

Service Manual

Colour Television EURO 2 Chassis

TX-21MD1F TX-25MD1F

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Service Manual

Colour Television TX-25MD1F TX-21MD1F EURO-2 Chassis

Specifications

(Information in brackets {} refer to TX-21MD1F)

Power Source :	220 — 240 V AC, 50Hz	
Power Consumption :	92W {75W}	
Aerial Impedance :	75Ω unbalanced, Coaxial Type	
Receiving System :	PAL B/G, I PAL — 60 SECAM L/L', B/G, D/K	
Receiving Channels :	VHF E2 — E12 VHF H1 — H2 (ITALY) VHF R1 — R2 VHF R6 — R12 UHF E21 — E69 CATV S1 — S10 (M1 — M10) CATV S11 — S20 (U1 — U10) CATV S21 — S41 (HYPERBAND)	
Intermediate Frequency :	Video 38.9MHz, 34MHz Sound 32.9MHz, 33.4MHz, 33.16MHz, 32.4MHz 33.05MHz, 34.05MHz, 40.4MHz 34.47MHz, 34.5MHz, 34.65MHz	
Colour		
Video / Audio Terminals :		
AV1 IN	Video (21 pin) Audio (21 pin) RGB (21 pin)	1V p—p 75Ω 500mV rms 10kΩ
AV1 OUT	Video (21 pin) Audio (21 pin)	1V p—p 75Ω 500mV rms 1kΩ
AV2 IN	Video (21 pin) Audio (21 pin) S—Video IN (21 pin)	1V p—p 75Ω 500mV rms 10 kΩ Y : 1V p—p 75Ω C : 0.3V p—p 75Ω
AV2 OUT	Video (21 pin) Audio (21 pin) Selectable output (21 pin)	1V p—p 75Ω 500mV rms 1kΩ
AV3 IN	S—Video IN (4—pin) Audio (RCA x 2) Video (RCA x 1)	Y : 1V p—p 75Ω C : 0.3V p—p 75Ω 500mV rms 10kΩ 1V p—p 75Ω
High Voltage :	28 kV ± 1kV {27 kV ± 1kV}	
Picture Tube :	A59ECF20X12 {A51EAL55X01} 63 cm {55 cm}	
Audio Output :		
Internal Speaker	2 x 15 W (Music Power) 8 Ω Impedance	
Headphones	8 Ω Impedance	
Accessories supplied :	Remote Control R6 (UM3) Battery	
Dimensions :	Height : 531mm {480mm} Width : 601mm {525mm} Depth : 439mm {480mm}	
Net Weight	25kg {20.2kg}	

Specifications are subject to change without notice.
Weight and dimensions shown are approximate.

Caractéristiques

(Les informations entre parenthèses {} concernent le TX-21MD1F)

Alimentation :	220 — 240 V AC, 50Hz	
Consommation :	92W {75W}	
Impédance d'antenne :	75Ω asymétrique sur prise coaxiale	
Système de réception :	PAL B/G, I PAL — 60 SECAM L/L', B/G, D/K	
Canaux de réception :	VHF E2 — E2 VHF H1 — H2 (ITALY) VHF R1 — R2 VHF R6 — R12 UHF E21 — E69 CATV S1 — S10 (M1 — M10) CATV S11 — S20 (U1 — U10) CATV S21 — S41 (HYPERBAND)	
Fréquence Intermédiaire :	Video 38.9MHz, 34MHz Sound 32.9MHz, 33.4MHz, 33.16MHz, 32.4MHz 33.05MHz, 34.05MHz, 40.4MHz 34.47MHz, 34.5MHz, 34.65MHz	
Colour		
Les bornes vidéo/audio :		
Entrée AV1 (21 broches)	Vidéo Audio RVB	1V p—p 75Ω 500mV rms 10kΩ
Sortie AV1 (21 broches)	Vidéo Audio	1V p—p 75Ω 500mV rms 1kΩ
Entrée AV2 (21 broches)	Vidéo Audio S—Vidéo IN (21 broches)	1V p—p 75Ω 500mV rms 10 kΩ Y : 1V p—p 75Ω C : 0.3V p—p 75Ω
Sortie AV2 (21 broches)	Vidéo Audio Sortie Commutable (21 broches)	1V p—p 75Ω 500mV rms 1kΩ
Entrée AV3 (21 broches)	S—Vidéo IN (4—broches) Audio (RCA x 2) Vidéo (RCA x 1)	Y : 1V p—p 75Ω C : 0.3V p—p 75Ω 500mV rms 10kΩ 1V p—p 75Ω
Tension d'anode :	28 kV ± 1kV {27 kV ± 1kV}	
Tube image :	A59ECF20X12 {A51EAL55X01} 63 cm {55 cm}	
Sortie Audio :		
Hautes parleurs intérieurs	2 x 15W (Music Power) 8 Ω Impédance	
Casque d'écoute	8 Ω Impédance	
Accessories fournis :	Télécommande R6 (UM3) Piles x 2	
Dimensions :	Hauteur : 531mm {480mm} Largeur : 601mm {525mm} Profondeur : 439mm {480mm}	
Poids (NET) :	25kg {20.2kg}	

Les caractéristiques techniques sont susceptibles de modification sans Préavis.
Le poids et les dimensions indiqués sont approximatifs.

Panasonic

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SAFETY PRECAUTIONS

GENERAL GUIDE LINES

1. It is advisable to insert an isolation transformer in the AC supply before servicing a hot chassis.
2. When servicing, observe the original lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations are correctly installed.
4. When the receiver is not being used for a long period of time, unplug the power cord from the AC outlet.
5. Potentials as high as 29kV are present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture to the chassis before handling the tube.
6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs of the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials , connectors, control shafts etc. When the exposed metallic part has a return path to the chassis the reading should be between 4M ohm and 20M ohm. When the exposed metal does not have a return path to the chassis the reading must be infinite.

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PRECAUTIONS DE SECURITE

CONSEILS GENERAUX

1. Avant d'effectuer toute révision d'un châssis sous tension il est recommandé d'installer un transformateur d'isolation.
2. Il est important, lors des réparations, de conserver la position initial de tous les fils et faisceaux, surtout dans le circuit de la haute tension. Remplacer toutes les pièces affectées par la chaleur dégagée lors d'un court-circuit.
3. Après les réparations, s'assurer que toutes les pièces protectrices telles que barrières ou papiers isolants, blindages et réseaux d'isolation R-C soient convenablement placées.
4. Il est préférable de débrancher le fil d'alimentation si la télé-couleur ne doit pas être utilisée pendant un certain temps.
5. Une tension élevée, de l'ordre de 29kV, est présente en plusieurs endroits lorsque l'appareil est en circuit. Il y a danger de chocs électriques lorsque le contact est établi en absence du panneau arrière. Toute personne qui tente de réparer cet appareil doit d'abord être consciente des précautions à observer avant de travailler sur un circuit à haute tension. Toujours décharger l'anode du tube cathodique au châssis avant de manipuler.
6. Après tout réparation, on doit effectuer les tests de courant de fuite dans le but d'éviter tout choc.

VERIFICATION DES COURANTS DE FUITE SANS ALIMENTATION

1. Débrancher le fil d'alimentation et installer un fil STRAP entre les deux broches de la fiche.
2. Placer l'interrupteur comme pour établir le contact sur l'appareil.
3. Mesurer la résistance entre les branches de la fiche d'alimentation et les pièces métalliques visibles telles que têtes de vis, antennes, arbre des commandes, support des poignées, etc. Certaines de ces pièces sont en contact avec le châssis et la résistance mesurée devrait se situer entre 4MΩ, et 20MΩ. La résistance des pièces qui ne sont pas en contact avec le châssis doit être infinie∞.

LEAKAGE CURRENT HOT CHECK

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 2k Ω 10W resistor in series with an exposed metallic part on the receiver and an earth such as a water pipe.
3. Use an AC voltmeter with high impedance to measure the potential across the resistor.
4. Check each exposed Metallic part and check the voltage at each point.
5. Reverse the AC plug at the outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 1.4 Vrms. In case a measurement is outside the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

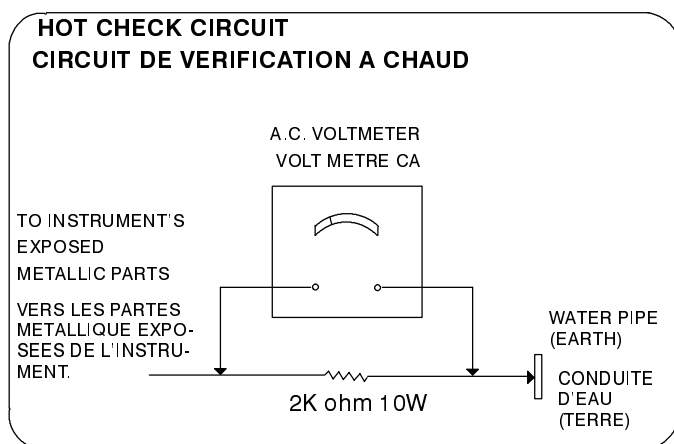


Fig.1

X—RADIATION WARNING

1. The potential sources of X—Radiation in TV sets are the high voltage section and the picture tube.
2. When using a picture tube test jig for service ensure that the jig is capable of handling 29kV without causing X—Radiation.

NOTE : It is important to use an accurate periodically calibrated high voltage meter

1. Set the brightness to minimum.
2. Measure the high voltage. The meter should indicate 28kV $\pm$ 1 kV {27kV $\pm$ 1 kV} if the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
3. To prevent any X—Radiation possibility, it is essential to use the specified tube.

VERIFICATION A CHAUD DU COURANT DE FUITE

1. Brancher le cordon secteur directement à une prise secteur. Ne pas utiliser de transformateur d'isolation pour cette vérification.
2. Raccorder une résistance de 2k Ω , 10W, en série avec une partie métallique exposée du récepteur et une terre comme une conduite d'eau.
3. Utiliser un voltmètre CA, de type à impédance élevée, pour mesurer le potentiel à travers la résistance.
4. Vérifier toutes les parties métalliques exposées et mesurer la tension à chaque point.
5. Retourner la fiche CA dans la prise secteur et répéter toutes les mesures ci-dessus.
6. Le potentiel à tous les points ne doit pas dépasser 1.4 volt RMS. AU cas où une mesure est supérieure à cette limite spécifiée, il y a un risque de décharge électrique et le récepteur doit être réparé et revérifié avant d'être rendu au client.

IRRADIATION AUX RAYONS X ATTENTION:

1. Les parties de la haute tension et du tube—cathodique d'une télé—couleur sont des sources possible d'émissions de rayons X.
2. Si un tube cathodique témoin est utilisé pour la réparation, s'assurer que son assemblage pourra supporter 29kV sans, émettre de radiations.

REMARQUE : Il est important que le multimètre à haute tension utilisé soit étalonné périodiquement.

1. Tourner entièrement vers la gauche la commande de lumière.
2. Mesurer la haute tension à l'aide du multimètre approprié. La valeur nominale est de 28kV $\pm$ 1 kV {27kV $\pm$ 1 kV}. Si la lecture est hors des tolérances, une réparation immédiate s'impose afin de prévenir toute panne prématurée.
3. Il est essentiel d'utiliser le tube cathodique d'origine pour prévenir toute émission de rayons X.

LOCATION OF CONTROLS

EMPLACEMENT DES COMMANDES

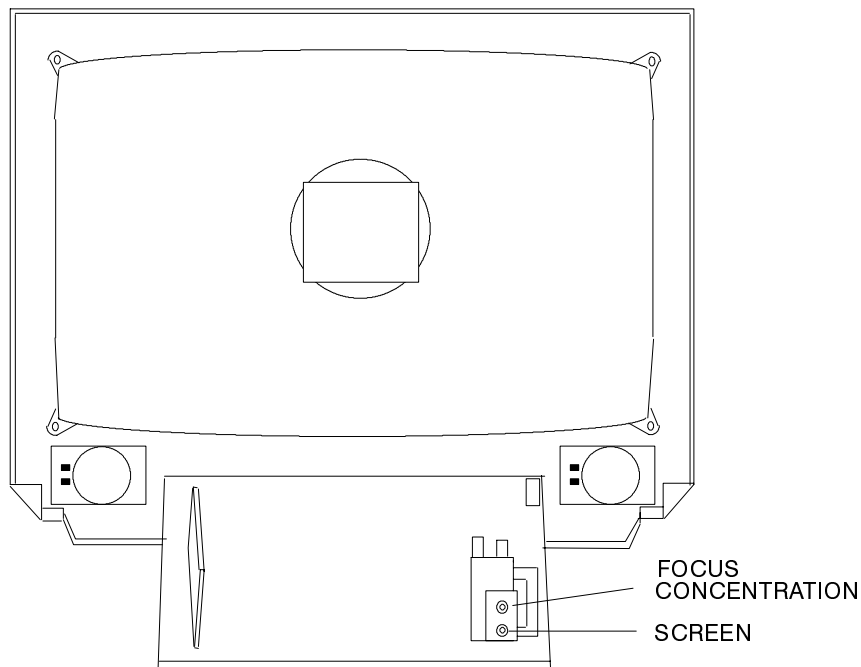


Fig.2

SERVICE HINTS

HOW TO REMOVE THE REAR COVER

1. Remove the 5 screws (A) as shown in Fig.3/Fig.4.

SUGGESTIONS DE DEPANNAGE

COMMENT RETIRER LE PENNEAU ARRIÈRE

1. Retirer les 5 vis (A) comme sur la Fig.3. / Fig.4.

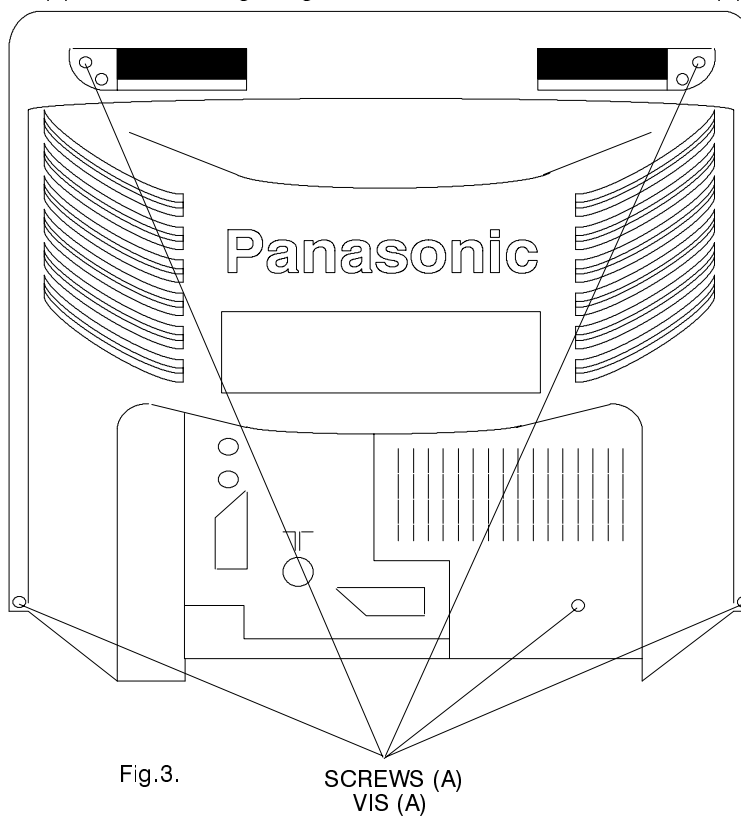


Fig.3.

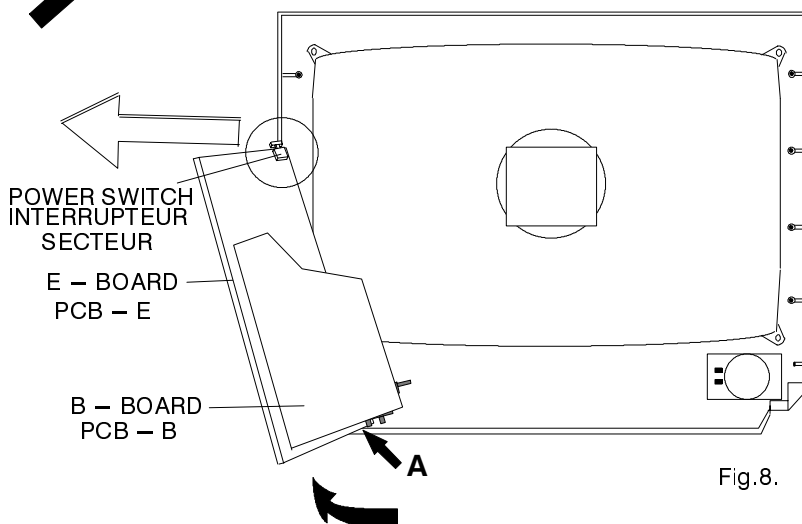
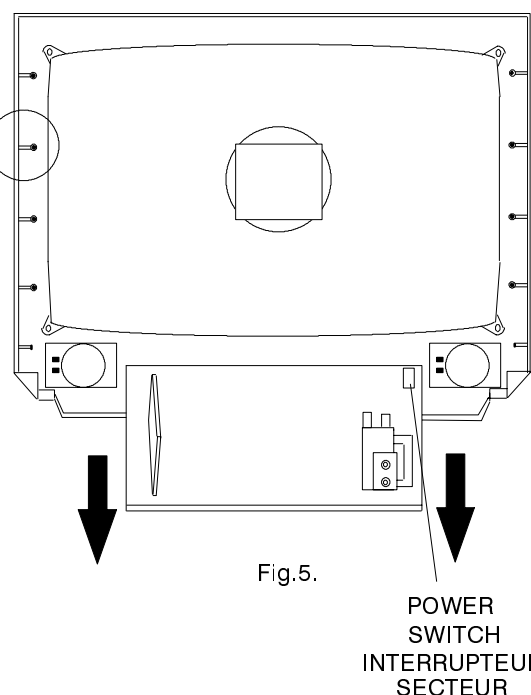
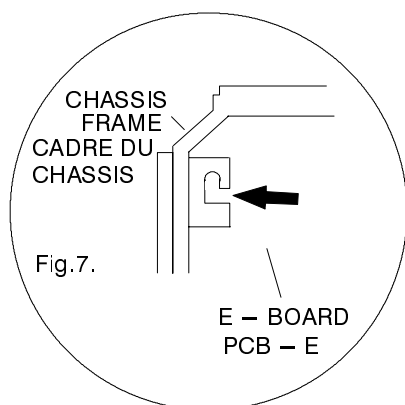
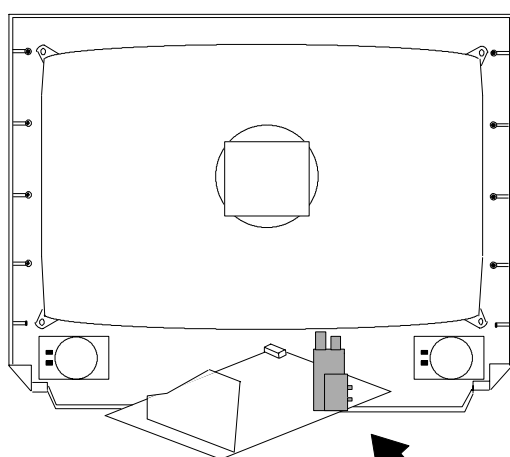
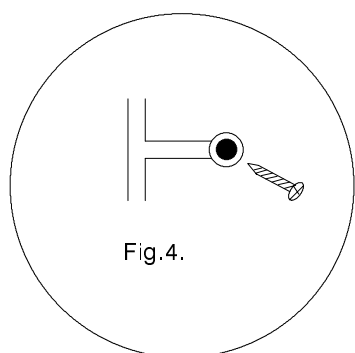
SCREWS (A)
VIS (A)

HOW TO MOVE THE CHASSIS INTO THE SERVICE POSITION

1. Insert 1 of the backcover screws into the rib on the left hand side of the cabinet as shown in Fig.4.
2. Hold and lift the rear of the E – PCB chassis and gently pull the chassis toward you as shown in fig.5.
3. Release the respective wiring clips and rotate the chassis horizontally through 90°, anti-clockwise, shown in Fig.6, then elevate the front of the chassis as shown in fig.8.
4. Clip the chassis frame onto the screw in the rib of the cabinet, shown in Fig.7/8.
5. Locate the base of the chassis frame into the recess marked A, shown in Fig.8.
6. After servicing remove the screw and ensure all wiring is returned to its original position before returning the receiver to the customer.

COMMENT PLACER LE CHASSIS EN POSITION DE SERVICE

1. Insérer 1 des vis de fixation du capot arrière dans une des nervures coté gauche; voir Fig.4
2. Tenir et soulever l'arrière de la PCB – E tel qu'indiquer sur la Fig.5 puis tirer doucement vers soi le châssis.
3. Dégrafer les retenues de câble et faire pivoter le châssis horizontalement de 90° vers la droite tel qu'en Fig.8
4. Fixer le cadre du châssis sur la vis; voir Fig.7/8
5. bloquer la base du châssis dans l' évidement marqué a; voir Fig.8
6. Après intervention s'assurer que les fils de liaisons soient bien à leur place.



ADJUSTMENT PROCEDURE

The remote control is used for entering and storing adjustments, with the exception of cut-off adjustments which must always be done prior to service adjustment. Perform adjustments in accordance with screen display. The display on the screen also specifies the CCU variants as well as the approx. setting values. The adjustment sequence for the service mode is indicated below.

1. Set the Bass to maximum position, set the Treble to minimum position, press the F button followed by the volume down button on the customer controls at the front of the TV and at the same time press the Reveal button on the remote control, this will place the TV into the Service Mode.
2. Press the RED / GREEN buttons to step up / down through the functions.
3. Press the YELLOW / BLUE buttons to alter the function values.
4. Press the STORE button after each adjustment has been made to store the required values.
5. To exit the Service Mode press the Normalisation button..

NOTE: This TV also has the option of using a Memory Pack which enables you to copy the preset TV channels into the Memory Pack and then download them onto this or any other EURO – 2 TV set.

TV to Memory Pack process

1. Plug the memory pack into the lower of the two 21 pin terminals at the back of the TV and switch the TV on. If the TV has only one 21 pin connector then this will be able to accept the memory pack.
2. Go into the Service Mode as explained above. The screen will show: –

Program
External>>TV

3. Press the blue button on the remote control. The screen will show: –

Program
TV>>External

4. Press the STORE button on the TV. The screen will show: –

Storing

5. All the tuning information stored inside the TV will now be transferred to the Memory Pack. This process will take 2–3 minutes to complete and when finished the screen will show: –

OK!

1. Plug the memory pack into the lower of the two 21 pin terminals at the back of the TV and switch the TV on. If the TV has only one 21 pin connector then this will be able to accept the memory pack.
2. Go into the Service Mode as explained above. The screen will show: –

Program
External>>TV

3. Press the STORE button on the TV. The screen will show: –

Loading

4. All the tuning information stored inside the Memory Pack will now be transferred to the TV. This process will take 2–3 minutes to complete and when finished the screen will show: –

OK!

5. The tuning information from the Memory Pack has now been copied into the TV
6. To exit from the Service Mode press the Normalisation button.
7. The process has now been completed and the Memory Pack can now be removed.

Memory Pack to TV Process

Errors

If an error occurs while using the Memory Pack the TV will detect this and the screen will show: –

Program
Error!

If this happens then press the Normalisation button and repeat the process that was being used. If the errors continue to occur then check the connectors between the TV and the memory pack and check the 9V battery inside the memory pack.

RÉGLAGES

La télécommande sert à entrer et stocker les données des réglages. Sauf pour le cut-off qui doit être réalisé en priorité. Les réglages s'affichent sur l'écran, ainsi que les spécificités nominales du CCU.

1. Régler par la télécommande le niveau de **grave** au **maximum, aigu** au **minimum**. Simultanément appuyer sur: **Volume-** du tiroir en face avant et le bouton **Reveal** de la télécommande.
2. Appuyer sur la touche **ROUGE** ou **VERTE** pour sélectionner la fonction désirée.
3. Appuyer sur la touche **JAUNE** ou **BLEUE** pour modifier les valeurs des réglages.
4. Mettre en mémoire après chaque réglage, en appuyant sur la touche **STORE**.
5. Pour sortir de la position SERVICE MODE arrêter le TV

REMARQUE : Le Memory Pack permet de copier la configuration du TV, (Chaines, Niveaux analogiques) et de la transférer, via le bloc-Mémoire vers un autre TV EURO-2.

Processus de transfert "téléviseur vers bloc-mémoire"

1. La partie arrière du téléviseur comporte deux connecteurs à 21 broches : brancher le bloc-mémoire dans le connecteur inférieur (AV2), puis mettre le téléviseur en marche ("ON"). Si le téléviseur ne comporte qu'un seul connecteur à 21 broches, celui-ci pourra alors servir à reccorder le bloc-mémoire.
2. Passer en Mode Service (voir ci-dessus). L'écran affichera:

Program
External>>TV

3. Appuyer sur la bouton BLEU de la télécommande. L'écran du téléviseur présente le message suivant:

Program
TV>>External

4. Appuyer sur la bouton de mémorisation (STORE) du téléviseur et l'écran présentera la message suivant :

Storing

5. Toutes les informations de syntonisation enregistrées par le téléviseur seront maintenant transférées vers le bloc-mémoire. Cette opération ne prend que 2 à 3 minutes. Lorsqu'elle est terminée, l'écran du téléviseur présentera message suivant :

OK!

Processus de transfert "bloc-mémoire vers téléviseur"

1. La partie arrière du téléviseur comporte deux connecteurs à 21 broches : brancher le bloc-mémoire dans le connecteur inférieur (AV2), puis mettre le téléviseur en marche ("ON"). Si le téléviseur ne comporte qu'un seul connecteur à 21 broches, celui-ci pourra alors servir à reccorder le bloc mémoire.
2. Passer en Mode Service (voir ci-dessus). L'écran affichera:

Program
External>>TV

3. Appuyer sur la bouton de mémorisation (STORE) du téléviseur et l'écran présentera la message suivant:

Loading

4. Toutes les informations de syntonisation enregistrées par le téléviseur seront maintenant transférées vers le bloc-mémoire. Cette opération ne prend que 2 à 3 minutes. Lorsqu'elle est terminée, l'écran du téléviseur présentera message suivant:

OK!

5. Les informations de syntonisation du téléviseur du bloc-mémoire ont maintenant été copiées dans le téléviseur.
6. Pour sortir du mode d'exploitation SERVICE, mettre le téléviseur hors circuit ("OFF").
7. Une fois l'opération terminée, enlever le bloc-mémoire.

Erreurs

Le téléviseur détectera toutes les erreurs susceptibles de se produire éventuellement pendant l'utilisation du bloc-mémoire. L'écran présentera alors le message suivant:

Program
Error!

Dans ce cas, mettre le téléviseur hors circuit ("OFF") puis répéter l'opération qui était en cours. En cas d'erreurs répétées, vérifier les connexions entre le téléviseur et le bloc-mémoire, puis contrôler l'état de la pile 9V à l'intérieur du bloc-mémoire.

ADJUSTMENT PROCEDURE

Item/Preparation	Adjustments
+B SET—UP 1. Recieve a window pattern 2. Set the controls: Brightness minimum Contrast minimum Volume minimum	1. Set the +B voltage up as follows: Adjust R811 so that B2 shows $147V \pm 1V$ { $130V \pm 1V$ } 2. Confirm the following voltages. B1 203 $\pm$ 10V B6 12 $\pm$ 0.5V B3 27 $\pm$ 1V B7 5 $\pm$ 0.1/—0.25V B4 35.5 $\pm$ 1V B8 5 $\pm$ 0.25V B5 15.5 $\pm$ 1V U33 31 $\pm$ 1V
RF AGC 1. Receive a test pattern. 2. Connect an oscilloscope between the tuner RF AGC and ground. 3. Set the oscilloscope gain range to 1V/div.	1. Check that the noise becomes large when the RF AGC VR R126 is turned counterclockwise. After the check turn it clockwise 2. Gradually turn the RF AGC VR anti—clockwise, and set the RF AGC VR to the point where the RF AGC voltage is just falling to a point where this voltage drops by 0.2V from the maximum value.
CUT OFF 1. Receive a widow pattern. 2. Degauss the tube externally. 3. Set the TV into Service Mode 1. 4. Select Cutoff DC mode.	1. Confirm then value is 128 and select Ug2 mode noting colour with largest value 2. Turn the screen VR until a colour reaches 20~30. 3. Connect an oscilloscope to the cathode with the biggest value colour. 4. Select Cutoff DC mode and adjust Cutoff pulse to 159V $\pm$ 5V. 5. Disconnect the oscilloscope and adjust the screen to whichever colour reaches 50 $\pm$ 10 first.

RÉGLAGES

Préparation	Réglages
+B 1. Appliquer une mire à carreaux N/B 2. Régler les contrôles suivants Lumière Minimum Contraste Minimum Volume Minimum	1. Régler les tensions +B comme suit : Régler R811 tel que la tension B2 soit de $147V \pm 1V$ { $130V \pm 1V$ } 2. Confirmer le réglage : B1 203 $\pm$ 10V B6 12 $\pm$ 0.5V B3 27 $\pm$ 1V B7 5 $\pm$ 0.1/—0.25V B4 35.5 $\pm$ 1V B8 5 $\pm$ 0.25V B5 15.5 $\pm$ 1V U33 31 $\pm$ 1V
CAG RF 1. Appliquer une mire test 2. Relier l'oscilloscope entre l'AGC RF du tuner et la masse 3. Calibrer l'oscilloscope sur 1V/div	1. Vérifier que le bruit augmente en tournant le VR R126 CAG RF vers la gauche. Puis le tourner vers la droite. 2. Tourner graduellement VR R126 vers la gauche jusqu'à obtenir 0.2V de moins que la tension maximum
CUT OFF 1. Appliquer une mire à carreaux N/B 2. Démagnétiser le tube extérieurement 3. Mettre le TV en Mode Service 1 4. Sélectionner le Mode Cutoff DC	1. Confirmer que la valeur soit 128 et sélectionner le mode Ug2 et noter la valeur de la couleur la plus élevée 2. Tourner le potentiomètre d'Ecran jusqu'à ce que la valeur d'une couleur se situe entre 20 et 30 3. Relier l'oscilloscope sur la cathode de la couleur dont la valeur est la plus élevée 4. Sélectionner le mode CUTOFF DC et régler l'impulsion de CUTOFF à 159V $\pm$ 5V 5. Retirer l'oscilloscope et régler la tension d'ecran à 50 ± 10 sur la première couleur atteignant cette valeur

ALIGNMENT SETTINGS (The figures used below are nominal and used for representative purposes only)

Alignment Function	TX–25MD1F	TX–21MD1F	Settings / Special features
1. Vertical amplitude	V–AM P051	V–AM P063	Optimum setting
2. Vertical symmetry	V–SYM 013	V–SYM 002	
3. Vertical linearity	V–LIN 012	V–LIN –020	
4. Vert. D.C.	Vert. D.C. 000	Vert.D.C. 000	No adjustment
5. V–Pos.	V. Pos. 003	V. Pos 005	Optimum setting
6. Horizontal amplitude	H–AM P –033	H–AM P –044	Optimum setting
7. Horizontal position	H–POS 049	H–POS 542	
8. Text Position	TEXT POSITION 045	TEXT POSITION 049	Optimum setting
9. EW–amplitude	E–W–AMP 1 –058	E–W–AMP 1 –059	Optimum setting
10. EW–amplitude	E–W–AMP 2 023	E–W–AMP 2 044	Optimum setting
11. Trapezium–comp	TRAPEZ–1 –014	TRAPEZ–1 000	Optimum setting
12. Trapezium– comp	TRAPEZ–2 012	TRAPEZ–2 –009	Optimum setting
13. Colour VCO	Colour VCO 015	Colour VCO 006	Press either Blue or Yellow buttons to effect automatic adjustment
14. Cut–off DC	Cut–off DC 050	Cut–off DC 050	No adjustment
15. Ug2 Test	Ug 2 Test 107 021 023	Ug 2 Test 094 044 020	Select Cutoff DC in Service Mode mode and confirm the value is 128. Select Ug 2 Test noting colour with largest value, adjust on FBT until a colour reaches 20 ~ 30. Connect an oscilloscope to the cathode of the biggest value colour, select Cutoff DC mode and adjust get Cutoff pulse voltage to $159 \pm 5V$. Disconnect the oscilloscope and adjust the screen to whichever colour reaches 50 ± 10 first.
16. Cutoff	Cutoff 045 055 050	Cutoff 057 064 056	Press the GREEN button to step through the settings. Adjust for optimum.
17. White	White 224 255 237	White 200 255 246	Press the GREEN button to step through the settings. Adjust for optimum.

RÉGLAGES (Les figures ci-dessous sont fictives et utilisées uniquement à des fins représentatives)

Fonctions	TX-25MD1F	TX-21MD1F	Réglages/Points particuliers
1. Amplitude verticale	V-AM P051	V-AM P063	Optimiser les réglages
2. Symétric verticale	V-SYM 013	V-SYM 002	
3. Linéarité verticale	V-LIN 012	V-LIN -020	
4. Vert. D.C.	Vert. D.C. 000	Vert.D.C. 000	Ne pas régler
5. V-Pos	V. Pos. 003	V. Pos 005	Optimiser les réglages
6. Amplitude horizontal	H-AMP -033	H-AMP -044	Optimiser les réglages
7. Centrage horizontal	H-POS 049	H-POS 542	
8. Text Position	TEXT POSITION 045	TEXT POSITION 049	Optimiser les réglages
9. Amplitude E.O.	E-W-AMP 1 -058	E-W-AMP 1 -059	Optimiser les réglages
10. Amplitude E.O.	E-W-AMP 2 023	E-W-AMP 2 044	Optimiser les réglages
11. Correction trapèze	TRAPEZ-1 -014	TRAPEZ-1 000	Optimiser les réglages
12. Correction trapèze	TRAPEZ-2 012	TRAPEZ-2 -009	Optimiser les réglages
13. Réglage oscillateur sous porteuse	Colour VCO 015	Colour VCO 006	Régler la fréquence
14. Cut-off DC	Cut-off DC 050	Cut-off DC 050	Ne pas régler
15. Ug2 Test	Ug 2 Test 107 021 023	Ug 2 Test 094 044 020	
Sélectionner le Mode Cutoff DC. Confirmer que la valeur soit 128 puis sélectionner le Mode Test Ug2 et noter la valeur de la couleur la plus élevée. Ajuster le réglage situé sur le FBT jusqu'à ce que la valeur d'une des couleurs se situe entre 20 et 30. Relier l'oscilloscope sur la cathode dont la valeur de la couleur est la plus élevée. Sélectionner le mode CUTOFF DC et régler l'impulsion de CUTOFF à 159V ± 5V. Retirer l'oscilloscope et régler la tension d'écran à 50 ± 10 sur la première couleur atteignant cette valeur.			
16. Cutoff	Cutoff 045 055 050	Cutoff 057 064 056	Appuyer sur la touche VERTE pour accéder aux réglages. Régler pour optimiser.
17. White	White 224 255 237	White 200 255 246	Appuyer sur la touche VERTE pour accéder aux réglages. Régler pour optimiser.

SELF CHECK

Self check is used to automatically check the Bus Lines and Hexadecimal code of the TV set.

To get into the SelfCheck mode press the F button followed by the volume down button on the customer controls at the front of the TV at the same time pressing the Status button, on the Remote Control, and the screen will show:—

1	—	ok	Tuner	11	—	—	Dolby IC for C/R
2	—	ok	VIF	12	—	ok	P S MODE
3	—	ok	EEPROM	13	—	ok	P TA0
4	—	—	Sound AV switch1	14	—	ok	P TA1
5	—	ok	Video AV switch1	15	—	ok	P TA2
6	—	ok	VDP	16	—	ok	P TA3
7	—	ok	TPU	17	—	ok	P SDA
8	—	ok	MSP	18	—	ok	P SCL1
9	—	—	Dolby Sub	19	—	ok	P SCL3
10	—	—	Dolby IC for L/R	20	—	ok	P SCL4

If the CCU ports have been checked and found to be incorrect then "—" will appear in place of "OK".

21	—	ok	P SBLED	Hex codes
22	—	ok	P OFF	7A
23	—	ok	P DEFL	20
24	—	ok	P RAM	62
				54
				85

AUTO TEST

L'auto test est utilisé pour vérifier le BUS et les codes Hexadécimaux du TV.

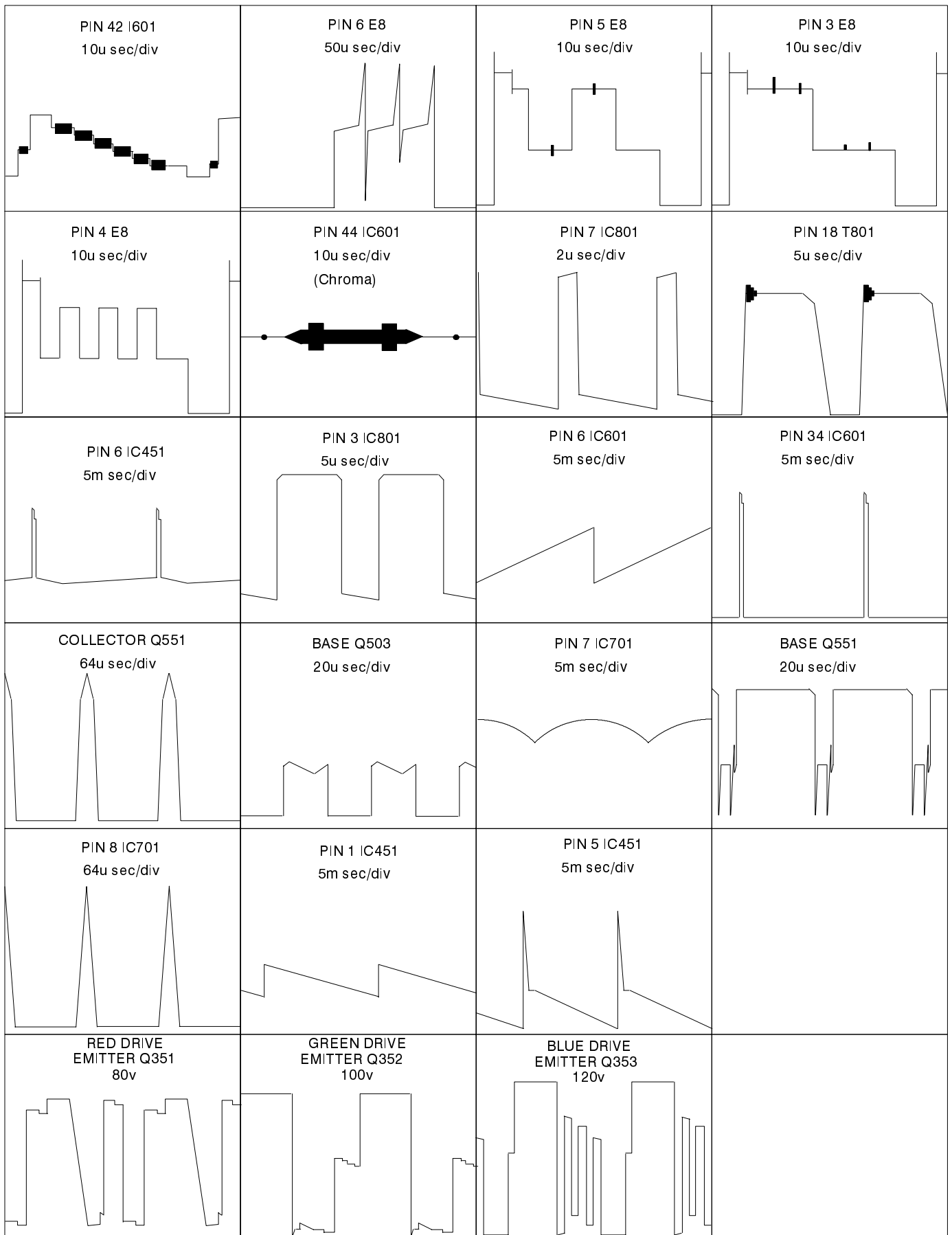
Pour passer en mode test ,il faut appuyé simultanément sur : VOLUME MOINS sur le tiroir en face avant et: OFF TIMER sur la télécommande Infra—rouge:—

1	—	ok	Tuner	11	—	—	Dolby IC for C/R
2	—	ok	VIF	12	—	ok	P S MODE
3	—	ok	EEPROM	13	—	ok	P TA0
4	—	—	Sound AV switch1	14	—	ok	P TA1
5	—	ok	Video AV switch1	15	—	ok	P TA2
6	—	ok	VDP	16	—	ok	P TA3
7	—	ok	TPU	17	—	ok	P SDA
8	—	ok	MSP	18	—	ok	P SCL1
9	—	—	Dolby Sub	19	—	ok	P SCL3
10	—	—	Dolby IC for L/R	20	—	ok	P SCL4

Si lors du test une fonction du ccu est incorrecte l'afficheur indiquera "—" au lieu de "OK".

21	—	ok	P SBLED	Hex codes
22	—	ok	P OFF	7A
23	—	ok	P DEFL	20
24	—	ok	P RAM	62
				54
				85

WAVEFORM PATTERN TABLE TABLEAU DE MIRES DE FORMA D'ONDES



SCHEMATIC DIAGRAM FOR MODELS TX–25MD1F TX–21MD1F (Euro–2 Chassis)

IMPORTANT SAFETY NOTICE

Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

Notes

1. **RESISTOR**
All resistors are carbon 1/4W resistor, unless marked as follows:
Unit of resistance is OHM (Ω) (K=1,000, M=1,000,000).
2. **CAPACITORS**
All capacitors are ceramic 50V, unless marked as follows:
Unit of capacitance is μ F, unless otherwise stated.
3. **COIL**
Unit of inductance is μ H, unless otherwise stated.
4. Components marked 'L' on the schematic diagram shows leadless parts.
5. **TEST POINT**
 : Test Point position
6. **EARTH SYMBOL**
 : Chassis Earth (Cold)  : Line Earth (Hot)
7. **VOLTAGE MEASUREMENT**
Voltage is measured by a DC voltmeter.
Measurement conditions are as follows:
Power source AC 220V–240V, 50Hz
Receiving Signal Colour Bar signal (RF)
All customer controls Maximum position
8.  : Indicates the Video signal path
 : Indicates the Audio signal path
 : Indicates the Vertical/Horizontal signal path
9. This schematic diagram is the latest at the time of printing and is subject to change without notice.

Remarks

1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection. The circuit is defined by HOT and COLD indications in the schematic diagram. All circuits, except the Power Circuit, are COLD. Take the following precautions:

Precautions

- a. Do not touch the hot part, or the hot and cold parts at the same time, as you are liable to a shock hazard.
- b. Do not short-circuit the hot and cold circuits as electrical components may be damaged.
- c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously, as this may cause fuse failure. Connect the earth of the instruments to the earth connection of the circuit being measured.
- d. Make sure to disconnect the power plug before removing the chassis.

SCHEMA TECHNIQUE POUR MODELE TX–25MD1F TX–21MD1F (Euro–2 Chassis)

REMARQUE IMPORTANTE POUR LA SÉCURITÉ

Les éléments portant la marque  possèdent des caractéristiques de sécurité spéciales. Lors du remplacement de l'une quelconque de ces pièces n'utiliser que celles spécifiées par la fabricant.

Nota :

1. **RESISTOR**
Toutes les résistances sont des résistances au carbone 1/4W, sauf indication contraire par les indications suivantes
L'unité de résistance est l' OHM (Ω) (K=1,000, M=1,000,000).
2. **CONDENSATEUR**
Tous les condensateurs sont des condensateurs céramique 50V, sauf indication contraire par les indications suivantes :
L'unité de capacité est le μ F, sauf indication contraire.
3. **BOBINE**
L'unité d'inductance est le μ H, sauf indication contraire
4. Les composants entourés de pointillés, sur le schéma, représentent des éléments non câblés.
5. **POINT D'ESSAI**
 Position du point d'essai
6. **SYMBOL DE TERRE**
 : Terre du châssis (froid)  : Terre de ligne (chaud)
7. **MESURE DE TENSION**
La tension est mesurée avec un voltmètre c.c.
Les conditions de mesure sont les suivantes:
Source d'alimentation CA 220V–240V, 50Hz
Signal de réception Signal barre couleur (RF)
Toutes les commandes utilisateur. Position maximum
8.  : Vidéo
 : Audio
 : Vertical / Horizontal
9. Ce schéma est à jour moment de l'impression et modifiable sans préavis.

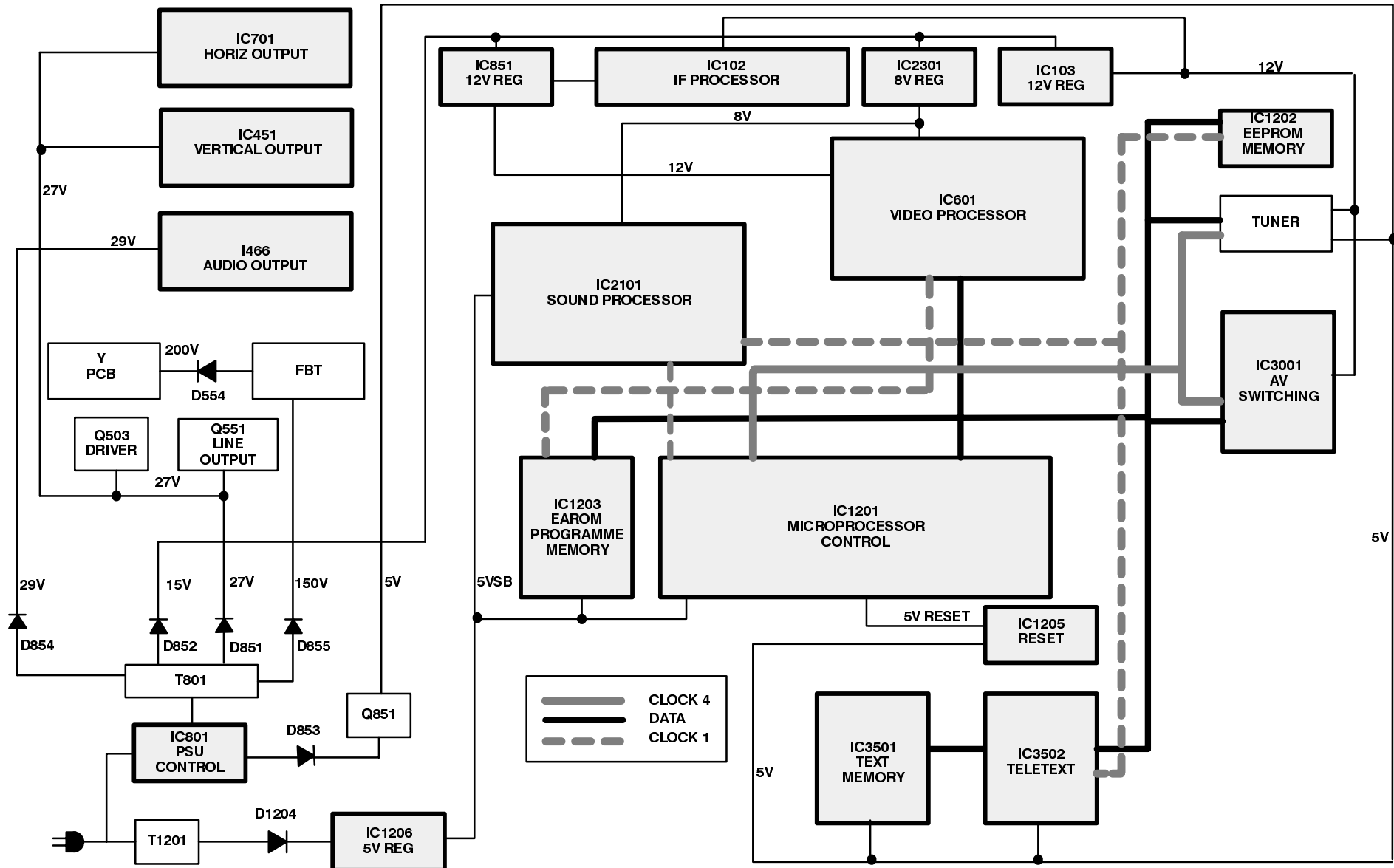
Remarque

1. Le circuit d'alimentation contient une zone de qui utilise une alimentation séparée pour isoler la connexion à la terre. Le circuit est défini par les indications chaud (HOT) et froid (COLD) dans le diagramme schématique. Prendre les précautions suivantes. Tous les circuits, sauf le circuit d'alimentation, sont froids.

Précautions

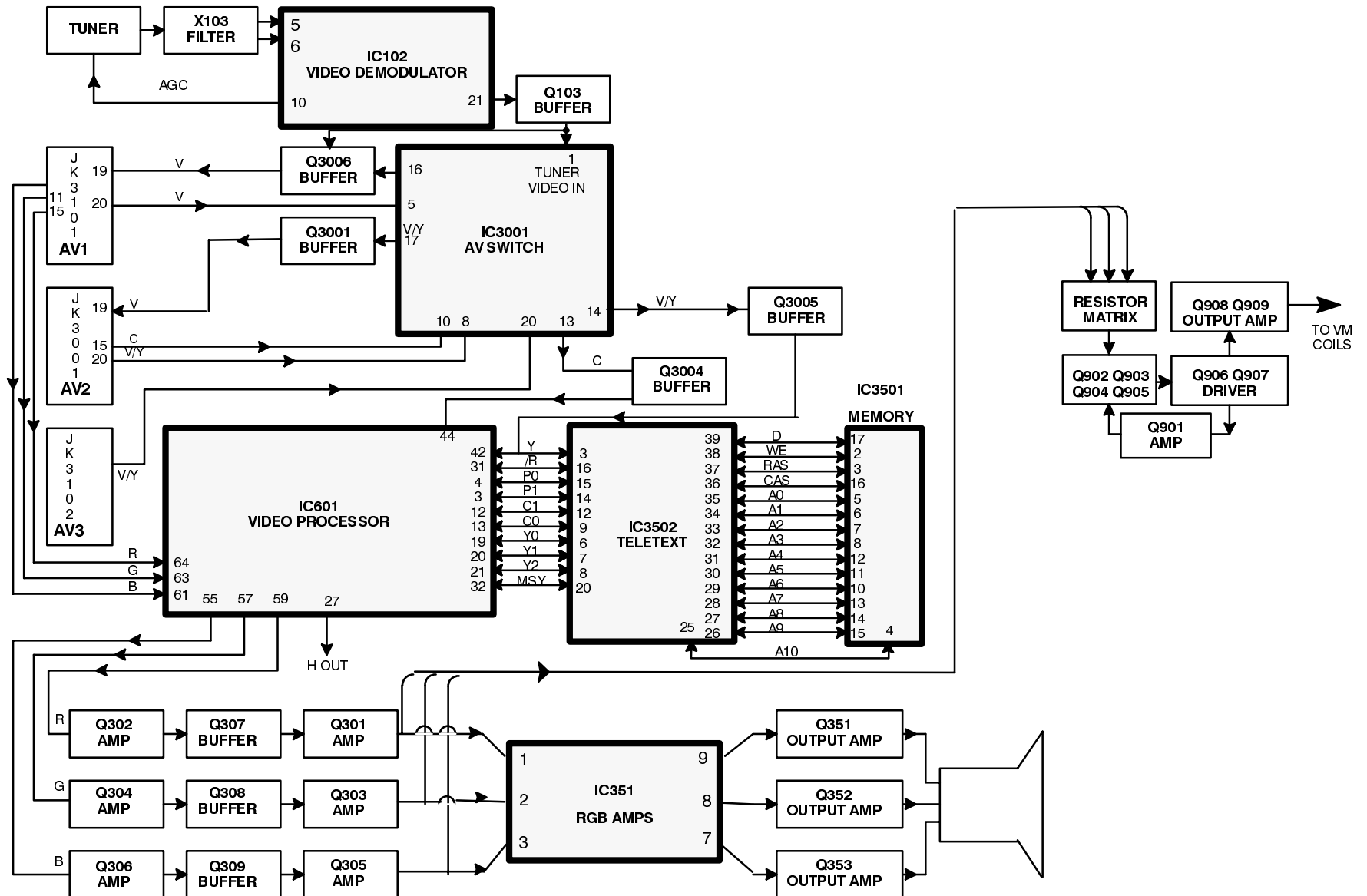
- a. Ne pas toucher la partie chaude ou en même temps les parties chaud et froide. Cela présente un risque de décharge électrique.
- b. Ne pas court-circuiter les circuits chaud et froid car un fusible peut sauter et des pièces se casser.
- c. Ne pas raccorder un instrument, comme un oscilloscope, simultanément aux circuits chaud et froid car un fusible peut sauter. Raccorder la terre des instruments à la connexion de terre du circuit mesuré.
- d. Toujours débrancher la fiche d'alimentation avant de déposer le châssis.

POWER SUPPLY AND CONTROL BLOCK DIAGRAM ALIMENTATION ET SYNOPTIQUE DE COMMANDE



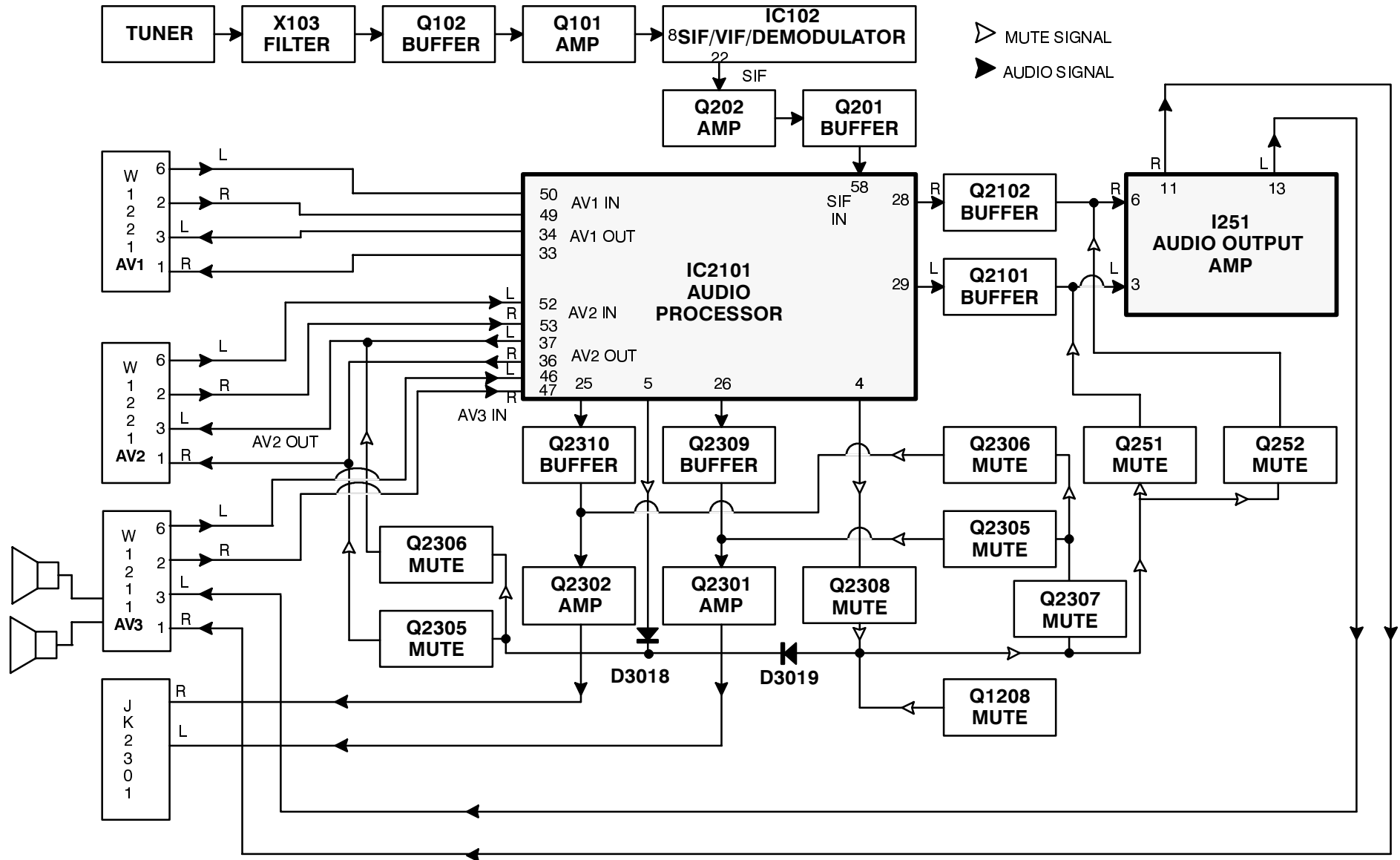
VIDEO BLOCK DIAGRAM

SYNOPTIQUE VIDEO



AUDIO BLOCK DIAGRAM

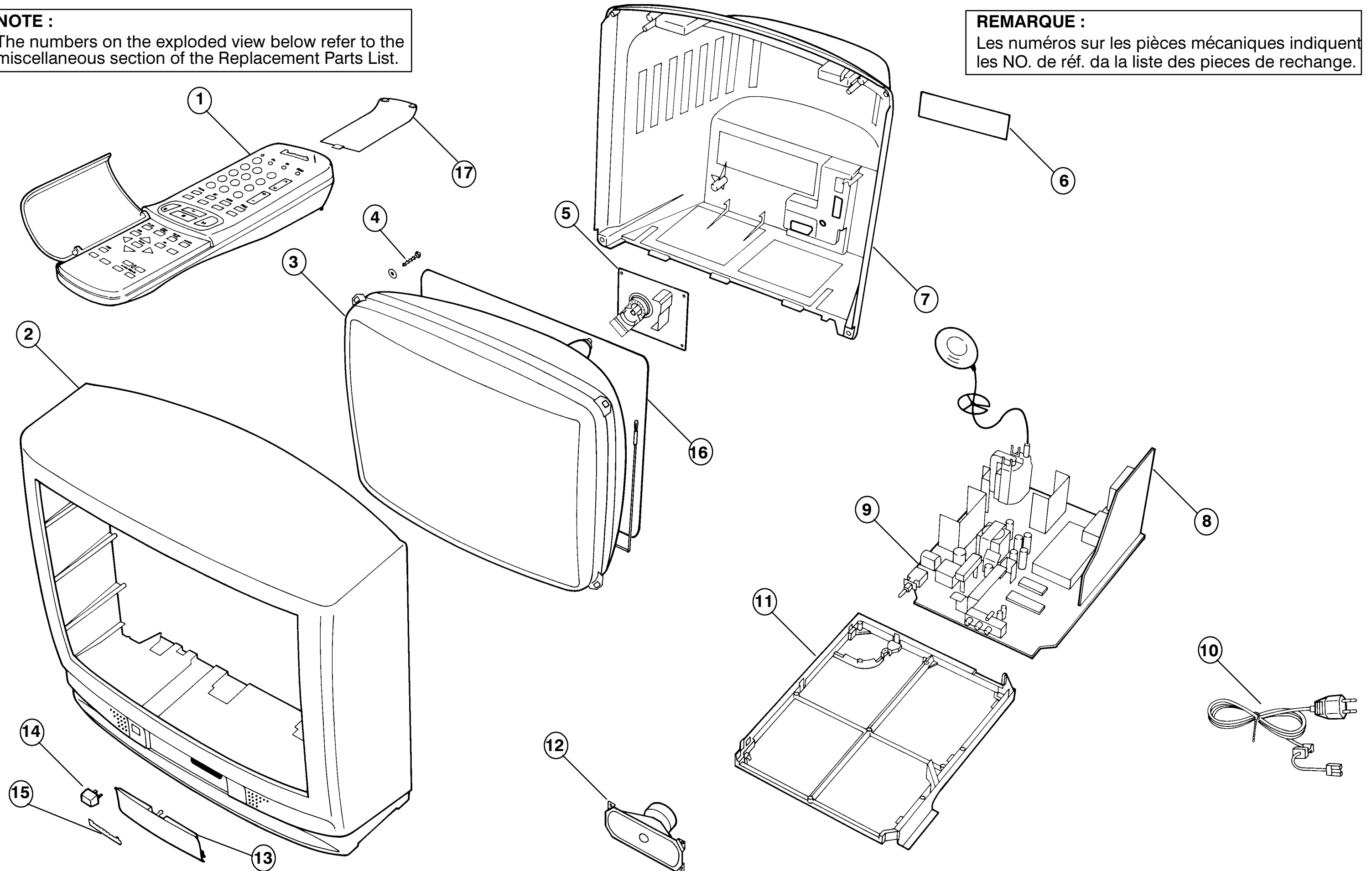
SYNOPTIQUE AUDIO



PARTS LOCATION

NOTE :

The numbers on the exploded view below refer to the miscellaneous section of the Replacement Parts List.



EMPLACEMENT DES PIÈCES

REMARQUE :

Les numéros sur les pièces mécaniques indiquent les NO. de réf. de la liste des pièces de rechange.

REPLACEMENT PARTS LIST

Important Safety Notice

Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

LISTE DES PIÈCES DE RECHANGE

Remarque importante pour la sécurité

Les éléments portant la indication Δ possèdent des caractéristiques de sécurité spéciales. Lors du remplacement de l'une quelconque de ces pièces, n'utiliser que celles spécifiées par la fabricant.

PARTS COMMON TO TX – 25MD1F AND TX – 21MD1F

Ref No.	Part No.	Description	
MISCELLANEOUS COMPONENTS			
1)	EUR51920	REMOTE CONTROL	
2)	*****	SEE DIFFERENCE LIST	
3)	*****	SEE DIFFERENCE LIST	
4)	*****	SEE DIFFERENCE LIST	
5)	*****	SEE DIFFERENCE LIST	
6)	*****	SEE DIFFERENCE LIST	
7)	*****	SEE DIFFERENCE LIST	
8)	TNP8EB006AA	B P.C.B.	Δ
9)	*****	SEE DIFFERENCE LIST	
10)	TSX8E0011	MAINS LEAD	Δ
11)	TMX8E010	CHASSIS FRAME	
12)	EASG12D531F2	SPEAKER	
13)	TKP8E1127	LID	
14)	TBX8E026	POWER BUTTON	
15)	TBM153022	PANASONIC BADGE	
16)	*****	SEE DIFFERENCE LIST	
17)	UR51EC780	BATTERY COVER (REMOTE)	
	ENV578F5G3	TUNER	Δ
	TEK6935	LID SWITCH	
	TES8E012	EARTH SPRING	
	TMW8E020	LED HOLDER	
	TMX8E010	LED PANEL	
	TPD8E562	CUSHION	
	UM-3DEP-2P	BATTERY	
	TQB8E2027A	GERMAN INST BOOK	Δ
	TQB8E2027B	DUTCH INST BOOK	Δ
	TQB8E2027C	ITALIAN INST BOOK	Δ
	TQB8E2027D	FRENCH INST BOOK	Δ
CAPACITORS			
C001	ECUV1H103ZFX	S.M.CAP	50V 10nF
C002	ECEA1HUR33	ELECT	50V 0.33 μ F
C003	ECUV1H104ZFX	S.M.CAP	50V 100nF
C004	ECEA1CU221	ELECT	16V 220 μ F
C007	ECUV1H104ZFX	S.M.CAP	50V 100nF
C009	ECUV1H104ZFX	S.M.CAP	50V 100nF
C100	ECUV1H104ZFX	S.M.CAP	50V 100nF
C101	ECUV1H104ZFX	S.M.CAP	50V 100nF
C102	ECUV1H104ZFX	S.M.CAP	50V 100nF
C103	ECUV1H104ZFX	S.M.CAP	50V 100nF
C104	ECUV1H104ZFX	S.M.CAP	50V 100nF
C105	ECUV1H104ZFX	S.M.CAP	50V 100nF
C106	ECUV1H100CCX	S.M.CAP	50V 10pF
C107	ECUV1H104ZFX	S.M.CAP	50V 100nF
C108	ECUV1H104ZFX	S.M.CAP	50V 100nF
C109	ECUV1H104ZFX	S.M.CAP	50V 100nF
C110	ECUV1H102KBX	S.M.CAP	50V 1nF
C111	ECEA1CKA470	ELECT	16V 47 μ F
C113	ECEA1HKA100	ELECT	50V 10 μ F
C115	ECEA1HKA100	ELECT	50V 10 μ F
C116	ECEA1CU100	ELECT	16V 10 μ F
C117	ECUV1H103ZFX	S.M.CAP	50V 10nF
C118	ECUV1H393KBX	S.M.CAP	50V 39nF
C119	ECUV1C224KBX	S.M.CAP	16V 0.22 μ F
C120	ECUV1H104ZFX	S.M.CAP	50V 100nF

Ref No.	Part No.	Description	
C121	ECUV1H070DTX	S.M.CAP	50V 7pF
C122	ECEA1HKA2R2	ELECT	50V 2.2 μ F
C123	ECEA1HKA2R2	ELECT	50V 2.2 μ F
C124	ECEA1CU470	ELECT	16V 47 μ F
C125	ECUV1H471JCX	S.M.CAP	50V 470pF
C128	ECUV1H103ZFX	S.M.CAP	50V 10nF
C130	ECEA1HKA2R2	ELECT	50V 2.2 μ F
C131	ECUV1H104ZFX	S.M.CAP	50V 100nF
C132	ECUV1H102KBX	S.M.CAP	50V 1nF
C133	ECUV1H102KBX	S.M.CAP	50V 1nF
C134	ECUV1H103ZFX	S.M.CAP	50V 10nF
C135	ECUV1H103ZFX	S.M.CAP	50V 10nF
C136	ECEA1CU100	ELECT	16V 10 μ F
C137	ECEA1EU100	ELECT	25V 10 μ F
C138	ECUV1H103ZFX	S.M.CAP	50V 10nF
C139	ECUV1H030CCX	S.M.CAP	50V 30pF
C140	ECUV1H104ZFX	S.M.CAP	50V 100nF
C141	ECUV1H151JCX	S.M.CAP	50V 150pF
C142	ECUV1H151JCX	S.M.CAP	50V 150pF
C143	ECEA1CKA100	ELECT	16V 10 μ F
C145	ECUV1H104ZFX	S.M.CAP	50V 100nF
C146	ECUV1H104ZFX	S.M.CAP	50V 100nF
C148	ECUV1H104ZFX	S.M.CAP	50V 100nF
C149	ECUV1H183JCN	S.M.CAP	50V 18nF
C150	ECEA1CKA100	ELECT	16V 10 μ F
C151	ECUV1H104ZFX	S.M.CAP	50V 100nF
C153	ECUV1H151JCX	S.M.CAP	50V 150pF
C154	ECUV1H151JCX	S.M.CAP	50V 150pF
C158	ECUV1H104ZFX	S.M.CAP	50V 100nF
C159	ECUV1H103ZFX	S.M.CAP	50V 10nF
C160	ECUV1H103ZFX	S.M.CAP	50V 10nF
C201	ECUV1H070DCX	S.M.CAP	50V 7pF
C202	ECUV1H070DCX	S.M.CAP	50V 7pF
C203	ECUV1H470JX	S.M.CAP	50V 47pF
C204	ECUV1H560JCX	S.M.CAP	50V 56pF
C205	ECUV1H560JCX	S.M.CAP	50V 56pF
C207	ECUV1H560JCX	S.M.CAP	50V 56pF
C210	ECUV1H103ZFX	S.M.CAP	50V 10nF
C252	ECUV1H223KBX	S.M.CAP	50V 22nF
C254	ECQM1H224J	FILM	50V 220nF
C255	ECEA1EGE101	ELECT	25V 100 μ F
C256	ECUV1H223KBX	S.M.CAP	50V 22nF
C259	ECQM1H224J	FILM	50V 220nF
C262	ECEA1HN010	ELECT	50V 1 μ F
C264	ECEA1HGE222	ELECT	50V 2200 μ F
C265	ECEA1HN010	ELECT	50V 1 μ F
C267	ECUV1H104ZFX	S.M.CAP	50V 100nF
C268	ECUV1H104ZFX	S.M.CAP	50V 100nF
C271	ECUV1H561KBX	S.M.CAP	50V 560pF
C302	ECUV1H104ZFX	S.M.CAP	50V 100nF
C303	ECUV1H104ZFX	S.M.CAP	50V 100nF
C310	ECUV1H104ZFX	S.M.CAP	50V 100nF
C354	ECQM2104KZ	FILM	250V 100nF
C355	ECUV1H222JCX	S.M.CAP	50V 2.2nF
C356	ECUV1H222JCX	S.M.CAP	50V 2.2nF
C357	ECUV1H222JCX	S.M.CAP	50V 2.2nF
C360	ECKC3D152J	CERAMIC	2KV 1.5nF
C361	ECEA1HMR47GBELECT		50V R47 μ F Δ

Ref No.	Part No.	Description	
C451	ECUV1H102JX S.M.CAP	50V 1nF	
C452	ECUV1H473ZFX S.M.CAP	50V 47nF	
C453	ECUV1H472KBX S.M.CAP	50V 4.7nF	
C454	ECUV1H104ZFX S.M.CAP	50V 100nF	
C456	ECEA1HGE221 ELECT	50V 220µF	
C458	ECQM1H154J FILM	50V 150nF	
C460	ECQV1H105JZ FILM	50V 1µF	
C462	ECEA1VGE332 ELECT	35V 3300µF	
C506	ECUV1H103ZFX S.M.CAP	50V 10nF	
C508	ECQV1H105JZ FILM	50V 1µF	
C509	ECEA1HGE101 ELECT	50V 100µF	
C510	ECUV1H104ZFX S.M.CAP	50V 100nF	
C511	ECQM2683JZ FILM	250V 68nF	
C555	ECWH12H103J FILM	1250V 10nF	△
C562	ECKC2H101J CERAMIC	500V 100pF	△
C563	ECEA2EU220 ELECT	250V 22µF	
C564	ECEA2AU2R2 ELECT	100V 2.2µF	
C565	ECQP1H273J FILM	50V 27nF	
C601	ECUV1H271JCX S.M.CAP	50V 270pF	
C602	ECUV1H121JCX S.M.CAP	50V 120pF	
C603	ECUV1H471JCX S.M.CAP	50V 470pF	
C605	ECUV1H103ZFX S.M.CAP	50V 10nF	
C608	ECUV1H683ZFX S.M.CAP	50V 68nF	
C610	ECUV1H683ZFX S.M.CAP	50V 68nF	
C611	ECUV1H104ZFX S.M.CAP	50V 100nF	
C612	ECUV1H103ZFX S.M.CAP	50V 10nF	
C613	ECUV1H102JCX S.M.CAP	50V 1nF	
C614	ECUV1H104ZFX S.M.CAP	50V 100nF	
C615	ECUV1H103ZFX S.M.CAP	50V 10nF	
C616	ECUV1H103ZFX S.M.CAP	50V 10nF	
C618	ECUV1H473ZFX S.M.CAP	50V 47nF	
C619	ECUV1H104ZFX S.M.CAP	50V 100nF	
C620	ECUV1H104ZFX S.M.CAP	50V 100nF	
C623	ECUV1H104ZFX S.M.CAP	50V 100nF	
C624	ECUV1H103ZFX S.M.CAP	50V 10nF	
C625	ECEA1HNR22 ELECT	50V 0.22µF	
C628	ECUV1H470JCX S.M.CAP	50V 47pF	
C629	ECUV1H101JCX S.M.CAP	50V 100pF	
C630	ECUV1H104ZFX S.M.CAP	50V 100nF	
C631	ECUV1H104ZFX S.M.CAP	50V 100nF	
C632	ECUV1H104ZFX S.M.CAP	50V 100nF	
C633	ECUV1H102JCX S.M.CAP	50V 1nF	
C636	ECUV1H101JCX S.M.CAP	50V 100pF	
C637	ECUV1H102KBX S.M.CAP	50V 1nF	
C638	ECUV1H181JCX S.M.CAP	50V 180pF	
C639	ECUV1H561KBX S.M.CAP	50V 560pF	
C702	ECUV1H103KBX S.M.CAP	50V 10nF	
C704	ECQB1H223K FILM	50V 22nF	
C801	ECUV1H101JCX S.M.CAP	50V 100pF	
C802	ECQE6104K FILM	600V 100nF	△
C803	ECUV1H560JX S.M.CAP	50V 56pF	
C805	ECUV1H104ZFX S.M.CAP	50V 100nF	
C807	ECEA1EGE101 ELECT	25V 100µF	
C808	ECQB1H103J FILM	50V 10nF	
C809	ECQB1H103J FILM	50V 10nF	
C810	ECQU2A224MN FILM	250V 220nF	
C811	ECEA1HN010 ELECT	50V 1µF	
C815	ECKC2H472J CERAMIC	500V 4.7nF	△
C816	ECKC3D222JB CERAMIC	2KV 2200pF	△
C817	ECQB1H223K FILM	50V 22nF	
C818	ECKC2H472J CERAMIC	500V 4.7nF	△
C821	ECKCNS332J CERAMIC	1.2KV 3.3nF	△
C851	ECKC2H681J CERAMIC	500V 680pF	△
C853	ECEA1EGE222 ELECT	25V 2200µF	
C854	ECEA1HGE102 ELECT	50V 1000µF	
C855	ECKC3D471JB CERAMIC	2KV 470pF	△
C856	ECEA1EGE222 ELECT	25V 2200µF	
C858	ECUV1H103ZFX S.M.CAP	50V 10nF	
C859	ECUV1H103ZFX S.M.CAP	50V 10nF	
C1052	ECUV1H104ZFX S.M.CAP	50V 100nF	

Ref No.	Part No.	Description
C1201	ECUV1H332KBX S.M.CAP	50V 3.3nF
C1202	ECUV1H332KBX S.M.CAP	50V 3.3nF
C1203	ECUV1H332KBX S.M.CAP	50V 3.3nF
C1204	ECUV1H332KBX S.M.CAP	50V 3.3nF
C1205	ECUV1H103ZFX S.M.CAP	50V 10nF
C1207	ECUV1H472KBX S.M.CAP	50V 4.7nF
C1208	ECUV1H390JCX S.M.CAP	50V 39pF
C1209	ECUV1H390JCX S.M.CAP	50V 39pF
C1210	ECUV1H103ZFX S.M.CAP	50V 10nF
C1211	ECUV1H470JCX S.M.CAP	50V 47pF
C1213	ECUV1H103ZFX S.M.CAP	50V 10nF
C1215	ECUV1H103ZFX S.M.CAP	50V 10nF
C1217	ECUV1H104ZFX S.M.CAP	50V 100nF
C1219	ECEA1CU471 ELECT	16V 470µF
C1220	ECUV1H103ZFX S.M.CAP	50V 10nF
C1222	ECUV1H104ZFX S.M.CAP	50V 100nF
C2101	ECUV1H223KBX S.M.CAP	50V 22nF
C2102	ECUV1H391KBX S.M.CAP	50V 390pF
C2103	ECUV1H102KBX S.M.CAP	50V 1nF
C2104	ECUV1H102KBX S.M.CAP	50V 1nF
C2105	ECUV1H102KBX S.M.CAP	50V 1nF
C2106	ECUV1H102KBX S.M.CAP	50V 1nF
C2107	ECUV1H391KBX S.M.CAP	50V 390pF
C2108	ECEA1CU101 ELECT	16V 100µF
C2109	ECUV1H223KBX S.M.CAP	50V 22nF
C2110	ECEA1CU100 ELECT	16V 10µF
C2111	ECUV1H104ZFX S.M.CAP	50V 100nF
C2112	ECEA1CU100 ELECT	16V 10µF
C2113	ECUV1H102KBX S.M.CAP	50V 1nF
C2114	ECUV1H104ZFX S.M.CAP	50V 100nF
C2115	ECUV1H471KBX S.M.CAP	50V 470pF
C2116	ECEA1HU3R3 ELECT	50V 3.3µF
C2117	ECUV1H471KBX S.M.CAP	50V 470pF
C2118	ECUV1H104ZFX S.M.CAP	50V 100nF
C2119	ECEA1CU100 ELECT	16V 10µF
C2120	ECUV1H104ZFX S.M.CAP	50V 100nF
C2121	ECUV1H104ZFX S.M.CAP	50V 100nF
C2122	ECQM1H334J FILM	50V 330nF
C2123	ECEA1CU100 ELECT	16V 10µF
C2124	ECUV1H104ZFX S.M.CAP	50V 100nF
C2125	ECUV1H030CCX S.M.CAP	50V 30pF
C2126	ECUV1H030CCX S.M.CAP	50V 30pF
C2127	ECEA1CU100 ELECT	16V 10µF
C2307	ECEA1CU470 ELECT	16V 47µF
C2308	ECEA1CU470 ELECT	16V 47µF
C2309	ECEA1CU101 ELECT	16V 100µF
C2310	ECEA1CU470 ELECT	16V 47µF
C2312	ECUV1H104ZFX S.M.CAP	50V 100nF
C2313	ECUV1H103KBX S.M.CAP	50V 10nF
C2314	ECUV1H104ZFX S.M.CAP	50V 100nF
C2315	ECUV1H103KBX S.M.CAP	50V 10nF
C2316	ECUV1H103ZFX S.M.CAP	50V 10nF
C2317	ECEA1CU470 ELECT	16V 47µF
C2318	ECUV1H222KBX S.M.CAP	50V 2.2nF
C2319	ECUV1H222KBX S.M.CAP	50V 2.2nF
C2651	ECUV1H103KBX S.M.CAP	50V 10nF
C2652	ECUV1H103KBX S.M.CAP	50V 10nF
C3003	ECEA1EU4R7 ELECT	25V 4.7µF
C3005	ECEA1HU4R7 ELECT	50V 4.7µF
C3006	ECUV1H473ZFX S.M.CAP	50V 47nF
C3007	ECEA1HU470 ELECT	50V 47µF
C3011	ECUV1H473ZFX S.M.CAP	50V 47nF
C3012	ECEA1CU470 ELECT	16V 47µF
C3013	ECUV1H104ZFX S.M.CAP	50V 100nF
C3014	ECUV1H104ZFX S.M.CAP	50V 100nF
C3017	ECEA1CN470 ELECT	16V 47µF
C3018	ECUV1H102KBX S.M.CAP	50V 1nF
C3019	ECUV1H102KBX S.M.CAP	50V 1nF
C3021	ECUV1H102KBX S.M.CAP	50V 1nF
C3023	ECEA1CU470 ELECT	16V 47µF

Ref No.	Part No.	Description
C3024	ECUV1H473ZFX S.M.CAP	50V 47nF
C3025	ECUV1H102KBX S.M.CAP	50V 1nF
C3028	ECUV1H221JX S.M.CAP	50V 220pF
C3029	ECUV1H221JX S.M.CAP	50V 220pF
C3030	ECUV1H221JX S.M.CAP	50V 220pF
C3031	ECUV1H221JX S.M.CAP	50V 220pF
C3034	ECUV1H221JX S.M.CAP	50V 220pF
C3035	ECUV1H221JX S.M.CAP	50V 220pF
C3036	ECUV1H222KBX S.M.CAP	50V 2.2nF
C3037	ECUV1H561JCX S.M.CAP	50V 560pF
C3038	ECEA1CM470GB ELECT	16V 47pF
C3039	ECEA1CU470 ELECT	16V 47µF
C3040	ECEA1HUR47 ELECT	50V 0.47µF
C3041	ECEA1HUR47 ELECT	50V 0.47µF
C3042	ECEA1CU220 ELECT	16V 22µF
C3043	ECEA1HU4R7 ELECT	50V 4.7µF
C3045	ECUV1H104ZFX S.M.CAP	50V 100nF
C3050	ECUV1H222KBX S.M.CAP	50V 2.2nF
C3051	ECUV1H222KBX S.M.CAP	50V 2.2nF
C3052	ECUV1H561JCX S.M.CAP	50V 560pF
C3053	ECUV1H561JCX S.M.CAP	50V 560pF
C3054	ECUV1H222KBX S.M.CAP	50V 2.2nF
C3055	ECUV1H561JCX S.M.CAP	50V 560pF
C3062	ECUV1H104ZFX S.M.CAP	50V 100nF
C3071	ECUV1H104ZFX S.M.CAP	50V 100nF
C3151	ECUV1H561JCX S.M.CAP	50V 560pF
C3152	ECUV1H561JCX S.M.CAP	50V 560pF
C3501	ECUV1H104ZFX S.M.CAP	50V 100nF
C3503	ECUV1H103ZFX S.M.CAP	50V 10nF
C3504	ECUV1H102JCX S.M.CAP	50V 1nF
C3505	ECUV1H104ZFX S.M.CAP	50V 100nF
C3508	ECUV1H473ZFX S.M.CAP	50V 47nF
C3509	ECUV1H103ZFX S.M.CAP	50V 10nF
C3511	ECUV1H103ZFX S.M.CAP	50V 10nF

DIODES

D100	BA582	DIODE
D101	BA582	DIODE
D102	MA3020TX	DIODE
D103	MA3020TX	DIODE
D251	MA2180TP	DIODE
D252	MA165TA5	DIODE
D253	MA700TA5	DIODE
D254	MA700TA5	DIODE
D310	MA165TA5	DIODE
D311	MA29TA5	DIODE
D312	MA29TA5	DIODE
D354	ERA22–04V1	DIODE
D355	ERA22–04V1	DIODE
D356	ERA22–04V1	DIODE
D357	MA165TA5	DIODE
D358	MA165TA5	DIODE
D359	MA165TA5	DIODE
D360	MA4150	DIODE
D451	MA165TA5	DIODE
D452	MA165TA5	DIODE
D454	ERA15–02V3	DIODE
D456	MA2160BLFS	DIODE
D501	MA165TA5	DIODE
D502	EU02	DIODE
D551	ERD07–15L7	DIODE
D552	TVSRU2AM	DIODE
D554	AU02V0	DIODE
D556	MA166TA5	DIODE
D601	MA165TA5	DIODE
D602	MA165TA5	DIODE
D604	MA165TA5	DIODE
D605	MA165TA5	DIODE
D606	MA165TA5	DIODE
D609	MA167TA5	DIODE

Ref No.	Part No.	Description
D701	MA165TA5	DIODE
D702	MA4056	DIODE
D801	MA165TA5	DIODE
D802	MA165TA5	DIODE
D803	MA165TA5	DIODE
D804	ERA15–02V3	DIODE
D805	EU02	DIODE
D806	RBV4–08	DIODE
D807	EU02	DIODE
D808	PC120FY	DIODE
D809	MA165TA5	DIODE
D851	EU02	DIODE
D852	ERD32–02L7	DIODE
D853	FML22SLF610	DIODE
D854	RU4AMLF–M1	DIODE
D855	RU4BLF–L1	DIODE
D856	MA4047	DIODE
D857	MA4300	DIODE
D858	MA29TA5	DIODE
D1201	LN81RPHL	DIODE
D1203	MA4082	DIODE
D1204	TVSS1WBS10	DIODE
D1205	MA165TA5	DIODE
D1207	MA165TA5	DIODE
D1208	MA165TA5	DIODE
D1209	MA165TA5	DIODE
D2303	MA165TA5	DIODE
D2304	MA4091	DIODE
D3001	MA4120	DIODE
D3003	MA4082	DIODE
D3004	MA4100	DIODE
D3005	MA4120	DIODE
D3006	MA4120	DIODE
D3007	MA4120	DIODE
D3008	MA4082	DIODE
D3009	MA4082	DIODE
D3010	MA4082	DIODE
D3011	MA4082	DIODE
D3012	MA4120	DIODE
D3013	MA4120	DIODE
D3014	MA4120	DIODE
D3015	MA4120	DIODE
D3016	MA4120	DIODE
D3018	MA165TA5	DIODE
D3019	MA165TA5	DIODE
D3501	MA165TA5	DIODE

FUSES

F851	TR5–T1250	FUSE	▲
F852	TR5–T2000	FUSE	▲
F853	TR5–T2000	FUSE	▲
F8011	EYF52BC	FUSE HOLDER	
F8012	EYF52BC	FUSE HOLDER	

SOCKETS

H1202	832AG11D–ESL I.C.SOCKET
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INTEGRATED CIRCUITS

IC100	TSA5514AT/C2	A.F.C. CONTROL
IC102	TDA9814T	VIF
IC103	L78M12MRB	12V REGULATOR
IC251	LA4280–TV	AUDIO OUTPUT
IC351	TDA6103Q	R.G.B. AMPLIFIER
IC451	TDA8175–3	VERTICAL OUTPUT
IC601	VDP3108–25	VIDEO PROCESSOR
IC701	TEA2031A	HORIZONTAL OUTPUT
IC801	TDA4601	POWER SUPPLY
IC851	L78M12MRB	12V REGULATOR
IC1051	RPM–637CBRL	LED RECEIVER

Ref No.	Part No.	Description
IC1201	CCU3000I—05	CENTRAL CONTROL UNIT
IC1202	27C010—08AMF	EPROM
IC1205	MN1280R	RESET
IC1206	L78M05MRB	5V REGULATOR
IC2101	MSP3410—15	AUDIO PROCESSOR
IC2301	AN78L08	8V REGULATOR
IC3001	TEA6415C	VIDEO SWITCH
IC3501	UD61256DC—08	DYNAMIC RAM

TERMINALS AND LINKS

JA.1	ERJ6GEY0R00	WIRE LINK
JA.1	ERJ8GEY0R00	WIRE LINK
JA.10	ERJ6GEY0R00	WIRE LINK
JA.11	ERJ6GEY0R00	WIRE LINK
JA.11	ERJ8GEY0R00	WIRE LINK
JA.12	ERJ6GEY0R00	WIRE LINK
JA.12	ERJ8GEY0R00	WIRE LINK
JA.13	ERJ6GEY0R00	WIRE LINK
JA.14	ERJ6GEY0R00	WIRE LINK
JA.14	ERJ8GEY0R00	WIRE LINK
JA.15	ERJ6GEY0R00	WIRE LINK
JA.15	ERJ8GEY0R00	WIRE LINK
JA.16	ERJ6GEY0R00	WIRE LINK
JA.16	ERJ8GEY0R00	WIRE LINK
JA.17	ERJ6GEY0R00	WIRE LINK
JA.17	ERJ8GEY0R00	WIRE LINK
JA.18	ERJ6GEY0R00	WIRE LINK
JA.19	ERJ6GEY0R00	WIRE LINK
JA.2	ERJ6GEY0R00	WIRE LINK
JA.2	ERJ8GEY0R00	WIRE LINK
JA.20	ERJ6GEY0R00	WIRE LINK
JA.21	ERJ6GEY0R00	WIRE LINK
JA.22	ERJ6GEY0R00	WIRE LINK
JA.22	ERJ8GEY0R00	WIRE LINK
JA.23	ERJ6GEY0R00	WIRE LINK
JA.24	ERJ6GEY0R00	WIRE LINK
JA.25	ERJ6GEY0R00	WIRE LINK
JA.25	ERJ8GEY0R00	WIRE LINK
JA.26	ERJ6GEY0R00	WIRE LINK
JA.27	ERJ6GEY0R00	WIRE LINK
JA.28	ERJ6GEY0R00	WIRE LINK
JA.29	ERJ6GEY0R00	WIRE LINK
JA.3	ERJ6GEY0R00	WIRE LINK
JA.3	ERJ8GEY0R00	WIRE LINK
JA.30	ERJ6GEY0R00	WIRE LINK
JA.31	ERJ6GEY0R00	WIRE LINK
JA.37	ERJ6GEY0R00	WIRE LINK
JA.38	ERJ6GEY0R00	WIRE LINK
JA.39	ERJ6GEY0R00	WIRE LINK
JA.4	ERJ6GEY0R00	WIRE LINK
JA.4	ERJ8GEY0R00	WIRE LINK
JA.40	ERJ6GEY0R00	WIRE LINK
JA.41	ERJ6GEY0R00	WIRE LINK
JA.5	ERJ6GEY0R00	WIRE LINK
JA.6	ERJ6GEY0R00	WIRE LINK
JA.6	ERJ8GEY0R00	WIRE LINK
JA.7	ERJ6GEY0R00	WIRE LINK
JA.7	ERJ8GEY0R00	WIRE LINK
JA.8	ERJ6GEY0R00	WIRE LINK
JA.9	ERJ6GEY0R00	WIRE LINK
JK2301	TJB18644	AV TERMINAL
JK3001	TJS8E007	21PIN TERMINAL
JK3101	TJS8E007	21PIN TERMINAL
JSB.5	ERJ6GEY0R00	WIRE LINK
JSE.31	ERJ6GEY0R00	WIRE LINK
JSE011	ERJ6GEY0R00	WIRE LINK
JSE012	ERJ6GEY0R00	WIRE LINK
JSE013	ERJ6GEY0R00	WIRE LINK
JSE014	ERJ6GEY0R00	WIRE LINK
JSE015	ERJ6GEY0R00	WIRE LINK

Ref No.	Part No.	Description
JSE016	ERJ6GEY0R00	WIRE LINK
JSE032	ERJ6GEY0R00	WIRE LINK
J196	EXCELSA35T	COIL

COILS

L001	TLT100K991R	COIL
L002	TSC925—4	CHOKE
L100	TLT181K991R	COIL
L102	TLT100K991R	COIL
L103	TLT100K991R	COIL
L104	EQV7EN203B	COIL
L105	TLT068K991R	COIL
L106	ELESNR22MA	COIL
L109	ELESNR22MA	COIL
L111	TLT102K991R	COIL
L202	ELEV6R8KA	COIL
L301	TLT047K991R	COIL
L302	EXCEMT101BT	COIL
L303	EXCEMT101BT	COIL
L304	EXCEMT101BT	COIL
L601	TLT047K991R	COIL
L602	EXCELD35V	COIL
L603	TLT047K991R	COIL
L604	EXCELD35V	COIL
L606	TLT015K991R	COIL
L607	EXCELSA35T	COIL
L701	ELC10D006	COIL
L801	298—19711	COIL
L802	TLT022K991R	COIL
L803	ELF18D490F	COIL
L804	ELESN4R7KA	COIL
L805	298—82858001	COIL
L851	EXCELD35V	COIL
L852	EXCELSA35T	COIL
L853	ELEIE470KA	COIL
L854	ELEIN470KA	COIL
L855	ELEIN470KA	COIL
L856	ELEIN470KA	COIL
L1051	TLT331K991R	COIL
L1201	TLT047K991R	COIL
L1202	TLT047K991R	COIL
L1203	TLT047K991R	COIL
L1204	EXCELD35V	COIL
L2101	TLT100K991R	COIL
L2102	TLT039K991R	COIL
L2103	EXCELD35V	COIL
L3151	EXCEMT101BT	COIL
L3152	EXCEMT101BT	COIL
L3153	EXCEMT101BT	COIL
L3154	EXCEMT101BT	COIL
L3155	ELEBT6R8KA	COIL
L3156	ELEBT6R8KA	COIL
L3158	EXCELSA39V	COIL
L3501	EXCELD35V	COIL
L3502	EXCELD35V	COIL
L3503	ELESN4R7KA	COIL
L3504	EXCELSA35T	COIL

TRANSISTORS

Q100	BC847B	TRANSISTOR
Q101	BC847B	TRANSISTOR
Q102	BC847B	TRANSISTOR
Q103	BC847B	TRANSISTOR
Q105	BC847B	TRANSISTOR
Q106	BF799E6327	CHIP TRANSISTOR
Q251	2SD1328STX	TRANSISTOR
Q252	2SD1328STX	TRANSISTOR
Q253	BC847B	TRANSISTOR
Q301	BC857B	TRANSISTOR

Ref No.	Part No.	Description
Q302	BC847B	TRANSISTOR
Q303	BC857B	TRANSISTOR
Q304	BC847B	TRANSISTOR
Q305	BC857B	TRANSISTOR
Q306	BC847B	TRANSISTOR
Q307	BC847B	TRANSISTOR
Q308	BC847B	TRANSISTOR
Q309	BC847B	TRANSISTOR
Q310	BC847B	TRANSISTOR
Q311	BC847B	TRANSISTOR
Q351	2SA1767	TRANSISTOR
Q352	2SA1767	TRANSISTOR
Q353	2SA1767	TRANSISTOR
Q451	BC847B	TRANSISTOR
Q501	BC847B	TRANSISTOR
Q502	BC847B	TRANSISTOR
Q503	2SD836–AL	TRANSISTOR
Q504	BC847B	TRANSISTOR
Q552	2SC1473–RN	TRANSISTOR
Q701	BC857B	TRANSISTOR
Q801	2SC1573	TRANSISTOR
Q802	S2000NLBMA	TRANSISTOR
Q851	2SD1273PLB	TRANSISTOR
Q852	TFD312SOF632	DIODE
Q1201	BC847B	TRANSISTOR
Q1202	BC847B	TRANSISTOR
Q1205	BC847B	TRANSISTOR
Q1206	BC847B	TRANSISTOR
Q1207	BC847B	TRANSISTOR
Q1208	BC857B	TRANSISTOR
Q2101	BC860B	TRANSISTOR
Q2102	BC860B	TRANSISTOR
Q2301	BC857B	TRANSISTOR
Q2302	BC857B	TRANSISTOR
Q2305	2SD1328STX	TRANSISTOR
Q2306	2SD1328STX	TRANSISTOR
Q2307	BC860B	TRANSISTOR
Q2308	BC857B	TRANSISTOR
Q2309	BC860B	TRANSISTOR
Q2310	BC860B	TRANSISTOR
Q3001	2SC1318–S	TRANSISTOR
Q3004	BC847B	TRANSISTOR
Q3005	BC847B	TRANSISTOR
Q3006	2SC1318–S	TRANSISTOR
Q3011	BC857B	TRANSISTOR
Q3012	2SD1328STX	TRANSISTOR
Q3013	2SD1328STX	TRANSISTOR

RESISTOR

R.107	ERJ6GEY0R00	WIRE LINK
R.108	ERJ6GEY0R00	WIRE LINK
R.109	ERJ6GEY0R00	WIRE LINK
R.112	ERJ6GEY0R00	WIRE LINK
R.114	ERJ6GEY0R00	WIRE LINK
R.128	ERJ6GEY0R00	WIRE LINK
R.135	ERJ6GEY0R00	WIRE LINK
R.136	ERJ6GEY0R00	WIRE LINK
R.138	ERJ6GEY0R00	WIRE LINK
R.142	ERJ6GEY0R00	WIRE LINK
R.143	ERJ6GEY0R00	WIRE LINK
R.153	ERJ6GEY0R00	WIRE LINK
R.158	ERJ6GEY0R00	WIRE LINK
R.203	ERJ6GEY0R00	WIRE LINK
R.604	ERJ6GEY0R00	WIRE LINK
R.622	ERJ6GEY0R00	WIRE LINK
R001	ERJ6GEYJ223	S.M.CARB 0.1W 5% 22KΩ
R002	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R003	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R004	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R100	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ

Ref No.	Part No.	Description
R101	ERJ6GEYJ331	S.M.CARB 0.1W 5% 330Ω
R102	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R103	ERJ6GEYJ331	S.M.CARB 0.1W 5% 330Ω
R104	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R105	ERJ6GEYJ561	S.M.CARB 0.1W 5% 560Ω
R110	ERJ6GEYJ331	S.M.CARB 0.1W 5% 330Ω
R111	ERJ6GEYJ680	S.M.CARB 0.1W 5% 68Ω
R113	ERJ6GEYJ473	S.M.CARB 0.1W 5% 47KΩ
R115	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R116	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R117	ERJ6GEYJ563	S.M.CARB 0.1W 5% 56KΩ
R118	ERJ6GEYJ181	S.M.CARB 0.1W 5% 180Ω
R119	ERJ6GEYJ393	S.M.CARB 0.1W 5% 39KΩ
R120	ERJ6GEYJ151	S.M.CARB 0.1W 5% 150Ω
R121	ERJ6GEYJ151	S.M.CARB 0.1W 5% 150Ω
R122	ERJ6GEYJ223	S.M.CARB 0.1W 5% 22KΩ
R123	ERJ6GEYJ181	S.M.CARB 0.1W 5% 180Ω
R124	ERJ6GEYJ512	S.M.CARB 0.1W 5% 5K1Ω
R126	EVND4AA00B24	CONTROL 20KΩ
R127	ERJ6GEYJ122	S.M.CARB 0.1W 5% 1K2Ω
R129	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R130	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R131	ERJ6GEYJ122	S.M.CARB 0.1W 5% 1K2Ω
R132	ERJ6GEYJ154	S.M.CARB 0.125W 5% 150KΩ
R139	ERJ6GEYJ330	S.M.CARB 0.1W 5% 33Ω
R141	ERJ6GEYJ123	S.M.CARB 0.1W 5% 12KΩ
R150	ERJ6GEYJ223	S.M.CARB 0.1W 5% 22KΩ
R151	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R154	ERJ6GEYJ154	S.M.CARB 0.125W 5% 150KΩ
R155	ERJ6GEYJ122	S.M.CARB 0.1W 5% 1K2Ω
R157	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R159	ERJ6GEYJ152	S.M.CARB 0.1W 5% 1K5Ω
R160	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R161	ERJ6GEYJ223	S.M.CARB 0.1W 5% 22KΩ
R162	ERJ6GEYJ122	S.M.CARB 0.1W 5% 1K2Ω
R163	EVND4AA00B24	CONTROL 20KΩ
R201	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R251	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R252	ERJ6GEYJ152	S.M.CARB 0.1W 5% 1K5Ω
R253	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R254	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R255	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R256	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R257	ERJ6GEYJ2R2	S.M.CARB 0.125W 5% 2R2Ω
R258	ERJ6GEYJ152	S.M.CARB 0.1W 5% 1K5Ω
R259	ERJ6GEYJ2R2	S.M.CARB 0.125W 5% 2R2Ω
R260	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R261	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R262	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R263	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R264	ERJ6GEYJ473	S.M.CARB 0.1W 5% 47KΩ
R265	ERD25TJ2R2	CARBON 0.25W 5% 2R2Ω
R266	ERD25TJ2R2	CARBON 0.25W 5% 2R2Ω
R267	ERF7ZK4R7	WOUND 7W 10% 4R7Ω Δ
R268	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R269	ERJ6GEYJ273	S.M.CARB 0.1W 5% 27KΩ
R271	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R272	ERF7ZK5R6	WOUND 7W 10% 5R6Ω Δ
R273	ERD25TJ273	CARBON 0.25W 5% 27KΩ
R301	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R302	ERJ6GEYJ391	S.M.CARB 0.1W 5% 390Ω
R303	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R304	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R305	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R306	ERJ6GEYJ391	S.M.CARB 0.1W 5% 390Ω
R307	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R308	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R309	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R310	ERJ6GEYJ391	S.M.CARB 0.1W 5% 390Ω
R311	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R312	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω

Ref No.	Part No.	Description				
R313	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R314	ERJ6GEYJ332	S.M.CARB	0.1W	5%	3K3Ω	
R315	ERJ6GEYJ332	S.M.CARB	0.1W	5%	3K3Ω	
R316	ERJ6GEYJ332	S.M.CARB	0.1W	5%	3K3Ω	
R321	ERJ6GEYJ473	S.M.CARB	0.1W	5%	47KΩ	
R322	ERJ6GEYJ473	S.M.CARB	0.1W	5%	47KΩ	
R323	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10KΩ	
R324	ERJ6GEYJ104	S.M.CARB	0.1W	5%	100KΩ	
R354	ERJ6GEYJ102	S.M.CARB	0.1W	5%	1KΩ	
R355	ERJ6GEYJ102	S.M.CARB	0.1W	5%	1KΩ	
R356	ERJ6GEYJ102	S.M.CARB	0.1W	5%	1KΩ	
R366	ERDS1TJ152	CARBON	0.5W	5%	1K5Ω	
R367	ERDS1TJ152	CARBON	0.5W	5%	1K5Ω	
R368	ERDS1TJ152	CARBON	0.5W	5%	1K5Ω	
R372	ERQ12AJ121	FUSIBLE	12W	5%	120Ω	Δ
R373	ERJ6GEYJ220	S.M.CARB	0.1W	5%	22Ω	
R375	ERJ6GEYJ684	S.M.CARB	0.1W	5%	680KΩ	
R376	ERJ6GEYJ183	S.M.CARB	0.1W	5%	18KΩ	
R451	ERJ6GEYJ223	S.M.CARB	0.1W	5%	22KΩ	
R452	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R453	ERJ6GEYJ104	S.M.CARB	0.1W	5%	100KΩ	
R455	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R456	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10KΩ	
R457	ERJ6GEYJ682	S.M.CARB	0.1W	5%	6K8Ω	
R458	ERD25TJ1R5	CARBON	0.25W	5%	1R5Ω	
R459	ERJ6GEYJ470	S.M.CARB	0.1W	5%	47Ω	
R460	ERJ6GEYJ183	S.M.CARB	0.1W	5%	18KΩ	
R461	ERDS1TJ471	CARBON	0.5W	5%	470Ω	
R462	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R463	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R465	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R466	ERO25CKF1801	METAL	0.25W	1%	1K8Ω	Δ
R472	ERDS1TJ4R7	CARBON	0.5W	5%	4R7Ω	
R501	ERJ6GEYJ331	S.M.CARB	0.1W	5%	330Ω	
R502	ERJ6GEYJ560	S.M.CARB	0.1W	5%	56Ω	
R503	ERJ6GEYJ273	S.M.CARB	0.1W	5%	27KΩ	
R504	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R506	ERD25TJ560	CARBON	0.25W	5%	56Ω	
R507	ERQ14AJ3R3	METAL	0.25W	5%	3R3Ω	Δ
R509	ERDS1TJ152	CARBON	0.5W	5%	1K5Ω	
R510	ERDS1TJ152	CARBON	0.5W	5%	1K5Ω	
R511	ERJ6GEYJ104	S.M.CARB	0.1W	5%	100KΩ	
R512	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R513	ERJ6GEYJ123	S.M.CARB	0.1W	5%	12KΩ	
R514	ERJ6GEYJ123	S.M.CARB	0.1W	5%	12KΩ	
R551	ERW2PKR47	WIREWOUND2W	10%0R47Ω			Δ
R553	ERG1SJ152	METAL	1W	5%	1.5KΩ	Δ
R558	ERDS1TJ124	CARBON	0.5W	5%	120KΩ	
R561	ERJ6GEYJ563	S.M.CARB	0.1W	5%	56KΩ	
R567	ERJ6GEYJ274	S.M.CARB	0.1W	5%	270KΩ	
R601	ERJ6GEYJ151	S.M.CARB	0.1W	5%	150Ω	
R602	ERJ6GEYJ151	S.M.CARB	0.1W	5%	150Ω	
R603	ERJ6GEYJ750	S.M.CARB	0.1W	5%	75Ω	
R605	ERJ6GEYJ183	S.M.CARB	0.1W	5%	18KΩ	
R606	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R607	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10KΩ	
R608	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R609	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R610	ERJ6GEYJ473	S.M.CARB	0.1W	5%	47KΩ	
R611	ERJ6GEYJ102	S.M.CARB	0.1W	5%	1KΩ	
R612	ERJ6GEYJ123	S.M.CARB	0.1W	5%	12KΩ	
R613	ERJ6GEYJ271	S.M.CARB	0.1W	5%	270Ω	
R614	ERJ6GEYJ470	S.M.CARB	0.1W	5%	47Ω	
R615	ERJ6GEYJ333	S.M.CARB	0.1W	5%	33KΩ	
R618	ERJ6GEYJ151	S.M.CARB	0.1W	5%	150Ω	
R619	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R623	ERJ6GEYJ821	S.M.CARB	0.1W	5%	820Ω	
R701	ERQ12AJ101	FUSIBLE	0.5W	5%	100Ω	Δ
R702	ERQ12HJ330	METAL	0.5W	5%	33Ω	Δ
R703	ERG2FJ821	METAL	2W	5%	820Ω	Δ

Ref No.	Part No.	Description				
R704	ERJ6GEYJ563	S.M.CARB	0.1W	5%	56KΩ	
R705	ERJ6GEYJ104	S.M.CARB	0.1W	5%	100KΩ	
R707	ERJ6GEYJ122	S.M.CARB	0.1W	5%	1K2Ω	
R708	ERJ6GEYJ393	S.M.CARB	0.1W	5%	39KΩ	
R709	ERJ6GEYJ393	S.M.CARB	0.1W	5%	39KΩ	
R711	ERJ6GEYJ681	S.M.CARB	0.1W	5%	680Ω	
R712	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R713	ERG1SJ101	METAL	1W	5%	100Ω	
R801	ERG3FJ682H	METAL	3W	5%	6K8Ω	Δ
R802	ERG2FJ472	METAL	2W	5%	4.7KΩ	Δ
R803	ERX12SJWR47	RESISTOR	12W	5%	R47Ω	
R804	ERJ6GEYJ682	S.M.CARB	0.1W	5%	6K8Ω	
R805	ERJ6GEYJ221	S.M.CARB	0.1W	5%	220Ω	
R806	ERG1SJ823	METAL	1W	5%	82KΩ	Δ
R807	ERO25CKF1201	METAL	0.25W	1%	1K2Ω	Δ
R808	232266296319	THERMISTOR				
R810	ERD25TJ103	CARBON	0.25W	5%	10KΩ	
R811	EVMEASA00B33	RESISTOR			82KΩ	
R812	ERDS1TJ220	CARBON	0.5W	5%	22Ω	
R813	ERD50FJ334	CARBON	0.5W	5%	330KΩ	
R814	ERF7ZK2R7	WIRE	7W	10%	2R7Ω	
R817	ERG3FJ470	METAL	3W	5%	47Ω	Δ
R818	ERD50FJ564	CARBON	0.5W	5%	560KΩ	
R819	ERD50FJ564	CARBON	0.5W	5%	560KΩ	
R820	ERD75TAJ825	CARBON	0.75W	5%	8M2Ω	Δ
R852	ERJ6GEYJ271	S.M.CARB	0.1W	5%	270Ω	
R853	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R854	ERDS1TJ474	CARBON	0.5W	5%	470KΩ	
R855	ERG2FJ223	METAL	2W	5%	22KΩ	Δ
R856	ERJ6GEYJ102	S.M.CARB	0.1W	5%	1KΩ	
R1202	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R1203	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R1204	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R1205	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R1206	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R1207	ERD25TJ331	CARBON	0.25W	5%	330Ω	
R1208	ERJ6GEYJ223	S.M.CARB	0.1W	5%	22KΩ	
R1209	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R1210	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R1212	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10KΩ	
R1213	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10KΩ	
R1214	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R1215	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R1216	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R1217	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R1218	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R1219	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R1220	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R1221	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10KΩ	
R1222	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10KΩ	
R1224	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10KΩ	
R1225	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R1226	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R1227	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R1229	ERJ6GEY0R00	WIRE LINK				
R1230	ERJ6GEY0R00	WIRE LINK				
R1231	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R1232	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10KΩ	
R1233	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R1235	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10KΩ	
R1236	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7Ω	
R1237	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10KΩ	
R1238	ERJ6GEYJ393	S.M.CARB	0.1W	5%	39KΩ	
R1239	ERJ6GEYJ392	S.M.CARB	0.1W	5%	3K9Ω	
R1240	ERJ6GEYJ392	S.M.CARB	0.1W	5%	3K9Ω	
R1241	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R1242	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100Ω	
R1244	ERJ6GEY0R00	WIRE LINK				
R1245	ERJ6GEYJ222	S.M.CARB	0.1W	5%	2K2Ω	
R1246	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10KΩ	

Ref No.	Part No.	Description
R1247	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1249	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1250	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1251	ERJ6GEYJ393	S.M.CARB 0.1W 5% 39KΩ
R1252	ERX1SJ3R3	METAL 1W 5% 3R3Ω
R1253	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1254	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R1255	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R1256	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R1257	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1258	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1260	ERDS1FJ121	CARBON 0.5W 5% 120Ω
R2101	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R2102	ERJ6GEYJ222	S.M.CARB 0.1W 5% 2K2Ω
R2103	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2104	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R2105	ERJ6GEYJ222	S.M.CARB 0.1W 5% 2K2Ω
R2106	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R2107	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2108	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2109	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2110	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R2111	ERJ6GEYJ473	S.M.CARB 0.1W 5% 47KΩ
R2301	ERJ6GEYJ222	S.M.CARB 0.1W 5% 2K2Ω
R2302	ERJ6GEYJ222	S.M.CARB 0.1W 5% 2K2Ω
R2303	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2304	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2313	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2314	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2315	ERJ6GEYJ473	S.M.CARB 0.1W 5% 47KΩ
R2316	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R2318	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R2321	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R2322	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R2323	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R2324	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R2325	ERJ6GEYJ273	S.M.CARB 0.1W 5% 27KΩ
R2326	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R2327	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R2328	ERJ6GEYJ473	S.M.CARB 0.1W 5% 47KΩ
R2329	ERJ6GEYJ222	S.M.CARB 0.1W 5% 2K2Ω
R2330	ERJ6GEYJ222	S.M.CARB 0.1W 5% 2K2Ω
R2331	ERJ6GEYJ223	S.M.CARB 0.1W 5% 22KΩ
R2332	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2333	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2334	ERJ6GEY0R00	WIRE LINK
R2335	ERJ6GEY0R00	WIRE LINK
R2651	ERG2FJ221	METAL 2W 5% 220Ω ▲
R2652	ERG2FJ221	METAL 2W 5% 220Ω ▲
R2653	ERDS1TJ151	CARBON 0.5W 5% 150Ω
R2654	ERDS1TJ151	CARBON 0.5W 5% 150Ω
R3001	ERJ6GEYJ153	S.M.CARB 0.1W 5% 15KΩ
R3002	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3003	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3004	ERJ6GEYJ153	S.M.CARB 0.1W 5% 15KΩ
R3005	ERJ6GEYJ470	S.M.CARB 0.1W 5% 47Ω
R3006	ERJ6GEYJ470	S.M.CARB 0.1W 5% 47Ω
R3007	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R3008	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R3009	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R3010	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3011	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3012	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3013	ERJ6GEYJ820	S.M.CARB 0.1W 5% 82Ω
R3015	ERJ6GEY0R00	WIRE LINK
R3016	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R3017	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R3019	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3020	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R3022	ERD2FCG560	CARBON 2W 2% 56Ω
R3024	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω

Ref No.	Part No.	Description
R3025	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R3026	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3027	ERJ6GEYJ680	S.M.CARB 0.1W 5% 68Ω
R3029	ERJ6GEYJ680	S.M.CARB 0.1W 5% 68Ω
R3030	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R3032	ERJ6GEYJ680	S.M.CARB 0.1W 5% 68Ω
R3034	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R3036	ERJ6GEYJ220	S.M.CARB 0.1W 5% 22Ω
R3037	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R3038	ERD2FCG100	CARBON 2W 2% 10Ω
R3039	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3040	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3041	ERJ6GEYJ153	S.M.CARB 0.1W 5% 15KΩ
R3042	ERJ6GEYJ682	S.M.CARB 0.1W 5% 6K8Ω
R3043	ERD2FCG100	CARBON 2W 2% 10Ω
R3044	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3045	ERJ6GEYJ221	S.M.CARB 0.1W 5% 220Ω
R3046	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3047	ERJ6GEYJ680	S.M.CARB 0.1W 5% 68Ω
R3048	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R3049	ERJ6GEYJ680	S.M.CARB 0.1W 5% 68Ω
R3050	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3051	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3052	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3053	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3054	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3055	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3056	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3057	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3058	ERJ6GEYJ153	S.M.CARB 0.1W 5% 15KΩ
R3059	ERJ6GEYJ153	S.M.CARB 0.1W 5% 15KΩ
R3060	ERJ6GEYJ470	S.M.CARB 0.1W 5% 47Ω
R3062	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R3063	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R3064	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R3065	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R3066	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R3067	ERJ6GEYJ273	S.M.CARB 0.1W 5% 27KΩ
R3068	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R3069	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R3070	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R3071	ERJ6GEYJ221	S.M.CARB 0.1W 5% 220Ω
R3150	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R3151	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R3152	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R3153	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R3154	ERJ6GEYJ153	S.M.CARB 0.1W 5% 15KΩ
R3155	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3156	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3157	ERJ6GEYJ153	S.M.CARB 0.1W 5% 15KΩ
R3158	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R3502	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3504	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R3505	ERJ6GEY0R00	WIRE LINK
R3508	ERJ6GEYJ183	S.M.CARB 0.1W 5% 18KΩ
R3511	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R3512	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω

SWITCHES

S801	ESB91232A	SWITCH
S1201	EVQ23405R	SWITCH
S1202	EVQ23405R	SWITCH
S1203	EVQ23405R	SWITCH
S1204	EVQ23405R	SWITCH
S1205	EVQ23405R	SWITCH

▲

Ref No.	Part No.	Description
TRANSFORMERS		
T501	5270103200	TRANSFORMER
T1201	ETP35KAN61ZU	TRANSFORMER
FILTERS		
X100	EFCT6504BF	FILTER
X101	EFCS6R0MW5	FILTER

Ref No.	Part No.	Description
X102	EFCS5M7MW3	CERAMIC FILTER
X104	K9453M	SAW FILTER
X105	K3953—M100	SAW FILTER
X106	EFCV4045A4	CHIP FILTER
X109	EFCV4045A4	CHIP FILTER
X601	TSS2169—B	CRYSTAL
X1201	TSS120M2	CRYSTAL
X2101	TSS4004—B	CRYSTAL

Ref No.	Part No.	Description
DIFFERENCES FOR TX – 25MD1F		
MISCELLANEOUS COMPONENTS		
2)	TKY8E040	CABINET
3)	A59ECF20X12	C.R.T.
4)	THE492—4	CRT FIXING SCREW
5)	TNP117070AA	Y P.C.B.
6)	TBM8E1484	MODEL LABEL
7)	TKU8E00190	REAR COVER
9)	TNP197091AU	E P.C.B.
16)	TLK8E05115	DEGAUSS COIL
	SVM100	COIL
	TBM8E1450	PRESET LABEL
	TBM8E1451	IND SHEET
	TPC8E4511	OUTER CARTON
CAPACITORS		
C251	ECEA1EM101GBELECT	25V 100pF
C253	ECEA1HM4R7GBELECT	50V 4R7 μ F
C257	ECEA1HM4R7GBELECT	50V 4R7 μ F
C258	ECEA1EM101GBELECT	25V 100pF
C260	ECEA1VM102GE ELECT	35V 1.0nF
C261	ECEA1VM102GE ELECT	35V 1.0nF
C263	ECEA1HM010GBELECT	50V 1pF
C266	ECEA1HM010GBELECT	50V 1pF
C269	ECEA1CM100GBELECT	16V 10pF
C301	ECEA1CM470GBELECT	16V 47pF
C358	ECQM1H224J FILM	50V 220nF
C364	ECUV1H103ZFX S.M.CAP	50V 10nF
C366	ECEA1CM100GBELECT	16V 10pF
C455	ECEA1VGE222 ELECT	35V 2200 μ F
C457	ECUV1H223KBX S.M.CAP	50V 22nF
C459	ECQM1H224J FILM	50V 220nF
C461	ECQM1H684J FILM	50V 680nF
C501	ECEA1CM100GBELECT	16V 10pF
C551	ECWH15H432J FILM	3.5kV 4.3nF
C552	ECWH15H102J FILM	3.5kV 1.0nF
C554	ECWF2H514J FILM	500V 510nF
C556	ECQM4333JC FILM	400V 33nF
C559	ECWF2H684J FILM	500V 680nF
C560	ECEA2GGE2R2 ELECT	400V 2R2 μ F
C604	ECEA1CM100GBELECT	16V 10pF
C609	ECEA1CM470GBELECT	16V 47pF
C621	ECEA1CM100GBELECT	16V 10pF
C622	ECEA1CM100GBELECT	16V 10pF
C626	ECEA0JM102GBELECT	6.3V 1.0nF
C701	ECEA1HGE101 ELECT	50V 100 μ F
C703	ECEA1HGE100 ELECT	50V 10 μ F
C705	ECQB1H102J FILM	50V 1nF
C804	ECEA1CM101GBELECT	16V 100pF
C806	ECEA1HM101GBELECT	50V 100pF
C820	ECOS2GG181NGELECT	400V 180 μ F
C852	ECEA1HM102GE ELECT	50V 1.0nF
C857	ECEA2EM101 ELECT	250V 100pF

Ref No.	Part No.	Description
C860	ECEA1CM471GBELECT	50V 470pF
C861	ECOS2EA221AB ELECT	400V 220 μ F
C862	ECEA1CM471GBELECT	16V 470pF
C901	ECUV1H030CCX S.M.CAP	50V 30pF
C902	ECEA1VU101 ELECT	35V 100 μ F
C903	ECEA1CM470GBELECT	16V 47pF
C904	ECUV1H103ZFX S.M.CAP	50V 10nF
C905	ECEA1HM4R7GBELECT	50V 4R7 μ F
C906	ECUV1H471KBX S.M.CAP	50V 470pF
C907	ECUV1H271JCX S.M.CAP	50V 270pF
C908	ECUV1H151JCX S.M.CAP	50V 150pF
C909	ECKC2H472J CERAMIC	500V 4.7nF
C910	ECKC2H472J CERAMIC	500V 4.7nF
C911	ECUV1H151JCX S.M.CAP	50V 150pF
C912	ECEA2CU100 ELECT	160V 10 μ F
C913	ECEA1CM101GBELECT	16V 100pF
C914	ECEA1CM101GBELECT	16V 100pF
C915	ECEA1CM471GBELECT	16V 470pF
C916	ECEA2CU100 ELECT	160V 10 μ F
C1051	ECEA0JM101GBELECT	6.3V 100pF
C1206	ECEA1HM4R7GBELECT	50V 4R7 μ F
C1212	ECEA1CM470GBELECT	16V 47pF
C1214	ECEA1CM470GBELECT	16V 47pF
C1221	ECEA0JM102GBELECT	6.3V 1.0nF
C1223	ECEA1CM101GBELECT	16V 100pF
C1224	ECEA0JM222GBELECT	6.3V 2.2nF
C1225	ECEA1CM471GBELECT	16V 470pF
C1226	ECEA1CM101GBELECT	16V 100pF
C3001	ECEA1HMR47GBELECT	50V R47 μ F
C3002	ECEA1HMR47GBELECT	50V R47 μ F
C3004	ECEA1HM4R7GBELECT	50V 4R7 μ F
C3026	ECEA1HMR47GBELECT	50V R47 μ F
C3027	ECEA1HMR47GBELECT	50V R47 μ F
C3032	ECEA1HMR47GBELECT	50V R47 μ F
C3033	ECEA1HMR47GBELECT	50V R47 μ F
C3502	ECEA1CM101GBELECT	16V 100pF
C3506	ECEA1CM470GBELECT	16V 47pF
C3507	ECEA1CM470GBELECT	16V 47pF
C3510	ECEA0JM102GBELECT	6.3V 1.0nF
DIODES		
D901	MA165TA5	DIODE
D902	MA165TA5	DIODE
INTEGRATED CIRCUITS		
IC1203	X24C16P—MD1F	EAROM
IC3502	TPU3040—18	TEXT PROCESSOR
TERMINALS AND LINKS		
JA1	ERJ6GEY0R00	WIRE LINK

Ref No.	Part No.	Description
COILS		
L352	SDL—4101	COIL
L353	SDL—4101	COIL
L354	SDL—4101	COIL
L501	EXCELDJR35V	COIL
L552	ELH5L421	COIL
L553	ELC08D055	COIL
L554	297—23293	COIL
L901	EXCELSA24T	COIL
L902	EXCELSA24T	COIL
TRANSISTORS		
Q551	2SD1577LB	TRANSISTOR
Q901	BC847B	TRANSISTOR
Q902	BC847B	TRANSISTOR
Q903	BC847B	TRANSISTOR
Q904	BC857B	TRANSISTOR
Q905	BC847B	TRANSISTOR
Q906	BC847B	TRANSISTOR
Q907	BC857B	TRANSISTOR
Q908	2SA1535ARLB	TRANSISTOR
Q909	2SC3944ARLB	TRANSISTOR
RESISTOR		
R351	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R352	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R353	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R357	ERG1SJ683	METAL 1W 5% 68KΩ ▲
R358	ERG1SJ683	METAL 1W 5% 68KΩ ▲
R359	ERG1SJ683	METAL 1W 5% 68KΩ ▲
R363	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R364	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R365	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R369	ERD25TJ203	CARBON 0.25W 5% 20KΩ
R370	ERJ6GEYJ822	S.M.CARB 0.1W 5% 8K2Ω
R374	ERD25TJ274	CARBON 0.25W 5% 270KΩ
R377	ERQ12HKR82	FUSIBLE 12W 10% R82Ω ▲
R381	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R382	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R383	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R464	ERW12PKR68	WIRE 12W 10% R68Ω
R467	ERO25CKF1801	METAL 0.25W 1% 1K8Ω ▲
R471	ERDS1TJ152	CARBON 0.5W 5% 1K5Ω
R554	ERQ14AJW101	FUSIBLE 14W 5% 100Ω ▲
R562	ERJ6GEYJ155	S.M.CARB0.125W 5% 1.5MΩ
R563	ERJ6GEYJ155	S.M.CARB0.125W 5% 1.5MΩ

Ref No.	Part No.	Description
R564	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R566	ERJ6GEYJ273	S.M.CARB 0.1W 5% 27KΩ
R616	ERJ6GEYJ333	S.M.CARB 0.1W 5% 33KΩ
R706	ERJ6GEYJ332	S.M.CARB 0.1W 5% 3K3Ω
R710	ERJ6GEYJ183	S.M.CARB 0.1W 5% 18KΩ
R809	ERO25CKF1332	METAL 25W 1% 13KΩ ▲
R901	ERJ6GEYJ562	S.M.CARB 0.1W 5% 5K6Ω
R902	ERJ6GEYJ562	S.M.CARB 0.1W 5% 5K6Ω
R903	ERJ6GEYJ562	S.M.CARB 0.1W 5% 5K6Ω
R904	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R905	ERJ6GEYJ681	S.M.CARB 0.1W 5% 680Ω
R906	ERJ6GEYJ223	S.M.CARB 0.1W 5% 22KΩ
R907	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R908	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R909	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R910	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R911	ERJ6GEYJ152	S.M.CARB 0.1W 5% 1K5Ω
R913	ERJ6GEYJ183	S.M.CARB 0.1W 5% 18KΩ
R914	ERJ6GEYJ222	S.M.CARB 0.1W 5% 2K2Ω
R915	ERJ6GEYJ182	S.M.CARB 0.1W 5% 1K8Ω
R916	ERJ6GEYJ221	S.M.CARB 0.1W 5% 220Ω
R917	ERJ6GEYJ121	S.M.CARB 0.1W 5% 120Ω
R919	ERQ14AJ390	FUSIBLE 14W 5% 39Ω ▲
R920	ERQ14AJ390	FUSIBLE 14W 5% 39Ω ▲
R921	ERD25TJ471	CARBON 0.25W 5% 470Ω
R922	ERD25TJ393	CARBON 0.25W 5% 39KΩ
R923	ERD25TJ393	CARBON 0.25W 5% 39KΩ
R924	ERDS1FJ390	CARBON 0.5W 5% 39Ω
R925	ERJ6GEYOR00	WIRE LINK
R926	ERJ6GEYOR00	WIRE LINK
R927	ERD25TJ471	CARBON 0.25W 5% 470Ω
R928	ERD25TJ2R7	CARBON 0.25W 5% 2R7Ω
R929	ERDS1FJ471	CARBON 0.5W 5% 470Ω
R930	ERD25TJ2R7	CARBON 0.25W 5% 2R7Ω
R931	ERDS1FJ390	CARBON 0.5W 5% 39Ω
R932	ERDS1FJ101	CARBON 0.5W 5% 100Ω ▲
R933	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R934	ERJ6GEYJ222	S.M.CARB 0.1W 5% 2K2Ω
R935	ERQ14AJ3R9	FUSIBLE 0.25W 5% 3R9Ω ▲
R936	ERQ1CJP331	METAL 1W 5% 330Ω ▲
R937	ERQ14AJ100	METAL 0.25W 5% 10Ω ▲
R1201	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
TRANSFORMERS		
T551	ZTFH65008A	TRANSFORMER ▲
T801	TLP8E1002	TRANSFORMER ▲

Ref No.	Part No.	Description	
DIFFERENCES FOR TX – 21MD1F			
MISCELLANEOUS COMPONENTS			
2)	TKY8E039	CABINET	△
3)	A51EAL55X01	C.R.T.	△
4)	THT1009R	CRT FIXING SCREW	
5)	TNP117069AA	Y P.C.B.	△
6)	TBM8E1483	REAR COVER LABEL	
7)	TKU8E00180	REAR COVER	△
9)	TNP197091AA	E P.C.B.	△
16)	TLK8E05117	DEGUASS COIL	
	TKP8E1128	LED PANEL	
	TBM8E1451-1	PRESET LABEL	
	TPC8E4510	OUTER CARTON	
CAPACITORS			
C251	ECEA1EU101	ELECT 25V 100μF	
C253	ECEA1HU4R7	ELECT 50V 4.7μF	
C257	ECEA1HU4R7	ELECT 50V 4.7μF	
C258	ECEA1EU101	ELECT 25V 100μF	
C260	ECEA1VU102	ELECT 35V 1000μF	
C261	ECEA1VU102	ELECT 35V 1000μF	
C263	ECEA1HU010	ELECT 50V 1μF	
C266	ECEA1HU010	ELECT 50V 1μF	
C269	ECEA1CU100	ELECT 16V 10μF	
C301	ECEA1CU470	ELECT 16V 47μF	
C358	ECQB1H224J	FILM 50V 0.22μF	
C455	ECEA1VU222	ELECT 35V 2200μF	
C457	ECUV1H103KBX	S.M.CAP 50V 10nF	
C459	ECQM1H154J	FILM 50V 150nF	
C463	ECQB1H222J	FILM 50V 2200pF	
C501	ECEA1AU330	ELECT 10V 33μF	△
C551	ECWH12H272J	CERAMIC 500V 2.7nF	△
C552	ECWH12H102J	FILM 500V 1.0nF	△
C556	ECQF4273JZH	FILM 400V 0.027μF	
C559	ECWF2H474J	FILM 500V 470nF	△
C604	ECEA0JU102	ELECT 6.3V 1000μF	
C609	ECEA1CU470	ELECT 16V 47μF	
C621	ECEA1CU100	ELECT 16V 10μF	
C622	ECEA1CU100	ELECT 16V 10μF	
C626	ECEA0JU102	ELECT 6.3V 1000μF	
C627	ECUV1H100DCX	S.M.CAP 50V 10pF	
C701	ECEA1HU101	ELECT 50V 100μF	
C703	ECEA1HU100	ELECT 50V 10μF	
C705	ECQB1H152K	FILM 50V 1.5nF	
C804	ECEA1CU101	ELECT 16V 100μF	
C806	ECEA1HU101	ELECT 50V 100μF	
C820	ECOS2GA151CB	ELECT 400V 150pF	
C852	ECEA1HU102	ELECT 50V 1000μF	
C857	ECEA2CM101E	ELECT 160V 100pF	
C860	ECEA1CU471	ELECT 16V 470μF	
C861	ECEA2CGE221	ELECT 160V 220μF	
C862	ECEA1CU471	ELECT 16V 470μF	
C1051	ECEA0JU101	ELECT 6.3V 100μF	
C1206	ECEA1HU4R7	ELECT 50V 4.7μF	
C1212	ECEA1CU470	ELECT 16V 47μF	
C1214	ECEA1CU470	ELECT 16V 47μF	
C1221	ECEA0JU102	ELECT 6.3V 1000μF	
C1223	ECEA1CU101	ELECT 16V 100μF	
C1224	ECEA0JU222	ELECT 6.3V 2200μF	
C1225	ECEA0JM472GE	ELECT 6.3V 4.7nF	
C1226	ECEA1CU101	ELECT 16V 100μF	
C3001	ECEA1HUR47	ELECT 50V 0.47μF	
C3002	ECEA1HUR47	ELECT 50V 0.47μF	
C3004	ECEA1HU4R7	ELECT 50V 4.7μF	

Ref No.	Part No.	Description	
C3026	ECEA1HUR47	ELECT 50V 0.47μF	
C3027	ECEA1HUR47	ELECT 50V 0.47μF	
C3032	ECEA1HUR47	ELECT 50V 0.47μF	
C3033	ECEA1HUR47	ELECT 50V 0.47μF	
C3056	ECCR1H101J	CERAMIC 50V 100pF	
C3502	ECEA1CU101	ELECT 16V 100μF	
C3506	ECEA1CU470	ELECT 16V 47μF	
C3507	ECEA1CU470	ELECT 16V 47μF	
C3510	ECEA0JU102	ELECT 6.3V 1000μF	
FUSES			
F801	19181-3.15	FUSE	△
INTEGRATED CIRCUITS			
IC1203	X24C16P-F1F	EAROM	
IC3502	TPU3040-20	TEXT PROCESSOR	
COILS			
L251	EXCELSA35T	COIL	
L552	ELH5L429	COIL	
TRANSISTORS			
Q551	BU2506DXLB	TRANSISTOR	
RESISTOR			
R351	ERJ6GEYJ182	S.M.CARB 0.1W 5% 1K8Ω	
R352	ERJ6GEYJ182	S.M.CARB 0.1W 5% 1K8Ω	
R353	ERJ6GEYJ182	S.M.CARB 0.1W 5% 1K8Ω	
R357	ERG1SJ563	METAL 1W 5% 56KΩ	△
R358	ERG1SJ563	METAL 1W 5% 56KΩ	△
R359	ERG1SJ563	METAL 1W 5% 56KΩ	△
R363	ERDS1TJ103	CARBON 0.5W 5% 10KΩ	
R364	ERDS1TJ103	CARBON 0.5W 5% 10KΩ	
R365	ERDS1TJ103	CARBON 0.5W 5% 10KΩ	
R369	ERD25TJ223	CARBON 0.25W 5% 22KΩ	
R370	ERD25TJ103	CARBON 0.25W 5% 10KΩ	
R374	ERDS1TJ274	CARBON 0.5W 5% 270KΩ	
R377	ERQ12HJ1R2	METAL 0.5W 5% 1R2Ω	△
R378	ERJ6GEYOR00	WIRE LINK	
R379	ERJ6GEYOR00	WIRE LINK	
R380	ERJ6GEYOR00	WIRE LINK	
R464	ERW12PK1R5	WIRE 12W 10% 1R5Ω	
R467	ERO25CKF1201	METAL 0.25W 1% 1K2Ω	△
R471	ERDS1TJ102	CARBON 0.5W 5% 1KΩ	
R562	ERJ6GEYJ225	S.M.CARB 0.125W 5% 2.2MΩ	
R563	ERJ6GEYJ225	S.M.CARB 0.125W 5% 2.2MΩ	
R564	ERJ6GEYJ623	S.M.CARB 0.125W 5% 62KΩ	
R566	ERJ6GEYJ473	S.M.CARB 0.1W 5% 47KΩ	
R616	ERJ6GEYJ153	S.M.CARB 0.1W 5% 15KΩ	
R706	ERJ6GEYJ272	S.M.CARB 0.1W 5% 2K7Ω	
R710	ERJ6GEYJ273	S.M.CARB 0.1W 5% 27KΩ	
R809	ERO25CKF1302	METAL 0.25W 1% 13KΩ	△
R1201	ERJ6GEYJ271	S.M.CARB 0.1W 5% 270Ω	
TRANSFORMERS			
T551	ZTFH44007A	F.B.T.	△
T801	TLP8E1001	TRANSFORMER	△

