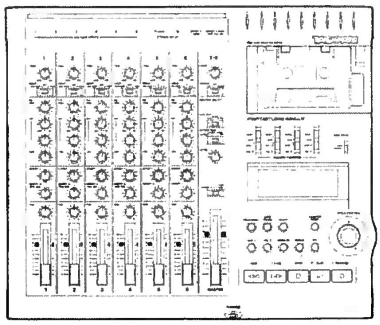
495



TASCAM
TEAC Professional Division

A66523
mm

SERVICE MANUAL

424MKIII
PORTASTUDIO

NOTES

As regards the resistors and capacitors, refer to the circuit diagrams and the PCB ass'y drawings contained in this manual.

* PC boards shown viewed from parts side.
* Parts marked with * require longer deliver time.
* ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components – refer to the TEAC Parts List and ensure exact replacement.
* Parts not shown in the parts lists, or parts, though listed, having no parts numbers, are not general "ready-to-supply" parts.
* Parts of [ ] mark can be used only with the version designated.
  [US/C]:U. S. A. /CANADA [E]:EUROPE [UK]:U. K. [A]:AUSTRALIA
  [J]:JAPAN

注意

標準抵抗,コンデンサーは省略してあります。回路図および基板図を参照してください。

- ●プリント基板図は部品面が示されています。
- ●＊印の部品は納期が若干かかります。 あらかじめご了承ください。
- ●⚠印は安全規格重要部品です。 交換するときは必ずティアック指定の部品を使用してください。
- ●リストされていない部品は原則としてサービス供給部品として取扱っていません。
- ●仕向先
  [US/C]:U. S. A. /CANADA [E]:EUROPE [UK]:U. K. [A]:AUSTRALIA
  [J]:JAPAN

INSTRUCTIONS FOR SERVICE PERSONNEL

BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

Effective : May, 1999

D00497600A

1. SPECIFICATIONS
仕様

MECHANICAL

Type : Compact cassette (C-30 to C-90), High-Bias (CrO2)
Track Format : 4-track/4-channel
Head Configuration :
4-channel record/play head (permalloy) × 1
4-channel erase head (ferrite) × 1
Motor : DC servo motor × 1
Tape Speed :
Switchable two speeds : 9.5 cm/sec. (3-3/4 ips)
4.8 cm/sec. (1-7/8 ips)
Speed Accuracy : ± 1 %
Pitch Control : ± 12 % (approx.)
Wow and Flutter : 0.06 % WRMS at 4.8 cm/sec.
0.05 % WRMS at 9.5 cm/sec.
Fast Winding Time : 120 sec. (approx.) with C-60
Dimensions (W x H x D) :
419 × 115 × 357 mm (16-1/2″ × 4-1/2″ × 14-1/16″)
Weight : 4.9 kg (10.8 lbs.)

ELECTRONICS

Mixer Section

MIC/LINE INPUT, Ch.1-4 (XLR type connector x 4)
Input Impedance : 3.6k ohms
Nominal Input Level : -60 dBV (1 mV) (MIC position)
-20 dBV (0.1 V) (LINE position)
Maximum Input Level : +3 dBV (1.4 V) at Trim Min.

MIC/LINE INPUT, Ch.1-6 (1/4" phone jack x 6)
Input Impedance : 5.6k ohms
Nominal Input Level : -50 dBV (3 mV) (MIC position)
-10 dBV (0.3 V) (LINE position)
Maximum Input Level : +10 dBV (3 V) at Trim Min.

STEREO INPUT, Ch.7-8 (1/4" phone jack x 2)
Input Impedance : 10k ohms
Nominal Input Level : -10 dBV (0.3 V)
Maximum Input Level : +10 dBV (3 V)

SUB INPUT (RCA jack x 2)
Input Impedance : 10 kohms
Nominal Input Level : -10 dBV (0.3 V)
Maximum Input Level : +10 dBV (3 V)

LINE OUTPUT (RCA jack x 2)
Output Impedance : 100 ohms
Nominal Output Level : -10 dBV (0.3 V)
Minimum Load Impedance : 2 kohms

EFFECT 1 SEND (1/4" phone jack)
Output Impedance : 100 ohms
Nominal Output Level : -10 dBV (0.3 V)
Minimum Load Impedance : 2k ohms

EFFECT 2 SEND/TAPE CUE OUT (1/4" phone jack)
Output Impedance : 100 ohms
Nominal Output Level : -10 dBV (0.3 V)
Minimum Load Impedance : 2 kohms

TAPE OUTPUT (RCA jack x 4)
Output Impedance : 100 ohms
Nominal Output Level : -10 dBV (0.3 V)
Minimum Load Impedance : 2 kohms

MONITOR OUTPUT (RCA jack x 2)
Output Impedance : 690 ohms
Nominal Output Level : -10 dBV (0.3 V)

PHONES (1/4" stereo phone jack x 1)
Nominal Load Impedance : 30 ohms
Maximum Output Level : 60 mW (approx.)

Equalizer
HIGH (Shelving) : 10 kHz, ± 10 dB
MID (Parametric) : 250 Hz to 5 kHz, ± 12 dB
LOW (Shelving) : 100 Hz, ± 10 dB

Frequency Response
MIC IN to LINE OUT : 20 Hz to 20 kHz, ± 3 dB
LINE IN to LINE OUT : 20 Hz to 20 kHz, ± 2 dB
LINE IN to EFFECT SEND : 20 Hz to 20 kHz, ± 2 dB
LINE IN to PHONES : 40 Hz to 20 kHz, ± 3 dB

Signal-to-Noise Ratio (20 Hz to 20 kHz, B.P.F. inserted)
1 MIC IN to LINE OUT :
65 dB (at a nominal input level of -60 dBV)
4 MIC INs to LINE OUT :
60 dB (at a nominal input level of -60 dBV)
1 LINE IN to LINE OUT :
76 dB (at a nominal input level of -10 dBV)
4 LINE INs to LINE OUT :
70 dB (at a nominal input level of -10 dBV)

Distortion
1 MIC IN to LINE OUT : 0.05 % (at 1 kHz, 15 dB above nominal input level with 30 kHz-L.P.F. inserted)
1 LINE IN to LINE OUT : 0.04 % (at 1 kHz, nominal input level with 30 kHz-L.P.F. inserted)

Crosstalk : 55 dB (at 1 kHz, nominal input level with 30 kHz-L.P.F. inserted)

424 MKIII

Recorder Section

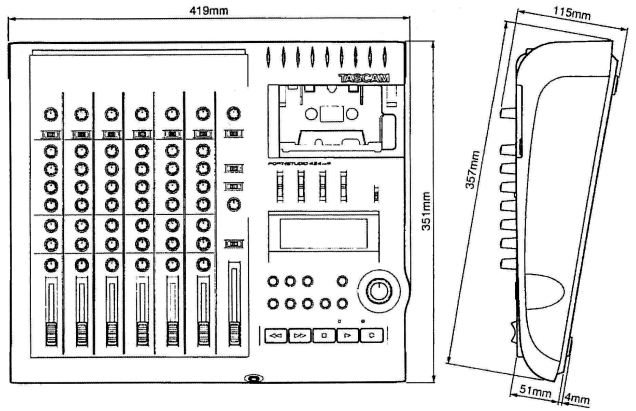
Record/Play channels : 4/4
Noise Reduction : dbx Type II
Overall Frequency Response :
40 Hz to 16 kHz, ± 3 dB at 9.5 cm/sec.
40 Hz to 10 kHz, ± 3 dB at 4.8 cm/sec.
Overall Signal-to-Noise Ratio :
UNWTD (20 Hz to 20 kHz)/IHF A WTD
HIGH : 55 dB/58 dB (without dbx) ;
90 dB/95 dB (with dbx)
HNORMAL : 54 dB/56 dB (without dbx) ;
88 dB/93 dB (with dbx)
Total Harmonic Distortion : 1.0 % (1 kHz)
Crosstalk (Channel Separation) : 55 dB or better
Erasure : 65 dB or better (at 1 kHz, B.P.F. inserted)

OTHERS

Power Requirements :
USA/CANADA : 120 V AC, 60 Hz
U.K./EUROPE : 230 V AC, 50 Hz
AUSTRALIA : 240 V AC, 50 Hz
JAPAN : 100 V AC, 50-60 Hz
Power Consumption : 22 W

* In these specifications, 0 dBV is referenced to 1 Volt. Actual voltage levels are also given in parenthesis (0.316 V for -10 dBV rounded off to 0.3 V).
* dbx is a registered trademark of dbx Incorporated.
* Changes in specifications and features may be made without notice or obligation.

* 0dBV = 1V, − 10dBV = 0.316Vを0.3Vに略して表記しています。
* dbxおよびdbxマークはdbxインコーポレーテッドの登録商標です。
* dbxシステムはdbxインコーポレーテッドの実地権に基づいて製造されています。
*仕様および外観は、改善のため予告なく変更することがあります。



2. MECHANICAL CHECKS AND ADJUSTMENTS
機構部の確認と調整

2-1. Wow and flutter

1. Connect the wow and flutter meter to TAPE OUT.
2. The wow and flutter value when the test tape MXT-111 (High Speed) / MTT-111N (Normal Speed) is played back should be within the standard given below:
   High Speed : 0.08 % or less (WRMS)
   Normal Speed : 0.10 % or less (WRMS)

2-1. ワウ・フラッタ

1. TAPE OUTにワウ・フラッタ・メータを接続する。
2. テスト・テープMXT-111 (High Speed)、MTT-111N (Normal Speed) を再生したときのワウ・フラッタ値は下記規格内であること。
   High Speed : 0.08％以下 (WRMS)
   Normal Speed : 0.10％以下 (WRMS)

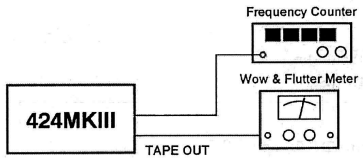


Fig. 2-1

2-2. Tape speed

1. Connect the frequency counter to TAPE OUT.
2. Set the **PITCH CONTROL** knob to the center position.
3. Turn the POWER switch ON, then play back the test tape. Leave the tape in this state for at least one minute, in order to let the capstan motor rotate and warm up.
4. Play back the middle portion of the test tape MXT-111 (High Speed) / MTT-111N (Normal Speed), then adjust trimmer resistor **R502** (High Speed) / **R501** (Normal Speed) (Fig. 2-2) on the **VR PCB** till a frequency counter reading of 3000 Hz ± 5 Hz is reached.
5. After adjustment, check the following at both the beginning and the end of tape.
   Frequency reading : 3000 Hz ± 60 Hz
   Fluctuation : less than 75 Hz

2-3. Pitch control

After the tape speed has been adjusted, play back the test tape MXT-111 (High Speed) / MTT-111N (Normal Speed), turn the **PITCH CONTROL** knob to the maximum and minimum positions so that the tape speed variations are as follows:

Specifications : ± 10 % or more
(2700 Hz or less, 3300 Hz or more)

2-2. テープ・スピード

1. TAPE OUTに周波数カウンタを接続する。
2. **PITCH CONTROL**ノブをセンターにセットする。
3. キャプスタン・モータを回転させウォーミング・アップさせるために、テスト・テープを装着し再生状態にして少なくとも1分間そのままにしておく。
4. テスト・テープMXT-111 (High Speed)、MTT-111N (Normal Speed) の中間部を再生したとき、周波数カウンタの値が**3000Hz ± 5Hz**になるように**VR PCB**の半固定抵抗**R502** (High Speed)、**R501** (Normal Speed) を調整する。(図2-2)
5. 調整後、テープの巻始めと巻終りで、次の値が得られるかを確認する。
   速度偏差 : 3000Hz ± 60Hz
   変動幅 : 75Hz以内

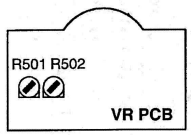


Fig. 2-2

2-3. ピッチ・コントロール

テープ・スピード調整後、テスト・テープMXT-111 (High Speed)、MTT-111N (Normal Speed) を再生し、**PITCH CONTROL**ノブを最大、最小に回したときのテープ・スピード可変幅は次の通りであること。

規格 : ± 10％以上 (2700Hz以下、3300Hz以上)

2-4. Reel torque

1. Take-up torque/back tension torque
   The torque values when the test tape MTT-8111 for measuring torques is played back should be as follows:
   Take-up torque (right reel) : 30 to 60 g·cm
   Back tension torque (left reel) : 2 to 5 g·cm
2. FF/REW torque
   Load the test tape MTT-8242 for measuring torques, then measure the starting torque when the unit is in FF and REW operation. The standard values are as follows:
   Torque in FF mode (right reel) : 70 to 140 g·cm
   Torque in REW mode (left reel) : 70 to 140 g·cm

2-4. リール・トルク

1. テイクアップ・トルク／バックテンション・トルク
   トルク測定用テスト・テープMTT-8111を再生したときのトルク値は下記の通りであること。
   テイクアップ・トルク (右リール台) : 30～60g・cm
   バックテンション・トルク (左リール台) : 2～5g・cm
2. FF／REWトルク
   トルク測定用テスト・テープMTT-8242を装着し、FF動作およびREW動作の起動トルクをそれぞれ測定する。
   規格値は次の通り。
   FFトルク (右リール台) : 70～140g・cm
   REWトルク (左リール台) : 70～140g・cm

2-5. R/P head azimuth

1. Refer to Figure 2-3 and connect the channel 1 TAPE OUT to the vertical input of an oscilloscope, and connect the channel 4 TAPE OUT to the horizonal input of the scope.
2. Set tape speed to HIGH, play the 315 Hz and 6.3 kHz signals on test tape MXT-1161 and adjust azimuth adjustment screw for 0 degree phase shift between channels 1 and 4. (Refer to Figure 2-4)
3. Play the test tape MXT-112 and check for 45 degrees or less of phase shift between channel 1 and 2, channel 2 and 3, and channel 2 and 4.

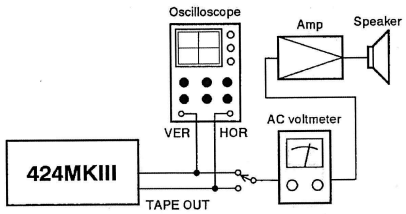


Fig. 2-3

2-5. 録再ヘッド・アジマス

1. 図2-3のようにCH1のTAPE OUTをオシロスコープのVER側に、CH4のTAPE OUTをHOR側に接続する。
2. テープ・スピードをHIGHにし、テスト・テープ MXT-1161の315Hzおよび6.3kHzを再生して、CH1とCH4の位相が0°になるようにアジマス調整ネジを調整する。(図2-4)
3. テスト・テープ MXT-112を再生して、CH1-CH2、CH2-CH3、CH2-CH4の位相が45° 以内であることを確認する。

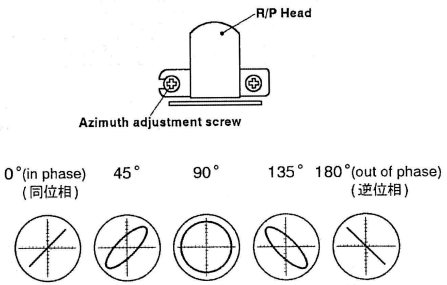
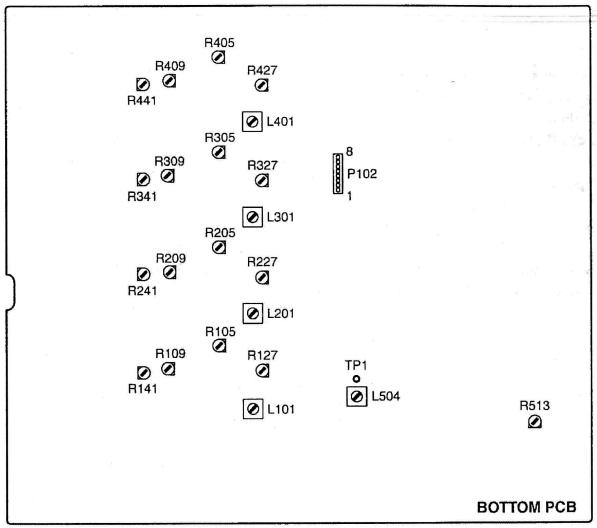


Fig. 2-4

3. AMPLIFIER CHECKS AND ADJUSTMENTS
録音・再生アンプの確認と調整



R109 (R209~R409)	Reproduce Reference Level	再生基準レベル
R513	Meter Calibration	メーター・レベル
R105 (R205~R405)	Reproduce Frequency Response	再生周波数特性
L504	Bias Oscillator Frequency	バイアス発振周波数
L101 (L201~L401)	Bias Amp (Erase)	バイアス・アンプ (消去)
R127 (R227~R427)	Bias Set	バイアス・セット
R141 (R241~R441)	Record Reference Level	録音基準レベル

Fig. 3-1 Adjustment and check points
調整個所および測定個所

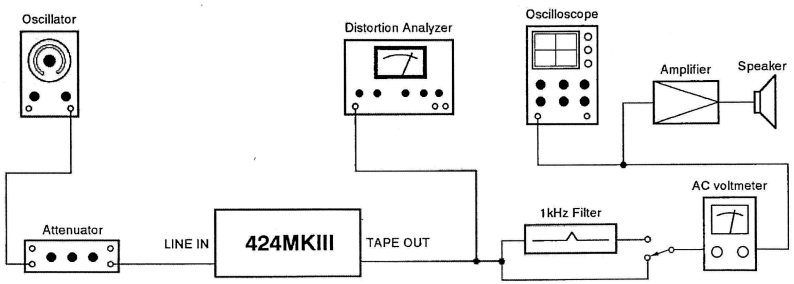


Fig. 3-2 Basic test setup

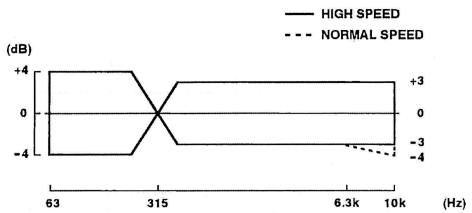
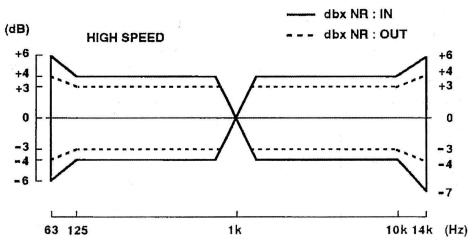


Fig. 3-3 Playback frequency
再生周波数特性



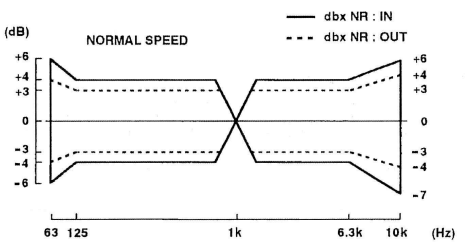


Fig. 3-4 Overall frequency response
録再周波数特性

3-1. Precautions

1. Before performing adjustments or checks, clean and demagnetize the entire tape path.
2. The AC voltmeter used in the procedures must have an input impedance of 1 MΩ or more.
3. 0 dBV corresponds 1.0 V.
4. For blank tape, use TEAC MTT-5563 or equivalent tapes.
5. Indication, for example, "R109 (R209 to R409)" means that R109 is for channel 1, R209 for channel 2, R309 for channel 3 and so on.
6. Refer to Figure 3-1 for location of adjustment points.

3-2. Playback System

Test Mode : PLAY
Measurement Point : TAPE OUT terminals (unless otherwise specified)

Adjustment Item	Preliminary	Input Signal	Adjustment Point	Measurement Method / Value Adjusted For
1. Reproduce Reference Level	Connection : Fig. 3-2 ; Tape Speed : HIGH	MXT – 112	R109 (R209 to R409)	– 10 dBV at output Specs : – 10 dBV ± 1.5 dB
2. Meter Calibration	Tape Speed : HIGH	Same as above	R513	0 dB on the meter
3. Reproduce Frequency Response	Connection : Fig. 3-2 ; Tape Speed : HIGH	MXT – 1161	R105 (R205 to R405)	0 dB at 10 kHz (same level as at 315 Hz) Specs : Fig. 3-3
	Tape Speed : NORMAL	MTT – 356	Check only	Specs : Fig. 3-3
4. Level Difference between Channels	Connection : Fig. 3-2 ; Tape Speed : HIGH	MXT – 1161	Check only	63 Hz to 10 kHz : within 3 dB
5. Level Fluctuation	Same as above	Same as above	Check only	63 Hz to 6.3 kHz : within 2 dB 6.3 kHz to 10 kHz : within 3 dB
6. Reproduce S/N Ratio	Connection : Fig. 3-2 ; dBx NR : OFF ; DIN AUDIO	——	Check only	Measure output when leader tape is played back with the unit set for nominal output level , and compare this reading with nominal output level. High Speed : 47 dB or more Normal Speed : 45 dB or more Defference between channels : within 4 dB

3-3. Recording System

Test Mode : REC/PLAY (unless otherwise specified)
Measurement Point : TAPE OUT terminals (unless otherwise specified)

Adjustment Item	Preliminary	Input Signal	Adjustment Point	Measurement Method / Value Adjusted For
1. Bias Oscillator Frequency	Frequency counter connected between TP1 and GND ; REC FUNCTION sw. : ON for all channels ;	——	L504	85 kHz ± 2 kHz as read on frequency counter
2. Bias Amp (Erase)	Oscilloscope connected between terminals # 1 (3, 5,7) and GND of P102 (with the scope's probe set to × 10) ; REC FUNCTION sw. : ON for all channels ;	——	L101 (L201 to L401)	Maximum output as read on the scope connected between the specified terminals of P102 : Trminals # 1 and GND – for Ch.1 Trminals # 3 and GND – for Ch.2 Trminals # 5 and GND – for Ch.3 Trminals # 7 and GND – for Ch.4

Adjustment Item	Preliminary	Input Signal	Adjustment point	Measurement Method / Value Adjusted For
3. Bias Set	Connection : Fig. 3-2 ; Tape Speed : NORMAL ; dBx NR : ON	1 kHz/10 kHz, – 30 dBV	R127 (R227 to R427)	Same output level at 1 kHz and 10 kHz signals as read off tape during recording them one after another
4. Record Reference Level	Connection : Fig. 3-2 ; Tape Speed : NORMAL ; dBx NR : ON	1 kHz, – 10 dBV	R141 (R241 to R441)	– 10 dBV output as read off tape during recording ; Tolerance : – 10 dBV ± 3 dB (whether dBx NR is ON or OFF)
5. Record Distortion	Connection : Fig. 3-2 ; dBx NR : OFF	Same as above	Check only	Specs : 2.0 % or less
6. Rec/Repro Frequency Responce	Connection : Fig. 3-2 ; dBx NR : ON/OFF	63 Hz to 14 kHz, – 30 dBV	Check only	Specs : Fig. 3-4
7. Level Difference between Channels	Connection : Fig. 3-2 ; dBx NR : OFF	63 Hz to 10 kHz, – 30 dBV	Check only	3 dB or less over 63 Hz to 6.3 kHz 4 dB or less over 6.3 kHz to 10 kHz
8. Level Fluctuation	Same as above	63 Hz to 10 kHz, – 30 dBV	Check only	1 dB or less at 1 kHz 2 dB or less over 63 Hz to 6.3 kHz 3 dB or less over 6.3 kHz to 10 kHz
9. Crosstalk between Tracks	Connection : Fig. 3-2 ; dBx NR : OFF ; REC FUNCTION sw. : ON for all channels	125 Hz, – 10 dBV into Ch.1 and 3 ; No signal into Ch.2 and 4	Check only	Record the input signal, then rewind the tape and play the recording. Compare the output from Ch.1 and Ch.3 with that from Ch.2 and 4. Level difference : 35 dB or greater In a similar way, check also the reverse : leakage from Ch.2 and 4 into Ch.1 and 3.
10. Channel Separation	Connection : Fig. 3-2 (1 kHz B.P.F. inserted) ; REC FUNCTION sw. : ON for all channels ; dBx NR : OFF	1 kHz, – 10 dBV into Ch.1 and 3 ; No signal into Ch.2 and 4	Check only	Compare the output level from Ch.1 and 3 with that from Ch.2 and 4 as read off tape during recording. Level difference : 45 dB or greater In a similar way, check also the reverse : leakage from Ch.2 and 4 into Ch.1 and 3.
11. Cross – erase	Connection : Fig. 3-2 ; dBx NR : OFF	10 kHz, – 10 dBV into Ch.1 and 3	Check only	Record tracks 1 and 3 and play the recording to measure their playback level, then erase tracks 2 and 4 to check for level drop of 1.5 dB or less in output from tracks 1 and 3. In a similar way, check also the reverse : recording tracks 2 and 4, erasing tracks 1 and 3, and checking level drop in output from tracks 2 and 4.
12. Erase Efficiency	Connection : Fig. 3-2 (1 kHz B.P.F. inserted) ; dBx NR : OFF	1 kHz, 0 dBV	Check only	Erase a part of a recorded section and play the tape to compare the level from the remaining recorded section with that from erased section. Level difference : 65 dB or greater
13. Rec/Repro S/N Ratio	Connection : Fig. 3-2 ; dBx NR : OFF ; DIN AUDIO	No input	Check only	Compare the output from the "no-signal" recording with nominal ouptut level. Level difference : 45 dB or greater at High Speed ; 43 dB or greater at Normal Speed. Difference between channels : 4 dB or less

3-1. 注意

1. アンプ部の調整の前に、消去ヘッド, 録/再ヘッド, テープ走行部分をそれぞれ充分消磁し、クリーナ液で清掃して下さい。
2. レベル計は、入力インピーダンス1MΩ以上のものを使用して下さい。
3. 0dBV＝1.0Vで表示しています。
4. ブランク・テープは、TEAC MTT-5563または相当品を使用して下さい。
5. R109（R209～R409）と記されているボリュームの部番は、CH1（CH2～CH4）を示します。
6. 調整個所は、図3-1を参照して下さい。

3-2. 再生系

モード：PLAY
測定個所：TAPE OUT端子

調整項目	準備・設定	入力信号	調整個所	測定方法・調整値
1. 再生基準レベル	接続：図3-2 Tape Speed：HIGH	MXT－112	R109（R209～R409）	出力が－10dBVになるように調整 規格：－10dBV±1.5dB
2. メーター・レベル	Tape Speed：HIGH	同上	R513	メーター指示：0dB
3.再生周波数特性	接続：図3-2 Tape Speed：HIGH	MXT－1161	R105（R205～R405）	10kHzのレベルが0dB（315Hzと同レベル）になるように調整 規格：図3-3
	接続：図3-2 Tape Speed：NORMAL	MTT－356	チェック	規格：図3-3
4. チャンネル間レベル差	接続：図3-2 Tape Speed：HIGH	MXT－1161	チェック	63Hz～10kHz：3dB以内
5. レベル変動	同上	同上	チェック	63Hz～6.3kHz：2dB以内 6.3kHz～10kHz：3dB以内
6. 再生S/N	接続：図3-2 dBx NR：OFF DIN AUDIO	——	チェック	基準出力状態で、リーダー・テープ部を再生した時のノイズ・レベルと基準出力との比 High Speed　：47dB以上 Normal Speed　：45dB以上 チャンネル差4dB以内

3-3. 録音系

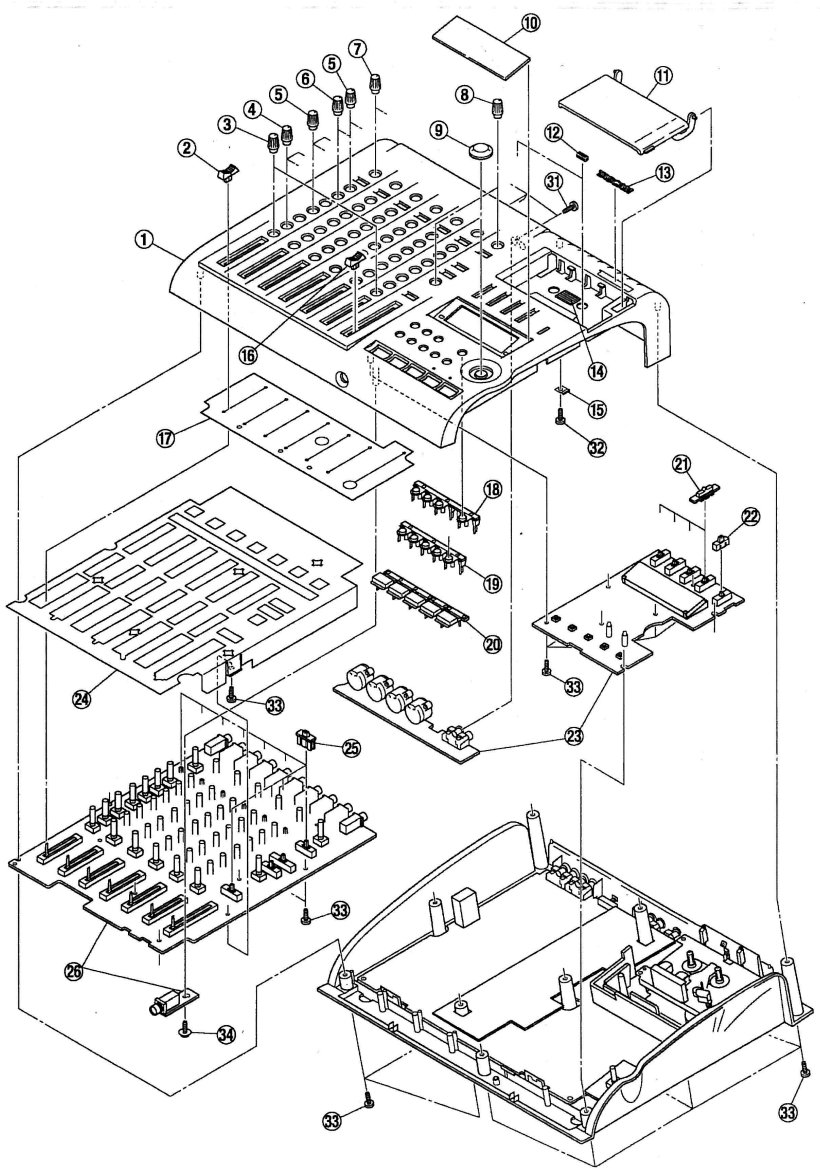
モード：REC/PLAY（特に指示のある場合を除く）
測定個所：TAPE OUT端子（特に指示のある場合を除く）

調整項目	準備・設定	入力信号	調整個所	測定方法・調整値
1. バイアス発振周波数	TP1とGND間に周波数カウンタを接続 REC FUNC. SW：全ch ON	——	L504	周波数が85kHz±2kHzになるように調整
2. バイアス・アンプ（消去）	P102－1（3, 5, 7）とGND間にオシロスコープを接続（プローブは×10にて使用） REC FUNC. SW：全ch ON	——	L101（L201～L401）	下記の端子間の出力が最大になるように調整 CH1：P102の1番端子－GND間 CH2：P102の3番端子－GND間 CH3：P102の5番端子－GND間 CH4：P102の7番端子－GND間
3. バイアス・セット	接続：図3-2 Tape Speed：NORMAL dBx NR：ON	1kHz, 10kHz／－30dBV	R127（R227～R427）	録音・再生したとき、1kHzと10kHzが同レベルになるように調整

調整項目	準備・設定	入力信号	調整個所	測定方法・調整値
4. 録音基準レベル	接続：図3-2 Tape Speed：NORMAL dBx NR：ON	1kHz／－10dBV	R141（R241～R441）	録音・再生したとき、出力が－10dBVになるように調整 規格：－10dBV±3dB（dBx NR：ON, OFF共）
5. 録音歪率	接続：図3-2 dBx NR：OFF	同上	チェック	規格：2.0%以下
6. 録再周波数特性	接続：図3-2 dBx NR：ON, OFF	63Hz～14kHz／－30dBV	チェック	規格：図3-4
7. チャンネル間レベル差	接続：図3-2 dBx NR：OFF	63Hz～10kHz／－30dBV	チェック	録再周波数特性規格内におけるch間のレベル差 63Hz～6.3kHz　：3dB以内 6.3kHz～10kHz　：4dB以内
8. レベル変動	同上	63Hz～10kHz／－30dBV	チェック	録再周波数特性規格内におけるレベル変動 1kHz　：1dB以内 63Hz～6.3kHz　：2dB以内 6.3kHz～10kHz　：3dB以内
9. トラック間クロストーク	接続：図3-2 dBx NR：OFF REC FUNC. SW：全ch ON	1,3ch：125Hz／－10dBV 2,4ch：無信号	チェック	録音・再生したときの1,3chの再生出力と2,4chの再生出力の比 35dB以上 2,4ch→1,3chの場合も同様
10. チャンネル・セパレーション	接続：図3-2 （1kHz B.P.F.使用） REC FUNC. SW：全ch ON dBx NR：OFF	1,3ch：1kHz／－10dBV 2,4ch：無信号	チェック	録音・再生したときの1,3chの再生出力と2,4chの再生出力の比 45dB以上 2,4ch→1,3chの場合も同様
11. クロス消去	接続：図3-2 dBx NR：OFF	1,3ch：10kHz／－10dBV	チェック	1,3chを録音・再生してレベルを確認後、2,4chを消去したとき、1,3chのレベルの低下 1.5dB以内 2,4ch→1,3chの場合も同様
12. 消去率	接続：図3-2 （1kHz B.P.F.使用） dBx NR：OFF	1kHz／0dBV	チェック	録音部分の一部を残して消去した後、再生したときの未消去部分との比 65dB以上
13. 録再S/N	接続：図3-2 dBx NR：OFF DIN AUDIO	無信号	チェック	基準出力と無信号録再出力レベルとの比 High Speed：45dB以上 Normal Speed：43dB以上 チャンネル差：4dB以内

4. EXPLODED VIEWS AND PARTS LIST
分解図とパーツリスト

EXPLODED VIEW-1



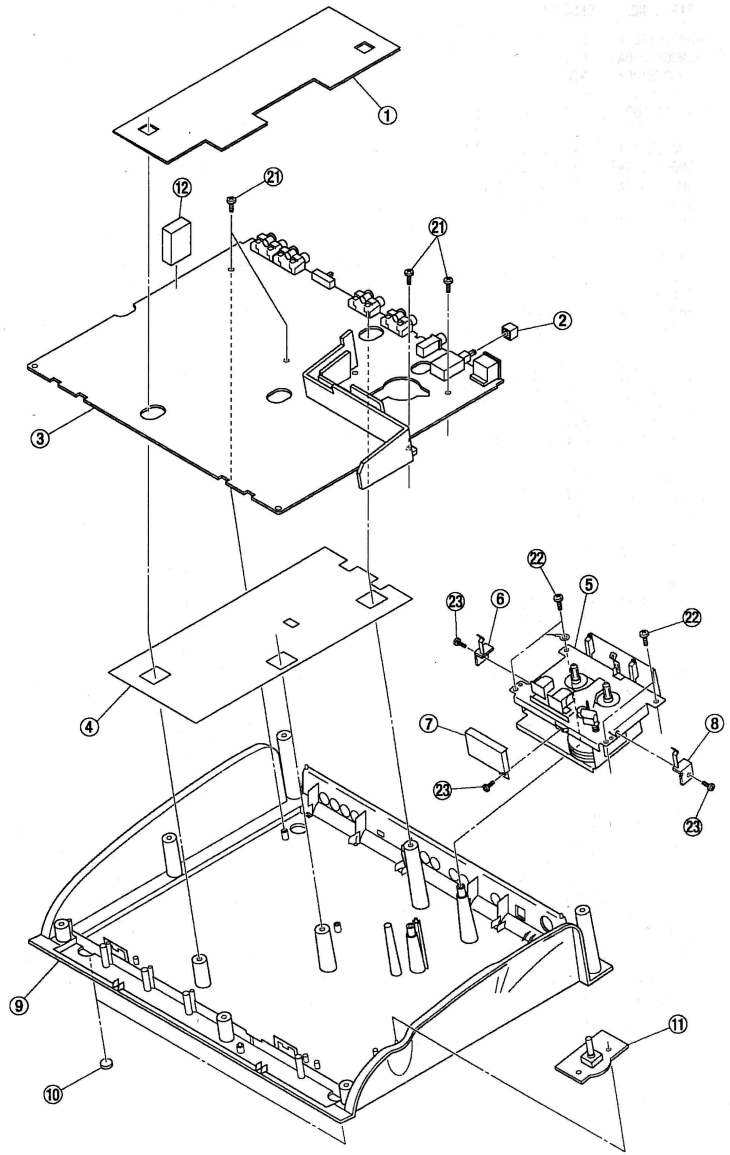
EXPLODED VIEW-1

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1- 1	*3M0066000A	TOP CASE [EXCEPT J]	
	*3M0066010A	TOP CASE BLK [J]	
1- 2	3M0073100A	KNOB, FADER N61/Y17	
1- 3	3M0069700A	R-VR KNOB, N61/N64	
1- 4	3M0069600A	R-VR KNOB, N61/G06	
1- 5	3M0069400A	R-VR KNOB, N61/B10	
1- 6	3M0069500A	R-VR KNOB, N61/B12	
1- 7	3M0069300A	R-VR KNOB, N61/R21	
1- 8	3M0069800A	R-VR KNOB, N61/Y17	
1- 9	3M0073000A	KNOB, PITCH N61	
1-10	*3M0067100A	WINDOW, FL	
1-11	9260298811	CASSETTE COVER [EXCEPT J]	
	9260301211	CASSETTE COVER [J]	
1-12	*3M0067000A	CUSION, CAS. COVER	
1-13	*9260268802	TASCAM BADGE	
1-14	*3M0062400A	PLATE, REFLECT	
1-15	*3M0066700A	SPRING, CASSETTE	
1-16	3M0073110A	KNOB, FADER N61/R21	
1-17	*3M0066800B	SHEET, MASKING	
1-18	*3M0066400A	BUTTON, RST (U)	
1-19	*3M0066300A	BUTTON, RST (D)	
1-20	3M0066200A	BUTTON, OPE	
1-21	3M0067400A	KNOB, SLIDE R. F	
1-22	3M0067500A	KNOB, SLIDE T/S	
1-23	*3E9516800B	GATHER B PCB ASSY	
1-24	*3M0073300B	SHIELD(MIXER)	
1-25	3M0072900A	KNOB, SLIDE LG	
1-26	3E9516500C	GATHER A PCB ASSY	
1-31	*3B0004708A	SCREW, BPP M2.6X8 (BLK)	
1-32	*3B0000808A	SCREW, BPP M3X8	
1-33	*3B0000810A	SCREW, BPP M3X10	
1-34	*3B0006410A	SCREW, BPPAW M3X10	

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	3D0023000A	OWNER'S MANUAL, JAPANESE [J]	
	3D0023100A	OWNER'S MANUAL, ENGLISH [EXCEPT J]	
	3D0023200A	OWNER'S MANUAL, FRENCH/GERMAN [E]	
	3E0092500A	AC ADAPTOR [J]	
	3E0092511A	AC ADAPTOR [US/C]	
	3E0092540A	AC ADAPTOR [E]	
	3E0092550A	AC ADAPTOR [UK]	
	3E0092560A	AC ADAPTOR [A]	

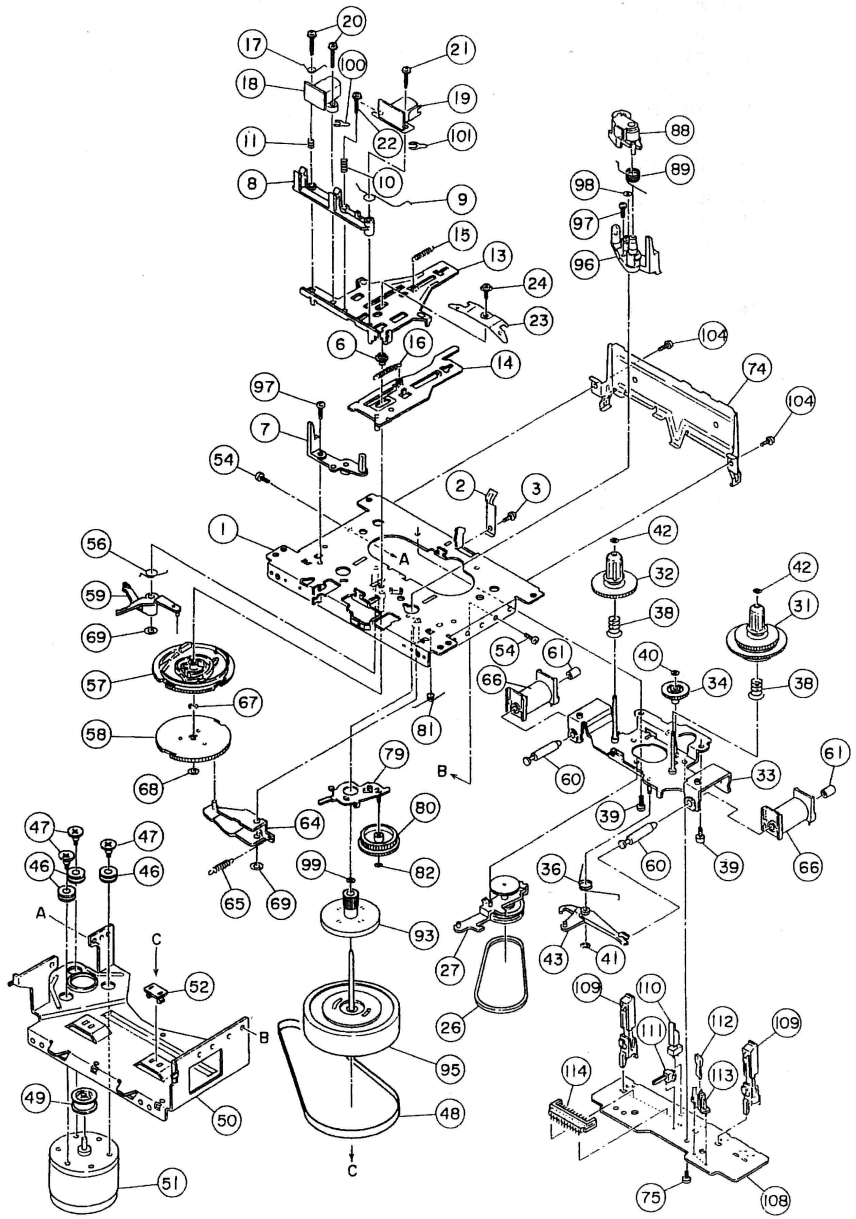
EXPLODED VIEW-2



EXPLODED VIEW-2

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2- 1	*3M0073400A	SHIELD(MIDLE)	
2- 2	5801503800	BUTTON, EJECT P-N15-A	
2- 3	*3E9517300B	BOTTOM PCB ASSY [J, US/C]	
	*3E9517340B	BOTTOM PCB ASSY [E, UK, A]	
2- 4	*3M0073500A	SHIELD(BOTTOM)	
2- 5	*3M0068300A	MECH ASSY, TN-1800SD-301-1	
2- 6	3M0067200A	HOLDER CAS(L)	
2- 7	*3M0066600A	SHIELD COVER HD	
2- 8	3M0067300A	HOLDER CAS(R)	
2- 9	*3M0066100A	BTM CASE [EXCEPT J]	
	*3M0066110A	BTM CASE BLK [J]	
2-10	3M0066910A	FOOT	
2-11	*3E9516800B	GATHER B PCB ASSY	
2-12	*3M0073900A	CUSHION, PCB	
2-21	*3B0000810A	SCREW, BPP M3X10	
2-22	*3B0004808A	SCREW, BPP M3X8 (BLK)	
2-23	*3B0005106A	SCREW, BPS M2X6	

EXPLODED VIEW-3



EXPLODED VIEW-3

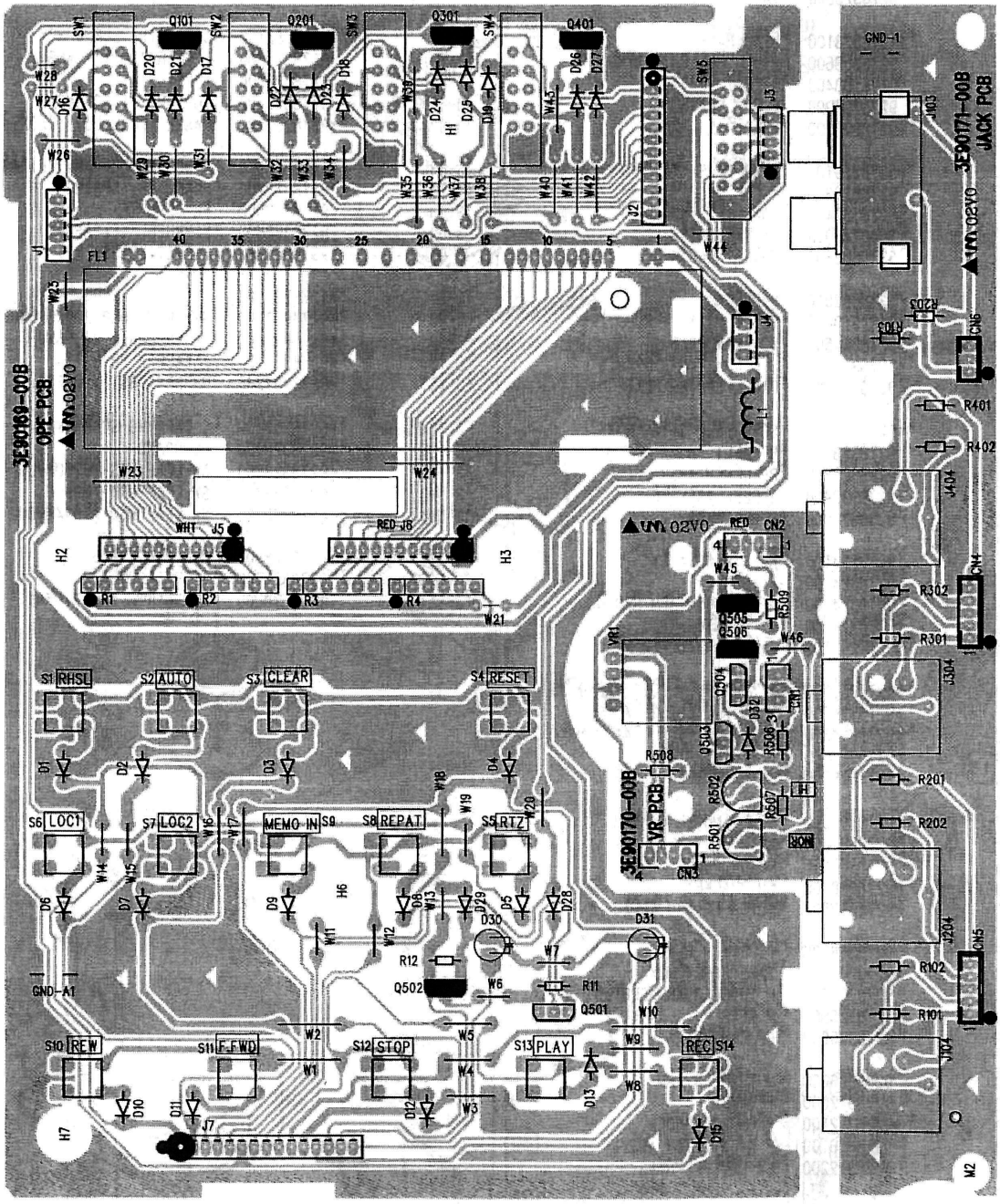
REF. NO.	PARTS NO.	DESCRIPTION
3- 1	*9278329000	CHASSIS ASSY
3- 2	9278308900	PACK SPRING
3- 3	*9278309200	SCREW, C-TAP. M2X3(SPECIAL)
3- 6	*9278322900	PANEL COLLAR (A)
3- 7	9278323000	TAPE GUIDE
3- 8	*9278323100	HEAD BASE
3- 9	9278309600	PINCH ROLLER SPRING
3-10	9278198400	AZIMUTH SPRING
3-11	9278197900	E. H. SPRING
3-13	*9278323200	HEAD PANEL (A)
3-14	*9278329100	HEAD PANEL (B) ASSY
3-15	9278323300	RC SPRING
3-16	9278323400	PANEL SPRING
3-17	3M0074300A	EARTH SPRING
3-18	5378602100	ERASE HEAD 4-4
3-19	5378602010	R/P HEAD
3-20	*9A07570400	SCREW, M2X11 +-CUP
3-21	*9278310500	SCREW, M2X9.5
3-22	*9278310300	SCREW, AZIMUTH M2X9.5
3-23	9278323500	PANEL SPRING PLATE
3-24	*9278323600	SCREW, CUP S-TAP M2X5
3-26	9278323700	RF BELT
3-27	9278323800	RF CLUCH ASSY
3-31	9278323900	T REEL ASSY, (F)
3-32	9278324000	S REEL ASSY,
3-33	9278324100	REEL BASE ASSY
3-34	9278324200	FF GEAR
3-36	9278324300	FR TRIGGER ARM SPRING
3-38	9278324400	B.T SPRING, (R)
3-39	*9278202100	C TAPPING SCREW M2X4
3-40	*9278253100	WASHER, POLY. CUT1. 2X3X0. 25
3-41	*9278324700	WASHER, P CUT 2. 1X5X0. 5
3-42	*9278324800	WASHER, HL CUT 1. 4X3. 2X0. 4
3-43	9278324900	RF TRIGGER ARM
3-46	9278325100	MOTOR RUBBER
3-47	*9278294600	SCREW, MOTOR COLLAR
3-48	9278367800	MAIN BELT
3-49	9278367900	MOTOR PULLEY (D)
3-50	*9278368000	FM BRACKET
3-51	9278368100	MOTOR EG-530 KD-2B
3-52	9278368200	FL PATCH PLATE
3-54	*9278201900	TAMS SCREW M2X4
3-56	9278325700	M TRIGGER ARM SPRING
3-57	9278325800	M GEAR
3-58	9278325900	RF CAM GEAR
3-59	9278326000	M TRIGGER ARM
3-60	9278312000	PLUNGER
3-61	*9278312100	PLUNGER HOLDER
3-64	9278326100	P KICK LEVER ASSY
3-65	9278312200	PK LEVER SPRING

REF. NO.	PARTS NO.	DESCRIPTION
3-66	9278326200	SOLENOID
3-67	*9278252600	E-RING, E-2
3-68	*9278326400	WASHER, HL CUT1. 55X3. 5X0. 5
3-69	*9278326500	WASHER, HL CUT 2. 1X5X0. 4
3-74	*9278326800	SW PROTECTOR
3-75	*9278202100	C TAPPING SCREW M2X4
3-79	9278327100	T GEAR ARM (F) ASSY
3-80	9278327200	T GEAR, (A)
3-81	9278327300	TG ARM (F) SPRING,
3-82	*9278253100	WASHER, POLY. CUT1. 2X3X0. 25
3-88	9278327500	PINCH ROLLER ARM (F) ASSY
3-89	9278329200	P ARM (F) SPRING
3-93	9278368500	FL GEAR (F)
3-95	9278368600	FLYWHEEL (F) ASS'Y
3-96	9278327700	FL METAL ASSY, (F)
3-97	*9278202300	C TAPPING SCREW M2X6
3-98	*9278368700	NYLON WASHER 2. 1X3. 5X0. 5
3-99	*9278328000	HL WASHER, 2. 3X3. 8X0. 3
3-100	*9278367100	Y WASHER PB 0. 1T
3-101	*9278367200	WASHER (BS) Y 0. 2T
3-104	*9278202100	C TAPPING SCREW M2X4
3-108	*9278328200	PC BOARD
3-109	9278328300	SW, LEAF MTS-10250MVJ0
3-110	9278328400	SW, LEAF MSW-1699CF
3-111	9278328500	SW, LEAF MSW-17944MVD0
3-112	9278328600	HALL IC, LB9051A
3-113	9278328700	IC PROTECTOR
3-114	9A07570300	CONNECTOR, TXL-P10PM1

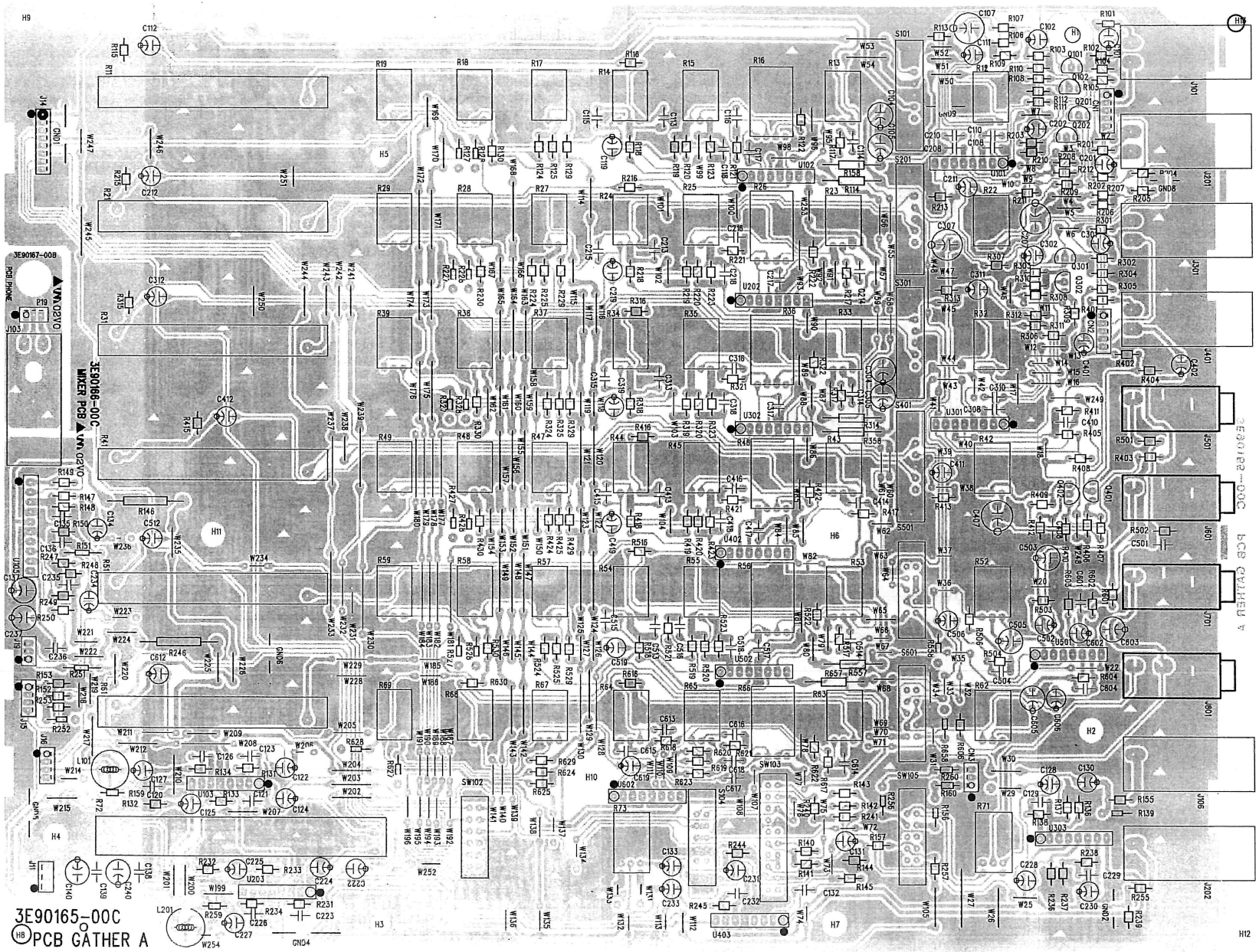
5. PC BOARDS AND PARTS LIST

基板図とパーツ・リスト

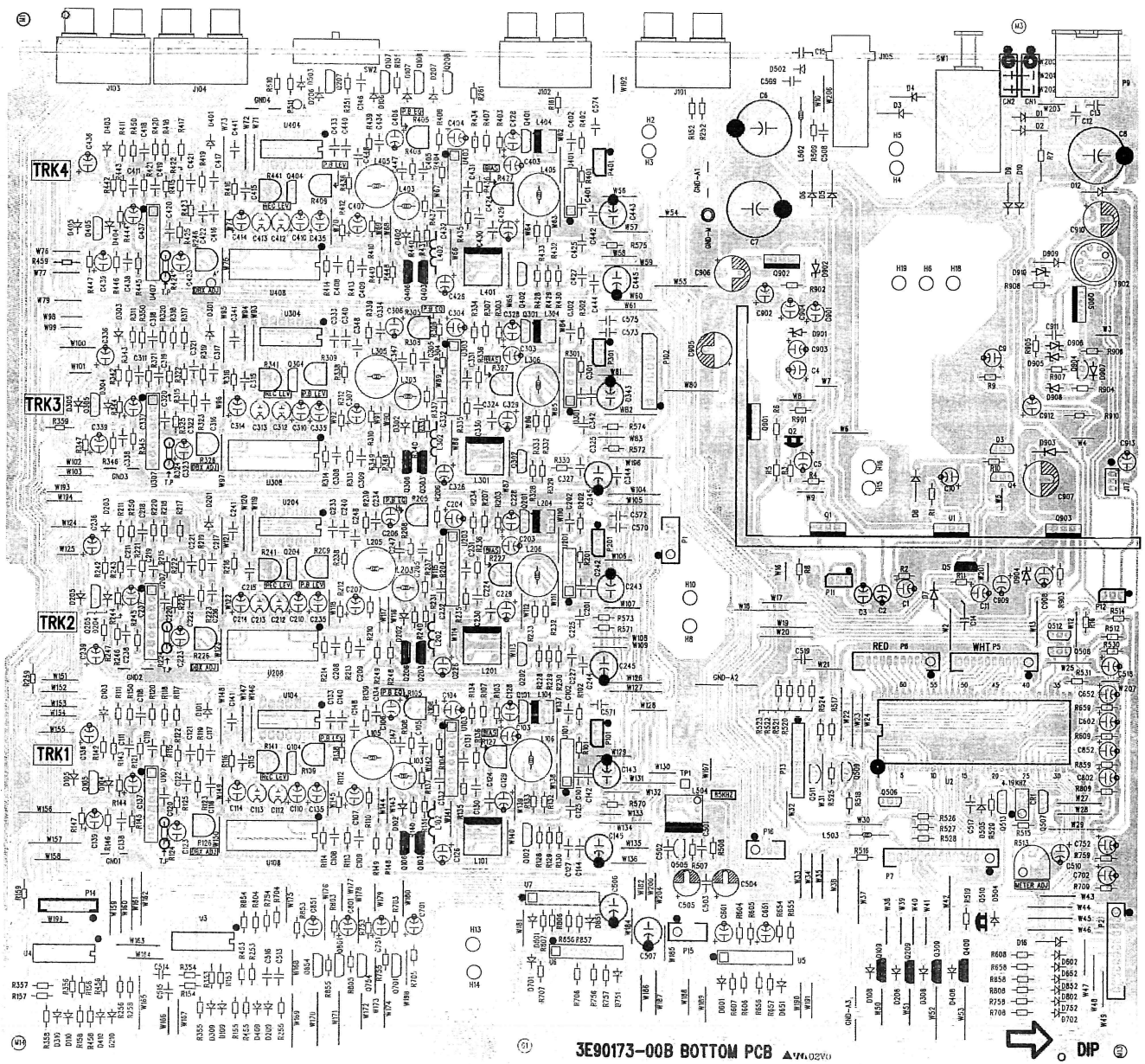
GATHER B PCB (OPE PCB, VR PCB, JACK PCB)



GATHER A PCB (MIXER PCB, PHONE PCB)



BOTTOM PCB



GATHER B PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9516800B	GATHER B PCB ASSY
	*3E9016800B	GATHER B PCB
		OPE PCB ASSY
		OPE PCB
	3M0068400A	LED HOLDER LED 3-13
	3M0068000A	FL HOLDER L
	3M0068100A	FL HOLDER R
D1-13	3S000241	DIODE, 1SS133 T-77
D15-29	3S000241	DIODE, 1SS133 T-77
D30	3S001960	LED, L-34 GDSL
D31	3S001970	LED, L-34 HDSL
FL1	3E0094300A	FL DISPLAY, BJ417GK
L1	3E010120	COIL, 1MH EC36-102K-T5
Q101-401	3S000301	TR, DTA124ES TP
Q501	3S000291	TR, DTC124ES TP
Q502	3S000301	TR, DTA124ES TP
R1-4	3R004990	RD ARRAY, 22K*5
SW1-14	3E002070	SW, TACT SKQSAB HMR-187
SW1-4	3E009200	SW, SLIDE SSSU023NB2 6MM
SW5	3E009210	SW, SLIDE SSSU042NB2 6MM
		VR PCB ASSY
		VR PCB
CN1	3E000670	CONECT PLUG, 3P B3B-PH-K
CN2	3E010180	CONECT PLUG, 4P 89400 RED
CN3	3E000680	CONECT PLUG, 4P B4B-PH-K
D501	3S000241	DIODE, 1SS133 T-77
Q503, 504	3S000291	TR, DTC124ES TP
Q505, 506	3S000301	TR, DTA124ES TP
R1	3R004960	VAR RES, RK11K12N-1.5KBX2
R501	3R005040	VR, SEMI-FIXED 637A 470
R502	3R005060	VR, SEMI-FIXED 637A 2.2K
		JACK PCB ASSY
		JACK PCB
CN4, 5	3E000690	CONECT PLUG, 5P B5B-PH-K
CN6	3E000670	CONECT PLUG, 3P B3B-PH-K
J103	3E010230	JACK, RCA 2P
J104-404	3E010130	JACK, XLR NC3FAH-0

GATHER A PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9516500C	GATHER A PCB ASSY
	*3E9016500C	GATHER A PCB
		PHONE PCB ASSY
		PHONE PCB
J103	3E010260	JACK, JY-6314-01-030

GATHER A PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
		MIXER PCB ASSY
		MIXER PCB
J101-401	3E010260	JACK, JY-6314-01-030
J106, 202	3E010100	JACK, JY-6314-01-020
J501-801	3E010110	JACK, JY-6314-01-130
L101	3E009450	COIL, LPF
L201	3E009450	COIL, LPF
Q101-401	3S002380	TR, 2SC732TMGR
Q102-402	3S002380	TR, 2SC732TMGR
R11-61	3R004970	VAR RES, RS45111-5KA
R12-62	3R004900	VAR RES, RK09D113-10KRD
R13-63	3R004910	VAR RES, RK09D113-100KB
R14-64	3R004910	VAR RES, RK09D113-100KB
R15-65	3R004920	VAR RES, RK09D113-10KB
R16-66	3R004950	VAR RES, RK11K12N-200KC
R17-67	3R004930	VAR RES, RK09D113-10KA
R18-68	3R004930	VAR RES, RK09D113-10KA
R19-69	3R004920	VAR RES, RK09D113-10KB
R71, 73	3R004940	VAR RES, RK09K12C-10KAX2
R72	3R004980	VAR RES, RS60112-10KAX2
R114, 314	⚠ 3R005000	RD, 1W 100 OHM NON-F
R146, 246	⚠ 3R005010	RD, 2W 22 OHM NON-F
R158, 358	⚠ 3R005000	RD, 1W 100 OHM NON-F
R557, 657	⚠ 3R005000	RD, 1W 100 OHM NON-F
SW101	3E009130	SW, SLIDE SSSU013NB2 9MM
SW102	3E009090	SW, SLIDE SSSU042NB2 9MM
SW103	3E009120	SW, SLIDE SSSU043NB2 9MM
SW104	3E009100	SW, SLIDE SSSU023NB2 9MM
SW105	3E009100	SW, SLIDE SSSU023NB2 9MM
SW201	3E009130	SW, SLIDE SSSU013NB2 9MM
SW301	3E009130	SW, SLIDE SSSU013NB2 9MM
SW401	3E009130	SW, SLIDE SSSU013NB2 9MM
SW501	3E009100	SW, SLIDE SSSU023NB2 9MM
SW601	3E009100	SW, SLIDE SSSU023NB2 9MM
U101, 301	3S001940	IC, NJM4565LD
U102, 602	3S001940	IC, NJM4565LD
U103-403	3S001940	IC, NJM4565LD
U105	3S002090	IC, LA6515
U501	3S001940	IC, NJM4565LD

BOTTOM PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*3E9517300B	BOTTOM PCB ASSY [J, US/C]
	*3E9517340B	BOTTOM PCB ASSY [E, UK, A]
	*3E9017300B	BOTTOM PCB
	*3M0066500A	HEAT SINK
	*3M0069100A	SUB HEAT SINK
	*3B0005308A	SCREW, BPB M3X8
	*3B0005312A	SCREW, BPB M3X12
CR1	3E005480	RESONATOR, CERAMIC 4.19MHZ
C6-8	⚠ 3C009940	CE, 25V 3300UF GS
C907	⚠ 3C009810	CE, 16V 470UF GS

BOTTOM PCB ASSY

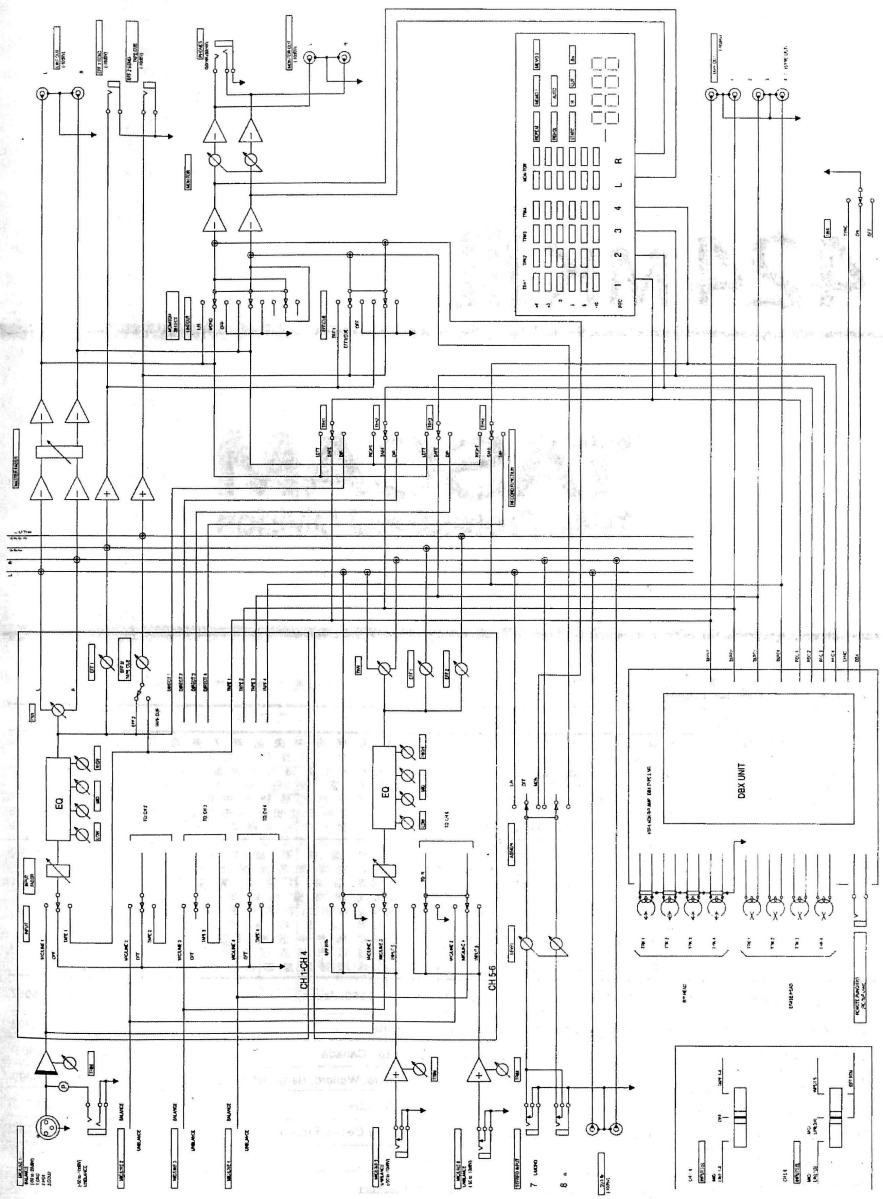
REF. NO.		PARTS NO.	DESCRIPTION
D1-6	⚠	3S001140	DIODE, RL252
D7		3S000241	DIODE, 1SS133 T-77
D8		3S000031	DIODE, 1N4003-TR
D9, 10		3S000241	DIODE, 1SS133 T-77
D12	⚠	3S000031	DIODE, 1N4003-TR
D16		3S002040	ZDI, TZJ3.3B T-77
D101-401		3S000241	DIODE, 1SS133 T-77
D102-402		3S000241	DIODE, 1SS133 T-77
D103-403		3S000241	DIODE, 1SS133 T-77
D104-404		3S000241	DIODE, 1SS133 T-77
D105-405		3S000241	DIODE, 1SS133 T-77
D106, 206		3S000241	DIODE, 1SS133 T-77
D107, 207		3S000241	DIODE, 1SS133 T-77
D108-408		3S000241	DIODE, 1SS133 T-77
D109-409		3S000241	DIODE, 1SS133 T-77
D110-410		3S000241	DIODE, 1SS133 T-77
D502-505		3S000241	DIODE, 1SS133 T-77
D601-801		3S000241	DIODE, 1SS133 T-77
D602-802		3S000241	DIODE, 1SS133 T-77
D651-851		3S000241	DIODE, 1SS133 T-77
D652-852		3S000241	DIODE, 1SS133 T-77
D901, 902	⚠	3S002050	ZDI, MTZJ5.6B T-77
D903	⚠	3S000031	DIODE, 1N4003-TR
D904	⚠	3S002050	ZDI, MTZJ5.6B T-77
D905, 908		3S002060	ZDI, MTZJ6.8B T-77
D906		3S001801	ZDI, MTZJ22C T-77
D907		3S000241	DIODE, 1SS133 T-77
D909		3S000031	DIODE, 1N4003-TR
D910		3S000681	ZDI, MTZJ5.1B T-77
J101-104		3E010230	JACK, RCA 2P
J105		3E010100	JACK, JY-6314-01-020
L101-401		3E009440	COIL, HX
L102-402		3E010140	COIL, 10UH EC36-100J
L103-403		3E010150	COIL, 36MH
L104-404		3E009470	COIL, 85KHZ
L105-405		3E009450	COIL, LPF
L106-406		3E009450	COIL, LPF
L502		3E004411	COIL, 220UH EC36-221K-T5
L503		3E010120	COIL, 1MH EC36-102K-T5
L504		3E009460	COIL, OSC
P1		3E000690	CONECT PLUG, 5P B5B-PH-K
P2		3E000760	CONECT PLUG, 12P B12B-PH-K
P5		3E010190	CONECT PLUG, 11P 89400 RED
P6		3E000750	CONECT PLUG, 11P B11B-PH-K
P7		3E010250	CONECT PLUG, 15P 89400-1511
P9	⚠	3E009240	JACK, DIN 6P JY-5004-01-060
P11		3E010210	CONECT PLUG, 3P 5267 BLK
P12		3E008580	CONECT PLUG, 3P 5267-03A-X
P14		3E000720	CONECT PLUG, 8P B8B-PH-K
P15		3E000680	CONECT PLUG, 4P B4B-PH-K

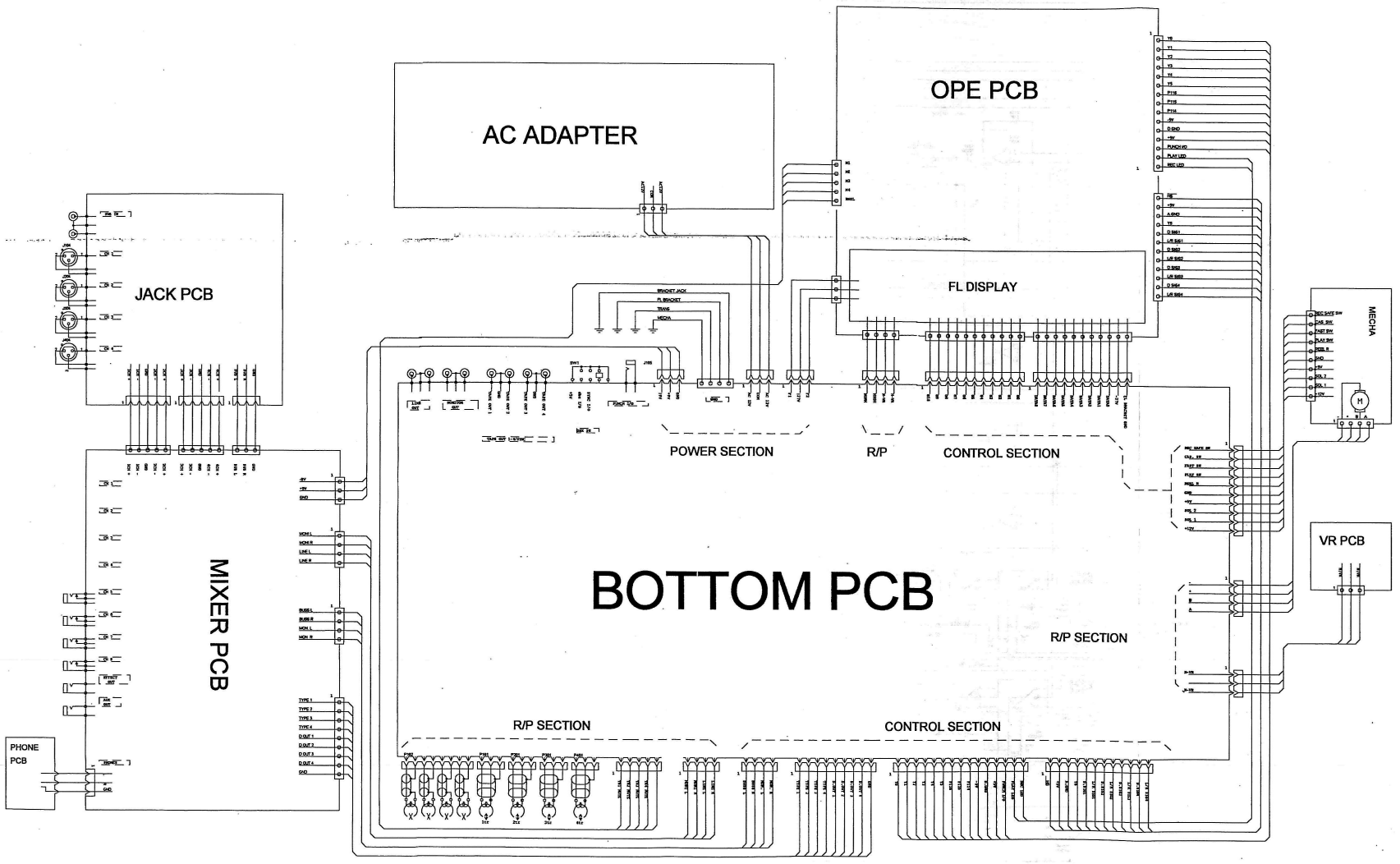
BOTTOM PCB ASSY

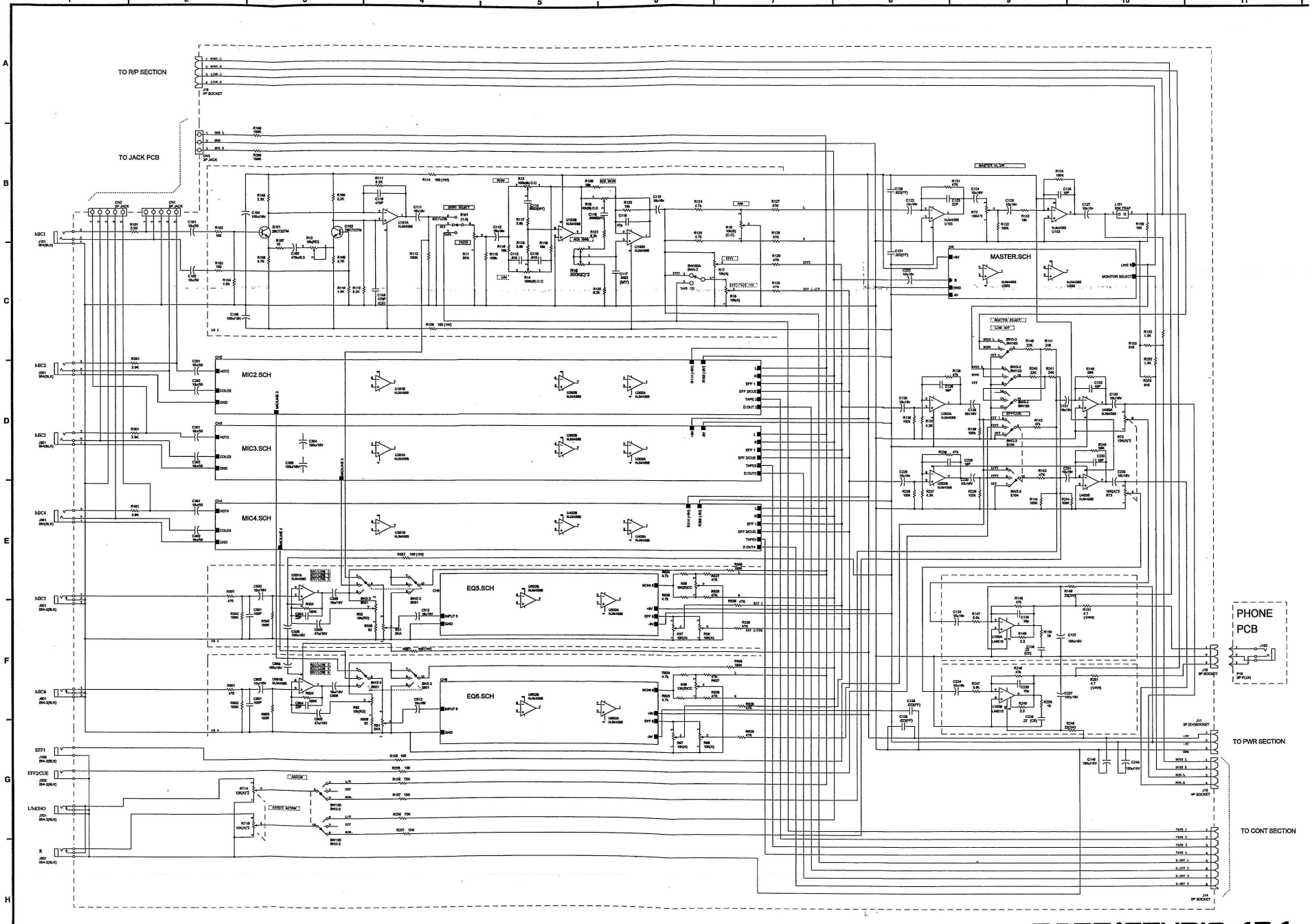
REF. NO.		PARTS NO.	DESCRIPTION
P16		3E010180	CONECT PLUG, 4P 89400 RED
P101		3E008580	CONECT PLUG, 3P 5267-03A-X
P102		3E008630	CONECT PLUG, 8P 5267-08A-X
P201		3E010200	CONECT PLUG, 3P 5267 RED
P301		3E010210	CONECT PLUG, 3P 5267 BLK
P401		3E010220	CONECT PLUG, 3P 5267 YEL
Q1	⚠	3S000820	TR, 2SB1655E
Q2	⚠	3S000020	TR, 2SA1015GR
Q3, 4		3S000291	TR, DTC124ES TP
Q5		3S000301	TR, DTA124ES TP
Q101-401		3S002030	TR, DTC363ES
Q102-402		3S001980	TR, 2SC2002L
Q103-403		3S002010	TR, DTA114ES
Q104-404		3S002000	TR, DTC314TS
Q105-405		3S002000	TR, DTC314TS
Q106-406		3S000301	TR, DTA124ES TP
Q107, 207		3S002000	TR, DTC314TS
Q108, 208		3S002000	TR, DTC314TS
Q109-409		3S002020	TR, DTB143ES
Q505		3S002371	TR, 2SC5395-T12-F
Q506-508		3S000291	TR, DTC124ES TP
Q509, 511		3S001550	TR, 2SD1859TV2-Q
Q510		3S000301	TR, DTA124ES TP
Q512, 513		3S000291	TR, DTC124ES TP
Q701, 801		3S002000	TR, DTC314TS
Q754, 854		3S002000	TR, DTC314TS
Q901, 903	⚠	3S001990	TR, 2SD2394F
Q902	⚠	3S000820	TR, 2SB1655E
Q904		3S002270	TR, 2SC1740S-S
Q905		3S002280	TR, 2SC4596F
R7	⚠	3R005310	RD, 1W 2.2 OHM NON-F
R105-405		3R005210	VR SEMI-FIXED 637A 6.8K
R109-409		3R005080	VR SEMI-FIXED 637A 10K
R126-426		3R005070	VR SEMI-FIXED 637A 4.7K
R127-427		3R005110	VR SEMI-FIXED 637A 100K
R141-441		3R005080	VR SEMI-FIXED 637A 10K
R513		3R005080	VR SEMI-FIXED 637A 10K
SW1	⚠	3E009140	SW, PUSHU SDKE3
SW2		3E009110	SW, SLIDE SSSU123NB2 9MM
T902		3E009420	COIL, DC/DC CONV. TRANS
U1	⚠	3S000250	IC, NJM317F
U2		3S0019500A	IC, UPD78023CW-016
U3, 4		3S000430	IC, BU4066BC
U5-7		3S001940	IC, NJM4565LD
U101-401		3S000990	IC, BA7755A
U103-403		3S002400	IC, NJM2068LD
U104-404		3S000430	IC, BU4066BC
U107-407		3S001940	IC, NJM4565LD
U108-408		3S001920	IC, AN7367K

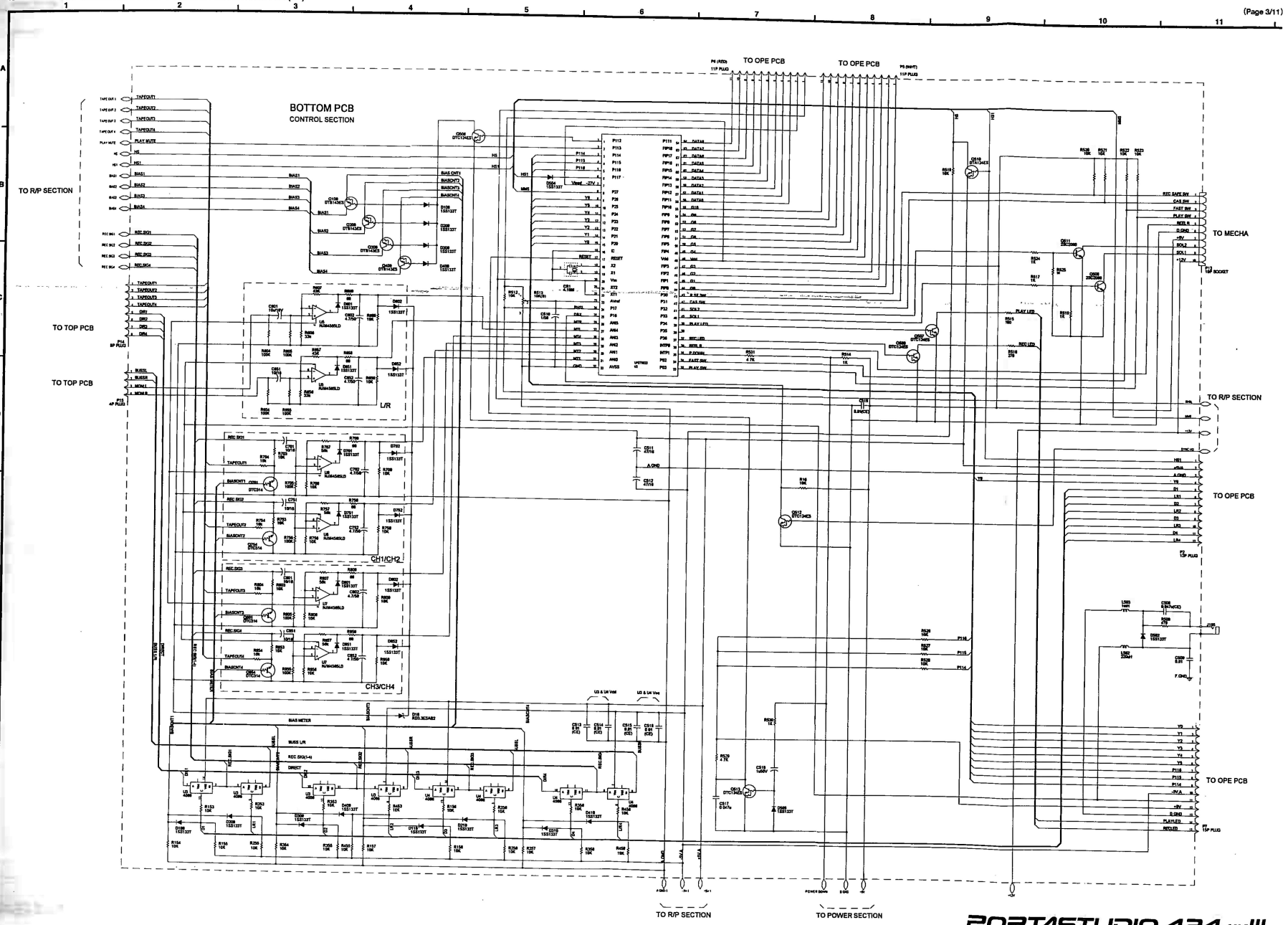
6. BLOCK DIAGRAM

ブロック・ダイアグラム

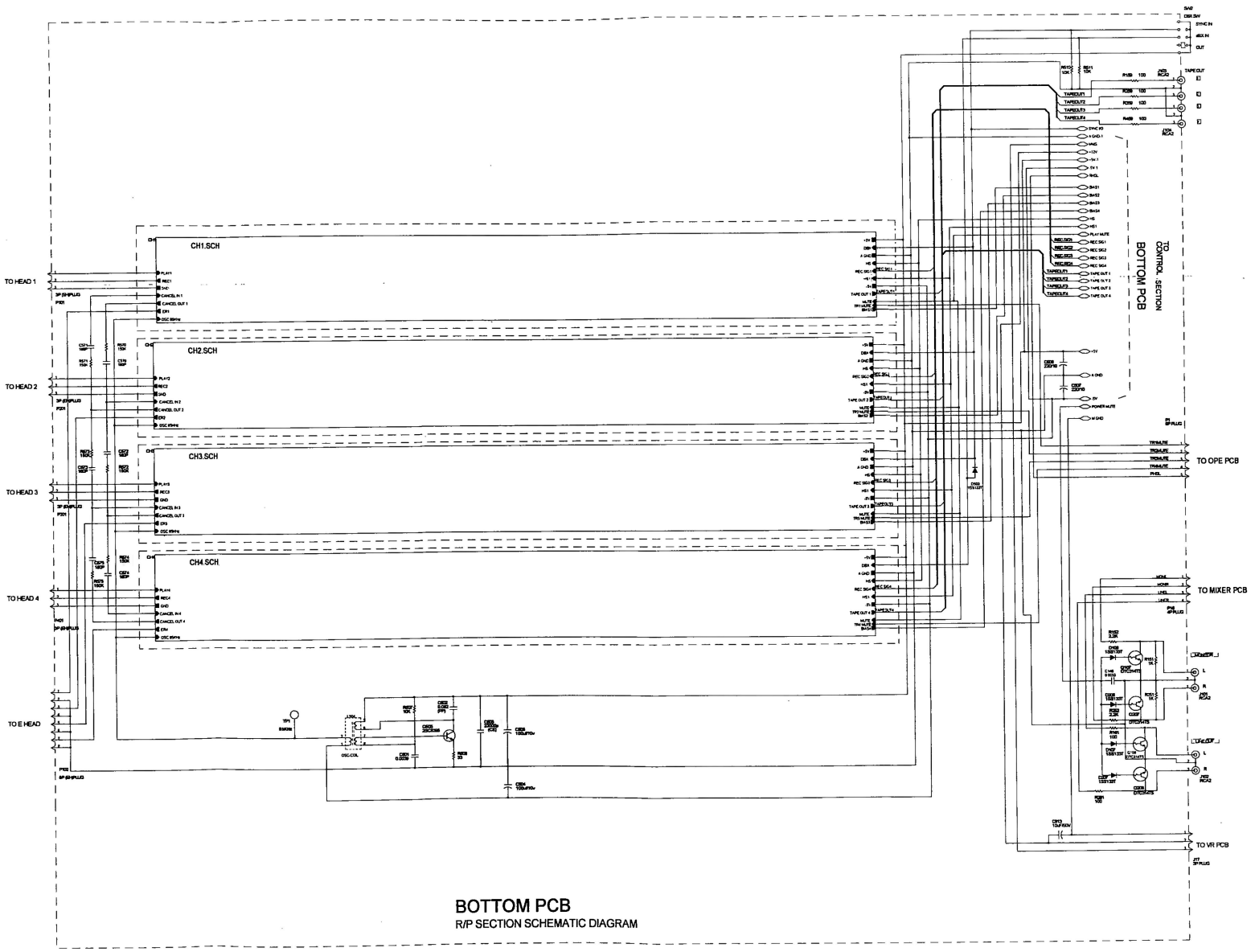



AC ADAPTER
OPE PCB
JACK PCB
FL DISPLAY
MECHA
POWER SECTION
R/P
CONTROL SECTION
MIXER PCB
BOTTOM PCB
VR PCB
R/P SECTION
R/P SECTION
CONTROL SECTION
PHONE PCB


TO R/P SECTION
TO JACK PCB
MIC2.SCH
MIC3.SCH
MIC4.SCH
EQ5.SCH
EQ6.SCH
MASTER.SCH
PHONE PCB
TO PWR SECTION
TO CONT SECTION



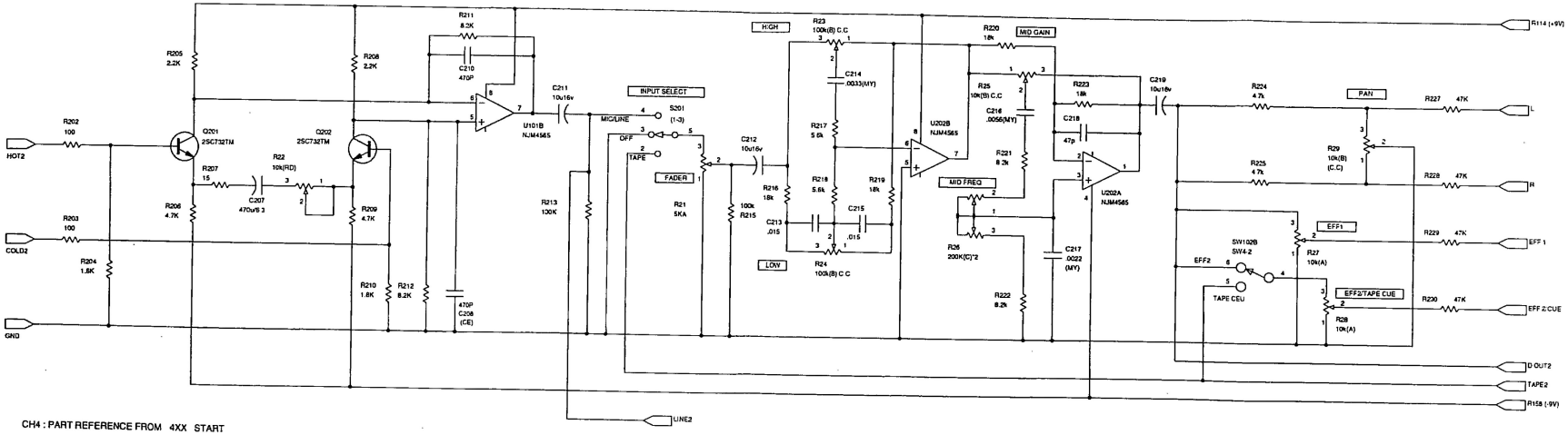
PORTASTUDIO 424MKIII



BOTTOM PCB

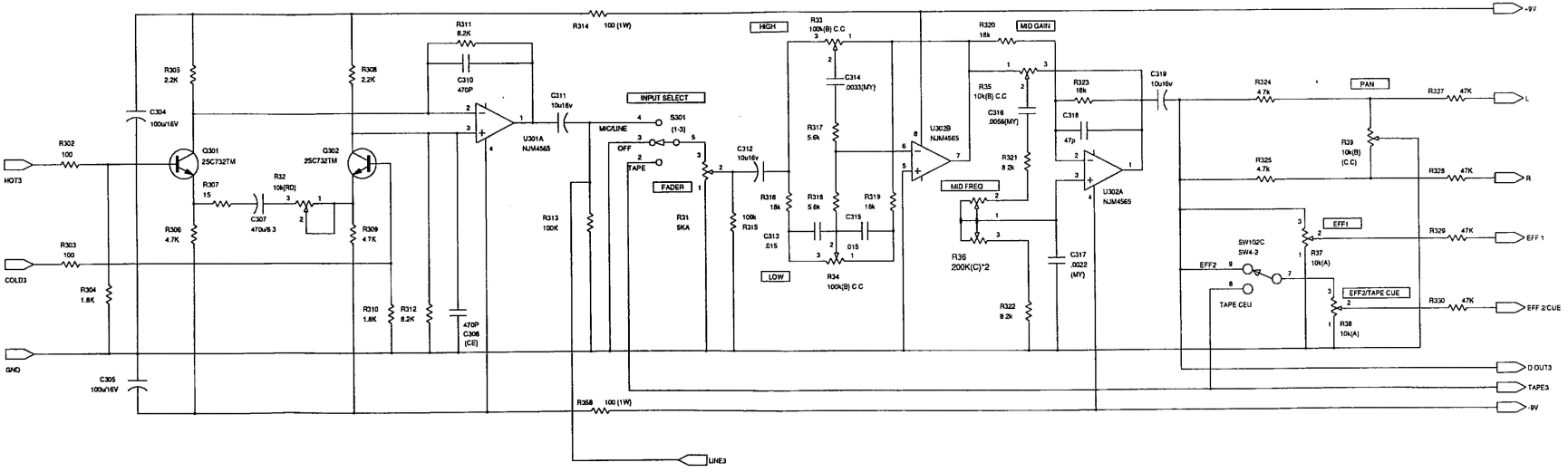
R/P SECTION SCHEMATIC DIAGRAM

MIC2 & MIC4

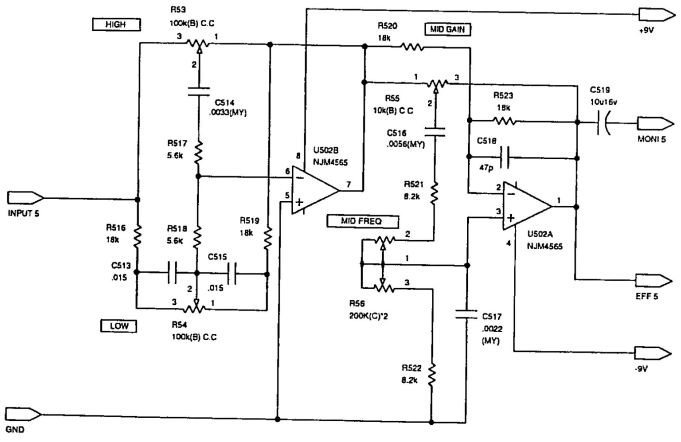


CH4 : PART REFERENCE FROM 4XX START

MIC3

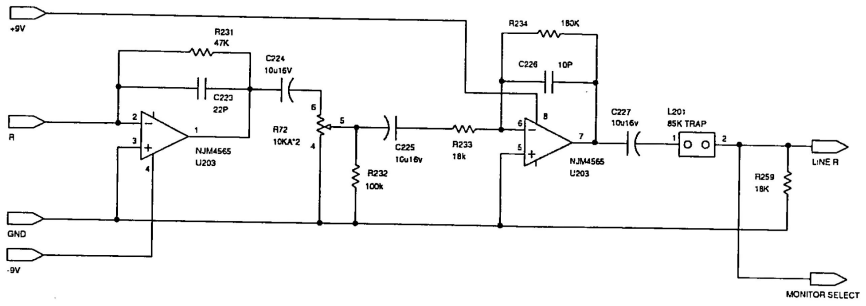

HOT3
COLD3
GND
Q301 2SC732TM
Q302 2SC732TM
U301A NJM4565
U302B NJM4565
U302A NJM4565
INPUT SELECT
MIC/LINE
OFF
TAPE
FADER
HIGH
LOW
MID GAIN
MID FREQ
PAN
EFF1
EFF2
TAPE CEU
EFF2/TAPE CUE
+9V
L
R
EFF 1
EFF 2/CUE
D OUT3
TAPE3
-9V
LINE3

EQ5 & EQ6

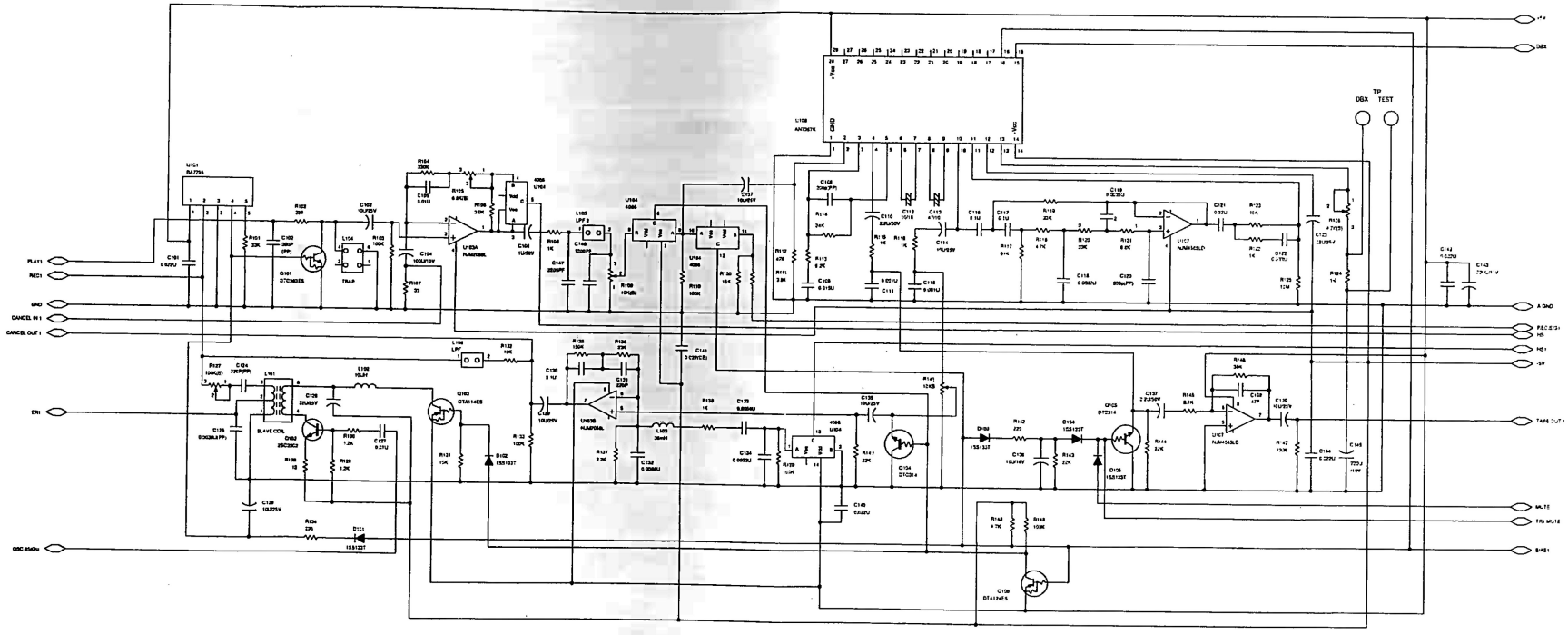


EQ6 : PART REFERENCE FROM 6XX START

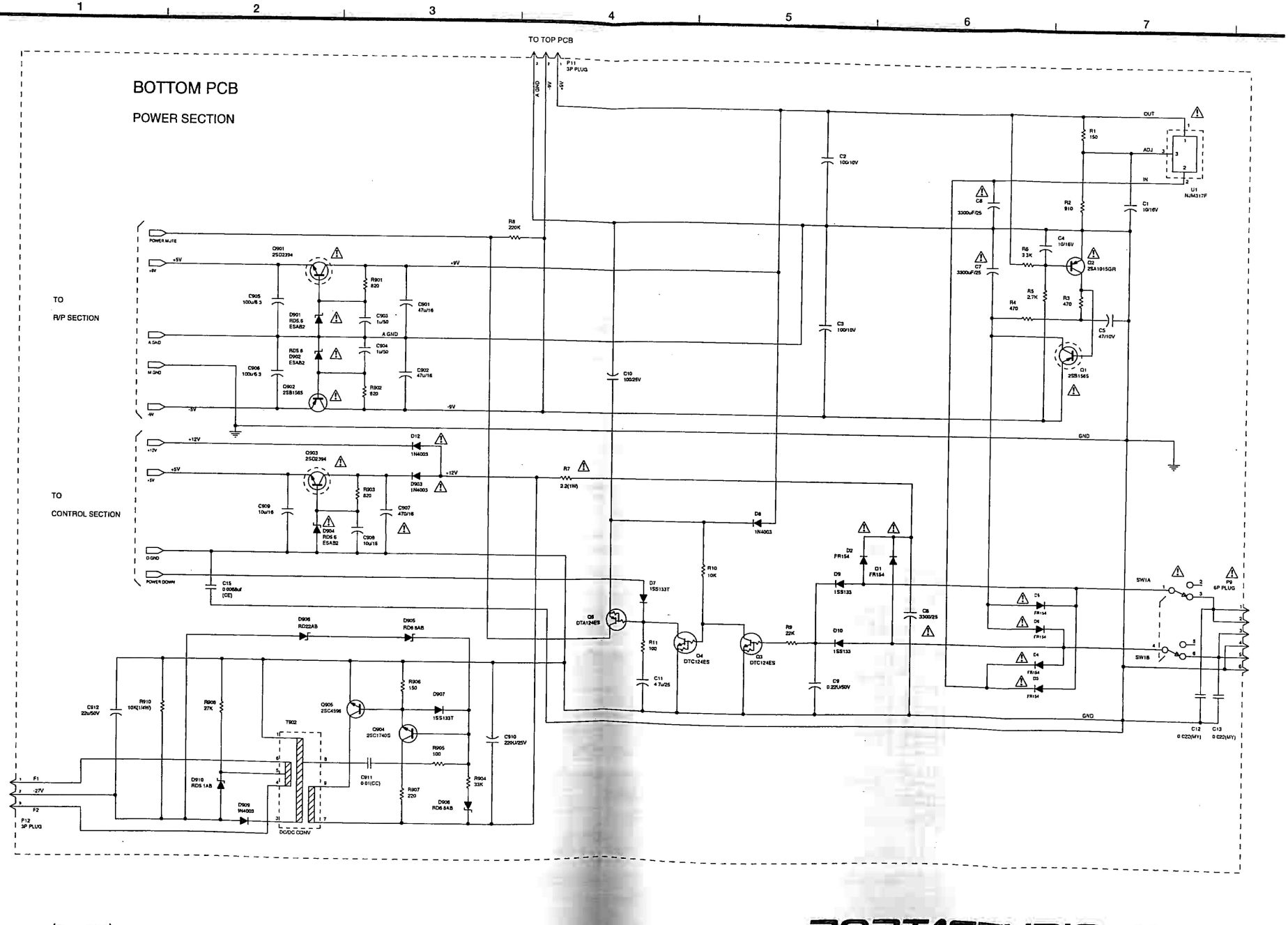
MASTER

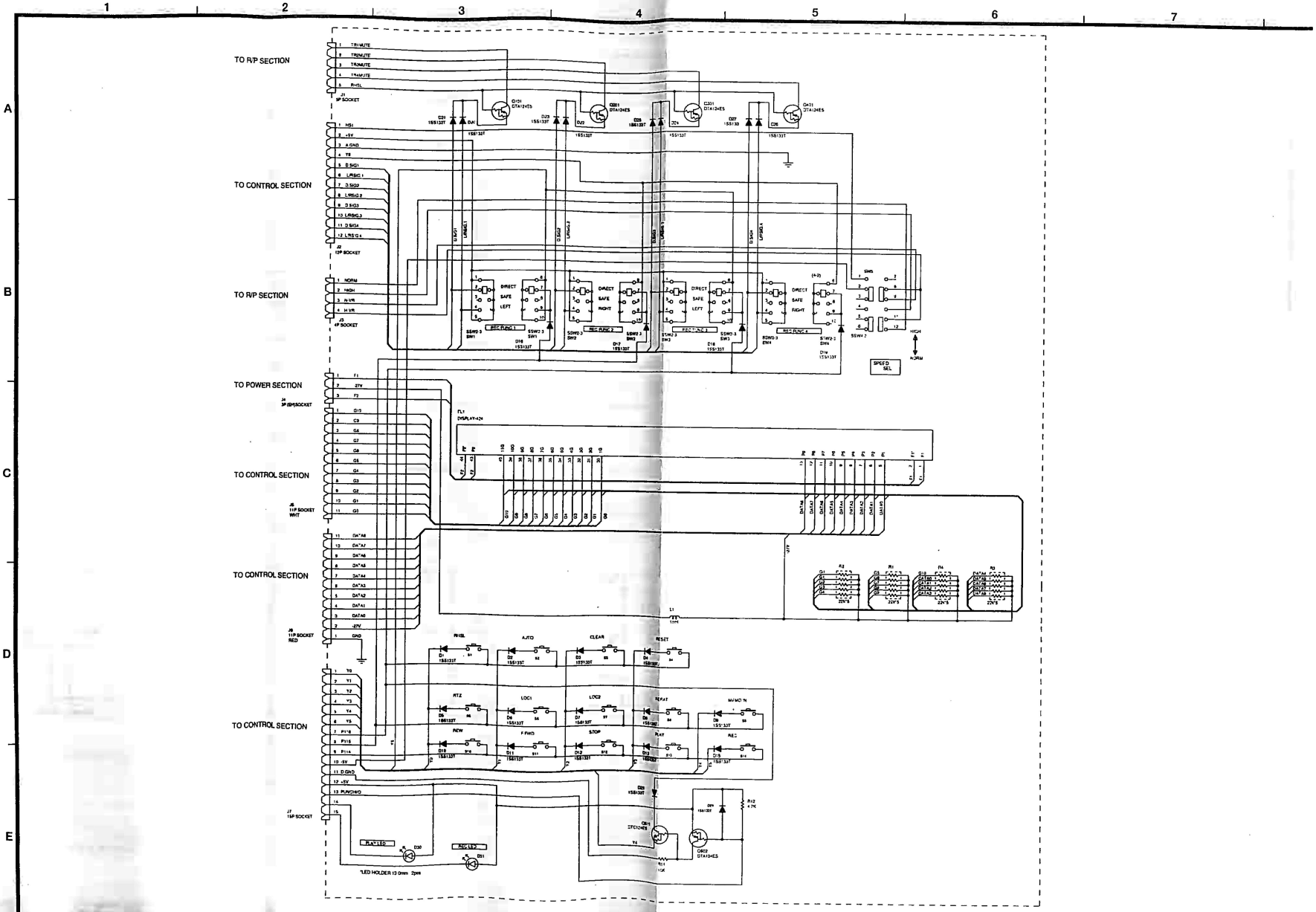


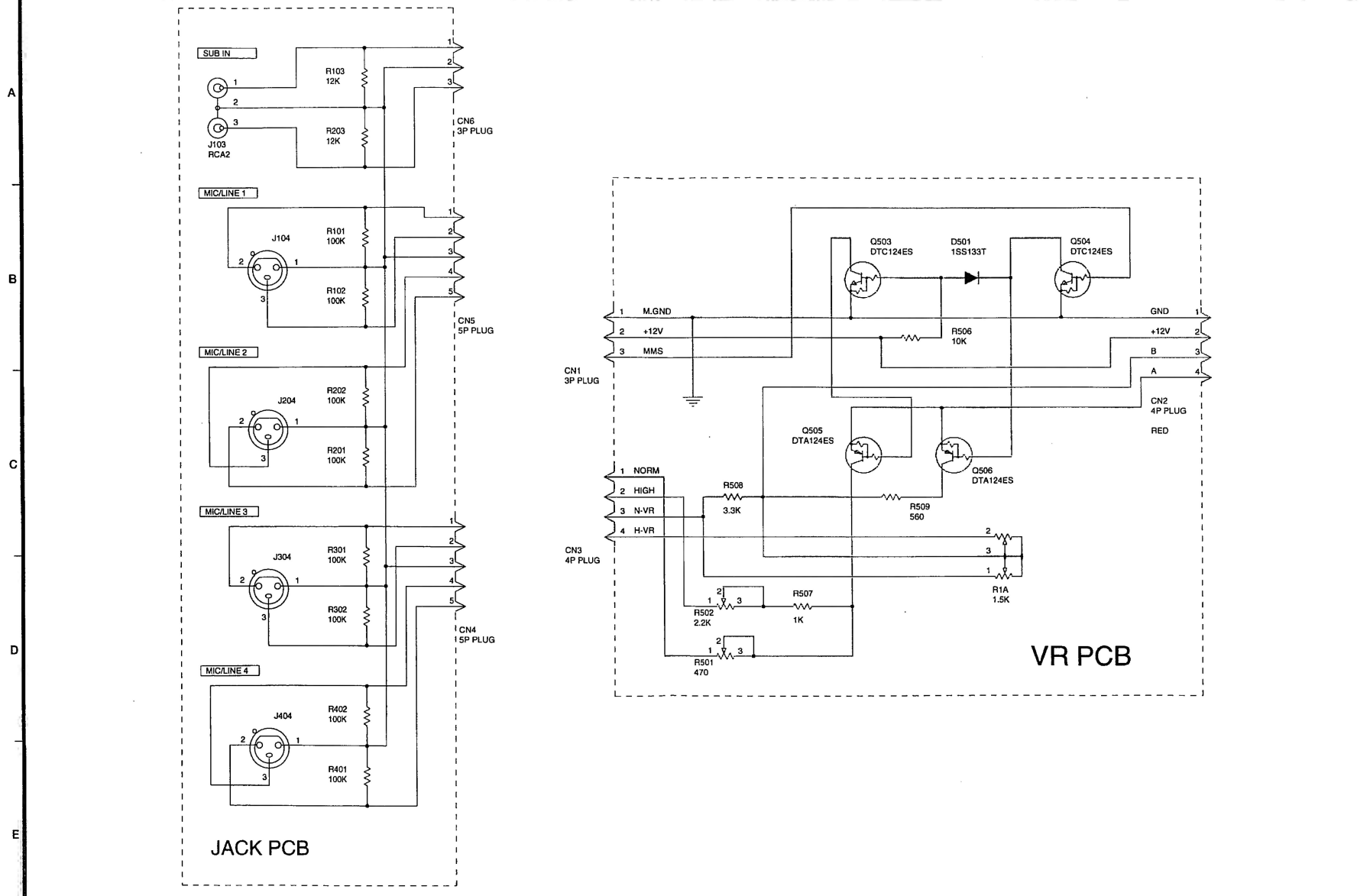
CH1 to CH4



CH2 : PART REFERENCE FROM 2XX START
CH3 : PART REFERENCE FROM 3XX START
CH4 : PART REFERENCE FROM 4XX START


BOTTOM PCB
POWER SECTION
TO TOP PCB
P11 3P PLUG
TO R/P SECTION
TO CONTROL SECTION
POWER MUTE
+5V
+9V
A GND
M GND
-9V
+12V
D GND
POWER DOWN
OUT
ADJ
IN
U1 NJM317F
GND
SW1A
SW1B
P9 6P PLUG
P12 3P PLUG
DC/DC CONV
Q901 2SD2394
Q902 2SB1565
Q903 2SD2394
Q904 2SC1740S
Q905 2SC4536
Q1 2SB1565
Q2 2SA1015GR
Q3 DTC124ES
Q4 DTC124ES
Q5 DTA124ES
D12 1N4003
D903 1N4003
D8 1N4003
D907 1SS133T
D7 1SS133T
D9 1SS133
D10 1SS133
D1 FR154
D2 FR154
D3 FR154
D4 FR154
D5 FR154
D6 FR154
D905 RD6.8AB
D906 RD22AB
D908 RD6.8AB
D910 RD5.1AB
D909 1N4003
D901 RD5.6 ESAB2
D902 RD5.6 ESAB2
D903 RD5.6 ESAB2
D904 RD5.6 ESAB2
R8 220K
R7 2.2(1W)
R1 150
R2 910
R3 470
R4 470
R5 2.7K
R6 3.3K
R9 22K
R10 10K
R11 100
R901 820
R902 820
R903 820
R904 33K
R905 100
R906 150
R907 220
R908 27K
R910 10K(1/4W)
C1 10/16V
C2 100/10V
C3 100/10V
C4 10/16V
C5 47/10V
C6 3300/25
C7 3300uF/25
C8 3300uF/25
C9 0.22U/50V
C10 100/25V
C11 4.7u/25
C12 0.022(MY)
C13 0.022(MY)
C15 0.0068uF (CE)
C901 47u/16
C902 47u/16
C903 1u/50
C904 1u/50
C905 100u/6.3
C906 100u/6.3
C907 470/16
C908 10u/16
C909 10u/16
C910 220U/25V
C911 0.01(CC)
C912 22u/50V
T902
F1
F2
-27V


1
2
3
4
5
6
7
A
B
C
D
E
TO R/P SECTION
TO CONTROL SECTION
TO R/P SECTION
TO POWER SECTION
TO CONTROL SECTION
TO CONTROL SECTION
TO CONTROL SECTION
J1 5P SOCKET
J2 12P SOCKET
J3 4P SOCKET
J4 3P (BIG)SOCKET
J5 11P SOCKET WHT
J6 11P SOCKET RED
J7 16P SOCKET
FL1 DISPLAY-424
REC FUNC 1
REC FUNC 2
REC FUNC 3
REC FUNC 4
SPEED SEL
RHSL
AJTO
CLEAR
RESET
RTZ
LOC1
LOC2
REPEAT
REW
F.FWD
STOP
PLAY
REC
PLAY LED
REC LED
*LED HOLDER 13.0mm 2pcs


SUB IN
J103
RCA2
R103
12K
R203
12K
CN6
3P PLUG
MIC/LINE 1
J104
R101
100K
R102
100K
CN5
5P PLUG
MIC/LINE 2
J204
R202
100K
R201
100K
MIC/LINE 3
J304
R301
100K
R302
100K
CN4
5P PLUG
MIC/LINE 4
J404
R402
100K
R401
100K
JACK PCB
Q503
DTC124ES
D501
1SS133T
Q504
DTC124ES
M.GND
+12V
MMS
CN1
3P PLUG
R506
10K
GND
+12V
B
A
CN2
4P PLUG
RED
Q505
DTA124ES
Q506
DTA124ES
NORM
HIGH
N-VR
H-VR
CN3
4P PLUG
R508
3.3K
R509
560
R1A
1.5K
R502
2.2K
R507
1K
R501
470
VR PCB