 126 14305 5322 126 11578 3198 017 41050 3198 017 41050 4822 126 13881 4822 122 31765 3198 017 41050 4822 126 13881	0603 10V 470nF COL 0603 10V 470nF COL 47pF 5% 63V 100nF 10% 16V 0603 10μF 20% 63V 100nF 10% 16V 0603 1nF 10% 50V 0603 0603 10V 1μF COL R 470pF 5% 50V 100pF 2% 63V 0603 10V 1μF COL R 470pF 5% 50V	7800 7801 7802 VAL Vario	4822 209 83357 4822 209 83357 4822 209 62059 6011 us 9305 023 61101	NJM4560M JRC NJM4560M JRC TCA0372DP1 VAL6011/01
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2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2232 2233 2234 2237 2238 2239	3198 017 44740 4822 122 33777 4822 126 14305 4822 126 14305 4822 126 14305 5322 126 11578 3198 017 41050 3198 017 41050 4822 126 13881 4822 122 31765 5328 126 13881 4822 122 31765 5322 126 13881 4822 122 31765 5322 126 13881 4822 122 31765 5322 126 13881 4822 122 31765 5322 126 12881 4822 122 31765 5322 126 12881 4822 122 31765 5322 126 12881 4822 122 31765 5322 126 12881 5322 126 12881 5328 128 128 128 128 128 128 128 128 128 1	0603 10V 470nF COL 0603 10V 470nF COL 47pF 5% 63V 100nF 10% 16V 0603 10μF 20% 63V 100nF 10% 16V 0603 1nF 10% 50V 0603 0603 10V 1μF COL R 470pF 5% 50V 100pF 2% 63V 100pF 2% 63V 100pF 2% 63V 100pF 2% 63V 100pF 2% 63V 100pF 2% 63V 00F 10% 50V 0603 0 OHM 5% 0.25W 0805	7800 7801 7802 VAL Vario 0001	4822 209 83357 4822 209 83357 4822 209 62059 6011 us 9305 023 61101	NJM4560M JRC NJM4560M JRC TCA0372DP1 VAL6011/01
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2220 2221 2222 2223 2224 2225 2226 2227 2228 2232 2233 2234 2237 2238 2239 2240 2241 2242 	3198 017 44740         3198 017 44740         4822 122 33777         4822 126 14305         4822 126 14305         3198 017 41050         3198 017 41050         3198 017 41050         4822 126 13881         4822 122 31765         5322 126 13881         4822 122 31765         5322 126 11583         4822 122 31765         5322 126 11583         4822 122 31765         5322 126 11583         4822 051 20008         3198 016 31020         4822 124 11947         4822 101 21199         4822 050 24708         4822 050 24708         4822 051 30479         4822 117 12139         4822 117 12139         4822 117 12139         4822 051 30479         4822 117 12139         4822 051 30479         4822 117 12139         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 0	$\begin{array}{c} 0003\ 100\ 470nF\ COL\\ 0603\ 100\ 470nF\ COL\\ 47pF\ 5\%\ 63V\\ 100nF\ 10\%\ 16V\ 0603\\ 10\muF\ 20\%\ 63V\\ 100nF\ 10\%\ 16V\ 0603\\ 1nF\ 10\%\ 50V\ 0603\\ 0603\ 10V\ 1\muF\ COL\ R\\ 470pF\ 5\%\ 50V\\ 100pF\ 2\%\ 63V\\ 0603\ 10V\ 1\muF\ COL\ R\\ 470pF\ 5\%\ 50V\\ 100pF\ 2\%\ 63V\\ 0603\ 10V\ 1\muF\ COL\ R\\ 470pF\ 5\%\ 50V\\ 100pF\ 2\%\ 63V\\ 000F\ 2\%\ 63V\\ 000F\ 2\%\ 63V\\ 100F\ 10\%\ 50V\ 0603\\ 0\ OHM\ 5\%\ 0.25W\ 0805\\ 0603\ 25V\ 1nF\\ 10\muF\ 20\%\ 16V\\ 10\muF\ 20\%\ 16V\\ 10\muF\ 20\%\ 16V\\ 10\muF\ 20\%\ 0.603\\ 4.7\Omega\ 5\%\ 0.603\ 0.0016W\\ 4.7\Omega\ 5\%\ 0.66W\\ 47\Omega\ 5\%\ 0.66W\\ 47\Omega\ 5\%\ 0.062W\\ 22\Omega\ 5\%\ 0.062W\\ 220\ 5\%\ 0.06W\\ 20\ 5\%\ 0.06W\\ 20\ 5\%\ 0.06W\\ 20\ 5\%\ 0.06W\ 0.06W\\ 20\ 0.06W\ $	7800 7801 7802 VAL Vario 0001	4822 209 83357 4822 209 83357 4822 209 62059 6011 us 9305 023 61101	NJM4560M JRC NJM4560M JRC TCA0372DP1 VAL6011/01
2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2232 2233 2234 2234 2237 2238 2239 2240 2241 2242 	3198 017 44740         3198 017 44740         4822 122 33777         4822 126 14305         4822 126 14305         3198 017 41050         3198 017 41050         3198 017 41050         3198 017 41050         4822 126 1381         4822 122 31765         5322 126 11583         3198 017 41050         4822 122 31765         5322 126 11583         4822 122 31765         5322 126 11583         4822 051 20008         3198 016 31020         4822 124 11947         4822 101 21199         4822 105 24708         4822 050 24708         4822 051 30479         4822 117 12139         4822 117 12139         4822 117 12139         4822 117 12139         4822 051 30479         4822 117 12139         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 05	$\begin{array}{c} 0003\ 100\ 470nF\ COL\\ 0603\ 100\ 470nF\ COL\\ 47pF\ 5\%\ 63V\\ 100nF\ 10\%\ 16V\ 0603\\ 10\muF\ 20\%\ 63V\\ 100nF\ 10\%\ 16V\ 0603\\ 10\muF\ 20\%\ 63V\\ 100nF\ 10\%\ 50V\ 0603\\ 0603\ 10V\ 1\muF\ COL\ R\\ 470pF\ 5\%\ 50V\\ 100pF\ 2\%\ 63V\\ 0603\ 10V\ 1\muF\ COL\ R\\ 470pF\ 5\%\ 50V\\ 100pF\ 2\%\ 63V\\ 000F\ 2\%\ 63V\\ 100F\ 10\%\ 50V\ 0603\\ 0\ OHM\ 5\%\ 0.25W\ 0805\\ 0603\ 25V\ 1nF\\ 10\muF\ 20\%\ 16V\\ 10\muF\ 20\%\ 16V\\ 10\muF\ 20\%\ 16V\\ 10\muF\ 20\%\ 16V\\ 10\muF\ 20\%\ 0603\ 0.0016W\\ 4.7\Omega\ 5\%\ 0.062W\\ 4.7\Omega\ 5\%\ 0.062W\\ 42\Omega\ 5\%\ 0.062W\\ 22\Omega\ 5\%\ 0.062W\\ 1k2\ 1\%\ 1/16W\\ 2k2\ 5\%\ 0.062W\\ 270k\ 5\%\ 0.1W\\ 11\ 5\%\ 0.062W\\ \end{array}$	7800 7801 7802 VAL Vario 0001	4822 209 83357 4822 209 83357 4822 209 62059 6011 us 9305 023 61101	NJM4560M JRC NJM4560M JRC TCA0372DP1 VAL6011/01
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2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2232 2233 2234 2237 2238 2239 2240 2241 2242 	3198 017 44740         3198 017 44740         4822 122 33777         4822 126 14305         5322 126 14305         5322 126 14305         5322 126 14305         5322 126 14305         5322 126 14305         3198 017 41050         4822 122 31765         5322 126 13881         4822 122 31765         5322 126 11573         4822 122 31765         5322 126 11583         4822 051 20008         3198 016 31020         4822 124 11947         4822 101 21199         4822 105 24708         4822 050 24708         4822 051 30479         4822 051 30479         4822 117 12139         4822 117 12139         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30154         4822 051 30154	$\begin{array}{c} 10003\ 100\ 470nF\ COL\\ 0603\ 100\ 470nF\ COL\\ 47pF\ 5\%\ 63V\\ 100nF\ 10\%\ 16V\ 0603\\ 10\muF\ 20\%\ 63V\\ 100nF\ 10\%\ 16V\ 0603\\ 10\muF\ 20\%\ 63V\\ 100nF\ 10\%\ 50V\ 0603\\ 0603\ 10V\ 1\muF\ COL\ R\\ 470pF\ 5\%\ 50V\\ 100pF\ 2\%\ 63V\\ 100F\ 10\%\ 50V\ 0603\\ 0\ OHM\ 5\%\ 0.25W\ 0805\\ 0603\ 25V\ 1nF\\ 10\muF\ 20\%\ 16V\\ 4.7\Omega\ 5\%\ 0.062W\\ 4.7\Omega\ 5\%\ 0.062W\\ 47\Omega\ 5\%\ 0.062W\\ 47\Omega\ 5\%\ 0.062W\\ 47\Omega\ 5\%\ 0.062W\\ 12\Omega\ 5\%\ 0.062W\\ 11W\ 1M\ 5\%\ 0.062W\\ 270k\ 5\%\ 0.1W\\ 1M\ 5\%\ 0.062W\\ 270k\ 5\%\ 0.1W\\ 1M\ 5\%\ 0.062W\\ 820\Omega\ 5\%\ 0.62W\\ 820\Omega\ 5\%\ 0.62W$ 8200\ 5\%\ 0.62W\\ 820\Omega\ 5\%\ 0.62W\ 820\Omega\ 5\%\ 0.62W	7800 7801 7802 VAL Vario 0001	4822 209 83357 4822 209 83357 4822 209 62059 6011 us 9305 023 61101	NJM4560M JRC NJM4560M JRC TCA0372DP1 VAL6011/01
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2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2233 2234 2237 2238 2239 2232 2233 2234 2237 2238 2239 2240 2241 2242 	43198 017 44740         3198 017 44740         4822 122 33777         4822 126 14305         5322 126 14305         5322 126 14305         5322 126 11578         3198 017 41050         3198 017 41050         4822 126 13881         4822 126 13881         4822 126 13881         4822 126 13881         4822 126 13881         4822 126 13881         4822 126 13881         4822 126 13881         4822 126 13881         4822 126 13881         4822 126 13881         4822 126 13881         4822 126 13881         4822 126 13881         4822 126 13881         4822 127 1383         4822 127 130         4822 117 13608         4822 050 24708         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30479         4822 051 30154         4822 051 30154         4822 051 30154         4822 051 30105         4822 051 30105         4822 051	0603 10V 470nF COL           0603 10V 470nF COL           47pF 5% 63V           100nF 10% 16V 0603           10µF 20% 63V           100nF 10% 16V 0603           1nF 10% 50V 0603           0603 10V 1µF COL R           0603 10V 1µF COL R           0603 10V 1µF COL R           470pF 5% 50V           100pF 2% 63V           0603 10V 1µF COL R           470pF 5% 50V           100pF 2% 63V           0603 10V 1µF COL R           470pF 5% 50V           100pF 2% 63V           0603 25V 1nF           0µF 20% 16V           10µF 20% 0.062W           22Ω 5% 0.062W	7800 7801 7802 VAL Vario 0001	4822 209 83357 4822 209 83357 4822 209 62059 6011 us 9305 023 61101	NJM4560M JRC NJM4560M JRC TCA0372DP1 VAL6011/01
2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2233 2234 2237 2238 2234 2237 2238 2239 2240 2241 2242 	4822         1017         44740           3198<017	$\begin{array}{c} 10003 100 470 \text{nF COL} \\ 0603 10V 470 \text{nF COL} \\ 47p \text{F} 5\% 63V \\ 100 \text{nF} 10\% 16V 0603 \\ 10\mu \text{F} 20\% 63V \\ 100 \text{nF} 10\% 16V 0603 \\ 10\mu \text{F} 20\% 63V \\ 100 \text{nF} 10\% 50V 0603 \\ 0603 10V 1\mu \text{F} COL \text{R} \\ 470 \text{pF} 5\% 50V \\ 100 \text{pF} 2\% 63V \\ 0603 10V 1\mu \text{F} COL \text{R} \\ 470 \text{pF} 5\% 50V \\ 100 \text{pF} 2\% 63V \\ 00603 10V 1\mu \text{F} COL \text{R} \\ 470 \text{pF} 5\% 50V \\ 100 \text{pF} 2\% 63V \\ 00 \text{m} 10\% 50V 0603 \\ 0 \text{ OHM} 5\% 0.25W 0805 \\ 0603 25V 1 \text{nF} \\ 10\mu \text{F} 20\% 16V \\ 10\mu \text{F} 20\% 16V \\ 10\mu \text{F} 20\% 16V \\ 10\mu \text{F} 20\% 0.025W \\ 4.7\Omega 5\% 0.062W \\ 4\Omega7 1\% 0.6W \\ 4\Omega7 1\% 0.6W \\ 4\Omega7 1\% 0.6W \\ 47\Omega 5\% 0.062W \\ 22\Omega 5\% 0.062W \\ 22\Omega 5\% 0.062W \\ 22\Omega 5\% 0.062W \\ 22\Omega 5\% 0.062W \\ 270k 5\% 0.1W \\ 1M 5\% 0.062W \\ 270k 5\% 0.062W \\ 820\Omega 5\% 0.62W \\ 1k5\% 0.062W \\ 270\Omega 5\% 0.062W \\ 2700 5\% 0.062W \\ 270$	7800 7801 7802 VAL Vario 0001	4822 209 83357 4822 209 83357 4822 209 62059 6011 us 9305 023 61101	NJM4560M JRC NJM4560M JRC TCA0372DP1 VAL6011/01
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