

### 2-5-19. REC SYNC GATE ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT PS303-10	VR809	SP RECORDING	SECAM COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	5.0+ $\pm$ 0.1 (usec)	

Note: 1. Set the S VHS SW to OFF position. (VHS MODE)  
 2. Set the SYSTEM SELECT SW to SECAM position.  
 3. Set the OUTPUT SYSTEM SELECT SW to SECAM position.

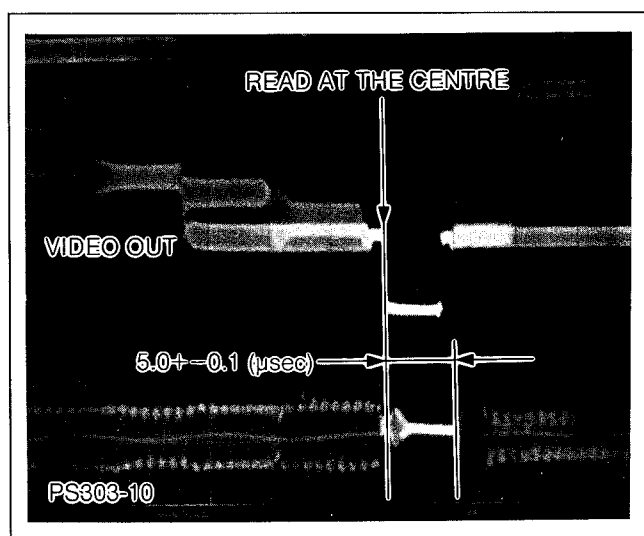


Fig. E22

### 2-5-20. PB SYNC GATE ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT TL806	VR808	SP (SELF RECORDED) PLAYBACK	SECAM COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	5.0+ $\pm$ 0.1 (usec)	

Note: 1. Set the S VHS SW to OFF position. (VHS MODE)  
 2. Set the SYSTEM SELECT SW to SECAM position.  
 3. Set the OUTPUT SYSTEM SELECT SW to SECAM position.

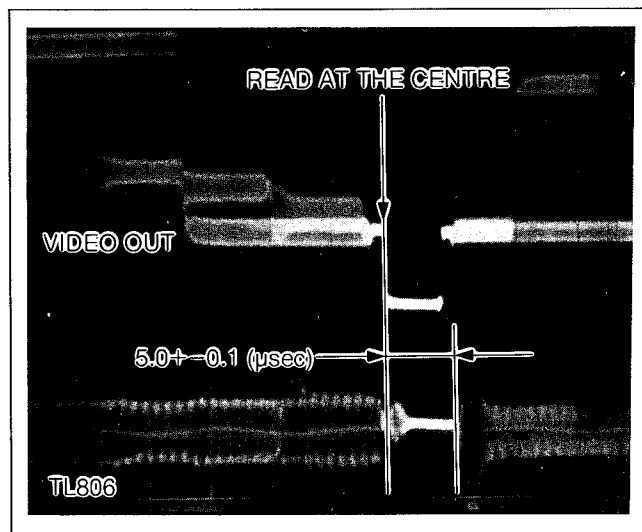


Fig. E23

### 2-5-21. AFC FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL8004	VR8001	STOP	
TAPE	M. EQ.	SPEC.	
	FREQUENCY COUNTER	15625+ $\pm$ 50 (Hz)	

Note: 1. Connect TL8002 to GND.

### 2-5-22. INPUT BELL FILTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL8001	L8005	STOP	SINEWAVE 4.286MHz
TAPE	M. EQ.	SPEC.	
	OSCILLO- SCOPE SINEWAVE GENERATOR	WAVEFORM IS MAXIMIZED AT 4.286+ $\pm$ 0.02 (MHz)	

Note: 1. Before adjusting, set the sinewave generator until the signal level at pin 3 of PS8001 is 150mVp-p.

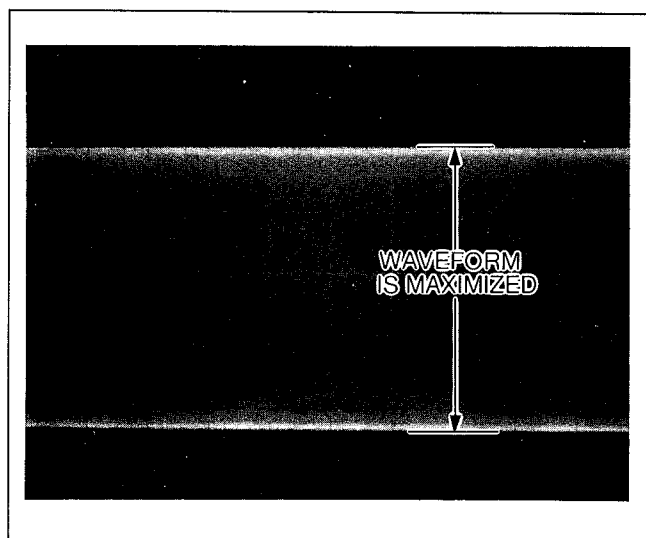


Fig. E24

#### 2-5-23. 4.43MHz REFERENCE OSCILLATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL8006	VC8001	STOP	SECAM COLOUR BAR
TAPE	M. EQ.	SPEC.	
	FREQUENCY COUNTER	4433619+ -50 (Hz)	

- Note: 1. Set the OUTPUT SYSTEM SELECT SW to PAL position.  
 2. Connect the service circuit to TL8006 as shown in Fig. E25.

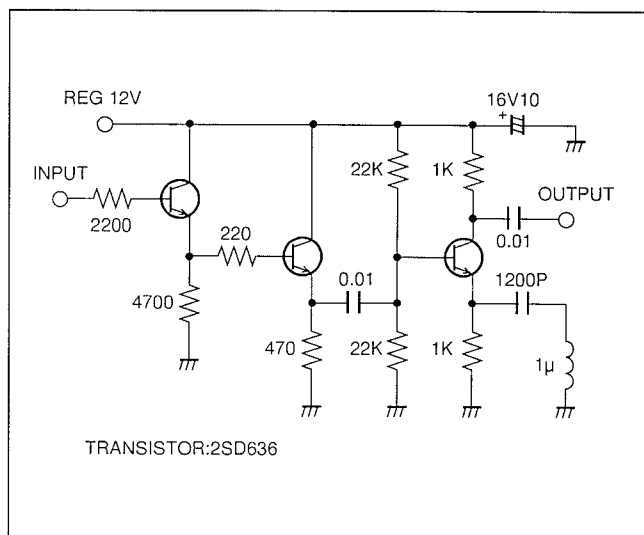


Fig. E25

#### 2-5-24. SECAM DEMODULATOR ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL8005	VR8003 L8007	STOP	SECAM COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLOSCOPE	LESS THAN 20 (mVp-p)	

- Note: 1. Set the OUTPUT SYSTEM SELECT SW to PAL position.

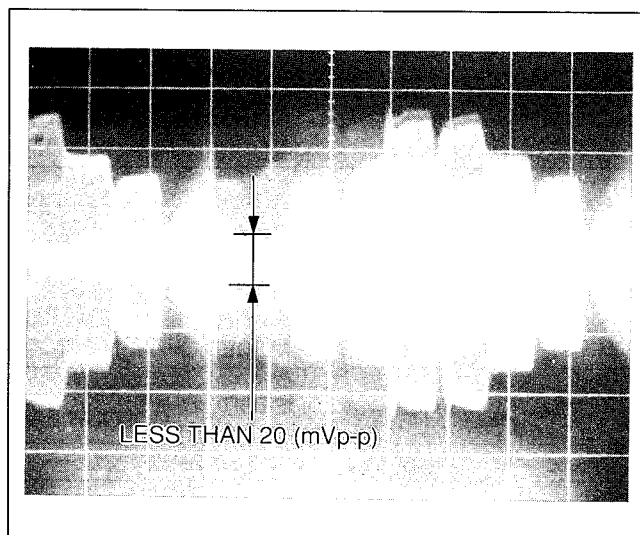


Fig. E26

#### 2-5-25. PAL FLICKER LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL8005	VR8002	STOP	SECAM COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLOSCOPE	LESS THAN 20 (mVp-p)	

- Note: 1. Set the OUTPUT SYSTEM SELECT SW to PAL position.  
 2. Adjust VR8002 so that the flicker level of red portion is less than 20 (mVp-p).

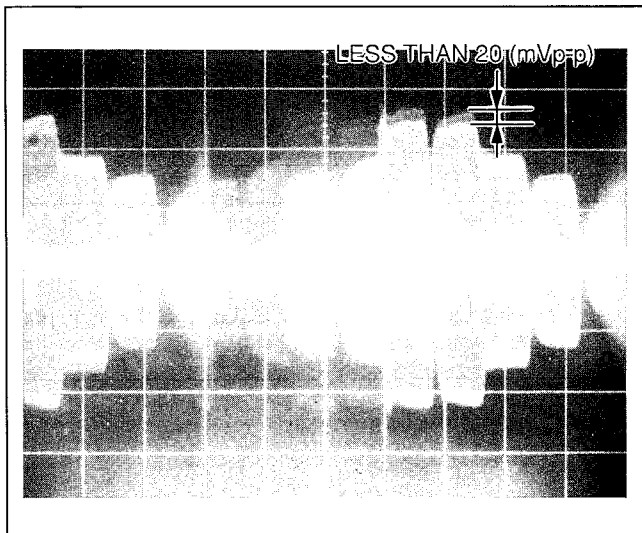


Fig. E27

#### 2-5-26. PAL CHROMINANCE LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL8003	VR8004	STOP	SECAM COLOUR BAR
TAPE	M. EQ.	SPEC.	
OSCILLOSCOPE		330±15 (mVp-p)	

- Note: 1. Set the OUTPUT SYSTEM SELECT SW to PAL position.  
 2. Adjust VR8004 so that the cyan level is 330±15 (mVp-p).

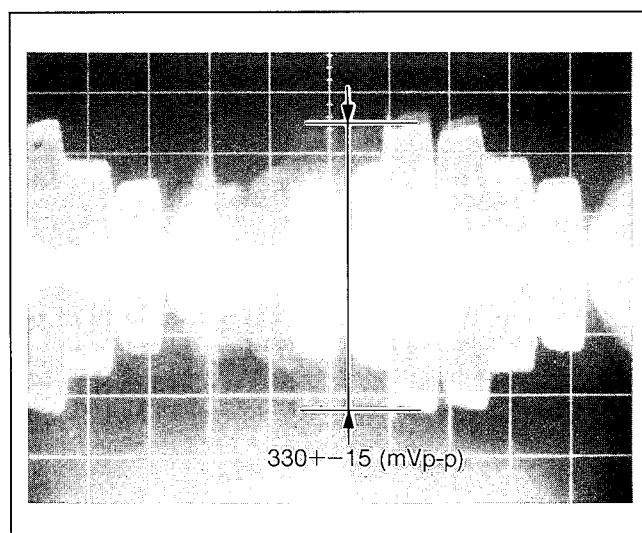


Fig. E28

#### 2-5-27. APC FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL8008	VC8002	STOP	
TAPE	M. EQ.	SPEC.	
	FREQUENCY COUNTER	8867238+-100 (Hz)	

- Note: 1. Connect TL8007 to GND.  
 2. Connect the service circuit to TL8008 as shown in Fig. E29.

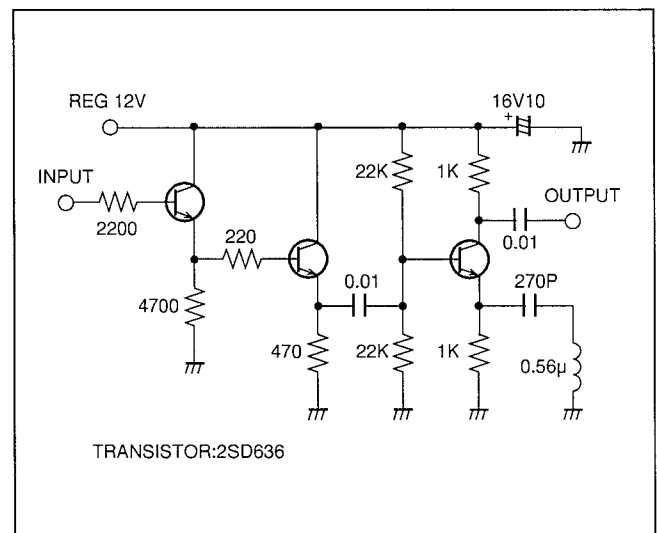


Fig. E29

#### 2-5-28. FLICKER LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL8009	L8010 VR8005	STOP	PAL COLOUR BAR
TAPE	M. EQ.	SPEC.	
OSCILLOSCOPE		L8010 : FLICKER LEVEL IS MINIMIZED VR8005 : 1.05±0.05 (Vp-p)	

- Note: 1. Set the OUTPUT SYSTEM SELECT SW to SECAM position.  
 2. Adjust L8010 so that the flicker level is minimized.  
 3. Adjust VR8005 so that the level is 1.05±0.05 (Vp-p).

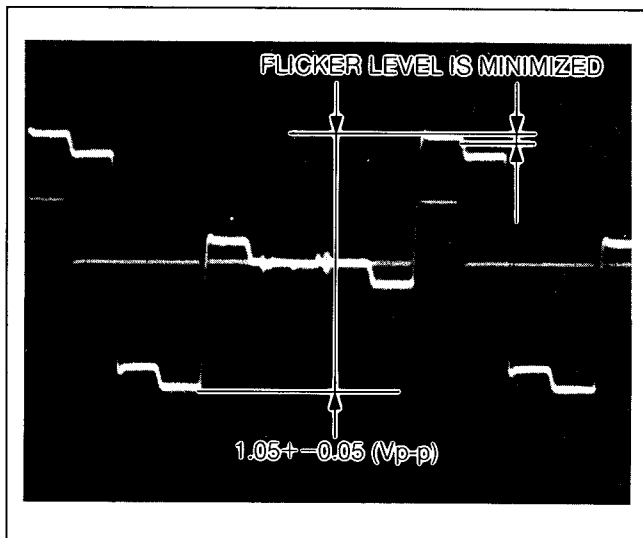


Fig. E30

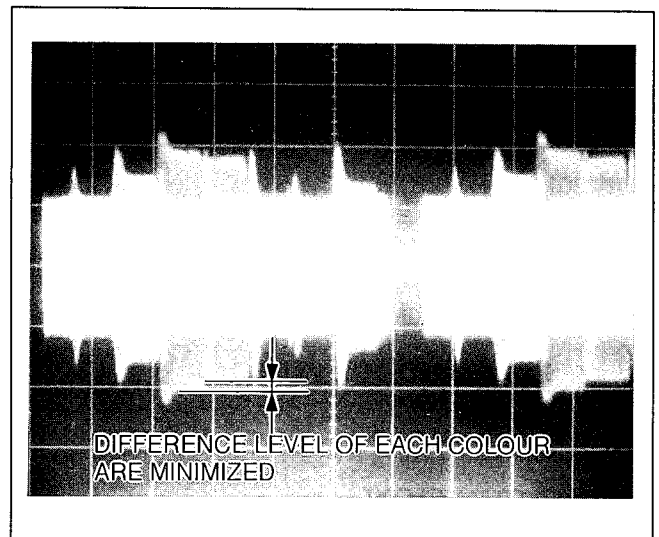


Fig. E32

#### 2-5-29. OUTPUT BELL FILTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL8003	VR8007	STOP	PAL COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLOSCOPE	DIFFERENCE LEVEL OF EACH COLOUR ARE MINIMIZED	

- Note: 1. Set the OUTPUT SYSTEM SELECT SW to SECAM position.
2. Before connecting the service circuit, the service circuit must be adjusted.  
Set the sinewave generator to the input of the service circuit until the signal level at the output of the service circuit, the waveform is maximized by adjusting TRANSFORMER (EIK7QG001B).
3. Connect the service circuit to TL8003 as shown in Fig. E31 in order to observe the more clear waveform.  
(This adjustment can be performed without connecting the service circuit.)

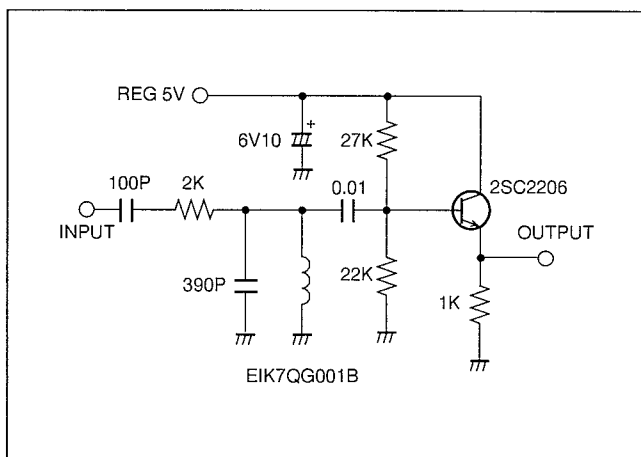


Fig. E31

#### 2-5-30. SECAM CHROMINANCE LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL8003	VR8006	STOP	PAL COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLOSCOPE	115+-5 (mVp-p)	

- Note: 1. Set the OUTPUT SYSTEM SELECT SW to SECAM position.
2. Adjust VR8006 so that the magenta level is 115+-5 (mVp-p).

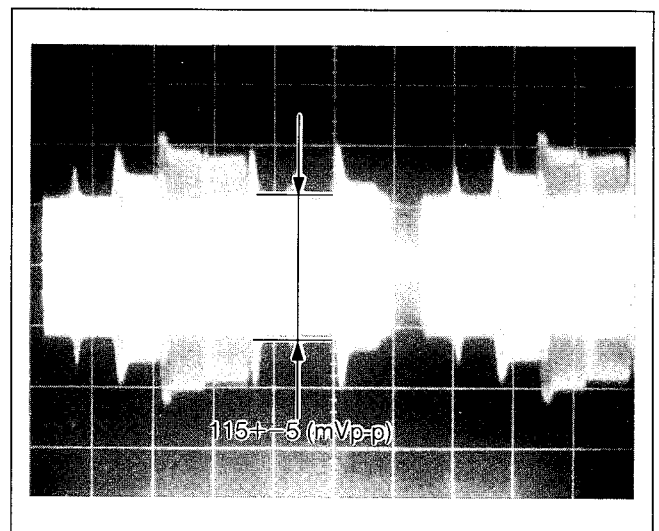


Fig. E33

## POWER SECTION

### 2-5-31. REGULATOR 12V ADJUSTMENT

TP	ADJ.	MODE	INPUT
P1201-2	VR1201	STOP	
TAPE	M. EQ.	SPEC.	
	DIGITAL VOLT METER	11.5V+/-0.1V	

Note: 1. Supply +12.5V DC to P1203-5.

## AUDIO SECTION

### 2-5-32. BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4001	RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	V.T.V.M.	2.5+/-0.1 (mVrms)	

Note: 1. Set the S-VHS SW to OFF position.

### 2-5-33. HIFI E-E LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
AUDIO OUT (L)	VR4512	STOP	SINEWAVE 1 KHz/-6dB (AUDIO IN (L))
TAPE	M. EQ.	SPEC.	
	V.T.V.M./ SINEWAVE GENERATOR	-8+/-0.5 (dB)	

Note: 1. Select the STEREO mode by Remote Controller.  
(Both Left and Right indicators on the FIP are lit.)  
2. Set the HIFI REC VR to FIX position.

### 2-5-34. CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4501-34 (L) IC4501-47 (R)	VR4501 (NTSC-L) VR4509 (NTSC-R) VR4551 (PAL-L) VR4552 (PAL-R)	SP RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	FREQUENCY COUNTER	NTSC-L: 1.3+/-0.003 (MHz) NTSC-R: 1.7+/-0.003 (MHz) PAL-L: 1.4+/-0.003 (MHz) PAL-R: 1.8+/-0.003 (MHz)	

Note: 1. When adjusting the NTSC mode, connect a jumper wire between TW 2 (on the Main C.B.A.) and GND.  
2. When adjusting the PAL mode, disconnect a jumper wire.

### 2-5-35. DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
BETWEEN VR4502 and R4511 (L) BETWEEN VR4507 and R4561 (R)	VR4502 (L) VR4507 (R)	SP RECORDING	SINEWAVE 1 KHz/-6dB (AV1 IN)
TAPE	M. EQ.	SPEC.	
BLANK TAPE	V.T.V.M./ SINEWAVE GENERATOR	110 (mVrms)	

Note: 1. Before recording the sinewave, adjust the HIFI REC VR until the audio output level of AV1 is 400mVrms.

## 2-5-36. FM B.P.F. ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4501-33 (L) IC4501-48 (R)	VR4550	PLAYBACK	SINEWAVE 1.608MHz/ 400mVp-p (PS4003-8)
TAPE	M. EQ.	SPEC.	
NTSC RECORDED TAPE	V.T.V.M./ SINEWAVE GENERATOR	PAL: Lch (IC4501-33)= Rch (IC4501-48) NTSC: 0+–2.0 (dB)	

- Note: 1. Disconnect P501 (from MAIN C.B.A. to HEAD AMP PACK C.B.A.).
2. Connect a jumper wire between PS4003-16 and GND to set the PAL mode.
3. The GND lead of oscilloscope must be connected to GND on HIFI AUDIO PACK C.B.A. to reduce the noise.
4. Supply the sinewave signal (1.608MHz/400mVp-p) to PS4003-8.
5. Adjust the level of the difference between L CH and R CH is equal.
6. Connect a jumper wire between TL47 (on the Main C.B.A.) and GND to set the NTSC mode.
7. Adjust the level of the difference between L CH and R CH is 0+–2.0 dB.
8. After this adjustment, connect P501 and disconnect the jumper wire.

## 2-5-37. LEVEL METER SENSITIVITY ADJUSTMENT

TP	ADJ.	MODE	INPUT
LEVEL METER ON THE FIP	VR4004	STOP	SINEWAVE 1 KHz/–6dB (AUDIO IN (L), (R))
TAPE	M. EQ.	SPEC.	
	V.T.V.M./ SINEWAVE GENERATOR	0dB INDICATOR ON THE AUDIO LEVEL METER JUST LIGHTS UP	

- Note: 1. Select the STEREO mode.  
(Both Left and Right indicators on the FIP are lit.)
2. Before recording the sinewave, adjust the HIFI REC VR until the signal level at Audio Output Terminal is 400mVrms.

## TIMER SECTION

### 2-5-38. TIMER REFERENCE CLOCK ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL7501	VC7501	STOP	
TAPE	M. EQ.	SPEC.	
	UNIVERSAL COUNTER	7812.5+–0.015 (μsec)	