

TEAC®

SERVICE MANUAL

CTM415

41 cm CTV

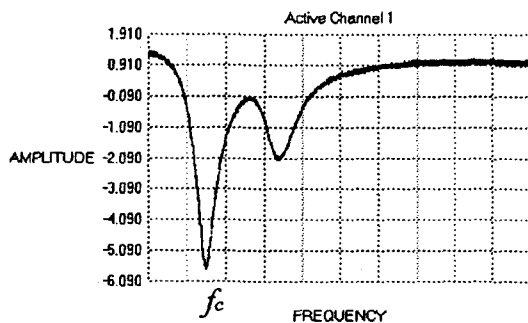
1 Power Supply

- 1.1 The voltage of the B+ terminal is $112V \pm 0.2V$, this can be adjusted by tuning VR801.
- 1.2 The voltage at pin 42 of the CPU should be 5V.

2 I.F. Amplifier

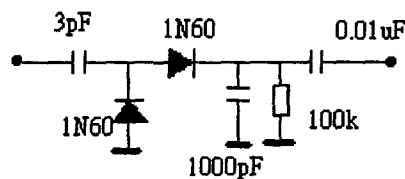
- 2.1 Adjustment of the attenuation of adjacent channel frequency:

Apply a sweep signal to the IF input. Observe the waveform at the Collector of Q101, using a detector with 3pF input capacitance. By tuning IF T101, minimize the signal level at f_c , refer to table 2.1. Found the IF frequency, f_p of the tuner in its specification and then according to table 2.1, adjust f_c to the correct value



f_p / MHz	f_c / MHz
38.9	31.9
38	31.0
39.5	32.5
45.75	40.75

Table 2.1



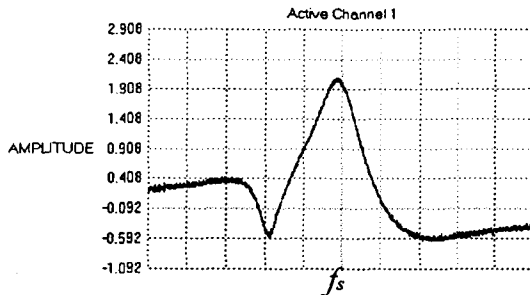
The detector circuit

- 2.2 Adjustment of sound IF:

Apply a sweep signal to the IF input. Observe the waveform at pin 11 of IC201, using a detector with 3pF input capacitor (the same as above). By tuning IF T102, adjust the signal level at f_s to maximum value, where f_s can be calculated by the following formula.

$$f_s = f_p - f_a$$

f_a is the audio carrier frequency and it can be found in table 2.2



System	f_a / MHz
B/G	5.5
D/K	6.5
I	6
M	4.5

Table 2.2

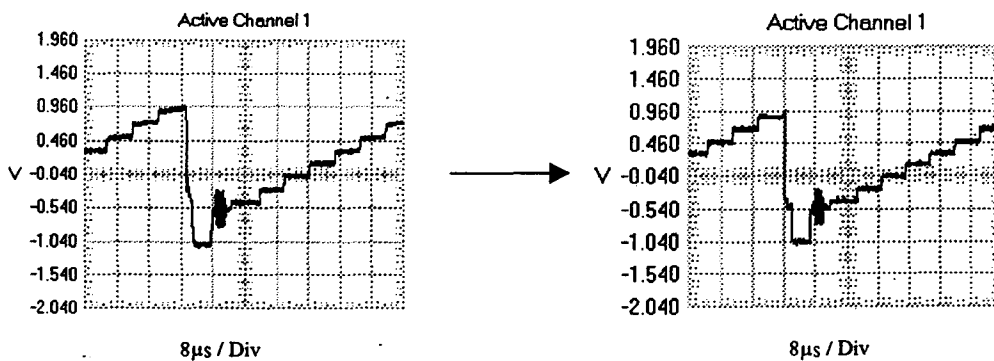
Note: if the TV had two or more sound systems, get the average value of f_a .

* E.g. B/G+D/K system, $f_a = 6\text{MHz}$

2.3 Adjustment of VCO:

Apply an IF signal (gray scale), f_p refer to the tuner specification, to the IF input.

Observe the waveform at pin 56 of IC201. By tuning IF T104, make the black level most smooth.



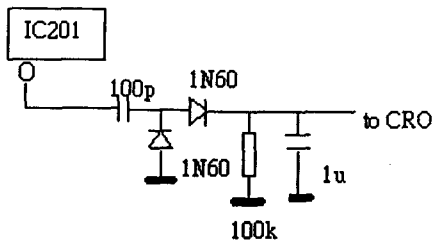
2.4 Adjustment of AFT:

Apply an IF signal, f_p refer to the tuner specification, (multi-burst & white field) to the IF input. Use a CRO to observe the waveform at pin 60 of IC201. Tuning IF T105 to minimize the ripple of the signal.

2.5 Adjustment of first sound IF:

Apply PAL IF signal (gray scale with audio), refer to table 2.5, to the IF input.

Connect a detector to pin 64 of IC201. Observe the waveform with CRO. By tuning IF T106, maximize the AC voltage shown on the CRO.



Detector circuit

System	Audio carrier freq. /MHz
B/G	5.5
D/K	6.5
I	6
M	4.5

Table 2.5

Note: This procedure is optional for BG/DK with 38.9MHz IF frequency.

2.6 Adjustment of second sound IF:

Apply PAL IF signal (gray scale with audio), refer to table 2.5, to the IF input. The audio carrier must be modulated by a 1kHz signal with frequency deviation $\pm 30\text{kHz}$. Connect a multimeter and CRO to pin 1 of IC201. By tuning IF T103, adjust the DC voltage shown on the multimeter to $5.2 \pm 0.1\text{V}$ and the CRO must display a maximum signal without distortion.

2.7 Adjustment of SAW filter matching coil (if provided):

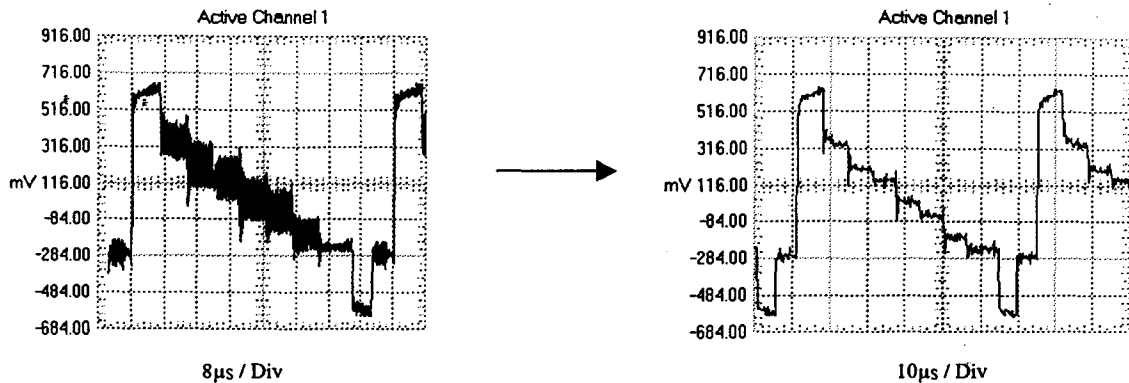
After complete the VCO and AFT alignment, apply an IF signal (multi burst and white field), f_p refer to the tuner specification, to the IF input. Connect a CRO to pin 21 of IC101 and observe the waveform of the output video signal. By tuning IF T107, adjust the amplitude of the multi burst signal so that is the same as the amplitude of the white field signal.

3 VCD

3.1 PAL alignment procedures

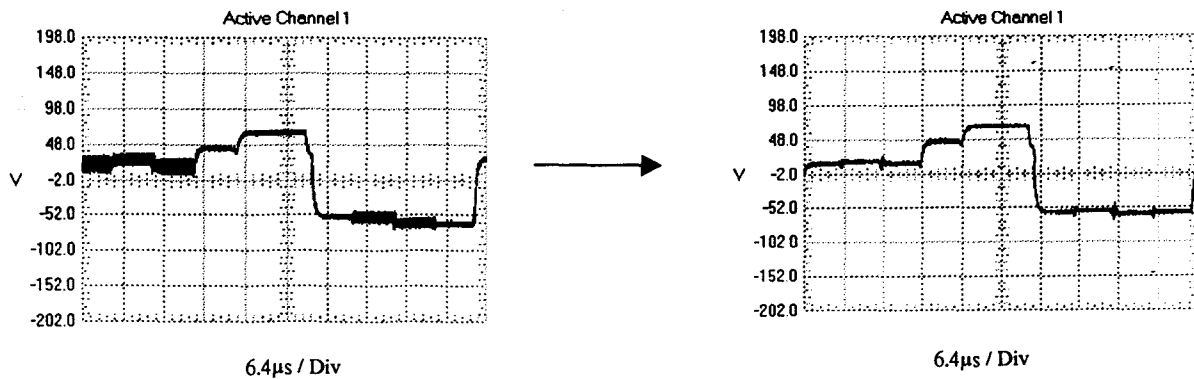
3.1.1 Absorption of color sub-carrier:

Input a PAL color bar signal. Observe the waveform at R251 and minimize the mis-alignment on the waveform by tuning T202 (minimize the level of color sub-carrier). Then change the channel to NTSC 3.58 and the absorption of the color carrier must be the same as the PAL channel.



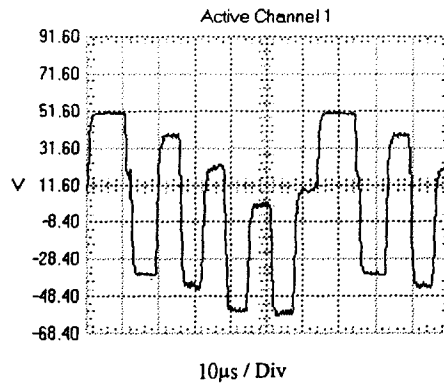
3.1.2 Adjustment of color demodulation:

Select the PAL color bar, all analogue setting must be set to medium. Use a CRO to observe the waveform of the 'green cathode' terminal on the CRT board. By tuning VR201 and T203, minimize the mis-alignment of the waveform.



3.2 NTSC alignment procedures

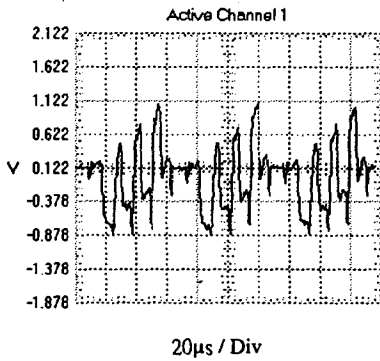
Select the NTSC color bar signal and set the TV to 'standard' mode. Observe the waveform on the "blue cathode" terminal on the CRT board with CRO. Tuning IF T201 and get the following waveform.



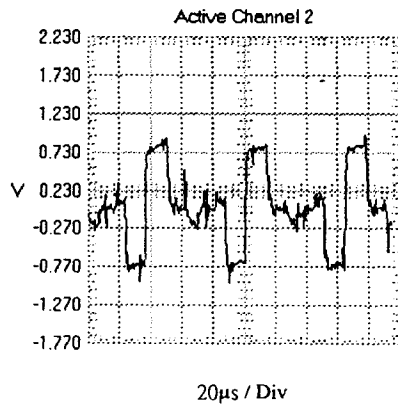
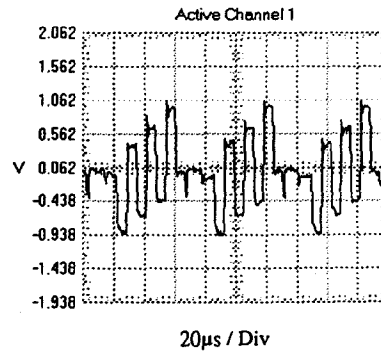
3.3 Secam alignment procedures

3.3.1 Bell filter

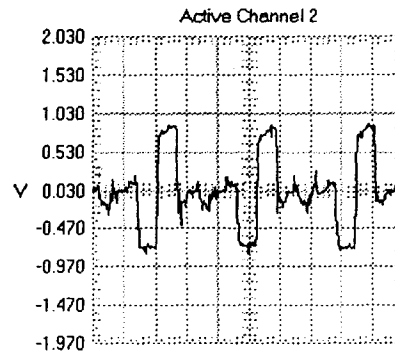
Select the SECAM color bar signal. Observe the waveform at pin 24 and 26 of IC201. Tuning IF T204 and get the correct waveform.



Waveform at pin 26



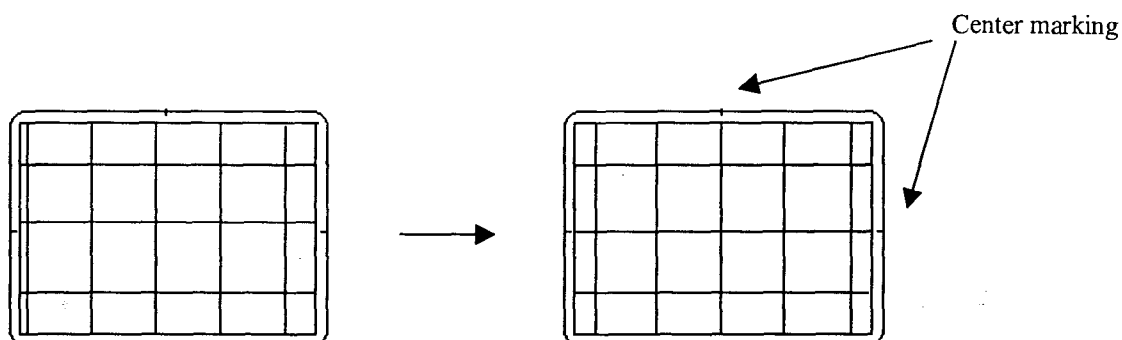
Waveform at pin24



6 Screen Alignment

6.1 Center alignment:

Receive a center cross with border castellations pattern. Place the centerline (both vertical and horizontal) to the center marking of the CRT. The center of the screen can be adjusted by tuning VR302 (vertical) and VR204 (horizontal).



6.2 Screen size adjustment:

Receive a center cross with border castellations pattern. Adjust the screen size until the border was just disappearing on the screen. The screen size can be adjusted by tuning VR301 (vertical size). The screen size is 90%-95% of the CRT size.

7 Focus alignment

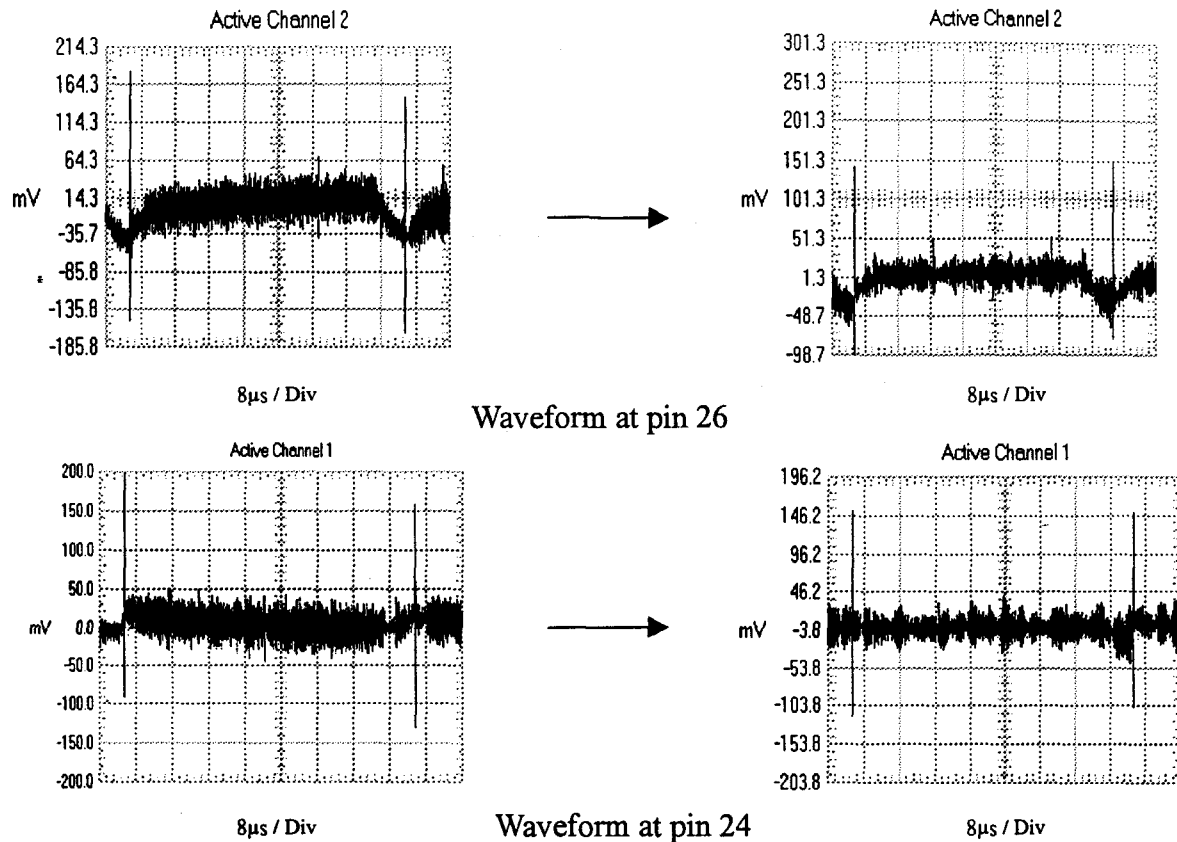
Receive a center cross with border castellations pattern. Then adjust the 'focus' switch on the flyback transformer until the picture become the clearest.

8 Cut-off alignment

Set the value of VR501, VR511 and VR521 to middle. Then turn the switch S301 to the service side and a red line will appear on the screen. Adjust the 'screen' switch on the flyback transformer to set the intensity of the red line to a minimum level (a level where the line is just appears). By adjusting VR501 and VR521, change the red line to a white line. Then adjust the 'screen' switch again and make the white just disappear.

3.3.2 De-emphasis alignment

Receive the gray scale pattern and observe the waveform at the pin 24 and 26 of IC201. Adjust VR202 until the remaining carrier reduced to minimum.



4 Adjustment of RF-AGC

Select the gray scale signal with amplitude about 60dB μ V. Adjust VR101 until the noise at the left of the screen disappears.

5 On Screen Display Position Alignment

Select PAL standard testing signal. Press the 'Function' button on the remote control and the screen will display the OSD menu. Adjust the OSD menu to the center position by tuning T001.

Note: This procedure is not necessary for Philips Chassis.

9 White Balance

Receive a Red + Color bar pattern (black and white on the screen). Then set the value of VR511, VR502 and VR522 to meddle.

- a. Use a CRT color analyzer to measure the black side of the screen. By adjusting VR501 and VR521, set the reading of the color analyzer to $x=281$, $y=311$, $Y=10$.
- b. Then measure the white side of the screen. By adjusting VR502 and VR522, set the reading of the color analyzer to $x=281$, $y=311$, $Y=100$.
- c. Measure the black size again and the reading may be changed. Then repeat step 'a' and 'b' until you can get the correct reading for both black and white sides.

Notes: The VR511 is for reference and its value is always set to middle.

10 Sub-brightness Alignment

Receive a gray scale pattern, set the contrast, brightness and color to center. Then adjust VR203 so that the brightness of the first and second step have a little difference.

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Part No.	Item Description	Quantity
08-289671-001	ASS'Y - MAIN BD	
02-270090-001	IR RECEIVER MODULE TFMS-5380	1
10-0FR104-EB1	DIODE FR104 (FAST RECOVERY)	3
10-1N4001-EB1	DIODE 1N4001 (RECTIFIER)	1
10-1N4002-EB1	DIODE 1N4002 (RECTIFIER)	2
10-1N4148-AB1	DIODE 1N4148 (SWITCHING)	15
10-79C5V1-DB1	DIODE ZENER 5.1V 1/2W 5%	1
10-79C9V1-DB1	DIODE ZENER 9.1V 1/2W 5%	4
10-PC574J-DJ1	DIODE ZENER UPC 574J	1
11-2N3904-0B1	TRANSISTOR 2N3904	1
11-A562TM-0B1	TRANSISTOR 2SA562TM-0	1
11-SA1015-YB1	TRANSISTOR 2SA1015Y	6
11-SC1815-YB1	TRANSISTOR 2SC1815Y	11
11-SC2482-0B1	TRANSISTOR 2SC2482	1
11-SC3779-DB1	TRANSISTOR 2SC3779D (RF AMPL)	1
11-SD2499-0A1	TRANSISTOR 2SD2499 (POWER)	1
11-TC144E-SB1	TRANSISTOR DTC144ES (TP)	6
13-000040-53P	IC 4053 (ANALOG SW)	1
13-00AN52-65S	IC AN5265 (AUDIO AMPL.)	1
13-00MC78-09S	IC MC7809C LINEAR +9V 1A	1
13-TV222S-1AP	IC CTV222S, PRC1.1A (ENGL) CPU	1
13-0DBL20-44S	IC DBL2044(BAND SELECT)	1
13-0LA768-5JP	IC LA7685J P/N IF+VCD	1
13-0TA844-5KS	IC TA8445K (VERT OUTPUT)	1
13-ST24C0-2FP	IC ST24C02FB6 EEPROM 2K	1
14-269140-LR1	LED RED L34HD	1
18-CB0100-JNX	RES. C.F. 10 OHM 1/6W +/-5%	1
18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	13
18-CB0104-JNX	RES. C.F. 100K OHM 1/6W +/-5%	3
18-CB0105-JNX	RES. C.F. 1M OHM 1/6W +/-5%	2
18-CB0121-JNX	RES. C.F. 120 OHM 1/6W +/-05%	1
18-CB0122-JNX	RES. C.F. 1.2K OHM 1/6W +/-5%	1
18-CB0123-JNX	RES. C.F. 12K OHM 1/6W +/-5%	3
18-CB0151-JNX	RES. C.F. 150 OHM 1/6W +/-5%	2
18-CB0152-JNX	RES. C.F. 1.5K OHM 1/6W +/-5%	3
18-CB0154-JNX	RES. C.F. 150K OHM 1/6W +/-5%	1
18-CB0184-JNX	RES. C.F. 180K OHM 1/6W +/-5%	2
18-CB0220-JNX	RES. C.F. 22 OHM 1/6W +/-5%	2
18-CB0221-JNX	RES. C.F. 220 OHM 1/6W +/-5%	3
18-CB0222-JNX	RES. C.F. 2.2K OHM 1/6W +/-5%	11
18-CB0223-JNX	RES. C.F. 22K OHM 1/6W +/-5%	6
18-CB0224-JNX	RES. C.F. 220K OHM 1/6W +/-5%	2
18-CB0271-JNX	RES. C.F. 270 OHM 1/6W +/-5%	2
18-CB0274-JNX	RES. C.F. 270K OHM 1/6W +/-5%	1
18-CB0331-JNX	RES. C.F. 330 OHM 1/6W +/-5%	3
18-CB0334-JNX	RES. C.F. 330K OHM 1/6W +/-5%	1
18-CB0391-JNX	RES. C.F. 390 OHM 1/6W +/-5%	2

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Part No.	Item Description	Quantity
18-CB0471-JNX	RES. C.F. 470 OHM 1/6W +/-5%	8
18-CB0472-JNX	RES. C.F. 4.7K OHM 1/6W +/-5%	14
18-CB0474-JNX	RES. C.F. 470K OHM 1/6W +/-5%	1
18-CB0511-JNX	RES. C.F. 510 OHM 1/6W +/-5%	1
18-CB0560-JNX	RES. C.F. 56 OHM 1/6W +/-5%	1
18-CB0561-JNX	RES. C.F. 560 OHM 1/6W +/-5%	3
18-CB0564-JNX	RES. C.F. 560K OHM 1/6W +/-5%	1
18-CB0681-JNX	RES. C.F. 680 OHM 1/6W +/-5%	2
18-CB0682-JNX	RES. C.F. 6.8K OHM 1/6W +/-5%	3
18-CB0750-JNX	RES. C.F. 75 OHM 1/6W +/-5%	5
18-CB0824-JNX	RES. C.F. 820K OHM 1/6W +/-5%	1
18-CD0100-JNX	RES. C.F. 10 OHM 1/4W +/-5%	1
18-CD0184-JNX	RES. C.F. 180K OHM 1/4W +/-5%	1
18-CD0221-JNX	RES. C.F. 220 OHM 1/4W +/-5%	1
18-CD0331-JNX	RES. C.F. 330 OHM 1/4W +/-5%	1
18-CE0331-JNX	RES. C.F. 330 OHM 1/2W +/-5%	1
18-EF0109-JG1	RES. FUS 1 OHM 1W +/-5%(LS)	2
18-FF0103-JGX	RES. M.O. 10K OHM 1W +/-5%	2
18-FF0122-JGX	RES. M.O. 1.2K OHM 1W +/-5%	1
18-FF0189-JGX	RES. M.O. 1.8 OHM 1W +/-5%	1
18-FF0330-JGX	RES. M.O. 33 OHM 1W +/-5%	1
20-141610-302	TRIMMER B3K VERT TYPE	1
25-BCA102-M11	CAP. ELEC 1000 UF 16V +/-20%	1
25-BCB100-M11	CAP. ELEC 10 UF 16V +/-20%	18
25-BCB101-M11	CAP. ELEC 100 UF 16V +/-20%	6
25-BCB220-M11	CAP. ELEC 22 UF 16V +/-20%	4
25-BCB330-M11	CAP. ELEC 33 UF 16V +/-20%	1
25-BCB331-M11	CAP. ELEC 330 UF 16V +/-20%	2
25-BCB471-M11	CAP. ELEC 470 UF 16V +/-20%	3
25-BDA471-M11	CAP. ELEC 470 UF 25V +/-20%	1
25-BEA471-M11	CAP. ELEC 470 UF 35V +/-20%	1
25-BEB101-M11	CAP. ELEC 100 UF 35V +/-20%	1
25-BFB100-M11	CAP. ELEC 10 UF 50V +/-20%	1
25-BFB109-K1A	CAP. ELEC 1 UF 50V 10% CEC-K	1
25-BFB109-M11	CAP. ELEC 1 UF 50V +/-20%	6
25-BFB228-M11	CAP. ELEC 0.22UF 50V +/-20%	1
25-BFB229-K1A	CAP. ELEC 2.2UF 50V 10% CEC-K	1
25-BFB229-M11	CAP. ELEC 2.2 UF 50V +/-20%	4
25-BFB478-M11	CAP. ELEC 0.47 UF 50V +/-20%	3
25-BFB479-M11	CAP. ELEC 4.7 UF 50V +/-20%	1
25-BHA100-M11	CAP. ELEC 10 UF 100V +/-20%	1
25-BJA109-M11	CAP. ELEC 1 UF 160V +/-20%	1
25-BLA100-M11	CAP. ELEC 10 UF 250V +/-20%	1
26-EBP100-JC1	CAP. CER 10 PF 50V +/-5% CH	1
26-EBP101-JC1	CAP. CER 100 PF 50V +/-5% CH	1
26-EBP102-KB1	CAP. CER 1000PF 50V 10% B TUBU	3
26-EBP103-ZF1	CAP. CER 0.01UF 50V +80-20% F	21

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Part No.	Item Description	Quantity
26-ABC104-ZFX	CAP. CER 0.1UF 50V +80-20% F	1
26-EBP150-JC1	CAP. CER 15 PF 50V +/-5% CH	2
26-ABC180-JZX	CAP. CER 18 PF 50V +/-5% SL	3
26-EBP220-JZ1	CAP. CER 22 PF 50V 5% SL TUBU	2
26-EBP221-JC1	CAP. CER 220 PF 50V +/-5% CH	1
26-EBP221-JC1	CAP. CER 220 PF 50V +/-5% CH	5
26-ABC222-KBX	CAP. CER 2200 PF 50V +/-10% B	1
26-ABC240-JZX	CAP. CER 24 PF 50V +/-5% SL	2
26-EBP241-JC1	CAP. CER 240 PF 50V +/-5% CH	1
26-EBP270-JC1	CAP. CER 27 PF 50V +/-5% CH	1
26-EBP330-JZ1	CAP. CER 33 PF 50V 5% SL TUBU	1
26-ABC339-CZX	CAP. CER 3.3 PF 50V +/-0.25PF	1
26-EBP470-JZ1	CAP. CER 47 PF 50V +/-5% SL TU	3
26-EBP471-JC1	CAP. CER 470 PF 50V +/-5% CH	2
26-ABC560-JZX	CAP. CER 56 PF 50V +/-5%	1
26-EBP561-JC1	CAP. CER 560 PF 50V +/-5% CH	1
26-EBP680-JZ1	CAP. CER 68 PF 50V 5% SL TUBU	2
26-EBP829-JC1	CAP. CER 8.2PF 50V +/-5% CH	1
26-AIC102-KBX	CAP. CER 1000 PF 500V +/-10% B	1
26-AIC332-KBX	CAP. CER 3300 PF 500V +/-10% B	1
26-AIC391-KBX	CAP. CER 390 PF 500V +/-10%	3
27-AHR274-J01	CAP. PP 0.27 UF 400V +/-5%	1
27-ALR922-J01	CAP. M.PP 0.0092UF 1.6KV +/-5%	1
27-MBC104-J01	CAP. M. P.E. 0.1 UF 50V +/-5%	4
27-MBC224-J01	CAP. M. P.E. 0.22 UF 50V +/-5%	1
27-PBC102-J01	CAP. P.E. 0.001 UF 50V +/-5%	1
27-PBC103-J01	CAP. P.E. 0.01 UF 50V +/-5%	5
27-PBC223-J01	CAP. P.E. 0.022 UF 50V +/-5%	1
27-PBC333-J01	CAP. P.E. 0.033 UF 50V +/-5%	1
27-PBC472-J01	CAP. P.E. 0.0047 UF 50V +/-5%	1
27-PBC473-J01	CAP. P.E. 0.047 UF 50V +/-5%	3
27-PBC562-J01	CAP. P.E. 0.0056 UF 50V +/-5%	1
34-A100K0-0IX	COIL CHOKE 10 UH +/-10%	1
34-A568K0-1IX	COIL CHOKE 0.56 UH +/-10%	1
34-A608K6-1BX	COIL CHOKE 0.6 UH +/-10%	1
34-R100J2-0EX	COIL PL - 10 UH +/-5%	3
34-R330J2-0EX	COIL PL - 33 UH +/-5%	2
34-R569J2-0EX	COIL PL - 5.6 UH +/-5%	1
34-R829J2-0EX	COIL PL - 8.2 UH +/-5%	1
36-107483-A02	TRANSFORMER HORIZ DRIVER	1
36-278440-017	COIL LINEARITY 58 UH	1
36-285600-017	COIL WIDTH 200 UH LC-201-TCL	1
38-138270-000	COIL DEMODULATION (TY-6045)	2
38-236550-000	COIL I.F.T. 236550 FOR AFT	1
38-236560-000	COIL I.F.T. 236560 FOR VCO	1
38-257980-00X	COIL I.F.T. 3350D	1
38-262530-000	COIL CHROMA 4.43MHZ MT251-1154	1

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Part No.	Item Description	Quantity
38-264630-00X	COIL I.F.T. 264630 SIF	1
41-AJ0100-BEE	WIRE BARE JUMPER 10MM	1
41-BF0070-5BB	WIRE UL 1007 #24 70MM GREEN	1
41-BF0100-7BB	WIRE UL 1007 #24 100MM VIOLET	1
41-BF0150-2BB	WIRE UL 1007 #24 150MM RED	1
41-BF0150-8BB	WIRE UL 1007 #24 150MM GREY	1
41-BF0250-3BB	WIRE UL 1007 #24 250MM ORG.	1
41-DE0280-2BB	WIRE UL 1015 #22 280MM RED	1
41-DE0320-0BB	WIRE UL 1015 #22 320MM BLACK	1
41-WJ0050-B00	WIRE BARE JUMPER 5MM	10
41-WJ0085-B00	WIRE BARE JUMPER 8.5MM	1
41-WJ0150-B00	WIRE BARE JUMPER 15MM	14
41-WJ0175-B00	WIRE BARE JUMPER 17.5MM	9
41-WJ0200-B00	WIRE BARE JUMPER 20MM	10
43-278460-004	DELAY LINE CHROMA YCS-FN6P5A11	1
45-107190-10X	CRYSTAL 4.43 MHZ	1
45-107742-401	CER. FILTER 5.5MHZ	1
45-117410-10X	CRYSTAL 3.58 MHZ	1
45-135070-600	CER. TRAP TPS 5.5MHZ	1
45-228590-10X	CRYSTAL 10MHZ	1
45-261530-200	CERAMIC RESONATOR CSB500F55	1
45-126172-300	SAW FILTER F1037C	1
46-10960W-047	PIN BASE *4 TJC3-4A	1
46-10964W-067	PIN BASE *6 TJC3-6A	1
46-20598W-047	PIN BASE *4 TJC1-4A	1
47-272430-00X	RCA JACK BD 6P (VERT TYPE)	1
48-282910-005	SW TACT L=16.5MM GR	4
48-282960-005	SW TACT L=12.5MM GR	9
62-10654X-00F	UNI - TIE 2.5X95MM	10
62-215870-0UH	MOUNTING SPACER FBT	1
62-227680-0UA	HOLDER CABLE FOR FBT	1
62-249190-0HH	BRACKET PCB SUPPORTER	1
62-269920-0HA	LED HOLDER	1
63-B4020X-AB2	S/T SCREW B 4 X 20 AB	1
64-B3006X-104	M/C SCREW B 3 X 6	2
64-P3510X-104	M/C SCREW P 3.5 X 10	3
65-Z3506X-26E	NUT M 3.5	3
67-203020-0M2	HEAT SINK I (L TYPE)	1
67-249280-3A0	HEAT SINK	1
67-251660-0M2	HEAT SINK	1
71-270870-0A9	LABEL	2
90-209770-000	SILICONE GREASE G-746	
90-269080-000	CLEAN COATING	
20-201260-203	TRIMMER B20K VERT TYPE	2
20-202980-503	TRIMMER B50K VERT TYPE	1
20-215450-103	TRIMMER B10K HORIZ TYPE	1
38-266610-000	COIL I.F.T. 266610 SIF	1

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Part No.	Item Description	Quantity
38-257970-001	COIL I.F.T. TRF 3800D	1
18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	12
18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	4
25-BJA470-M11	CAP. ELEC 47 UF 160V +/-20%	1
18-FG0100-JHX	RES. M.O. 10 OHM 2W +/-5%	1
18-FG0682-JHX	RES. M.O. 6.8K OHM 2W +/-5%	1
18-FH0242-JIX	RES. M.O. 2.4K OHM 3W +/-5%	1
34-R150J2-0EX	COIL PL - 15 UH +/-5%	1
41-WJ0060-B00	WIRE BARE JUMPER 6MM	12
41-WJ0060-B00	WIRE BARE JUMPER 6MM	11
41-WJ0075-B00	WIRE BARE JUMPER 7.5MM	12
41-WJ0075-B00	WIRE BARE JUMPER 7.5MM	12
41-WJ0075-B00	WIRE BARE JUMPER 7.5MM	12
41-WJ0100-B00	WIRE BARE JUMPER 10MM	12
41-WJ0100-B00	WIRE BARE JUMPER 10MM	12
41-WJ0100-B00	WIRE BARE JUMPER 10MM	12
41-WJ0100-B00	WIRE BARE JUMPER 10MM	6
41-WJ0125-B00	WIRE BARE JUMPER 12.5MM	12
41-WJ0125-B00	WIRE BARE JUMPER 12.5MM	12
41-WJ0125-B00	WIRE BARE JUMPER 12.5MM	1
10-79C18V-DB1	DIODE ZENER 18V 1/2W 5%	1
18-CB0183-JNX	RES. C.F. 18K OHM 1/6W +/-5%	1
18-DF0109-JGX	RES. M.F. 1 OHM 1W +/-5%	1
48-114820-00X	SW. CHANNEL BAND SELECTOR	1
70-271510-00A	SERVICE CARD	1
26-AMK331-JZ1	CAP. CER 330 PF 2KV +/-5% SL	1
18-CB0683-JNX	RES. C.F. 68K OHM 1/6W +/-5%	1
41-WJ0075-B00	WIRE BARE JUMPER 7.5MM	12
71-265650-0A0	LABEL FUSE T2L250V	1
41-WJ0060-B00	WIRE BARE JUMPER 6MM	11
41-WJ0075-B00	WIRE BARE JUMPER 7.5MM	7
18-CB0823-JNX	RES. C.F. 82K OHM 1/6W +/-5%	1
18-CB0153-JNX	RES. C.F. 15K OHM 1/6W +/-5%	4
18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	1
18-CB0822-JNX	RES. C.F. 8.2K OHM 1/6W +/-5%	2
18-CB0473-JNX	RES. C.F. 47K OHM 1/6W +/-5%	12
18-CB0473-JNX	RES. C.F. 47K OHM 1/6W +/-5%	11
18-CB0333-JNX	RES. C.F. 33K OHM 1/6W +/-5%	3
18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	11
18-CB0332-JNX	RES. C.F. 3.3K OHM 1/6W +/-5%	3
54-128373-00X	FIBRE TUBE D=1MM L=15MM	1
18-CB0563-JNX	RES. C.F. 56K OHM 1/6W +/-5%	1
20-200560-102	TRIMMER B1K HORIZ TYPE	1
37-JF0501-A02	FLYBACK JF0501-1214A (54CM)	1
46-12866W-027	PIN BASE *2 TJC3-2A	1
46-12866W-027	PIN BASE *2 TJC3-2A	1
46-12866W-02X	PIN BASE *2 S11-02W	1

TEAC MODEL : CT-M415

Part No.	Item Description	Quantity
40-271341-0AF	P.C.B. MAIN BD (2128SZ)	1
18-FE0681-JNX	RES. M.O. 680 OHM 1/2W +/-5%	1
10-1N4148-AB1	DIODE 1N4148 (SWITCHING)	1
07-TSR7SD-050	TUNER VTSR7SD05 38.9MHZ CB/IEC	1
26-EBP331-JC1	CAP. CER 330 PF 50V +/-5% CH	1
41-AJ0075-BEE	WIRE BARE JUMPER 7.5MM	2
08-289681-001	ASS'Y - POWER PARTS (EC1701)	
10-0RL255-EB1	DIODE RL255 (RECTIFIER)	4
10-0RU3AM-E01	DIODE RU3AM (FAST RECOVERY)	1
10-1N4004-EB1	DIODE 1N4004 (RECTIFIER)	2
10-1N4148-AB1	DIODE 1N4148 (SWITCHING)	1
10-79C12V-DB1	DIODE ZENER 12V 1/2W 5%	1
10-79C20V-DB1	DIODE ZENER 20V 1/2W 5%	1
11-SC1815-YB1	TRANSISTOR 2SC1815Y	2
11-SC2230-YB1	TRANSISTOR 2SC2230Y	1
11-SD2498-0A1	TRANSISTOR 2SD2498 (POWER)	1
13-0TDA46-01S	IC TDA4601	1
18-BE0105-KN1	RES. C.C. 1M OHM 1/2W +/-10%	1
18-BE0475-KN1	RES. C.C. 4.7M OHM 1/2W +/-10%	2
18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	1
18-CB0222-JNX	RES. C.F. 2.2K OHM 1/6W +/-5%	1
18-CB0223-JNX	RES. C.F. 22K OHM 1/6W +/-5%	2
18-CB0332-JNX	RES. C.F. 3.3K OHM 1/6W +/-5%	1
18-CB0472-JNX	RES. C.F. 4.7K OHM 1/6W +/-5%	1
18-CB0682-JNX	RES. C.F. 6.8K OHM 1/6W +/-5%	1
18-CD0103-JNX	RES. C.F. 10K OHM 1/4W +/-5%	2
18-CD0221-JNX	RES. C.F. 220 OHM 1/4W +/-5%	1
18-CE0102-JNX	RES. C.F. 1K OHM 1/2W +/-5%	1
18-CE0109-JNX	RES. C.F. 1 OHM 1/2W +/-5%	1
18-CE0122-JNX	RES. C.F. 1.2K OHM 1/2W +/-5%	1
18-CE0470-JNX	RES. C.F. 47 OHM 1/2W +/-5%	1
18-FF0470-JGX	RES. M.O. 47 OHM 1W +/-5%	1
18-FF0472-JGX	RES. M.O. 4.7K OHM 1W +/-5%	1
20-215450-103	TRIMMER B10K HORIZ TYPE	1
22-202BG3-602	POSISTOR PTH451C202BG360N270	1
25-267980-M11	CAP. ELEC 100 UF 16/25V +/-20%	1
25-BCB101-M11	CAP. ELEC 100 UF 16V +/-20%	1
25-BEA471-M11	CAP. ELEC 470 UF 35V +/-20%	2
25-BEB101-M11	CAP. ELEC 100 UF 35V +/-20%	1
25-BFB100-M11	CAP. ELEC 10 UF 50V +/-20%	1
25-BFB479-M11	CAP. ELEC 4.7 UF 50V +/-20%	1
25-BJA109-M11	CAP. ELEC 1 UF 160V +/-20%	1
25-BJG101-M11	CAP. ELEC 100 UF 160V +/-20%	1
25-BMJ221-M11	CAP. ELEC 220 UF 400V +/-20%	1
26-EBP101-JC1	CAP. CER 100 PF 50V +/-5% CH	1
26-EBP103-ZF1	CAP. CER 0.01UF 50V +80-20% F	2
26-EBP221-JC1	CAP. CER 220 PF 50V +/-5% CH	1

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Part No.	Item Description	Quantity
26-AIC221-KBX	CAP. CER 220 PF 500V +/-10% B	1
26-AIM103-KBX	CAP. CER 0.01 UF 500V +/-10% B	1
26-AMK102-KR1	CAP. CER 1000 PF 2KV +/-10% R	2
26-AMK152-KR1	CAP. CER 1500 PF 2KV +/-10% R	1
26-APK222-MEJ	CAP. CER 2200PF 400VAC+/-20% E	1
26-AQK472-ZF1	CAP.CER 4700PF 250VAC +80-20%F	2
27-ALQ222-J01	CAP. M.PP 0.0022UF 1.6KV +/-5%	1
27-MHW104-K01	CAP. METAL P.E. 0.1UF 400V 10%	1
27-PBC682-J01	CAP. P.E. 0.0068 UF 50V +/-5%	3
34-R101K2-1BX	COIL CHOKE 100 UH +/-10%	1
34-R109J2-0EX	COIL PL - 1 UH +/-5%	2
35-139730-00X	FERR. BEAD BF60	2
36-238300-A02	LINE FILTER	1
36-258740-A02	TRANSF. CONVERTER FOR TDA4601	1
41-AJ0025-BEE	WIRE BARE JUMPER 2.5MM	1
41-WJ0075-B00	WIRE BARE JUMPER 7.5MM	1
41-WJ0100-B00	WIRE BARE JUMPER 10MM	1
41-WJ0150-B00	WIRE BARE JUMPER 15MM	1
41-WJ0200-B00	WIRE BARE JUMPER 20MM	2
46-10962W-027	PIN BASE *2 TJC2-2A	1
48-256460-0C0	SW. POWER TV8 (PCB MOUNTING)	1
50-26930D-1VS	FUSE 2.0AT 250V 5X20MM BELL	1
54-113971-0U4	PVC TUBE #6 L=20MM	2
62-249790-0HH	BRACKET PCB SUPPPORTER	1
62-262660-0HA	POWER SW. ADAPTOR	1
62-269980-0HG	CABLE CLAMP	1
63-B3510X-AB4	S/T SCREW B 3.5 X 10 AB HARD	2
64-B3008X-102	M/C SCREW B 3 X 8	1
64-B3010X-104	M/C SCREW B 3 X 10	1
65-E3305X-07E	SPRING WASHER 3.3 X 5.0 X 0.7	2
65-Z3005X-23M	NUT M 3	2
67-258760-0A0	HEAT SINK	1
71-242640-0A2	LABEL WARNING LIVE PARTS	1
74-010050-40C	POLYBAG FOR POWER CORD	1
90-209770-000	SILICONE GREASE G-746	
51-JC0243-0CC	POWER CORD 8FT W/PIN TERM. SAA	1
18-FG0153-JHX	RES. M.O. 15K OHM 2W +/-5%	1
18-FH0390-JIX	RES. M.O. 39 OHM 3W +/-5%	1
18-FH0472-JIX	RES. M.O. 4.7K OHM 3W +/-5%	2
10-79C18V-DB1	DIODE ZENER 18V 1/2W 5%	1
10-79C33V-DB1	DIODE ZENER 33V 1/2W 5%	1
71-221930-0AA	LABEL FUSE REPLACEMENT	1
27-AQT224-MVF	CAP. M.PP 0.22UF 250VAC 20% CB	1
27-MDK104-MVF	CAP. M.PE 0.1UF 125/250VAC CB	1
66-20516X-0B0	FUSE HOLDER	2
10-0FR104-EB1	DIODE FR104 (FAST RECOVERY)	6
18-GM0339-KTX	RES. CEMENT 3.3 OHM 7W +/-10%	1

TEAC MODEL : CT-M415

Part No.	Item Description	Quantity
18-FF0154-JGX	RES. M.O. 150K OHM 1W +/-5%	2
18-FF0124-JGX	RES. M.O. 120K OHM 1W +/-5%	2
08-289690-001	ASS'Y - IR TRANSMITTER BD	
11-A562TM-0B1	TRANSISTOR 2SA562TM-0	1
11-SC1815-YB1	TRANSISTOR 2SC1815Y	1
13-00PT22-10P	IC PT2210 28PINS (IR TRANS.)	1
15-0TSU54-02D	DIODE INFRARED TSU5402	1
18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	1
18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	1
18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	1
18-CB0229-JNX	RES. C.F. 2.2 OHM 1/6W +/-5%	1
18-CB0473-JNX	RES. C.F. 47K OHM 1/6W +/-5%	1
18-CB0680-JNX	RES. C.F. 68 OHM 1/6W +/-5%	1
18-CB0682-JNX	RES. C.F. 6.8K OHM 1/6W +/-5%	1
25-BBA100-K31	CAP. TAN 10 UF 10V +/-10%	1
40-270280-0AC	P.C.B. HANDSET BD	1
41-AJ0175-BEE	WIRE BARE JUMPER 17.5MM	2
45-120550-20X	CER RESONATOR 455KHZ	1
49-269530-00XAA	RUBBER PAD 40 KEYS	1
67-26958X-0E2	BATTERY CONTACT SPRING (+)	1
67-26959X-0E2	BATTERY CONTACT SPRING (-)	1
67-26968X-0E2	BATT. TERMINAL (+/-)	1
74-009022-60C	POLYBAG HANDSET	1
58-26957S-3UIAC	INLAY IR TRANSMITTER BD	1
55-269540-0HABD	CASE UPPER - REMOTE HANDSET	1
55-269550-0HAAN	CASE LOWER - REMOTE HANDSET	1
55-269560-0HAAN	DOOR BATT. - REMOTE HANDSET	1
08-289700-001	ASS'Y - FRONT CABINET	
02-278410-00X	ASS'Y CRT GND WIRE & HOUS.(17)	1
36-278420-017	DEGAUSSING COIL 2240+20MM (17)	1
42-272410-00X	SPEAKER 50X120MM 16 OHM 3W D50	2
46-14026H-027	HS 2P24 570/7 F/W TJC3-2Y	1
46-20600H-047	HS 4P A/B 360/13 RBGW TJC1-4Y	1
48-259140-00X	SW. DOOR LOCK PR4	1
54-113971-0UE	PVC TUBE #6 L=160MM	2
54-205140-000	SPACER CRT MOUNTING T=2MM	4
54-271620-000	SPACER CRT MOUNTING T=1MM	4
62-10654X-00F	UNI - TIE 2.5X95MM	15
62-269930-0UA	HOLDER POWER CORD	1
63-H5025X-0B4	S/T SCREW H 5 X 25 B	4
63-P2606X-BT4	S/T SCREW P 2.6 X 6 BT	1
63-W3010X-AB4	S/T SCREW W 3 X 10 AB	8
65-A5020X-20E	WASHER 5 X 20 X 2MM	4
67-126680-0E0	SPRING CRT 6 X 40 X 0.5 MM	1
67-249700-0E0	SPRING PWR KNOB	1
62-238130-0HA	HOLDER BRAND	1
58-27548S-0UIAC	INLAY CONTROL (CT-M415)	1

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Part No.	Item Description	Quantity
67-13461S-0A0AE	INLAY LOGO EMBLEM PLATE (TEAC)	1
56-275460-0HCAB	LENS - SENSER & LED (EC1701)	1
59-130460-00X	RUBBER PAD 25MM X 7MM	2
59-130460-00X	RUBBER PAD 25MM X 7MM	8
54-205140-000	SPACER CRT MOUNTING T=2MM	2
59-130460-00X	RUBBER PAD 25MM X 7MM	2
46-13902H-02X	HS 2P24 360/5 F/W S11-02H	1
44-289480-00K	CRT 41CM A41ECV40X01 (HF)	1
55-27542X-0CAAJ	CABINET FRONT (CT-M415)	1
55-27544X-0HAAP	DOOR (CT-M415)	1
56-275450-0HAAG	POWER KNOB (CT-M415)	1
08-289710-001	ASS'Y - REAR CABINET	
59-130460-00X	RUBBER PAD 25MM X 7MM	2
59-279090-000	SPONGE RUBBER (15X15X1.5)	3
63-B4020X-AB3	S/T SCREW B 4 X 20 AB (BLACK)	5
63-F3008X-BT3	S/T SCREW F 3 X 8 BT BLACK	2
58-11484S-0UIJU	PLATE MODEL NO. (CT-M415)	1
58-29171S-0UIAC	INLAY TERMINAL BD (RCA-6)	1
54-114000-00X	FELT TAPE 150X19MM	13
55-275430-1ANAB	CABINET REAR (CT-M415)	1
08-289720-001	ASS'Y - PACKING	
74-022032-6WE	POLYBAG 22 X 32CM	1
74-104088-6YC	POLYBAG W/SUFFOCATION WARNING	1
72-1701K4-EY0AA	OPERATION MANUAL (CT-M415)	1
49-268110-000	BATTERY AA SIZE CARBON ZINC	2
70-281020-00AAA	TOTAL CARE SHEET (TEAC)	1
71-290670-0A0AA	LABEL P.O. NO. (CT-M415)	2
75-288540-C00	POLYFOAM "UR" (EC1701)	1
75-288550-C00	POLYFOAM "UL" (EC1701)	1
75-288560-C00	POLYFOAM "LR" (EC1701)	1
75-288570-C00	POLYFOAM "LL" (EC1701)	1
70-278170-00AAD	EASY TUNE CARD (CT-M415)	1
71-293810-0A0AA	LABEL BAR CODE	2
71-278180-0A0AE	LABEL SERIAL NO. (CT-M415)	3
76-28858X-02AAB	CARTON BOX (CT-M415)	1
71-293820-0A0AA	LABEL SCREEN NON-STICK (TEAC)	1
71-276630-0A0AB	LABEL SERVICE STATION (TEAC)	1
47-137000-000	ASS'Y - TWO ROD ANT.W/RIB.65CM	1
36-110590-000	CONVERTER 300 OHM/75 OHM	1
08-289360-002	ASS'Y - CRT BD (17" TEAC)	
11-SC1815-YB1	TRANSISTOR 2SC1815Y	3
11-SC2482-0B1	TRANSISTOR 2SC2482	3
18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	1
18-CB0121-JNX	RES. C.F. 120 OHM 1/6W +/-05%	3
18-CB0221-JNX	RES. C.F. 220 OHM 1/6W +/-5%	1
18-CB0471-JNX	RES. C.F. 470 OHM 1/6W +/-5%	3
20-203700-201	TRIMMER B200 VERT TYPE (8MM)	2

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Part No.	Item Description	Quantity
20-216050-302	TRIMMER B3K VERT TYPE (8MM)	3
25-BCB101-M11	CAP. ELEC 100 UF 16V +/-20%	1
26-EBP101-JC1	CAP. CER 100 PF 50V +/-5% CH	3
26-EBP103-ZF1	CAP. CER 0.01UF 50V +80-20% F	1
26-EBP331-JC1	CAP. CER 330 PF 50V +/-5% CH	1
26-ABC391-JZX	CAP. CER 390 PF 50V +/-5% SL	1
26-EBP471-JC1	CAP. CER 470 PF 50V +/-5% CH	1
26-EBP561-JC1	CAP. CER 560 PF 50V +/-5% CH	2
26-AMK102-KR1	CAP. CER 1000 PF 2KV +/-10% R	1
34-R100K2-1CX	COIL CHOKE 10 UH +/-10%	1
34-R220K2-1CX	COIL CHOKE 22 UH +/-10%	1
35-139730-00X	FERR. BEAD BF60	2
40-264590-0AC	P.C.B. CRT BD(22.5MM)	1
46-10967W-017	PIN BASE *1 TJC1-1A	1
46-20389H-047	HS 4P24 460/5 F/W TJC3-4Y	1
46-22134H-067	HS 6P26 450/5 F/W TJC3-6Y	1
18-BE0272-KN1	RES. C.C. 2.7K OHM 1/2W +/-10%	3
26-EBP102-KB1	CAP. CER 1000PF 50V 10% B TUBU	1
18-FG0153-JHX	RES. M.O. 15K OHM 2W +/-5%	3
47-208530-007	SOCKET CRT GZS 8-6-4 22.5MM	1
41-WJ0075-B00	WIRE BARE JUMPER 7.5MM	4
25-BLA100-M11	CAP. ELEC 10 UF 250V +/-20%	1

MODEL: TEAC CT-M415 PAL B/G NTSC3.58/4.43(AV)

