

**CARD:** CMI-331

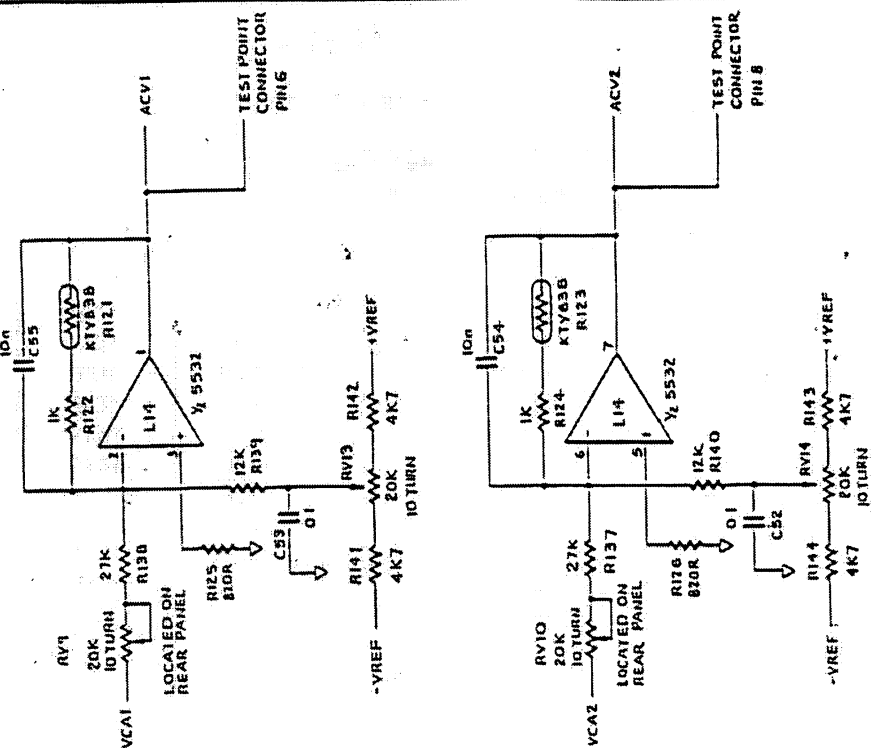
**DATE:** 4 November 1992

**SUBJECT:** CMI-331 Check List

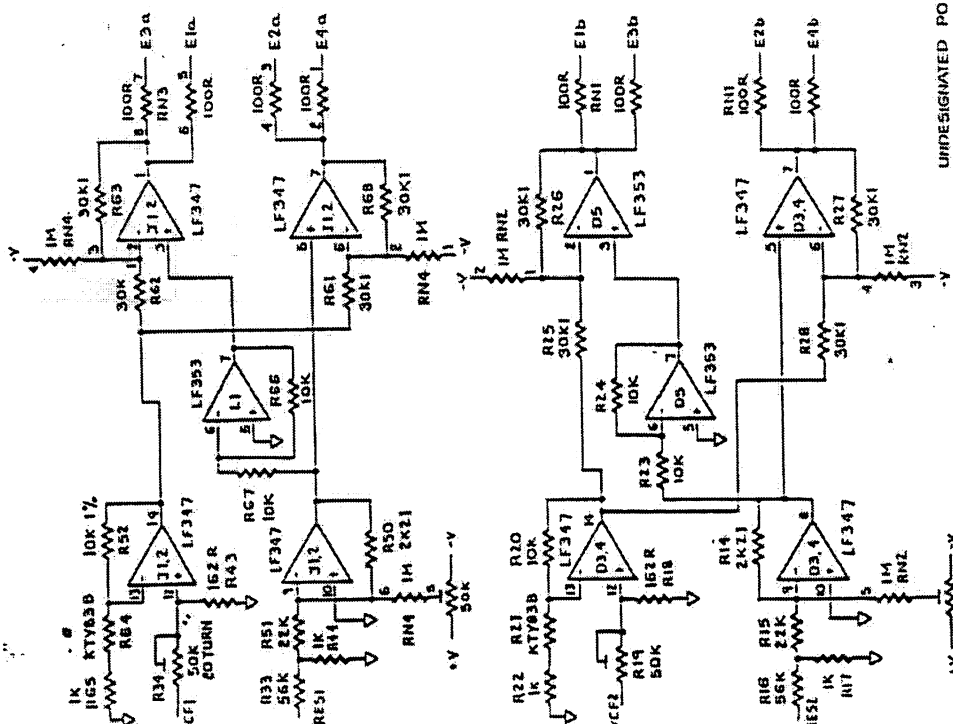
1. There are two types of anti aliasing filters used on this card. One is the TOKO filter (copper can) and the other is an in house design (plain PCB). Component number is PAL H 1107E.  
If the filter type is the in house type check that R120 (ref M15) and R48 (ref H2) are 22k. With the TOKO filters in place the value should be 10K. With either filter check that R109 (ref K9) and R47 (ref H1) are 10K.
2. Check that R74, R75, R76, R77 are either 3K71 or 3K65 tol .1% or 2 X 5K in parallel or 2 X 4K99 in parallel or 2 X 4K75 in parallel. These resistors must be .1%.
3. Check that (C45) C46, C26, C29, C42, C51 are 4.7uF 25v non polarised.
4. Check that IC L2, L5, L8 are NE5532
5. Check that on component side near pin 78 of edge connector is cut away so the shield mounting screw does not short out. Alternatively use an insulation washer.
6. Remove IC M(4053), L11 (NE5532), R104, R107, R108, R136, R135, R134, R133. Connect pin4 M9 to pin6 L8. Connect pin14 M9 to pin2 L8.
7. Check that R105, R106 are 82K 1% and C32, C33 are 56pF.
8. Check that R70, R72, R98, R100 are 100 ohm 1%.
9. See CMI-331 Temp. Mod sheet. See circuits
10. See CMI-331 capacitor mod list.
11. See CMI-331 track cut and wire re route info sheet.
12. Do audio calibration procedure for card revision 1B10.

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Audio Card CMI-331-02



Voltage Controls For  
 VCA'S & VCF'S  
 DRAWN: RII REVISION: JBT.1.1 → JBT.2  
 VPTD



UNDESIGNATED POTS ARE  
 MOUNTED ON TOP OF  
 IC5 J1, J2, F1, D3, D4 &  
 D5

AUDIO CARD CAGE - 3.2.9

## CMI-331 Changes for Temp. Mods

3-Nov-92

COMP	SECTION	VALUE WAS	VALUE NOW IS
R115	CHANNEL A STAGE 1	4K75	6K21 1%
R114	CHANNEL A STAGE 1	4K75	6K21 1%
R91	CHANNEL A STAGE 2	4K75	6K21 1%
R90	CHANNEL A STAGE 2	4K75	6K21 1%
R29	CHANNEL B STAGE 1	4K75	6K21 1%
R42	CHANNEL B STAGE 1	4K75	6K21 1%
R31	CHANNEL B STAGE 2	4K75	6K21 1%
R53	CHANNEL B STAGE 2	4K75	6K21 1%

## VCF CONTROL MODIFICATIONS

## CHANNEL A

REMOVE RN - 4

Place between pins 5 &amp; 6 Discrete Imeg resistor and wire to "1st" 50K pot (see circuit)

REPLACE R43 (162ohm) with 270 ohm

ADD 30K 1% from pin 12 (J1,2) to -Vref

ADD 220k 1% from pin12 (J1,2) to center of "2nd" top 50K pot

Mount 50K pots on IC J1,2

ADD 100n across R63 &amp; R68

Change C34, C41, C43, C47 to 1000pF

Remove R117 replace with 7K32 1% OR place 27K in parallel with 10K in place

Remove R94 replace with 11K3 1% OR place 15K 1% in parallel with a 47K 1%

## CHANNEL B

REMOVE RN - 2

Place between pins 5 &amp; 6 Discrete Imeg resistor and wire to "1st" 50K pot (see circuit)

REPLACE R18 (162ohm) with 270 ohm

ADD 30K 1 %from pin 12 (D3,4) to -Vref

ADD 220k 1% from pin12 (D3,4) to center of "2nd" top 50K pot

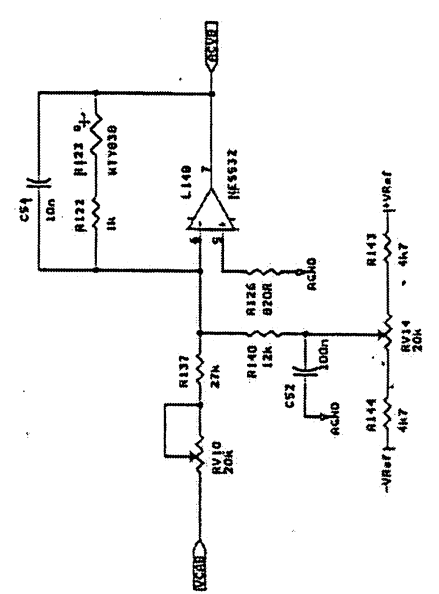
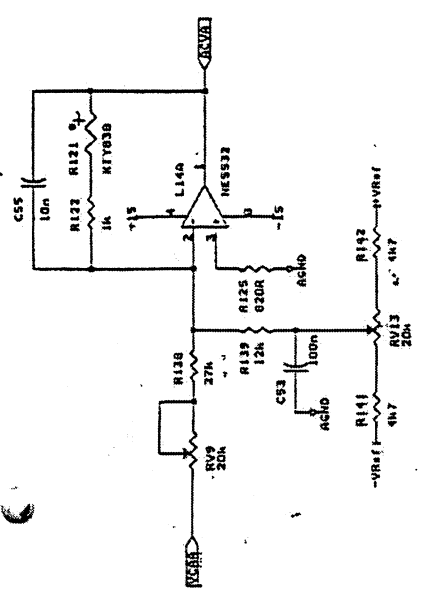
Mount 50K pots on IC D 3,4

ADD 100n across R26 &amp; R27

Change C23, C25, C27, C28 to 1000pF

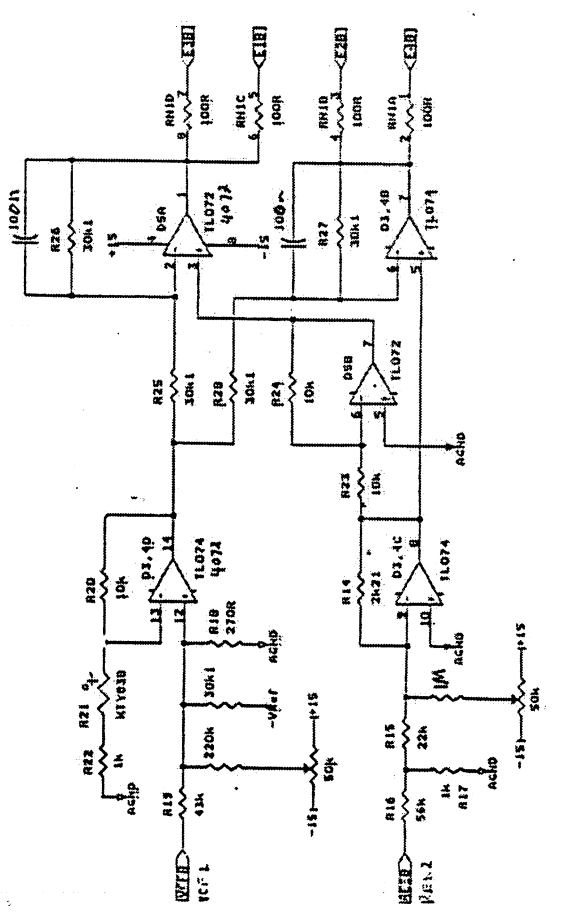
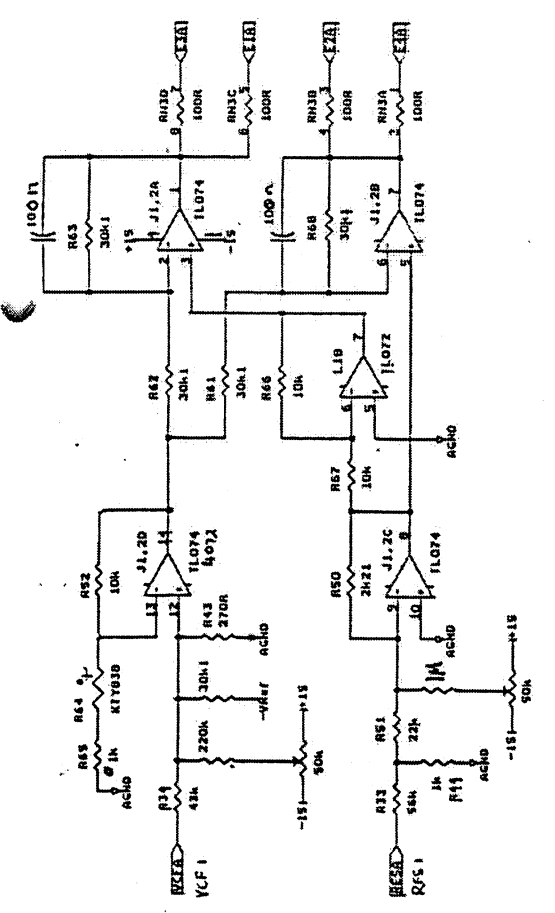
Remove R30 replace with 7K32 1% OR place 27K in parallel with 10K in place

Remove R45 replace with 11K3 1% OR place 15K 1% in parallel with a 47K 1%



\* NOTE: Changes to VCF  
Capacitor & Resistor Values if this  
Circuit is used.  
See list for temp. Mods.  
188/189

1114	Fairlight ESP P/L
1115	Tracking Filter & VCF Control
STES Document Number	CIRL.SCH
REV	2



## Audio Card Capacitor Additions

Date 3-Nov-92

I.C.	LOC	BETWEEN PINS	VALUE	APPLIES TO REV 1B10
MP7616	G15-1	15 / 20	0.1uF	YES
2150	K15	2 / 3	0.1uF	YES
2150	J15	2 / 3	0.1uF	YES
POT	RV5	CENTER / 0V	0.1uF	YES
POT	RV6	CENTER / 0V	0.1uF	YES
POT	RV7	CENTER / 0V	0.1uF	YES
POT	RV8	CENTER / 0V	0.1uF	YES
2150	I9,10	2 / 3	0.1uF	YES
2150	H9,10	2 / 3	0.1uF	YES
MP7616	G8,9	15 / 20	0.1uF	YES
2150	J4,5	2 / 3	0.1uF	YES
2150	I4,5	2 / 3	0.1uF	YES
POT	RV1	CENTER / 0V	0.1uF	YES
POT	RV2	CENTER / 0V	0.1uF	YES
POT	RV3	CENTER / 0V	0.1uF	YES
POT	RV4	CENTER / 0V	0.1uF	YES
2150	F4,5	2 / 3	0.1uF	YES
2150	F4,5	2 / 3	0.1uF	YES
LF347	J1,2	1 / 2	0.1uF	YES
LF347	J1,2	6 / 7	0.1uF	YES
LF347	D3,4	6 / 7	0.1uF	YES
C4072	D5	1 / 2	0.1uF	YES
COMPONENT SIDE				
C4072	L15	4 / 5	.1uF	YES
C4072	L15	8 / 5	.1uF	YES
C4072	F3	4 / 5	.1uF	YES
C4072	F3	8 / 5	.1uF	YES
C56	ADD .1uF across 10uF			YES

CARD: CMI-331  
DATE: 3 NOV 1992  
SUBJECT: TRACK CUTS FOR REVISION 1B.10

The following track cuts and modifications must be done to the audio output card to remove cross talk.

Track Cuts must be done exactly where indicated.

- 1. Cut track at PIN 5 of I6 ( PALH 1107E ). Component side.
- 2. Cut track at via hole. ( PALH 1107E ). Component side.
- 3. Cut track at C40. Component side.
- 4. Cut tracks at C46. Component side.
- 5. Cut track at R89. Component side
- 6. Cut track solder side.

NOTE: Track cuts 1,2,3,4 & 6 are associated with track routing changes..

