ATTACHMENT K

CIRCUIT DESCRIPTION

Model No.: VCR2510
Brand: SANSUI

The device under application is a Video Cassette Recorder, which is operated by AC commercial power source(AC120V, 60Hz).

The unit contains circuitry for the Power supply, Luminance, Chrominance, System control, Servo, Operation, Head amp, Audio, Tuner and RF converter and so on.

RF Converter output is output in US 3ch or 4ch and Emission frequency is as follows.

Emission Frequency: US 3ch Video carrier: 61.25MHz
Audio carrier: 65.75MHz
US 4ch Video carrier: 67.25MHz
Audio carrier: 71.75MHz

Type of RF Input and Output Connector;
Type "F" Connector 75 ohm(Unbalanced)

The attached block diagram, ATTACHMENT L, describes the circuit functions.

ATTACHMENT H-C-1

Product ID.Code: M4C7C
(Model No.: VCR2510)
Brand Name: SANSUI

TV RECEIVER APPLICATION CHECKLIST

(X) 1. A statement identifying the production run plan we will be using to show compliance in meeting "TV Receiver, UHF Noise Figures Certification and Compliance Criteria" (July 1982).

: We will use the production run plan C to show compliance in meeting 14dB UHF Noise Figure requirement.

(X) 2. A statement that NF measurements were made pursuant to OST MP-2, July 1982.

: NF measurements were made pursuant to OST BULLETIN MP-2, July 1982.

(X) 3. The names of all manufacturing sources for the VHF and UHF tuners as well as the tuner manufacture's part No.

Product ID. Code (Model No.)	VHF/UHF 1 PACK TUNER	
	PART NO.	SOURCE
M4C7C(VCR2510)	0162600016	ALPS

(X) 4.UHF and VHF tuner part numbers assigned by the receiver manufacturer.

: There are no tuner part assigned by receiver manufacturer.

(X) 5. Frequency bands tuned by receiver.

VHF : 2 - 13 ch
UHF : 14- 69 ch
CATV : 1 -125 ch(101 - 845MHz)

(X) 6. Pursuant to Section 15.117 of the Rules, a statement specifying the receiver design noise figure, in dB.

: Because TV Tuner built in as part of a video tape recorder which uses a power splitter between the antenna terminals of the video tape recorder and input terminals of the TV Tuner, the limits of Noise Figure, pursuant to section 15.117(g)(4), complies with the limits subtracted 4dB from 14dB.

( ) 7. The length of the UHF lead, from antenna input terminal to the tuner.

:

(X) 8. A numbered electrical schematic for the receiver.

: Attached

(X) 9. The exact chassis number (MFR'S Model No. instead of chassis No.) (This number is classified with SUFFIX in order to show voltage difference, Radio band difference and so on.)

: Mfr's No. : M4C7C

( )10. Picture tube size in inches.

:

(X)11. Type of receiver - color or black and white.

: Color

(X)12. A description of the cabinet material.

: plastic and metal cover

( )13. Copy of all the information submitted with the original certification for the basic receiver.

:Attached

(X)14. A statement that the contribution not exceed 0.3dB for the channel.

$$\Delta F(dB) = 10 \cdot \log_{10} \left[1 + \frac{F2 - 1}{G1F1} \right]$$

where

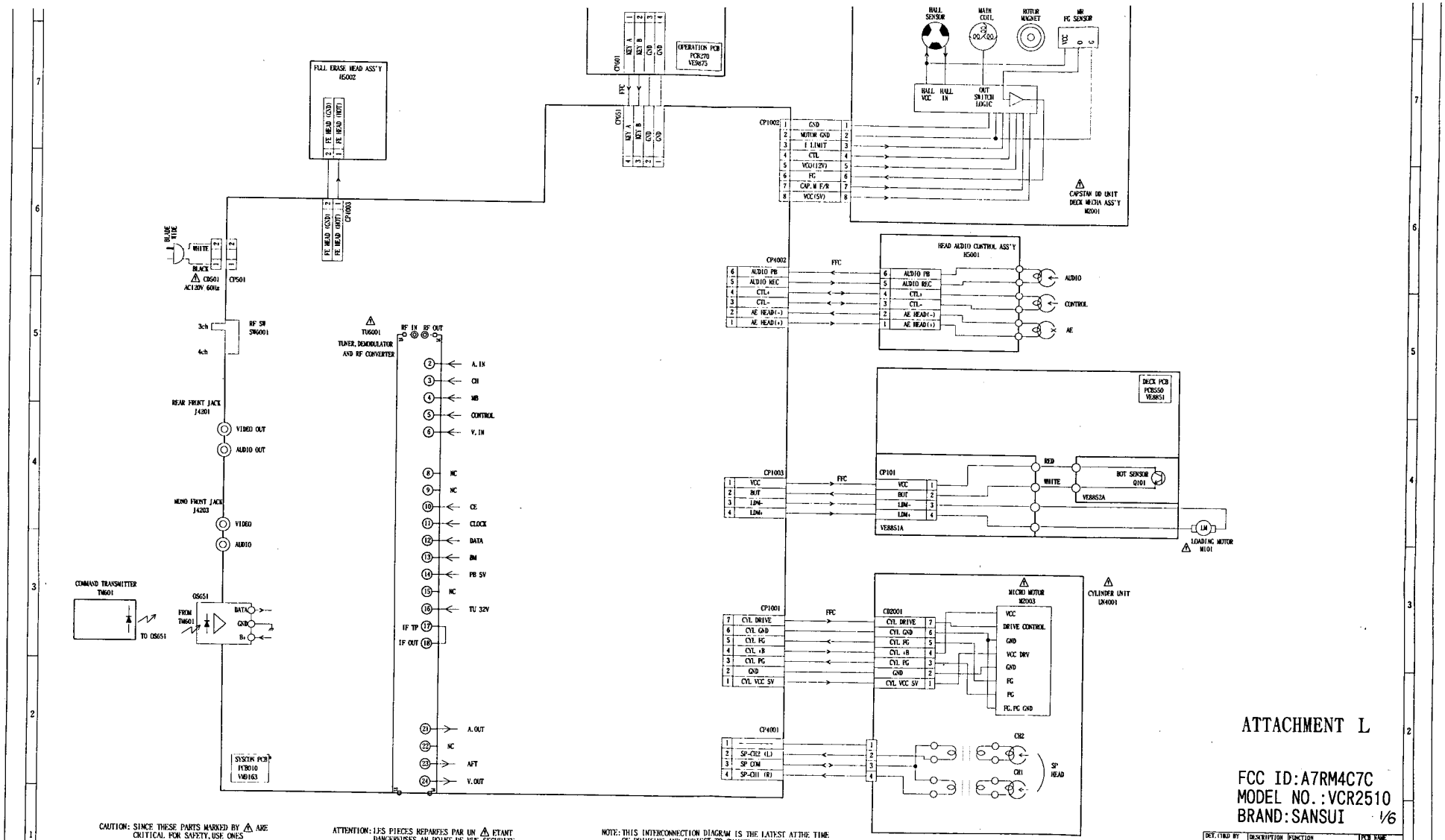
F1 : 7.0 dB ---------- typical value

F2 : 8.5 dB ---------- N.F. indicator (I.F. Noise Figure)
* See ATTACHMENT H 2/4

G1 : 39.0 dB ---------- See ATTACHMENT H 2/4

$\Delta F = 10 \cdot \log_{10} 1.014 = 0.060$ dB

The contribution does not exceed 0.3dB, so, neglected.



CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRITED IN PARTS LIST ONLY.

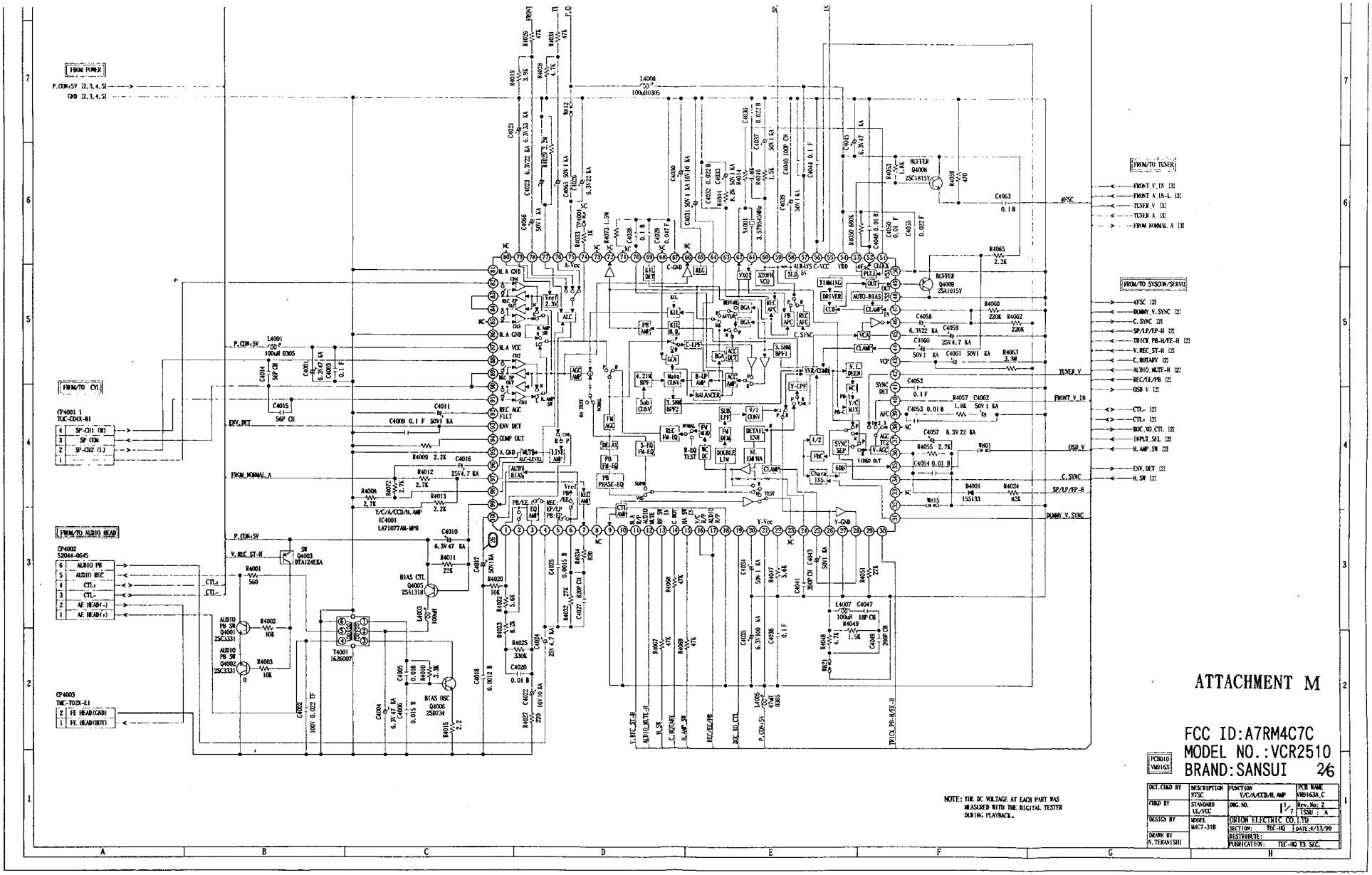
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

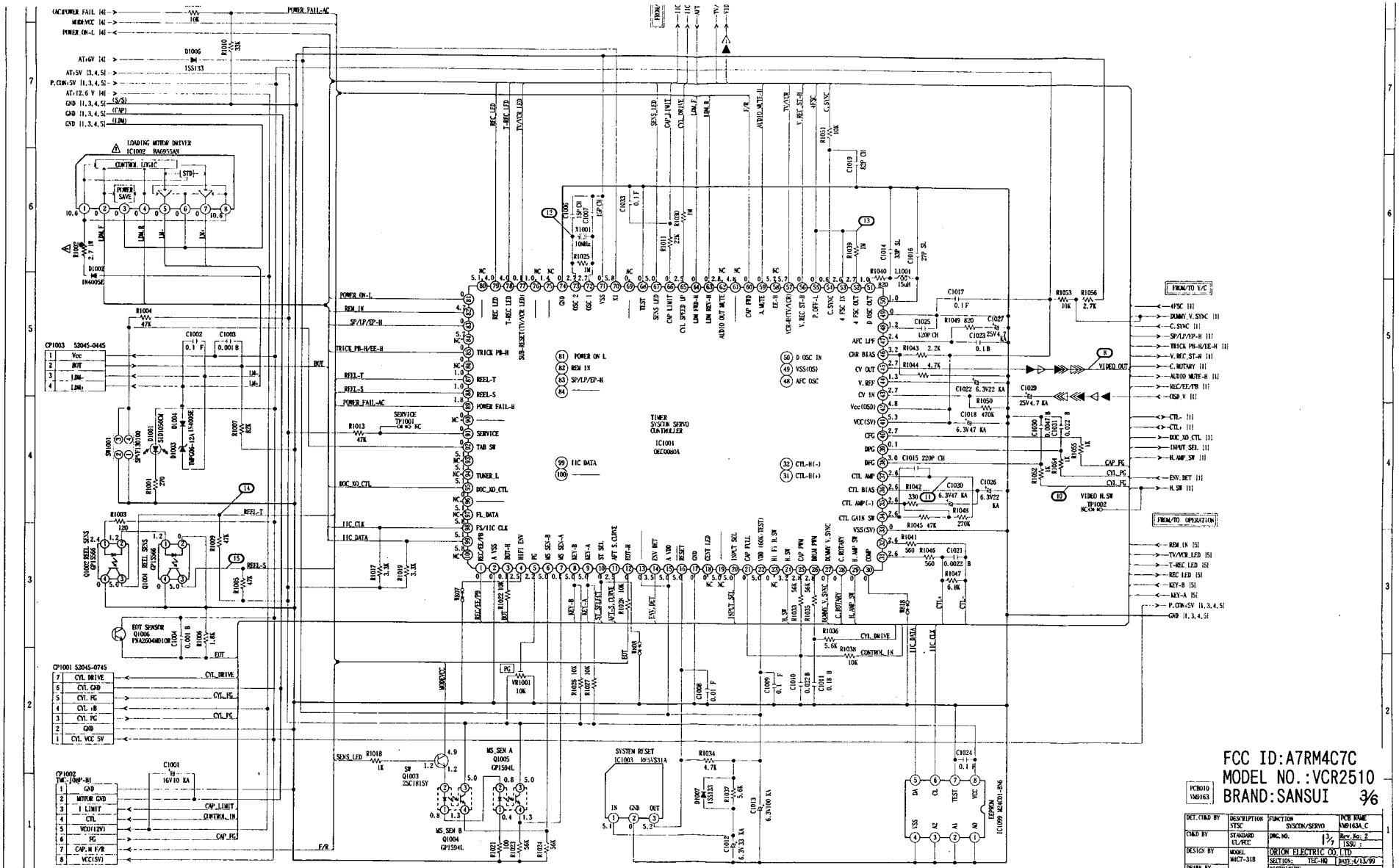
NOTE: THIS INTERCONNECTION DIAGRAM IS THE LATEST ATTHE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

ATTACHMENT L

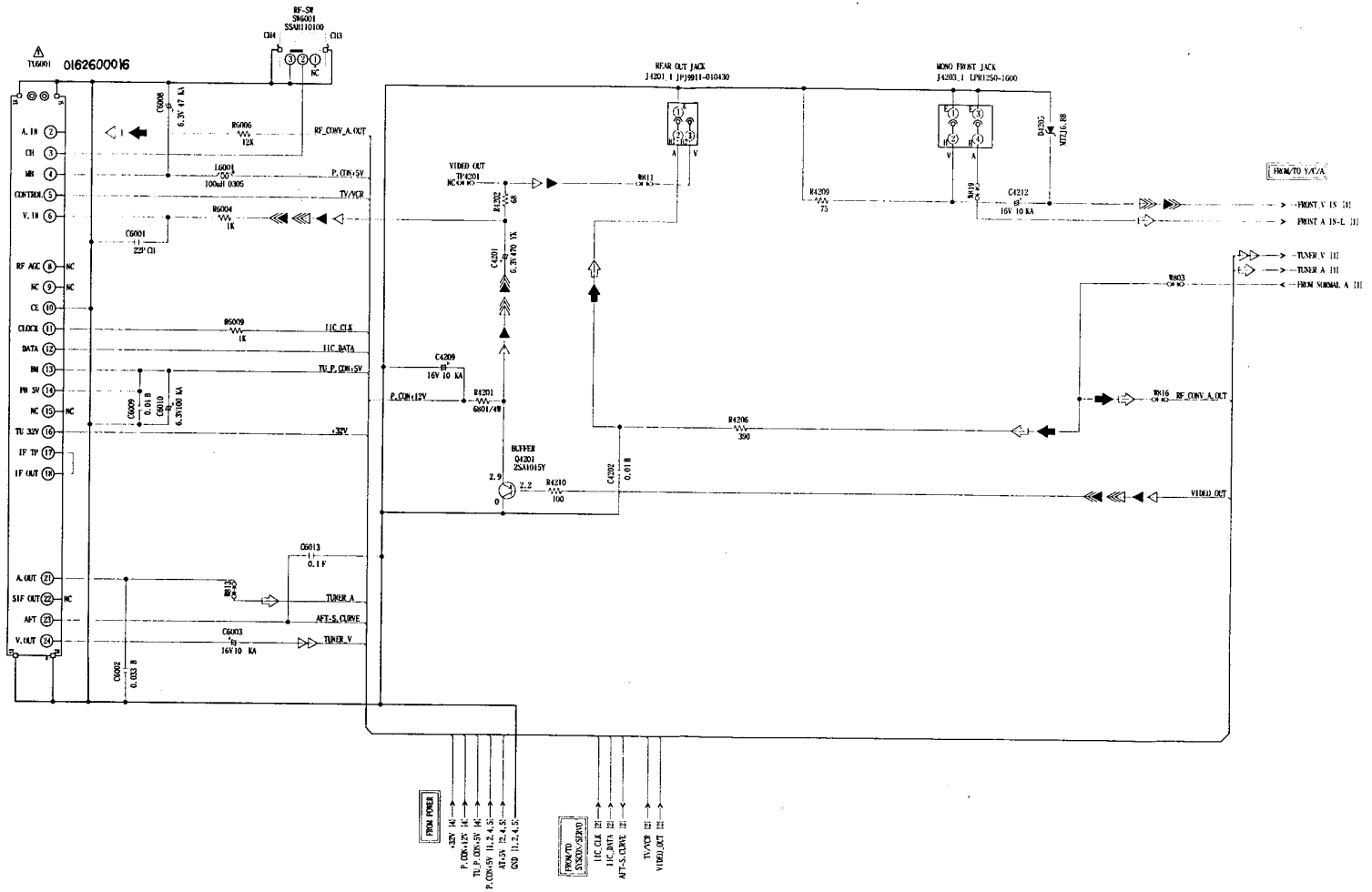
FCC ID:A7RM4C7C
MODEL NO.:VCR2510
BRAND:SANSUI

DET. CHKD BY	DESCRIPTION NTSC	FUNCTION INTERCONNECTION	PCB NAME VW9163
CHKD BY	STANDARD U2/FCC	DWG. NO. 1/2	Rev. No.: 1.0 ISSU : A
DESIGN BY	MODEL M4C7-31A, B	ORION ELECTRIC CO.,LTD	
DRAWN BY S. KIMURA		SECTION: TEC-HQ	DATE:4/15/99
		DISTRIBUTE: VERIFICATION: TEC-HQ TS SEC.	


FROM POWER
P.CON+5V 12, 3, 4, 5
GND 12, 3, 4, 5
FROM/TO CYL
FROM/TO AUDIO HEAD
FROM/TO TUNER
FROM/TO SYSCON/SERVO
FROM_NORMAL_A
ENV_DET
TUNER_V
FRONT_V_IN
OSD_V
C.SYNC
SP/LP/EP-H
DUMMY_V.SYNC
4FSC
ATTACHMENT M
FCC ID:A7RM4C7C
MODEL NO.:VCR2510
BRAND:SANSUI
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.



FCC ID:A7RM4C7C
MODEL NO.:VCR2510
BRAND:SANSUI 3/6



PCB010 VB9163

FCC ID:A7RM4C7C
MODEL NO.:VCR2510
BRAND:SANSUI 4/6

CAUTION: DIGITAL TRANSISTOR

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

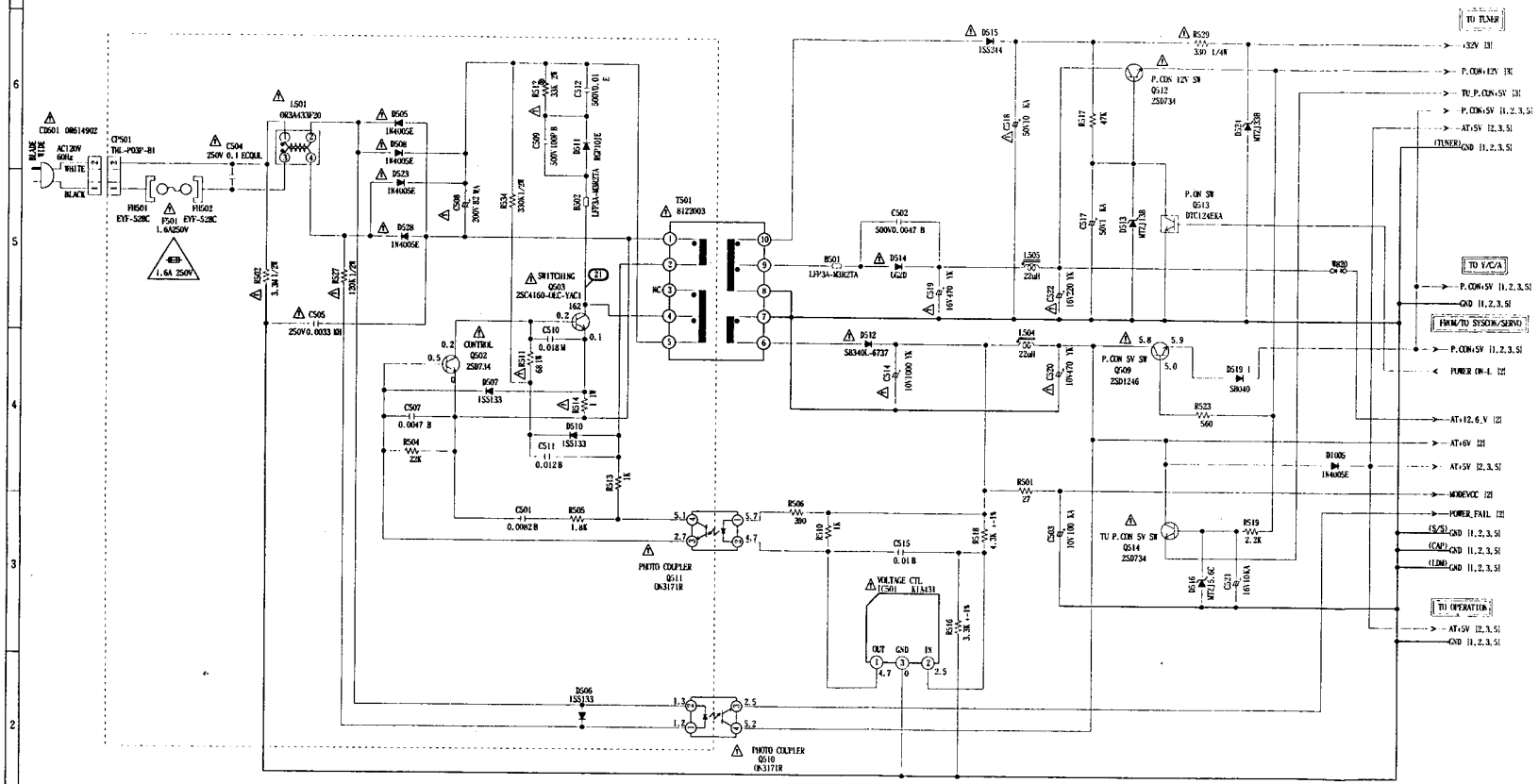
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONLY DESCRIBED IN PARTS LIST ONLY.

ATTENTION: LES PIECES REPEREES PAR UN ⚠ ETANT DANGEREUSES AU POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

◀ PLAYBACK LUMINANCE SIGNAL
◁ PLAYBACK COLOR SIGNAL
⋘ RECORD LUMINANCE SIGNAL
⋘ RECORD COLOR SIGNAL
◁ AUDIO SIGNAL(REC)
◀ AUDIO SIGNAL(PB)
◁◁ TUNER VIDEO SIGNAL

DFT. CHKD BY	DESCRIPTION: NTSC	FUNCTION: TUNER/OSD	PCB NAME: AM0163A C
CHKD BY	STANDARD: U1/FCC	DRG. NO.	Rev. No.: 2 ISSU : A
DESIGN BY	MODEL: 4MC7-31B	ORION ELECTRIC CO.LTD	
DRAWN BY: S.TERANISHI		SECTION: TEC-HQ	DATE: 4/13/99
		DISTRIBUTE:	
		FABRICATION: TEC-HQ T3 SEC.	



PCB010
VM9163

FCC ID:A7RM4C7C
MODEL NO.:VCR2510
BRAND:SANSUI

5/6

1.6A 250V

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 1.6A 250V (F501).
ATTENTION: POUR UNEPROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 1.6A 250V (F501).

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

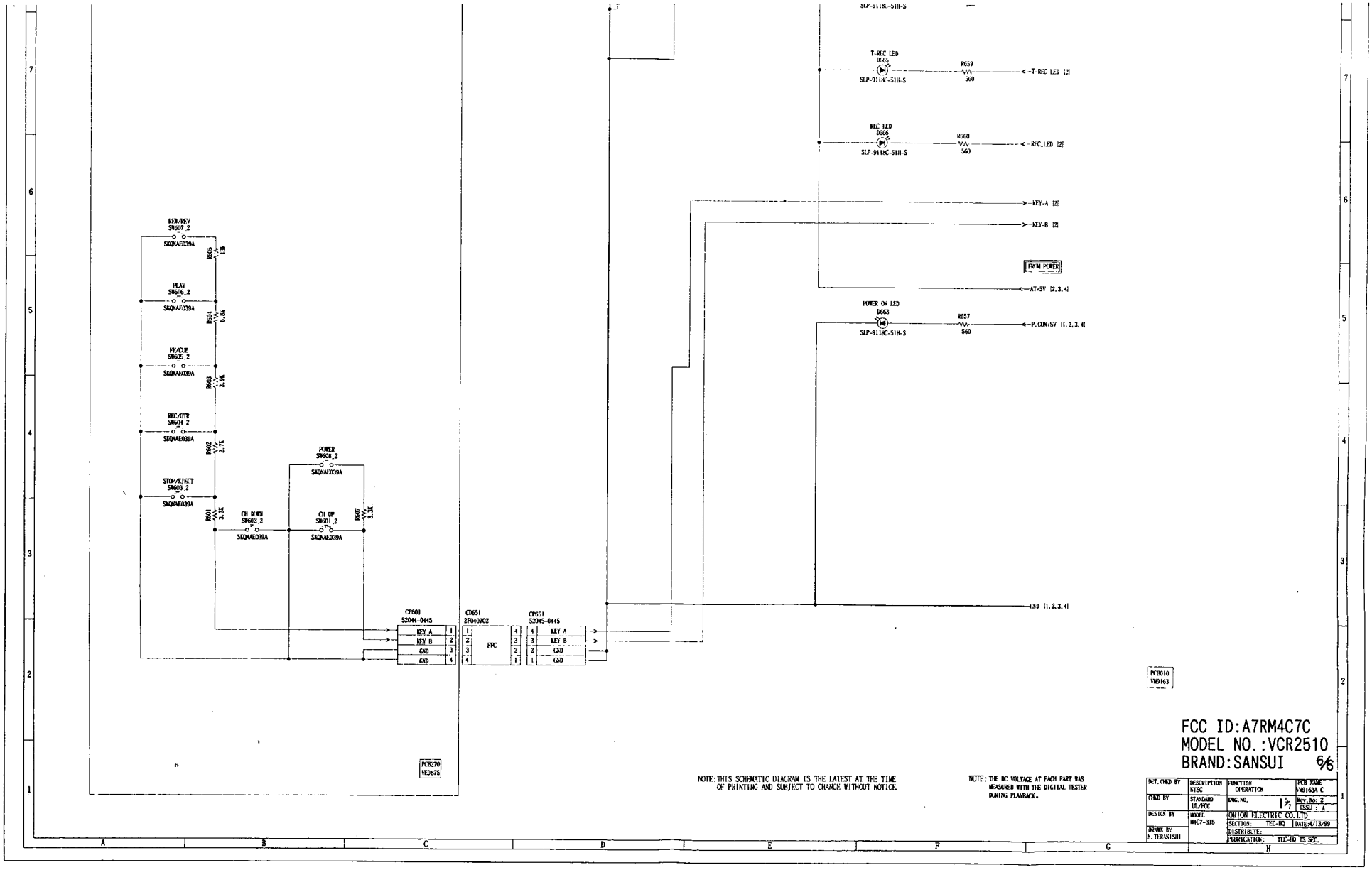
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY. USE ONES DESCRIBED IN PARTS LIST ONLY.

CAUTION: DIGITAL TRANSISTOR

DFT. CHKD BY	DESCRIPTION NTSC	FUNCTION POWER	PCB NAME VM9163A C
CHKD BY	STANDARD UL/FCC	DWG. NO. 1/7	Rev. No: 2 ISSU : A
DESIGN BY	MODEL M4C7-31B	ORION ELECTRIC CO.,LTD	
DRAWN BY N. TERANISHI		SECTION: TEC-HQ	DATE: 4/13/99
		DISTRIBUTE: PUBRICATION: TEC-HQ TS SEC.	



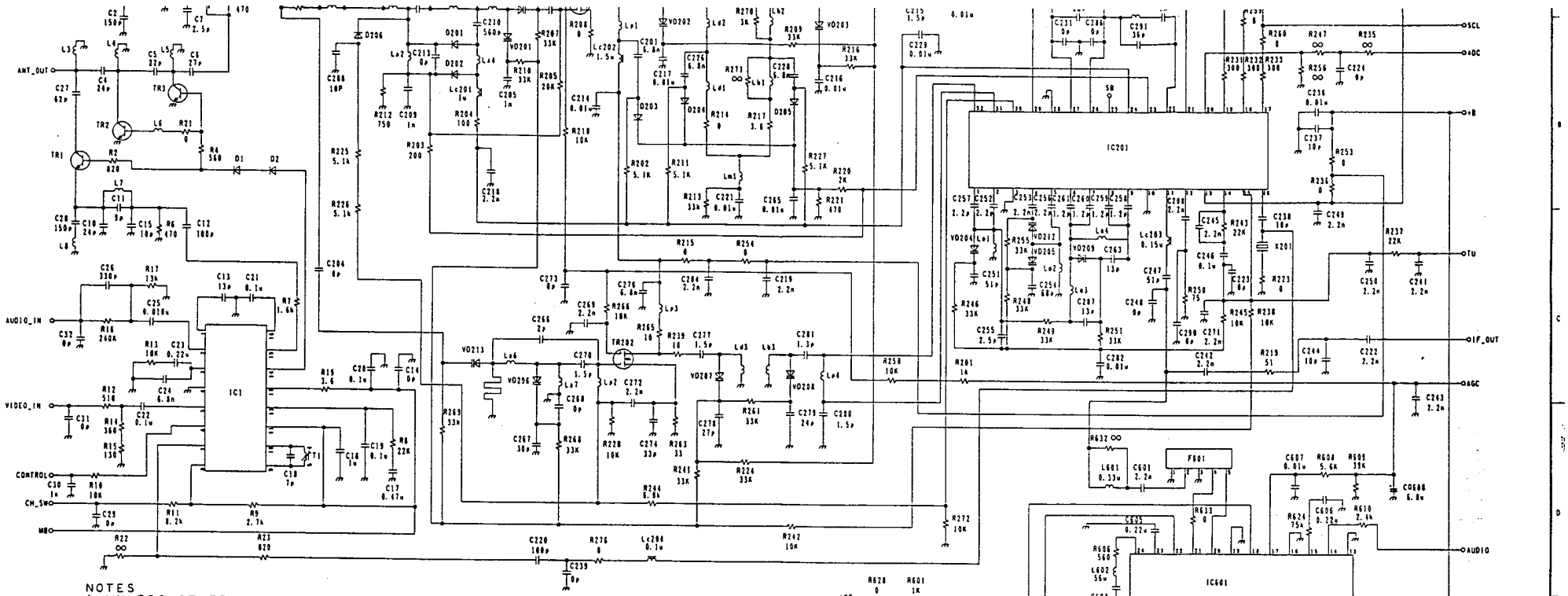
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

FCC ID:A7RM4C7C
MODEL NO.:VCR2510
BRAND:SANSUI

6/6

DET. CHKD BY	DESCRIPTION NTSC	FUNCTION OPERATION	PCB NAME VM9163A C
CHKD BY	STANDARD UL/FCC	DWG. NO. 5/7	Rev. No: 2 ISSU : A
DESIGN BY	MODEL M4C7-31B	ORION ELECTRIC CO.LTD	
DRAWN BY N.TERASHIH		SECTION: TEC-HQ	DATE:4/13/99
		DISTRIBUTE:	
		PUBRICATION: TEC-HQ T3 SEC.	



NOTES
1. UNLESS OTHERWISE SPECIFIED,
ALL RESISTORS ARE IN OHM (1/W),
CAPACITORS ARE IN FARAD,
INDUCTORS ARE IN HENRY.

2. SEMICONDUCTORS ARE AS FOLLOWS.

TR1, 2, 3 : 2SC4713K, 2SC4680
TR201 : BB305C, 3SK254, 3SK298, 3SK317
TR202 : 3SK318, 3SK255, 3SK296
TR601 : 2SA1576

VD201~205, 212 : HVC306B
VD206~209 : HVC306B
VD210, 211, 213 : HVC202B
D201~ 206, D1, D2 : HSC277

IC1 : LA7160M
IC201 : ALP020, ALP024
IC601 : ALP027

F601 : TSF5225P
F602 : TPS4.5MB
F603 : SFSH4.5MDB

	SUPPLY VOLTAGE
+B	5V
MB	5V
TU	32V

PROVISIONAL DRAWING

0162600016	TMDH2-020A
CUST MODEL NO.	ALPS MODEL NO.

ALPS ELECTRIC CO., LTD

DSGD. Apr. 13. '99 R. Fujita	SCALE				
CHKD.		TITLE	CIRCUIT DIAGRAM		
APPD. Apr. 13. '99	UNIT mm	DOCUMENT NO.			
ZONE	SYMB	DATE OR NO.	APPD	CHKD	DSGD

TUNER DEMODULATOR AND RF CONVERTER CIRCUIT DIAGRAM