

# HITACHI

# SERVICE MANUAL



MODEL VC-5430  
DIGITAL OSCILLOSCOPE  
SERVICE MANUAL

Hitachi Denshi, Ltd.

## SERVICING PRECAUTIONS

Read all instructions in the service manual and safety markings on the product thoroughly before servicing.

The apparatus shall be disconnected from the external power AC adaptor specified for this apparatus and be switched off, before it is opened for any adjustment. The apparatus shall be disconnected the P8021 from internal battery pack and the P8001 from PEG-011 printed circuit board, before it is replaced, maintained and repaired.

Any adjustment, maintenance and repair of the opened apparatus under voltage shall be avoided as far as possible and, if inevitable, shall be carried out only by our authorized service person who is aware of the hazard involved.

WARNING-THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT PERFORM ANY SERVICING OTHER THAN CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO."

## NOTICE

This service manual describes the most typical product of this model. If there are any specific differences between this Manual and the servicing unit, please contact Hitachi Denshi sales office in your area.

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# 1. SPECIFICATIONS

## Vertical axis

Resolution	8 bits
Sensitivity	1mV/div to 5V/div, 12 steps
Accuracy	± 3% (± 5% for 1mV/div and 2mV/div)
Variable	Continuous between ranges
Bandwidth (-3dB)	DC to 50MHz
Low frequency limit in AC coupling	10Hz
Input channels	CH1, CH2, EXT
Max safe input voltage	42V pk (DC + AC peak at 1 KHz + floating voltage)
Input coupling	DC, AC, GND
Input impedance	1MΩ 1.5%/23pF ± 3pF
Operating system	CH1 and CH2 can be turned on or off independently. EXT input waveform can be displayed in DIFF mode.

## Horizontal axis

Max. sampling speed	30MS/s (Simultaneous on 2 channels)
Acquisition memory	2kW/CH
Sweep time	
Equivalent sampling	5ns/div-2μs/div ± 1%
Realtime sampling	5μs/div-1s/div ± 0.04%
Roll mode	0.2s/div-50s/div ± 0.25%
Pre-trigger	Max. 10div
Post-trigger	Max. 400div

## Trigger

Source	CH1, CH2, DIFF, EXT
Mode	AUTO, NORM, TV-V, TV-H
Coupling	DC, AC, HFrej, LFrej
Slope	+ or -
Level	Manual setting or automatic 50% setting

## Sensitivity

Trigger	Frequency	Sensitivity	
		5mV to 5V/div	1mV, 2mV/div
CH1, CH2	DC to 10MHz	0.5div or more	2.5mVp-p or more
DIFF	10MHz to 50MHz	1.5div or more	7.5mVp-p or more
EXT	DC to 50MHz	0.1Vp-p or more	

TV trigger sensitivity	SYNC section: 1div or more, negative
AC cutoff frequency	10Hz approx. (-3dB)
HF/LF cutoff frequency	50kHz approx. (-3dB)
AUTO lower frequency	20Hz approx.

## Trigger function

Divide trigger	No. of divide triggers: 2 to 4096 Trigger frequency: 10MHz or less
----------------	---

## Display function

Display function

Waveforms, measurement condition setting data and calculated results are classified by color for each channel.

Scales, menus, waveforms, etc, are classified by up to 8 colors.

Waveform display

Refresh mode/infinity persistence mode

Waveform clear

Dot display/linear display

Interpolation display (Sin, linear)

X-Y display

Horizontal magnification/movement

Vertical magnification/movement

Others

Ground point display

Trigger level display

Graticule (grids, axes, frames)

No. of displayed data

1500 data/10div

1200 data/10div

## Processing functions

Average mode

Exponential average

Weighting factor: 2 to 256 (2n)

Waveform operations

addition, subtraction, inversion

## Measurement function

Cursor readout

Mode

Item

parameter

Between cursors,  $\Delta V$  with Auto cursor.

$\Delta V$ ,  $\Delta T$ ,  $1/\Delta T$

Any 4 parameters out of the following 17 parameters can be measured simultaneously.

Frequency, Period, Rise time/Fall time, Pulse width (positive, negative), Duty cycle, MIN, MAX, Peak-to-Peak, Base, Top, Amplitude, PRE-shoot, Over-shoot, RMS, Average.

Automatic

measurement

Auto setup

GO-NOGO judgment

Processings after GO-NOGO judgment Buzzer sound, HOLD, save, hard copy, power off, setup recall

Intermittent data collectionfunction

Data can be collected at the specified interval (in units of minute). (Max, 100 waveforms)

## Save function

Waveform save/recall

Waveform memory

Waveform data and measurement conditions can be saved and recalled.

Max. 100 waveforms (2kw/waveform)

Pixel memory

Setup save/recall

The waveforms on one display screen can be saved and recalled.

10 setup data (setup data in SAVE mode can be recalled.)

Resume

The setup data before power off and all the displayed information are retained.

At power on, these data are displayed and used as setup data.

**Timer function**

Timer display  
 Timer function  
 Auto power off

Time and data can be printed on a hard copy.  
 The instrument can be turned on at the specified time.  
 The instrument is turned off when any switch or control is not operated for the specified duration.

**Input/output functions**

Interface  
 Panel control  
 Printer output function  
 Plotter output function

RS-232C(isolated type) (X-ON/X-OFF handshake)  
 Centronix  
 Programmable  
 Remote control from a PC through RS-232C  
 ESC/P, PC-PR201, DPU-201G or HP THINKJET printer  
 Plotter conforming to HP-GL format  
 Available pen colors : five colors  
 Plot size : A6, A5, A4, A3  
 Paper size : A4, A3

**Calibration output**

Frequency  
 Output voltage

1kHz  $\pm$  20%  
 5V  $\pm$  1%

**Display**

Display  
 Resolution  
 Scale  
 Waveform display  
 resolution

4" color TFT LCD (CFL backlight)  
 (160  $\times$  3 colors) dots (H)  $\times$  220 dots(V)  
 10div(H)  $\times$  8div(V)  
 30 dots/div(H)  $\times$  25 dots/div(V)

**Miscellaneous**

Dimensions  
 Weight

184(W)  $\times$  259(D)  $\times$  62(H)mm  
 2kg approx.

**Power supply**

Power supply  
 Power consumption  
 Built-in battery  
 Operation  
 Recharge time

Exclusive AC adaptor, built-in battery or external battery pack(option)  
 Rated external input voltage : 12V  
 Power consumption for external power input : 1A (typ)  
 12W (typ)  
 NiCd battery, automatically rechargeable (voltage drop is automatically detected.)  
 Two hours (typ)  
 16 hours (typ) (at power off)  
 32 hours (typ) (at power on)

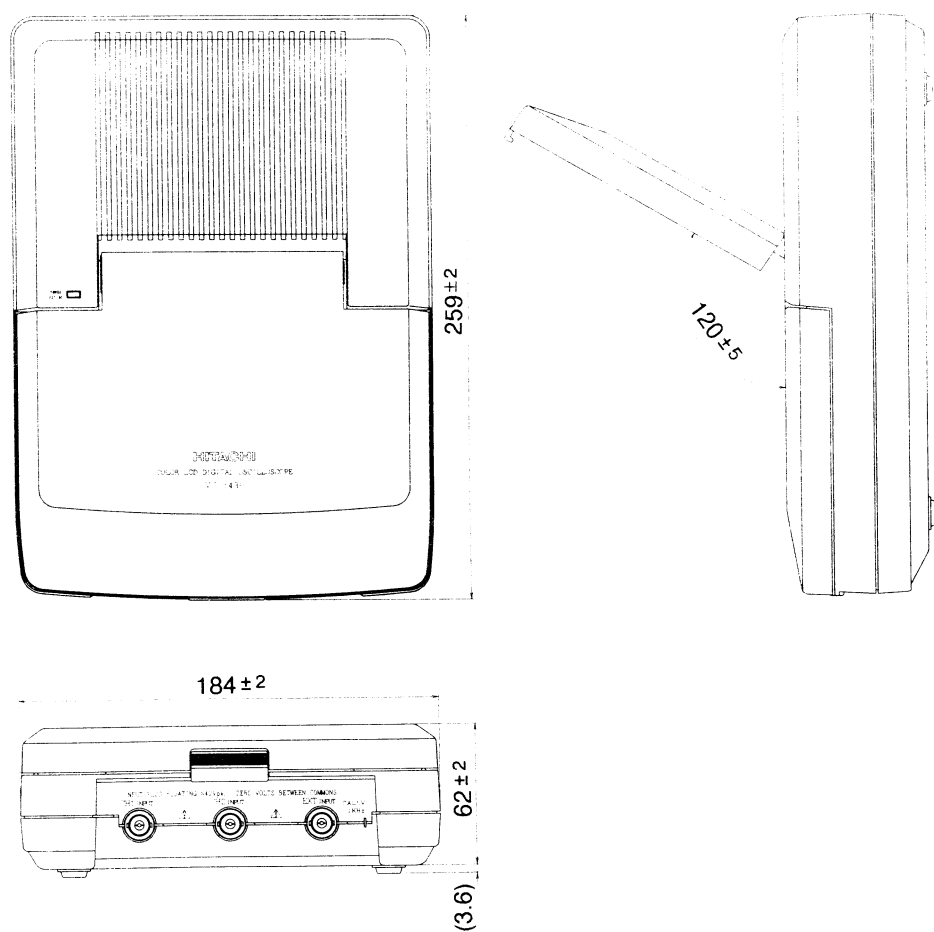
**Ambient conditions**

Specification  
 Operating  
 Storage

10 to 35°C (when automatic calibration is performed within the range of  $25 \pm 5^\circ\text{C}$ )  
 0 to 40°C, 45 to 80%  
 -20 to 60°C, 35 to 85% (70% for 50°C or more)  
 VDE0871 (CLASS B) & Vfg 243/1991

**EMI**

Dimentions



2. CONPOSITION

(1) Oscilloscope	1 unit
(2) Accessories	
Probe, AT-10AK1.5	2 pcs.
Operation manual	1 copy
Operation guide	1 copy
AC-DC conversion adaptor	1 pc.

### **3. PREVENTIVE MAINTENANCE**

Preventive maintenance, when performed on a regular basis, can prevent instrument breakdown and may improve the reliability of the oscilloscope. The severity of environment to which this instrument is subjected will determine the frequency of maintenance. A convenient time to perform preventive maintenance is preceding recalibration of the instrument.

#### **Disassembly**

Remove the top cover (CASE 2 ASSY) and the bottom cover (CASE 1 ASSY) of the instrument. Most of the internal parts of the instrument are now accessible.

#### **Cleaning**

The instrument should be cleaned as often as operating conditions require. Accumulation of dirt in the instrument can cause component breakdown.

The covers provide protection against dust in the interior of the instrument. Loose dust accumulated on these covers can be removed with a soft cloth or small brush.

Dirt that remains can be removed with a soft cloth dampened in a mild detergent and water solution.

Abrasive cleaners should not be used. Cleaning the interior should only be occasionally necessary.

The best way to clean the interior is to blow off the dust with a dry, low-velocity stream of air. A soft-bristle brush or a cotton-tipped applicator is useful for cleaning in narrow spaces or for cleaning more delicate components.

#### **Visual Inspection**

The instrument should be inspected occasionally for such defects as broken connections, improperly seated transistors, damaged circuit boards, and heat-damaged parts. The corrective procedure for most visible defects is apparent; however, particular care must be taken if heat-damaged components are found. Overheating usually indicates other trouble in the instrument; therefore, correcting the cause of the overheating is important to prevent recurrence of the damage.

## **4. CALIBRATION**

Hitachi Denshi provides complete instrument repair and calibration. Contact your local Hitachi Denshi office or representative.

### **4.1 Calibration Interval**

To maintain instrument accuracy, perform the calibration of this instrument at least every 1000 hours of operation or every six months if used infrequently.

### **4.2 Test equipment required**

The test equipment and accessories listed in Table 4-1 or equivalent are required to perform the calibration of this instrument. The minimum specifications required for accurate calibration are also listed. All the test equipment is assumed to be correctly calibrated and operate properly within the listed specifications. It is recommended to use the test equipment which exceeds the listed specifications. Operating instructions for the test equipment are not given in this procedure. Refer to the instruction manual for the test equipment for more information.

**Table 4-1 TEST EQUIPMENT AND ACCESSORIES REQUIRED**

	<b>Description</b>	<b>Specifications</b>	<b>Applications</b>	<b>Examples of Applicable Test Equipment</b>
<b>1</b>	Constant Amplitude Signal Generator	Reference frequency: 50kHz, Maximum frequency: 150MHz, Amplitude: variable	Check horizontal, vertical and trigger bandwidths.	TEKTRONIX RSG503
<b>2</b>	Standard amplitude Calibrator	Amplitude accuracy: 0.25% Variable amplitude: 5mV to 40V, Frequency: 1kHz square wave	Check horizontal and vertical gains.	TEKTRONIX PG506
<b>3</b>	Square-wave Generator	Variable frequency: 10Hz to 1MHz, Output amplitude: 10mV to 100V	Check probe and vertical compensation.	TEKTRONIX PG506
<b>4</b>	Digital Multimeter	Accuracy: 0.1%	Check power supply.	TEKTRONIX DM501A
<b>5</b>	Digital Frequency Counter	Accuracy: 0.1%	Check CAL frequency.	
<b>6</b>	Time Mark Generator	Accuracy: 0.1%	Check sweep time.	TEKTRONIX TG501
<b>7</b>	Cable	Impedance: 50 ohms, Type: RG-58/U, Length: 42 inches, Connectors: BNC	This cable is used for almost all adjustment.	Hitachi Part No. 4202
<b>8</b>	Termination	Impedance: 50 ohms, Connectors: BNC Feed through	Check vertical amplifier compensation.	
<b>9</b>	Attenuator	Ratio: 10x, Connectors: BNC, Impedance: 50 ohms	Check vertical amplifier bandwidth.	
<b>10</b>	T-Connector	Connectors: BNC	Check X-Y operation.	Hitachi Part No. 1301



### **4.3 Items of adjustment**

The adjustment of the instrument is classified into the unit adjustment of a PC board and the overall adjustment of the instrument.

(1) Unit adjustment of PC board

Perform the +5V supply adjustment, the coarse adjustment of the DC characteristics and the high frequency characteristics of the vertical axis.

(2) Overall adjustment

Adjusted by establishing the auto calibration mode.

### **4.4 Setup procedure for adjustment**

The setup procedure of the instrument for unit adjustment of a PC board is shown below. (See Fig. 4-1)

Perform the overall adjustment after assembling the instrument completely.

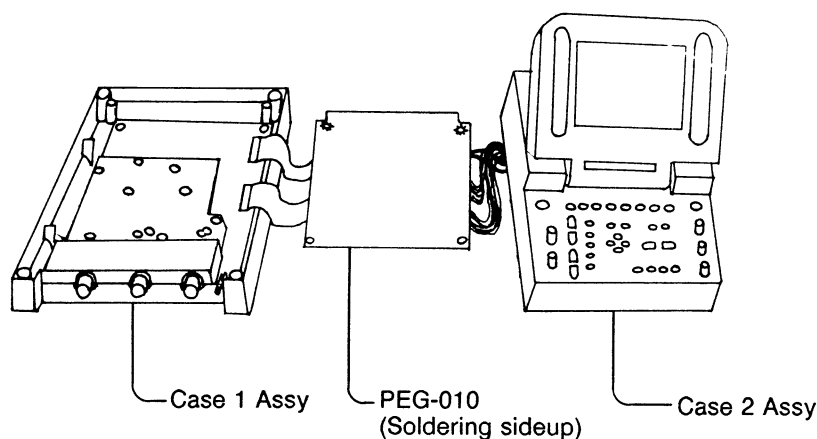
(1) Detach Case 1 Assy from Case 2 Assy.

(2) Remove PEG-010 from Case 1 Assy.

(3) Place PEG-010 with the soldering side up.

(4) Arrange Case 1 Assy, Case 2 Assy and PEG-010 as illustrated below.

**Note:** It is not needed to disconnect the connectors.



**Fig. 4-1 Setup at unit adjustment of PC board**

### **4.5 Unit adjustment of PC board**

#### **1. Preparation for adjustment**

(1) Turn on the power at the setup condition of unit adjustment as show in Fig. 4-1, and allow the warm-up time of more than 5 minutes.

(2) Press the three keys  $\leftarrow$  ,  $\wedge$  , and  $\rightarrow$  simultaneously to open the service menu.

(3) Move the highlighted marker to DEFAULT with the  $\vee$  and  $\wedge$  keys, then press the ENTER key.

All calibration data are set to zero or the default values.(See Fig. 4-2)

- (4) Move the highlighted marker to QUIT with the  $\odot$  and  $\wedge$  keys, then press the ENTER key to return to the operation mode.

The circuit is activated by this operation while the DAC output for internal control is in the default state.

.....P. 1

< SERVICE MENU >

1. KEYBOARD TEST

2. FULLCAL

3. DEFAULT

4. INTERPOLATOR

MIN	= 220	0
-----	-------	---

MAX	= 444	0
-----	-------	---

5. INPUTOFFSET

CH1	= 128	0
-----	-------	---

CH2	= 128	0
-----	-------	---

6. 2nd ATTBAL

CH1	5mV	= 2048	0
-----	-----	--------	---

10mV	= 2048	0
------	--------	---

20mV	= 2048	0
------	--------	---

50mV	= 2048	0
------	--------	---

Fig. 4-2

0.1V	= 2048	0
------	--------	---

0.2V	= 2048	0
------	--------	---

0.5V	= 2048	0
------	--------	---

1V	= 2048	0
----	--------	---

2V	= 2048	0
----	--------	---

5V	= 2048	0
----	--------	---

NEXT

QUIT

.....P. 2

< SERVICE MENU >

CH2	5mV	= 2048	0
-----	-----	--------	---

10mV	= 2048	0
------	--------	---

20mV	= 2048	0
------	--------	---

50mV	= 2048	0
------	--------	---

0.1V	= 2048	0
------	--------	---

0.2V	= 2048	0
------	--------	---

0.5V	= 2048	0
------	--------	---

1V	= 2048	0
----	--------	---

2V	= 2048	0
----	--------	---

5V	= 2048	0
----	--------	---

Fig. 4-2 (Continued)

DIFF CH2	5mV	= 2048	0	
	10mV	= 2048	0	
	20mV	= 2048	0	
	50mV	= 2048	0	
	0.1V	= 2048	0	
	0.2V	= 2048	0	
	0.5V	= 2048	0	
	1V	= 2048	0	
	2V	= 2048	0	
	5V	= 2048	0	
NEXT				QUIT
.....P. 3				
< SERVICE MENU >				
DIFF EXT		= 2048	0	
7. GAIN				
CH1	5mV	= 128	0	
	10mV	= 128	0	
	20mV	= 128	0	
	50mV	= 128	0	
	0.1V	= 128	0	
	0.2V	= 128	0	
	0.5V	= 128	0	
	1V	= 128	0	
	2V	= 128	0	
	5V	= 128	0	
CH2	5mV	= 128	0	
	10mV	= 128	0	
	20mV	= 128	0	
	50mV	= 128	0	
	0.1V	= 128	0	
	0.2V	= 128	0	
	0.5V	= 128	0	
	1V	= 128	0	
NEXT				QUIT
.....P. 4				
< SERVICE MENU >				
	2V	= 128	0	
	5V	= 128	0	

**Fig. 4-2 (Continued)**

DIFF CH1, CH2	5mV	= 128	0
	10mV	= 128	0
	20mV	= 128	0
	50mV	= 128	0
	0.1V	= 128	0
	0.2V	= 128	0
	0.5V	= 128	0
	1V	= 128	0
	2V	= 128	0
	5V	= 128	0
DIFF	EXT	= 128	0
8. TRIG			
CH1	UTL1	= 2253	0
	LTL1	= 1843	0
	ATL1	= 2048	0
CH2	UTL2	= 2253	0
	LTL2	= 1843	0
	ATL1	= 2048	0
NEXT		QUIT	

.....P. 5

< SERVICE MENU >

EXT	UTLE	= 2253	0
	LTLE	= 1843	0
	ATLE	= 2048	0
		= 0	

9. ROM sum data

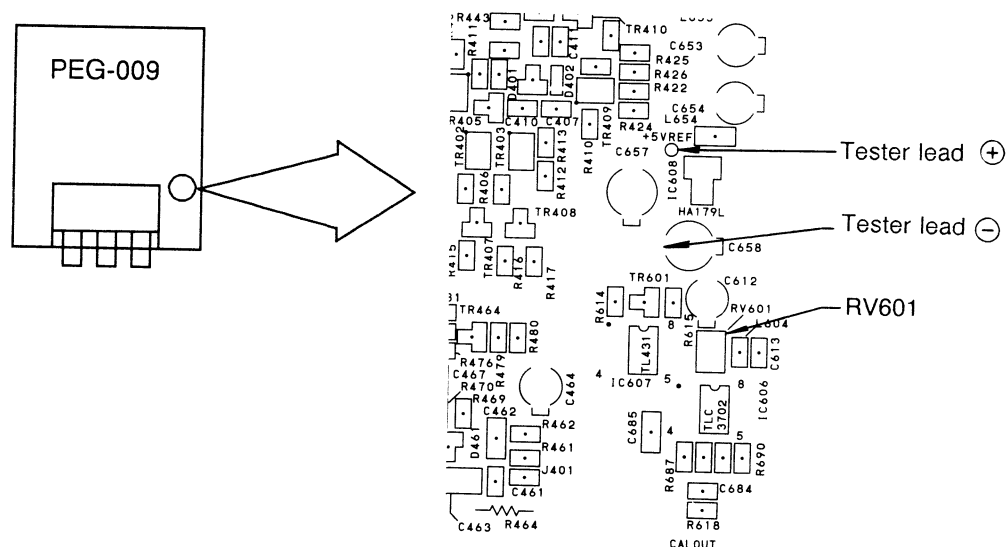
10. LCD TEST PATTERN

	ROM Version X.X
NEXT	QUIT

**Fig. 4-2 (Continued)**

## 2. +5V supply adjustment

Measure the DC voltage between +5V REF and GND (+ terminal side of C658) by a digital voltmeter (5 digits or more), and adjust RV601 for 4.999 to 5.001V.



### 3. DC GAIN ② RV1 ③ RV201

(1) Set as follows:

VOLTS DIV: 5mV/div (1:1)

TIME/DIV: 2ms /div

COUPLING: DC

POSITION: + 3div

Select the input CH signal as a trigger source and then synchronize them.

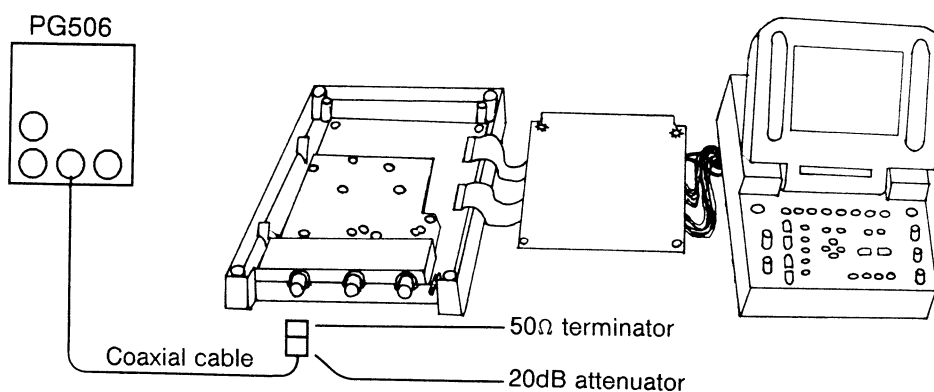
**(2) Set the PG506 as follows:**

MODE: FAST RISE

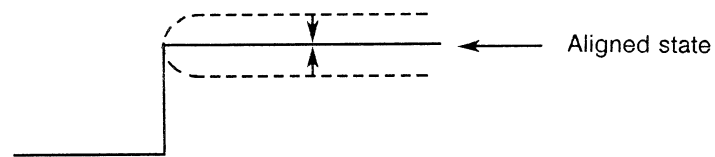
PERIOD: 100Hz

**AMPLITUDE:** Equivalent to 6 div on the screen of the instrument.

**(3) Connect the PG506 and the instrument as illustrated below.**



- (4) Adjust RV1(CH1), RV201(CH2) so that the square wave characteristics are flat. A typical waveform at this point is shown below.



#### 4. ATT Comp ④ CV1 ⑤ CV201

- (1) Set the instrument as follows.

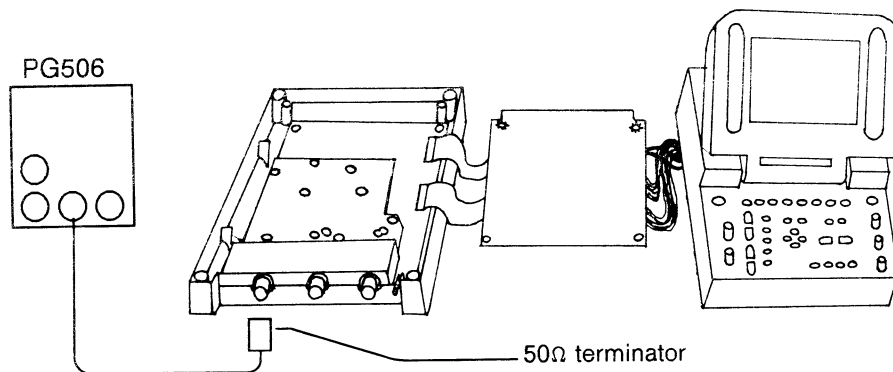
VOLTS/DIV: 200mV/div  
 TIME/DIV: 0.1ms/div  
 COUPLING: DC  
 POSITION: +3div

Select the input CH signal as a trigger source and then synchronize them.

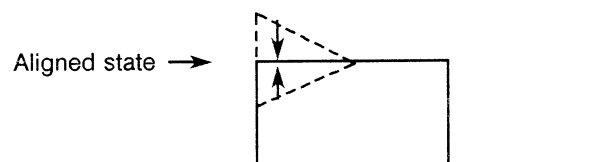
- (2) Set the PG506 as follows.

MODE: HIGH AMPL  
 PERIOD: 1kHz  
 AMPLITUDE: Equivalent to 6 div on the screen of the instrument.

- (3) Connect the PG506 and the instrument as illustrated below.



- (4) Adjust CV1(CH1), CV201(CH2) so that the square wave characteristics are flat. A typical waveform at this point is shown below.



## 5. HF COMP ⑥ CV2 ⑦ CV202

(1) Set as follows:

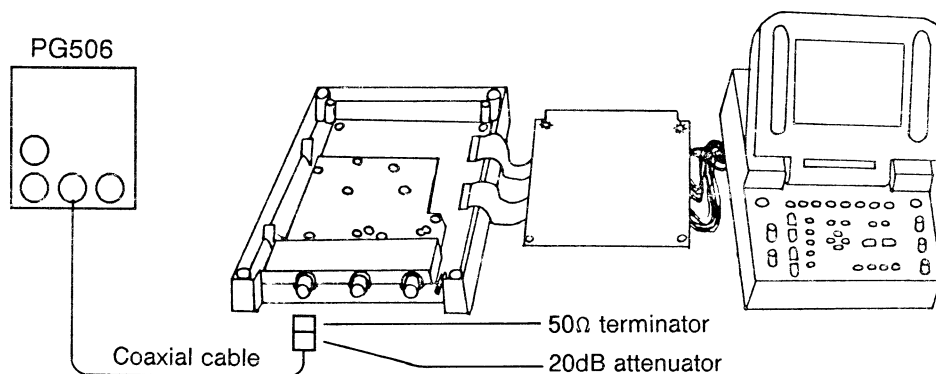
VOLTS/DIV: 5mV/div  
TIME/DIV: 10ns/div  
COUPLING: DC  
POSITION: +3div

Select the input CH signal as a trigger source and then synchronize them.

(2) Set the PG506 as follows.

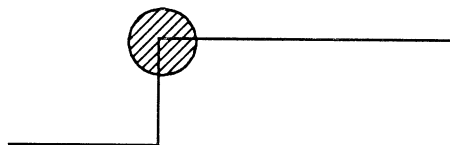
MODE: FAST RiZE ( $t_r \leq 1\text{ns}$ )  
PERIOD: 1MHz  
AMPLITUDE: Equivalent to 6 div on the screen of the instrument.

(3) Connect the PG506 and the instrument as illustrated bellow.



(4) Adjust CV2 (CH1) and CV202 (CH2) so that the using portion of a square wave becomes flat and that the rise time becomes sharpest.

A typical waveform at this point is shown below.



## 4.6 Overall adjustment

### 1. Execution of FULL CALL

Set CALIBRATE in the page menu to FULL, and set CAL to START. (Or, open the service menu, and then move the highlighted marker to FULL CAL and press the ENTER key).

<Note> If calibration fails after performing FULL CALL several times, shoot the trouble, referring to the description on service menu in item 4.7.

### 2. Timer setting

Set data and time in the page menu. Move the highlighted marker to the desired position with the menu select key, and then set CLOCK DATE: and CLOCK TIME: with the VARIABLES

control.

Example:

CLOCK DATE:    JAN   -   12   -   94  
                              Month        Day        Year  
CLOCK TIME:    09   :   07  
                              Hour        Minute

### 3. DEFAULT setting

Set DEFAULT: in the page menu to ON. Then the panel setting conditions set at factory are obtained.

## 4.7 Operation description of automatic calibration

### 1. General

The instrument is provided with the following automatic calibration functions to ensure correct hardware operation.

- (1) INTERPOLATOR    . . . . . Deviation of equivalent sample waveform.
- (2) INPUT OFFSET    . . . . . Deviation of trace at offset zero.
- (3) 2nd ATT BAL    . . . . . Deviation of trace caused when attenuators are switched.
- (4) GAIN    . . . . . Deviation of sensitivity of vertical axis.
- (5) TRIG    . . . . . Deviation of trigger point.

### 2. Execution of automatic calibration use menu

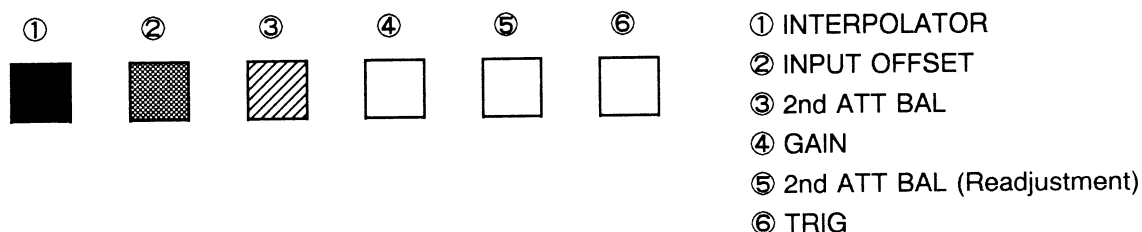
When CAL EXEC on menu page 6 is set to START after CALIBRATE:FULL has been selected, FULL CALIBRATION is executed.

**Caution:** In this case, place each input to the released mode so that undesired noise due to electrostatic coupling does not enter from each input.

Description of indicator.

While calibration is executed, graphics "calibrating" is displayed, and 6 indicators corresponding to the 6 items are displayed after the graphics.

Whenever one calibration item is completed, the result is indicated by the corresponding indicator.





Color display: White . . . . . Calibration is not executed  
 Yellow . . . . . Calibration being executed  
 Green . . . . . Calibration ends satisfactorily (OK)  
 Red . . . . . Calibration ends unsatisfactorily (NG)

**Caution:** The power is turned on without performing automatic calibration when the POWER switch is turned on with the MODE key pressed.

In this case, keep pressing the MODE key for approximately 5 seconds after power on.

If any item ends abnormally (red indicator lights) after completion of automatic calibration, the data obtained are all ignored, and the hardware operates based on the previous calibration data.

### 3. Execution of automatic calibration use service menu

How to start-up

Press the three switches  $\odot$ ,  $\wedge$  and  $\oslash$  keys on the panel simultaneously to display the service menu.

Determine the item with the  $\wedge$ ,  $\vee$  keys, then press the ENTER key to execute the selected item.

How to quit service menu

Select QUIT, then press the ENTER key to return to the initial state.

Though each calibration item on the service menu can be executed independently, the parameters other than interpolator are related each other. Therefore, execute "FULLCAL" after each calibration.

#### (1) KEY BOARD TEST

The display corresponding to the selected switch or control is highlighted. The normal operation is thus confirmed. When all the displays are highlighted, this mode ends.

#### (2) FULL CAL

With the FULL CAL menu, all the calibration items are performed in the order of

3. DEFAULT→4. INTERPOLATOR→5. INPUT OFFSET→  
 6. 2nd ATT BAL→7. GAIN→8. TRIG.

By executing FULL CAL and press the  $\vee$  key values and the judgment results displayed on the right side of the above items Nos. 4 to 8 are updated.

#### (3) DEFAULT

With this function, V POSITION, TRIG LEVEL, etc. are set to the default values.

By executing this items, fixed values are displayed for items 4 and 8.

#### (4) INTERPOLATOR

This function corrects errors caused by temperature drift, etc., in the interpolator circuit section.

	Default value
MIN	220
MAX	444

### (5) INPUT OFFSET

The offset voltage of the input operational amplifier (IC11a, 211a) is cancelled.

If this value deviates, a trace deviates when the input coupling mode (AC-DC-GND) is changed.

When this item is faulty, set the default value once, and finish the service menu.

Then, switch the input coupling mode at 5mV/div range.

If a trace is moved on the screen, calibration can be done.

If a trace is out of the screen, the hardware around the operational amplifier may be faulty.

**Caution:** If this item is not normal, the calibration values of the succeeding items becomes abnormal.

In this case, take the measures against this item.

	Default value	Value range	Analog output voltage
CH1	128	0~255	0~5V(IC604-11 pin)
CH2	128	0~255	0~5V(IC604-12 pin)

### (6) 2nd ATT BAL

This function is used to obtain the correction value of V POSITION allowing the quantity of trace movement to be zero when ATT is switched.

	Default value	Value range	Analog output voltage
CH1	2048	0~4097	-2.5~2.5V(IC605-14 pin)
CH2	2048	0~4097	-2.5~2.5V(IC605-1 pin)
EXT	2048	0~4097	-2.5~2.5V(IC605-2 pin)

### (7) GAIN

This function is used to obtain the correction value of AD GAIN allowing the error of GAIN to be zero.

This calibration is executed at each range and the result is displayed.

	Default value	Value range	Analog output voltage
CH1, DIFF	128	0~255	0~5V(IC604-9 pin)
CH1, EXT	128	0~255	0~5V(IC604-5 pin)

### (8) TRIG

This function corrects the GAIN and OFFSET amount of TRIG LEVEL.

- ULT . . . . . Setting value to the D/A converter for the trigger level where a trigger is applied to the +2 div input voltage.
- LTL . . . . . Setting value to the D/A converter for the trigger level where a trigger is applied to the -2 div input voltage.
- ALT . . . . . Setting value of trigger level for offset correction in the AC trigger coupling mode.

### Calculation

Obtain the gain per 1 div by  $(UTL-LTL)/4$  (div), and determine the value of  $(UTL + LTL)/2$  as a trigger offset value.

However, use ALT as a offset value in the AC trigger coupling mode.

		Default value	Value range	Analog output voltage
CH1	UTL	2253	0~4097	(IC605-8 pin) -2.5~2.5V
CH2	LTL	1843		
EXT	ALT	2048		

### (9) ROM Sum Data

This function performs the sum check of each ROM.

### (10) LCD TEST PATTERN

The test pattern for checking the quality of the LCD is displayed.

Pressing the ENTER key establishes this mode, and a second pressing the ENTER key releases this mode.

In this mode, eight kinds of colors can be selected by the  $\wedge$  and  $\vee$  keys. The status of the LCD can be checked for dropping of dots.

## 4. Service menu display

For display, see Fig. 4-2 in item 4.5. This menu consists of 5 pages.


The items normally calibrated are indicated by the marking  $\bigcirc$ , while the items not calibrated are indicated by the marking X. (The values in Fig. 4-2 indicate the default values.)


## 5. Signals related to faulty automatic calibrations

Related signal lines and control signal lines for each item are indicated on the schematic diagram.

- (1) When INTERPOLATION is FAIL
- (2) When INPUT OFFSET is FAIL
- (3) When 2nd ATT BAL is FAIL
- (4) When GAIN is FAIL
- (5) When TRIG is FAIL

The related signals are shown on the schematic diagram as follows.

 Bold line : Signal line

 Dotted line : Control signal line

## **4.8 Replacement of battery**

### **1. Replacement of battery**

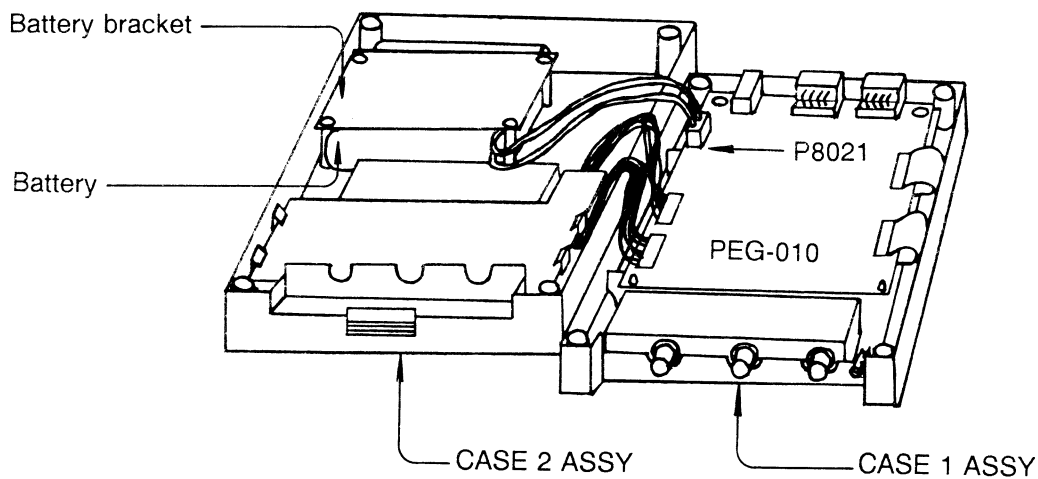
In case the operation time of a built-in battery which is charged for approximately 16' hours (with power off) by the supplied AC adaptor is less than one hour, the service life of the battery may be completed. In this case, replace with a new battery.

### **2. How to replace battery**

(Note) When a battery is replaced with a new one within 5 minutes after the old battery has been removed, the waveform data and panel setting data stored in the internal memory is not lost. It is recommended to replace with a new battery within 5 minutes.

#### **Replacement procedure**

- (1) Detach CASE 1 ASSY from CASE 2 ASSY and place them as illustrated in Fig. 4-3.
- (2) Remove the battery bracket.
- (3) Disconnect the cable assembly from P8021 of PEG-010.
- (4) Install a new battery, and reverse the order of procedure from (3) to (1).


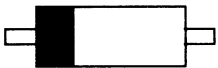
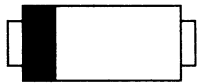
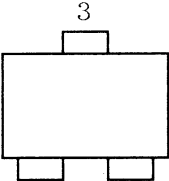
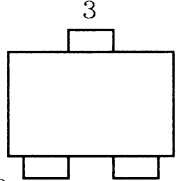
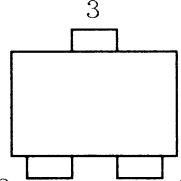
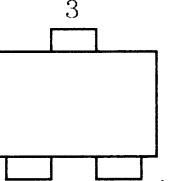
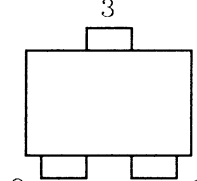


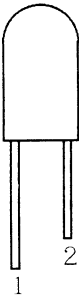
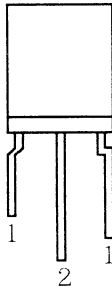
**Fig. 4-3**



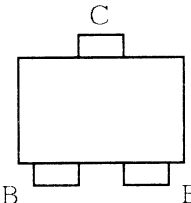
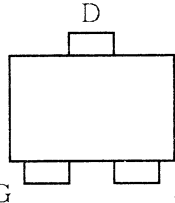
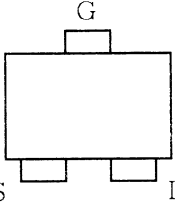
6. ELECTRICAL PARTS LEAD CONFIGURATIONS

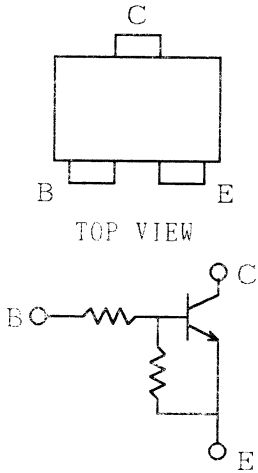
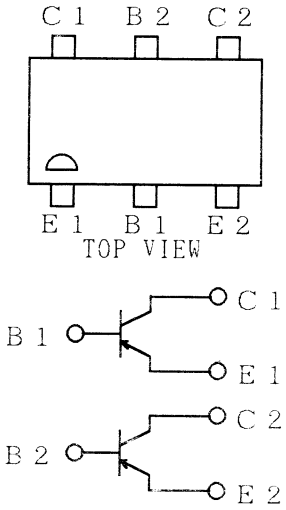
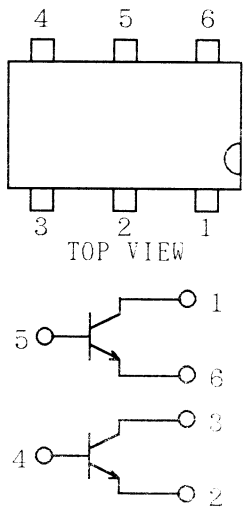
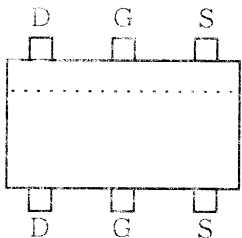
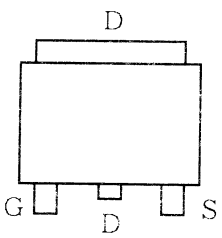
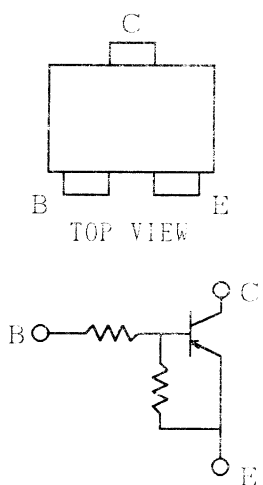
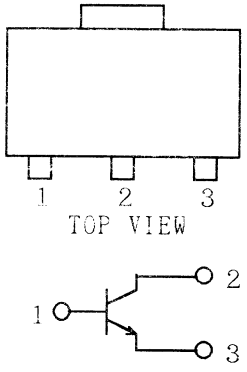
Diode

 <p>CATHODE BAND</p> <p>S 5 5 6 6 B</p>	 <p>TOP VIEW</p> <p>CATHODE BAND</p> <p>H S U 2 7 7</p>	 <p>TOP VIEW</p> <p>CATHODE BAND</p> <p>H R F 3 2</p> <p>H R F 2 2</p>
 <p>TOP VIEW</p> <p>1 ANODE 1</p> <p>2 ANODE 1</p> <p>3 CATHODE 1</p> <p>H Z M 7 B</p>	 <p>TOP VIEW</p> <p>1 CATHODE 1</p> <p>2 ANODE 2</p> <p>3 ANODE 1</p> <p>CATHODE 2</p> <p>H S M 8 8 A S</p> <p>H S M 1 0 7 S</p> <p>1 S S 1 2 3</p>	 <p>TOP VIEW</p> <p>1 NC</p> <p>2 ANODE 1</p> <p>3 CATHODE 1</p> <p>H S M 8 3</p> <p>H S M 2 6 9 2</p> <p>H Z M 6 . 2 N B 2</p>
 <p>TOP VIEW</p> <p>1 ANODE 1</p> <p>2 ANODE 2</p> <p>3 CATHODE 1</p> <p>CATHODE 2</p> <p>D C B 0 1 0</p> <p>H S M 8 8 W K</p>		 <p>TOP VIEW</p> <p>1 CATHODE 1</p> <p>2 CATHODE 2</p> <p>3 ANODE 1</p> <p>ANODE 2</p> <p>D C A 0 1 0</p> <p>H S M 8 8 W A</p>

 <p>1 ANODE 2 CATHODE</p> <p>LN 2 8 R P P N</p>		 <p>1 ANODE 2 CATHODE</p> <p>LN 1 1 7 W P 2 3</p>
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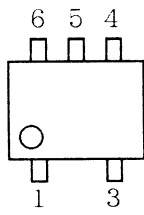
Transistor

 <p>TOP VIEW</p> <p>2 S A 1 4 6 2 2 S C 1 6 2 1 B 4 2 S C 2 4 6 2 C 2 S C 2 7 5 9 2 S C 3 7 7 2 L Y 4 2 S C 4 6 8 0</p>	 <p>TOP VIEW</p> <p>2 S K 1 8 2 8</p>	 <p>TOP VIEW</p> <p>2 S K 4 3 6 A 2 0</p>
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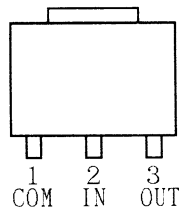
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 <p>TOP VIEW</p> <p>2SK332E(DP6B)</p>	 <p>TOP VIEW</p> <p>2SJ246S 2SJ296S</p>	 <p>TOP VIEW</p> <p>DTA124EK</p>
 <p>TOP VIEW</p> <p>2SC2873Y</p>		



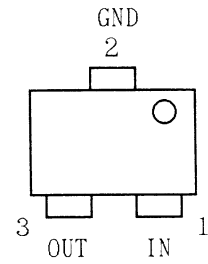
IC



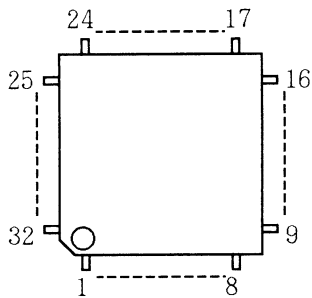
TOP VIEW  
TLP 115A



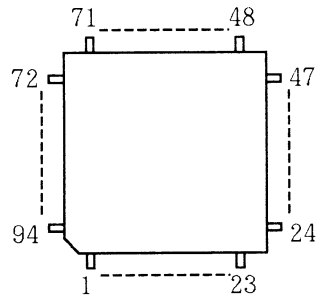
TOP VIEW  
HA 179L05U  
NJU 7201U50



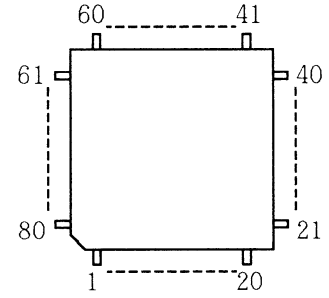
TOP VIEW  
PST 520CMT



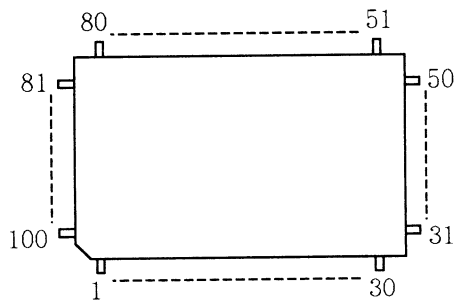
TOP VIEW  
CXD 1179Q



TOP VIEW  
 $\mu$ PD 70325-GJ-8



TOP VIEW  
HG 62G010R08FBN



TOP VIEW  
HG 62E22S47FS

# 7. ELECTRICAL PARTS LIST

## PEG-009 CH1 ATT & AMP

SYMBOL	PART CODE	DESCRIPTION	QTY
C 2	CCV0003	C.CERAMIC 630 V47000 PF+-10%	1
C 3	CCG0278	C.CERAMIC 50 V 220 PF+-5%	1
C 4	CCG0279	C.CERAMIC 50 V 270 PF+-5%	1
C 5	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 7	CCG0255	C.CERAMIC 500 V 330 PF+-10%	1
C 8	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 9	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 10	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 11	CCG0282	C.CERAMIC 50 V 1000 PF+-10%	1
C 12	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 13	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 14	CCG9292	C.CERAMIC 50 V10000 PF+-10%	1
C 15	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 20	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 21	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 22	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 25	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 26	CCG9295	C.CERAMIC 50 V10000 PF+-10%	1
C 27	CCG0259	C.CERAMIC 50 V 15 PF+-5%	1
C 28	CCG9292	C.CERAMIC 50 V10000 PF+-10%	1
C 29	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 30	CCG0284	C.CERAMIC 50 V 680 PF+-5%	1
C 31	CCG0284	C.CERAMIC 50 V 680 PF+-5%	1
C 32	CCG0261	C.CERAMIC 50 V 18 PF+-5%	1
C 33	CCG9295	C.CERAMIC 50 V10000 PF+-10%	1
C 34	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 35	CCG0284	C.CERAMIC 50 V 680 PF+-5%	1
C 36	CCG0284	C.CERAMIC 50 V 680 PF+-5%	1
C 40	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 41	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 42	CCG0261	C.CERAMIC 50 V 18 PF+-5%	1
C 43	CCG0247	C.CERAMIC 50 V 2 PF+-0.25PF	1
C 44	CCG0284	C.CERAMIC 50 V 680 PF+-5%	1
C 45	CCG0284	C.CERAMIC 50 V 680 PF+-5%	1
C 48	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 49	CCG0274	C.CERAMIC 50 V 100 PF+-5%	1
C 50	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 51	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 52	CEU0022	C.AL ELVC 16 V 10 UF+-20%	1
C 53	CEU0022	C.AL ELVC 16 V 10 UF+-20%	1
C 55	CCE0121	C.CERAMIC 16 V 1 UF+80%-20%	1
C 56	CCE0121	C.CERAMIC 16 V 1 UF+80%-20%	1
C 57	CCG9292	C.CERAMIC 50 V10000 PF+-10%	1
C 58	CEU0022	C.AL ELVC 16 V 10 UF+-20%	1

SYMBOL	PART CODE	DESCRIPTION	QTY
R 8	RME1447	R.METAL 1/10W 18 OHM +-5%	1
R 9	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 10	RMS0044	R.METAL 1/4W 990 KOHM +-0.5%	1
R 11	RME1464	R.METAL 1/10W 220 KOHM +-5%	1
R 12	RME1422	R.METAL 1/10W 47 OHM +-5%	1
R 13	RME1597	R.METAL 1/8W 5.6 KOHM +-5%	1
R 14	RME1428	R.METAL 1/10W 150 OHM +-5%	1
R 15	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 16	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 17	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 18	RME1413	R.METAL 1/10W 0 OHM	1
R 19	RMR4814	R.METAL 0.1W 2 KOHM +-0.25%	1
R 20	RMR4274	R.METAL 1/10W 1 KOHM +-0.25%	1
R 21	RMR4813	R.METAL 0.1W 1.2 KOHM +-0.25%	1
R 22	RMR4815	R.METAL 0.1W 200 OHM +-0.25%	1
R 23	RMR4208	R.METAL 1/10W 100 OHM +-0.25%	1
R 24	RMR4208	R.METAL 1/10W 100 OHM +-0.25%	1
R 25	RMR4178	R.METAL 1/16W 1 MOHM +-0.5%	1
R 26	RMR4178	R.METAL 1/16W 1 MOHM +-0.5%	1
R 33	RMR4813	R.METAL 0.1W 1.2 KOHM +-0.25%	1
R 34	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 35	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 36	RME1439	R.METAL 1/10W 1.2 KOHM +-5%	1
R 37	RME1414	R.METAL 1/10W 10 OHM +-5%	1
R 38	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 39	RMR4166	R.METAL 1/16W 4.7 KOHM +-0.5%	1
R 41	RMR4166	R.METAL 1/16W 4.7 KOHM +-0.5%	1
R 42	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 43	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 44	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 45	RME1423	R.METAL 1/10W 56 OHM +-5%	1
R 46	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 47	RME1423	R.METAL 1/10W 56 OHM +-5%	1
R 48	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 49	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 50	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 51	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 52	RMR4163	R.METAL 1/16W 1.8 KOHM +-0.5%	1
R 53	RMR4220	R.METAL 1/10W 200 OHM +-0.5%	1
R 54	RMR4220	R.METAL 1/10W 200 OHM +-0.5%	1
R 55	RMR4163	R.METAL 1/16W 1.8 KOHM +-0.5%	1
R 56	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 57	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 58	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 59	RME1421	R.METAL 1/10W 39 OHM +-5%	1
R 60	RMR4816	R.METAL 0.1W 91 OHM +-0.5%	1
R 61	RMR4816	R.METAL 0.1W 91 OHM +-0.5%	1
R 62	RMR4817	R.METAL 0.1W 510 OHM +-0.5%	1
R 63	RME1438	R.METAL 1/10W 1.2 KOHM +-5%	1
R 64	RME1439	R.METAL 1/10W 1.2 KOHM +-5%	1
R 65	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 67	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 68	RME1440	R.METAL 1/10W 1.5 KOHM +-5%	1
R 69	RME1414	R.METAL 1/10W 15 OHM +-5%	1
R 70	RMR4816	R.METAL 0.1W 91 OHM +-0.5%	1

SYMBOL	PART CODE	DESCRIPTION	QTY
C 59	CEU0022	C.AL ELVC 16 V 10 UF+-20%	1
C 60	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 61	CCG0286	C.CERAMIC 50 V 1000 PF+-10%	1
C 62	CCE0121	C.CERAMIC 16 V 1 UF+80%-20%	1
C 63	CCG0249	C.CERAMIC 50 V 4 PF+-0.25PF	1
C 64	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 65	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 66	CCG0250	C.CERAMIC 50 V 5 PF+-0.25PF	1
C 67	CCG0250	C.CERAMIC 50 V 5 PF+-0.25PF	1
C 71	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 72	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 73	CCG0248	C.CERAMIC 50 V 3 PF+-0.25PF	1
CV 1	CVT0052	C.VARIABLE TZBX4N100BA	1
CV 2	CVT0070	C.VARIABLE TZBX4R200BA	1
D 1	HDH0293	DIODE HSM2692	1
D 2	HDH0293	DIODE HSM2692	1
D 3	HDH0293	DIODE HSM2692	1
D 4	HDH0289	DIODE HSM88WK (C4)	1
D 5	HDH0289	DIODE HSM88WK (C4)	1
D 6	HDH0289	DIODE HSM88WK (C4)	1
D 9	HDH0308	DIODE HSM1075	1
D 10	HDH0293	DIODE HSM2692	1
D 11	HDH0266	DIODE.ZEN HZM7B (23)	1
D 12	HDH0266	DIODE.ZEN HZM7B (23)	1
IC 1	IDH1487	IC.LOGIC HD74AC08FP	1
IC 2	IDT0288	IC.LOGIC TC74HC051AF	1
IC 3	IDT0323	IC.LOGIC TC4W53F	1
IC 4	IDT0323	IC.LOGIC TC4W53F	1
IC 6	IDT0323	IC.LOGIC TC4W53F	1
IC 7	IDT0323	IC.LOGIC TC4W53F	1
IC 8	IDT0323	IC.LOGIC TC4W53F	1
IC 9	IDT0323	IC.LOGIC TC4W53F	1
IC 10	IDT0323	IC.LOGIC TC4W53F	1
IC 11	ILT0172	IC.ANALOG TL032CPS	1
IC 12	ILT0171	IC.ANALOG TL021CPS	1
IC 13	ILC0096	IC.ANALOG CLC406AJE	1
IC 14	ILT0067	IC.ANALOG TL062CPS	1
J 1	JHB0088	CON.COAX BNC071	1
K 1	SRM0452	RLY.MINI EB2-4.5S	1
K 2	SRM0452	RLY.MINI EB2-4.5S	1
L 1	EGF0095	FERRITE HF70ACB201209	1
R 1	RME1420	R.METAL 1/10W 33 OHM +-5%	1
R 2	RMR4170	R.METAL 1/16W 68 KOHM +-0.5%	1
R 3	RMS0043	R.METAL 1/4W 900 KOHM +-0.5%	1
R 4	RMR4231	R.METAL 1/10W 20 KOHM +-0.5%	1
R 5	RME1422	R.METAL 1/10W 47 OHM +-5%	1
R 6	RME1433	R.METAL 1/10W 390 OHM +-5%	1
R 7	RME1418	R.METAL 1/10W 22 OHM +-5%	1

SYMBOL	PART CODE	DESCRIPTION	QTY
R 71	RMR4816	R.METAL 0.1W 91 OHM +-0.5%	1
R 72	RMR4817	R.METAL 0.1W 510 OHM +-0.5%	1
R 73	RME1443	R.METAL 1/10W 2.7 KOHM +-5%	1
R 74	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 75	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 76	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 77	RME1436	R.METAL 1/10W 680 OHM +-5%	1
R 78	RME1420	R.METAL 1/10W 33 OHM +-5%	1
R 79	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 80	RME1420	R.METAL 1/10W 33 OHM +-5%	1
R 81	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 82	RME1420	R.METAL 1/10W 33 OHM +-5%	1
R 83	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 84	RMR4218	R.METAL 1/10W 120 OHM +-0.5%	1
R 85	RMR4218	R.METAL 1/10W 120 OHM +-0.5%	1
R 86	RMR4218	R.METAL 1/10W 120 OHM +-0.5%	1
R 87	RMR4218	R.METAL 1/10W 120 OHM +-0.5%	1
R 88	RMR4221	R.METAL 1/10W 240 OHM +-0.5%	1
R 91	RMR4221	R.METAL 1/10W 240 OHM +-0.5%	1
R 94	RME1433	R.METAL 1/10W 390 OHM +-5%	1
R 95	RME1428	R.METAL 1/10W 150 OHM +-5%	1
R 96	RME1428	R.METAL 1/10W 150 OHM +-5%	1
R 97	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 98	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 99	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 100	RME1441	R.METAL 1/10W 1.8 KOHM +-5%	1
R 101	RME1413	R.METAL 1/10W 0 OHM	1
R 105	RME1454	R.METAL 1/10W 22 KOHM +-5%	1
R 106	RMR4245	R.METAL 1/10W 180 OHM +-0.5%	1
R 107	RMR4245	R.METAL 1/10W 180 OHM +-0.5%	1
R 108	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 109	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 110	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 111	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 112	RME1420	R.METAL 1/10W 33 OHM +-5%	1
R 113	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 114	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 115	RME1413	R.METAL 1/10W 0 OHM	1
R 116	RME1441	R.METAL 1/10W 1.8 KOHM +-5%	1
R 117	RME1423	R.METAL 1/10W 56 OHM +-5%	1
R 118	RME1423	R.METAL 1/10W 56 OHM +-5%	1
R 119	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 120	RME1435	R.METAL 1/10W 560 OHM +-5%	1
R 121	RME1435	R.METAL 1/10W 560 OHM +-5%	1
R 122	RMR4142	R.METAL 1/16W 22 KOHM +-0.5%	1
R 123	RMR4142	R.METAL 1/16W 22 KOHM +-0.5%	1
R 124	RME1442	R.METAL 1/10W 2.2 KOHM +-5%	1
R 125	RMR4158	R.METAL 1/16W 330 OHM +-0.5%	1
R 126	RMR4216	R.METAL 1/10W 49.9 OHM +-0.5%	1
R 127	RMR4244	R.METAL 1/10W 21 KOHM +-0.5%	1
R 128	RME1418	R.METAL 1/10W 22 OHM +-5%	1
R 129	RMR4820	R.METAL 0.1W 150 KOHM +-0.5%	1
R 130	RMR4144	R.METAL 1/16W 27 KOHM +-0.5%	1
R 131	RMR4374	R.METAL 0.1W 36 KOHM +-0.5%	1

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SYMBOL	PART CODE	DESCRIPTION	QTY
R 132	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 133	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 134	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 135	RMR4231	R.METAL 1/10W 20 KOHM +-0.5%	1
R 136	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 137	RMR4244	R.METAL 1/10W 1 KOHM +-0.5%	1
R 139	RME1413	R.METAL 1/10W 0 OHM	1
R 140	RME1413	R.METAL 1/10W 0 OHM	1
R 141	RME1413	R.METAL 1/10W 0 OHM	1
R 146	RME1418	R.METAL 1/10W 22 OHM +-5%	1
R 147	RME1418	R.METAL 1/10W 22 OHM +-5%	1
R 148	RMR4271	R.METAL 1/10W 12 KOHM +-0.5%	1
R 149	RMR4137	R.METAL 1/16W 820 OHM +-0.5%	1
R 150	RMR4137	R.METAL 1/16W 820 OHM +-0.5%	1
R 151	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 152	RME1418	R.METAL 1/10W 22 OHM +-5%	1
R 153	RME1430	R.METAL 1/10W 220 OHM +-5%	1
R 154	RME1430	R.METAL 1/10W 220 OHM +-5%	1
R 155	RME1432	R.METAL 1/10W 100 KOHM +-5%	1
R 157	RME1432	R.METAL 1/10W 330 OHM +-5%	1
R 158	RME1431	R.METAL 1/16W 270 OHM +-5%	1
R 161	RMR4170	R.METAL 1/16W 68 KOHM +-0.5%	1
R 162	RME1449	R.METAL 1/10W 8.2 KOHM +-5%	1
R 163	RME1413	R.METAL 1/10W 0 OHM	1
R 164	RME1413	R.METAL 1/10W 0 OHM	1
R 165	RME1413	R.METAL 1/10W 0 OHM	1
R 166	RME1413	R.METAL 1/10W 0 OHM	1
R 167	RME1421	R.METAL 1/10W 39 OHM +-5%	1
R 168	RME1428	R.METAL 1/10W 16.8 KOHM +-5%	1
R 169	RME1435	R.METAL 1/10W 560 OHM +-5%	1
R 170	RME1428	R.METAL 1/10W 150 OHM +-5%	1
R 171	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 172	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 173	RME1420	R.METAL 1/10W 33 OHM +-5%	1
R 174	RME1420	R.METAL 1/10W 33 OHM +-5%	1
R 175	RMR4162	R.METAL 1/16W 1.5 KOHM +-0.5%	1
R 176	RMR4162	R.METAL 1/16W 1.5 KOHM +-0.5%	1
R 177	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 178	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 179	RME1435	R.METAL 1/10W 560 OHM +-5%	1
R 180	RME1435	R.METAL 1/10W 560 OHM +-5%	1
R 184	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 185	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
RV 1	RNE0109	VR.METAL EVM-7JGA00B54 (50K)	1
TR 1	HTK0147	TRANSISTOR 2SK436A20	1
TR 2	HTA0318	TRANSISTOR 2SA1462Y34	1
TR 3	HTC0871	TRANSISTOR 2SC3772LY4	1
TR 4	HTC0974	TRANSISTOR 2SC4680 (XU)	1
TR 5	HTI0011	TRANSISTOR IMX5	1
TR 6	HTI0011	TRANSISTOR IMX5	1
TR 7	HTI0011	TRANSISTOR IMX5	1
TR 8	HTI0011	TRANSISTOR IMX5	1
TR 9	HTI0011	TRANSISTOR IMX5	1
TR 10	HTI0011	TRANSISTOR IMX5	1

SYMBOL	PART CODE	DESCRIPTION	QTY
C 202	CCV0003	C.CERAMIC 630 V47000 PF+-10%	1
C 203	CCG0278	C.CERAMIC 50 V 220 PF+-5%	1
C 204	CCG0279	C.CERAMIC 50 V 270 PF+-5%	1
C 205	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 206	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 207	CCG0614	C.CERAMIC 500 V 330 PF+-10%	1
C 208	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 209	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 210	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 211	CCG0286	C.CERAMIC 50 V 1000 PF+-10%	1
C 212	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 213	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 214	CCG9292	C.CERAMIC 50 V10000 PF+-10%	1
C 215	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 220	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 221	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 222	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 225	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 226	CCG9292	C.CERAMIC 50 V10000 PF+-10%	1
C 227	CCG0259	C.CERAMIC 50 V 15 PF+-5%	1
C 228	CCG9292	C.CERAMIC 50 V10000 PF+-10%	1
C 229	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 230	CCG0284	C.CERAMIC 50 V 680 PF+-5%	1
C 231	CCG0284	C.CERAMIC 50 V 680 PF+-5%	1
C 232	CCG0259	C.CERAMIC 50 V 15 PF+-5%	1
C 233	CCG9292	C.CERAMIC 50 V10000 PF+-10%	1
C 234	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 235	CCG0284	C.CERAMIC 50 V 680 PF+-5%	1
C 236	CCG0284	C.CERAMIC 50 V 680 PF+-5%	1
C 240	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 241	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 242	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 243	CCG0247	C.CERAMIC 50 V 2 PF+-0.25PF	1
C 244	CCG0284	C.CERAMIC 50 V 680 PF+-5%	1
C 245	CCG0284	C.CERAMIC 50 V 680 PF+-5%	1
C 248	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 249	CCG0274	C.CERAMIC 50 V 100 PF+-5%	1
C 250	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 251	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 252	CEU0022	C.AL ELYC 16 V 10 UF+-20%	1
C 253	CEU0022	C.AL ELYC 16 V 10 UF+-20%	1
C 255	CCG0121	C.CERAMIC 16 V 1 UF+80X-20X	1
C 256	CCG0121	C.CERAMIC 16 V 1 UF+80X-20X	1
C 257	CCG9292	C.CERAMIC 50 V10000 PF+-10%	1
C 258	CEU0022	C.AL ELYC 16 V 10 UF+-20%	1

SYMBOL	PART CODE	DESCRIPTION	QTY
TR 11	HTI0011	TRANSISTOR IMX5	1
TR 12	HTI0011	TRANSISTOR IMX5	1
TR 13	HTD0161	TRANSISTOR DTC124EKA	1
TR 14	HTD0161	TRANSISTOR DTC124EKA	1
TR 15	HTA0318	TRANSISTOR 2SA1462Y34	1
TR 16	HTA0318	TRANSISTOR 2SA1462Y34	1
TR 17	HTI0011	TRANSISTOR IMX5	1
TR 18	HTC0974	TRANSISTOR 2SC4680 (XU)	1
TR 19	HTC0974	TRANSISTOR 2SC4680 (XU)	1
TR 20	HTC0871	TRANSISTOR 2SC3772LY4	1
TR 21	HTC0871	TRANSISTOR 2SC3772LY4	1
TR 22	HTA0400	TRANSISTOR FC151	1
TR 23	HTA0318	TRANSISTOR 2SA1462Y34	1
TR 24	HTA0318	TRANSISTOR 2SA1462Y34	1

SYMBOL	PART CODE	DESCRIPTION	QTY
C 259	CEU0022	C.AL ELYC 16 V 10 UF+-20%	1
C 260	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 261	CCG0286	C.CERAMIC 50 V 1000 PF+-10%	1
C 262	CCG0121	C.CERAMIC 16 V 1 UF+80X-20X	1
C 263	CCG0249	C.CERAMIC 50 V 4 PF+-0.25PF	1
C 264	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 265	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 266	CCG0250	C.CERAMIC 50 V 5 PF+-0.25PF	1
C 267	CCG0250	C.CERAMIC 50 V 5 PF+-0.25PF	1
C 268	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 269	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 270	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 271	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 272	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 273	CCG0248	C.CERAMIC 50 V 3 PF+-0.25PF	1
CV 201	CVT0052	C.VARIABLE TZBX4N100BA	1
CV 202	CVT0070	C.VARIABLE TZBX4R200BA	1
D 201	HDH0293	DIODE HSM2692	1
D 202	HDH0293	DIODE HSM2692	1
D 203	HDH0293	DIODE HSM2692	1
D 204	HDH0289	DIODE HSM88WK (C4)	1
D 205	HDH0289	DIODE HSM88WK (C4)	1
D 206	HDH0289	DIODE HSM88WK (C4)	1
D 207	HDD0167	DIODE DCB010	1
D 208	HDD0159	DIODE DCA010	1
D 209	HDH0308	DIODE HSM107S	1
D 210	HDH0293	DIODE HSM2692	1
D 211	HDH0266	DIODE.ZEN HZM7B (23)	1
D 212	HDH0266	DIODE.ZEN HZM7B (23)	1
IC 201	IDH1487	IC.LOGIC HD74AC08FP	1
IC 202	IDT0288	IC.LOGIC TC74HC4051AF	1
IC 203	IDT0323	IC.LOGIC TC4W53F	1
IC 204	IDT0323	IC.LOGIC TC4W53F	1
IC 206	IDT0323	IC.LOGIC TC4W53F	1
IC 207	IDT0323	IC.LOGIC TC4W53F	1
IC 208	IDT0323	IC.LOGIC TC4W53F	1
IC 209	IDT0323	IC.LOGIC TC4W53F	1
IC 210	IDT0323	IC.LOGIC TC4W53F	1
IC 211	ILT0172	IC.ANALOG TL032CPS	1
IC 212	ILT0171	IC.ANALOG TL061CPS	1
IC 213	ILC0096	IC.ANALOG CLC406AJE	1
IC 214	ILT0067	IC.ANALOG TL062CPS	1
J 201	JHB0088	CON.COAX BNC071	1
K 201	SRM0452	RLY.MINI EB2-4.5S	1
K 202	SRM0452	RLY.MINI EB2-4.5S	1
L 201	EGF0095	FERRITE HF70ACB201209	1
R 201	RME1420	R.METAL 1/10W 33 OHM +-5%	1
R 202	RMR4170	R.METAL 1/16W 68 KOHM +-0.5%	1
R 203	RMS0043	R.METAL 1/4W 900 KOHM +-0.5%	1

SYMBOL	PART CODE	DESCRIPTION	Q.TY
R 204	RMR4231	R.METAL 1/10W 20 KOHM +-0.5X	1
R 205	RME1422	R.METAL 1/10W 47 OHM +-5X	1
R 206	RME1433	R.METAL 1/10W 390 OHM +-5X	1
R 207	RME1418	R.METAL 1/10W 22 OHM +-5X	1
R 208	RME1417	R.METAL 1/10W 18 OHM +-5X	1
R 209	RMR4255	R.METAL 1/10W 10 KOHM +-0.5X	1
R 210	RMS0044	R.METAL 1/4W 990 KOHM +-0.5X	1
R 211	RME1464	R.METAL 1/10W 220 KOHM +-5X	1
R 212	RME1422	R.METAL 1/10W 47 OHM +-5X	1
R 213	RME1597	R.METAL 1/8W 10 MOHM +-5X	1
R 214	RME1428	R.METAL 1/10W 150 OHM +-5X	1
R 215	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 216	RME1447	R.METAL 1/10W 5.6 KOHM +-5X	1
R 217	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 218	RME1413	R.METAL 1/10W 0 OHM	1
R 219	RMR4814	R.METAL 0.1W 2 KOHM +-0.25X	1
R 220	RMR4274	R.METAL 1/10W 1 KOHM +-0.25X	1
R 221	RMR4813	R.METAL 0.1W 1.2 KOHM +-0.25X	1
R 222	RMR4815	R.METAL 0.1W 200 OHM +-0.25X	1
R 223	RMR4208	R.METAL 1/10W 100 OHM +-0.25X	1
R 224	RMR4208	R.METAL 1/10W 100 OHM +-0.25X	1
R 225	RMR4178	R.METAL 1/16W 1 MOHM +-0.5X	1
R 226	RMR4178	R.METAL 1/16W 1 MOHM +-0.5X	1
R 233	RMR4813	R.METAL 0.1W 1.2 KOHM +-0.25X	1
R 234	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 235	RME1447	R.METAL 1/10W 5.6 KOHM +-5X	1
R 236	RME1439	R.METAL 1/10W 1.2 KOHM +-5X	1
R 237	RME1413	R.METAL 1/10W 0 OHM	1
R 238	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 239	RMR4166	R.METAL 1/16W 4.7 KOHM +-0.5X	1
R 241	RMR4166	R.METAL 1/16W 4.7 KOHM +-0.5X	1
R 243	RME1447	R.METAL 1/10W 5.6 KOHM +-5X	1
R 244	RME1447	R.METAL 1/10W 5.6 KOHM +-5X	1
R 245	RME1423	R.METAL 1/10W 56 OHM +-5X	1
R 246	RME1447	R.METAL 1/10W 5.6 KOHM +-5X	1
R 247	RME1463	R.METAL 1/10W 56 OHM +-5X	1
R 248	RME1438	R.METAL 1/10W 1 KOHM +-5X	1
R 249	RME1447	R.METAL 1/10W 5.6 KOHM +-5X	1
R 250	RME1438	R.METAL 1/10W 1 KOHM +-5X	1
R 251	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 252	RME1463	R.METAL 1/16W 1.8 KOHM +-0.5X	1
R 253	RMR4220	R.METAL 1/10W 200 OHM +-0.5X	1
R 254	RMR4220	R.METAL 1/10W 200 OHM +-0.5X	1
R 255	RMR4163	R.METAL 1/16W 1.8 KOHM +-0.5X	1
R 256	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 257	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 258	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 259	RME1421	R.METAL 1/10W 39 OHM +-5X	1
R 260	RMR4816	R.METAL 0.1W 91 OHM +-0.5X	1
R 261	RMR4816	R.METAL 0.1W 91 OHM +-0.5X	1
R 262	RMR4817	R.METAL 0.1W 510 OHM +-0.5X	1
R 263	RME1443	R.METAL 1/10W 2.7 KOHM +-5X	1
R 264	RME1439	R.METAL 1/10W 1.2 KOHM +-5X	1
R 265	RME1438	R.METAL 1/10W 1 KOHM +-5X	1
R 267	RME1438	R.METAL 1/10W 1 KOHM +-5X	1

SYMBOL	PART CODE	DESCRIPTION	Q.TY
R 329	RMR4820	R.METAL 0.1W 150 KOHM +-0.5X	1
R 330	RMR4144	R.METAL 1/16W 27 KOHM +-0.5X	1
R 331	RMR4374	R.METAL 0.1W 36 KOHM +-0.5X	1
R 332	RMR4253	R.METAL 1/10W 10 KOHM +-0.5X	1
R 333	RMR4255	R.METAL 1/10W 10 KOHM +-0.5X	1
R 334	RMR4255	R.METAL 1/10W 10 KOHM +-0.5X	1
R 335	RMR4231	R.METAL 1/10W 20 KOHM +-0.5X	1
R 336	RMR4255	R.METAL 1/10W 10 KOHM +-0.5X	1
R 337	RMR4244	R.METAL 1/10W 7 KOHM +-0.5X	1
R 339	RME1413	R.METAL 1/10W 0 OHM	1
R 340	RME1413	R.METAL 1/10W 0 OHM	1
R 341	RME1413	R.METAL 1/10W 0 OHM	1
R 346	RME1418	R.METAL 1/10W 22 OHM +-5X	1
R 347	RME1418	R.METAL 1/10W 22 OHM +-5X	1
R 348	RMR4271	R.METAL 1/10W 12 KOHM +-0.5X	1
R 349	RMR4137	R.METAL 1/16W 820 OHM +-0.5X	1
R 350	RMR4137	R.METAL 1/16W 820 OHM +-0.5X	1
R 351	RMR4255	R.METAL 1/10W 10 KOHM +-0.5X	1
R 352	RME1418	R.METAL 1/10W 22 OHM +-5X	1
R 353	RME1430	R.METAL 1/10W 220 OHM +-5X	1
R 354	RME1430	R.METAL 1/10W 220 OHM +-5X	1
R 355	RME1462	R.METAL 1/10W 100 KOHM +-5X	1
R 357	RME1432	R.METAL 1/10W 330 OHM +-5X	1
R 358	RME1431	R.METAL 1/10W 270 OHM +-5X	1
R 361	RMR4170	R.METAL 1/16W 68 KOHM +-0.5X	1
R 362	RME1449	R.METAL 1/10W 8.2 KOHM +-5X	1
R 363	RME1413	R.METAL 1/10W 0 OHM	1
R 364	RME1420	R.METAL 1/10W 0 OHM	1
R 365	RME1413	R.METAL 1/10W 0 OHM	1
R 366	RME1413	R.METAL 1/10W 0 OHM	1
R 367	RME1421	R.METAL 1/10W 39 OHM +-5X	1
R 368	RME1448	R.METAL 1/10W 6.8 KOHM +-5X	1
R 369	RME1435	R.METAL 1/10W 560 OHM +-5X	1
R 370	RME1428	R.METAL 1/10W 150 OHM +-5X	1
R 371	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 372	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 373	RME1420	R.METAL 1/10W 33 OHM +-5X	1
R 374	RME1420	R.METAL 1/10W 33 OHM +-5X	1
R 375	RMR4162	R.METAL 1/16W 1.5 KOHM +-0.5X	1
R 376	RMR4162	R.METAL 1/16W 1.5 KOHM +-0.5X	1
R 377	RMR4255	R.METAL 1/10W 10 KOHM +-0.5X	1
R 378	RMR4255	R.METAL 1/10W 10 KOHM +-0.5X	1
R 379	RME1435	R.METAL 1/10W 560 OHM +-5X	1
R 380	RME1435	R.METAL 1/10W 560 OHM +-5X	1
R 381	RME1456	R.METAL 1/10W 33 KOHM +-5X	1
R 382	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 383	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 384	RMR4255	R.METAL 1/10W 10 KOHM +-0.5X	1
R 385	RMR4255	R.METAL 1/10W 10 KOHM +-0.5X	1
RV 201	RNE0109	VR.METAL EVM-7JGA00B54 (50K)	1
TR 201	HTK0147	TRANSISTOR 2SK436A20	1
TR 202	HTA0318	TRANSISTOR 2SA1462Y34	1
TR 203	HTC0871	TRANSISTOR 2SC3772LY4	1
TR 204	HTC0974	TRANSISTOR 2SC4680 (XU)	1

SYMBOL	PART CODE	DESCRIPTION	Q.TY
R 268	RME1440	R.METAL 1/10W 1.5 KOHM +-5X	1
R 269	RME1420	R.METAL 1/10W 33 OHM +-5X	1
R 270	RMR4816	R.METAL 0.1W 91 OHM +-0.5X	1
R 271	RMR4816	R.METAL 0.1W 91 OHM +-0.5X	1
R 272	RMR4817	R.METAL 0.1W 510 OHM +-0.5X	1
R 273	RME1443	R.METAL 1/10W 2.7 KOHM +-5X	1
R 274	RME1438	R.METAL 1/10W 1 KOHM +-5X	1
R 275	RME1438	R.METAL 1/10W 1 KOHM +-5X	1
R 276	RME1438	R.METAL 1/10W 1 KOHM +-5X	1
R 277	RME1436	R.METAL 1/10W 680 OHM +-5X	1
R 278	RME1420	R.METAL 1/10W 33 OHM +-5X	1
R 279	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 280	RME1420	R.METAL 1/10W 33 OHM +-5X	1
R 281	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 282	RME1420	R.METAL 1/10W 33 OHM +-5X	1
R 283	RME1420	R.METAL 1/10W 10 KOHM +-5X	1
R 284	RMR4218	R.METAL 1/10W 120 OHM +-0.5X	1
R 285	RMR4218	R.METAL 1/10W 120 OHM +-0.5X	1
R 286	RMR4218	R.METAL 1/10W 120 OHM +-0.5X	1
R 287	RMR4218	R.METAL 1/10W 120 OHM +-0.5X	1
R 288	RMR4221	R.METAL 1/10W 240 OHM +-0.5X	1
R 289	RMR4221	R.METAL 1/10W 240 OHM +-0.5X	1
R 291	RMR4221	R.METAL 1/10W 240 OHM +-0.5X	1
R 294	RME1433	R.METAL 1/10W 390 OHM +-5X	1
R 295	RME1428	R.METAL 1/10W 150 OHM +-5X	1
R 296	RME1428	R.METAL 1/10W 150 OHM +-5X	1
R 297	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 298	RME1447	R.METAL 1/10W 5.6 KOHM +-5X	1
R 299	RME1447	R.METAL 1/10W 5.6 KOHM +-5X	1
R 300	RME1441	R.METAL 1/10W 1.8 KOHM +-5X	1
R 301	RME1413	R.METAL 1/10W 0 OHM	1
R 305	RME1454	R.METAL 1/10W 22 KOHM +-5X	1
R 306	RMR4245	R.METAL 1/10W 180 OHM +-0.5X	1
R 307	RMR4245	R.METAL 1/10W 180 OHM +-0.5X	1
R 308	RME1438	R.METAL 1/10W 1 KOHM +-5X	1
R 309	RME1438	R.METAL 1/10W 1 KOHM +-5X	1
R 310	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 311	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 312	RME1423	R.METAL 1/10W 33 OHM +-5X	1
R 313	RMR4255	R.METAL 1/10W 10 KOHM +-0.5X	1
R 314	RMR4255	R.METAL 1/10W 10 KOHM +-0.5X	1
R 315	RME1413	R.METAL 1/10W 0 OHM	1
R 316	RME1441	R.METAL 1/10W 1.8 KOHM +-5X	1
R 317	RME1423	R.METAL 1/10W 56 OHM +-5X	1
R 318	RME1423	R.METAL 1/10W 56 OHM +-5X	1
R 319	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 320	RME1435	R.METAL 1/10W 560 OHM +-5X	1
R 321	RME1435	R.METAL 1/10W 560 OHM +-5X	1
R 322	RMR4142	R.METAL 1/16W 22 KOHM +-0.5X	1
R 323	RMR4142	R.METAL 1/16W 22 KOHM +-0.5X	1
R 324	RME1442	R.METAL 1/10W 2.2 KOHM +-5X	1
R 325	RMR4158	R.METAL 1/16W 330 OHM +-0.5X	1
R 326	RMR4216	R.METAL 1/10W 49.9 OHM +-0.5X	1
R 327	RMR4244	R.METAL 1/10W 1 KOHM +-0.5X	1
R 328	RME1418	R.METAL 1/10W 22 OHM +-5X	1

SYMBOL	PART CODE	DESCRIPTION	Q.TY
TR 205	HTI0011	TRANSISTOR 1MX5	1
TR 206	HTI0011	TRANSISTOR 1MX5	1
TR 207	HTI0011	TRANSISTOR 1MX5	1
TR 208	HTI0011	TRANSISTOR 1MX5	1
TR 209	HTI0011	TRANSISTOR 1MX5	1
TR 210	HTI0011	TRANSISTOR 1MX5	1
TR 211	HTI0011	TRANSISTOR 1MX5	1
TR 212	HTI0011	TRANSISTOR 1MX5	1
TR 213	HTC0161	TRANSISTOR DTC124EKA	1
TR 215	HTA0318	TRANSISTOR 2SA1462Y34	1
TR 216	HTA0318	TRANSISTOR 2SA1462Y34	1
TR 217	HTI0011	TRANSISTOR 1MX5	1
TR 218	HTC0974	TRANSISTOR 2SC4680 (XU)	1
TR 219	HTC0974	TRANSISTOR 2SC4680 (XU)	1
TR 220	HTC0871	TRANSISTOR 2SC3772LY4	1
TR 221	HTC0871	TRANSISTOR 2SC3772LY4	1
TR 222	HTA0400	TRANSISTOR FCI51	1
TR 223	HTA0318	TRANSISTOR 2SA1462Y34	1
TR 224	HTA0318	TRANSISTOR 2SA1462Y34	1

# PEG-009 EXT IN & TRIG

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
C 401	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 402	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 404	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 405	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 406	CCG0286	C.CERAMIC 50 V 1000 PF+-10%	1
C 407	CCG0249	C.CERAMIC 50 V 3 PF+-0.25PF	1
C 408	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 409	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 410	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 411	CCG0291	C.CERAMIC 50 V 6800 PF+-10%	1
C 412	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 413	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 414	CCG0291	C.CERAMIC 50 V 6800 PF+-10%	1
C 415	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 416	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 420	CCG0292	C.CERAMIC 50 V10000 PF+-10%	1
C 421	CCG0292	C.CERAMIC 50 V10000 PF+-10%	1
C 422	CCG0121	C.CERAMIC 16 V 1 UF +80X-20X	1
C 423	CCG0121	C.CERAMIC 16 V 1 UF +80X-20X	1
C 424	CEU0018	C.AL ELYC 6.3V 22 UF+-20%	1
C 425	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 426	CEM0007	C.AL ELYC 6.3V 10 UF+-20% BP	1
C 427	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 428	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 429	CCG0261	C.CERAMIC 50 V 18 PF+-5%	1
C 462	CCG0403	C.CERAMIC 500 V 8 PF+-0.5PF	1
C 463	CCG0601	C.CERAMIC 500 V 1000 PF+-10%	1
C 464	CEU0018	C.AL ELYC 6.3V 22 UF+-20%	1
C 465	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 466	CEU0018	C.AL ELYC 6.3V 22 UF+-20%	1
C 467	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 469	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 470	CCG0121	C.CERAMIC 16 V 1 UF +80X-20X	1
C 471	CEU0018	C.AL ELYC 6.3V 22 UF+-20%	1
C 472	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 473	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 474	CCG0270	C.CERAMIC 50 V 47 PF+-5%	1
C 475	CCG0248	C.CERAMIC 50 V 3 PF+-0.25PF	1
C 476	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 501	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 502	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 503	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 511	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 521	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
D 401	HDS0496	D.IODE 1SS123	1
D 402	HDH0307	D.IODE HSU277	1
D 403	HDH0308	D.IODE HSM107S	1
D 404	HDH0308	D.IODE HSM107S	1
D 405	HDH0308	D.IODE HSM107S	1
D 461	HDH0293	D.IODE HSM2692	1
D 501	HDS0496	D.IODE 1SS123	1
D 511	HDH0307	D.IODE HSU277	1
D 521	HDH0307	D.IODE HSU277	1

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
R 443	RMR4244	R.METAL 1/10W KOHM +-0.5%	1
R 444	RME1435	R.METAL 1/10W 560 OHM +-5%	1
R 445	RME1435	R.METAL 1/10W 560 OHM +-5%	1
R 446	RME1422	R.METAL 1/10W 47 OHM +-5%	1
R 447	RME1442	R.METAL 1/10W 2.2 KOHM +-5%	1
R 448	RME1414	R.METAL 1/10W 10 OHM +-5%	1
R 449	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 450	RME1454	R.METAL 1/10W 22 KOHM +-5%	1
R 451	RME1446	R.METAL 1/10W 4.7 KOHM +-5%	1
R 452	RME1446	R.METAL 1/10W 4.7 KOHM +-5%	1
R 453	RME1435	R.METAL 1/10W 560 OHM +-5%	1
R 455	RMR4244	R.METAL 1/10W 1 KOHM +-0.5%	1
R 456	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 457	RME1446	R.METAL 1/10W 4.7 KOHM +-5%	1
R 458	RME1440	R.METAL 1/10W 22 OHM +-5%	1
R 459	RME1421	R.METAL 1/10W 39 OHM +-5%	1
R 461	RME1420	R.METAL 1/10W 33 OHM +-5%	1
R 462	RME1420	R.METAL 1/10W 33 OHM +-5%	1
R 463	RMR4288	R.METAL 1/10W 100 KOHM +-1%	1
R 464	RMS0018	R.METAL 1/4W 1 MOHM +-1%	1
R 465	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 466	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 467	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 468	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 469	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 470	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 471	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 472	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 473	RMR4244	R.METAL 1/10W 1 KOHM +-0.5%	1
R 474	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 475	RMR4244	R.METAL 1/10W 1 KOHM +-0.5%	1
R 476	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 477	RME1459	R.METAL 1/10W 56 KOHM +-5%	1
R 479	RME1440	R.METAL 1/10W 1.5 KOHM +-5%	1
R 480	RME1418	R.METAL 1/10W 22 OHM +-5%	1
R 481	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 483	RMS0043	R.METAL 1/4W 900 KOHM +-0.5%	1
R 484	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 485	RME1455	R.METAL 1/10W 27 KOHM +-5%	1
R 486	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 487	RME1464	R.METAL 1/10W 220 KOHM +-5%	1
R 488	RME1442	R.METAL 1/10W 2.2 KOHM +-5%	1
R 489	RME1445	R.METAL 1/10W 3.9 KOHM +-5%	1
R 490	RME1430	R.METAL 1/10W 220 OHM +-5%	1
R 491	RME1430	R.METAL 1/10W 220 OHM +-5%	1
R 492	RMR4063	R.METAL 1/10W 2.67KOHM +-1%	1
R 493	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 494	RMR4231	R.METAL 1/10W 20 KOHM +-0.5%	1
R 495	RMR4063	R.METAL 1/10W 2.67KOHM +-1%	1
R 496	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 497	RMR4231	R.METAL 1/10W 20 KOHM +-0.5%	1
R 501	RMR4255	R.METAL 1/10W 10 KOHM +-0.5%	1
R 502	RMR4244	R.METAL 1/10W 1 KOHM +-0.5%	1
R 503	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 504	RME1445	R.METAL 1/10W 3.9 KOHM +-5%	1
R 505	RMR4244	R.METAL 1/10W 1 KOHM +-0.5%	1

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
IC 401	IDH1437	IC.LOGIC HD74HC595FP	1
IC 402	IDT0309	IC.LOGIC TC74HC4052AF	1
IC 403	IDT0309	IC.LOGIC TC74HC4052AF	1
IC 404	IDT0323	IC.LOGIC TC74HC4052AF	1
IC 405	IDT0323	IC.LOGIC TC74HC4052AF	1
IC 406	ILT0068	IC.ANALOG TL072CPS	1
IC 407	ILT0171	IC.ANALOG TL061CPS	1
IC 408	IDS0657	IC.LOGIC SN74F00NS	1
IC 409	ILT0067	IC.ANALOG TL062CPS	1
J 401	JHB0088	CON.COAX BNC071	1
L 401	RME1413	R.METAL 1/10W 0 OHM	1
L 402	TLB0025	BLM31A02PB	1
L 403	EGF0095	FERRITE HF70ACB201209	1
L 404	EGF0095	FERRITE HF70ACB201209	1
L 405	EGF0095	FERRITE HF70ACB201209	1
L 406	EGF0095	FERRITE HF70ACB201209	1
R 401	RMR4156	R.METAL 1/16W 220 OHM +-0.5%	1
R 402	RMR4156	R.METAL 1/16W 220 OHM +-0.5%	1
R 403	RMR4219	R.METAL 1/10W 150 OHM +-0.5%	1
R 404	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 405	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 406	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 407	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 408	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 409	RME1438	R.METAL 1/10W 100 OHM +-5%	1
R 410	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 411	RME1423	R.METAL 1/10W 56 OHM +-5%	1
R 412	RMR4112	R.METAL 1/16W 390 OHM +-0.5%	1
R 413	RMR4244	R.METAL 1/10W 1 KOHM +-0.5%	1
R 414	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 415	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 416	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 417	RME1433	R.METAL 1/10W 390 OHM +-5%	1
R 418	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 419	RMR4244	R.METAL 1/10W 1 KOHM +-0.5%	1
R 420	RMR4166	R.METAL 1/16W 4.7 KOHM +-0.5%	1
R 421	RMR4166	R.METAL 1/16W 4.7 KOHM +-0.5%	1
R 422	RME1442	R.METAL 1/10W 2.2 KOHM +-5%	1
R 423	RME1448	R.METAL 1/10W 6.8 KOHM +-5%	1
R 424	RME1427	R.METAL 1/10W 120 OHM +-5%	1
R 425	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 426	RME1444	R.METAL 1/10W 3.3 KOHM +-5%	1
R 427	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 429	RMR4244	R.METAL 1/10W 1 KOHM +-0.5%	1
R 430	RMR4227	R.METAL 1/10W 2 KOHM +-0.5%	1
R 433	RMR4244	R.METAL 1/10W 1 KOHM +-0.5%	1
R 434	RME1466	R.METAL 1/10W 470 KOHM +-5%	1
R 435	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 436	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 439	RME1468	R.METAL 1/10W 1 MOHM +-5%	1
R 440	RME1468	R.METAL 1/10W 1 MOHM +-5%	1
R 441	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 442	RME1413	R.METAL 1/10W 0 OHM	1

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
R 506	RME1420	R.METAL 1/10W 33 OHM +-5%	1
R 507	RME1444	R.METAL 1/10W 3.3 KOHM +-5%	1
R 508	RME1447	R.METAL 1/10W 5.6 KOHM +-5%	1
R 511	RME1459	R.METAL 1/10W 56 KOHM +-5%	1
R 521	RME1459	R.METAL 1/10W 56 KOHM +-5%	1
TR 401	HTI0011	TRANSISTOR 1MX5	1
TR 402	HTI0011	TRANSISTOR 1MX5	1
TR 403	HTI0011	TRANSISTOR 1MX5	1
TR 404	HTA0400	TRANSISTOR FC151	1
TR 405	HTC0871	TRANSISTOR 2SC3772LY4	1
TR 406	HTC0871	TRANSISTOR 2SC3772LY4	1
TR 407	HTC0871	TRANSISTOR 2SC3772LY4	1
TR 408	HTC0871	TRANSISTOR 2SC3772LY4	1
TR 409	HTI0011	TRANSISTOR 1MX5	1
TR 410	HTC0974	TRANSISTOR 2SC4680 (XU)	1
TR 411	HTI0011	TRANSISTOR 1MX5	1
TR 412	HTC0871	TRANSISTOR 2SC3772LY4	1
TR 413	HTD0161	TRANSISTOR DTC124EKA	1
TR 415	HTI0011	TRANSISTOR 1MX5	1
TR 461	HTK0212	TRANSISTOR 2SK532E(DP6B)	1
TR 462	HTI0011	TRANSISTOR 1MX5	1
TR 464	HTA0318	TRANSISTOR 2SA1462Y34	1
TR 501	HTI0011	TRANSISTOR 1MX5	1
TR 502	HTC0871	TRANSISTOR 2SC3772LY4	1
TR 503	HTC0974	TRANSISTOR 2SC4680 (XU)	1

SYMBOL	PART CODE...	DESCRIPTION	QTY
C 601	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 602	CCG9295	C.CERAMIC V 25 0.1 UF+80-20%	1
C 603	CCCE0121	C.CERAMIC 16 V 1 UF +80%-20%	1
C 604	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 605	CCG0288	C.CERAMIC 50 V 2200 PF+-10%	1
C 606	CCG0288	C.CERAMIC 50 V 2200 PF+-10%	1
C 607	CCG0288	C.CERAMIC 50 V 2200 PF+-10%	1
C 608	CCG0290	C.CERAMIC 50 V 4700 PF+-10%	1
C 609	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 610	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 611	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 612	CEU0919	C.AL ELYC 6.3V 47 UF+-20%	1
C 613	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 614	CCCE0121	C.CERAMIC 16 V 1 UF +80%-20%	1
C 615	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 651	CEU0024	C.AL ELYC 16 V 47 UF+-20%	1
C 652	CEU0024	C.AL ELYC 16 V 47 UF+-20%	1
C 653	CEU0019	C.AL ELYC 6.3V 47 UF+-20%	1
C 654	CEU0019	C.AL ELYC 6.3V 47 UF+-20%	1
C 655	CEU0019	C.AL ELYC 6.3V 47 UF+-20%	1
C 656	CEU0019	C.AL ELYC 6.3V 47 UF+-20%	1
C 657	CEU0024	C.AL ELYC 16 V 47 UF+-20%	1
C 658	CEU0024	C.AL ELYC 16 V 47 UF+-20%	1
C 659	CEU0019	C.AL ELYC 6.3V 47 UF+-20%	1
C 684	CCG0282	C.CERAMIC 50 V 470 PF+-5%	1
C 685	CGE02LASTI	C.C V 4700 PF+-5%	1
C 686	CCG0290	C.CERAMIC 50 V 4700 PF+-10%	1
C 687	CCG0290	C.CERAMIC 50 V 4700 PF+-10%	1
C 688	CCG9292	C.CERAMIC 50 V10000 PF+-10%	1
C 689	CCG0290	C.CERAMIC 50 V 4700 PF+-10%	1
C 690	CCG0290	C.CERAMIC V 50 33 PF+-5%	1
C 691	CCG0267	C.CERAMIC 50 V 33 PF+-5%	1
C 692	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
IC 601	IDH1437	IC.LOGIC HD74HC595FP	1
IC 602	IDH1437	IC.LOGIC HD74HC595FP	1
IC 604	ILM0611	IC.ANALOG M62354FP	1
IC 605	ILT0066	IC.ANALOG TL064CNS	1
IC 606	ILT0140	IC.ANALOG TLC3702CPS	1
IC 607	ILT1017	IC.ANALOG TL431CPZ	1
IC 608	IPH0005	IC HA1791LSU	1
IC 609	I2M0147	IC M66242FP	1
L 601	EGF0095	FERRITE HF70ACB201209	1
L 602	EGF0095	FERRITE HF70ACB201209	1
L 603	EGF0095	FERRITE HF70ACB201209	1
L 604	EGF0095	FERRITE HF70ACB201209	1
L 651	TLB0023	COIL BLM31A02PB	1
L 652	TLB0023	COIL BLM31A02PB	1
L 653	TLB0023	COIL BLM31A02PB	1
L 654	TLB0023	COIL BLM31A02PB	1
L 655	TLB0023	COIL BLM31A02PB	1
L 656	TLB0023	COIL BLM31A02PB	1
L 657	TLB0023	COIL BLM31A02PB	1
L 658	TLL0343	COIL LQH3C470K04 (47UH)	1
L 660	TLL0363	COIL LQH3C470K04 (47UH)	1

S Y M B O L	PART CODE	DESCRIPTION	QTY
C 6101	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6102	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6104	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6111	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6114	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6121	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6131	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6140	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 6141	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 6142	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 6143	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 6144	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 6145	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 6203	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6205	CCCE0121	C.CERAMIC 16 V 1 UF +80%-20%	1
C 6206	CCCE0121	C.CERAMIC 16 V 1 UF +80%-20%	1
C 6207	CCCE0121	C.CERAMIC 16 V 1 UF +80%-20%	1
C 6208	CCCE0121	C.CERAMIC 16 V 1 UF +80%-20%	1
C 6230	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
IC 6101	ILC0105	IC. ANALOG CXD1179Q	1
IC 6111	ILC0105	IC. ANALOG CXD1179Q	1
IC 6121	INH0104	IC HM63021FP-28	1
IC 6131	INH0104	IC HM63021FP-28	1
IC 6200	8595490	IC HG62G010R08FBN	1
IC 6201	INE00019	IC EPM7192UC160-1	R
IC 6203	IDT0261	IC TMF82C54M-2	1
L 6201	EGF0095	FERRITE HF70ACB201209	1
P 6001	JBF0063	CONNECTOR FH21-24S-1DS	1
R 6103	RME1413	R.METAL 1/10W 0 OHM	1
R 6106	RME1413	R.METAL 1/10W 0 OHM	1
R 6121	RME1444	R.METAL 1/10W 3.3 KOHM +5%	1
R 6122	RME1444	R.METAL 1/10W 3.3 KOHM +5%	1
R 6123	RME1444	R.METAL 1/10W 3.3 KOHM +5%	1
R 6124	RME1444	R.METAL 1/10W 3.3 KOHM +5%	1
R 6130	RME1413	R.METAL 1/10W 0 OHM	1
R 6131	RME1413	R.METAL 1/10W 0 OHM	R
R 6140	RME1422	R.METAL 1/10W 47 OHM +5%	R
R 6141	RME1424	R.METAL 1/10W 68 OHM +5%	1
R 6142	RME1422	R.METAL 1/10W 47 OHM +5%	1
R 6143	RME1422	R.METAL 1/10W 68 OHM +5%	1
R 6144	RME1422	R.METAL 1/10W 47 OHM +5%	1
R 6145	RME1424	R.METAL 1/10W 68 OHM +5%	1
R 6146	RME1422	R.METAL 1/10W 47 OHM +5%	1
R 6147	RME1424	R.METAL 1/10W 68 OHM +5%	1
R 6148	RME1422	R.METAL 1/10W 47 OHM +5%	1
R 6149	RME1424	R.METAL 1/10W 68 OHM +5%	1

SYMBOL	..PART CODE...	DESCRIPTION	QTY
R 6150	RME1422	R..METAL 1/10W 47 OHM +-5%	1
R 6155	RME1424	R..METAL 1/10W 68 OHM +-5%	1
R 6230	RME1413	R..METAL 1/10W 0 OHM	1
R 6231	RME1413	R..METAL 1/10W 0 OHM	1
R 6232	RME1413	R..METAL 0 1/10W 0 OHM	1
R 6301	RME1458	R..METAL 1/10W 47 KOHM +-5%	1
R 6302	RME1458	R..METAL 1/10W 47 KOHM +-5%	1
R 6303	RME1458	R..METAL 1/10W 47 KOHM +-5%	1
R 6304	RME1458	R..METAL 1/10W 47 KOHM +-5%	1
R 6307	RME1458	R..METAL 1/10W 47 KOHM +-5%	1
R 6308	RME1458	R..METAL 1/10W 47 KOHM +-5%	1
R 6310	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6311	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6312	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6313	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6314	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6315	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6316	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6317	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6318	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6319	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6320	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6321	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6322	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6323	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6324	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6325	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6326	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6327	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6328	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6329	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6330	RME1427	R..METAL 1/10W 120 OHM +-5%	1
R 6331	RME1432	R..METAL 1/10W 330 OHM +-5%	1
R 6332	RME1432	R..METAL 1/10W 330 OHM +-5%	1
R 6333	RME1432	R..METAL 1/10W 330 OHM +-5%	1
R 6334	RME1432	R..METAL 1/10W 330 OHM +-5%	1
X 6230	AAT0029	XTAL TCO-711SHC 30.0 MHZ	1

## PEG-009 SPL CNTL

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
C 6401	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6402	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6421	CCG0286	C.CERAMIC 50 V 1000 PF+-10%	1
C 6423	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
IC 6401	IDM0950	IC.LOGIC MC74F74M	1
IC 6402	IDH1477	IC.LOGIC HD74HC132FP	1
R 6421	RME1464	R.METAL 1/10W 220 KOHM +-5%	1
R 6424	RME1466	R.METAL 1/10W 470 KOHM +-5%	1
R 6425	RME1424	R.METAL 1/10W 68 OHM +-5%	1
R 6429	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 6430	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 6431	RME1413	R.METAL 1/10W 0 OHM	1
R 6432	RME1413	R.METAL 1/10W 0 OHM	1
R 6433	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 6440	RME1413	R.METAL 1/10W 0 OHM	1
R 6441	RME1424	R.METAL 1/10W 68 OHM +-5%	1
TR 6421	HTD0161	TRANSISTOR DTC124EKA	1
TR 6422	HTD0161	TRANSISTOR DTC124EKA	1

## PEG-009 INTERPOLATOR

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
C 6003	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6007	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6009	CCG0286	C.CERAMIC 50 V 1000 PF+-10%	1
C 6011	CMU0027	C.MICA 100 V 120 PF+-5%	1
C 6012	CMU0003	C.MICA 500 V 18 PF+-5%	1
C 6014	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6015	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6016	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6017	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6018	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6019	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6020	CCG9292	C.CERAMIC 50 V10000 PF+-10%	1
C 6021	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
D 6013	HDH0305	DIODE HSM88WA	1
D 6014	HDH0305	DIODE HSM88WA	1
IC 6018	ILN0048	IC.ANALOG NJM311M	1
IC 6019	IDM0945	IC.LOGIC MC74ACT02M	1
L 6018	TLN0035	COIL 400 MA 1 UH+-5%	1
L 6019	TLN0035	COIL 400 MA 1 UH+-5%	1
L 6020	TLN0035	COIL 400 MA 1 UH+-5%	1
L 6021	TLN0040	COIL 110 MA 22 UH+-5%	1
R 6003	RMR4057	R.METAL 1/10W 825 OHM +-1%	1
R 6004	RMR4056	R.METAL 1/10W 681 OHM +-1%	1
R 6005	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 6007	RMR4062	R.METAL 1/10W 2.21KOHM +-1%	1
R 6008	RMR4066	R.METAL 1/10W 4.75KOHM +-1%	1
R 6009	RMR3954	R.METAL 1/8W 3.92KOHM +-1%	1
R 6014	RME1439	R.METAL 1/10W 1.2 KOHM +-5%	1
R 6015	RME1442	R.METAL 1/10W 2.2 KOHM +-5%	1
R 6016	RME1463	R.METAL 1/10W 150 KOHM +-5%	1
R 6017	RME1452	R.METAL 1/10W 15 KOHM +-5%	1
R 6018	RME1453	R.METAL 1/10W 18 KOHM +-5%	1
R 6019	RME1444	R.METAL 1/10W 3.3 KOHM +-5%	1
R 6020	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 6021	RME1431	R.METAL 1/10W 270 OHM +-5%	1
R 6022	RME1414	R.METAL 1/10W 10 OHM +-5%	1
R 6023	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 6024	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 6025	RME1413	R.METAL 1/10W 0 OHM	1
R 6031	RME1413	R.METAL 1/10W 0 OHM	1
R 6032	RME1418	R.METAL 1/10W 22 OHM +-5%	1
R 6033	RME1413	R.METAL 1/10W 0 OHM	1
TR 6003	HTA0318	TRANSISTOR 2SA1462Y34	1
TR 6016	HTC0848	TRANSISTOR 2SC2759-U23	1
TR 6017	HTA0318	TRANSISTOR 2SA1462Y34	1

## PEG-009 TRIG GATE

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
C 3001	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 3002	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 3021	CCG0286	C.CERAMIC 50 V 1000 PF+-10%	1
C 3022	CCG0274	C.CERAMIC 50 V 100 PF+-5%	1
IC 3001	IDM0915	IC.LOGIC MC74ACT00M	1
IC 3002	IDH1485	IC.LOGIC HD74AC74FP	1
R 3021	RME1448	R.METAL 1/10W 6.8 KOHM +-5%	1
R 3022	RME1458	R.METAL 1/10W 47 KOHM +-5%	1

## PEG-010 MCOM

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
IXX0075	SOCKET.IC	10632-01-445	1
C 6501	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6502	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6503	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6504	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6506	CCG0266	C.CERAMIC 50 V 30 PF+-5%	1
C 6507	CCG0266	C.CERAMIC 50 V 30 PF+-5%	1
C 6510	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6511	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6512	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6513	CCG0263	C.CERAMIC 50 V 22 PF+-5%	1
C 6514	CCG0255	C.CERAMIC 50 V 10 PF+-0.5PF	1
C 6515	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6520	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6530	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6531	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6532	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6533	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6534	CEA0019	C.AL ELYC 16 V 47 UF+-20%	1
C 6535	CEA0019	C.AL ELYC 16 V 47 UF+-20%	1
C 6536	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6540	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6541	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6560	CEA0036	C.AL ELYC 10 V 68 UF+-20%	1
C 6561	CEA0036	C.AL ELYC 10 V 68 UF+-20%	1
C 6562	CEA0036	C.AL ELYC 10 V 68 UF+-20%	1
C 6563	CEA0036	C.AL ELYC 10 V 68 UF+-20%	1
C 6570	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6571	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6572	CEA0019	C.AL ELYC 16 V 47 UF+-20%	1
C 6573	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 6601	CCG0270	C.CERAMIC 50 V 47 PF+-5%	1
C 6602	CCG0274	C.CERAMIC 50 V 100 PF+-5%	1
D 6557	HDH0290	DIODE HSM88AS (C1)	1
D 6558	HDH0290	DIODE HSM88AS (C1)	1
IC 6501	IMM0050	IC UPD70325-GJ-8	1
IC 6510	INT0014	IC TMS27C020-15JL	1
IC 6511	INH0106	IC HM658512LFP-12L	1
IC 6512	I2T0009	IC TC8521AM	1
IC 6515	IDM0720	IC.LOGIC UPD74HCT244GS	1

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
IC 6520	I2P0009	IC P5T520CM	1
IC 6530	IDH1477	IC.LOGIC HD74HC132FP	1
IC 6531	IDM0816	IC.LOGIC UPD74HCT245G	1
IC 6532	IDN0812	IC.DIGITAL MC145406F	1
IC 6540	HZT0028	PHOTOCOUP TLP115A	1
IC 6541	HZT0028	PHOTOCOUP TLP115A	1
IC 6570	IDH1544	IC.LOGIC HD74HCT374FP	1
IC 6571	IDH1477	IC.LOGIC HD74HC132FP	1
IC 6572	ILN0134	IC.ANALOG NJU7201U50	1
L 6501	EGF0095	FERRITE HF70ACB201209	1
L 6534	EGF0095	FERRITE HF70ACB201209	1
L 6535	EGF0095	FERRITE HF70ACB201209	1
L 6560	EGF0095	FERRITE HF70ACB201209	1
L 6561	EGF0095	FERRITE HF70ACB201209	1
P 6501	JBD0059	CONNECTOR DF11-26DP-2DS	1
P 6502	JBF0063	CONNECTOR FH21-24S-1DS	1
P 6503	JBF0063	CONNECTOR FH21-24S-1DS	1
P 6504	JBX2690	CONNECTOR 17LE-13090-27 (D3AB)	1
P 6505	JBD0109	CONNECTOR DX10GM-20SE	1
R 6501	RME1446	R.METAL 1/10W 4.7 KOHM +-5X	1
R 6502	RME1446	R.METAL 1/10W 4.7 KOHM +-5X	1
R 6503	RME1446	R.METAL 1/10W 4.7 KOHM +-5X	1
R 6504	RME1446	R.METAL 1/10W 4.7 KOHM +-5X	1
R 6505	RME1446	R.METAL 1/10W 4.7 KOHM +-5X	1
R 6506	RME1413	R.METAL 1/10W 0 OHM	1
R 6507	RME1446	R.METAL 1/10W 4.7 KOHM +-5X	1
R 6508	RME1446	R.METAL 1/10W 4.7 KOHM +-5X	1
R 6510	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6511	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6512	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6513	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6514	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 6515	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6516	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6517	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6518	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6519	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6520	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6521	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6522	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6523	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6524	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 6525	RME1466	R.METAL 1/10W 470 KOHM +-5X	1
R 6530	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6531	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6532	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 6533	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 6534	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 6535	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 6536	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 6537	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 6538	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 6539	RME1458	R.METAL 1/10W 47 KOHM +-5X	1

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
R 6662	RME1413	R.METAL 1/10W 0 OHM	1
R 6663	RME1413	R.METAL 1/10W 0 OHM	1
R 6664	RME1413	R.METAL 1/10W 0 OHM	1
R 6665	RME1413	R.METAL 1/10W 0 OHM	1
R 6666	RME1413	R.METAL 1/10W 0 OHM	1
R 6667	RME1413	R.METAL 1/10W 0 OHM	1
R 6668	RME1413	R.METAL 1/10W 0 OHM	1
R 6669	RME1413	R.METAL 1/10W 0 OHM	1
R 6670	RME1413	R.METAL 1/10W 0 OHM	1
R 6671	RME1413	R.METAL 1/10W 0 OHM	1
TR 6590	HTK0210	TRANSISTOR 2SK1828	1
TR 6591	HTK0210	TRANSISTOR 2SK1828	1
X 6501	ACC0012	CERA OSC CSA16.00MX040	1
X 6502	8388121	XTAL CFS-308 32.7680 KHZ	1

## PEG-010 DISPLAY

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
R 6540	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 6541	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6542	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6543	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6544	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6545	RME1413	R.METAL 1/10W 0 OHM	1
R 6546	RME1413	R.METAL 1/10W 0 OHM	1
R 6550	RME1413	R.METAL 1/10W 0 OHM	1
R 6551	RME1413	R.METAL 1/10W 0 OHM	1
R 6552	RME1413	R.METAL 1/10W 0 OHM	1
R 6553	RME1413	R.METAL 1/10W 0 OHM	1
R 6554	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6555	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6556	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6557	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6558	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6559	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6560	RME1434	R.METAL 1/10W 470 OHM +-5X	1
R 6561	RME1438	R.METAL 1/10W 1 KOHM +-5X	1
R 6563	RME1438	R.METAL 1/10W 1 KOHM +-5X	1
R 6564	RME1434	R.METAL 1/10W 470 OHM +-5X	1
R 6570	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6571	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6572	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6573	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6601	RME1434	R.METAL 1/10W 470 OHM +-5X	1
R 6602	RME1454	R.METAL 1/10W 22 KOHM +-5X	1
R 6603	RME1431	R.METAL 1/10W 270 OHM +-5X	1
R 6604	RME1427	R.METAL 1/10W 120 OHM +-5X	1
R 6608	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6609	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6610	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6611	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6612	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6613	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6614	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6615	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6616	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6617	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6630	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6631	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6632	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6633	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6634	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6635	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6636	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6637	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6638	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6639	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6640	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6641	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6642	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6650	RME1413	R.METAL 1/10W 0 OHM	1
R 6651	RME1413	R.METAL 1/10W 0 OHM	1
R 6660	RME1413	R.METAL 1/10W 0 OHM	1
R 6661	RME1413	R.METAL 1/10W 0 OHM	1

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
C 7001	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7002	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7003	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7004	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7005	CCG0266	C.CERAMIC 50 V 30 PF+-5X	1
C 7006	CCG0266	C.CERAMIC 50 V 30 PF+-5X	1
C 7007	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7008	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7009	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7010	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7012	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7013	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7014	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7015	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7020	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7030	CCE0121	C.CERAMIC 16 V 1 UF+80X-20X	1
C 7031	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7032	CCE0121	C.CERAMIC 16 V 1 UF+80X-20X	1
C 7033	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7034	CCE0121	C.CERAMIC 16 V 1 UF+80X-20X	1
C 7035	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7036	CCE0121	C.CERAMIC 16 V 1 UF+80X-20X	1
C 7037	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7040	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7041	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7042	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7043	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7044	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7045	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7046	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7047	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7048	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7049	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7050	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7051	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7052	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
C 7053	CCG9295	C.CERAMIC 25 V 0.1 UF+80-20X	1
D 7011	HNH0031	DIODE-ZEN HZM6.2NB2	1
D 7012	HNH0031	DIODE-ZEN HZM6.2NB2	1
D 7013	HNH0031	DIODE-ZEN HZM6.2NB2	1
D 7014	HNH0031	DIODE-ZEN HZM6.2NB2	1
IC 7001	INH0103	IC HMS38121AJ-8	1
IC 7002	IDT0380	IC.LOGIC TC74HCT04AF	1
IC 7003	IDM0816	IC.LOGIC UPD74HCT245G	1
IC 7004	IDH1544	IC.LOGIC HD74HCT374FP	1
IC 7020	IDT0239	IC.LOGIC TC74HCU04AF	1
IC 7030	ISH0029	IC H662E22S47FS	1
L 7001	EGF0095	FERRITE HF70ACB201209	1
L 7007	EGF0095	FERRITE HF70ACB201209	1
L 7008	EGF0095	FERRITE HF70ACB201209	1



SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q..TY
L 7009	EGF0095	FERRITE HF70ACB201209	1
L 7020	EGF0095	FERRITE HF70ACB201209	1
L 7030	EGF0095	FERRITE HF70ACB201209	1
R 6605	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 6606	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 6618	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6619	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6620	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6621	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6622	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 6623	RME1413	R.METAL 1/10W 0 OHM	1
R 7005	RME1444	R.METAL 1/10W 3.3 KOHM +-5X	1
R 7006	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 7011	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 7012	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 7013	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 7014	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 7015	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 7016	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 7017	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 7018	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 7019	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 7020	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 7021	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 7022	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 7023	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 7024	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 7025	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 7026	RME1026	R.METAL 1/10W 100 OHM +-5X	1
R 7027	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 7028	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 7029	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 7030	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 7031	RME1426	R.METAL 1/10W 100 OHM +-5X	1
X 7010	ACC0013	CERA OSC CSA20.00MX040	1

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q..TY
D 8132	HDH0306	DIODE HRF32	1
D 8133	HDH0306	DIODE HRF32	1
D 8134	HDH0300	DIODE HSM83	1
D 8135	HDH0306	DIODE HRF32	1
D 8136	HDH0306	DIODE HRF32	1
D 8151	HDH0289	DIODE HSM88WK (C4)	1
F 8001	EFZ0017	FUSE ICP-F38(1.5A)	1
F 8021	EFZ0012	FUSE ICP-F75 (2.7A)	1
IC 8001	ILH0209	IC.ANALOG HA16114FP	1
IC 8011	ILN0057	IC.ANALOG NJM2904M	1
IC 8031	IDH1477	IC.LOGIC HD74HC132FP	1
IC 8041	ILN0039	IC.ANALOG NJM2903M	1
IC 8101	ILH0210	IC.ANALOG HA16116FP	1
IC 8151	ILN0134	IC.ANALOG NJU7201U50	1
J 8001	JJH0035	JACK HEC3800-01-010	1
L 8001	8451770	COIL 2 A 125 UH	1
L 8011	TLL0359	COIL LQH3C2R2M04 (2.2UH)	1
L 8111	TLL0022	COIL RCH-110-101K	1
L 8119	TLT0085	COIL 47 UH+-10% 0.944	1
L 8131	TLT0085	COIL 47 UH+-10% 0.944	1
L 8133	TLL0363	COIL LQH3CA70K04 (47UH)	1
P 8001	JBD0059	CONNECTOR DF11-26DP-2DS	1
P 8021	JBB0021	CONNECTOR B3B-XH-A	1
R 8001	RMB0009	R.METAL 2 W 0.05 OHM +-10X	1
R 8002	RME1430	R.METAL 1/10W 220 OHM +-5X	1
R 8003	RME1442	R.METAL 1/10W 2.2 KOHM +-5X	1
R 8004	RME1459	R.METAL 1/10W 56 KOHM +-5X	1
R 8005	RME1440	R.METAL 1/10W 1.5 KOHM +-5X	1
R 8006	RME1454	R.METAL 1/10W 22 KOHM +-5X	1
R 8007	RMR4145	R.METAL 1/16W 12 KOHM +-0.5X	1
R 8008	RME1462	R.METAL 1/10W 100 KOHM +-5X	1
R 8009	RMR4355	R.METAL 1/10W 11 KOHM +-0.25X	1
R 8011	RMR4145	R.METAL 1/16W 12 KOHM +-0.5X	1
R 8012	RMR4057	R.METAL 1/10W 825 OHM +-1X	1
R 8013	RMR4058	R.METAL 1/10W 1 KOHM +-1X	1
R 8014	RME1454	R.METAL 1/10W 22 KOHM +-5X	1
R 8015	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 8016	RMR3984	R.METAL 1/10W 10 KOHM +-1X	1
R 8017	RMS0072	R.METAL 1 W 1 OHM +-5X	1
R 8018	RMR4178	R.METAL 1/16W 1 MOHM +-0.5X	1
R 8019	RME1464	R.METAL 1/10W 220 KOHM +-5X	1
R 8020	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 8021	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 8022	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 8031	RME1462	R.METAL 1/10W 100 KOHM +-5X	1
R 8032	RME1462	R.METAL 1/10W 100 KOHM +-5X	1
R 8033	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 8034	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 8035	RME1450	R.METAL 1/10W 10 KOHM +-5X	1

## PEG-010 POWER

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q..TY
B 8061	ESB0059	BUZZER KSB-13DB-4P-2	1
C 8001	CEL0026	C.AL ELYC 35 V 220 UF+-20X	1
C 8002	CEL0026	C.AL ELYC 35 V 220 UF+-20X	1
C 8003	CCG9292	C.CERAMIC 50 V10000 PF+-10X	1
C 8004	CEA0032	C.AL ELYC 50 V 2.2 UF+-20X	1
C 8005	CQA0048	C.PLASTIC 250 V47000 PF+-10X	1
C 8006	CCG0394	C.CERAMIC 50 V 0.1 UF+-10X	1
C 8009	CCG0288	C.CERAMIC 50 V 2200 PF+-10X	1
C 8011	CEA0031	C.AL ELYC 35 V 22 UF+-20X	1
C 8014	CCG0394	C.CERAMIC 50 V 0.1 UF+-10X	1
C 8015	CCG0394	C.CERAMIC 50 V 0.1 UF+-10X	1
C 8020	CCG0601	C.CERAMIC 500 V 1000 PF+-10X	1
C 8021	CEL0026	C.AL ELYC 35 V 220 UF+-20X	1
C 8022	CEL0026	C.AL ELYC 35 V 220 UF+-20X	1
C 8031	CCG9295	C.CERAMIC 25 V 0.1 UF+-80-20X	1
C 8035	CEA0022	C.AL ELYC 50 V 1 UF+-20X	1
C 8041	CEA0019	C.AL ELYC 16 V 47 UF+-20X	1
C 8042	CCG9295	C.CERAMIC 25 V 0.1 UF+-80-20X	1
C 8101	CCG9295	C.CERAMIC 25 V 0.1 UF+-80-20X	1
C 8102	CCG9295	C.CERAMIC 25 V 0.1 UF+-80-20X	1
C 8103	CCG9295	C.CERAMIC 25 V 0.1 UF+-80-20X	1
C 8104	CCG0288	C.CERAMIC 50 V 2200 PF+-10X	1
C 8105	CEA0032	C.AL ELYC 50 V 2.2 UF+-20X	1
C 8111	CEL0026	C.AL ELYC 35 V 220 UF+-20X	1
C 8112	CCG0290	C.CERAMIC 50 V 4700 PF+-10X	1
C 8114	CEA0033	C.AL ELYC 50 V 4.7 UF+-20X	1
C 8116	CCG0290	C.CERAMIC 50 V 4700 PF+-10X	1
C 8118	CEL0023	C.AL ELYC 16 V 470 UF+-20X	1
C 8119	CEA0019	C.AL ELYC 16 V 47 UF+-20X	1
C 8121	CEL0026	C.AL ELYC 35 V 220 UF+-20X	1
C 8122	CCG0290	C.CERAMIC 50 V 4700 PF+-10X	1
C 8124	CEA0033	C.AL ELYC 50 V 4.7 UF+-20X	1
C 8126	CCG0290	C.CERAMIC 50 V 4700 PF+-10X	1
C 8131	CEL0023	C.AL ELYC 16 V 470 UF+-20X	1
C 8132	CEL0023	C.AL ELYC 16 V 470 UF+-20X	1
C 8133	CEL0026	C.AL ELYC 35 V 220 UF+-20X	1
C 8134	CEL0026	C.AL ELYC 35 V 220 UF+-20X	1
C 8135	CEL0026	C.AL ELYC 35 V 220 UF+-20X	1
C 8136	CEL0026	C.AL ELYC 35 V 220 UF+-20X	1
C 8137	CCG0620	C.CERAMIC 500 V 680 PF+-10X	1
C 8141	CEA0019	C.AL ELYC 16 V 47 UF+-20X	1
C 8142	CEA0019	C.AL ELYC 16 V 47 UF+-20X	1
C 8143	CEA0031	C.AL ELYC 35 V 22 UF+-20X	1
C 8144	CEA0031	C.AL ELYC 35 V 22 UF+-20X	1
C 8151	CCG9295	C.CERAMIC 25 V 0.1 UF+-80-20X	1
C 8152	CCG9295	C.CERAMIC 25 V 0.1 UF+-80-20X	1
C 8153	CEA0019	C.AL ELYC 16 V 47 UF+-20X	1
C 8154	CDD0001	C.2-LAYER DB-SR5D105	1
D 8005	HDH0306	DIODE HRF32	1
D 8017	HDH0306	DIODE HRF32	1
D 8021	HDH0306	DIODE HRF32	1
D 8022	HDH0475	DIODE S5566B	1
D 8111	HDH0302	DIODE HRF22	1
D 8131	HDH0306	DIODE HRF32	1

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q..TY
R 8041	RMR3999	R.METAL 1/10W 332 KOHM +-1X	1
R 8042	RMR3988	R.METAL 1/10W 22.1 KOHM +-1X	1
R 8043	RMR4163	R.METAL 1/16W 1.8 KOHM +-0.5X	1
R 8044	RMR4000	R.METAL 1/10W 475 KOHM +-1X	1
R 8051	RMR4231	R.METAL 1/10W 20 KOHM +-0.5X	1
R 8052	RMR4178	R.METAL 1/16W 1 MOHM +-0.5X	1
R 8053	RMR4178	R.METAL 1/16W 1 MOHM +-0.5X	1
R 8054	RMR4231	R.METAL 1/10W 20 KOHM +-0.5X	1
R 8055	RMR4178	R.METAL 1/16W 1 MOHM +-0.5X	1
R 8056	RMR4178	R.METAL 1/16W 1 MOHM +-0.5X	1
R 8057	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 8058	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 8061	RME1426	R.METAL 1/10W 100 OHM +-5X	1
R 8071	RME1637	R.METAL 1/10W 3.3 KOHM +-5X	1
R 8081	RME1433	R.METAL 1/10W 120 KOHM +-5X	1
R 8082	RME1458	R.METAL 1/10W 47 KOHM +-5X	1
R 8101	RME1433	R.METAL 1/10W 390 OHM +-5X	1
R 8102	RME1442	R.METAL 1/10W 2.2 KOHM +-5X	1
R 8104	RMR4355	R.METAL 1/10W 11 KOHM +-0.25X	1
R 8111	RMB0009	R.METAL 2 W 0.05 OHM +-10X	1
R 8112	RME1436	R.METAL 1/10W 680 OHM +-5X	1
R 8113	RME1422	R.METAL 1/10W 47 OHM +-5X	1
R 8114	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 8115	RME1452	R.METAL 1/10W 15 KOHM +-5X	1
R 8116	RME1446	R.METAL 1/10W 4.7 KOHM +-5X	1
R 8117	RME1462	R.METAL 1/10W 100 KOHM +-5X	1
R 8118	RMR4139	R.METAL 1/16W 10 KOHM +-0.5X	1
R 8119	RMR4139	R.METAL 1/16W 10 KOHM +-0.5X	1
R 8121	RMB0009	R.METAL 2 W 0.05 OHM +-10X	1
R 8122	RME1434	R.METAL 1/10W 470 OHM +-5X	1
R 8123	RME1422	R.METAL 1/10W 47 OHM +-5X	1
R 8124	RME1450	R.METAL 1/10W 10 KOHM +-5X	1
R 8125	RME1452	R.METAL 1/10W 15 KOHM +-5X	1
R 8126	RME1446	R.METAL 1/10W 4.7 KOHM +-5X	1
R 8127	RME1462	R.METAL 1/10W 100 KOHM +-5X	1
R 8128	RMR4145	R.METAL 1/16W 12 KOHM +-0.5X	1
R 8129	RMR4145	R.METAL 1/16W 12 KOHM +-0.5X	1
R 8131	RMR4170	R.METAL 1/10W 10 OHM +-5X	1
R 8132	RMR4145	R.METAL 1/16W 12 KOHM +-0.5X	1
R 8133	RMR4145	R.METAL 1/16W 12 KOHM +-0.5X	1
R 8134	RMR4139	R.METAL 1/16W 10 KOHM +-0.5X	1
R 8135	RME1414	R.METAL 1/10W 10 OHM +-5X	1
R 8136	RME1414	R.METAL 1/10W 10 OHM +-5X	1
R 8137	RME1431	R.METAL 1/10W 270 OHM +-5X	1
R 8138	RME1414	R.METAL 1/10W 10 OHM +-5X	1
R 8139	RME1414	R.METAL 1/10W 10 OHM +-5X	1
R 8151	RME1413	R.METAL 1/10W 0 OHM	1
R 8154	RME1424	R.METAL 1/10W 68 OHM +-5X	1
T 8001	8590466	XFMR EI-22	1
T 8131	8590467	XFMR SEE-16	1
TR 8001	HTJ0020	TRANSISTOR 2SJ2965	1
TR 8031	HTJ0019	TRANSISTOR 2SJ2465	1
TR 8032	HTK0210	TRANSISTOR 2SK1828	1
TR 8033	HTK0210	TRANSISTOR 2SK1828	1

## PEG-012 F. PANEL

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
TR 8081	HTD0161	TRANSISTOR DTC124EKA	1
TR 8111	HTJ0019	TRANSISTOR 2SJ246S	1
TR 8121	HTJ0019	TRANSISTOR 2SJ246S	1

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
C 7501	CC69295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 7502	CC69295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 7503	CC69295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 7504	CC69295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 7505	CC69295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 7506	CC69295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 7507	CC69295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 7517	CC69295	C.CERAMIC 25 V 0.1 UF+80-20%	1
C 7521	CC69292	C.CERAMIC 50 V10000 PF+-10%	1
C 7522	CC69292	C.CERAMIC 50 V10000 PF+-10%	1
C 7523	CC69292	C.CERAMIC 50 V10000 PF+-10%	1
C 7524	CC69292	C.CERAMIC 50 V10000 PF+-10%	1
C 7525	CC69292	C.CERAMIC 50 V10000 PF+-10%	1
C 7526	CC60540	C.CERAMIC 50 V 1000 PF+-5%	1
C 7527	CC60540	C.CERAMIC 50 V 1000 PF+-5%	1
C 7528	CC60540	C.CERAMIC 50 V 1000 PF+-5%	1
C 7529	CC60540	C.CERAMIC 50 V 1000 PF+-5%	1
C 7530	CC60540	C.CERAMIC 50 V 1000 PF+-5%	1
C 7531	CC60540	C.CERAMIC 50 V 1000 PF+-5%	1
C 7532	CC60540	C.CERAMIC 50 V 1000 PF+-5%	1
C 7533	CC60540	C.CERAMIC 50 V 1000 PF+-5%	1
C 7534	CC60540	C.CERAMIC 50 V 1000 PF+-5%	1
C 7535	CC60540	C.CERAMIC 50 V 1000 PF+-5%	1
C 7536	CC69292	C.CERAMIC 50 V10000 PF+-10%	1
C 7547	CC60540	C.CERAMIC 50 V 1000 PF+-5%	1
C 7550	CC60540	C.CERAMIC 50 V 1000 PF+-5%	1
D 7514	HLL0011	LED LN28RPPN (RED)	1
D 7515	HLL0011	LED LN28RPPN (RED)	1
D 7516	HLL0014	LED LN117WP23	1
D 7541	HDD0159	DIODE DCA010	1
D 7543	HDD0159	DIODE DCA010	1
D 7545	HDD0159	DIODE DCA010	1
ENC7501	EMY0046	ENCODER EC11B15244	1
ENC7502	EMY0046	ENCODER EC11B15244	1
ENC7503	EMY0046	ENCODER EC11B15244	1
ENC7504	EMY0046	ENCODER EC11B15244	1
ENC7505	EMY0045	ENCODER EC11B15204	1
IC 7501	IDH1552	IC.LOGIC HD74HC148FP	1
IC 7502	IMT0013	IC TMP82C55AM-10	1
IC 7503	IDH1433	IC.LOGIC HD74HC14FP	1
IC 7504	IDH1381	IC.LOGIC HD74HC86FP	1
IC 7505	IDH1381	IC.LOGIC HD74HC86FP	1
IC 7506	IDH1387	IC.LOGIC HD74HC27FP	1
IC 7507	IDT0148	IC.LOGIC TC74HC123AF	1
L 7501	TLB0023	COIL BLM31A02PB	1
P 7501	8592804	AA CABLE ASSY 8592804-AA	1
R 7501	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7502	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7503	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7504	RME1458	R.METAL 1/10W 47 KOHM +-5%	1

## PEG-011 INVERTER

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
C 8501	CEL0031	C.AL ELYC 35 V 220 UF+-20%	1
C 8502	CQE0240	C.PLASTIC 100 V33000 PF+-5%	1
C 8503	CCD0407	C.CERAMIC 2000 V 22 PF+-10%	1
L 8501	TLR0023	COIL RCH-895-681K	1
P 8501	8592804	AA CABLE ASSY 8592804-AA	1
P 8502	JBS0066	CONNECTOR S48-XH-A	1
P 8503	JBX2689	CONNECTOR 52043-1610	1
R 8501	RME1448	R.METAL 1/10W 6.8 KOHM +-5%	1
R 8502	RME1448	R.METAL 1/10W 6.8 KOHM +-5%	1
T 8501	8590465	XFMR EW-12H	1
TR 8501	HTC0994	TRANSISTOR 2SC2873Y (MO)	1
TR 8502	HTC0994	TRANSISTOR 2SC2873Y (MO)	1
TR 8503	HTD0161	TRANSISTOR DTC124EKA	1
TR 8504	HTD0160	TRANSISTOR DTA124EKA	1

SYMBOL	..PART CODE..	..... DESCRIPTION .....	Q.TY
R 7505	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7506	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7507	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7508	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7509	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7510	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7511	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7512	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7513	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7514	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 7515	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 7516	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 7517	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 7518	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 7519	RME1438	R.METAL 1/10W 1 KOHM +-5%	1
R 7521	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7522	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7523	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7524	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7525	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7526	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7527	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7528	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7529	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7530	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7531	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7532	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7533	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7534	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7535	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7536	RME1450	R.METAL 1/10W 10 KOHM +-5%	1
R 7537	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7541	RME1462	R.METAL 1/10W 100 KOHM +-5%	1
R 7542	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7543	RME1462	R.METAL 1/10W 100 KOHM +-5%	1
R 7544	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7545	RME1462	R.METAL 1/10W 100 KOHM +-5%	1
R 7546	RME1458	R.METAL 1/10W 47 KOHM +-5%	1
R 7547	RME1462	R.METAL 1/10W 100 KOHM +-5%	1
R 7550	RME1466	R.METAL 1/10W 470 KOHM +-5%	1
R 7551	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 7552	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 7553	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 7554	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 7555	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 7556	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 7557	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 7558	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 7559	RME1426	R.METAL 1/10W 100 OHM +-5%	1
R 7560	RME1413	R.METAL 1/10W 0 OHM	R
R 7561	RME1413	R.METAL 1/10W 0 OHM	R
R 7570	RME1413	R.METAL 1/10W 0 OHM	R
RM 7501	RZA0365	R.BLOCK EXB-M16P473J	1
TR 7501	HTC0686	TRANSISTOR 2SC2462C (LC)	1

SYMBOL	PART CODE	DESCRIPTION	QTY
TR 7502	HTC0686	TRANSISTOR 2SC2462C (LC)	1
TR 7503	HTC0686	TRANSISTOR 2SC2462C (LC)	1
TR 7504	HTC0686	TRANSISTOR 2SC2462C (LC)	1
TR 7505	HTC0686	TRANSISTOR 2SC2462C (LC)	1
TR 7541	HTC0590	TRANSISTOR 2SC1621B4	1
TR 7543	HTC0590	TRANSISTOR 2SC1621B4	1
TR 7545	HTC0590	TRANSISTOR 2SC1621B4	1

CHASSIS

SYMBOL	PART CODE	DESCRIPTION	QTY
BBZ0441	CABLE FLAT	SMCD24 x 100BLP1.0S4MT0.7UL	2
GEA0029	UNIT LCD	TFD40W11	1
GEB0008	BACKLIGHT	RB-047V413-A	1
8592808	BATTERY	8N-1800SCR-L4	1

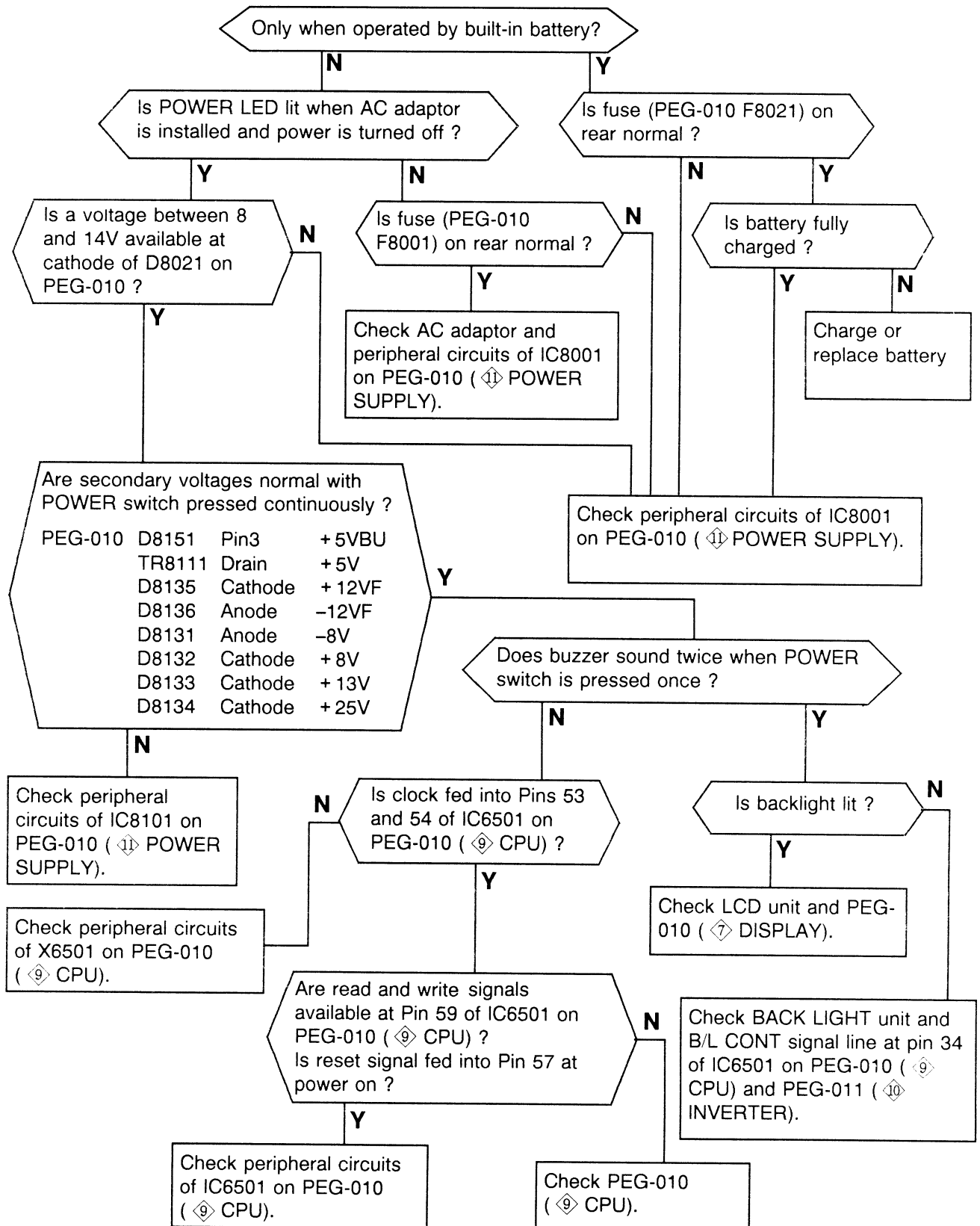
## 10. MECHANICAL PARTS LIST AND EXPLODED VIEW

Symbol	Description	Part Code	Qty	Remarks
G01	Case 1 assy	8580433 A	1	
1	Case 1	130152 A	1	
16	Foot	8416271 C	4	
18	Label	8393786 A	1	
19	Shield sheet	3262695 A	1	
23	Label	8596206 A	1	
G02	Case 2 assy	8580434 A	1	
2	Case 2	130153 A	1	
10	Panel	3262629 A	1	
21	Mesh	8596216 A	1	
22	Label	8596208 A	1	
25	Sticker wire	8543461 E	1	
G03	LCD cover assy	8580435 A	1	
4	LCD cover	130155 A	1	
11	Name plate	8588516 A	1	
20	Filter	8596189 B	1	
G04	PEG-009 ATT PCB assy	8592004 A	1	
30	Shield case	3262626 AA	1	
31	Shield	8588511 A	1	
32	Shield plate	8588512 A	1	
33	Terminal	8588517 A	1	
34	Support	8481986 C	2	
35	Shield plate	3262657 A	1	
36	Cusion	8411928 I	2	
G05	Battery bracket assy	8580475 A	1	
9	Battery bracket	8588521 A	1	
24	Rubber	8330712 M	1	
G06	PEG-010 PCB assy	8592004 B	1	
G07	PEG-011 PCB assy	8592004 C	1	
G08	PEG-012 PCB assy	8592004 D	1	
3	LCD case	130154 A	1	
5	Stopper	3262633 A	1	
6	Axis	8588520 A	1	
7	Bracket	8588490 A	1	
8	Lock hinge	3262637 A	1	
12	Rubber key	3262619 A	1	
13	Knob	3262617 A	5	
14	Spring	8588538 A	1	
15	Axis	8588518 A	1	
17	Knob spring	8459020 C	5	
101	Screw M3×6	XCA6306	11	
102	Screw M3×16	XCA6316	4	
103	Screw M2×5	XCA6205	2	
104	Screw	H4014980 13	8	

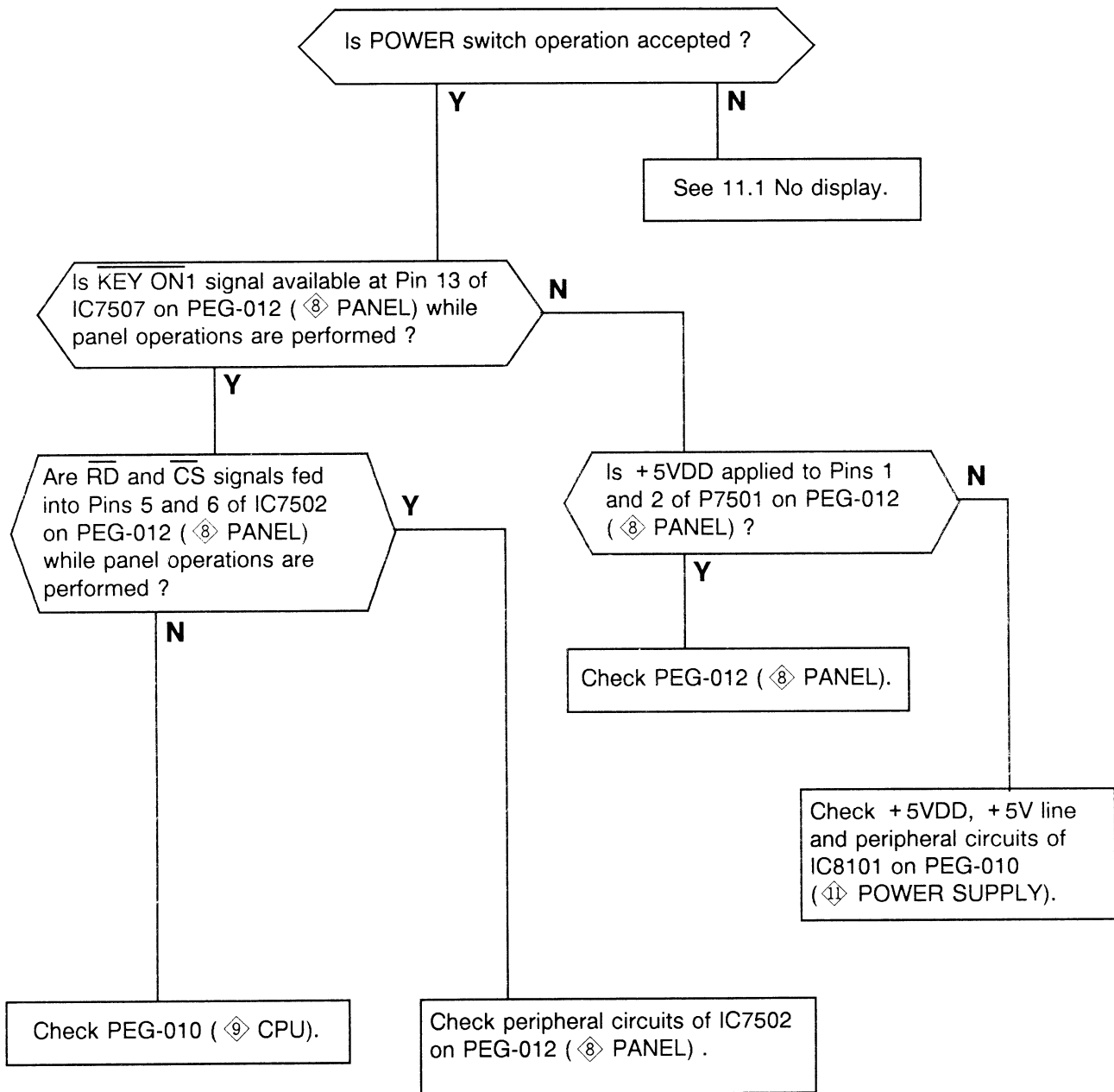


## 11. TROUBLE ISOLATION FLOWCHARTS

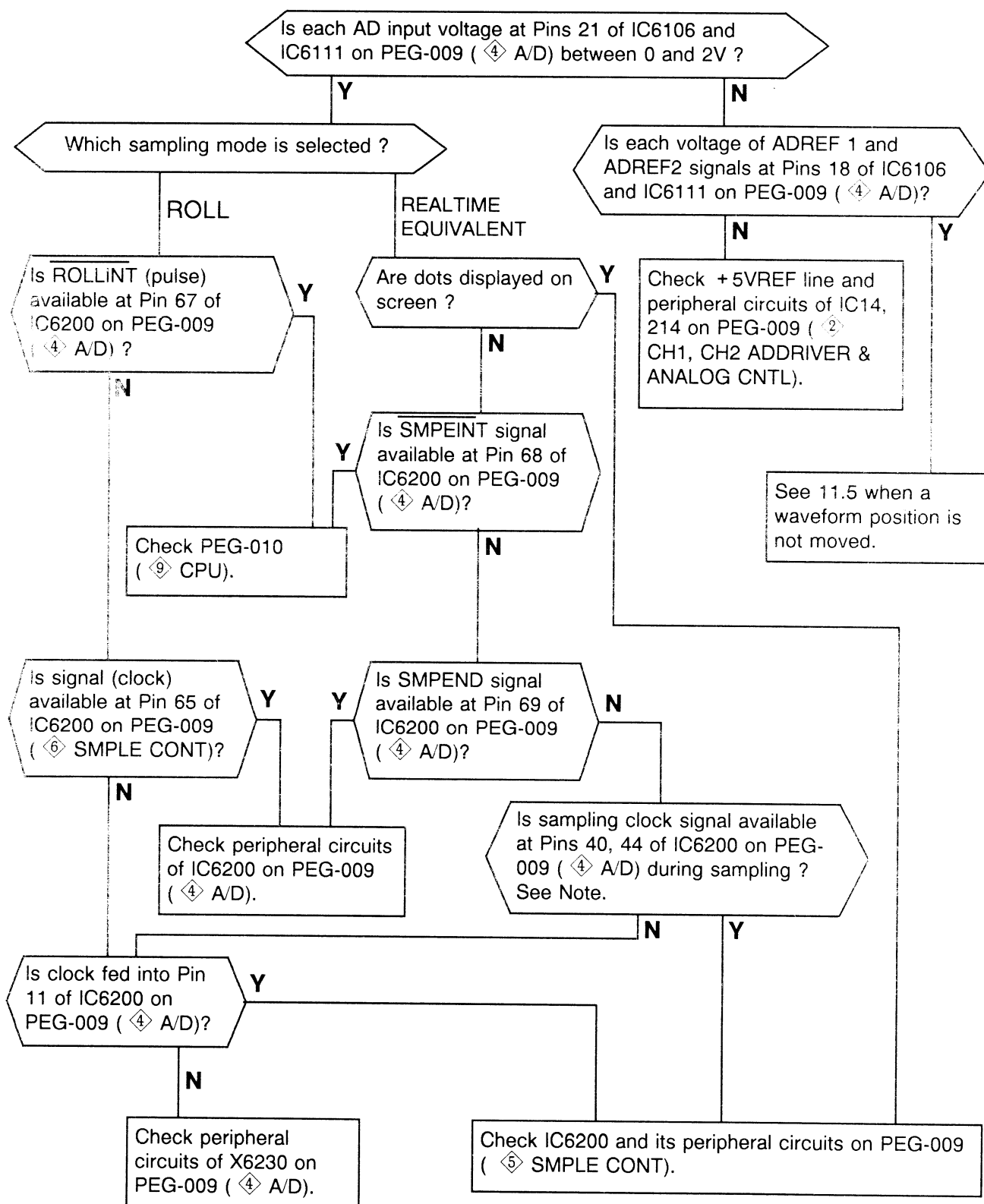
### 11.1 No display



## 11.2 When any panel operation is not accepted



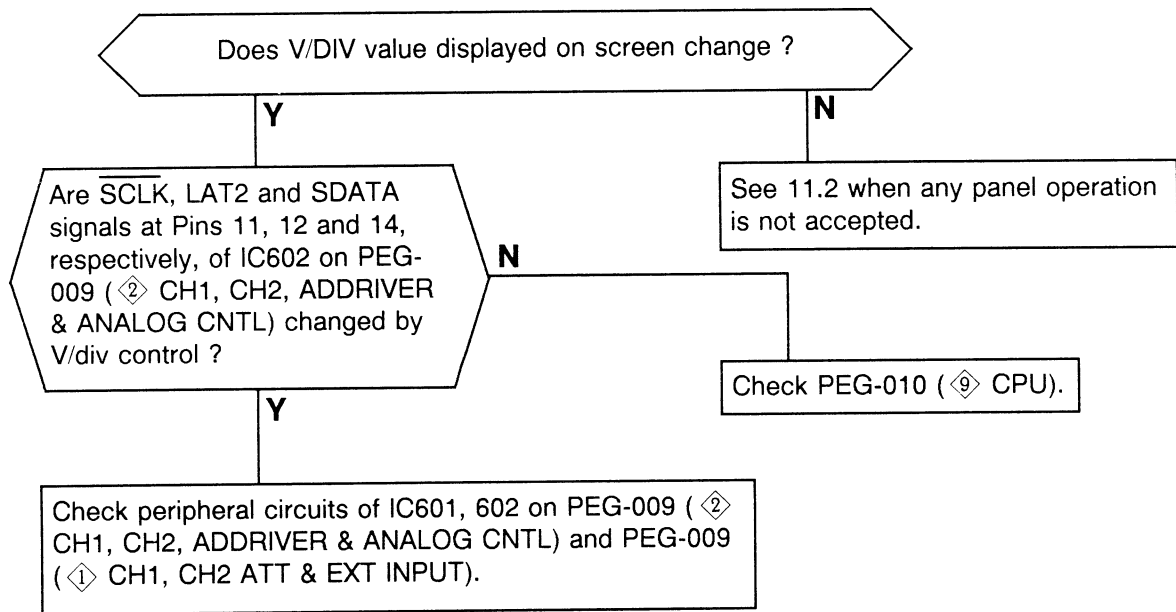
### 11.3 When a trace is not displayed



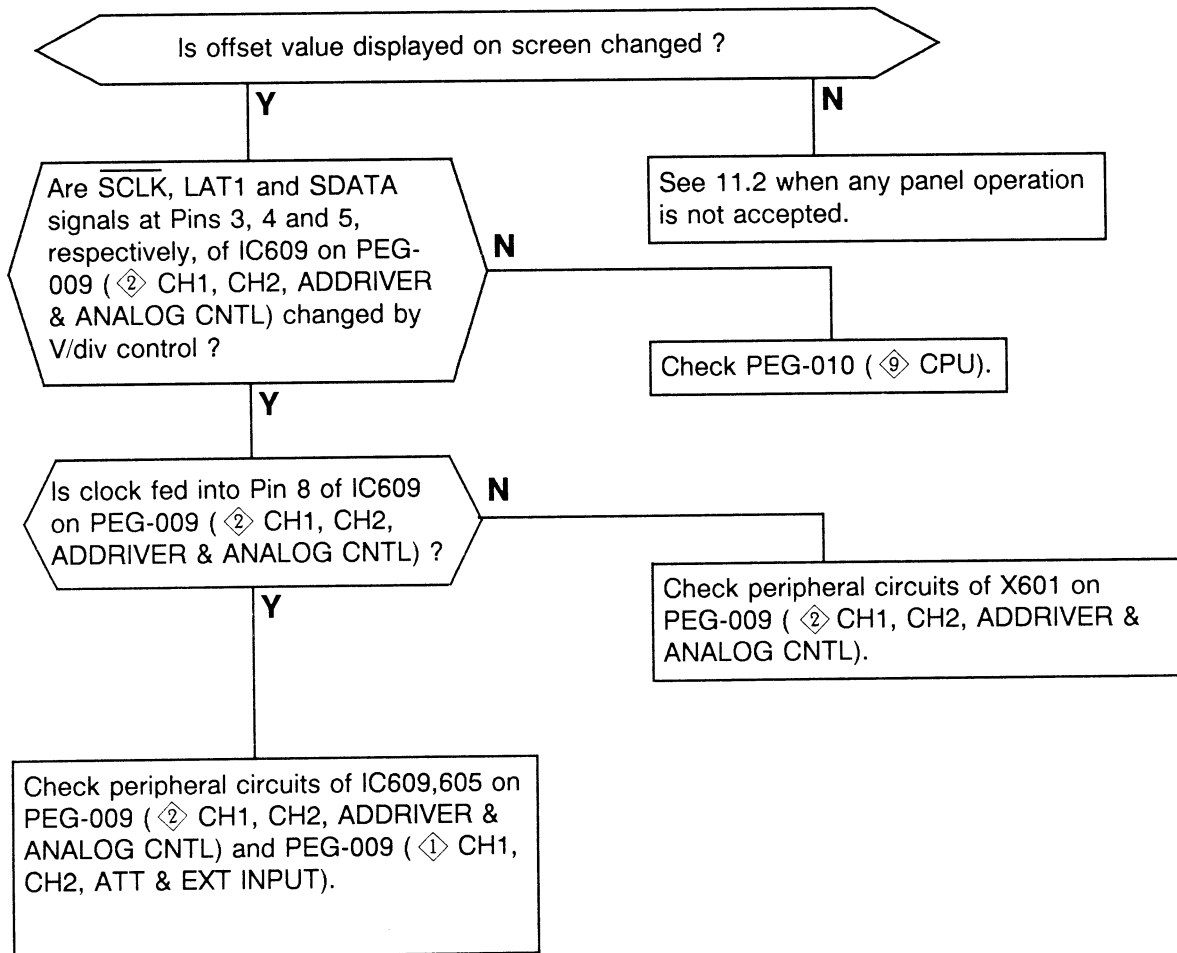
**Note:** For this measurement, set the trigger mode to NORM and set the trigger level to unlock.



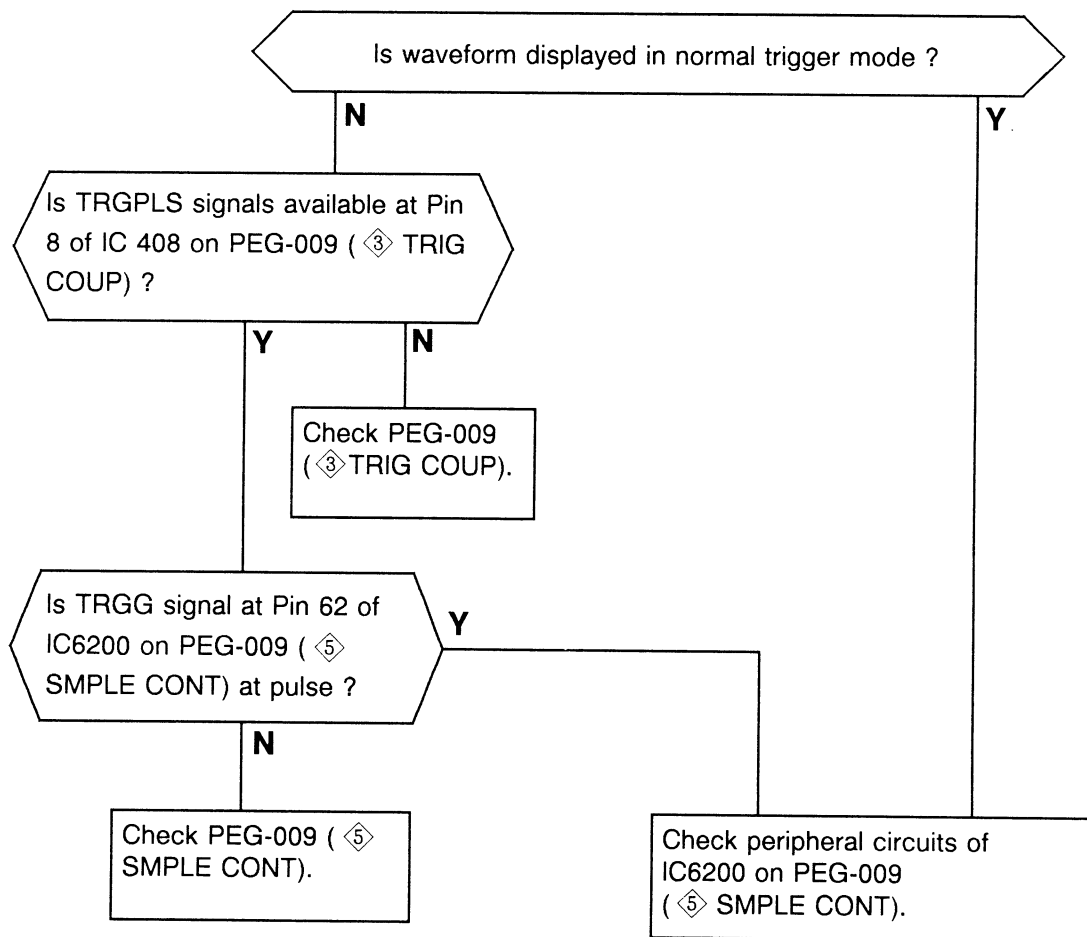
#### 11.4 When volt ranges are not changed



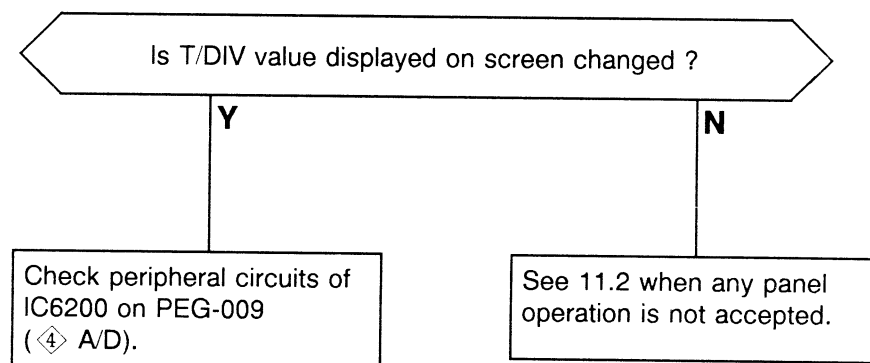
#### 11.5 When a waveform position is not moved



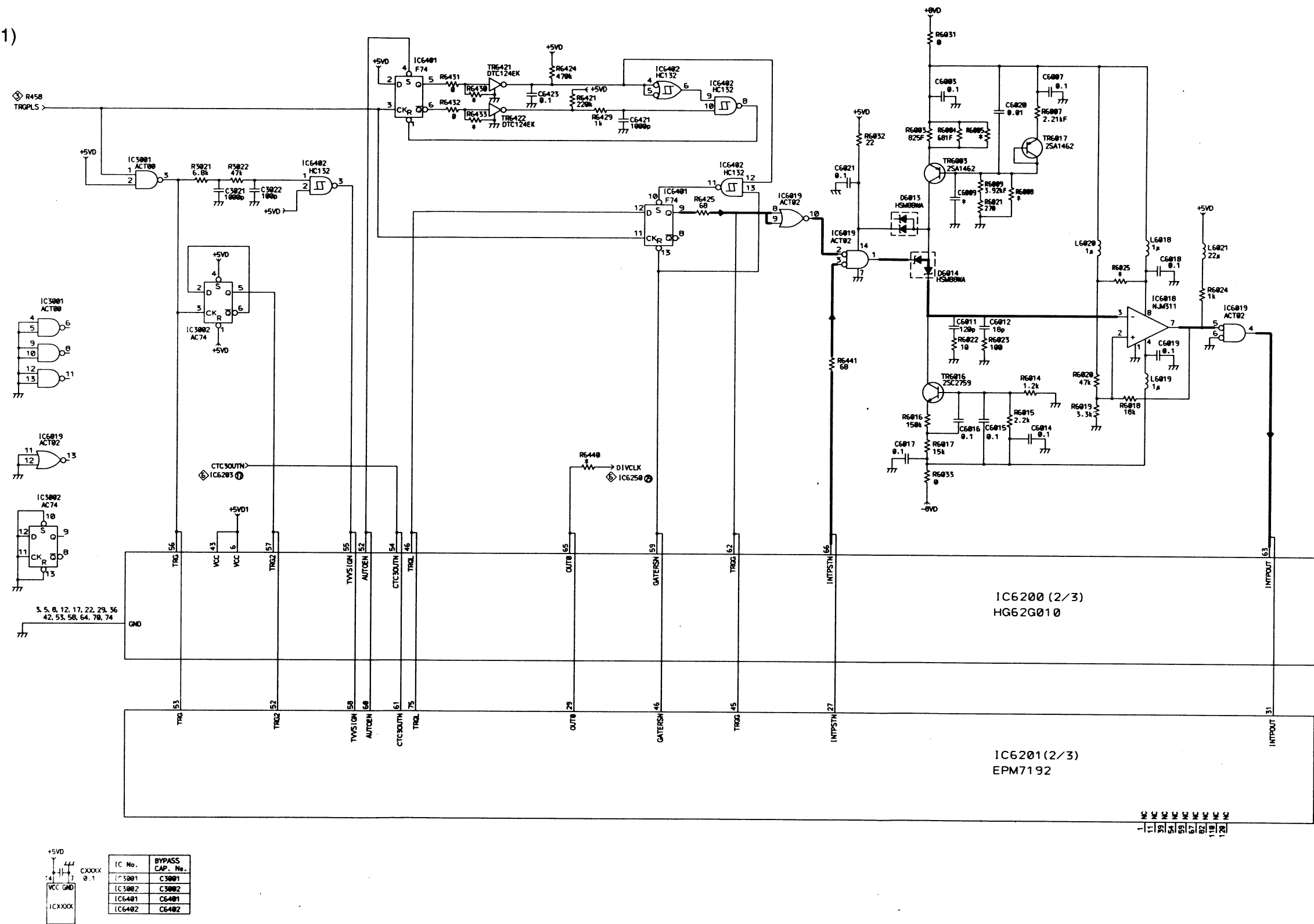
### 11.6 When not trigger



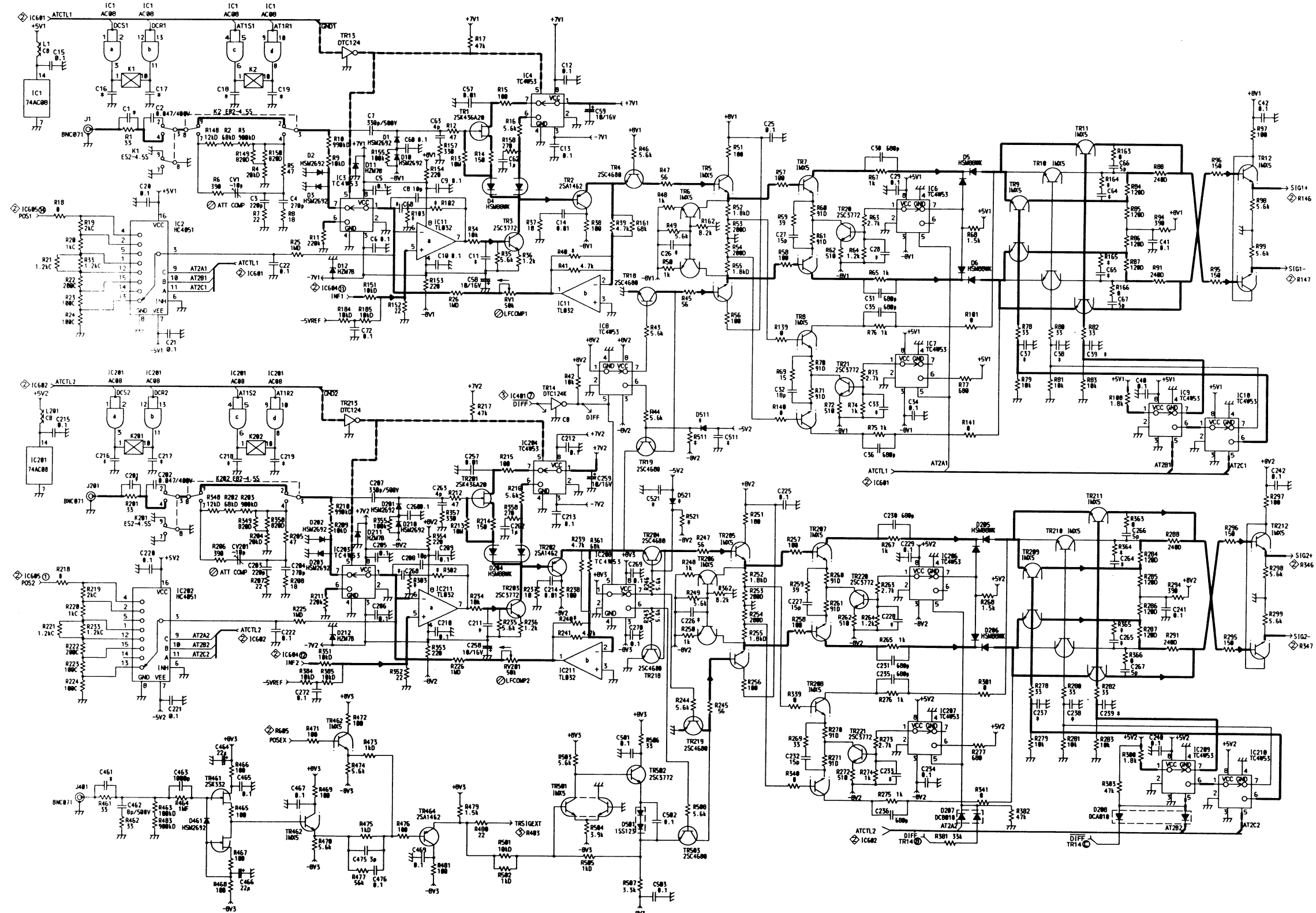
### 11.7 When time ranges are not changed



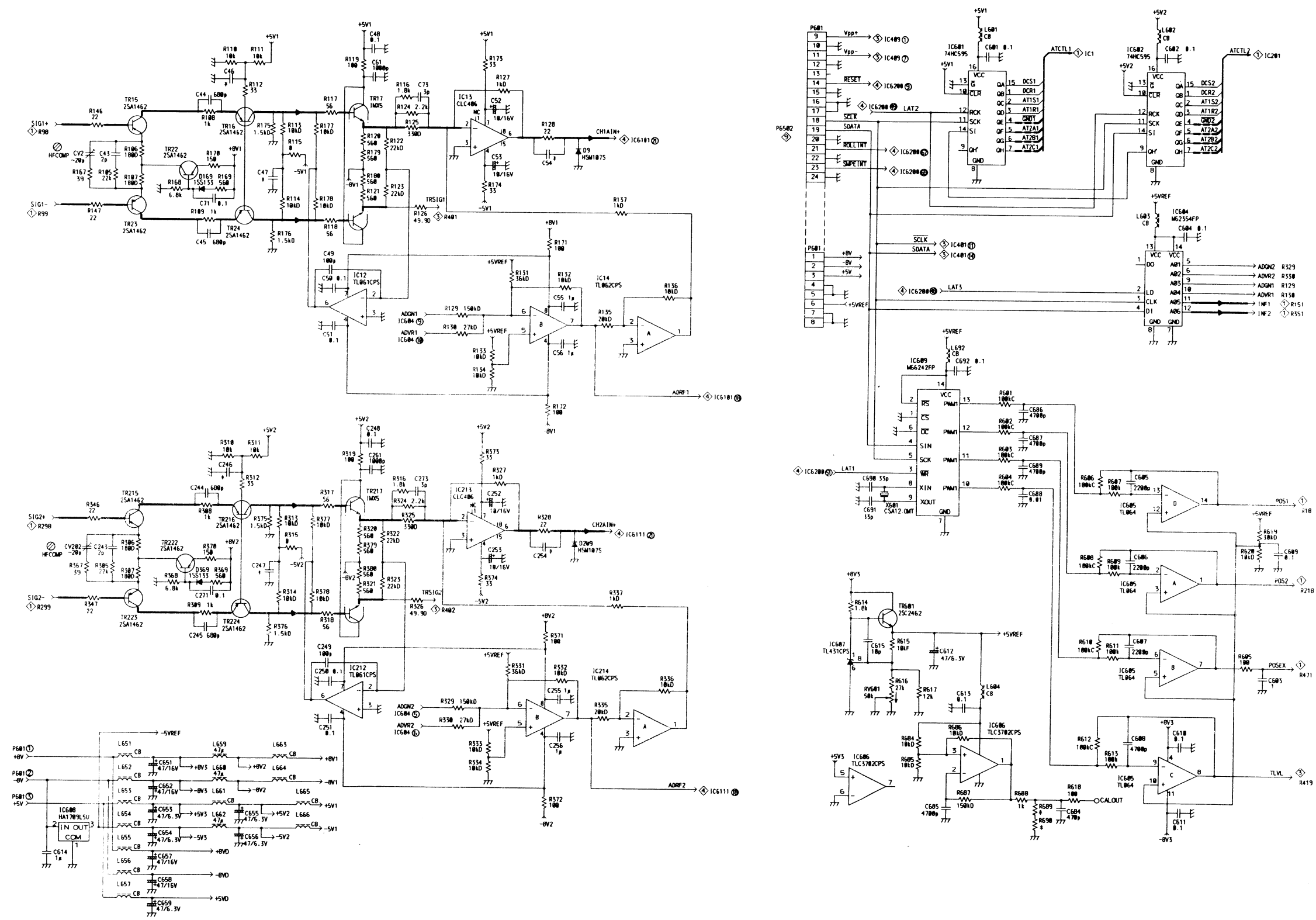
(1) Check lines at failure of  
INTERPOLATOR item. (1/1)



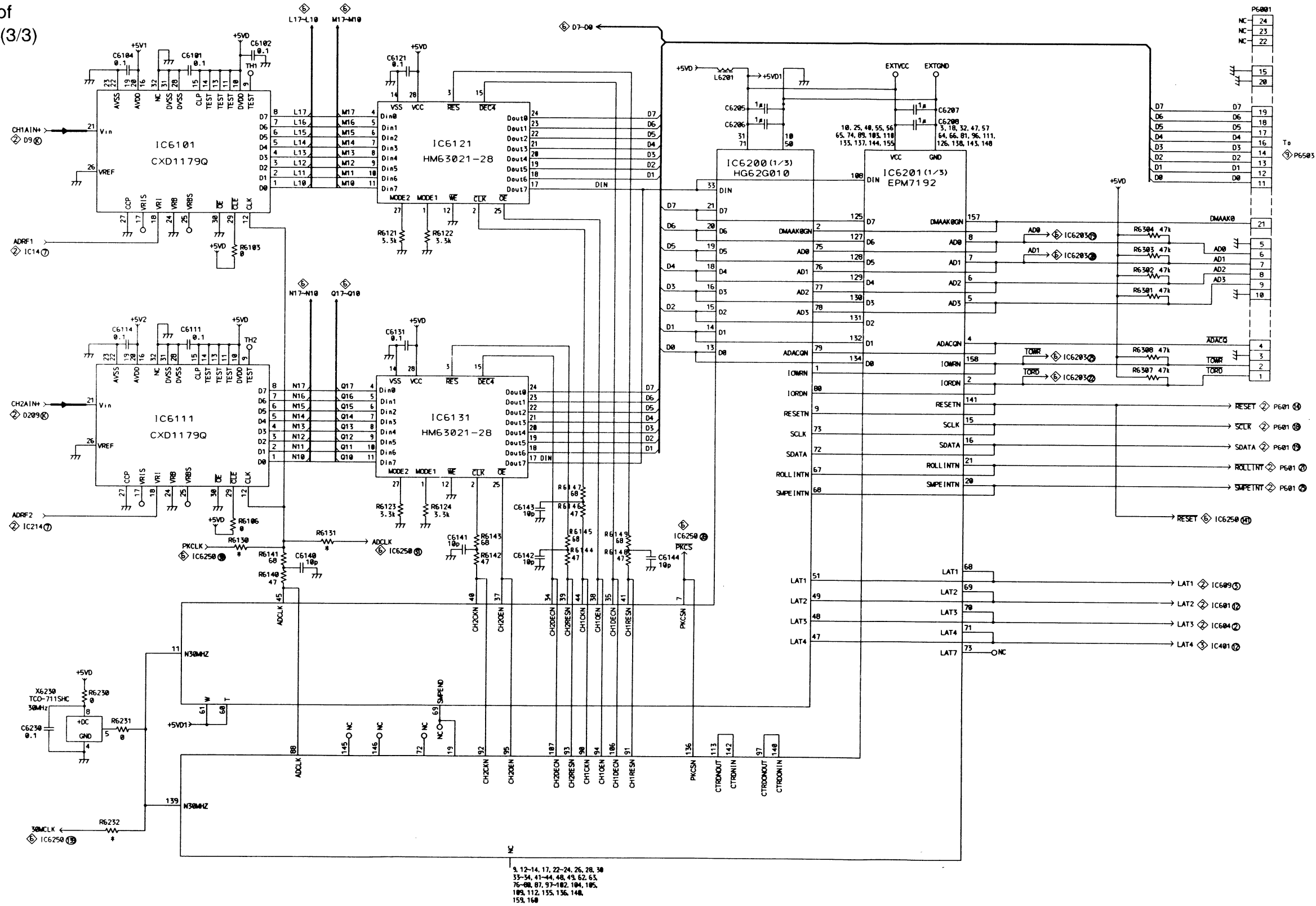
(2) Check lines at failure of  
INPUT OFFSET item. (1/3)



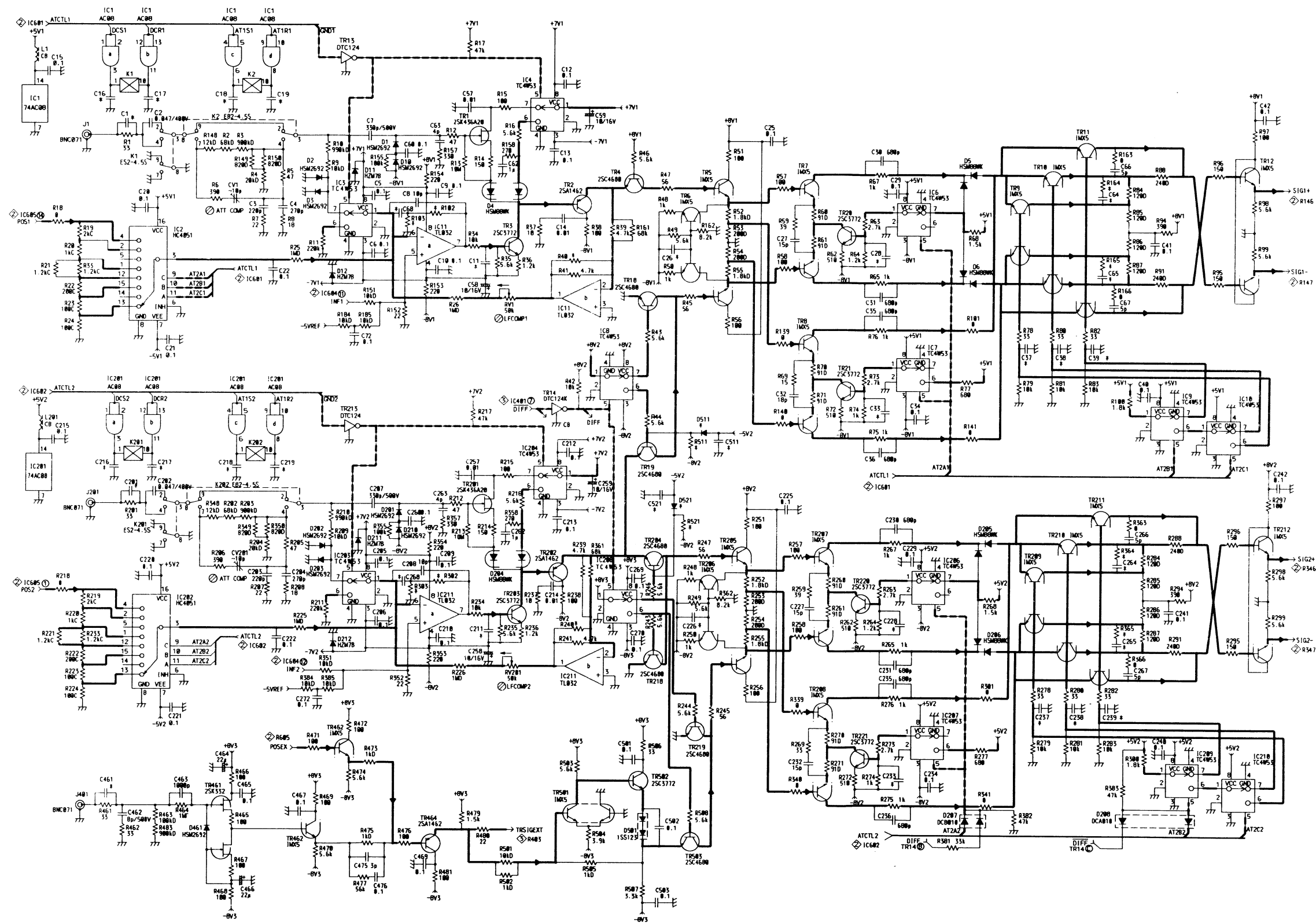
(2) Check lines at failure of  
INPUT OFFSET item. (2/3)



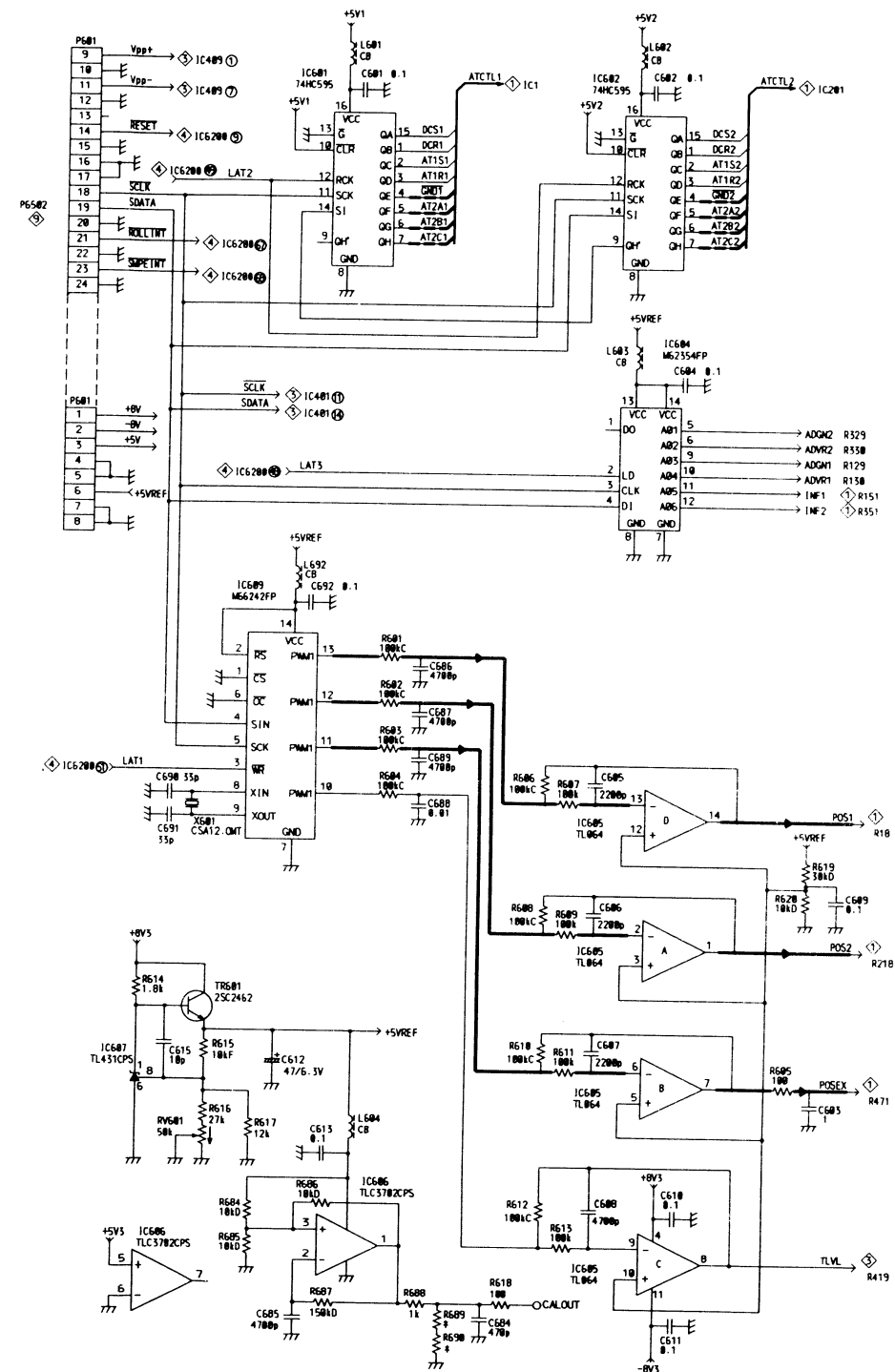
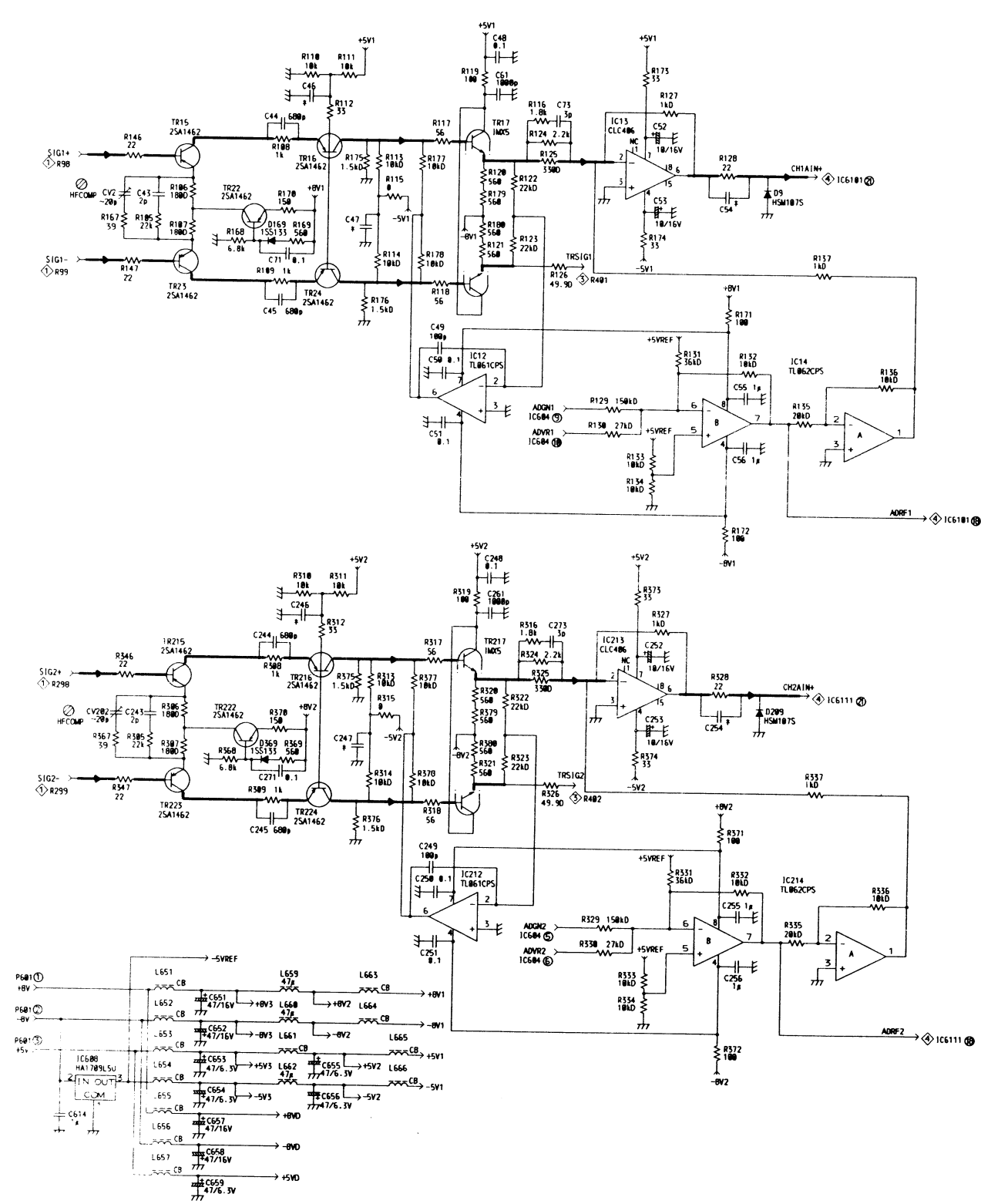
(2) Check lines at failure of  
INPUT OFFSET item. (3/3)



(3) Check lines at failure of 2nd ATT BAL item. (1/3)

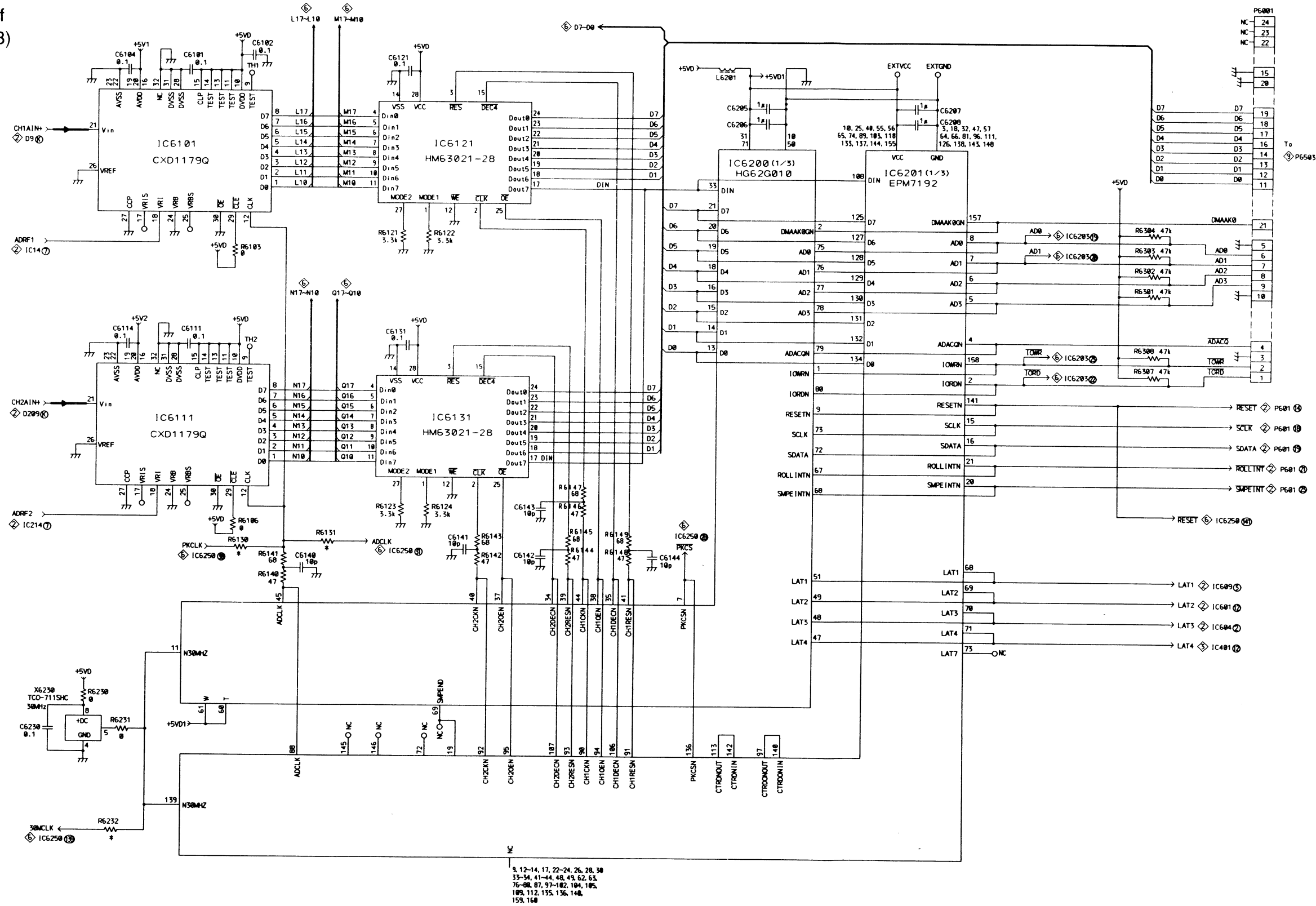


(3) Check lines at failure of  
2nd ATT BAL item. (2/3)

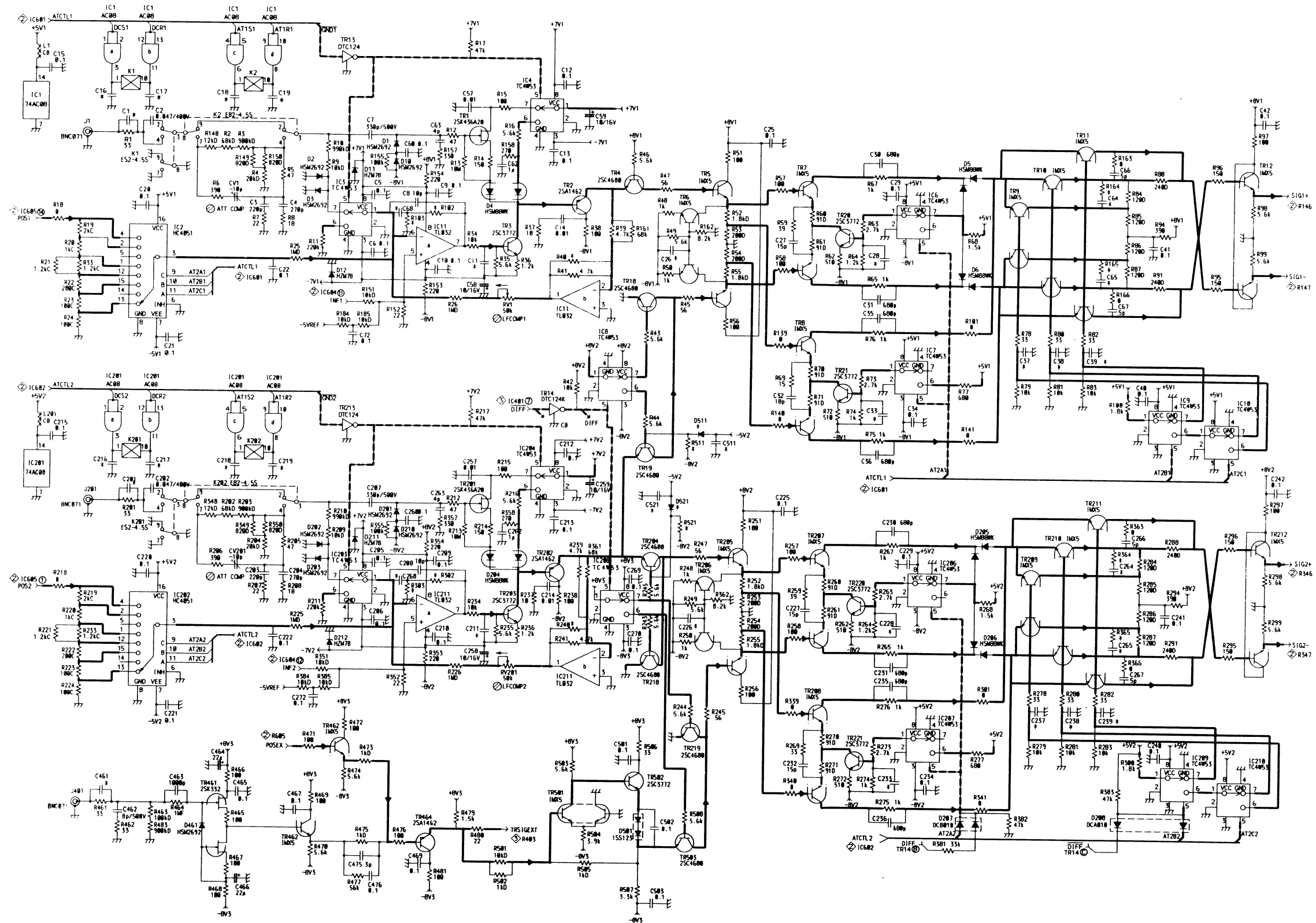




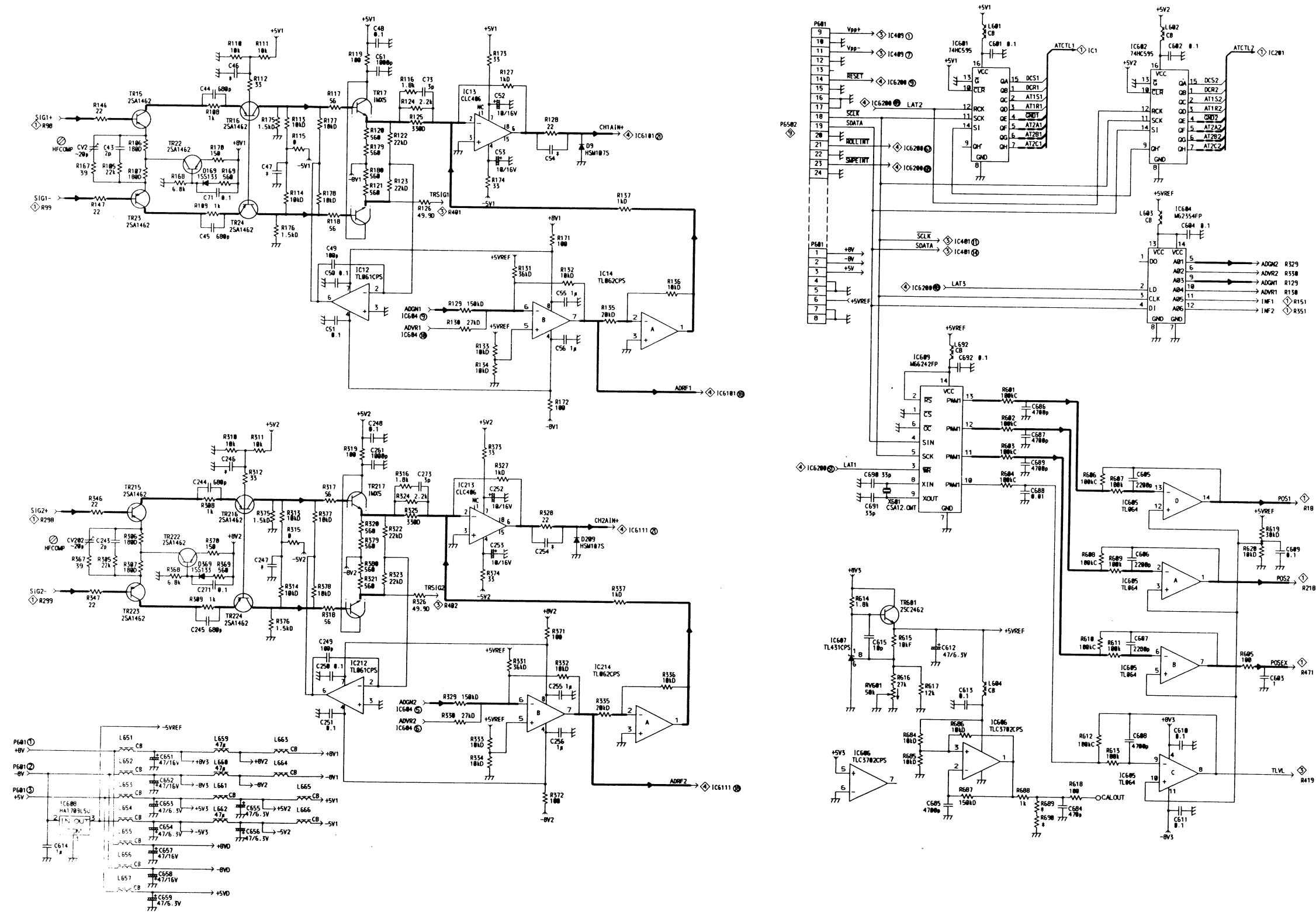
(3) Check lines at failure of  
2nd ATT BAL item. (3/3)



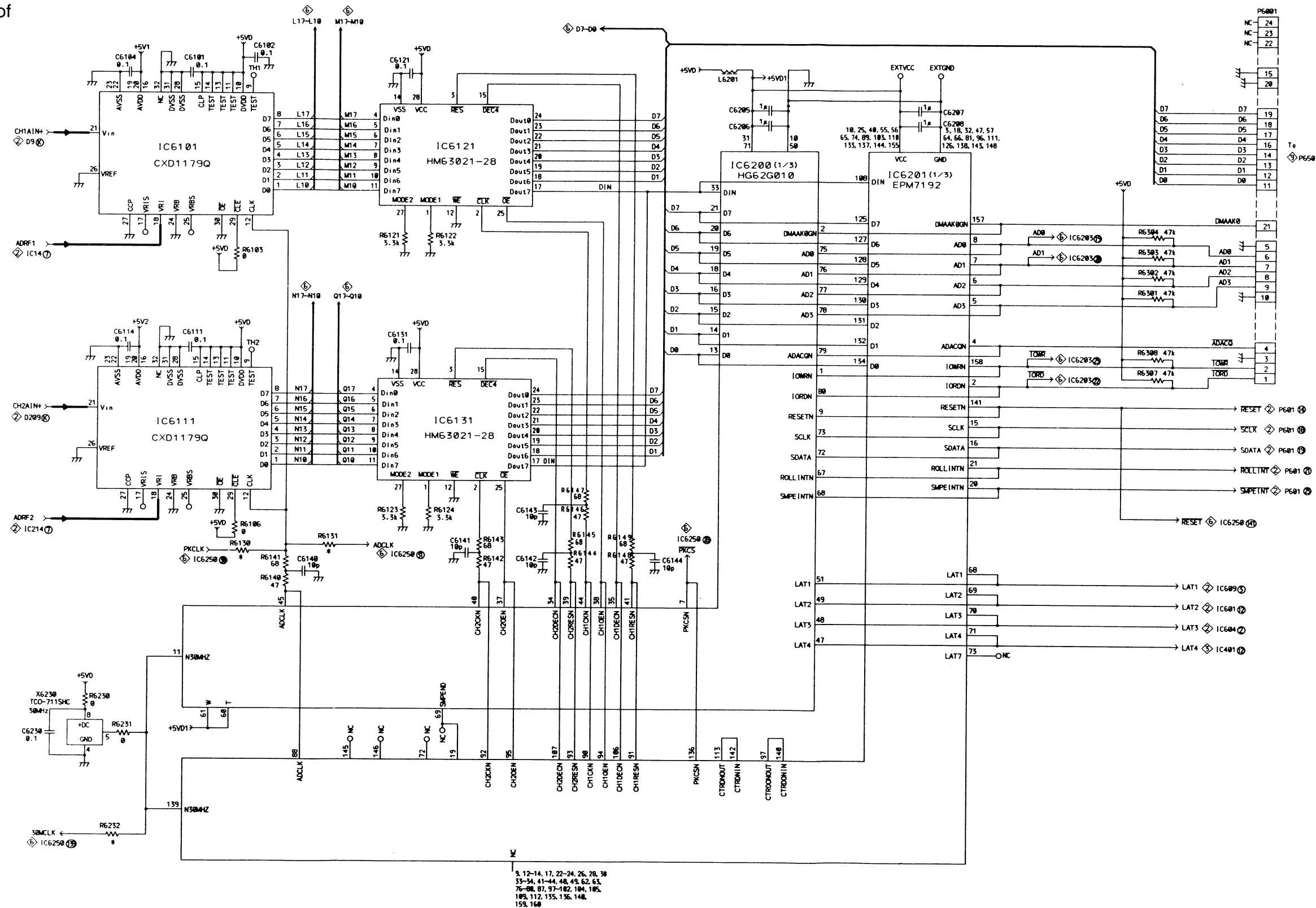
(4) Check lines at failure of  
GAIN item. (1/3)



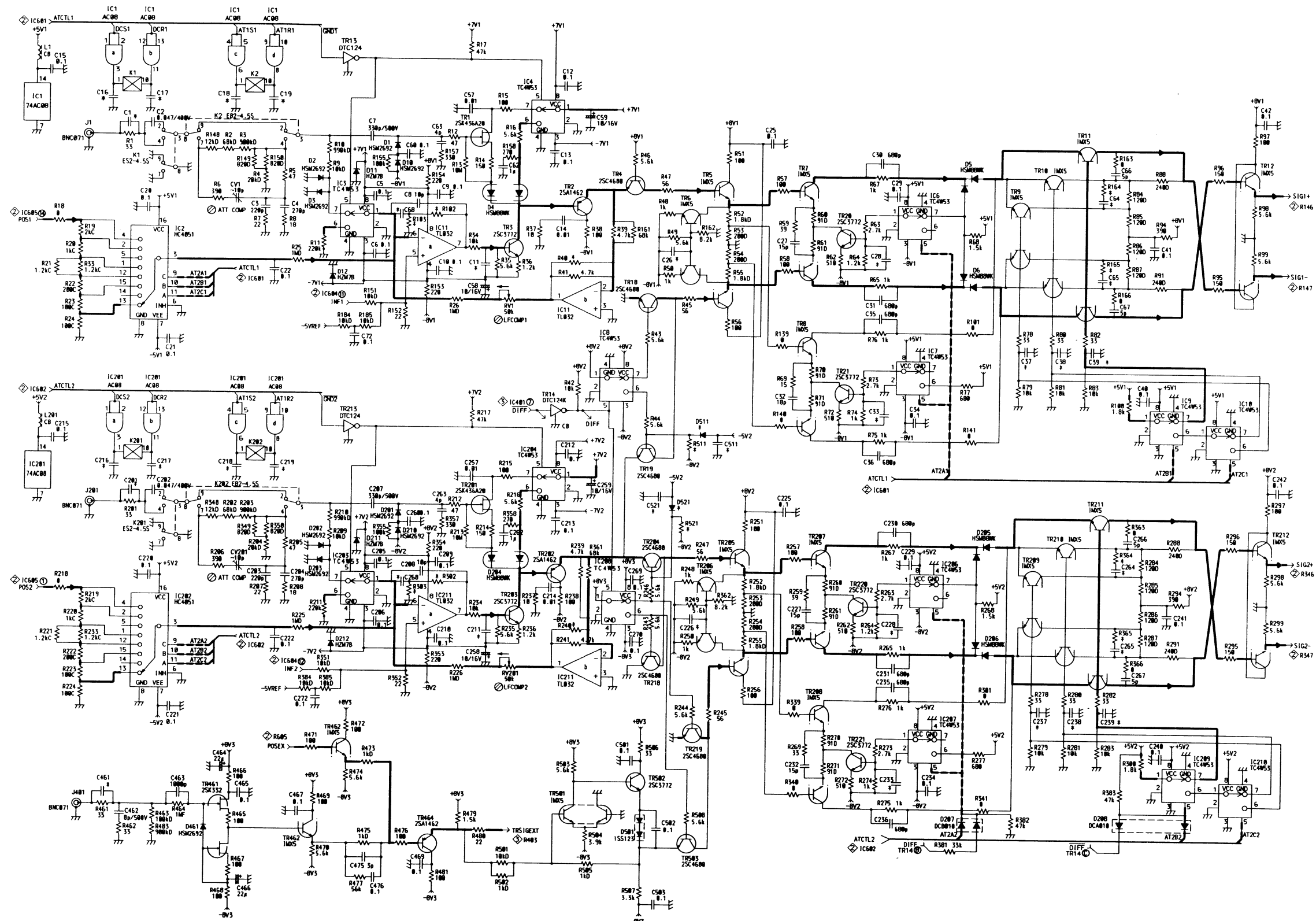
(4) Check lines at failure of  
GAIN item. (2/3)



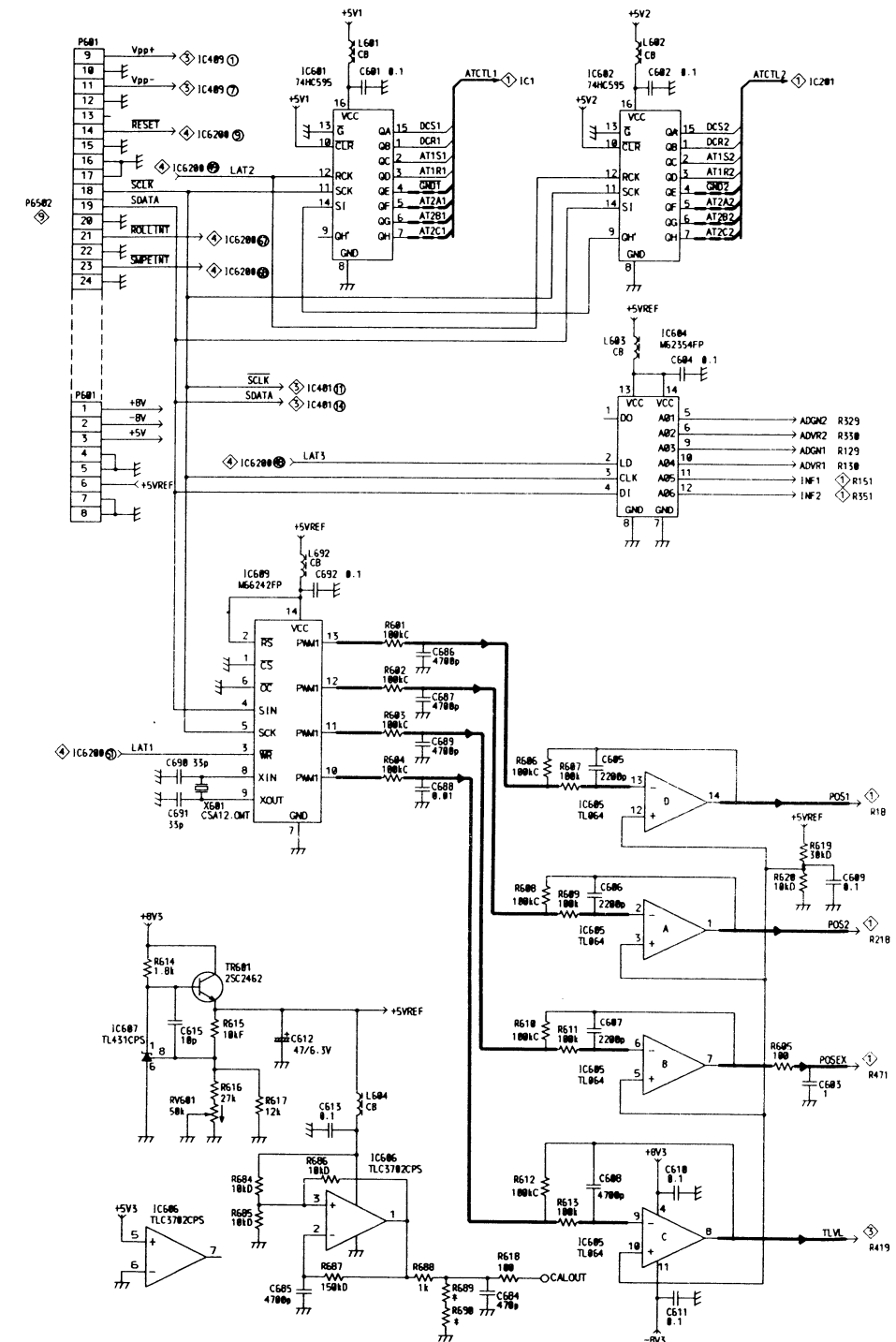
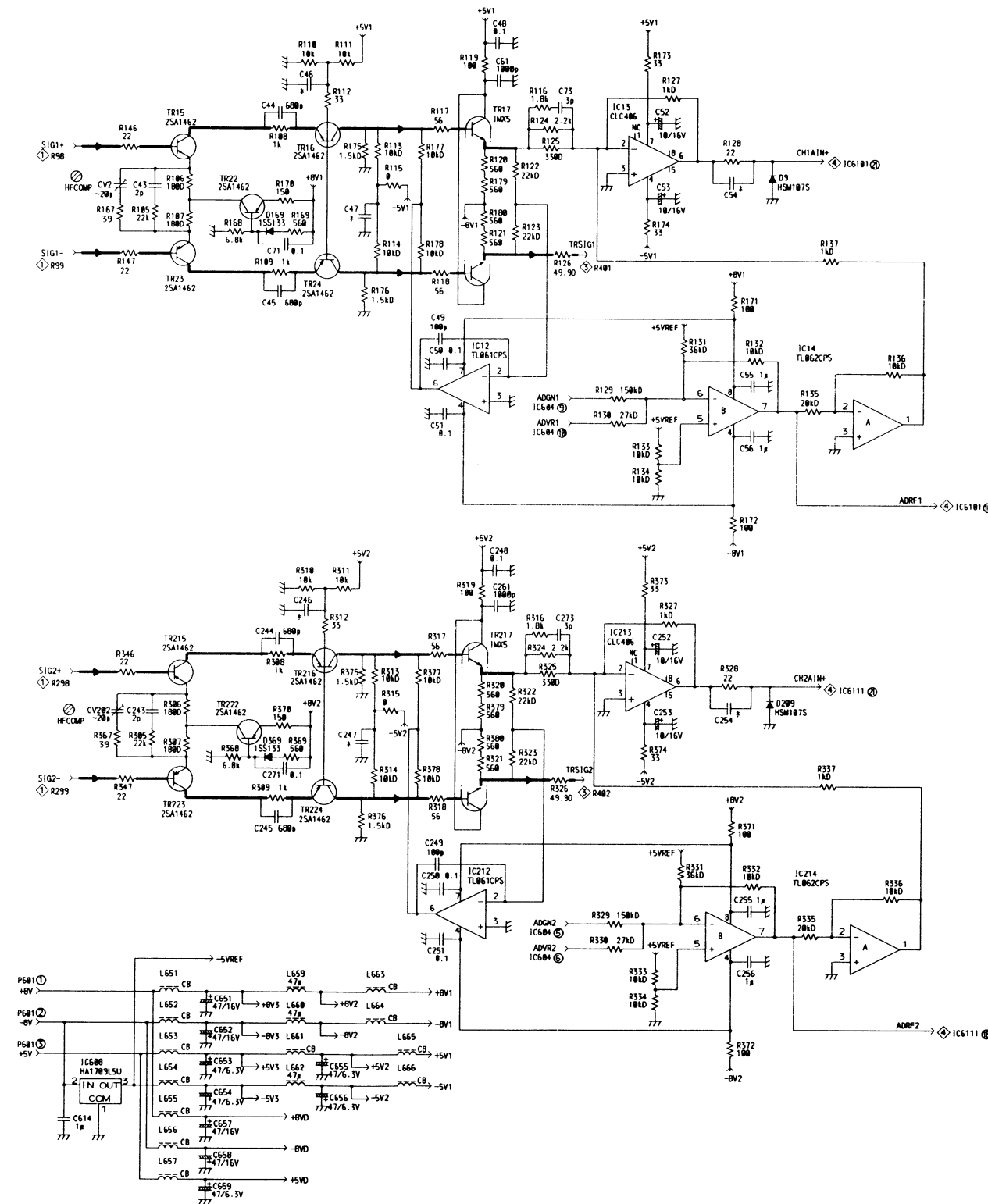
(4) Check lines at failure of GAIN item. (3/3)



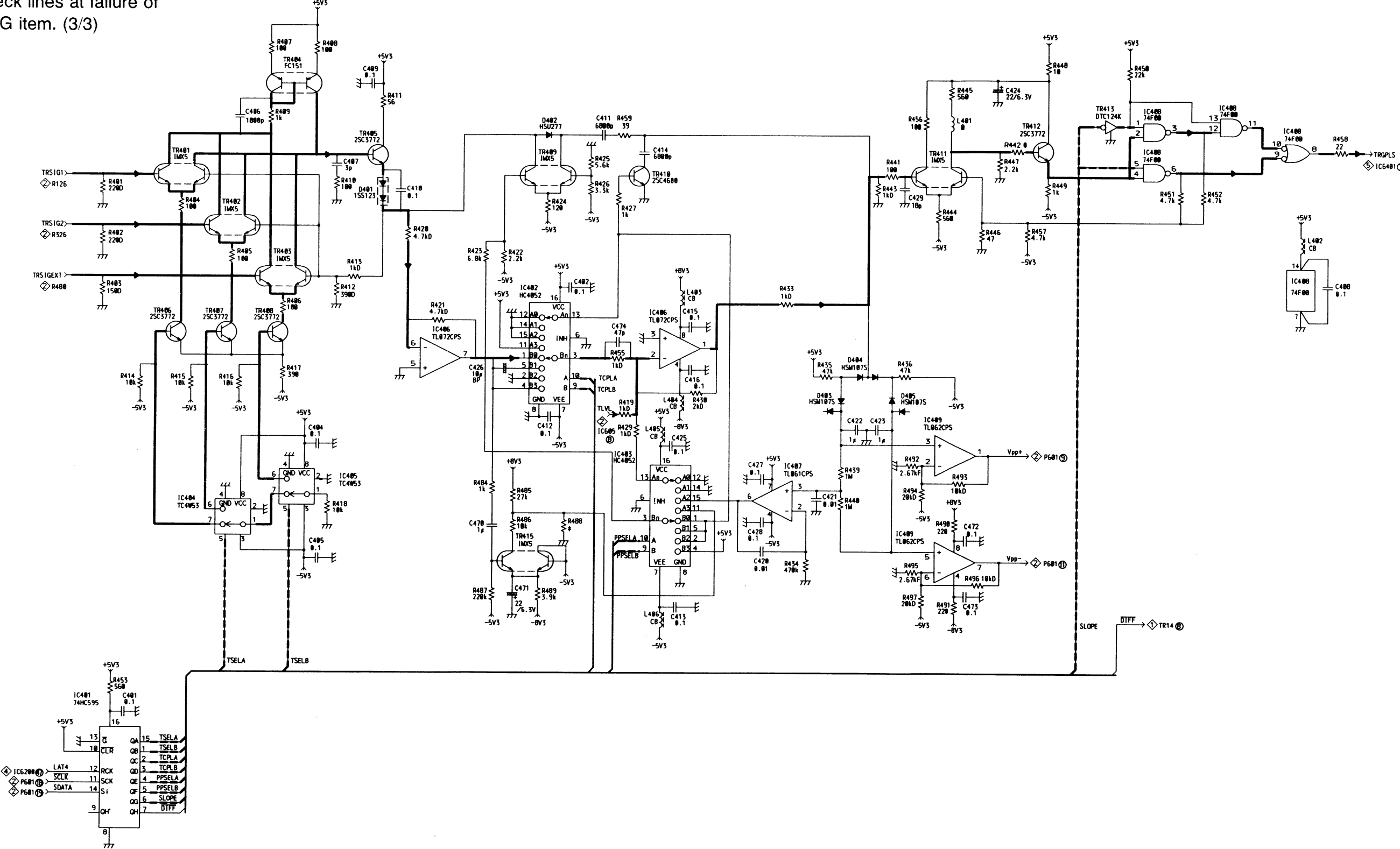
(5) Check lines at failure of TRIG item. (1/3)



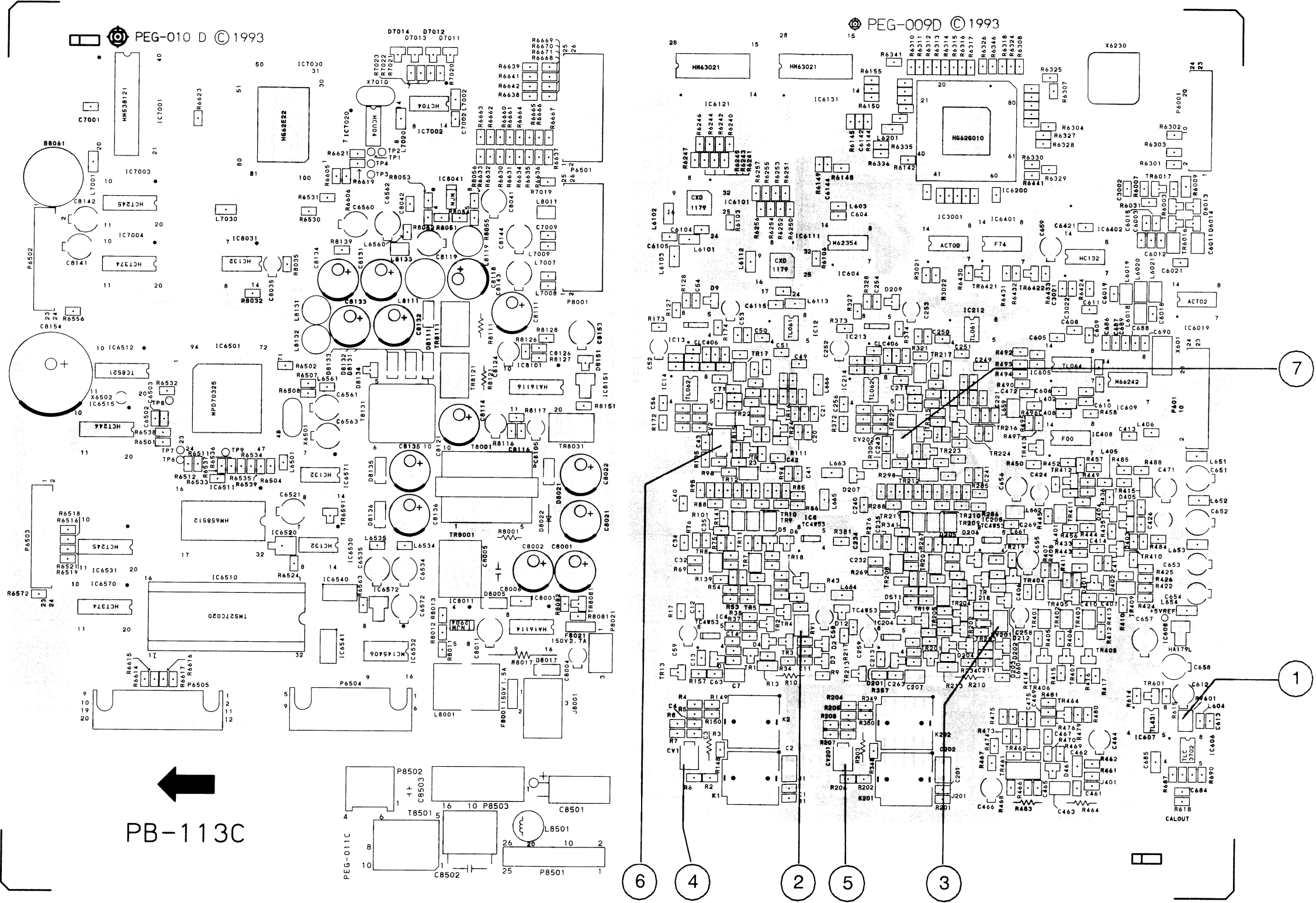
(5) Check lines at failure of TRIG item. (2/3)



(5) Check lines at failure of TRIG item. (3/3)



5. ELECTRICAL PARTS ARRANGEMENT  
(WITH ADJUSTMENT LOCATIONS)



PEG-009D, 010D, 011C (Parts side)

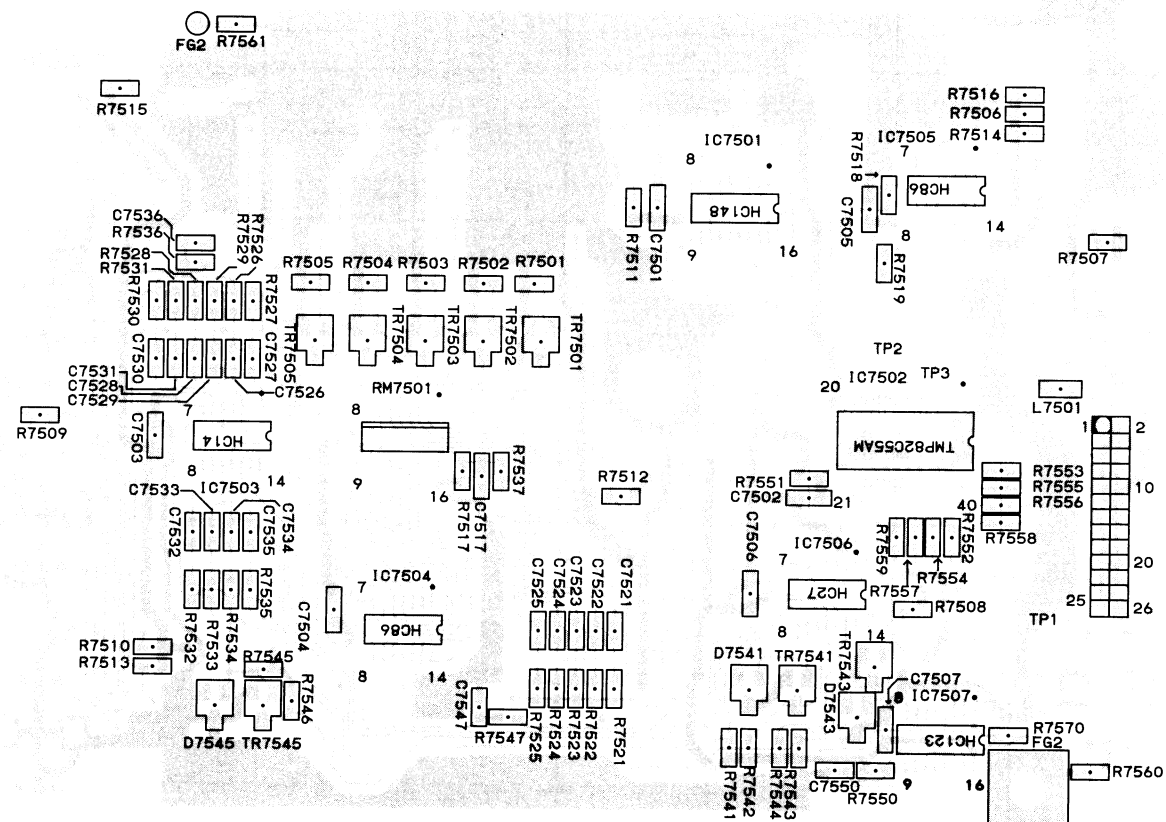




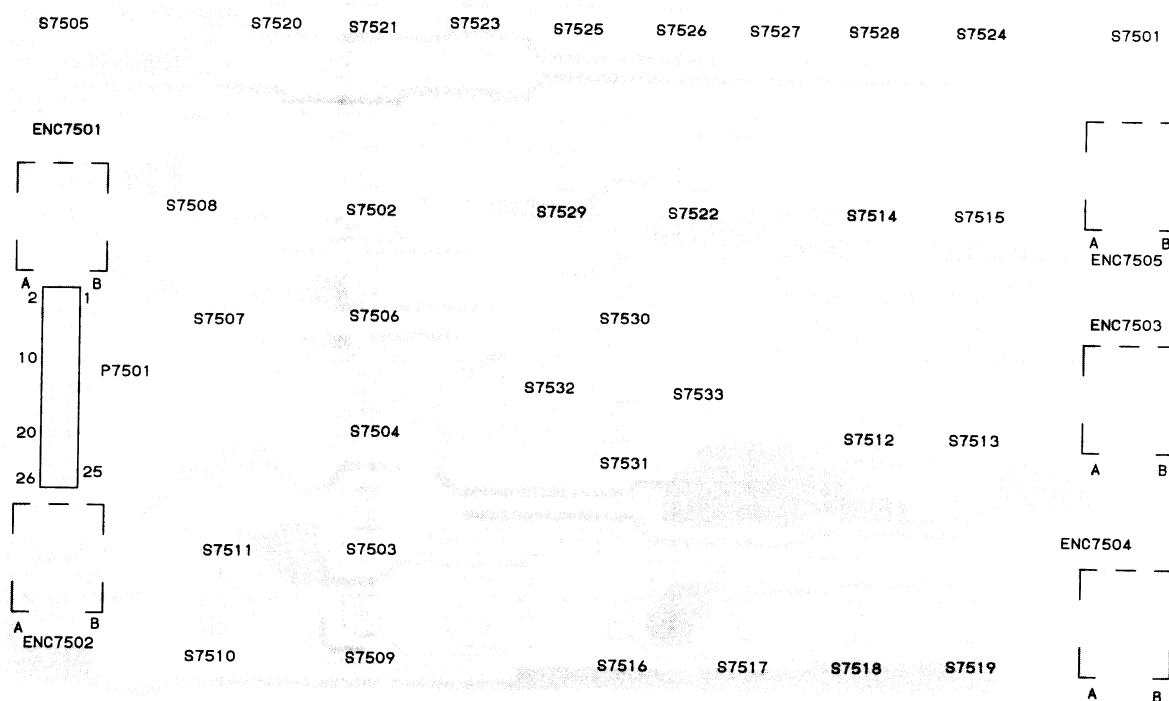


PEG-009D, 010D, 011C (Soldering side)





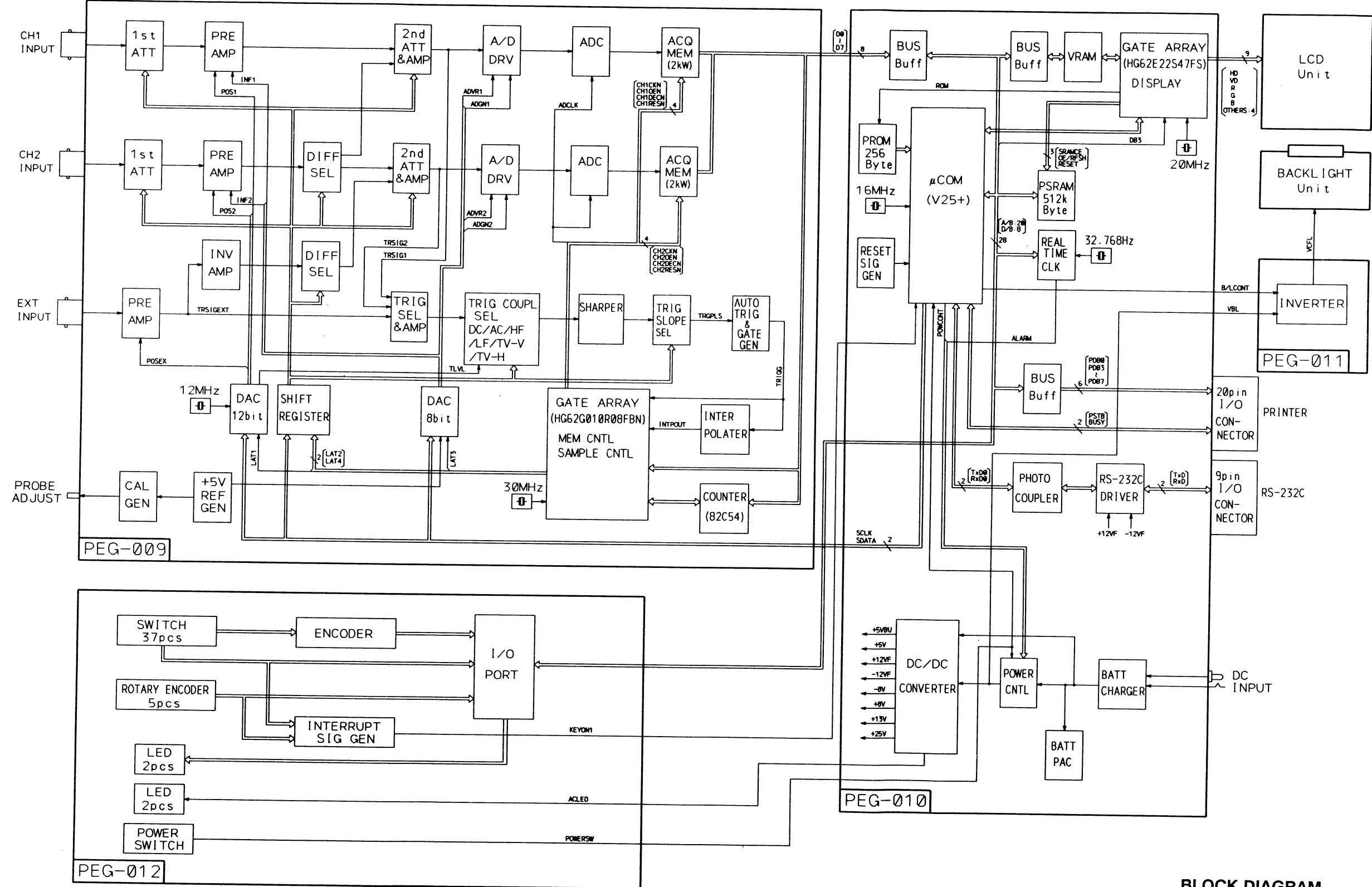
PB-114B



### PEG-012C (Soldering side)

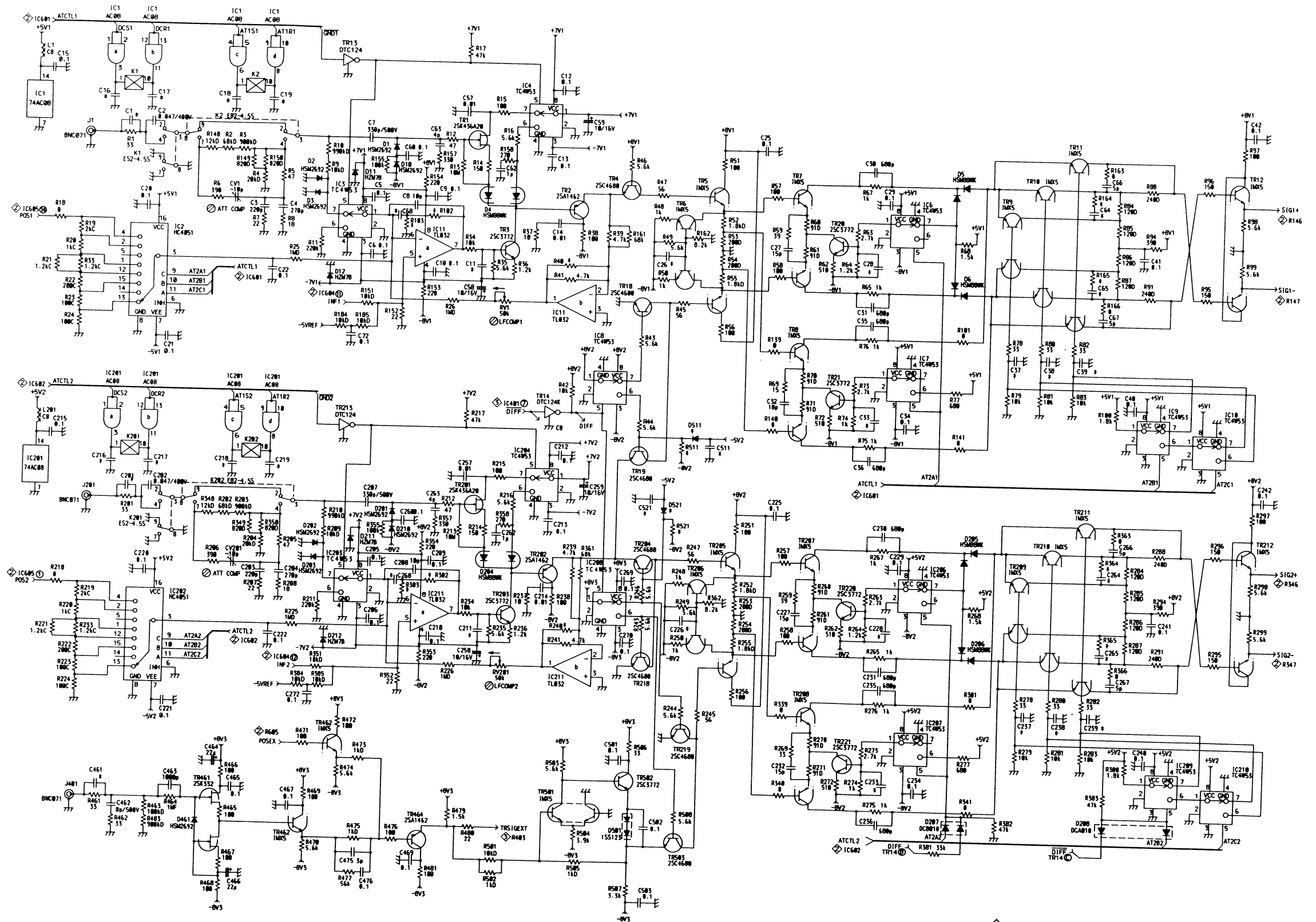
**PEG-012C (Parts side)**

8. GENERAL BLOCK DIAGRAM





BLOCK DIAGRAM

## 9. SCHEMATIC DIAGRAMS





1 CH1, CH2, ATT & EXT INPUT (PEG-009)













CH1 input coupling

CONT \ Coupling	DC	AC	GND
DCR1 (IC601 Pin 1)	L		X
DCS1 (IC601 Pin 15)		L	X
$\overline{\text{GND1}}$ (IC601 Pin 4)	H	H	L













CH2 input coupling


CONT \ Coupling	DC	AC	GND
DCR2 (IC602 Pin 1)	L		X
DCS2 (IC602 Pin 15)		L	X
$\overline{\text{GND2}}$ (IC602 Pin 4)	H	H	L

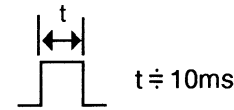
CH1 VOLTS RANGE

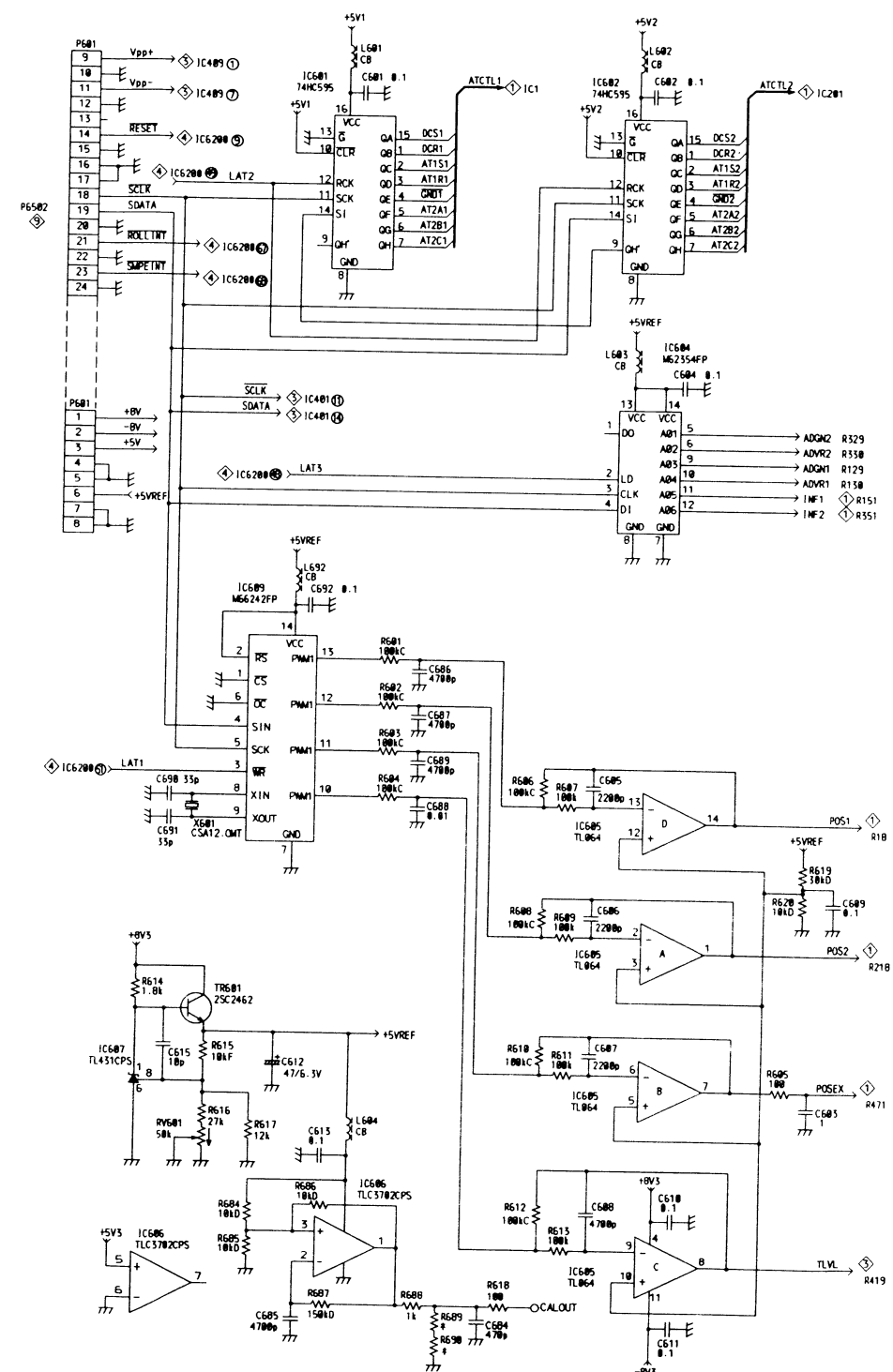
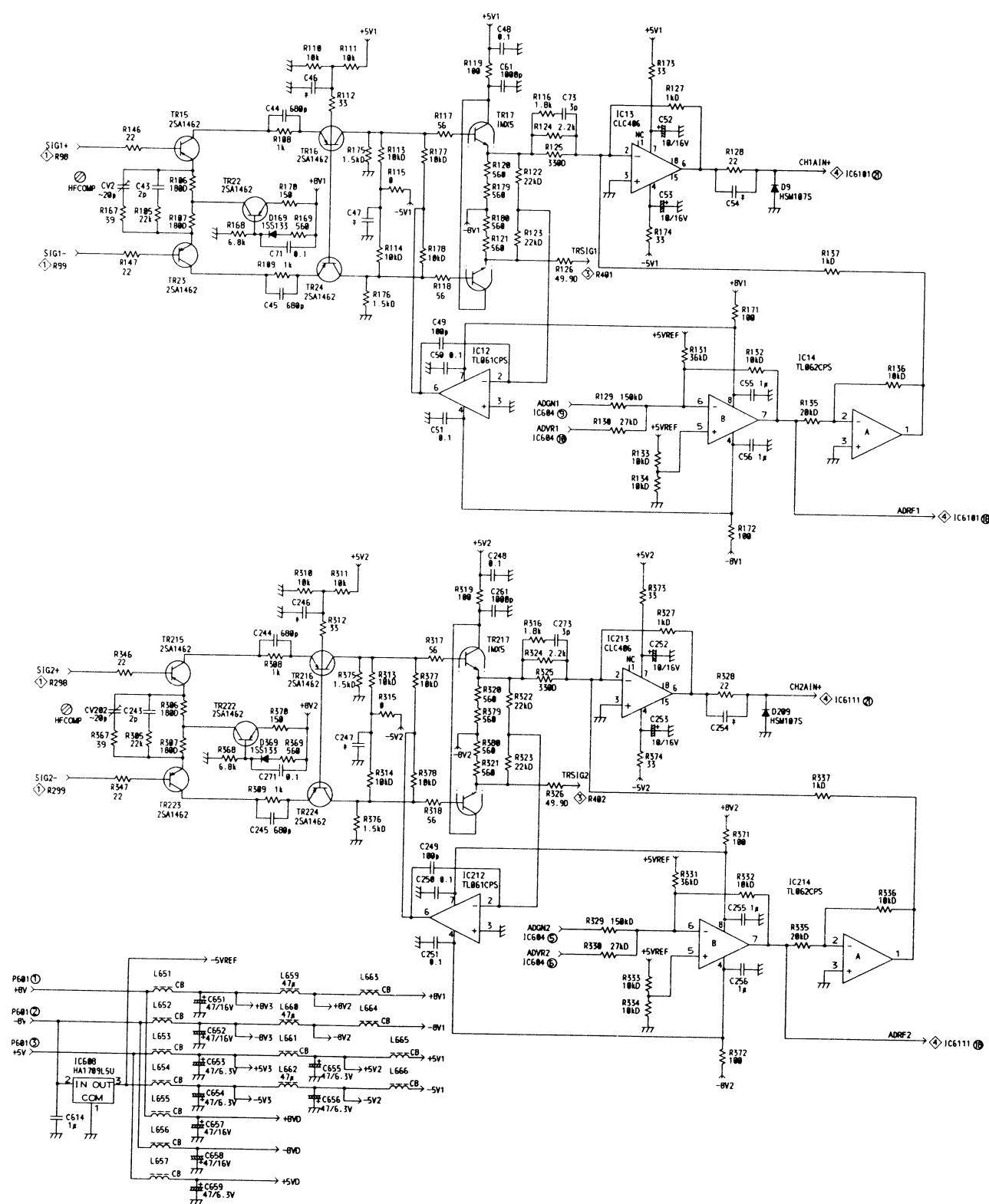
CONT \ V/div	2mV	5mV	10mV	20mV	50mV	0.1V	0.2V	0.5V	1V	2V	5V	10V
AT1S1 (IC601 Pin 2)	L	L	L	L	L	L						
AT1R1 (IC601 Pin 3)							L	L	L	L	L	L
AT2A1 (IC601 Pin 5)	L	L	L	L	H	H	L	L	L	H	H	H
AT2B1 (IC601 Pin 6)	L	L	H	H	L	H	L	H	H	L	H	H
AT2C1 (IC601 Pin 7)	L	L	L	H	L	L	L	L	H	L	L	H

CH2 VOLTS RANGE

CONT \ V/div	2mV	5mV	10mV	20mV	50mV	0.1V	0.2V	0.5V	1V	2V	5V	10V
AT1R2 (IC602 Pin 2)	L	L	L	L	L	L						
AT1R2 (IC601 Pin 3)							L	L	L	L	L	L
AT2A2 (IC601 Pin 5)	L	L	L	L	H	H	L	L	L	H	H	H
AT2B2 (IC601 Pin 6)	L	L	H	H	L	H	L	H	H	L	H	H
AT2C2 (IC601 Pin 7)	L	L	L	H	L	L	L	L	H	L	L	H

<NOTE>  : Control pulse to set or reset a latching relay.





**2 CH1, CH2, ADDRIVER  
& ANALOG CNTL(PEG-009)**



**TRIG MODE**

CONT \ MODE	AUTO/NORM	SET 50%	TV SYNC
PPSELA (IC401 Pin 4)	X	L	H
PPSELB (IC401 Pin 5)	L	H	H



**TRIG SOURCE**

CONT \ SOURCE	CH1	CH2	EXT
TSELA(IC401 Pin 15)	L	H	L
TSELB (IC401 Pin 1)	L	L	H

**TRIG COUPLING**

CONT \ COUPLING	DC	AC	LF-REJ	HF-REJ	TV SYNC
TCPLA(IC401 Pin 2)	L	H	L	H	L
TCPLB (IC401 Pin 3)	L	L	H	H	H

**TRIG SLOPE**

CONT \ SLOPE	 (-)	 (+)	TV-V	TV-H
SLOPE(IC401 Pin 6)	L	H	H	L

**DIFF MODE**

CONT \ MODE	DIFF	DUAL
$\overline{\text{DIFF}}$ (IC401 Pin 7)	L	H



Output frequency

TIME/DIV	5ns	2μs	5μs	0.1s	0.2s
Frequency	30MHz	30MHz	30MHz	1.5KHz	750Hz

Check points

IC6101

Pin12

(A/D)

IC6111

Pin12

(A/D)

IC6121

Pin2

(Line Memory)

IC6131

Pin2

(Line Memory)

CONDITIONS

Trigger mode

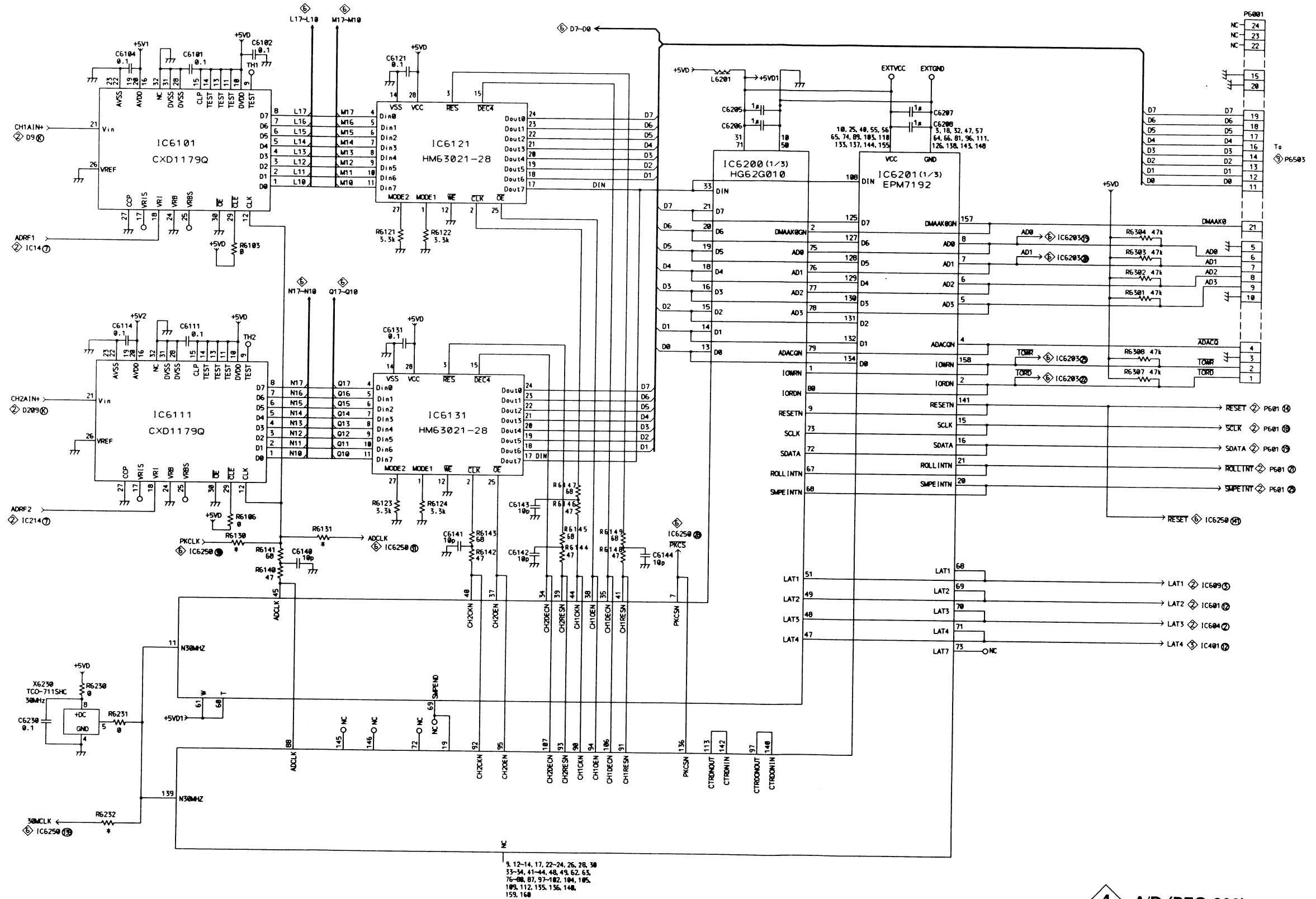
:NORMAL

Trigger mode

:unlock

Sampling mode

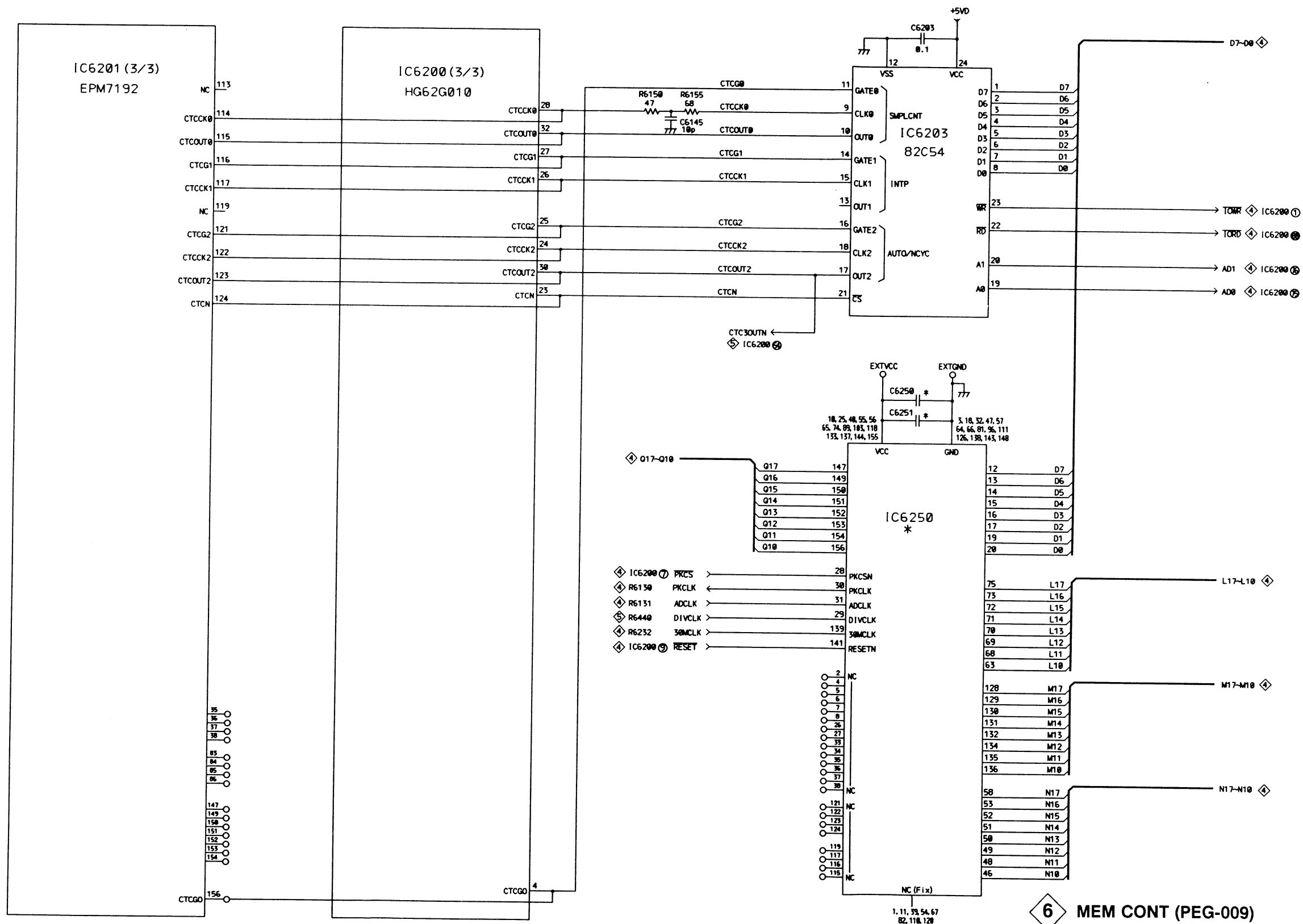
:Equivalent or NORM

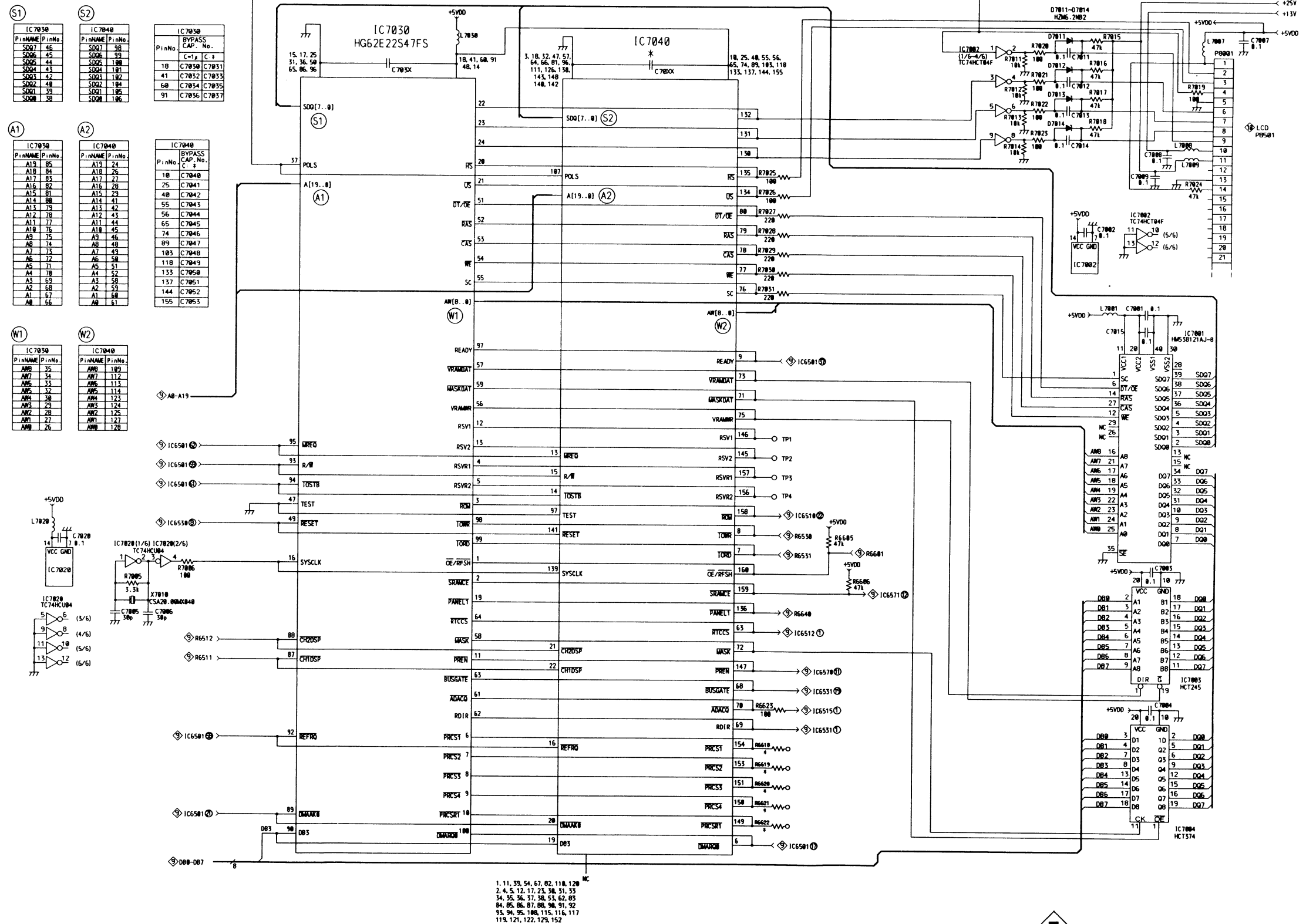


AUTO TRIG

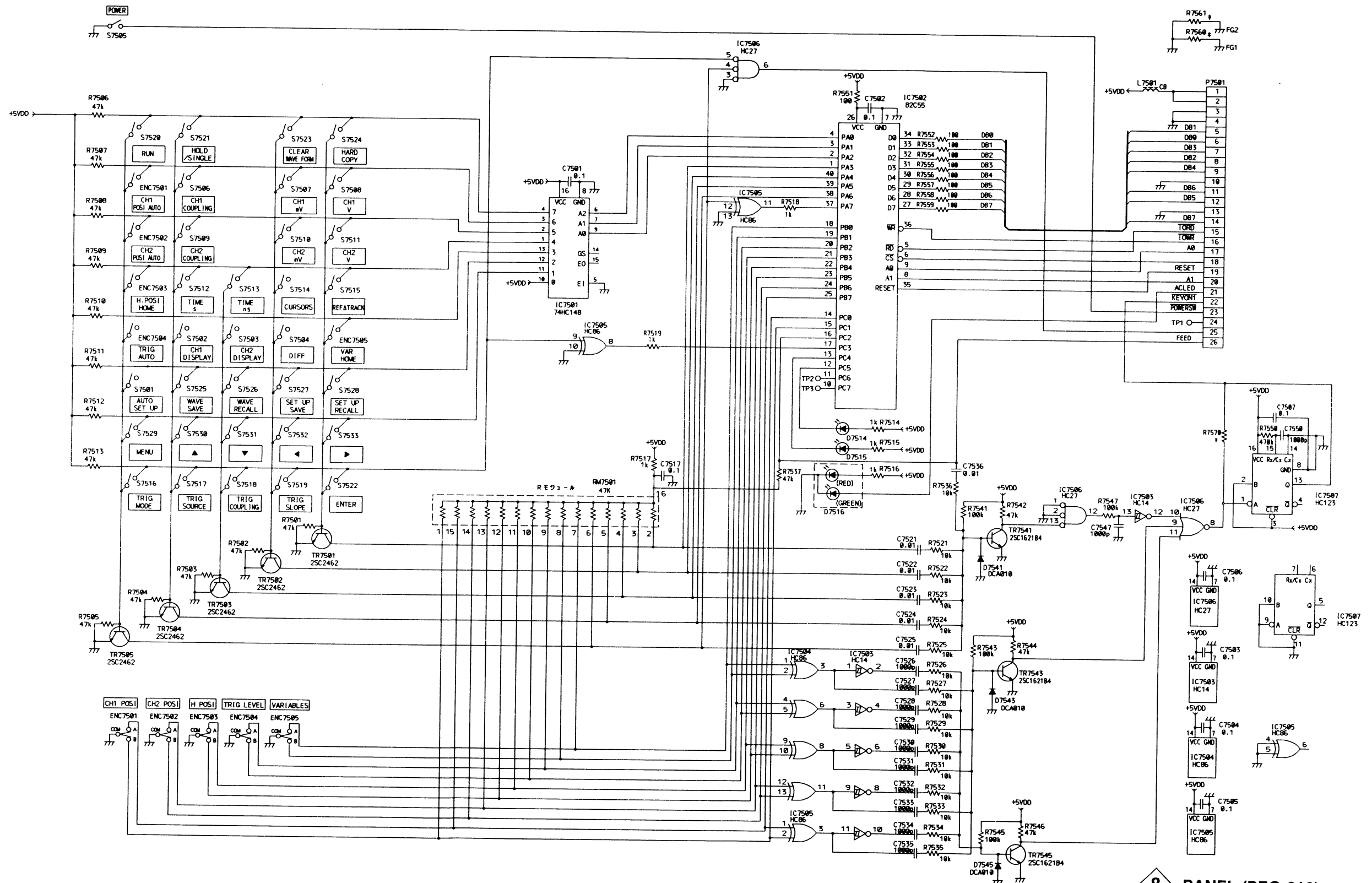
CONT	AUTO	AUTO	others
AUTOEN(IC6200 Pin 52)	H	L	



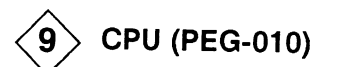




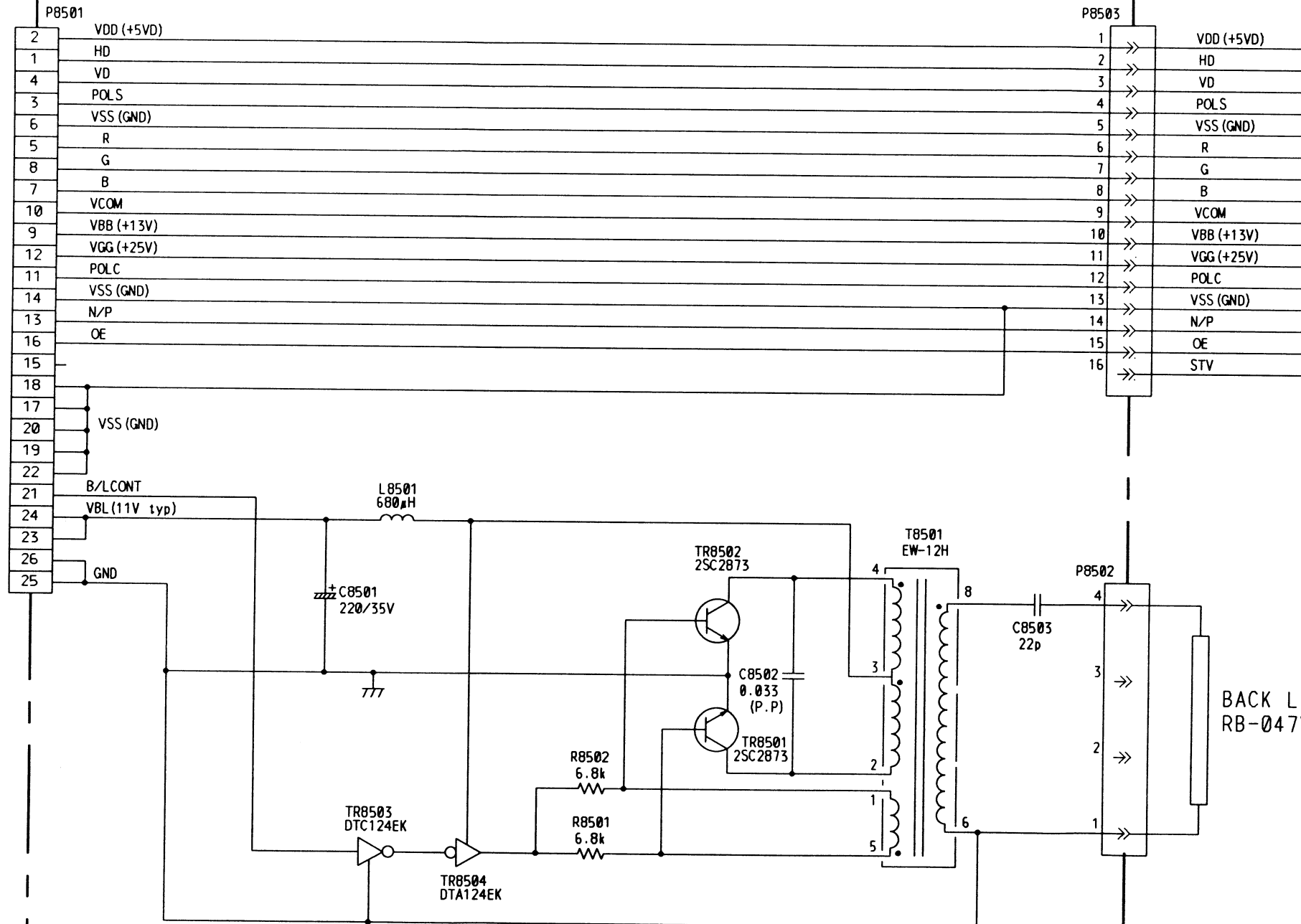




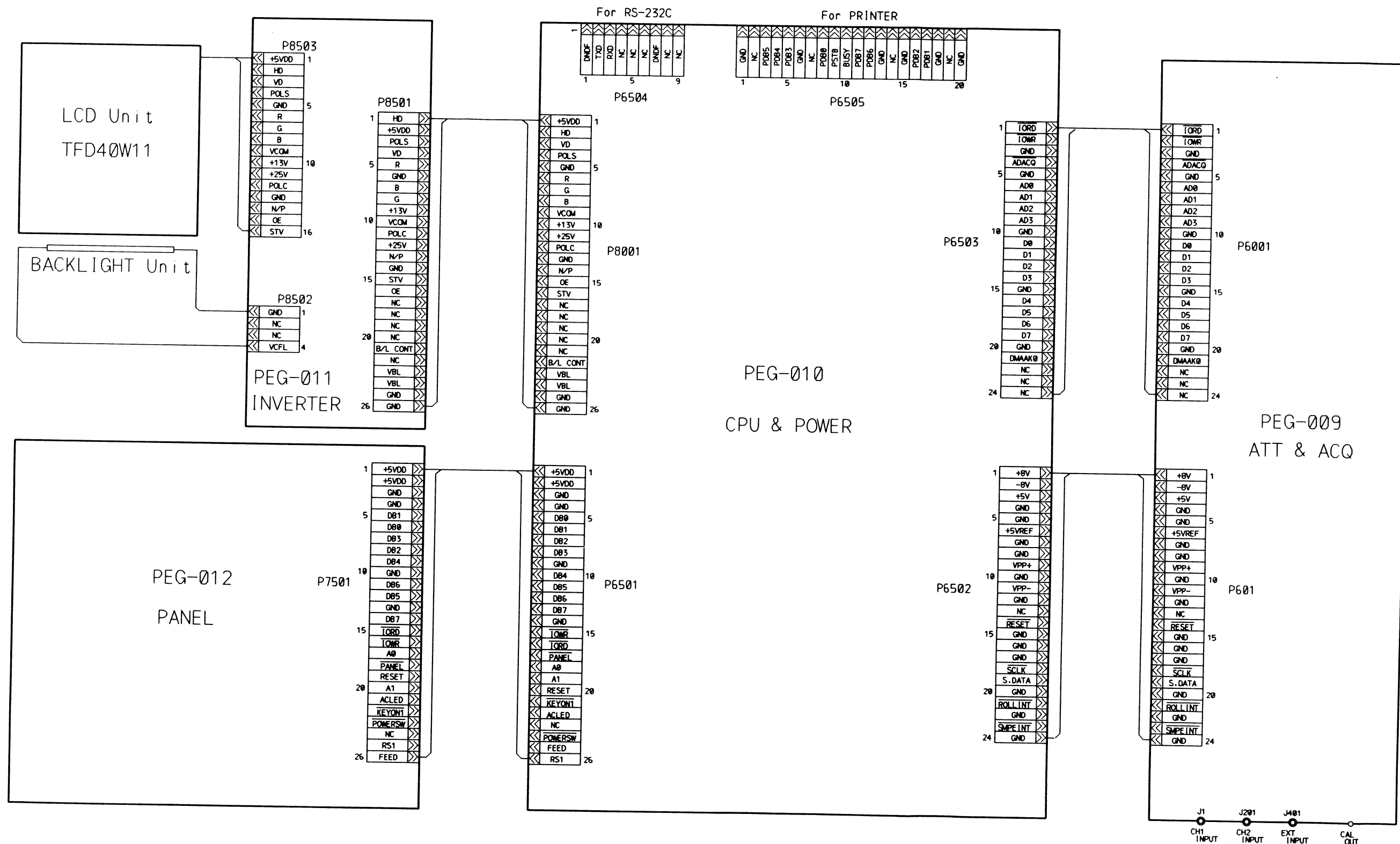
8 PANEL (PEG-012)



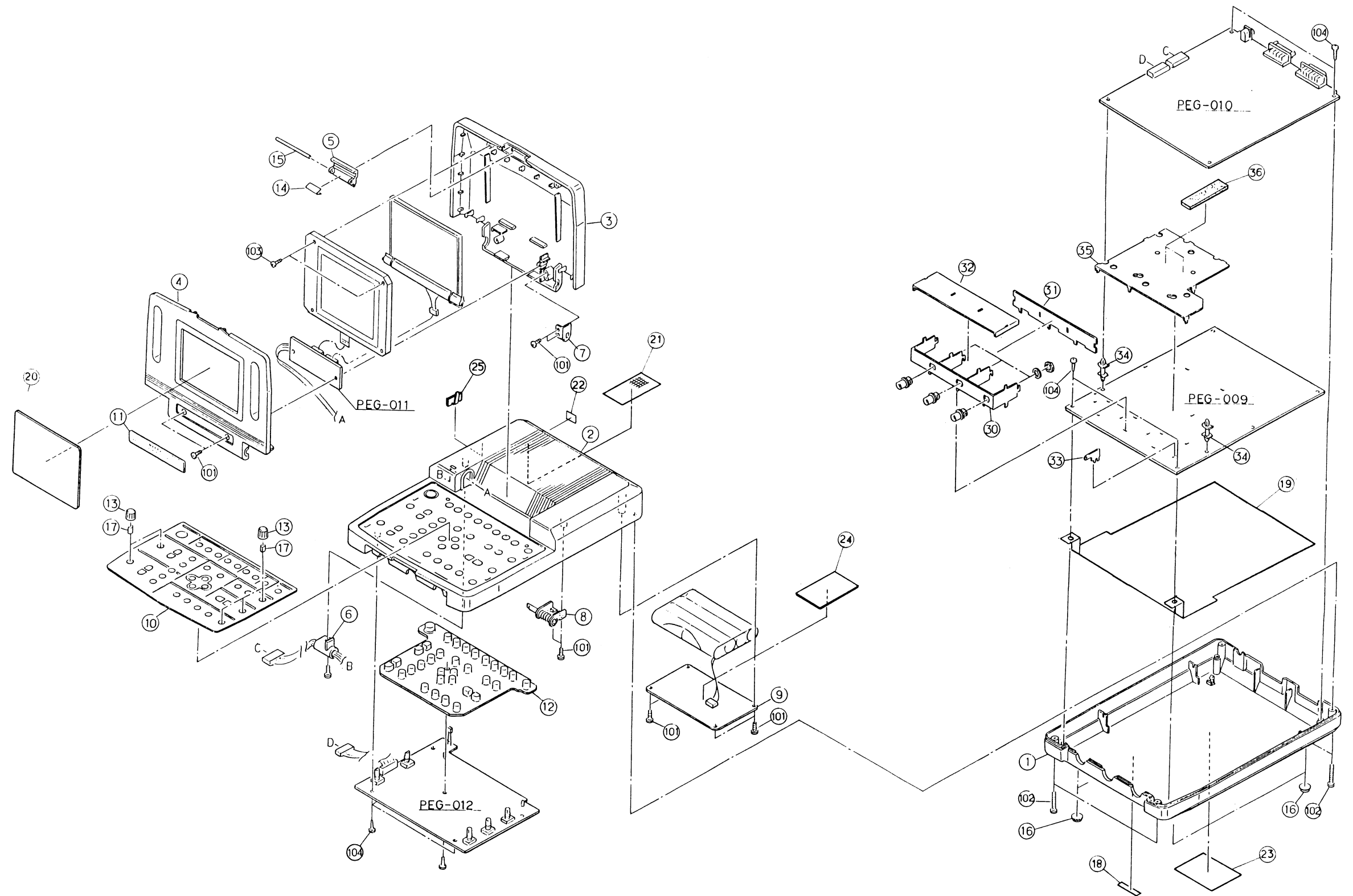
To  
P8001







# INTERCONNECTION



**EXPLODED VIEW**