



STEREO TAPE DECK

MODEL GX-370D

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SECTION 1

SERVICE MANUAL

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I. SPECIFICATIONS

An asterisk next to a figure indicates the minimum guaranteed performance.

| | | |
|--|--|---|
| TRACK SYSTEM | 4 track 2-channel stereo/monaural system | |
| REEL CAPACITY | Up to 7" reel | |
| TAPE SPEED | 7-1/2 and 3-3/4 ips $\pm 0.5\%$ | |
| WOW AND FLUTTER | Less than 0.07% (*0.1%) RMS at 7-1/2 ips Less than 0.1% (*0.15%) RMS at 3-3/4 ips | |
| FREQUENCY RESPONSE | 30 to 26,000 Hz (*30 to 24,000 Hz) ± 3 dB at 7-1/2 ips (AKAI S.R.T. Tape) 30 to 24,000 Hz (*30 to 22,000 Hz) ± 3 dB at 7-1/2 ips (Regular Tape) 30 to 22,000 Hz (*30 to 19,000 Hz) ± 3 dB at 3-3/4 ips (AKAI S.R.T. Tape) 30 to 19,000 Hz (*30 to 18,000 Hz) ± 3 dB at 3-3/4 ips (Regular Tape) | |
| SIGNAL TO NOISE RATIO | Better than 50 dB (*48 dB) | |
| DISTORTION | Less than 1.5% (*2%) at 7-1/2 ips 1,000 Hz "0" VU recording Less than 3% at 3-3/4 ips 1,000 Hz "0" VU recording | |
| CROSS TALK | Better than 70 dB (Monaural) Better than 45 dB (Stereo) | |
| ERASE RATIO | Better than 70 dB | |
| BIAS FREQUENCY | 103 kHz ± 5 kHz | |
| BIAS LEAK | Less than -20 VU | |
| HIGH FREQUENCY DEVIATION (between left and right channel) | Within 3 dB, using a 8,000 Hz 3-3/4 ips recorded tape at 7-1/2 ips | |
| INPUTS | Mic input | 0.7 mV Impedance: 10 k Ω |
| | Line input | 70 mV Impedance: 150 k Ω |
| | Din input | 7 mV (low) and 70 mV (high) |
| OUTPUTS | Line output | 1.228V (4 ± 1.5 dB) Impedance: 100 Ω , using a 250 Hz "0" VU recorded tape |
| | Din output | 0.4V |
| RECORDING CAPACITY | 60 min. stereo recording, using a 1,200 ft. tape at 7-1/2 ips | |
| FAST FORWARD & REWIND TIME | 68/83 sec., using a 1,200 ft. tape at 60/50 Hz | |
| MOTORS | Capstan Motor | 2-speed servo control outer rotor motor Type: SCM2-24 Revolutions: 520 r.p.m. at 7-1/2 ips 260 r.p.m. at 3-3/4 ips |
| | Reel Motor | Two 6-pole eddy current outer rotor motors Type: 24X0-II Revolutions: 930 r.p.m. at 50 Hz 1120 r.p.m. at 60 Hz |
| HEADS | Combination Recording & Erase Head | Type: RE4-1 Gap: 4 $\mu \pm 15\%$, 0.2x2 mm Impedance: 1,800 Ω at 100 kHz 210 $\Omega \pm 15\%$ at 100 kHz |
| | Playback Head | Type: P4-200 Gap: 1.75 $\mu \pm 15\%$ Impedance: 3 ± 1 k Ω at 1 kHz |
| TRANSISTORS | 2 ... 2SA564(R) 8 ... 2SC458LG(B)(C) 4 ... 2SC871(F) 6 ... 2SC968(3) 1 ... 2SC1013 3 ... TSC9000-1(B)(C) | 4 ... 2SC454(C) 16 ... 2SC711(D)(E) 17 ... 2SC945(Q)(R)(S) 2 ... 2SC971(2)(3)(red) 2 ... 2SD234(Y) |
| DIODES | 27 ... 1N34A 3 ... 10D4 1 ... 10DC-1(red) | 17 ... 10D1 2 ... 10DC-1(black) |
| IC | 2 ... LD-3141 | |
| THERMISTORS | 1 ... 1N359A | 1 ... RD9A |
| VARISTOR | 1 ... TH201 | |
| POWER SUPPLY | 100 to 240V AC, 50/60 Hz | |
| POWER CONSUMPTION | 130 W | |
| INSULATION RESISTANCE | More than 50 M Ω | |
| INSULATION DURABILITY | 1,000V AC for more than 1 min. duration | |
| DIMENSIONS | 445 (W) x 503 (H) x 252 (D) mm (18.2 x 20.5 x 10.3") | |
| WEIGHT | 25.5 kg (56 lbs.) | |

NOTE: Specifications subject to change without notice.

II. MEASURING METHOD

1. TAPE SPEED DEVIATION

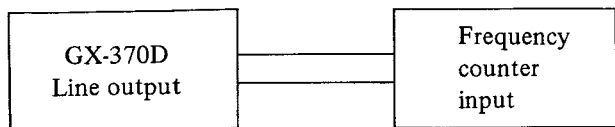


Fig. 1

As shown in Fig. 1, connect a Frequency Counter to the Line Output of Model GX-370D. Playback a 1,000 Hz pre-recorded test tape. Take a Frequency Counter reading at the beginning, middle, and end of tape winding during playback. The maximum value of these respective readings will represent tape speed deviation.

2. WOW AND FLUTTER

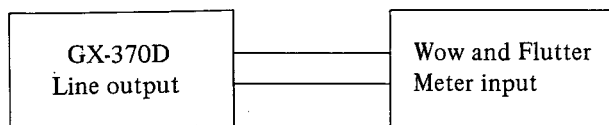


Fig. 2

Method A

As shown in Fig. 2, connect the Line Output of Model GX-370D to the Input of a Wow and Flutter Meter. Playback a 3,000 Hz pre-recorded test tape and take a Wow and Flutter Meter reading at the beginning, middle, and end of tape winding. The maximum value of these respective readings will represent the Wow and Flutter.

Method B

Supply a 3,000 Hz sine wave signal from an Audio Frequency Oscillator and make a recording on a blank tape at the beginning, middle, and end of tape winding. Rewind and playback the resultant signal. Measure Wow and Flutter with a Wow and Flutter Meter. (The Wow and Flutter value of Method B will be close to twice that of Method A.)

3. FREQUENCY RESPONSE

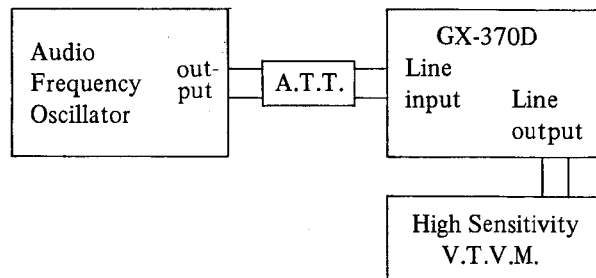


Fig. 3

For measuring Frequency Response, connect instruments as shown in Fig. 3 and proceed as follows:

- 1) Supply a 1,000 Hz sine wave signal to the Line Input of Model GX-370D from an Audio Frequency Oscillator through an Attenuator.
- 2) Set recorder to recording mode and turn recording level control volume and line output level control volume to maximum. Adjust attenuator to obtain a +4 dB V.T.V.M. reading.
- 3) Under conditions described in 2) above, readjust attenuator so that the Line Output is -16 dB, and record 30 to 24,000 Hz spot frequencies.
- 4) Rewind tape and playback from the beginning. Take V.T.V.M. spot frequency readings and plot values on a graph.

NOTE: When measuring Frequency Response, new tape should be used.

4. SIGNAL TO NOISE RATIO

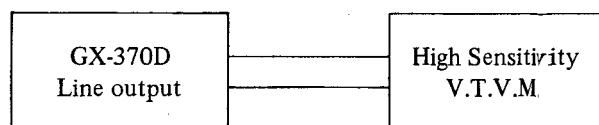


Fig. 4

As shown in Fig. 4, connect a High Sensitivity V.T.V.M. to the Line output of Model GX-370D. Playback a 250 Hz "0" VU pre-recorded test tape and measure the output. Then remove the tape and measure the noise level under the same condition. Convert each of the measured values into decibels.

5. TOTAL HARMONIC DISTORTION

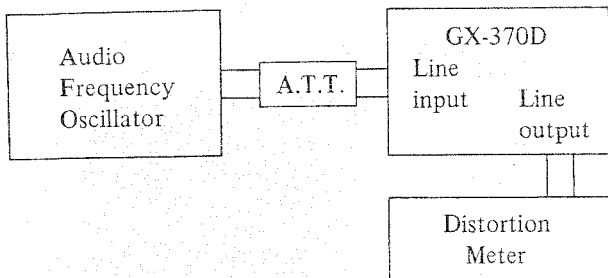


Fig. 5

Connect the measuring instruments as shown in Fig. 5 and record a 1,000 Hz sine wave signal at "0" VU. Playback the resultant signal and measure the overall distortion factor. Measure the noise level of the tape recorder without the tape. Connect the Audio Frequency Oscillator directly to the distortion meter for measurement of the distortion factor of the oscillator. The required distortion factor can be obtained from the results of the above measurement by the following formula:

$$d_0 = d - d_1 - d_2$$

where, d_0 — Required distortion factor
 d — Overall distortion factor
 d_1 — Noise level
 d_2 — Distortion factor of the oscillator

NOTE: When measuring the distortion factor, new tape should be used.

6. CROSS TALK (Cross talk between the tracks)

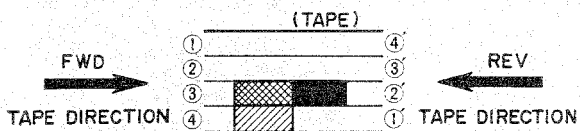


Fig. 6

As shown in Fig. 6, first record a 1,000 Hz sine wave signal on Track No. 3 at +3 VU level. Next, record under a non-input condition. Then, playback the tape on Tracks No. 3 and 1 (reversed condition of tape) through the B.P.F. (band pass filter sensitivity... 1:1) and obtain a ratio between the two from the following formula:

$$C = 20 \log \frac{E_0}{E_2 - E_1} \text{ (dB)}$$

where, C — Desired cross talk ratio (dB)
 E_0 — 1,000 Hz signal output level
 E_2 — 1,000 Hz cross talk level
 E_1 — Non-input signal recorded level

Fig. 7

7. ERASE RATIO

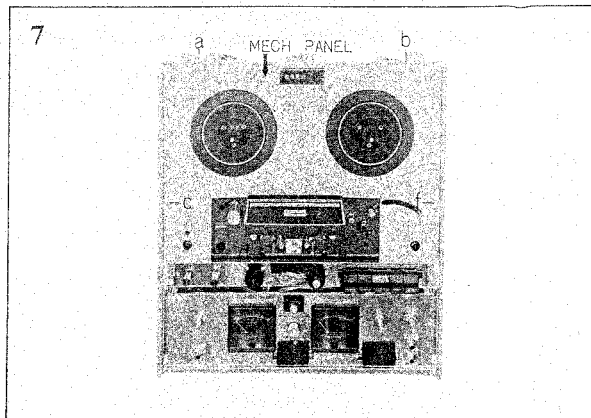
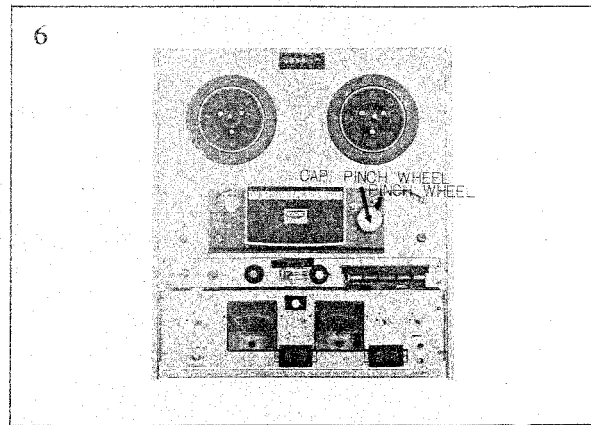
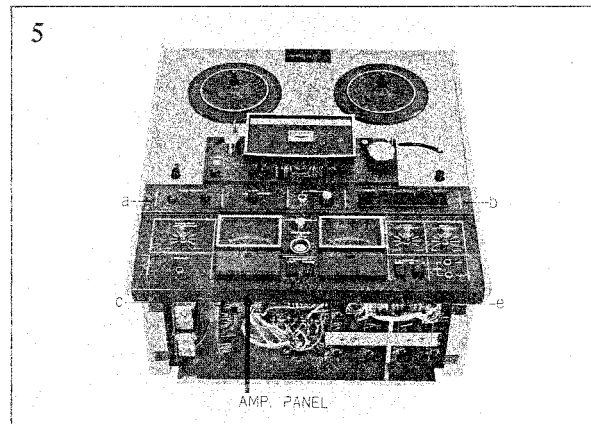
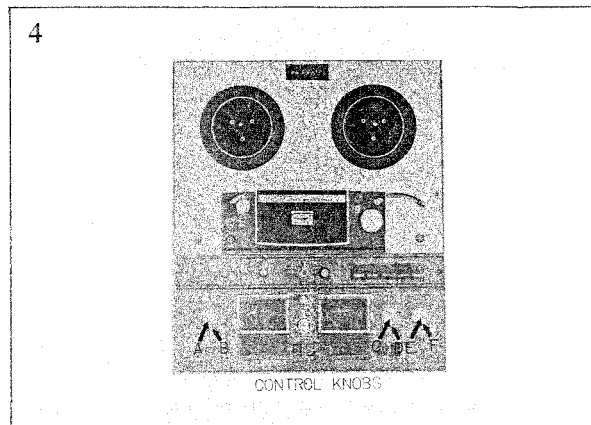
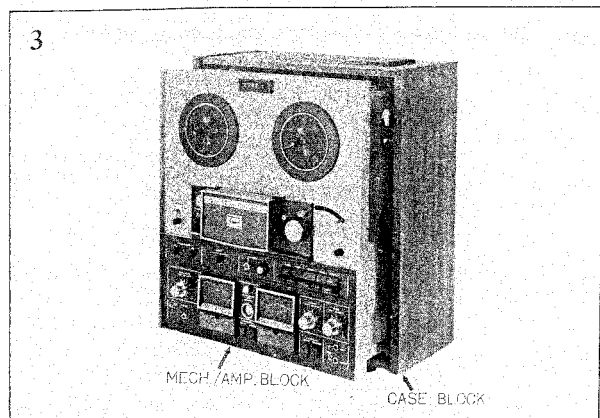
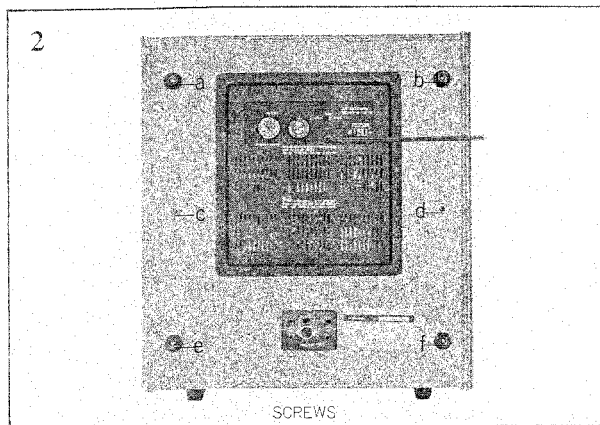
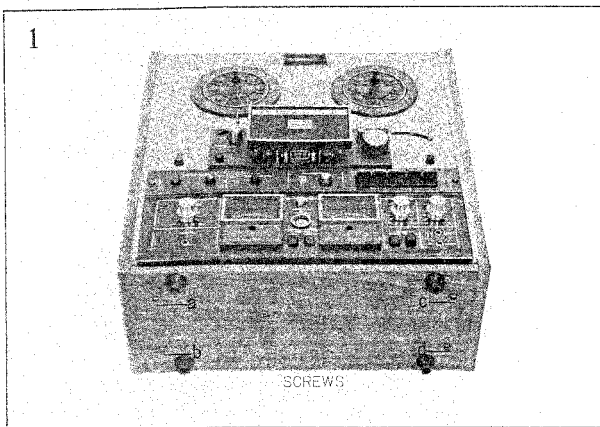
As shown in Fig. 4, connect a High Sensitivity V.T.V.M. to the Line Output of Model GX-370D. Playback a virgin tape and take a V.T.V.M. reading of the output level. Next, record a 1,000 Hz sine wave signal at +3 dB, then playback this recorded signal and take a V.T.V.M. reading of the output level. Next, using this pre-recorded tape, record under a non-input condition and take a reading of the noise output level of the erased signal and obtain a ratio between the two from the following formula:

$$E_r = 20 \log \frac{E_0}{E_2 - E_1} \text{ (dB)}$$

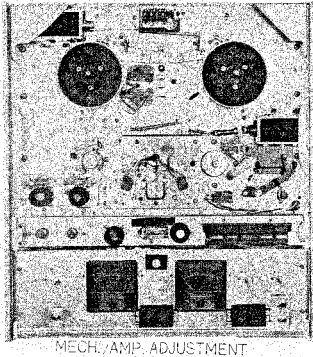
where, E_r — Desired erase ratio (dB)
 E_0 — 1,000 Hz signal output level
 E_2 — Non-input signal recorded level
 E_1 — Virgin tape noise output level

III. DISMANTLING OF UNIT

In case of trouble, etc. necessitating disassembly, please disassemble in the order shown in photographs. Re-assemble in reverse order.

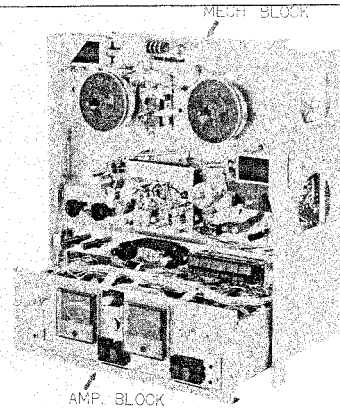


8



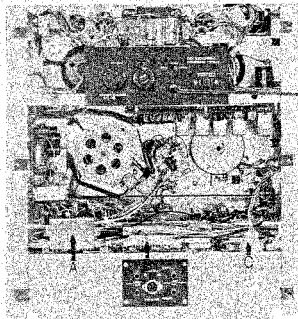
MECH. AMP. ADJUSTMENT

12



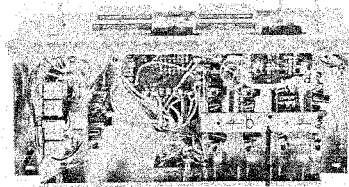
AMP. BLOCK

9



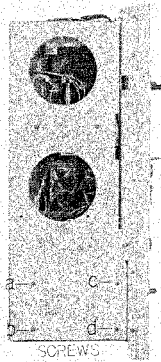
CONNECTION PLUGS

13



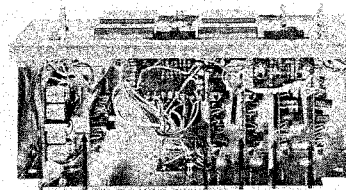
P. C. BOARD HOLDER

10



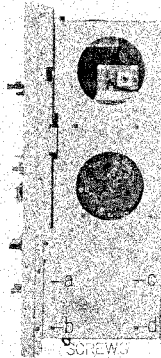
SCREWS

14



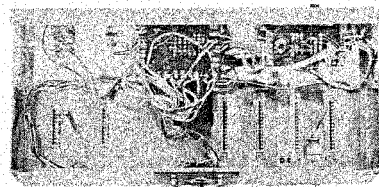
P. C. BOARD

11



SCREWS

15



AMP. CHARGE ADJUSTMENT

IV. MECHANISM ADJUSTMENTS

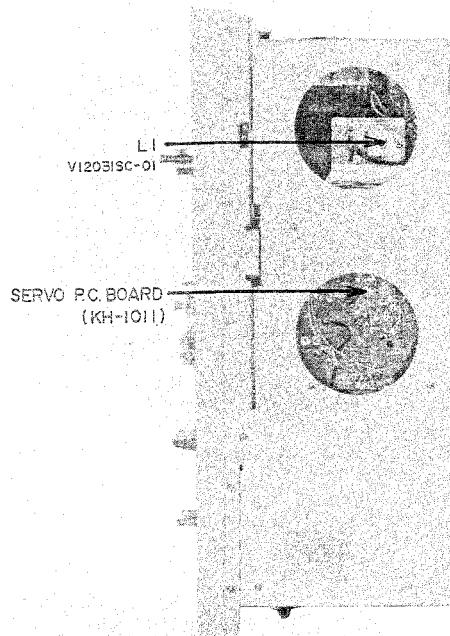


Fig. 8

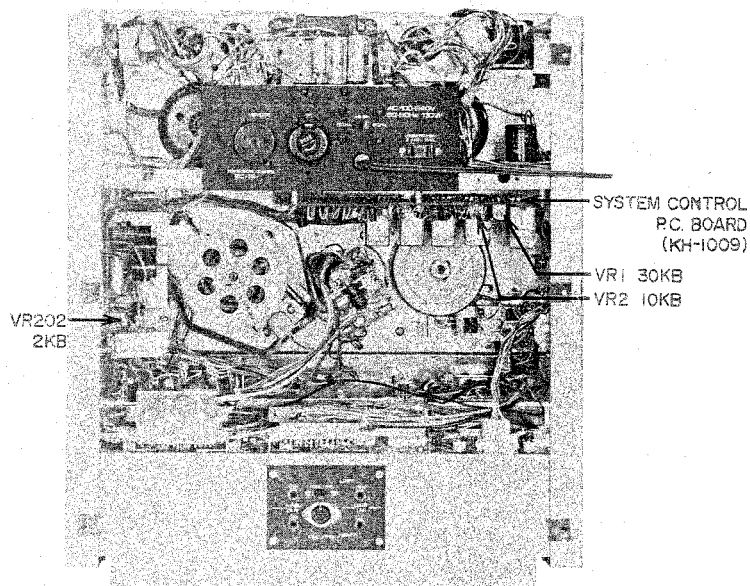


Fig. 9

1. TAPE SPEED ADJUSTMENT (SERVO MOTOR CIRCUIT ADJUSTMENT)

- 1) Connect a Frequency Counter to the Line Output.
- 2) Set the Tape Speed Selector to 3-3/4 ips and playback a 1,000 Hz pre-recorded tape.
- 3) Adjust the core of Coil L1 (V1203ISC-01) shown in Fig. 8 to obtain a Frequency Counter indication of 500 Hz $\pm 1\%$.
- 4) When the 3-3/4 ips tape speed adjustment is completed, set the Tape Speed Selector to 7-1/2 ips and adjust Servo P.C. Board (KH-1011) semi-fixed resistor VR-202 (2k B) shown in Fig. 9 to obtain a Frequency Counter indication of 1,000 Hz $\pm 1/-0.5\%$.

NOTE: When making tape speed adjustment, it is necessary to make the low speed (3-3/4 ips) adjustment first.

2. DIRECT FUNCTION TIME CONSTANT ADJUSTMENT (See Fig. 9)

- 1) FWD \leftrightarrow REV Time Constant
Adjust System Control P.C. Board (KH-1009) semi-fixed resistor VR-1 (30k B) so that the time constant to and from FWD and REV mode is about 3 seconds.
- 2) F-FWD or RWD to FWD or REV Time Constant
Adjust System Control P.C. Board (KH-1009) semi-fixed resistor VR-2 (10k B) so that the time constant from F-FWD or RWD to FWD or REV mode is about 1.5 seconds.

NOTE: In making the adjustments outlined in Items (1) and (2) above, when the machine is switched from the various modes to FWD or REV, it is important that proper capstan motor revolutions be attained by the time the pinch wheel contacts the capstan.

3. BRAKE TENSION ADJUSTMENT

Use a 60 mm diameter tape wound on a 5" reel and measure the brake tension with a tension gauge. (See Fig. 10) Ideal tape tension is 350 grams.

Brake tension adjustment can be made as follows:

- 1) Adjust position of suspended springs (d) (d').
- 2) Loosen screws (a) (b) as well as (a') (b') and adjust the vertical (upper/lower) position of spring suspension metal (c) (c').
- 3) Loosen screws (e) (f) as well as (e') (f') and adjust the horizontal (left/right) position of brake band suspension metal (g) (g').

Adjust as described above until proper brake tension is attained. (Refer to Fig. 11)

NOTE: In making brake tension adjustment, when the machine is set to other than stop mode, confirm that the brake band definitely does not touch the cloth tape on the brake drum.

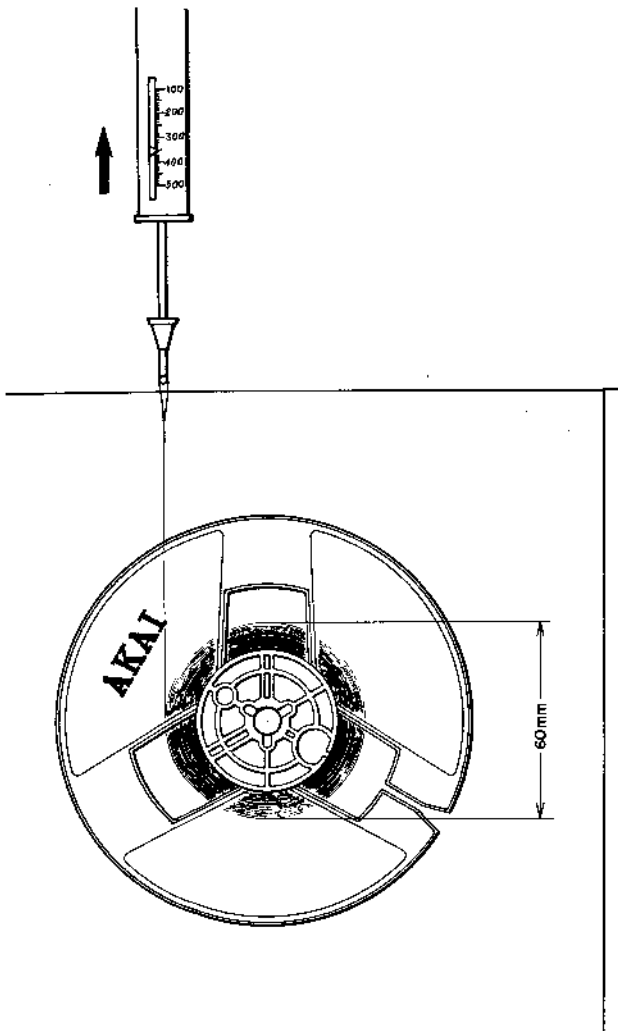


Fig. 10

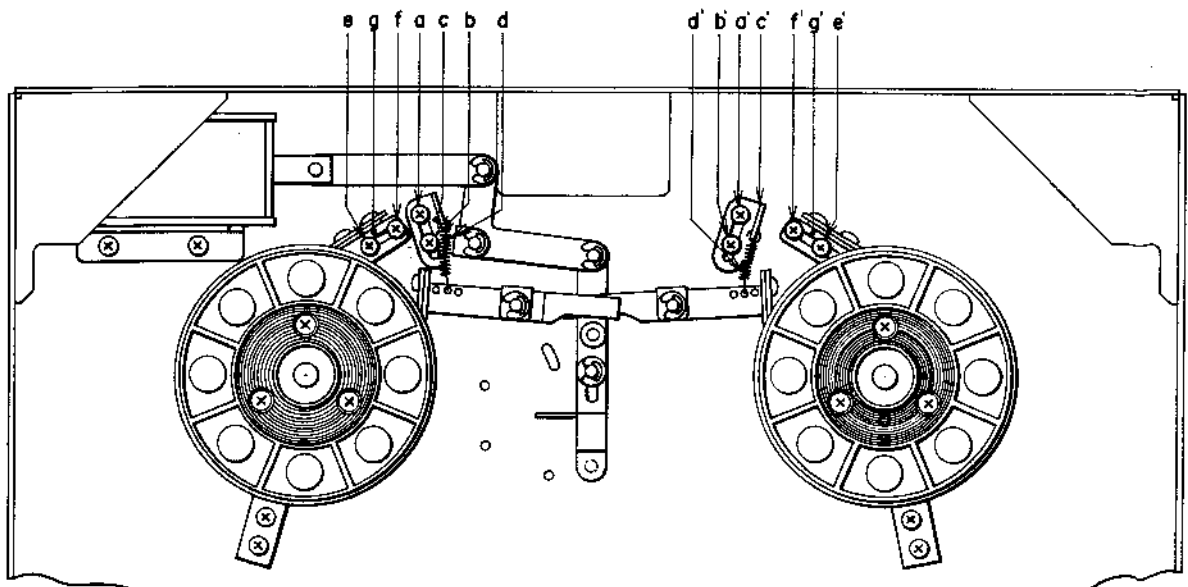


Fig. 11

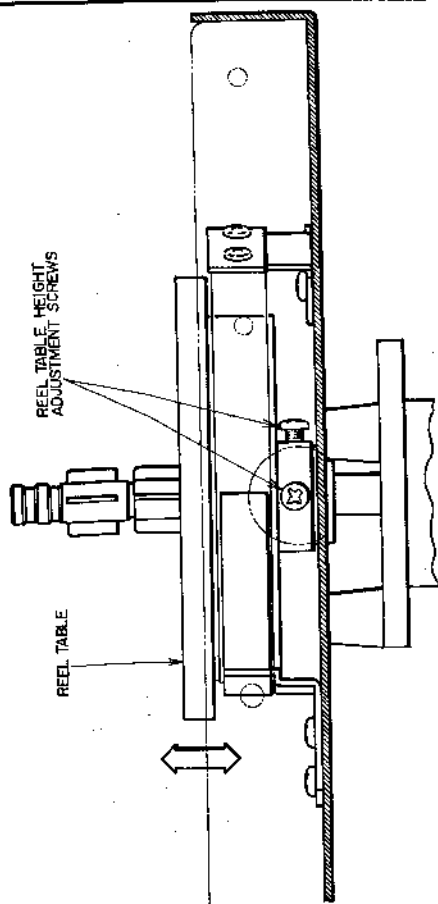


Fig. 12

4. REEL HEIGHT ADJUSTMENT

Loosen the reel table height adjustment screws shown in Fig. 12 and adjust by moving the reel table in the direction of arrow and positioning so that the tape winds in the center of the reel.

5. PINCH WHEEL PRESSURE MEASUREMENT AND ADJUSTMENT

Use a tension gauge and measure the pinch wheel pressure as shown in Fig. 13. Read the value on the tension gauge as soon as the pinch wheel separates from the tape and tape travel stops. Ideal pinch wheel pressure is 1.5 kg. Pinch wheel pressure can be increased or decreased by adjusting screws (a) (b) shown in Fig. 13.

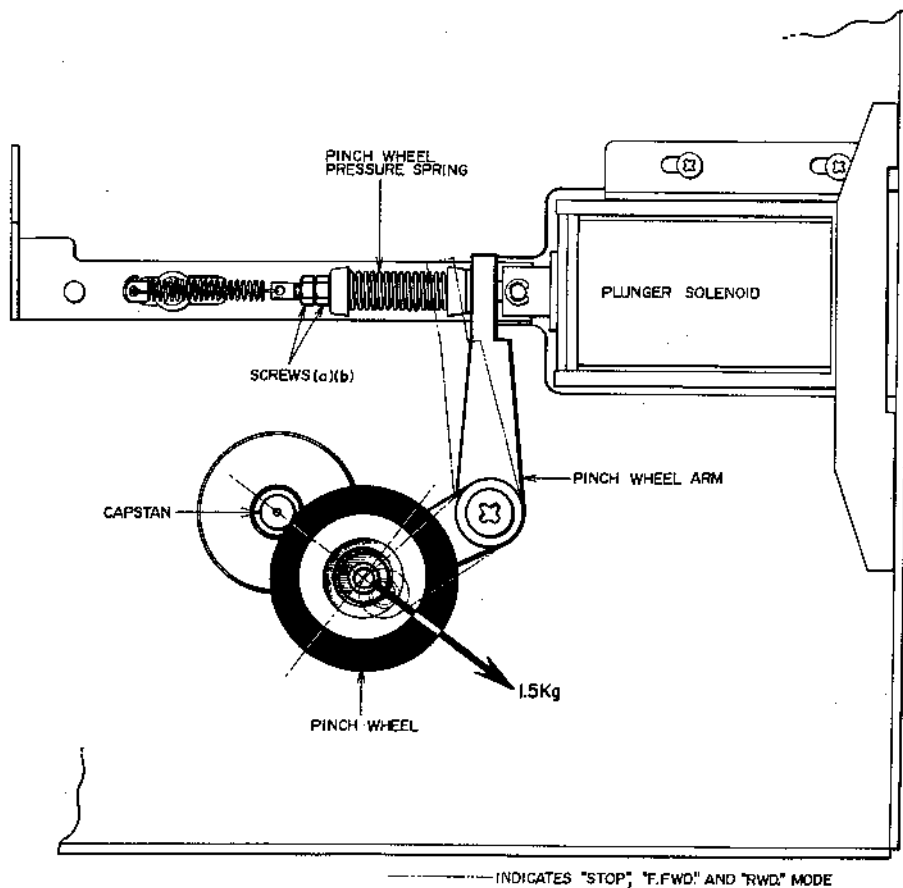


Fig. 13

V. HEAD ADJUSTMENTS

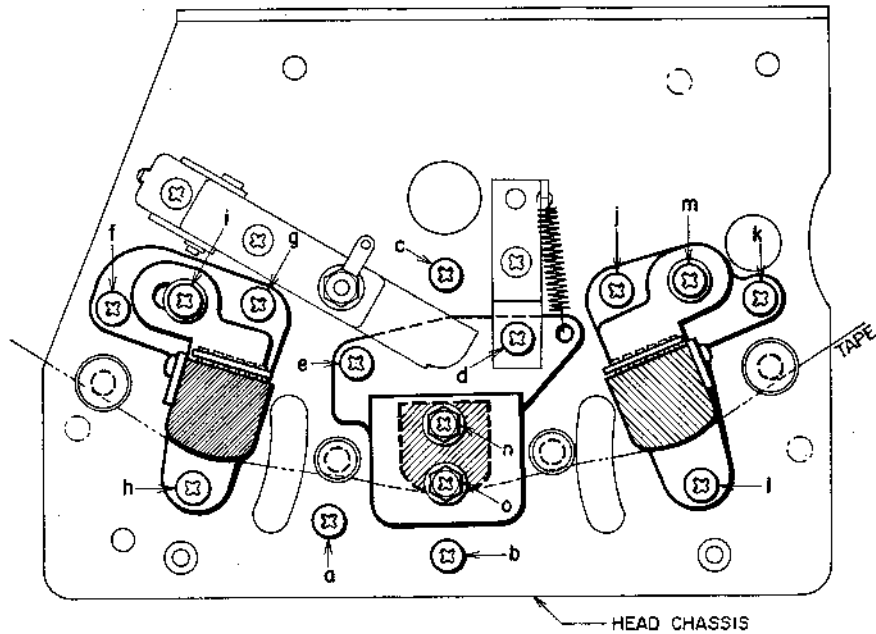


Fig. 14

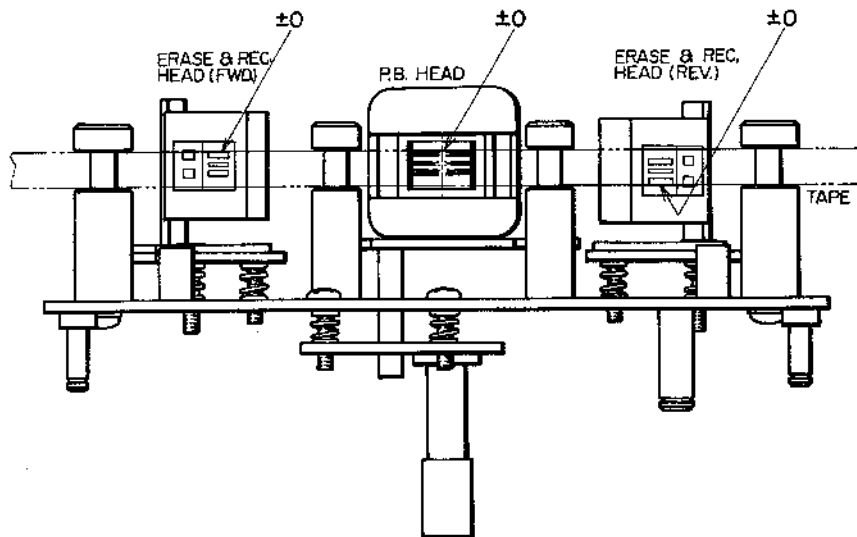


Fig. 15

1. HEAD HEIGHT ADJUSTMENT

(See Figs. 14 & 15)

1) Playback Head

- a) For FWD playback mode head height adjustment, during FWD playback, turn head height control screw (d) to left and right until the upper edge of the tape as it passes the head is aligned with the upper edge of channel 1 head core.
- b) For REV playback mode head height adjustment, during REV playback, turn head height control screw (e) to left and right until the lower edge of the tape as it passes the head is aligned with the lower edge of channel 1 head core.

2) Recording and Erase Heads

- a) For FWD recording and erase head height adjustment, at FWD playback mode, adjust head height control screws (f) (g) and (h) by turning to left and right until the upper edge of the tape as it passes the head is aligned with the upper edge of channel 1 recording head core.
 - b) For REV recording and erase head height adjustment, at REV playback mode, adjust head height control screws (j) (k) and (l) by turning to left and right until the lower edge of the tape is aligned with the lower edge of channel 1 recording head core.
- 3) When making the various head height adjustments, confirm that the tape and head core surface is at a right angle with the head chassis during tape travel.

2. HEAD AZIMUTH ALIGNMENT

ADJUSTMENT (See Figs. 14 & 15)

1) Playback Head

- a) Connect a High Sensitivity V.T.V.M. to the line output and playback a test tape (Ampex Alignment Tape, 8,000 Hz at 3-3/4 ips) at 7-1/2 ips.
- b) At FWD playback mode, turn adjustment screws (a) and (b) to left and right until the line output level of both channels is maximum.
- c) When Item (b) adjustment is completed, loosen screws (n) and (o) and move the head gap side of the playback head to the left and right. When the tension increases on the supply reel side and the line output level of both channels do not fluctuate, fix screws (n) and (o) to maintain this condition.
- d) At REV playback mode, make the same adjustment as outlined above to attain maximum line output of both channels.

2) Recording and Erase Heads

- a) Connect an Audio Frequency Oscillator to the line input and connect a High Sensitivity V.T.V.M. to the line output and load a blank tape.
- b) Set the Monitor Switch to TAPE position and record a 16,000 Hz signal at -10 dB recording level.
- c) At FWD recording mode, adjust Azimuth Alignment screw (f) so that the line output level of both channels is maximum and does not fluctuate.
- d) After completing Item (c) adjustment, loosen screw (i) and move the head gap side of the recording head to left and right. When the tension increases on the supply reel side and the line output level of both channels do not fluctuate, fix screw (i) to maintain this condition.
- e) At REV recording mode, make the same adjustment as outlined above by adjusting screws (k) and (m) to attain maximum line output of both channels without fluctuation.

3. To obtain the best results make adjustments outlined in Paragraphs 1 and 2 above two or three times. Also new blank tape should be used.

VI. AMPLIFIER ADJUSTMENTS

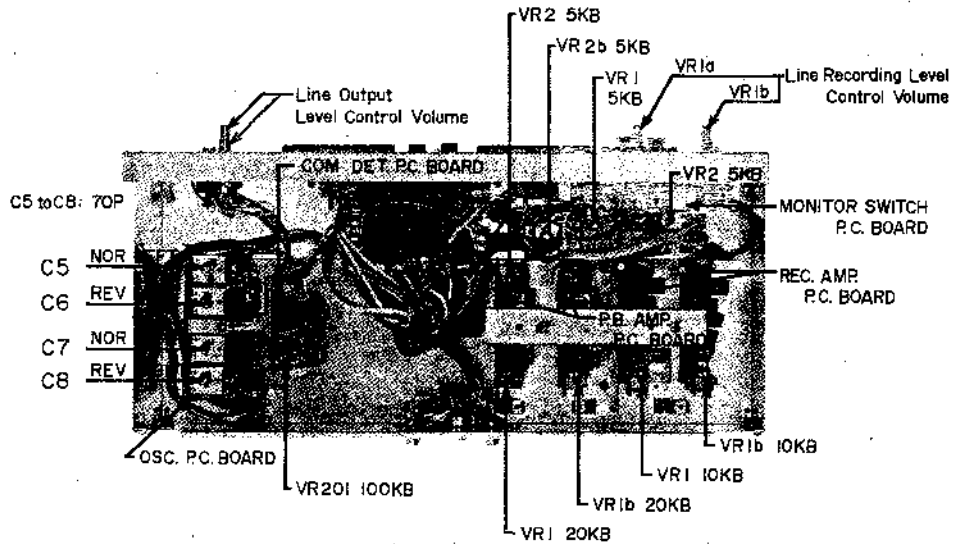


Fig. 16

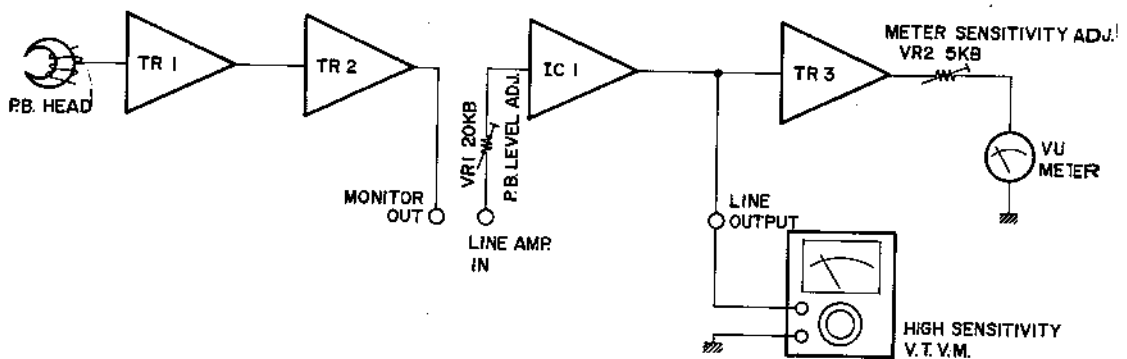


Fig. 17 P.B. AMP. BLOCK DIAGRAM

1. PLAYBACK LEVEL ADJUSTMENT

(See Fig. 16)

- 1) Connect a High Sensitivity V.T.V.M. to the line output.
- 2) Set Tape Speed Selector to 7-1/2 ips.
- 3) Depress both LEFT and RIGHT Track Selector Switches.
- 4) Set Monitor Switch to TAPE position and Line Output Level Controls to maximum.
- 5) Playback a 250 Hz, 7-1/2 ips pre-recorded tape.
- 6) With P.B. Amp. P.C. Board (KH-5014) semi-fixed resistors VR-1 and VR-1b (20k B), set the line output level of both channels to 4 ± 1.5 dB.

2. VU METER SENSITIVITY ADJUSTMENT

(See Fig. 16)

Adjust P.B. Amp. P.C. Board (KH-5014) semi-fixed resistors VR-2 and VR-2b (5k B) to obtain a VU meter indication of "0" VU on both channels.

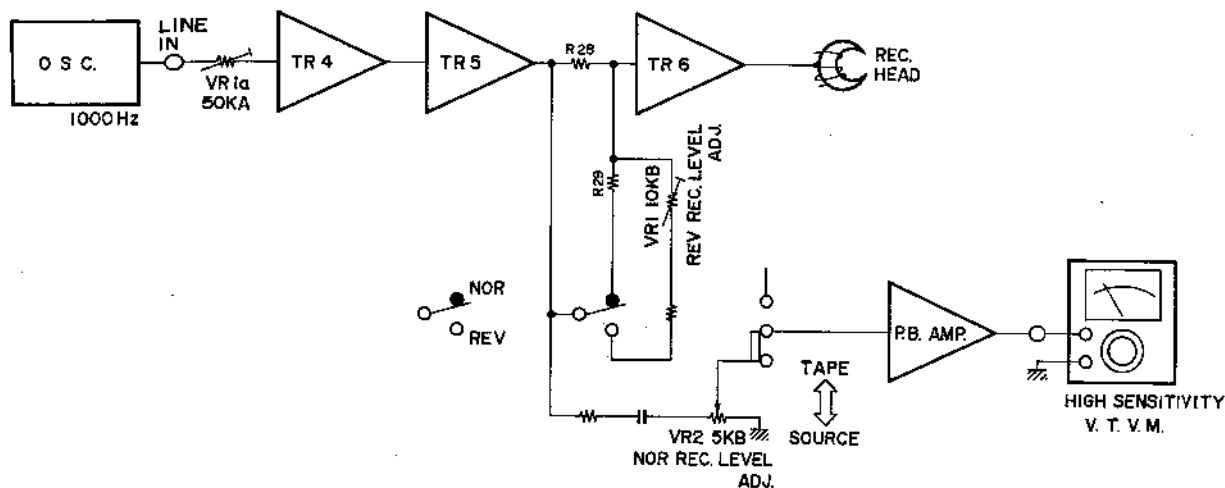


Fig. 18 REC. AMP. BLOCK DIAGRAM

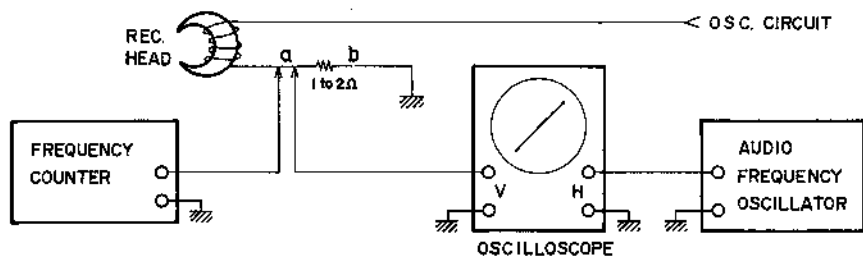


Fig. 19

3. RECORDING LEVEL ADJUSTMENT

(See Fig. 16)

- 1) Connect an Audio Frequency Oscillator to the line input and connect a High Sensitivity V.T.V.M. to the line output.
- 2) Set Tape Speed Selector to 7-1/2 ips.
- 3) Depress both LEFT and RIGHT Track Selector Switches.
- 4) Load an AKAI 100L (Fuji S-100) blank tape. Set the Monitor Switch to TAPE position and the Line Output Level Controls to maximum.
- 5) Set recorder to FWD recording mode and supply a 1,000 Hz sine wave signal to the line input from the Audio Frequency Oscillator. Adjust line recording level volume controls VR-1a and VR-1b (20k B) to obtain a line output level of 4 dB (0 VU) on both channels.
- 6) Set Monitor Switch to SOURCE position and adjust Monitor Switch P.C. Board (KH-5012) semi-fixed resistors VR-1 and VR-2 (5k B) to obtain a 4 dB line output level on both channels.
- 7) When the FWD recording level adjustment is completed, set the recorder to REV recording mode and set the Monitor Switch to TAPE position.
- 8) Adjust Rec. Amp P.C. Board (KH-5013) semi-fixed resistors VR-1 and VR-1b (10k B) to obtain a line output level of 4 dB on both channels.

4. RECORDING BIAS FREQUENCY

MEASURING METHOD AND ADJUSTMENT

Method I

- 1) Install a 1 to 2 Ω resistor in series with the recording head and connect these terminals (a)(b) to the vertical input of an oscilloscope. (See Fig. 19)
- 2) Supply a sine wave signal to the horizontal input of the Oscilloscope from an Audio Frequency Oscillator. Set recorder to the REC mode.
- 3) Vary the frequency of the Audio Frequency Oscillator until the oscilloscope waveform displays a circular or linear pattern.
- 4) If the audio frequency oscillator indication is 103 ± 5 kHz, the recording bias frequency is correct.

Method II

- 1) Connect a Frequency Counter to points (a) and (b) as shown in Fig. 19. Set recorder to the REC mode, and take a frequency counter reading at this time.
- 2) If the Frequency Counter indication is 103 ± 5 kHz, the recording bias frequency is correct.

Adjustment

The recording bias frequency can be adjusted by changing the value of OSC. circuit capacitor C-4 (4500P/500).

TAPE SPEED 3-3/4 ips

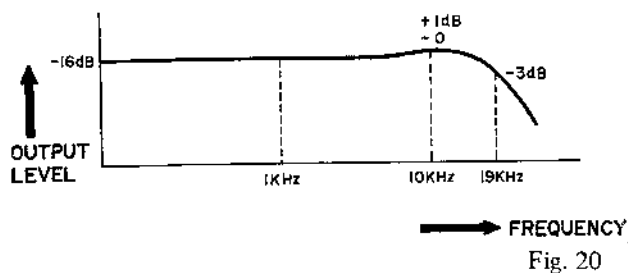


Fig. 20

5. RECORDING BIAS VOLTAGE ADJUSTMENT (Frequency Response Adjustment)

- 1) Refer to section regarding Frequency Response Measuring Method (Fig. 3 of this manual)
- 2) Adjust OSC. P.C. Board semi-fixed capacitors C-5 to C-8 (70P) so that a 10 kHz signal output level is within $\pm 1/0$ dB in relation to 1,000 Hz. (See Figs. 16 & 17)
- 3) The bias voltage after the frequency response adjustment has been made is about 5V AC.

NOTE: The frequency response will vary depending upon the tape being used.

6. ERASE VOLTAGE

There is no way to adjust the erase voltage, but correct value is about 23V AC.

7. COMPUTE-O-MATIC RECORDING LEVEL SENSITIVITY ADJUSTMENT

- 1) Connect an Audio Frequency Oscillator to the left microphone input and connect a High Sensitivity V.T.V.M. to the left line output.
- 2) Supply a 1,000 Hz sine wave from the audio frequency oscillator.
- 3) Set the Monitor Switch to SOURCE position and depress both the LEFT and RIGHT Track Selector Switches.
- 4) Adjust COM-DET (Compute-O-Matic Detector) P.C. Board (RD-A514) semi-fixed resistor VR-201 (100k B) to obtain a 4 dB V.T.V.M. indication when the Compute-O-Matic Button is depressed.

VII. TRANSPORT MECHANISM

1. TRANSISTOR, RELAY, AND PLUNGER SOLENOID OPERATION CHART

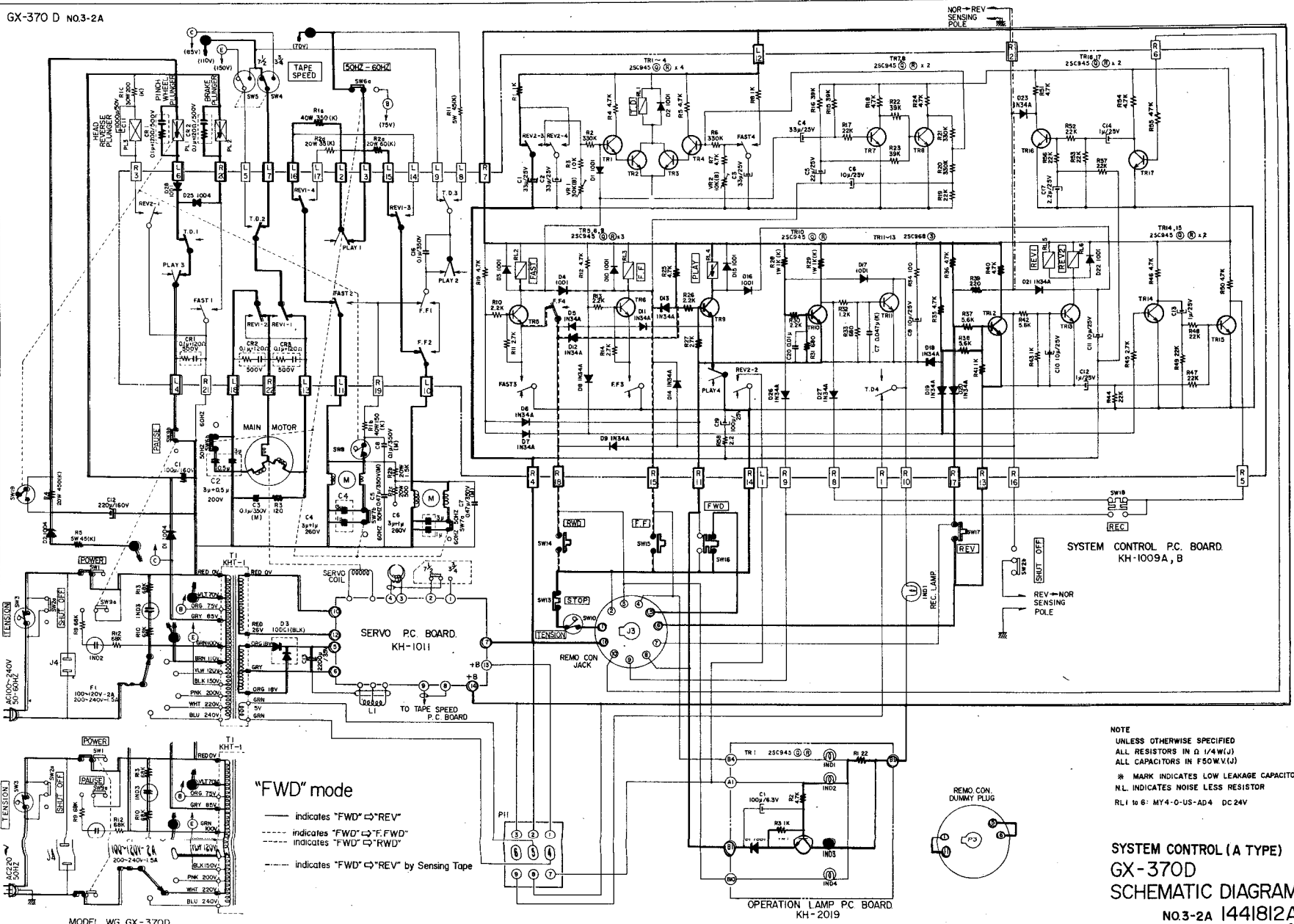
(Refer to Schematic Diagram 1 through 6)

| | FUNCTION | RWD | REV | STOP | FWD | F.FWD | FWD REC | REV REC |
|-------------------|-----------------|-----|-----|------|-----|-------|---------|---------|
| TRANSISTORS | TR1 | | | | | | | |
| | TR2 | | | | | | | |
| | TR3 | | | | | | | |
| | TR4 | | | | | | | |
| | TR5 | ○ | | | | ○ | | |
| | TR6 | | | | | ○ | | |
| | TR7 | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | TR8 | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | TR9 | | ○ | | ○ | | ○ | ○ |
| | TR10 | ○ | ○ | ○ | ○ | ○ | | |
| | TR11 | | | | | | ○ | ○ |
| | TR12 | ○ | | ○ | ○ | ○ | ○ | ○ |
| | TR13 | | | ○ | | | | ○ |
| | TR14 | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | TR15 | | | | | | △ | △ |
| | TR16 | | | | | | | |
| | TR17 | | | | | | | |
| RELAYS | T.D RL1 | | | | | | | |
| | FAST RL2 | ○ | | | | ○ | | |
| | F.F RL3 | | | | | ○ | | |
| | PLAY RL4 | | ○ | | ○ | | ○ | ○ |
| | REV 1 RL5 | | ○ | | | | | ○ |
| | REV 2 RL6 | | ○ | | | | | ○ |
| PLUNGER SOLENOIDS | PINCH WHEEL PL1 | | ○ | | ○ | | ○ | ○ |
| | BRAKE PL2 | ○ | ○ | | ○ | ○ | ○ | ○ |
| | HEAD REV PL3 | | ○ | | | | | ○ |
| | | | | | | | | |

○ mark indicates "engaged"

△ mark indicates "momentarily engaged" when the REC, FWD or REV button is depressed

Chart 1



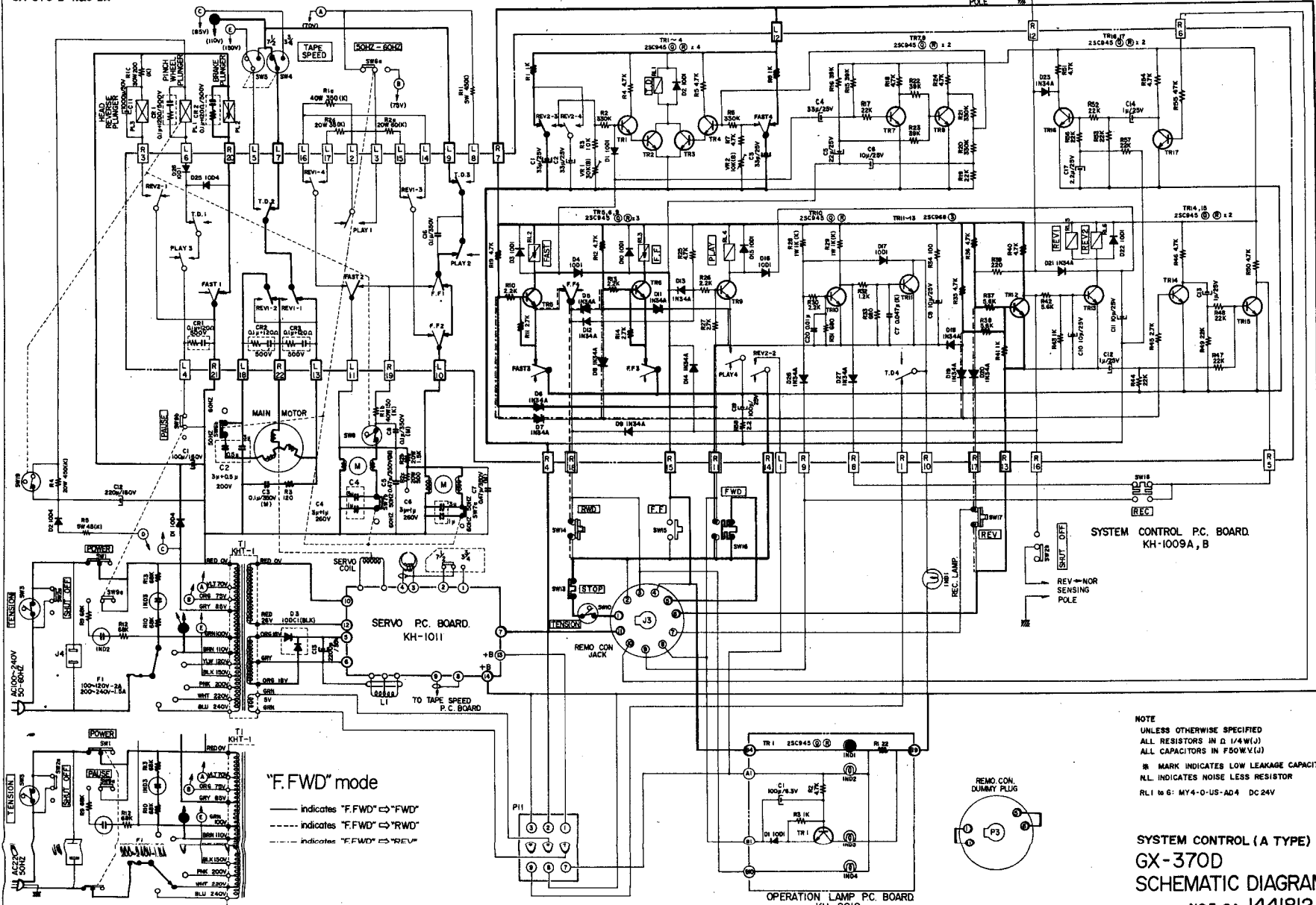
"FWD" mode

— indicates "FWD" ⇌ "REV"
 - - - indicates "FWD" ⇌ "F.FWD"
 - · - · indicates "FWD" ⇌ "RWD"
 - · - · indicates "FWD" ⇌ "REV" by Sensing Tape

NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN Ω 1/4W(J)
 ALL CAPACITORS IN F50W(V)
 * MARK INDICATES LOW LEAKAGE CAPACITOR
 NL INDICATES NOISE LESS RESISTOR
 RL1 to 6: MY4-0-US-AD4 DC 24V

SYSTEM CONTROL (A TYPE)
 GX-370D
 SCHEMATIC DIAGRAM
 NO.3-2A 1441812A
 2C

GX-370 D NO.3-2A



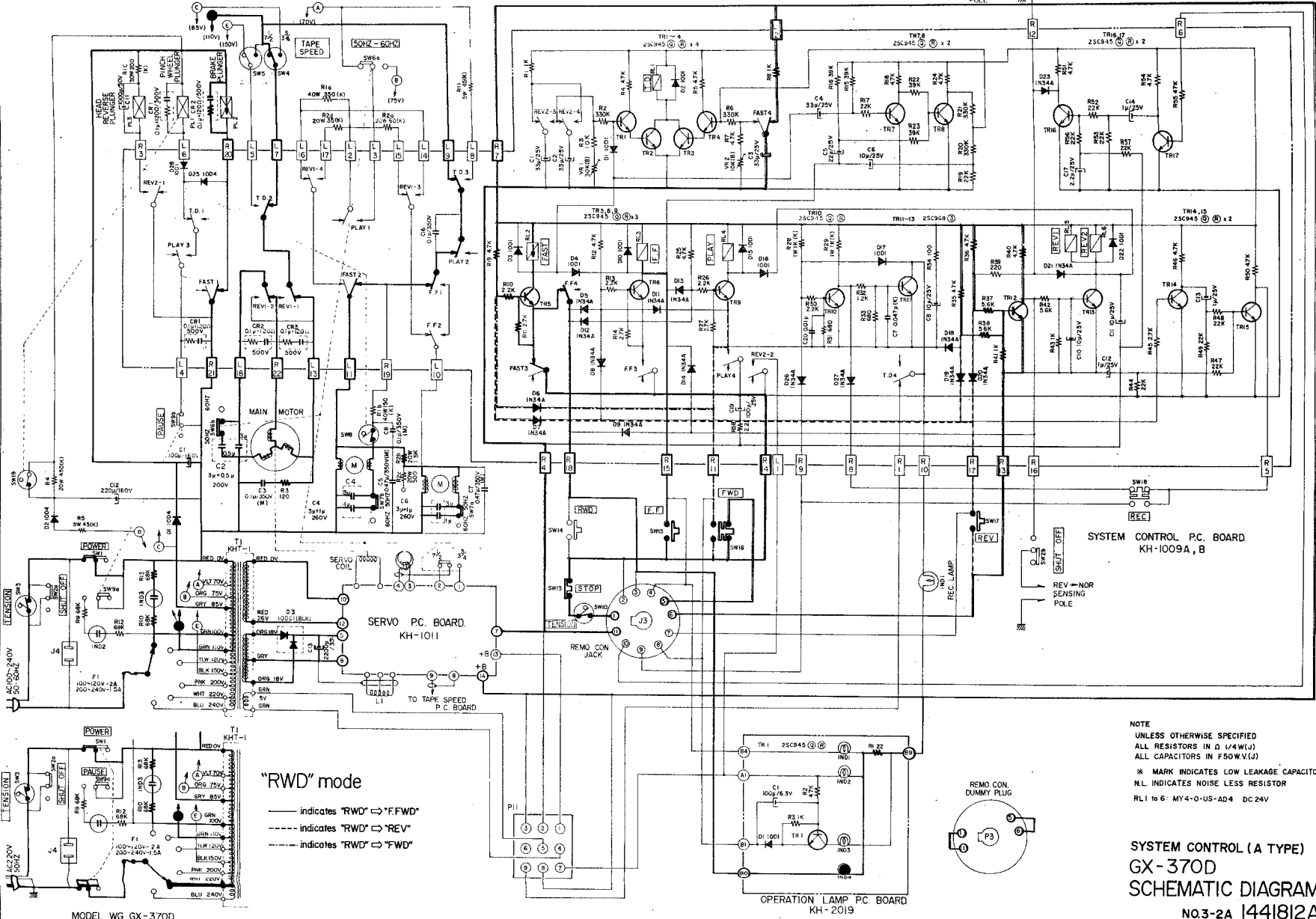
"F.FWD" mode
 — indicates "F.FWD" ⇌ "FWD"
 - - - indicates "F.FWD" ⇌ "REV"
 ····· indicates "F.FWD" ⇌ "REV-NOR"

NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN Ω 1/4W(J)
 ALL CAPACITORS IN F50WV(L)
 * MARK INDICATES LOW LEAKAGE CAPACITOR
 NL INDICATES NOISE LESS RESISTOR
 RL1 to 6: MY4-0-US-AD4 DC24V

SYSTEM CONTROL (A TYPE)
 GX-370D
 SCHEMATIC DIAGRAM
 NO.3-2A 144182A
 2C

MODEL WG GX-370D

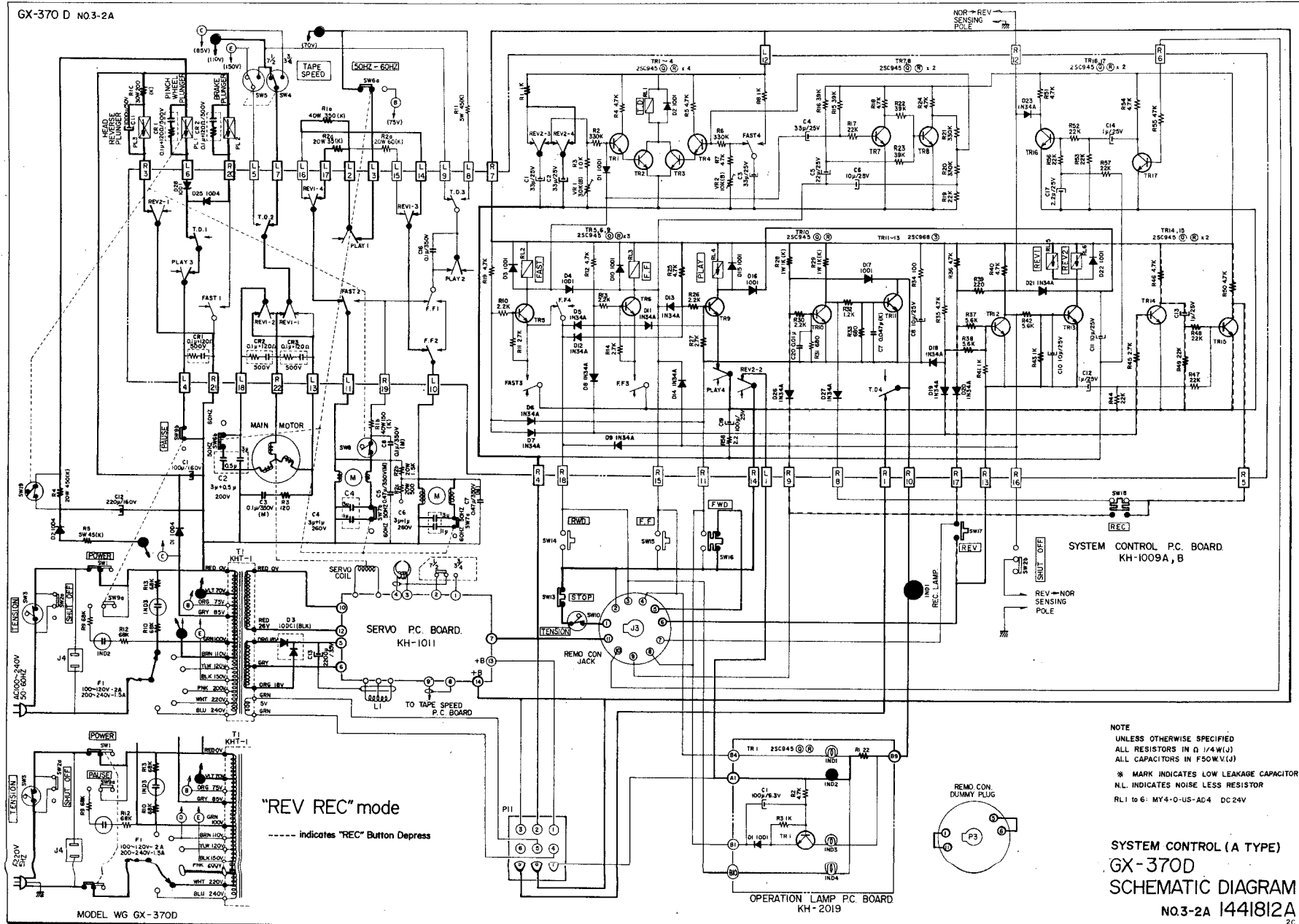
GX-370 D NO.3-2A



NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN Ω 1/4W(J)
 ALL CAPACITORS IN F50V(V.I)
 * MARK INDICATES LOW LEAKAGE CAPACITOR
 N.L. INDICATES NOISE LESS RESISTOR
 RL1 to 6: MY4-0-US-AD4 DC24V

SYSTEM CONTROL (A TYPE)
 GX-370D
 SCHEMATIC DIAGRAM
 NO.3-2A 144182A
 2C

GX-370 D NO.3-2A



"REV REC" mode
 - - - - indicates "REC" Button Depress

SYSTEM CONTROL P.C. BOARD
 KH-1009A, B

NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN Ω 1/4 W (J)
 ALL CAPACITORS IN F50W.V (J)
 * MARK INDICATES LOW LEAKAGE CAPACITOR
 N.L. INDICATES NOISE LESS RESISTOR
 RL1 to 6: MY4-0-US-AD4 DC 24V

SYSTEM CONTROL (A TYPE)
 GX-370D
 SCHEMATIC DIAGRAM
 NO.3-2A 1441812A

MODEL WG GX-370D

OPERATION LAMP P.C. BOARD
 KH-2019

(Refer to Schematic Diagram 7 through 12)

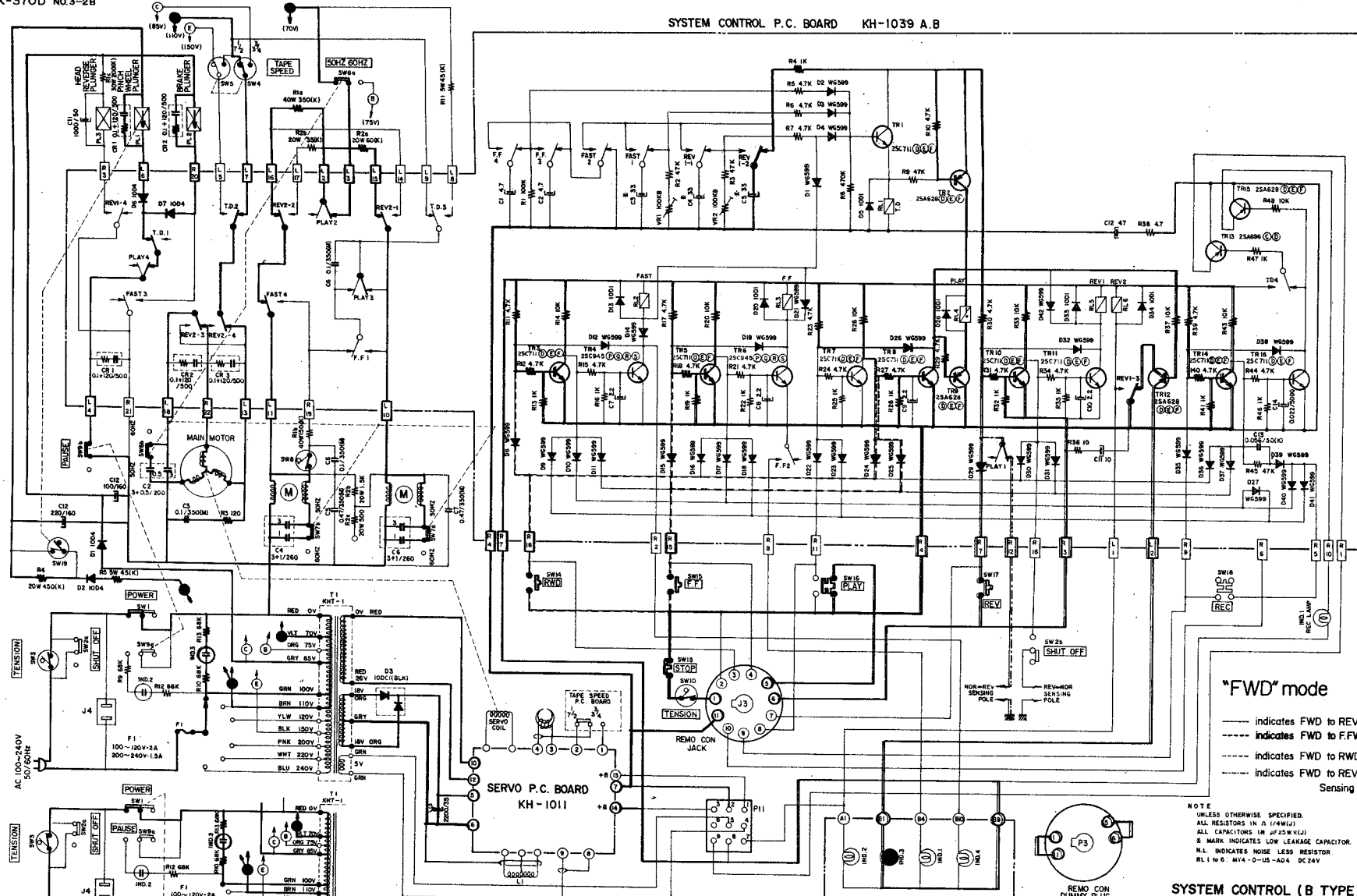
| | FUNCTION | RWD | REV | STOP | FWD | F.FWD | FWD REC | REV REC |
|-------------------|-----------------|-----|-----|------|-----|-------|---------|---------|
| TRANSISTORS | TR1 | | | | | | | |
| | TR2 | | ○ | | ○ | | ○ | ○ |
| | TR3 | | ○ | ○ | ○ | ○ | ○ | ○ |
| | TR4 | ○ | | | | | | |
| | TR5 | ○ | ○ | ○ | ○ | | ○ | ○ |
| | TR6 | | | | | ○ | | |
| | TR7 | ○ | | ○ | | ○ | | |
| | TR8 | | ○ | | ○ | | ○ | ○ |
| | TR9 | | ○ | | ○ | ○ | ○ | ○ |
| | TR10 | ○ | | ○ | ○ | ○ | ○ | |
| | TR11 | | ○ | | | | | ○ |
| | TR12 | | | | | ○ | ○ | |
| | TR13 | | | | | | ○ | ○ |
| | TR14 | ○ | ○ | ○ | ○ | ○ | | |
| | TR15 | | | | | | ○ | ○ |
| | TR16 | | | | | | ○ | ○ |
| RELAYS | T.D RL1 | | | | | | | |
| | FAST RL2 | ○ | | | | ○ | | |
| | F.F RL3 | | | | | ○ | | |
| | PLAY RL4 | | ○ | | ○ | | ○ | ○ |
| | REV1 RL5 | | ○ | | | | | ○ |
| | REV2 RL6 | | ○ | | | | | ○ |
| PLUNGER SOLENOIDS | PINCH WHEEL PL1 | | ○ | | ○ | | ○ | ○ |
| | BRAKE PL2 | ○ | ○ | | ○ | ○ | ○ | ○ |
| | HEAD REV PL3 | | ○ | | | | | ○ |
| | | | | | | | | |

○ mark indicates "engaged"

Chart 2

GX-370D NO.3-2B

SYSTEM CONTROL P.C. BOARD KH-1039 A.B



"FWD" mode

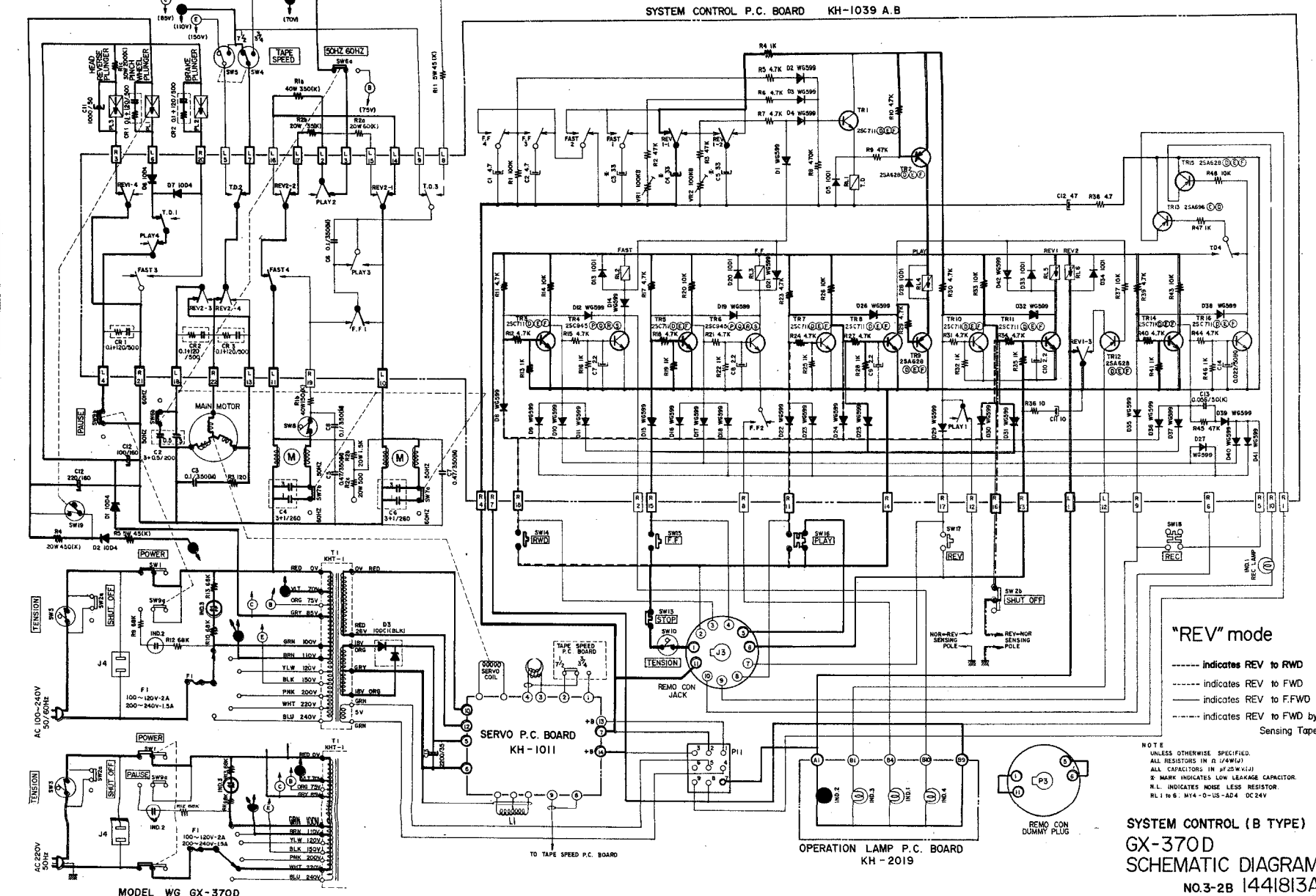
- indicates FWD to REV
- - - indicates FWD to F.FWD
- indicates FWD to RWD
- - - indicates FWD to REV by Sensing Taps

NOTE
 UNLESS OTHERWISE SPECIFIED:
 ALL RESISTORS IN A (1/4W)
 ALL CAPACITORS IN (100V)
 * MARK INDICATES LOW LEAKAGE CAPACITOR
 N.L. INDICATES NOISE LESS RESISTOR
 RL1 to 6: MY4-0-US-A04 DC 24V

**SYSTEM CONTROL (B TYPE)
 GX-370D
 SCHEMATIC DIAGRAM
 NO.3-2B 1441813A**

GX-370D NO.3-2B

SYSTEM CONTROL P.C. BOARD KH-1039 A B



"REV" mode

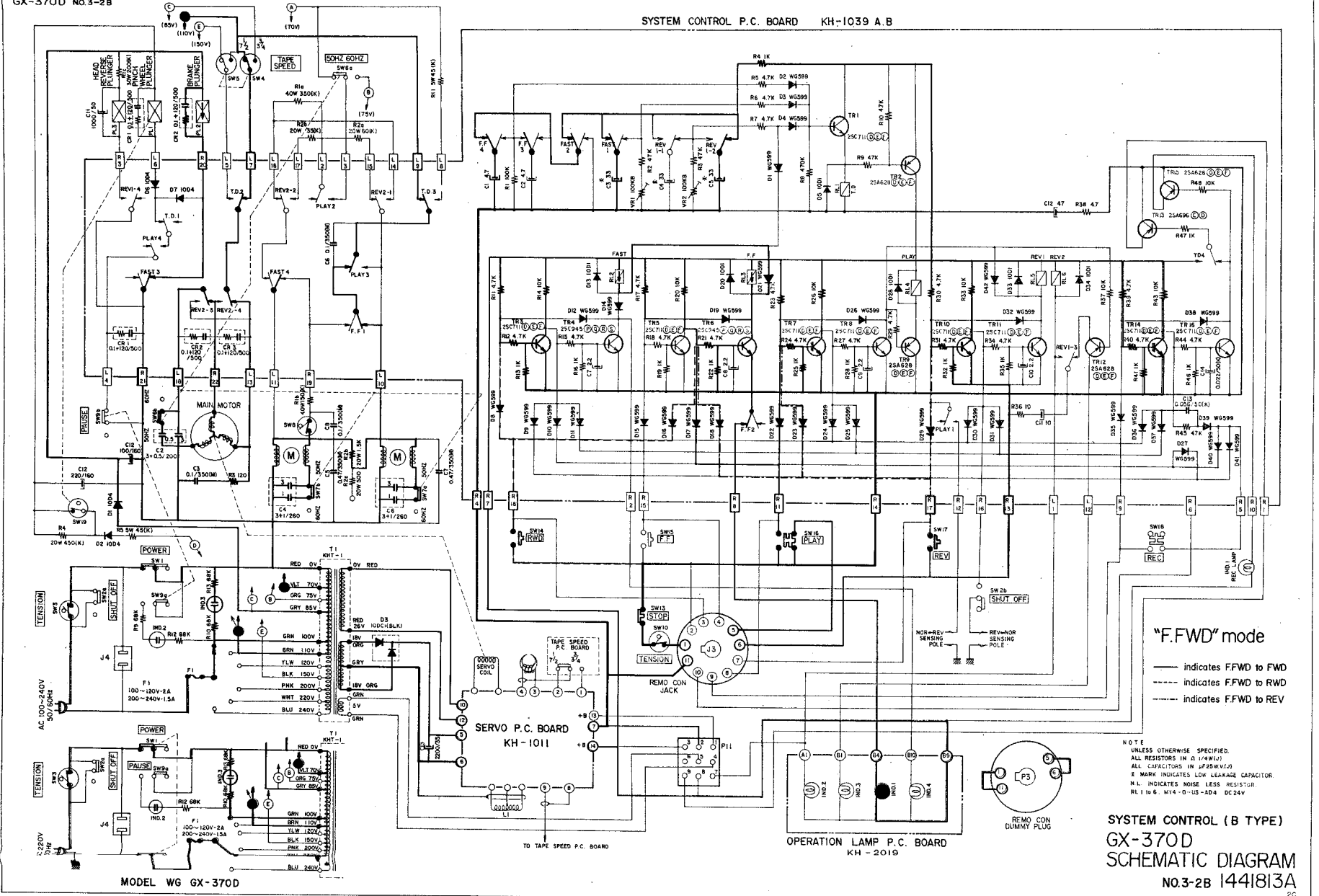
- indicates REV to RWD
- indicates REV to FWD
- indicates REV to F.F.WD
- · - · - indicates REV to FWD by Sensing Tape

NOTE
UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS IN Ω (4W/1/2)
ALL CAPACITORS IN μF(25WV/50)
% MARK INDICATES LOW LEAKAGE CAPACITOR
N.L. INDICATES NOISE LESS RESISTOR
RL 1 to 6, M14-0-US-AD4 DC24V

SYSTEM CONTROL (B TYPE)
GX-370D
SCHEMATIC DIAGRAM
NO.3-2B 1441813A

GX-370D No.3-2B

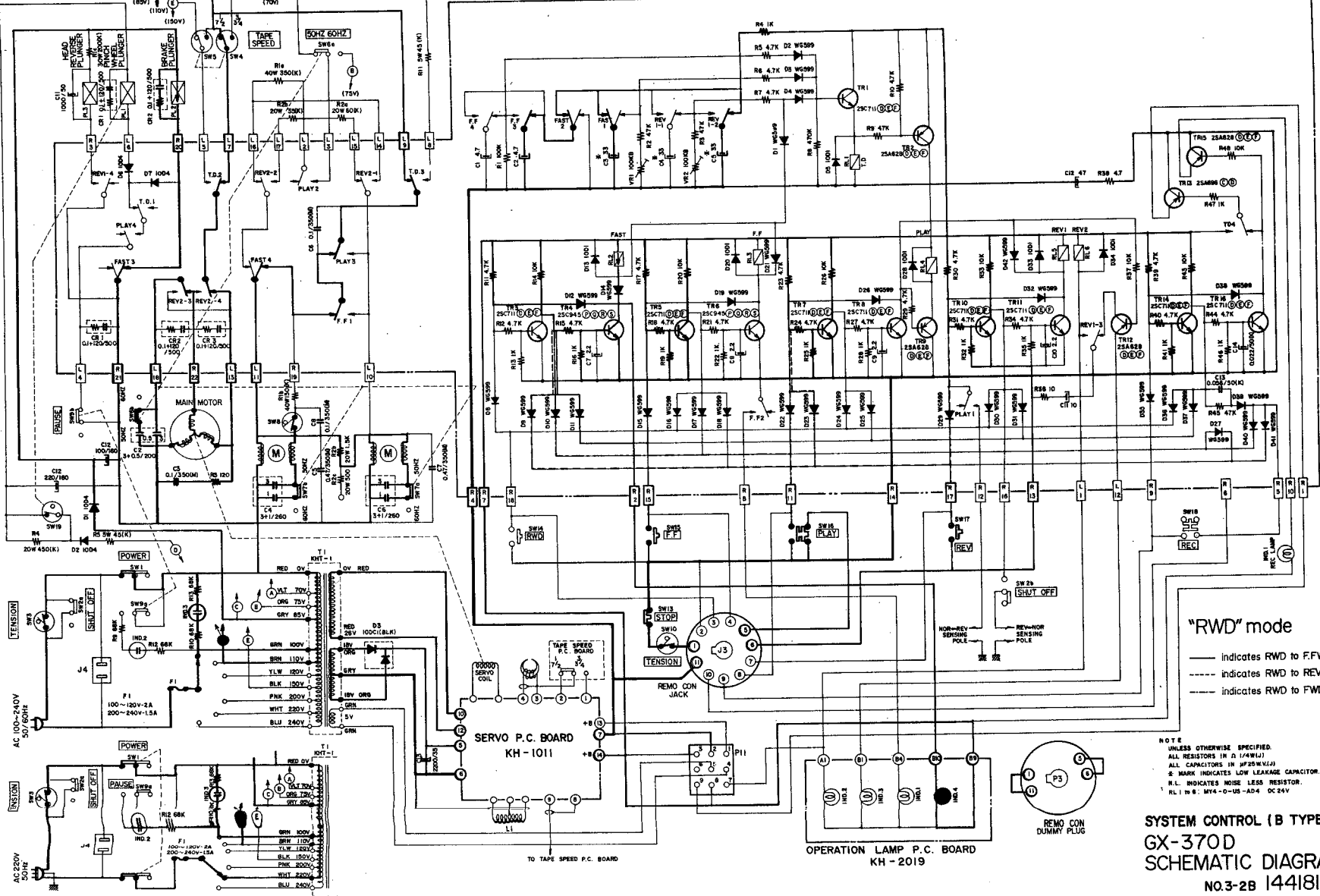
SYSTEM CONTROL P.C. BOARD KH-1039 A.B



SYSTEM CONTROL (B TYPE)
 GX-370D
 SCHEMATIC DIAGRAM
 NO.3-2B 1441813A

GX-370D NO.3-2B

SYSTEM CONTROL P.C. BOARD KH-1039 A.B



"RWD" mode

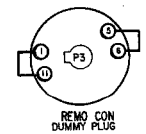
- indicates RWD to F.FWD
- indicates RWD to REV
- indicates RWD to FWD

NOTE
 UNLESS OTHERWISE SPECIFIED:
 ALL RESISTORS IN Ω (4/44L)
 ALL CAPACITORS IN μF (25WV/1J)
 ⚡ MARK INDICATES LOW LEAKAGE CAPACITOR.
 N.L. INDICATES NOISE LESS RESISTOR.
 R.L. IN S. MVA-00-US-A04 DC 24V

SYSTEM CONTROL (B TYPE).
 GX-370D
 SCHEMATIC DIAGRAM
 NO.3-2B 1441813A

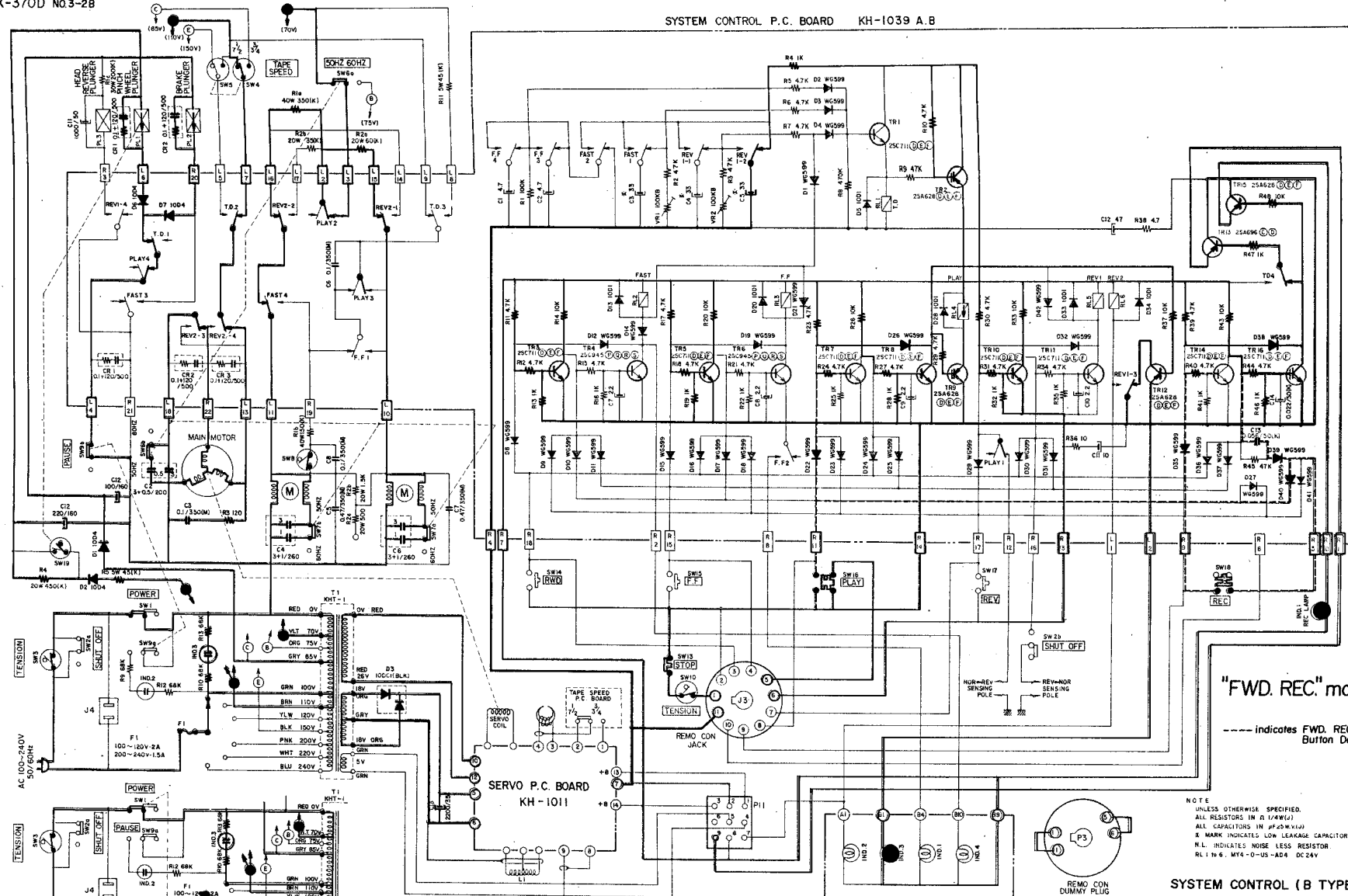
MODEL WG GX-370D

OPERATION LAMP P.C. BOARD
 KH-2019



GX-370D NO.3-2B

SYSTEM CONTROL P.C. BOARD KH-1039 A.B



"FWD. REC." mode
 ---- indicates FWD. REC. Button Depress

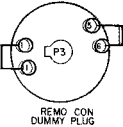
NOTE
 UNLESS OTHERWISE SPECIFIED,
 ALL RESISTORS IN Ω (1/4W/5%)
 ALL CAPACITORS IN μF(50V/10)
 * MARK INDICATES LOW LEAKAGE CAPACITOR.
 N.L. INDICATES NOISE LESS RESISTOR.
 RL1196, MY4-00-US-AD4 DC 24V

SYSTEM CONTROL (B TYPE)
 GX-370D
 SCHEMATIC DIAGRAM
 NO.3-2B 1441813A

MODEL WG GX-370D

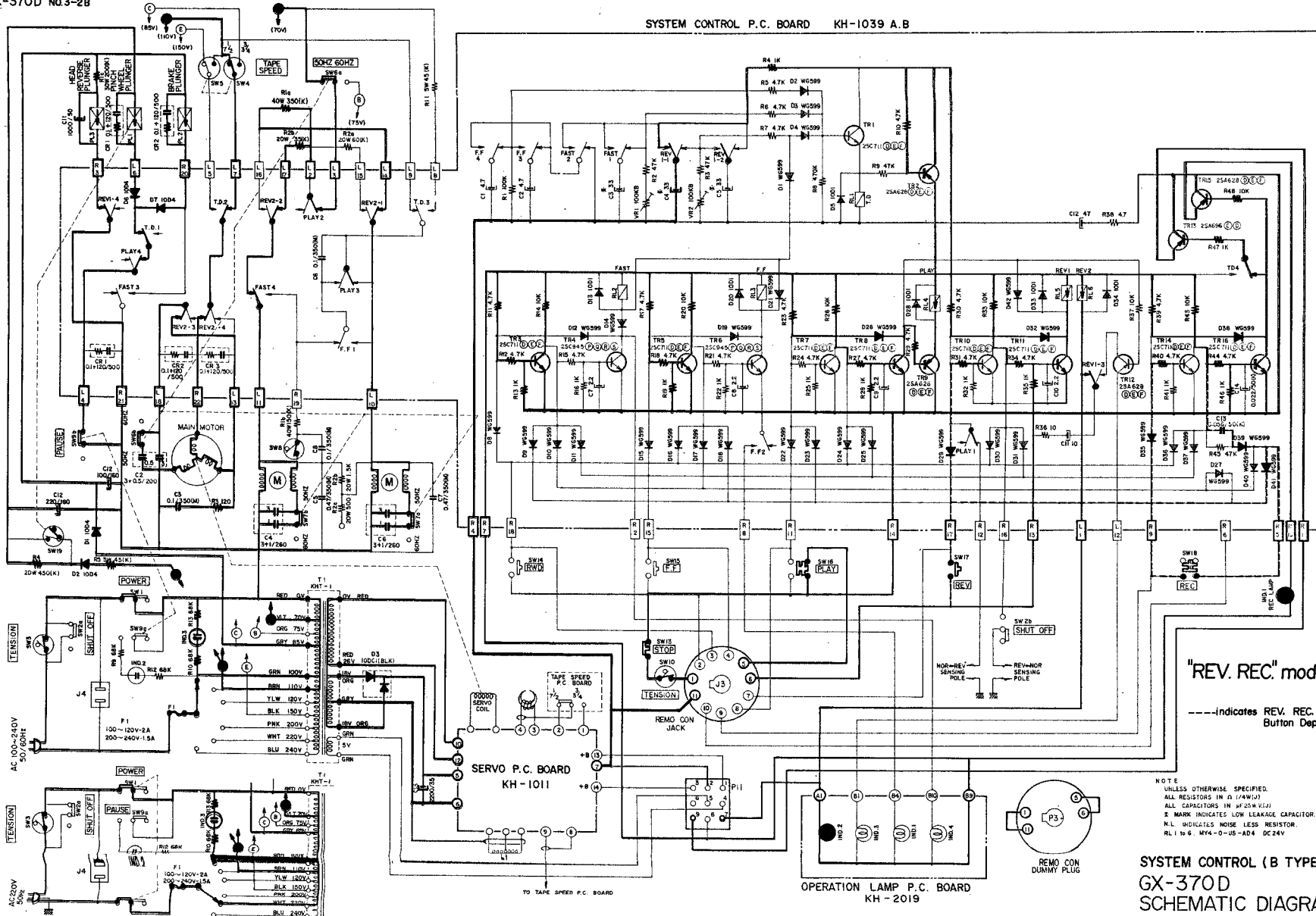
TO TAPE SPEED P.C. BOARD

OPERATION LAMP P.C. BOARD KH-2019



GX-370D NO.3-2B

SYSTEM CONTROL P.C. BOARD KH-1039 A.B



"REV. REC" mode
 --- indicates REV. REC. Button Depress

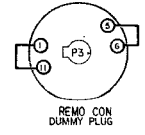
NOTE
 UNLESS OTHERWISE SPECIFIED,
 ALL RESISTORS IN Ω (1/4W)
 ALL CAPACITORS IN μF (25V-50V)
 R MARK INDICATES LOW LEAKAGE CAPACITOR.
 N.L. INDICATES NOISE LESS RESISTOR.
 RL 1 to 6: MY4-0-US-AD4 DC24V

SYSTEM CONTROL (B TYPE)
 GX-370D
 SCHEMATIC DIAGRAM
 NO.3-2B 144183A

MODEL W6 GX-370D

SERVO P.C. BOARD KH-1011

OPERATION LAMP P.C. BOARD KH-2019



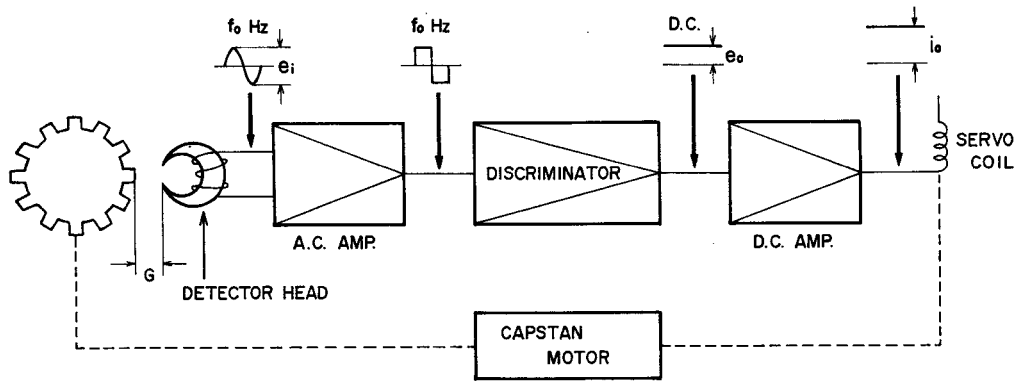
**2. VOLTAGE SUPPLY TO TORQUE MOTOR
AND TENSION AT VARIOUS MODES**

| TORQUE MOTOR MODE | Left Side | Right Side |
|----------------------|---------------------|---------------------|
| FWD | 29V (35V) 50g | 55V (62V) 170g |
| REV | 61V (67V) 210g | 29V (35V) 50g |
| F.FWD | 10V (10V) 15g | 118V (118V) 600g |
| RWD | 118V (118V) 600g | 10V (10V) 15g |

() indicates Voltage at 60 Hz.

Chart 3

VIII. SERVO MOTOR OPERATING PRINCIPLES



G (Gap): Adjust to obtain a detector head terminal voltage of 3 ± 0.5 mV at 7-1/2 ips.

Fig. 21

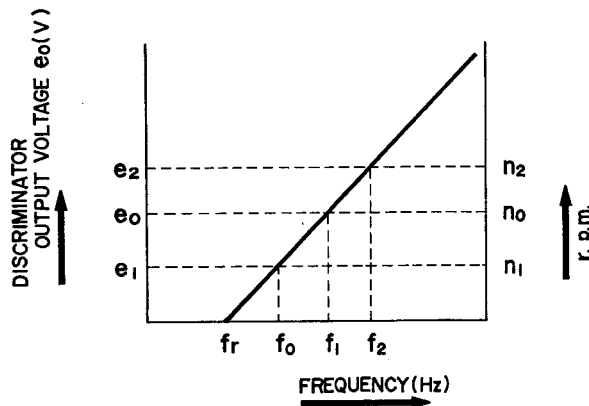


Fig. 22

1. The detector head core is comprised of a permanent magnet, and the gear installed on the motor, by means of the capstan motor revolutions, changes the magnetic flux of the detector head core. Accordingly, the detector head coil works in the same way and generates AC Voltage (becomes the detector signal described below). When this detector signal voltage (e_i) becomes detector signal frequency (f_0), this adjusts the capstan motor revolutions proportionately. (See Figs. 21 & 22)
2. When the detector signal voltage generated from the detector head is about 3 mV (at 7-1/2 ips), because the level is low, the perpendicular (up and down) waveform is amplified by the AC Amplifier until the waveform is clipped. (See Fig. 21)

3. Discriminator Coil L-1 (V12031SC-01) and C-210 (0.051/50) at 7-1/2 ips (and C-211 (0.27/100) at 3-3/4 ips) constitute the resonance circuit, and this resonance frequency becomes f_r . Because the detector signal frequency generated at the detector coil differs according to capstan motor revolutions, the capacity of the discriminator resonance condenser changes, and the resonance frequency changes at the different tape speeds of 7-1/2 and 3-3/4 ips.

4. When the discriminator input frequency and the resonance frequency f_r are simultaneous, the DC signal to be supplied to the next stage DC Amplifier is not generated. Consequently, when the capstan motor rotates at normal speed, a higher than resonance frequency f_r , detector signal. Signal frequency f_0 is established.
5. As shown in Chart 4, when electric current is not flowing to the capstan motor servo coil, the capstan motor revolutions are far faster than normal revolutions. Consequently, in order to maintain normal revolutions, an electro-magnetic field is generated at the servo coil by means of collector current flowing to TR-209 (2SD234), and this serves as an electro-magnetic brake. This electro-magnetic brake and the load torque balances the capstan motor torque and normal revolutions are maintained.

| TAPE SPEED | Capstan motor supply voltage | Capstan motor supply voltage at FWD or REV starting time | Voltage and frequency generated at the detector coil | Controlled capstan motor speed | Uncontrolled capstan motor speed |
|------------|------------------------------|--|--|--------------------------------|----------------------------------|
| 7-1/2 ips | 110V | 150V | $3 \text{ mV} \pm 0.5 \text{ mV}$ r.m.s. / 1040 Hz | 520 r.p.m. | 1420 r.p.m. |
| 3-3/4 ips | 85V | 110V | $1.5 \text{ mV} \pm 0.25 \text{ mV}$ r.m.s. / 520 Hz | 260 r.p.m. | 1380 r.p.m. |

Chart 4

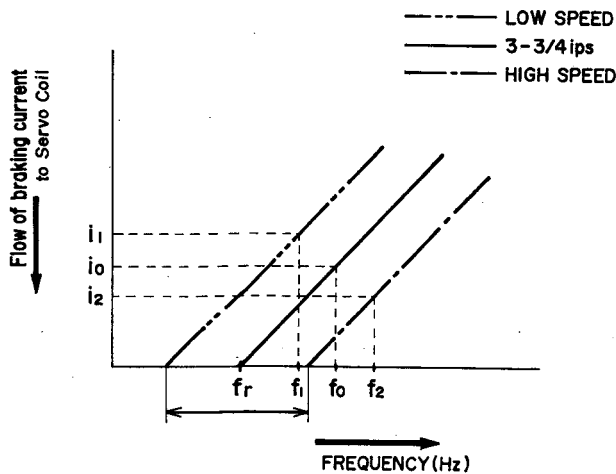


Fig. 23

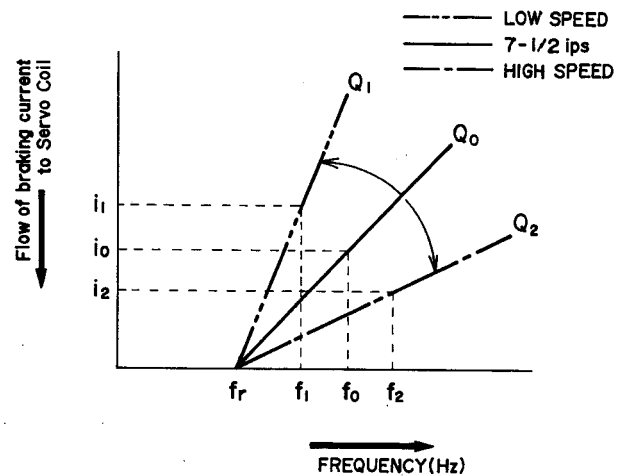


Fig. 24

6. In case of the capstan motor revolutions having reached the speed of n_2 , the detector signal produced at the detector coil surpasses f_0 and advances toward the higher f_2 frequency. (See Figs. 23 & 24). Accordingly, the flow of current to the servo coil increases, and because the electro-magnetic braking supplied to the capstan motor is increased, the capstan motor revolutions become slower, and normal revolutions are regained.
7. In case of the capstan motor revolutions having slowed to n_1 , the detector signal produced at the detector coil drops to lower than f_0 and descends toward the low f_1 frequency (See Figs. 23 & 24). Accordingly, the flow of current to the servo coil decreases, and because the electro-magnetic braking supplied to the capstan motor is decreased, the capstan motor revolutions speed up and normal revolutions are regained.

8. To obtain the proper number of revolutions, adjustment of the flow of brake current to the servo coil is necessary.

- 1) At 3-3/4 ips tape speed

As shown in Fig. 23, resonance frequency f_r (between the arrow mark) is changed by adjusting the dust core of discriminator coil L-1 (V1203 1SC-01). Accordingly, f_0 is also changed between f_1 and f_2 , and the flow of braking current (i_0) to the servo coil is also changed between i_1 and i_2 . Consequently, correct tape speed can be attained by using a tape speed measuring tape and a Frequency Counter and adjusting the dust core of coil L-1.

- 2) At 7-1/2 ips tape speed

As shown in Fig. 24, Q_0 of the resonance circuit (within the arrow mark with f_r as center frequency), is changed by adjusting discriminator semi-fixed resistor VR-202 (2k B). Therefore, f_0 is also changed between f_1 and f_2 , and the flow of current (i_0) to the servo coil is also changed between i_1 and i_2 . Consequently, correct tape speed can be attained by using a tape speed measuring tape and a Frequency Counter and adjusting semi-fixed resistor VR-202.

IX. DIFFERENTIATION OF SYSTEM CONTROL SCHEMATIC DIAGRAM & P. C. BOARD

1. Because the System Control Schematic Diagram and the P.C. Board are differentiated by serial number, the following (Chart 5) is provided for reference.

| Serial Number | Schematic Diagram No. | P.C. Board |
|---------------------------------|-----------------------|-------------|
| # 70301-0001 to # 70809-2000 | No. 3-3A | KH-1009A, B |
| from # 71011-0001 | No. 3-3B | KH-1039A, B |

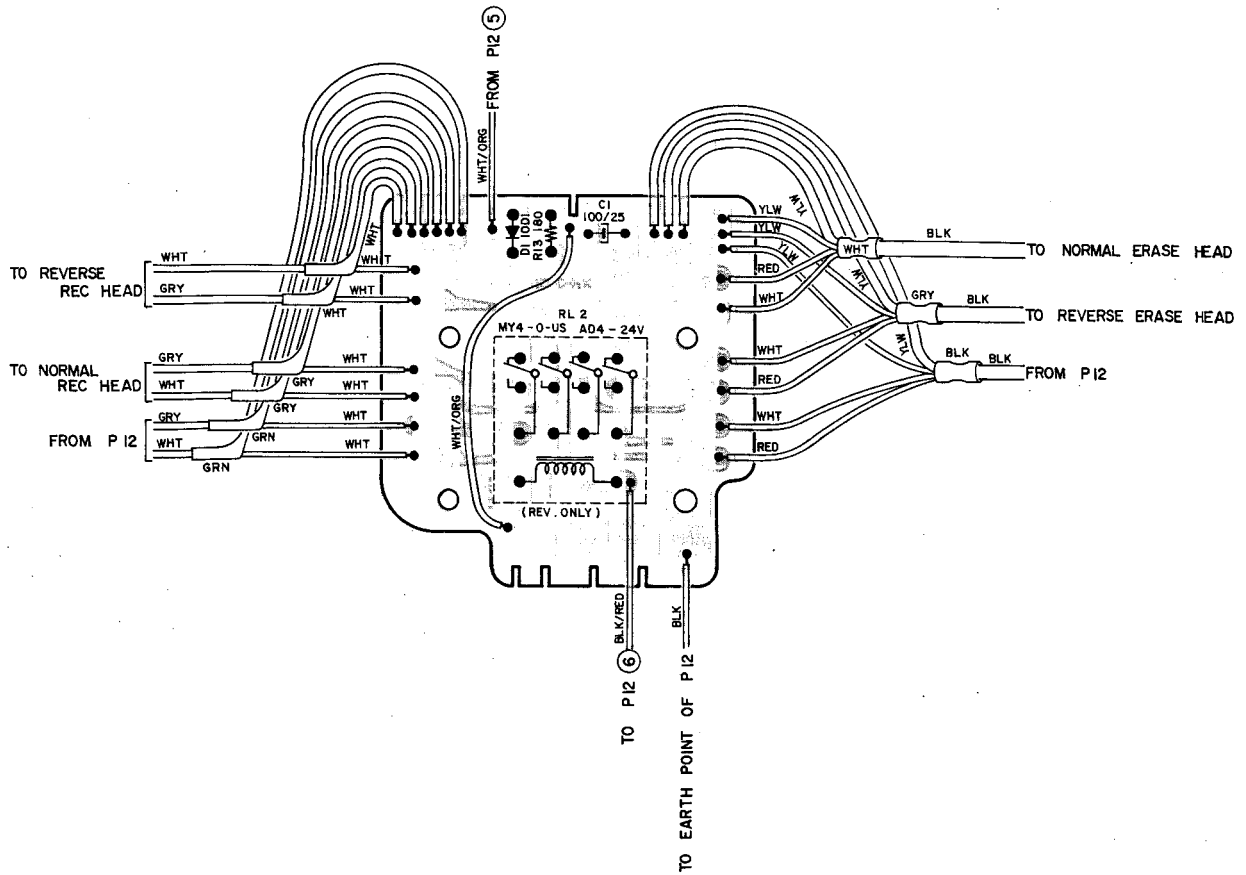
Chart 5

Accordingly, because System Control P.C. Board KH-1009A, B and KH-1039A, B are not interchangeable, when placing your order, be sure to state the System Control P.C. Board number.

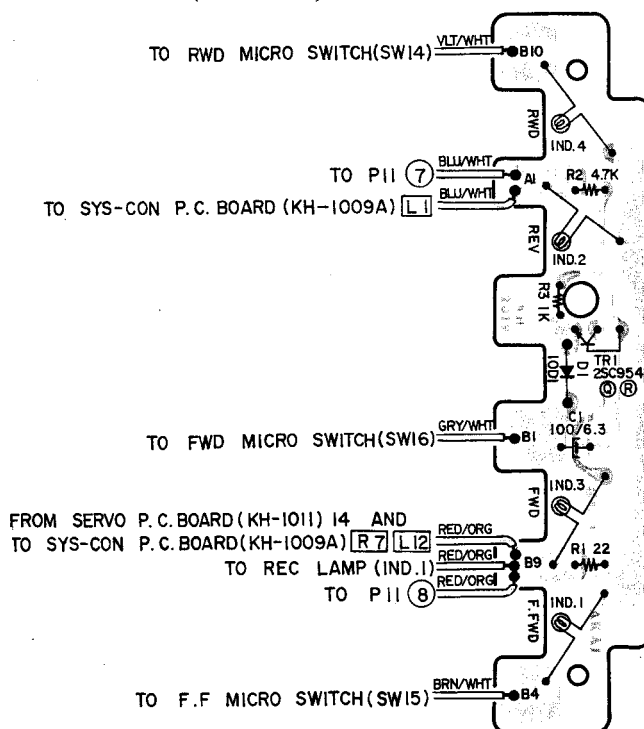
2. When using a KH-1039A, B in a machine employing System Control P.C. Board KH-1009A, B, the following changes are also necessary.
- 1) Remove the lead wires connected to operation switches SW-14 (RWD), SW-15 (F.FWD), and SW-16 (FWD) from terminals (B1) (B4) and (B10) of the Operation Lamp P.C. Board.
 - 2) Remove the multi-socket terminal [L12] lead wire connected to the System Control P.C. Board, and connect terminals [L12] and (B1).
 - 3) Remove the multi-socket terminal [R8] lead wire connected to the System Control P.C. Board, and connect terminals [R8] and (B4).
 - 4) Remove the multi-socket terminal [R2] lead wire and connect terminals [R2] and (B10).
 - 5) Disconnect the various inner components (resistor, capacitor, diode, and transistor) of the Operation Lamp P.C. Board and directly connect Lamps IND-1 through IND-4.

X. COMPOSITE VIEWS OF COMPONENTS

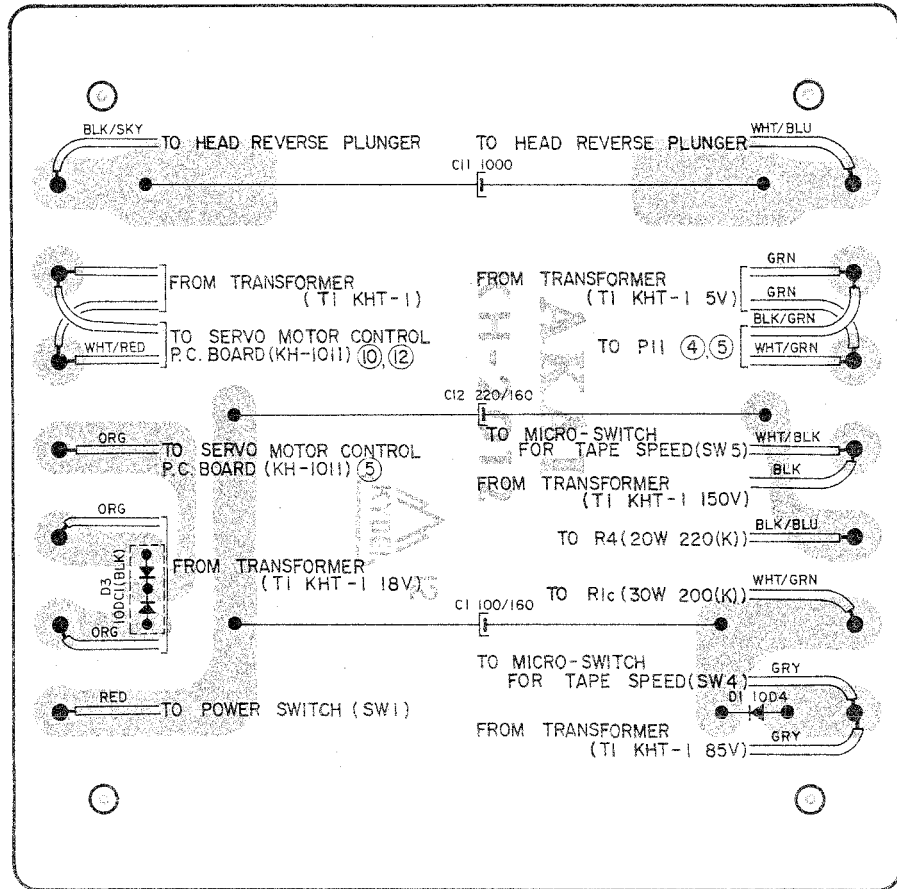
HEAD RELAY P.C. BOARD (KH-0029)



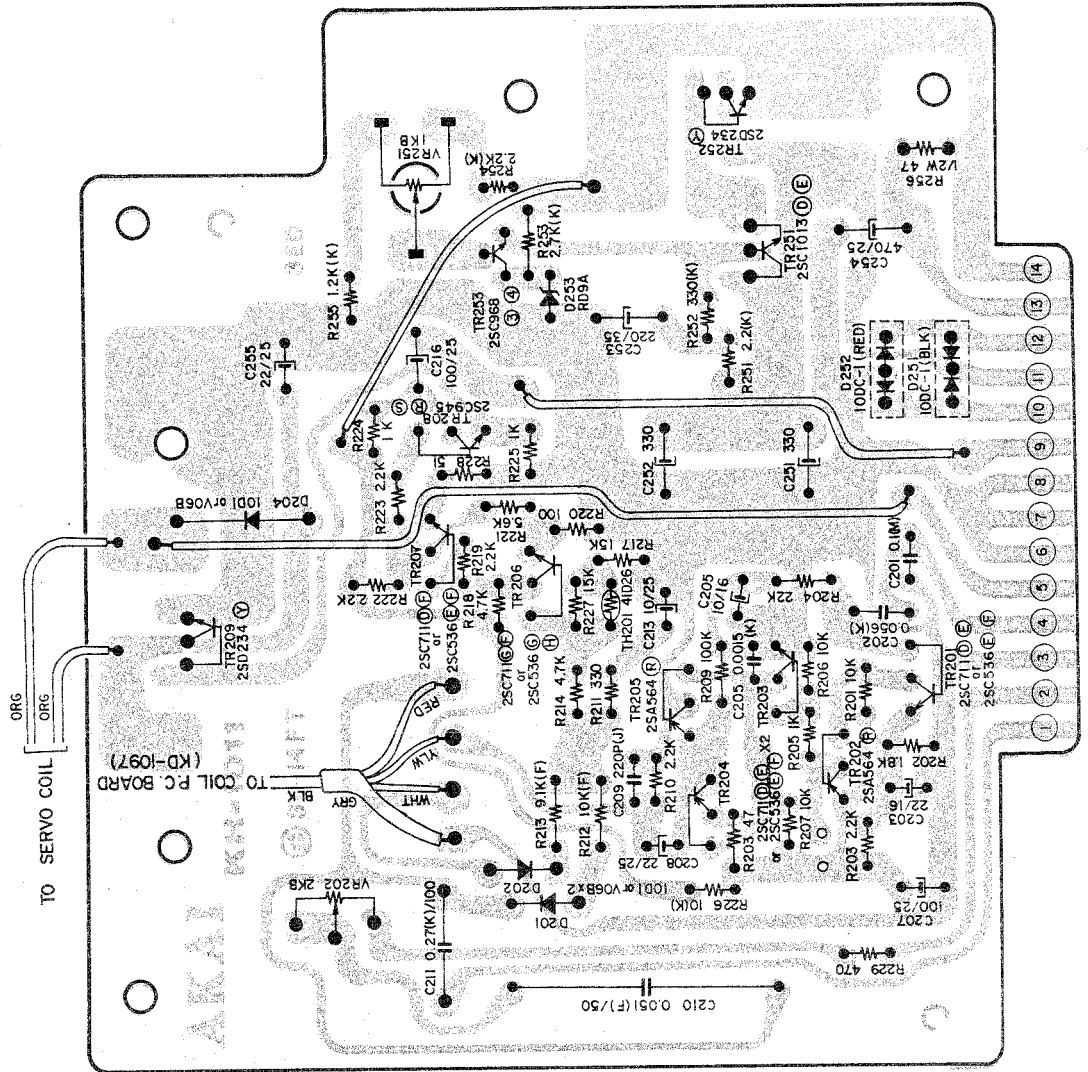
OPERATION LAMP P.C. BOARD (KH-2019)



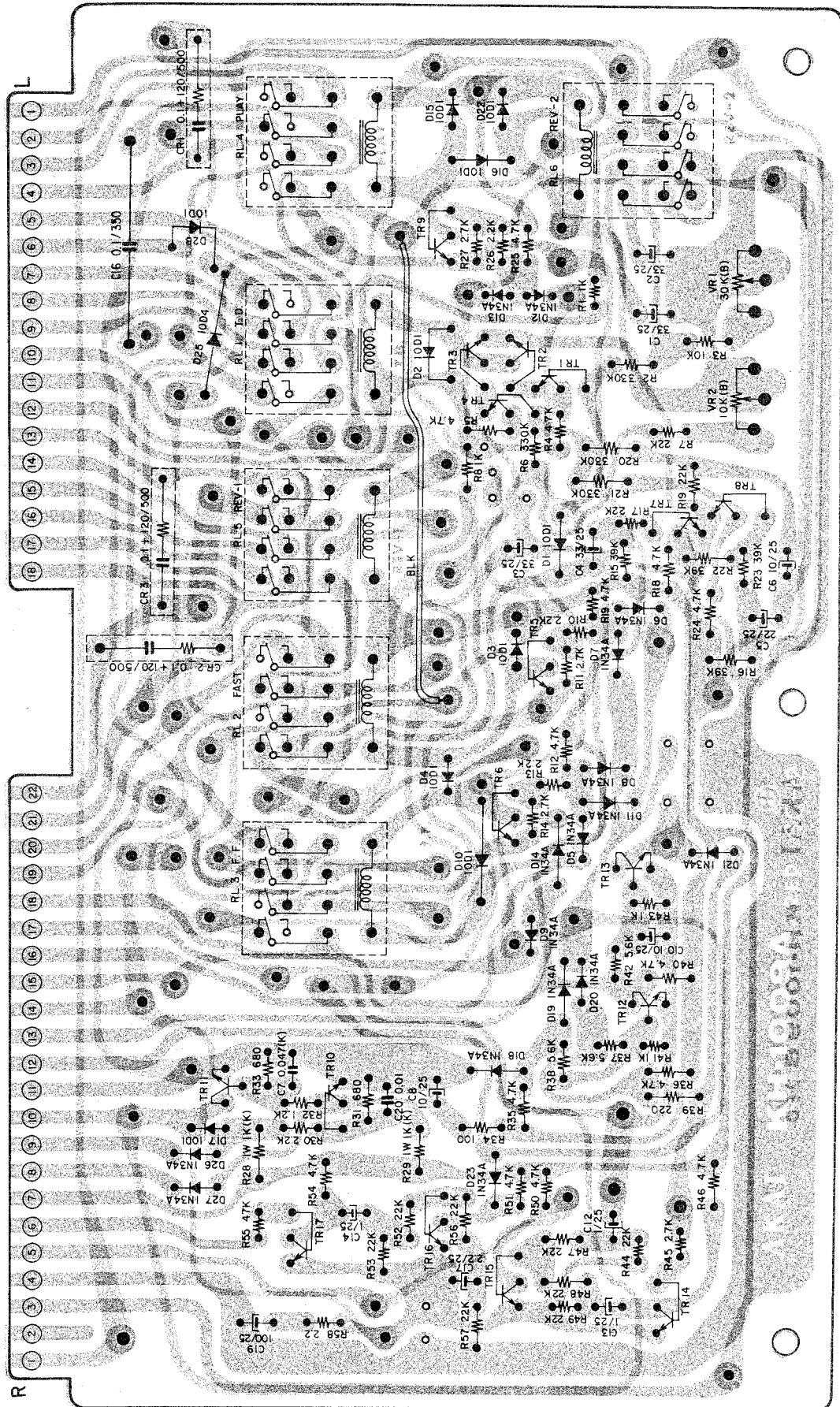
CAPACITOR P.C. BOARD (KH-2012)



SERVO P.C. BOARD (KH-1011)



SYSTEM CONTROL P.C. BOARD (KH-1009)

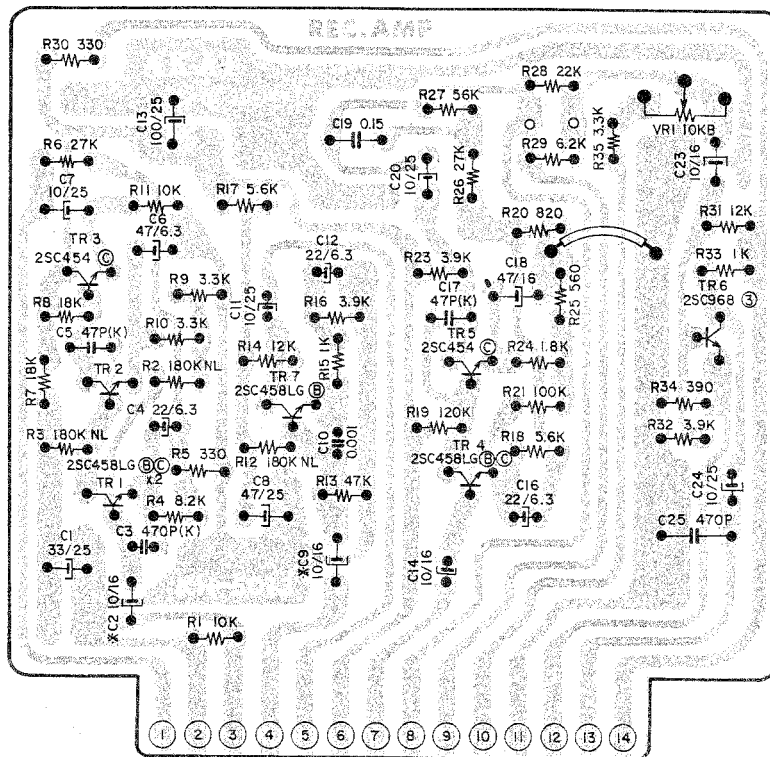


RL1 to 6 : MY4-O-US-AD4 DC24V

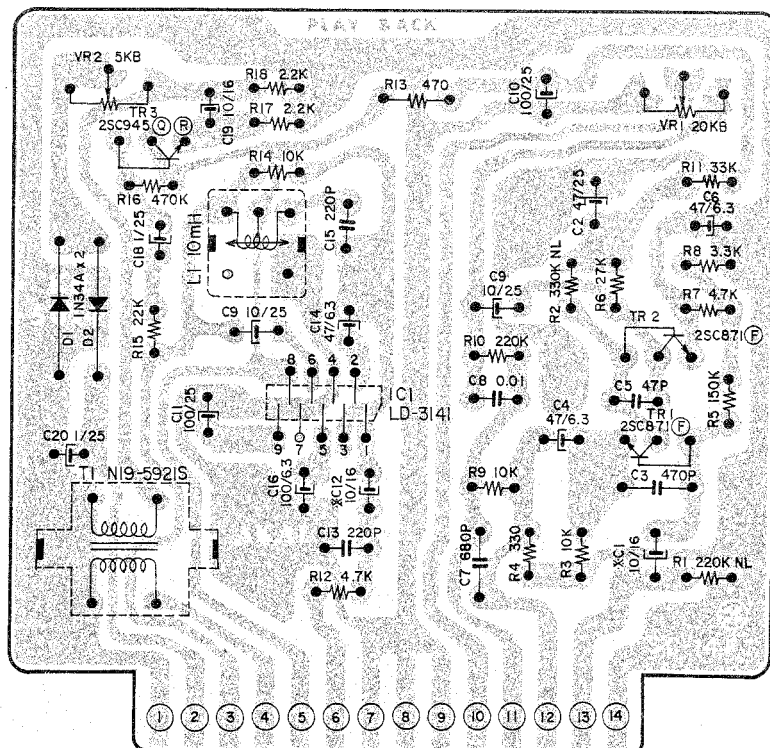
TR11 to 13 : 25C968 ③

TR1 to 10, TR14 to 17 : 25C945 ④ ⑤

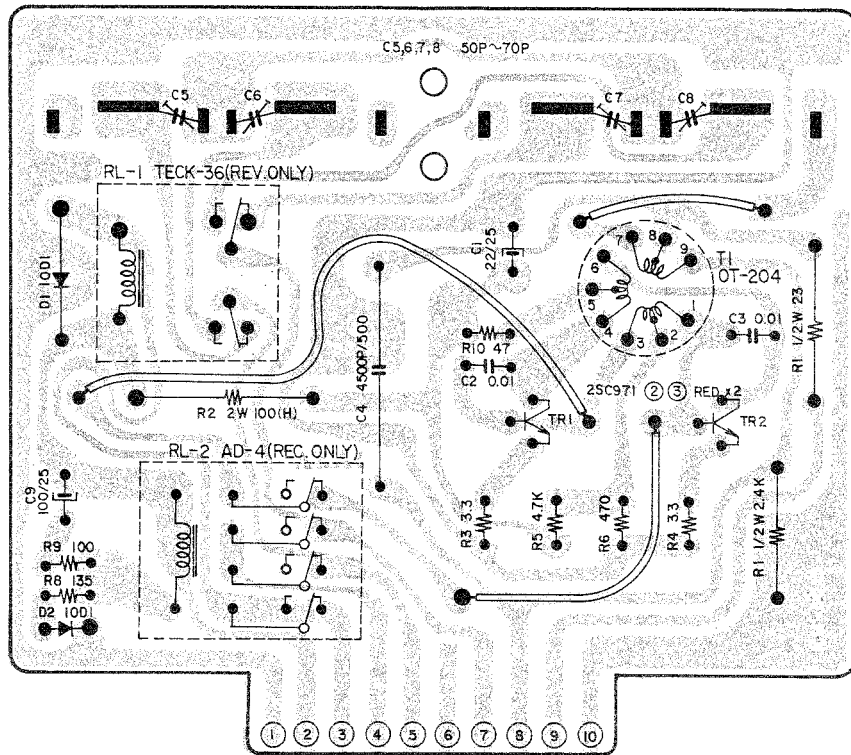
REC. AMP. P.C. BOARD (KH-5013)



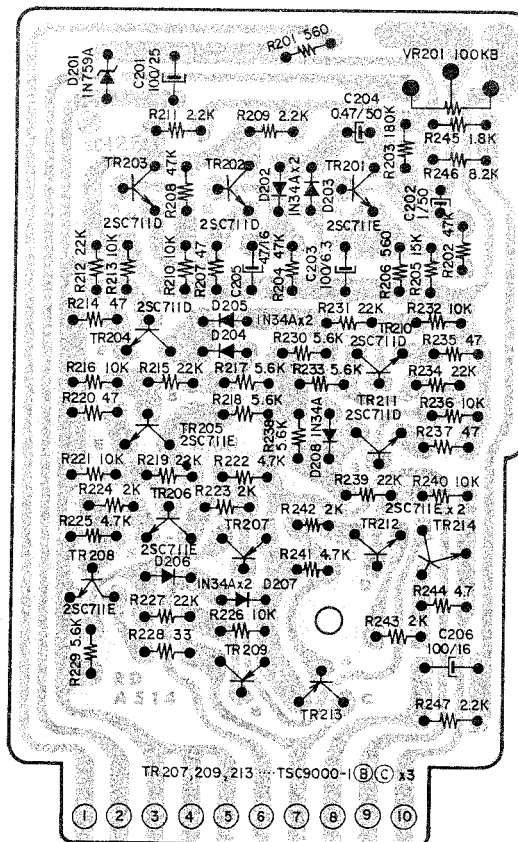
P.B. AMP P.C. BOARD (KH-5014)



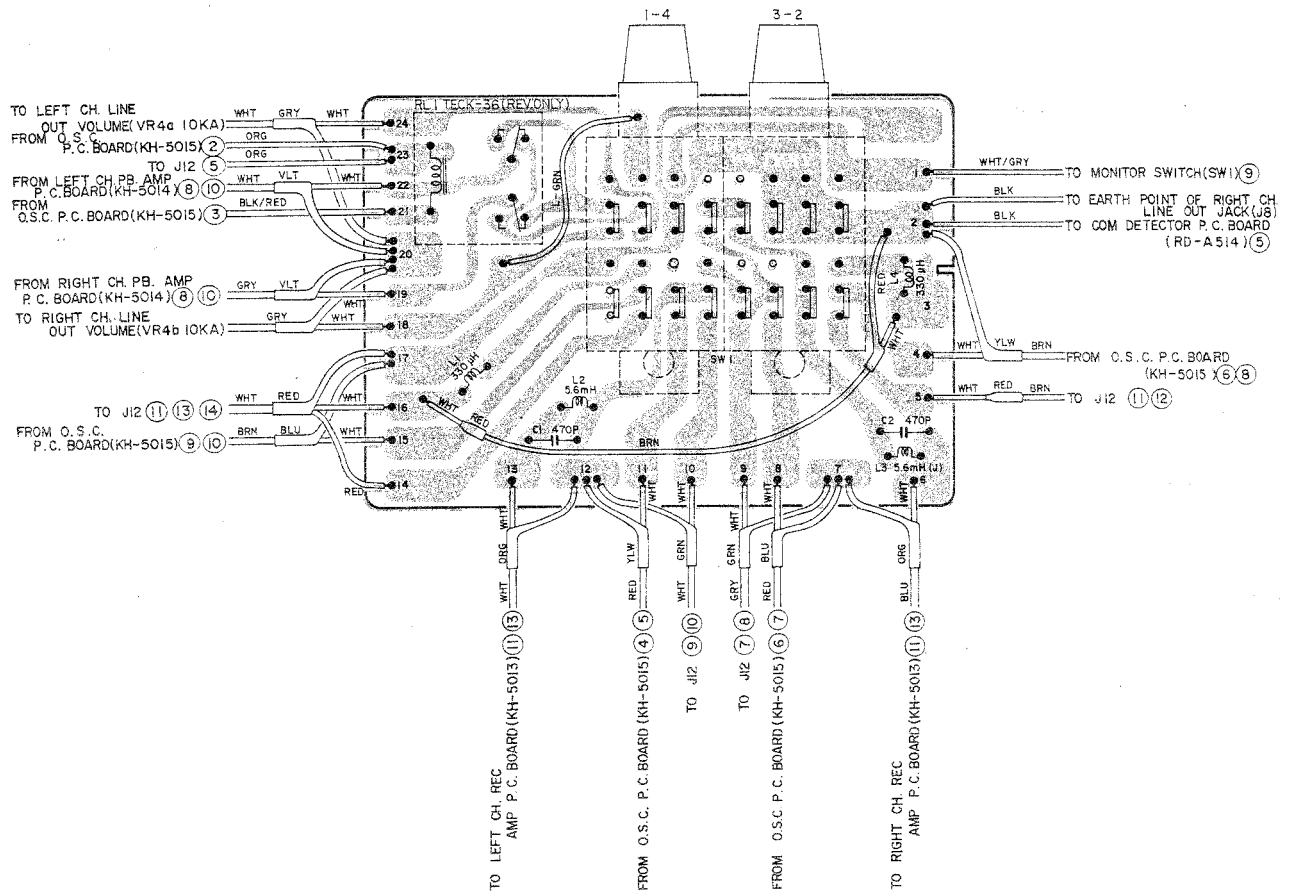
OSC. P.C.



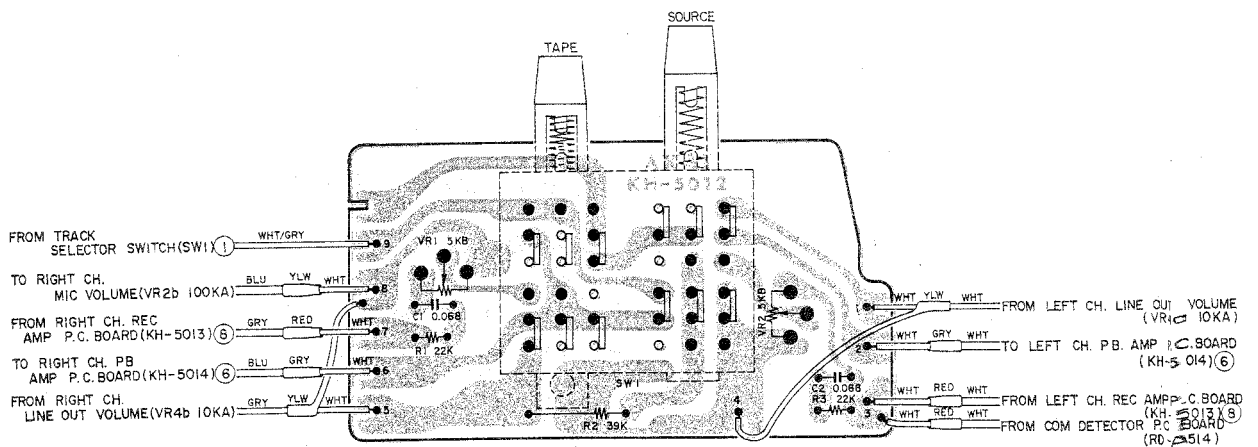
COM DETECTOR P.C. BOARD (RD-A514)



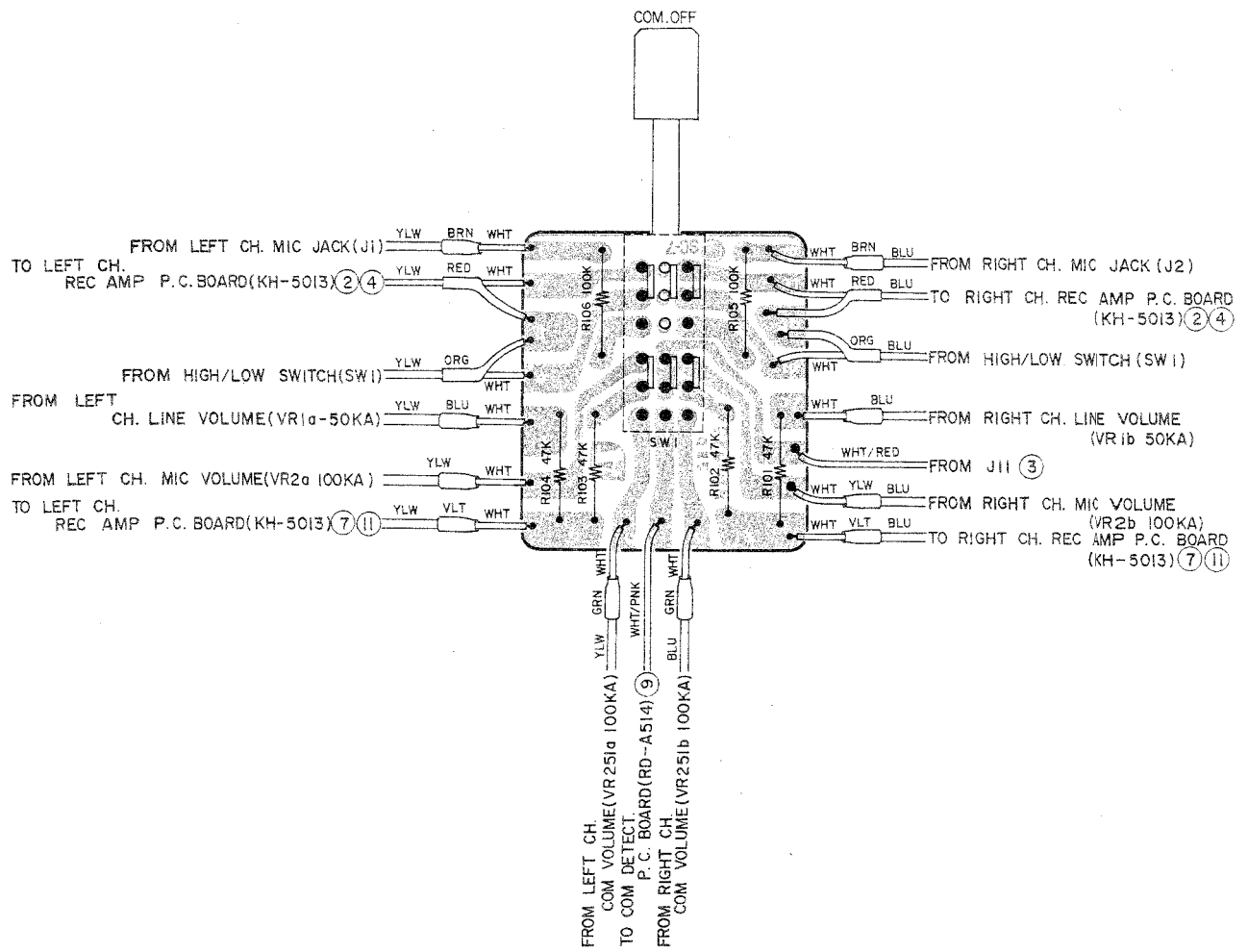
TRACK SELECTOR P.C. BOARD (KH-5011)



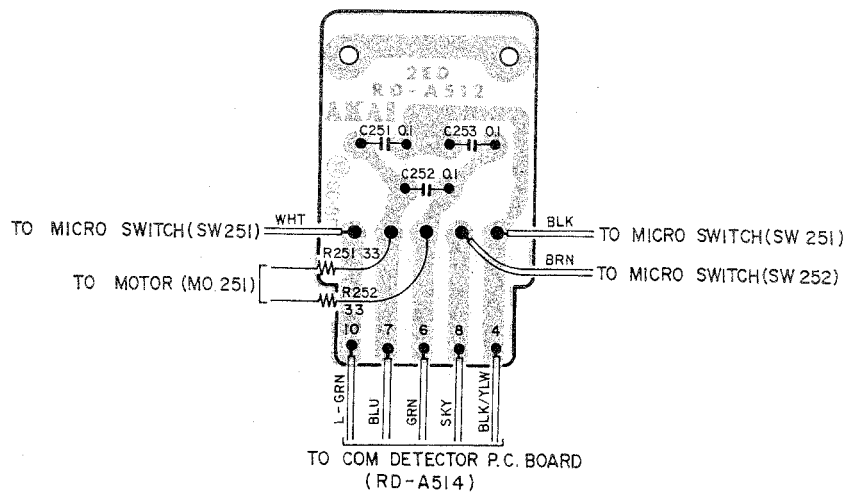
MONITOR SWITCH P.C. BOARD (KH-5012)



COM SWITCH P.C. BOARD (RD-525 2ED)



TERMINAL P.C. BOARD (RD-A512 2ED)



SECTION 2

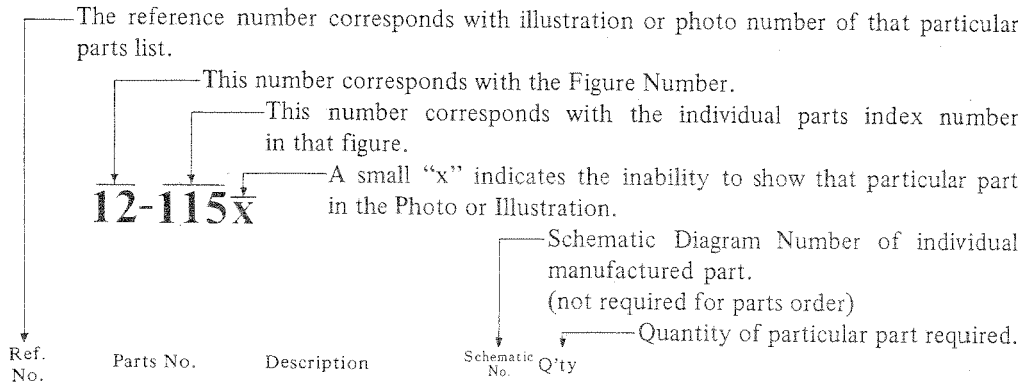
PARTS LIST

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HOW TO USE THIS PARTS LIST

1. This parts list is compiled by various individual blocks based on assembly process.
2. When ordering parts, please describe parts number, serial number, and model number in detail.
3. How to read List



FLYWHEEL BLOCK #13

| | | | | |
|---------|--------|----------------------------|---------|---|
| 12-115x | 800425 | Flywheel Block Assy. Comp. | RDG #13 | 1 |
| 12-116 | 244506 | Flywheel Only | RD-233 | 1 |
| 12-117x | 244754 | Felt, Flywheel | RD-275 | 1 |
| 12-118 | 251324 | Main Metal Case | RD-236 | 1 |
| 12-119 | 253080 | Main Metal | RD-237 | 1 |

4. The symbol numbers shown on the P.C. Board list can be matched with the Composite Views of components of the Schematic Diagram or Service Manual.
5. The indications of Resistors and Capacitors in the photos of P.C. Board are being eliminated.
6. The shape of the parts and parts name, etc. can be confirmed by comparing them with the parts shown on the Electrical Parts List Table of P.C. Board.
7. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List.
It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index. (meaning of ref. no. outlined in Item 3 above).
8. Utilize separate "Price List for Parts" to determine unit price. The most simple method of finding parts Price is to utilize the reference number.

ELECTRICAL PARTS LIST TABLE

| | | | | |
|---|--|--|--|---|
| <p>ELECTRICAL PARTS LIST TABLE Because the indication of resistors and capacitors in the P.C. Board photos are being eliminated, please confirm parts name and shape by comparing them with the parts shown in this table.</p> | <p>1</p>  <p>Solid Resistor</p> | <p>2</p> <p style="text-align: right;">Stopper Type</p>  <p>Insulator Type</p> <p>Carbon Resistor</p> | <p>3</p>  <p>Metal Oxide Film Resistor</p> | |
| | <p>4</p>  <p>Cement Resistor</p> | <p>5</p>  <p>Wire-Wound Resistor</p> | <p>6</p>  <p>Thermistor</p> | <p>7</p>  <p>Enamel Resistor</p> |
| | <p>1</p>  <p>MP Capacitor (Tubler Type)</p> | <p>2</p>  <p>Plastic Capacitor</p> | <p>3</p>  <p>Mylar Capacitor</p> | <p>4</p>  <p>VFM (Hi-Q) Capacitor</p> |
| | <p>5</p>  <p>Mylar Capacitor</p> | <p>6</p>  <p>Tantalum Capacitor</p> | <p>7</p>  <p>Oil Capacitor (Tubler Type)</p> | <p>8</p> <p style="text-align: right;">Vertical Type</p> <p style="text-align: left;">Tubler Type</p>  <p>Styrol Capacitor</p> |
| | <p>9</p>  <p>Electrolytic Capacitor (Tubler Type)</p> | <p>10</p> <p style="text-align: right;">Vertical Type</p> <p style="text-align: left;">Tubler Type</p>  <p>Electrolytic Capacitor</p> | <p>11</p>  <p>Ceramic Capacitor</p> | <p>12</p>  <p>Metalized Mylar (Paper) Capacitor</p> |
| | <p>13</p>  <p>Trimer Condenser</p> | <p>VR</p>  <p>Semi-Fixed Volume</p> | | |
| | <p>L</p>  <p>Ferri Inductor</p> | <p>TR</p>  <p>Transistor</p> | | |
| <p>CR</p>  <p>Spark Quencher</p> | <p>D</p>  <p>Diode (Silicon, Zener, Germanium)</p> | | | |

FIG. 1 (A) ILLUSTRATION OF KH HEAD BLOCK

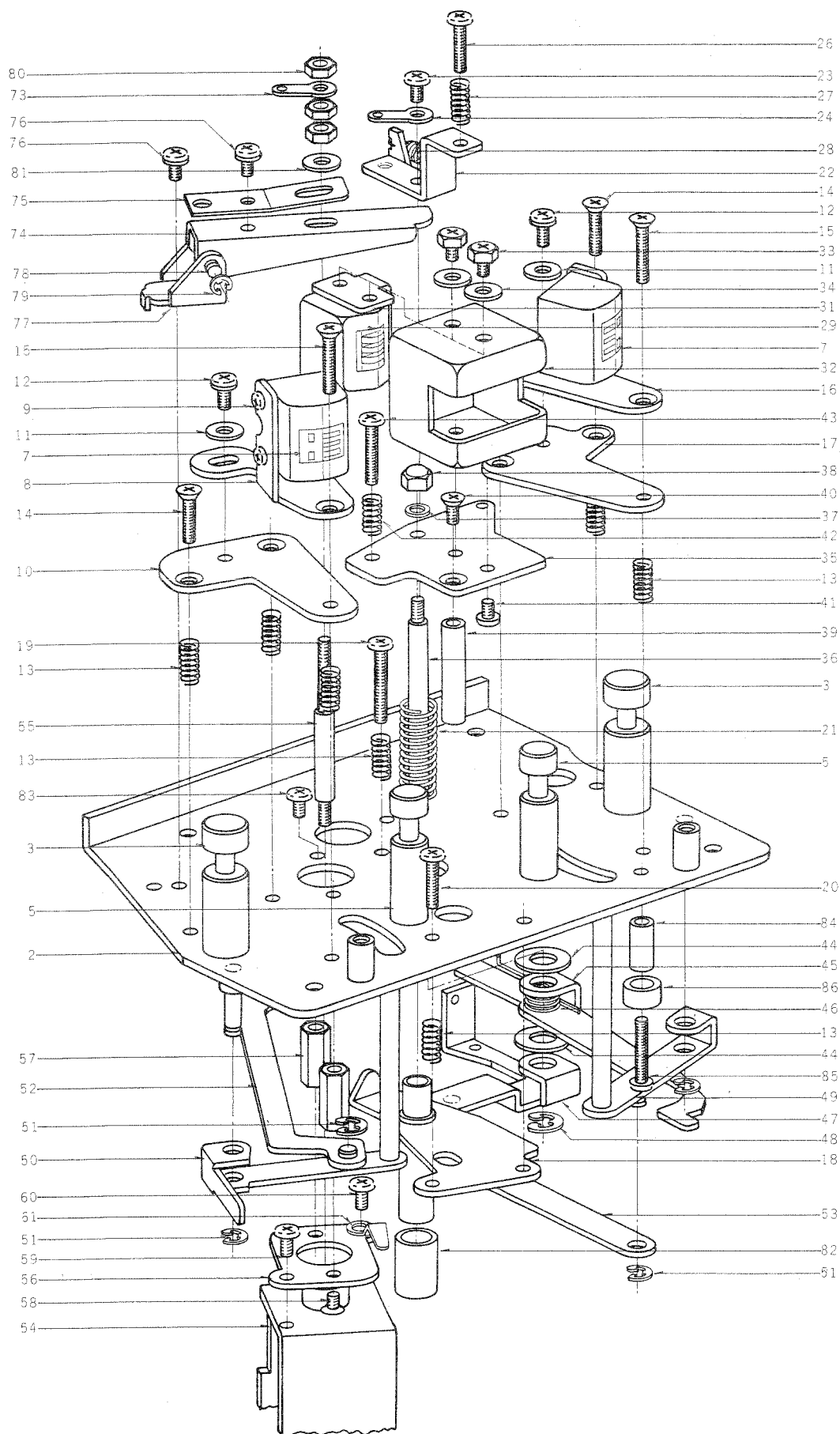
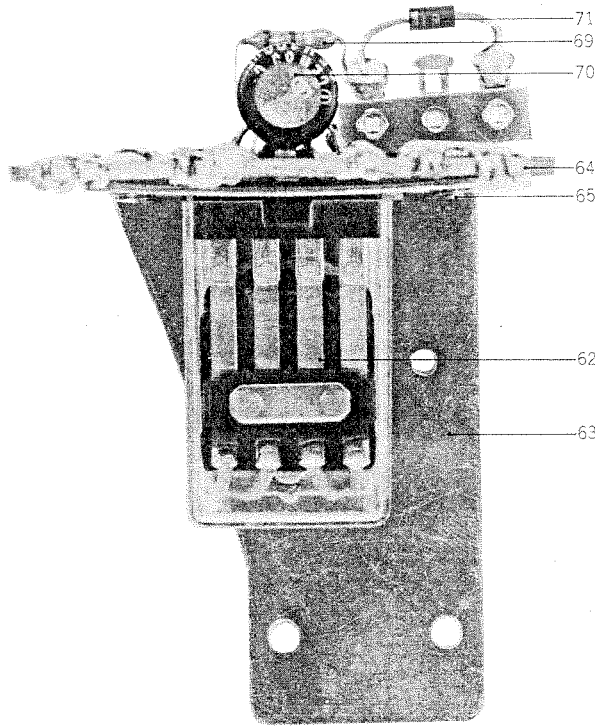


FIG. 1 (B) PHOTO OF KH HEAD BLOCK

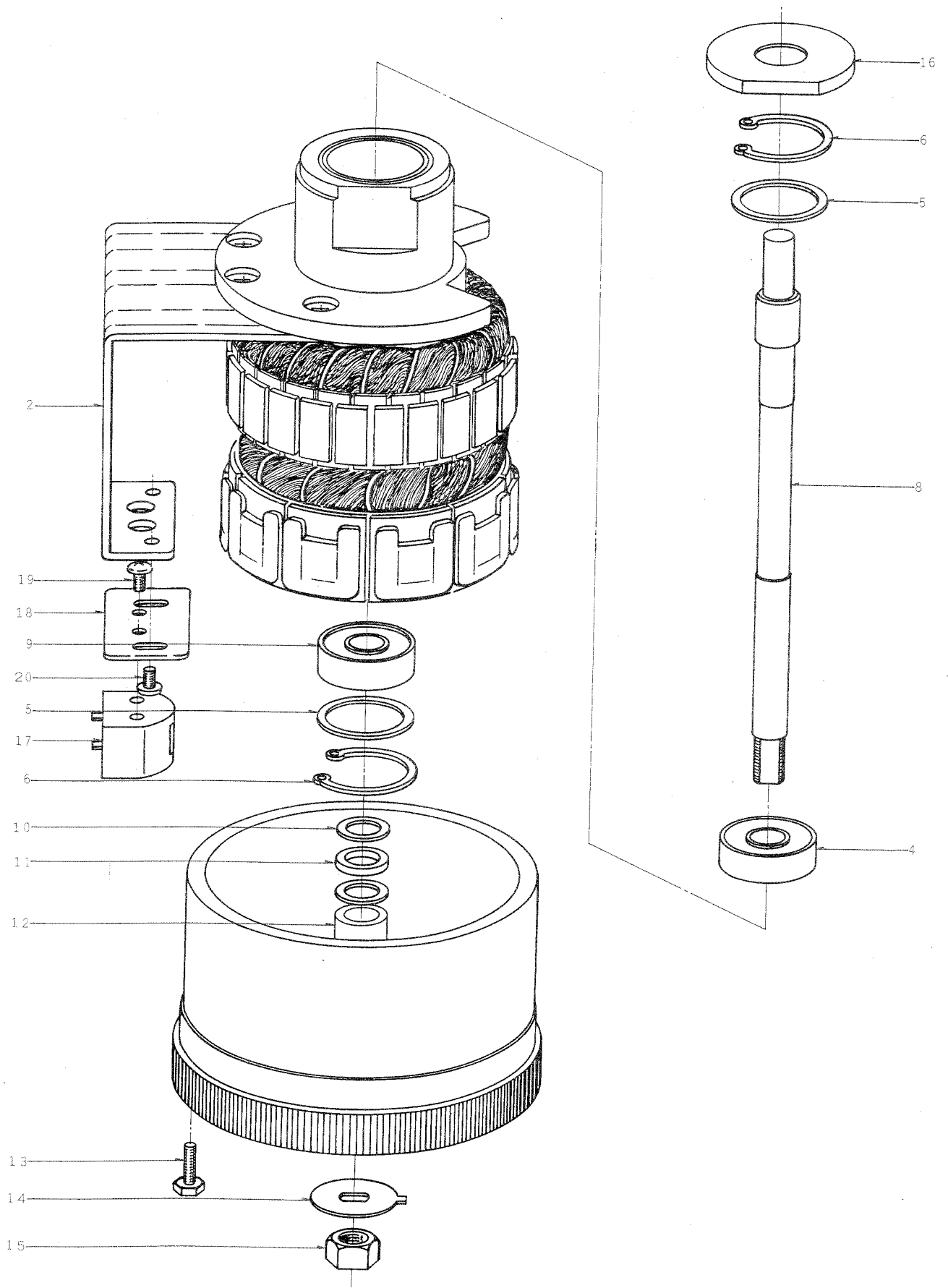


KH HEAD BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|-----------------------------------|---------------|------|
| 1-1x | BH482310 | KH Head Block Comp. | KH | 1 |
| 1-2 | HZ473084 | Head Chassis, w/pin | KH-0001 | 1 |
| 1-3 | HZ473332 | Tape Guide B | KH-0027 | 2 |
| 1-4x | ZW434250 | Screw, pan head 4x8, w/washer | | 2 |
| 1-5 | HZ482714 | Tape Guide C | KH-0052 | 2 |
| 1-6x | ZW414033 | Screw, countersunk head 3x8 | | 2 |
| 1-7 | HR482321 | REC./ERASE HEAD RE4-1 | | 2 |
| 1-8 | HZ473152 | Combo Head Angle B | KH-0008 | 1 |
| 1-9 | ZW477876 | Screw, pan head 2x3 | | 6 |
| 1-10 | HZ473343 | Combo Head Base B | KH-0033 | 1 |
| 1-11 | ZW413256 | Washer (SPC) D3.4x7.8x0.5t | | 2 |
| 1-12 | ZW413728 | Screw, binding head 3x6, w/washer | | 2 |
| 1-13 | ZG303300 | Angle Adjust Spring B | RD-55 | 9 |
| 1-14 | ZW419793 | Screw, countersunk head 3x12 | | 4 |
| 1-15 | ZW482736 | Screw, countersunk head 3x15 | | 2 |
| 1-16 | HZ473141 | Combo Head Angle A | KH-0007 | 1 |
| 1-17 | HZ473163 | Combo Head Base A | KH-0009 | 1 |
| 1-18 | HZ473185 | PH Head Chassis B, w/metal | KH-0011 | 1 |
| 1-19 | ZW439514 | Screw, binding head 3x18 | | 1 |
| 1-20 | ZW413785 | Screw, binding head 3x12 | | 2 |
| 1-21 | ZG473218 | Reverse Spring | KH-0014 | 1 |
| 1-22 | HZ473174 | Head Height Adjust Table | KH-0010 | 1 |
| 1-23 | ZW413155 | Screw, binding head 3x6 | | 1 |
| 1-24 | ZW273778 | M3 Earth Lug | | 2 |
| 1-25x | ZW273802 | M3 Toothed Lock Washer | | 1 |
| 1-26 | ZW413785 | Screw, binding head 3x12 | | 1 |
| 1-27 | ZG303300 | Angle Adjust Spring B | RD-55 | 1 |
| 1-28 | ZG810055 | PH Hold-down Pull Spring | RD-52 | 1 |
| 1-29 | HP384524 | P.B. HEAD P4-200 | | 1 |
| 1-30x | EA463206 | P.C. Board, Terminal A | RD-A36 | 2 |
| 1-31 | HZ473130 | PH Head Angle | KH-0005 | 1 |
| 1-32 | HZ382667 | Triple-shield | RD-A3 | 1 |
| 1-33 | ZW375963 | Hexagon Bolt 3x4 | | 2 |
| 1-34 | ZW413256 | Washer (SPC)D3.4x7.8x0.5t | | 2 |

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|-----------------------------------|-------------------------|------|
| 1-35 | HZ473128 | PH Head Chassis A | KH-0005 | 1 |
| 1-36 | MH473207 | UD Shaft | KH-0013 | 1 |
| 1-37 | ZW259648 | Washer (PBP)D3x5x0.1t | | 1 |
| 1-38 | ZW482758 | M3 Cap Nut | | 1 |
| 1-39 | HZ809976 | PH Hold-down Guide | RD-14 | 1 |
| 1-40 | ZW432685 | Screw, countersunk head 3x6 D=5 | | 1 |
| 1-41 | ZW413223 | Screw, binding head 3x5, w/washer | | 2 |
| 1-42 | ZG303300 | Angle Adjust Spring B | RD-55 | 1 |
| 1-43 | ZW417148 | Screw, binding head 3x15 | | 1 |
| 1-44 | ZW260188 | Washer (Nylon)D6.2x1.3x0.5t | | 2 |
| 1-45 | HZ473231 | Stopper | KH-0017 | 1 |
| 1-46 | ZG473321 | Stopper Spring | KH-0025 | 1 |
| 1-47 | HL473242 | Shifter Lever 1, w/pin | KH-0015 | 1 |
| 1-48 | ZW270134 | 'E' Ring 5M | 6-1-9 | 1 |
| 1-49 | HL473253 | Shifter Lever 2, w/pin | KH-0019 | 1 |
| 1-50 | HL473264 | Shifter Lever 3, w/pin | KH-0020 | 1 |
| 1-51 | ZW270101 | 'E' Ring 3M | 6-1-9 | 6 |
| 1-52 | HZ473297 | Shifter Joint A | KH-0023 | 1 |
| 1-53 | HZ473308 | Shifter Joint B | KH-0024 | 1 |
| 1-54 | EP804813 | Plunger Solenoid M-10B-34V | 44-1-16 | 1 |
| 1-55 | HZ473365 | Plunger Joint | KH-0031 | 1 |
| 1-56 | HZ473354 | Plunger Base | KH-0015 | 1 |
| 1-57 | HZ321344 | Plunger Retaining Prop | RD-7 | 2 |
| 1-58 | ZW432685 | Screw, countersunk head 3x6 D=5 | | 2 |
| 1-59 | ZW413728 | Screw, binding head 3x6, w/washer | | 1 |
| 1-60 | ZW413155 | Screw, binding head 3x6 | | 1 |
| 1-61 | HZ321366 | Retaining Plate | 3A-72 | 1 |
| 1-62 | EP344136 | Relay MY4-0-US-AD4-24V | 47-1-8 | 1 |
| 1-63 | HZ473220 | Relay Mt. Parts | KH-0016 | 1 |
| 1-64 | EA473376 | Head Relay P.C. Board | KH-0029 | 1 |
| 1-65 | ZW461935 | Screw, round head 2.6x4 | | 4 |
| 1-66x | ZW317801 | M2.6 Toothed Lock Washer | | 1 |
| 1-67x | EA222096 | Connector P.C. Board | RD-140 | 1 |
| 1-68x | EZ328320 | Nylon Clip HP-5N | | 1 |
| 1-69 | ER361563 | Carbon/R. RD1/4 180(J) | (Stop. type) 35-10-1 | 1 |
| 1-70 | EC220151 | Elect./C. 100 μF 25WV | (Vert. type) 24-12-91 | 1 |
| 1-71 | ED224526 | Silicon Diode 10D1 | 45-2-11 | 1 |
| 1-72x | HZ488092 | P.C. Board Shield | (for connector) KH-0055 | 2 |
| 1-73 | ZW273778 | M3 Earth Lug | | 1 |
| 1-74 | HL809998 | PH Hold-down Lever | RD-24 | 1 |
| 1-75 | ZG246857 | Pull Lever Spring | RD-25 | 1 |
| 1-76 | ZW413223 | Screw, binding head 3x5, w/washer | | 2 |
| 1-77 | HL473387 | PH Hold-down Lever Support | KH-0032 | 1 |
| 1-78 | ZW257477 | Connecting Pin | RD-211 | 1 |
| 1-79 | ZW270088 | 'E' Ring 1.9M | 6-1-9 | 1 |
| 1-80 | ZW273756 | M3 Nut | | 5 |
| 1-81 | ZW413256 | Washer (SPC)D3.4x7.8x0.5t | | 1 |
| 1-82 | HZ321434 | Dust-proof Cap B | RD-54 | 1 |
| 1-83 | ZW417025 | Screw, binding head 3x8, w/washer | | 2 |
| 1-84 | HZ434272 | Shifter Stopper Collar | KD-A0010 | 1 |
| 1-85 | ZW417148 | Screw, binding head 3x15 | | 1 |
| 1-86 | MZ428343 | KD Stopper Rubber | KD-1088 | 1 |

FIG. 2 ILLUSTRATION OF MAIN MOTOR BLOCK (SCM-24)

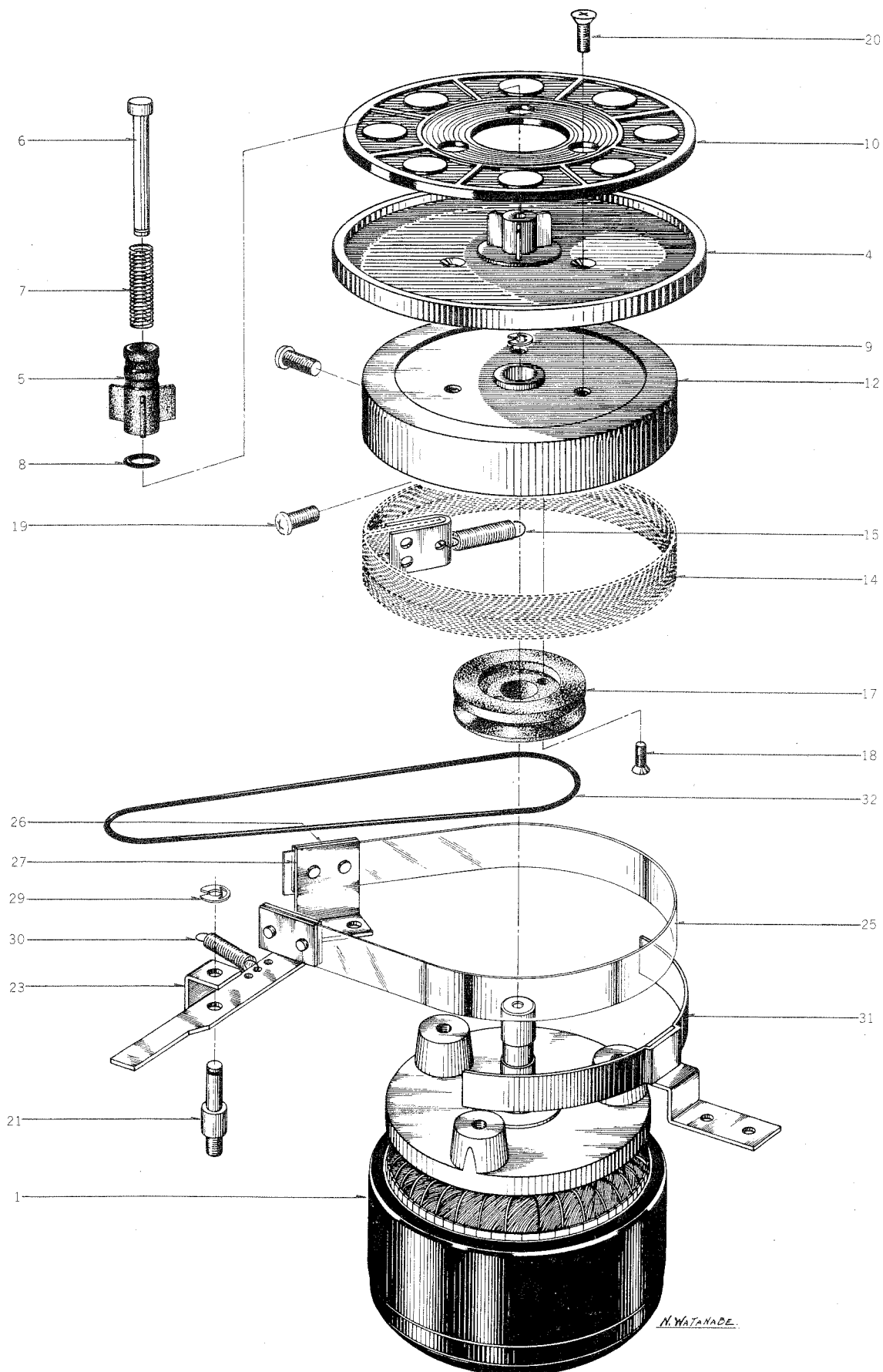


MAIN MOTOR BLOCK (SCM-24)

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|---------------------------------------|---------------|------|
| 2-1x | BM482286 | Main Motor Block (SCM-24) | | |
| | | Comp. | KH,KD,KF | 1 |
| 2-2 | MZ405437 | Detector Head Mt. Base | KD-7029 | 1 |
| 2-3x | ZW419747 | Screw, countersunk head 4x6 | | 4 |
| 2-4 | MV408510 | Bearing 608VVC2E-AV2-L | 100707 | 1 |
| 2-5 | ZW398125 | Adjust Washer A | KD-7019 | 2 |
| 2-6 | ZW206021 | 'C' Ring (hollow) D22 | 6-1-2 | 2 |
| 2-7x | ZW391476 | Set Screw, hexagon socket 4x4(cup) | | 1 |
| 2-8 | MS473657 | Motor Shaft | KH-7001 | 1 |
| 2-9 | MV248130 | Bearing 608VVC2E-B32 | 100707 | 1 |
| 2-10 | ZW321592 | Washer (SUS)D8.1x13x0.3t | | 2 |
| 2-11 | ZW356883 | Washer (Hycar)D8.3x11.8x0.5t | | 3 |
| 2-12 | ZW424203 | Spacer | KD-7057 | 1 |
| 2-13 | ZW403525 | Hexagon Bolt 3x10 | | 4 |
| 2-14 | ZW398158 | Servo Motor Anti Loosening Washer | KD-7022 | 1 |
| 2-15 | ZW403536 | M7 Nut P=0.5 | | 1 |
| 2-16 | MZ398182 | Cap | KD-7026 | 1 |
| 2-17 | HK398452 | DETECTOR HEAD | KH,KD,KF | 1 |
| 2-18 | MZ400421 | Detector Head Plate | KD-3008 | 1 |
| 2-19 | ZW201475 | Screw, pan head 2x3 | | 2 |
| 2-20 | ZW413155 | Screw, binding head 3x6 | | 2 |

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 3 ILLUSTRATION OF REEL MOTOR/REEL TABLE BLOCK



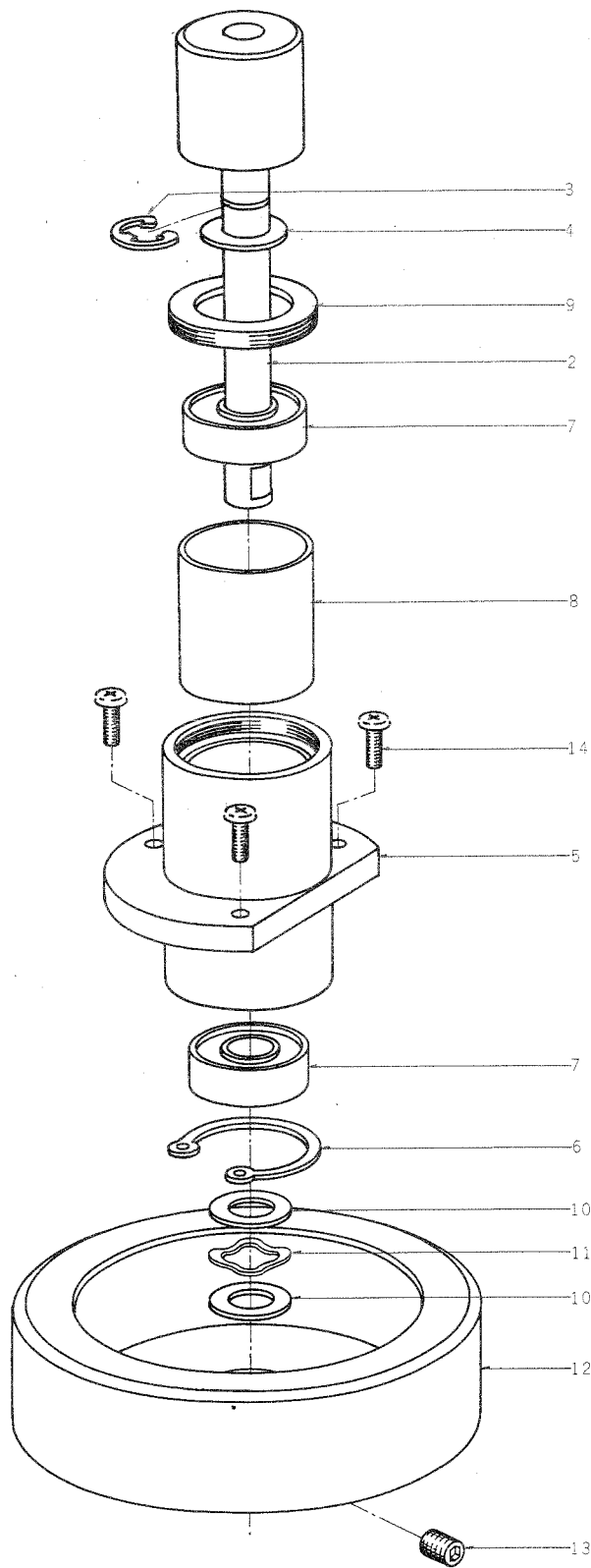
REEL MOTOR/REEL TABLE BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|-------------------------|-----------|---------------------------|---------------|------|
| REEL MOTOR BLOCK | | | | |
| 3-1 | BM314741 | Reel Motor Block (24XO-2) | KD,MR,MS,MC | 2 |

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|-------------------------|-----------|---------------------------------|---------------|------|
| REEL TABLE BLOCK | | | | |
| 3-2x | BR482400 | Supply Reel Table Comp. | KH,MR,MC | 1 |
| 3-3x | BR482411 | Take-up Reel Table Comp. | KH,MR,MC | 1 |
| 3-4 | MT488147 | RD Reel Table Disk B | RD-272 | 2 |
| 3-5 | MT255420 | Reel Retainer | 3R-102 | 2 |
| 3-6 | MS342000 | Reel Shaft | 3R-108 | 2 |
| 3-7 | ZG255633 | Reel Spring | 3R-109 | 2 |
| 3-8 | MT297663 | 3R 'O' Ring 2.9x1.65M | 3R-139 | 2 |
| 3-9 | ZW270088 | 'E' Ring 1.9M | 6-1-9 | 2 |
| 3-10 | MT473422 | Reel Table Rubber (KH) | KH-2042 | 2 |
| 3-11x | MT473444 | Brake Drum (left) (Supply) | KH-2031 | 1 |
| 3-12 | MT473433 | Brake Drum (right) (Take-up) | KH-2031 | 1 |
| 3-13x | ZW273778 | M3 Earth Lug | | 2 |
| 3-14 | MT436860 | Brake Cloth Comp. | MR-269 | 2 |
| 3-15 | ZG317496 | Felt Tension Spring | MR-260 | 2 |
| 3-16x | ZW425981 | Screw, binding head 3x3 | | 2 |
| 3-17 | MR317507 | Counter Pulley (Take-up) | MR-217 | 1 |
| 3-18 | ZW365973 | Screw, countersunk head 2.3x1.2 | | 2 |
| 3-19 | ZW424056 | Screw, pan head 4x10 | | 4 |
| 3-20 | ZW403222 | Screw, countersunk head 3x10 | | 6 |
| 3-21 | MZ317373 | Brake Lever Prop | MR-102 | 2 |
| 3-22x | ZW413188 | M4 Nut | | 2 |
| 3-23 | ML314976 | Brake Lever A (Take-up) | MR-210 | 1 |
| 3-24x | ML396810 | Brake Lever B (Supply) | KD-1038 | 1 |
| 3-25 | MB314987 | Brake Band | MR-213 | 2 |
| 3-26 | MZ314998 | Brake Band Retaining Plate | MR-212 | 4 |
| 3-27 | MZ315000 | Brake Band Support | MR-214 | 2 |
| 3-28x | ZW323728 | Screw, binding head 3x5 | | 8 |
| 3-29 | ZW290283 | 'U' Ring 2.85M | 6-1-1 | 2 |
| 3-30 | ZG315011 | Brake Lever Spring | MR-116 | 2 |
| 3-31 | MZ317406 | Brake Band Guide, w/base | MR-120 | 2 |
| 3-32 | MB303535 | Counter Belt D91x1.6 | 3A-617 | 1 |

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 4 ILLUSTRATION OF IMPEDANCE ROLLER BLOCK

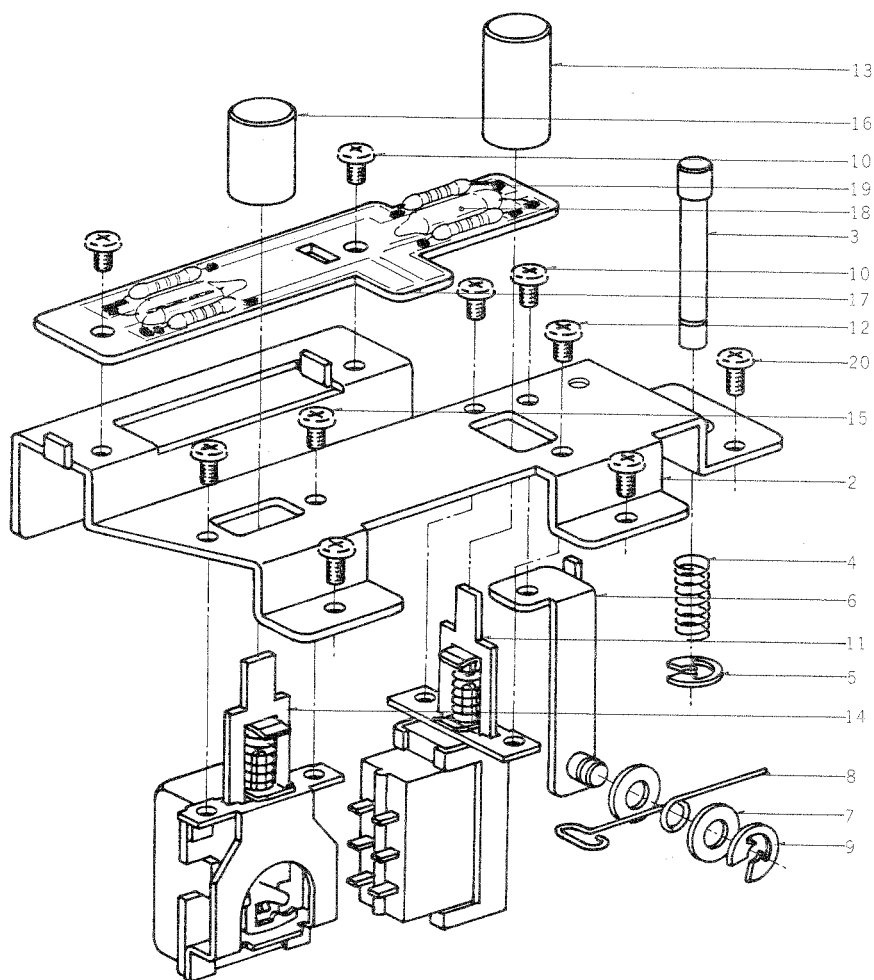


IMPEDANCE ROLLER BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|--------------------------------------|---------------|------|
| 4-1x | BL482422 | Impedance Roller Block Comp. | KH-0 | 1 |
| 4-2 | MS473916 | Impedance Roller Arm Shaft, w/roller | KH-0 36 | 1 |
| 4-3 | ZW334653 | 'E' Ring 7M | 6-13 | 1 |
| 4-4 | ZW321592 | Washer (SUS)D8.1x13x0.3t | | 1 |
| 4-5 | BC473927 | Impedance Case | KH-0 32 | 1 |
| 4-6 | ZW206021 | 'C' Ring (hollow) D22 | 6-13 | 1 |
| 4-7 | MV248141 | Bearing 608VVC2E-B32-L | | 2 |
| 4-8 | MZ473938 | Bearing Collar | KH-0 33 | 1 |
| 4-9 | ZW292667 | Z Bearing Screw | 3A-15 | 1 |
| 4-10 | ZW260256 | Washer (PBP)D8.1x13x0.1t | | 2 |
| 4-11 | ZG300431 | 8M/M Oil-pressure Spring WW-8 | 6-24 | 1 |
| 4-12 | MZ292678 | Z Wheel | RD-15 | 1 |
| 4-13 | ZW487912 | Set Screw, hexagon socket 5x6(cup) | | 2 |
| 4-14 | ZW413201 | Screw, pan head 4x8 | | 3 |

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 5 ILLUSTRATION OF POWER & PAUSE SWITCH BLOCK



POWER & PAUSE SWITCH BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty | Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|-------------------------------------|---------------|------|----------|-----------|--|---------------|------|
| 5-1x | BS482308 | Power & Pause Switch Comp. | KH | 1 | 5-12 | ZW444273 | Iso Screw, binding head 3x4 | | 2 |
| 5-2 | MZ474006 | Power & Pause Switch Table, w/metal | KH-2050 | 1 | 5-13 | SB474118 | Push Button 3 | KH-1023 | 1 |
| 5-3 | MS473962 | Pause Lock Shaft | KH-2005 | 1 | 5-14 | ES468426 | Push Switch UEH-12BFN | 25-5-58 | 1 |
| 5-4 | ZG473973 | Pause Spring | KH-2006 | 1 | 5-15 | ZW371856 | Iso Screw, binding head 3x5 | | 2 |
| 5-5 | ZW482635 | 'U' Ring 2.85M | 6-1-1 | 1 | 5-16 | SK482646 | Knob B-1 | MC-5011 | 1 |
| 5-6 | MZ473995 | Spring Mt. Plate, w/pin | KH-2049 | 1 | 5-17 | EA487991 | Neon Lamp P.C. Board | KH-1031 | 1 |
| 5-7 | ZW420682 | Washer (Nylon)D4.2x9x0.5t | | 2 | 5-18 | EL236125 | Neon Lamp NE-68 | 28-3-3 | 2 |
| 5-8 | ZG472770 | Pause Spring B | KH-2009 | 1 | 5-19 | ER345756 | Carbon/R. RD1/4 68k(J) (Insu. type) | 35-9-5 | 4 |
| 5-9 | ZW290283 | 'U' Ring 2.85M | 6-1-1 | 1 | | | | | |
| 5-10 | ZW417137 | Screw, binding head 3x4 | | 3 | 5-20 | ZW323728 | Screw, binding head 3x5 | | 3 |
| 5-11 | ES482938 | Push Switch JH-3 | 25-5-61 | 1 | | | | | |

FIG. 6 (A) ILLUSTRATION OF OPERATION BLOCK

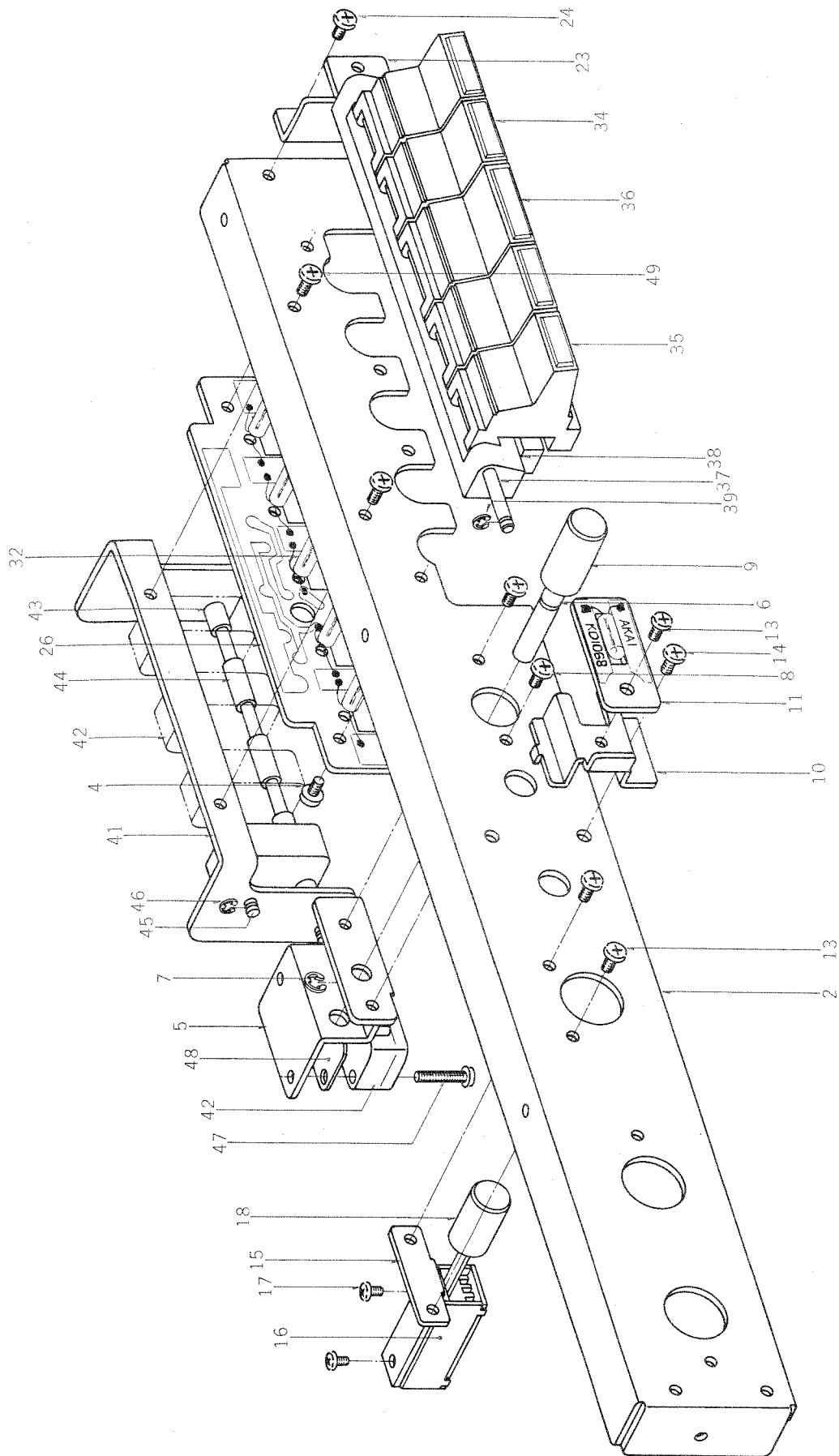
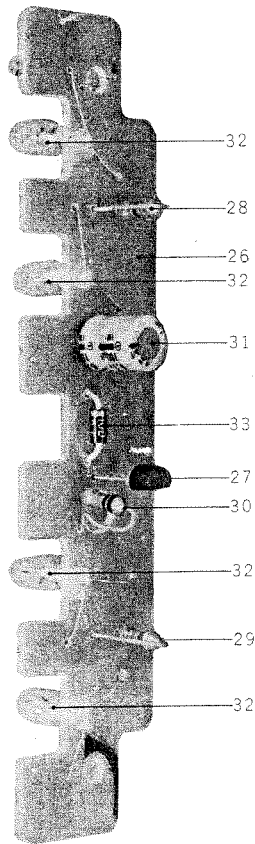


FIG. 6 (B) PHOTO OF OPERATION BLOCK



OPERATION BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|--|---------------|------|
| 6-1x | BZ482376 | Operation Block Comp. | KH | 1 |
| 6-2 | BZ472656 | Operation Frame | KH-2016 | 1 |
| 6-3x | BA482398 | Operation Lamp P.C. Board Comp. (KH-2019) | | 1 |
| 6-4 | ZW323728 | Screw, binding head 3x5 | | 2 |
| 6-5 | EZ397956 | Rec. Button Bracket | KD-5015 | 1 |
| 6-6 | MZ472667 | Rec. Push Rod | KH-2028 | 1 |
| 6-7 | ZW270101 | 'E' Ring 3M | 6-1-9 | 1 |
| 6-8 | ZW323728 | Screw, binding head 3x5 | | 2 |
| 6-9 | SK472678 | Rec. Knob | KH-2027 | 1 |
| 6-10 | MZ472680 | Rec. Lamp Mt. Plate | KH-2040 | 1 |
| 6-11 | EA396898 | Neon Lamp P.C. Board | KD-1068 | 1 |
| 6-12x | EL390576 | Pilot Lamp RM6-24V-50MA | 28-2-6 | 1 |
| 6-13 | ZW323728 | Screw, binding head 3x5 | | 3 |
| 6-14 | ZW472274 | Tapping Screw #2 3x6 | | 1 |
| 6-15 | MZ472691 | SRT Switch Mt. Part | KH-2024 | 1 |
| 6-16 | ES482861 | Push Switch UEG-63A | 25-5-63 | 1 |
| 6-17 | ZW442585 | Screw, binding head 2.6x4 | | 2 |
| 6-18 | SK482850 | Knob B-1 | KF-2019 | 1 |
| 6-19x | BA482387 | Tape Speed Switch P.C. Board Comp. (KH-2011) | | 1 |
| 6-20x | ZW371856 | Iso Screw, binding head 3x5 | | 2 |
| 6-21x | SB474052 | Push Button 1 | KH-1022 | 2 |
| 6-22x | ZW259413 | Washer (ALP)D2.7x4.9x1t | BT-112 | 1 |
| 6-23 | MZ472792 | Amp. Panel Retaining Metal | KH-2029 | 2 |
| 6-24 | ZW472274 | Tapping Screw #2 3x6 | | 4 |
| 6-25x | BA482398 | Operation Lamp P.C. Board Comp. (KH-2019) | | 1 |
| 6-26 | EA472724 | Operation Lamp P.C. Board (KH-2019) | KH-2019 | 1 |
| 6-27 | ET398711 | Transistor 2SC945(Q)(R) | 45-1-85 | 1 |
| 6-28 | ER430053 | Carbon/R. RD1/4 22(J) (Stop. type) | 35-10-1 | 1 |
| 6-29 | ER212883 | Carbon/R. RD1/4 4.7k(J) (Stop. type) | 35-10-1 | 1 |
| 6-30 | ER211465 | Carbon/R. RD1/4 1k(J) | 35-10-1 | 1 |
| 6-31 | EC220364 | Elect./C. 100 μF 6.3WV (Vert. type) | 24-12-9 | 1 |
| 6-32 | EL390576 | Pilot Lamp RM6-24V-50MA | 28-2-6 | 4 |
| 6-33 | ED224526 | Silicon Diode 10DI | 45-2-11 | 1 |
| 6-34 | SB867205 | Operation Button A, w/bush A(blue) | KH-2022 | 2 |
| 6-35 | SB867565 | Operation Button A, w/bush B(orange) | KH-2022 | 2 |
| 6-36 | SB472768 | Operation Button B | KH-2021 | 1 |
| 6-37 | MS438243 | Button Shaft | KF-2009 | 1 |
| 6-38 | MZ472781 | Lamp Cover | KH-2018 | 1 |
| 6-39 | ZW270088 | 'E' Ring 1.9M | 6-1-9 | 2 |
| 6-40x | ZW323728 | Screw, binding head 3x5 | | 2 |
| 6-41 | MZ474513 | Operation Switch Base | KH-2017 | 1 |
| 6-42 | ES250075 | Micro Switch V-1A10 U/L | 25-1-8 | 7 |
| 6-43 | MZ397337 | Switch Spacer A | KD-2005 | 2 |
| 6-44 | MZ472836 | Operation Button Collar | KH-2023 | 2 |
| 6-45 | MS250165 | Micro Switch Shaft B | RD-122B | 2 |
| 6-46 | ZW270088 | 'E' Ring 1.9M | 6-1-9 | 4 |
| 6-47 | ZW417148 | Screw, binding head 3x15 | | 2 |
| 6-48 | ZG466154 | Switch Spring | KD-A2-012 | 1 |
| 6-49 | ZW323728 | Screw, binding head 3x5 | | 2 |

FIG. 7 (A) ILLUSTRATION OF POWER SUPPLY BLOCK

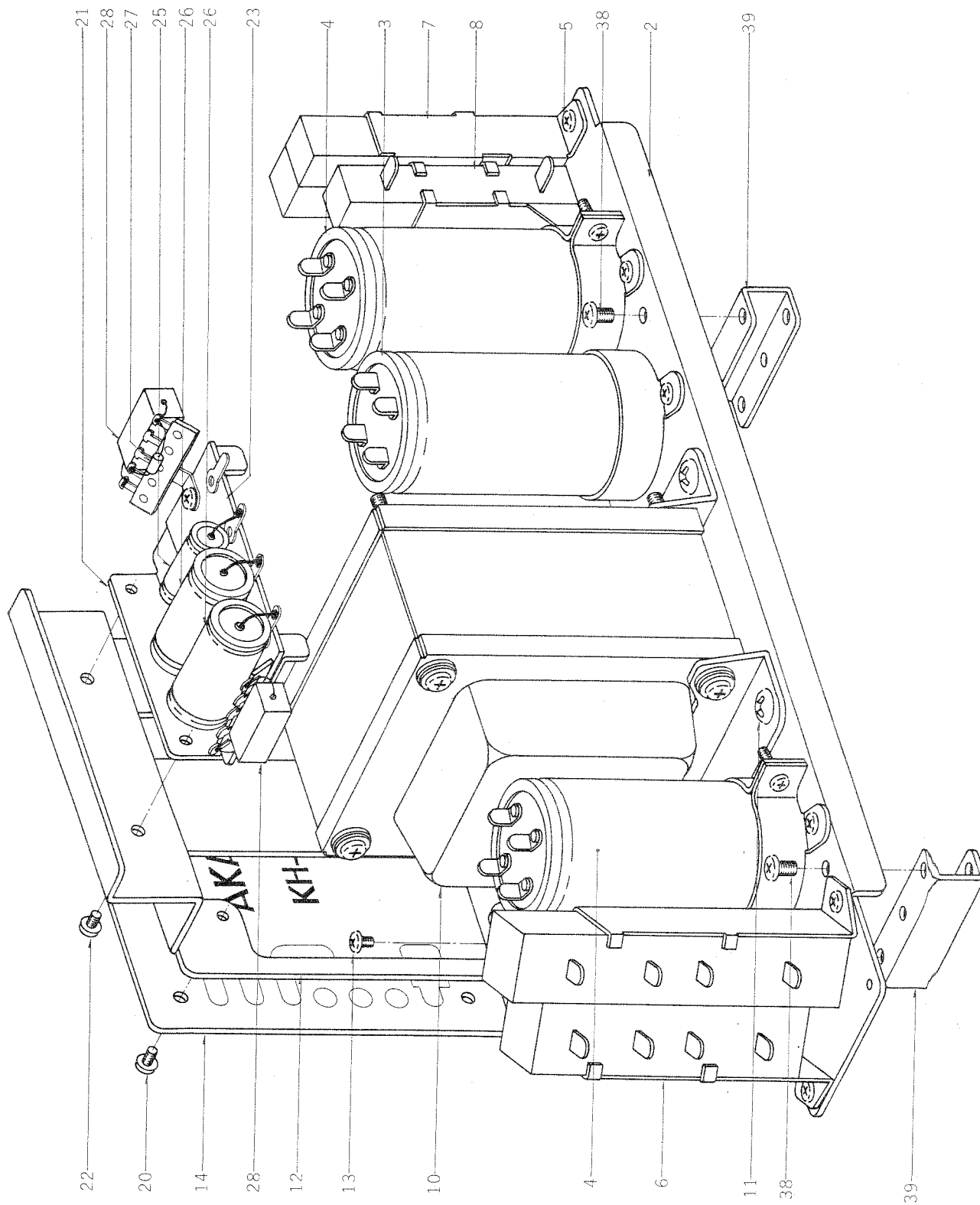
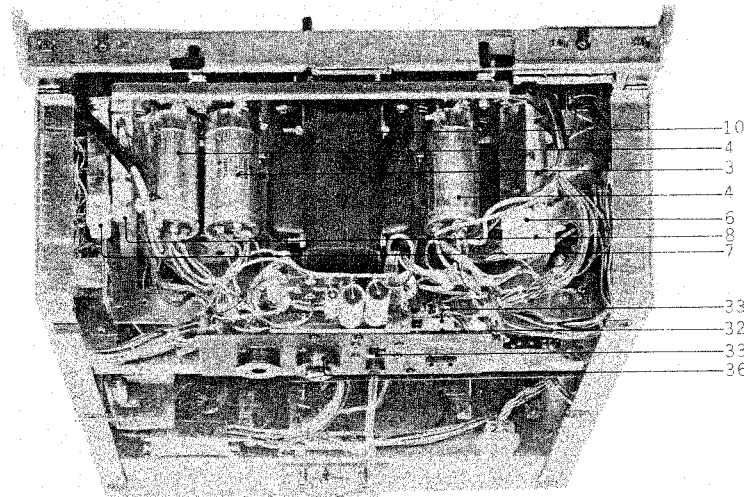
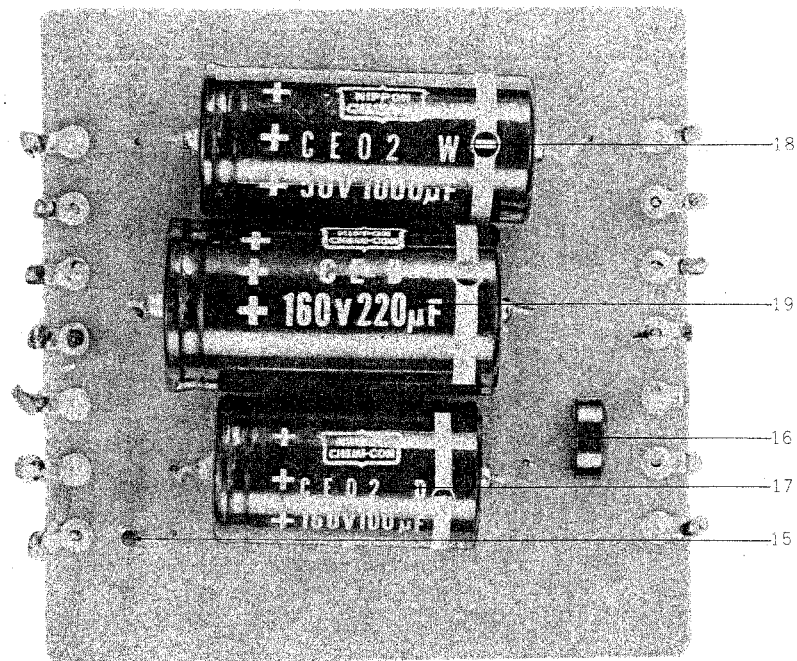


FIG. 7 (B.C) PHOTO OF POWER SUPPLY BLOCK

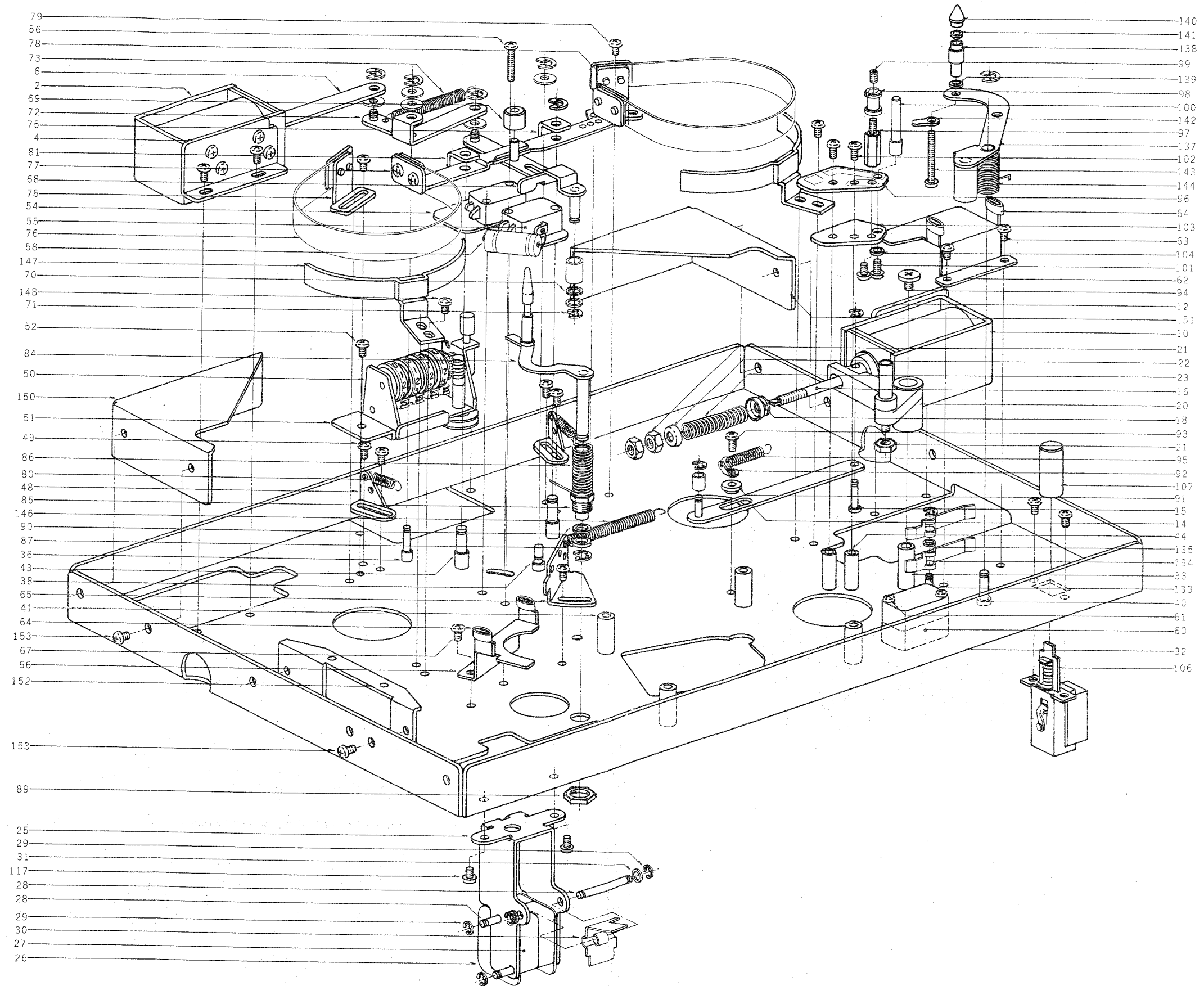


POWER SUPPLY BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|--|---------------|------|
| 7-1x | BP482343 | Power Supply Block Comp. | KH KD, NF, KG | 1 |
| 7-2 | UM488924 | Trans. Table | KH-2052 | 1 |
| 7-3 | EC434081 | MP/C. 3+0.5 μ F 200WV (Lug type Uni/D.) | 24-9-58 | 1 |
| 7-4 | EC398632 | MP/C. 3+1 μ F 260WV (Lug type Uni/D.) | 24-9-52 | 2 |
| 7-5 | ZW472274 | Tapping Screw #2 3x6 | | 11 |
| 7-6 | ER426690 | Cement/R. H(40+30) H2B (350+150x200+500) | 35-16-25 | 1 |
| 7-7 | ER493097 | Cement/R. H(20+20) H1B (60+35x1.5k+500)k | 35-16-35 | 1 |
| 7-8 | ER339805 | Cement/R. H20B 450(K) (wire-wound type), w/belt | 35-16-16 | 1 |
| 7-9x | ER472296 | Cement/R. H20B 220(K) | 35-16-16 | 1 |
| 7-10 | BT472702 | Power Trans. KHT-1 | 38-4-153 | 1 |
| 7-11 | ZW468112 | Tapping Screw #2 4x8(truss) | | 4 |
| 7-12 | MZ465772 | Trans. Table D | KD-A2008 | 1 |
| 7-13 | ZW490228 | Tapping Screw #2 3x8 | | 2 |
| 7-14 | BA482578 | Capacitor P.C. Board (KH-2012) Comp. | KH-2051 | 1 |
| 7-15 | ED224550 | Silicon Diode 10D4 | 45-2-16 | 1 |
| 7-16 | ED329130 | Silicon Diode 10DC-1 (black) | 45-2-27 | 1 |
| 7-17 | EC316091 | Elect./C. 100 μ F 160WV (Tub. type) | 24-14-14 | 1 |
| 7-18 | EC365692 | Elect./C. 1000 μ F 50WV (Tub. type) | 24-13-15 | 1 |
| 7-19 | EC346746 | Elect./C. 220 μ F 160WV (Tub. type) | 24-14-8 | 1 |
| 7-20 | ZW490228 | Tapping Screw #2 3x8 | | 4 |
| 7-21 | EZ397282 | Capacitor Retaining Base | KD-2027 | 1 |
| 7-22 | ZW323728 | Screw, binding head 3x5 | | 4 |
| 7-23 | EZ398946 | Terminal Plate SP-0501 B type 4P | 33-4-9 | 1 |
| 7-24x | ER430143 | Carbon/R. RD1/4 120(J) (Insu. type) | 35-9-5 | 1 |
| 7-25 | EC273464 | MP/C. 0.1 μ F(M) 350WVDC (Tub. type) | 24-9-4 | 1 |
| 7-26 | EC341842 | MP/C. 0.47 μ F(M) 300WVAC (Tub. type) | 24-9-35 | 2 |
| 7-27 | EJ255115 | Lug Plate VB2L2 | 33-4-3 | 2 |
| 7-28 | ER466986 | Cement/R. S5W 45(K) (Wire-wound type) | 35-16-3 | 2 |
| 7-29x | ED224550 | Silicon Diode 10D4 | 45-2-16 | 1 |
| 7-30x | EZ328320 | Nylon Clip HP-5N | | 2 |
| 7-31x | ZW462194 | Tapping Screw #2 3x8(pan), w/washer | | 2 |
| 7-32 | EZ397304 | Frequency Change Switch Plate A | KD-2043 | 1 |
| 7-33 | ES375478 | Slide Switch ESD-279DU | 25-3-23 | 2 |
| 7-34x | ZW371856 | Iso Screw, binding head 3x5 | | 2 |
| 7-35x | ZW440291 | Iso Screw, countersunk head 3x6 | | 2 |
| 7-36 | EJ233370 | Power Plug Socket S-18010 | 40-2-3 | 1 |
| 7-37x | EF277413 | Fuse ST-2 2A | 39-1-26 | 1 |
| 7-38 | ZW417150 | Screw, pan head 4x6 | | 4 |
| 7-39 | MZ397170 | Trans. Base C | KD-1065 | 2 |

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 8 (A) (B) ILLUSTRATION OF MECHANISM ASSEMBLY BLOCK



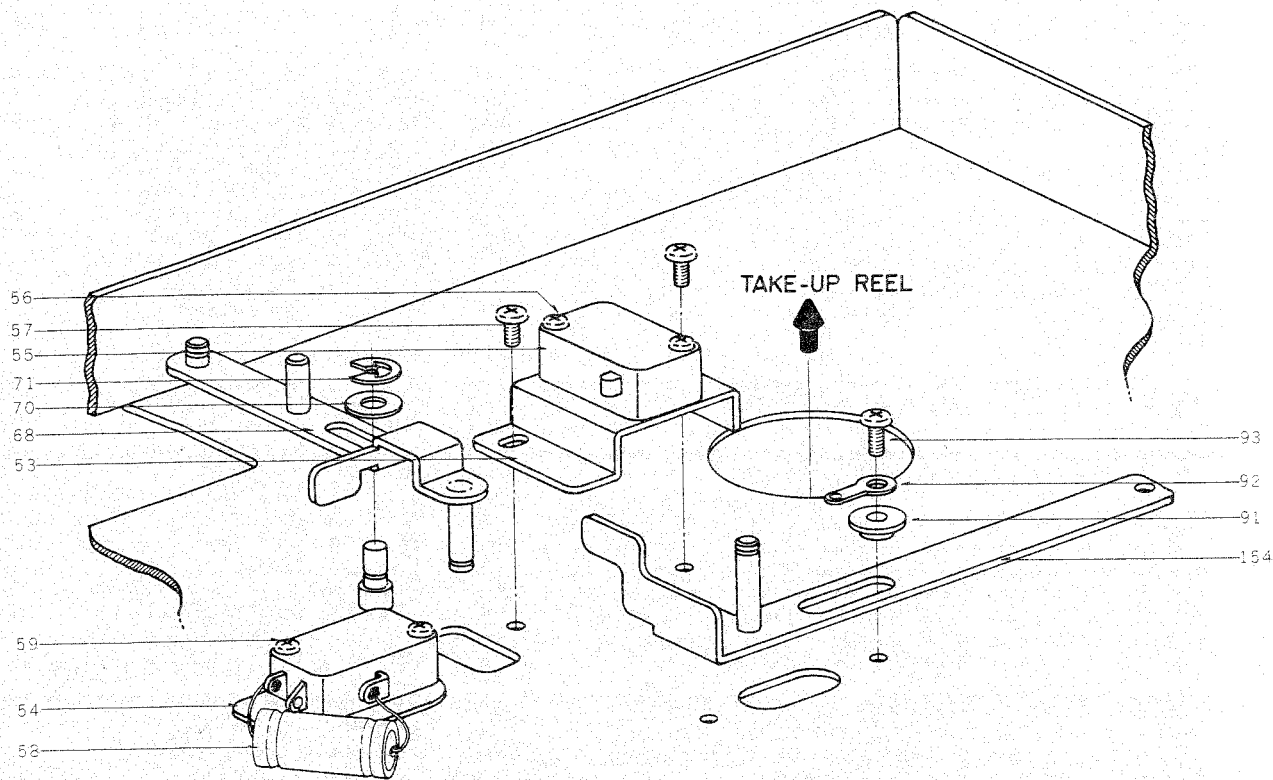
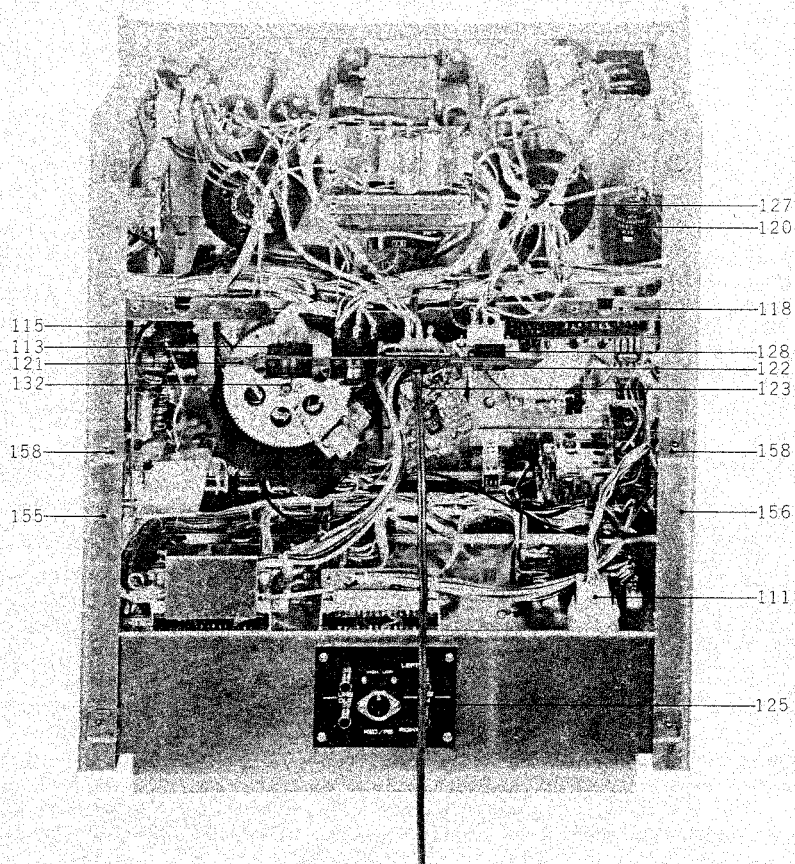


FIG. 8 (C) PHOTO OF MECHANISM ASSEMBLY BLOCK



MECHANISM ASSEMBLY BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty | Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------------------------|-----------|-----------------------------|--------------------|------|----------|-----------|--------------------------------|---------------|------|
| BRAKE PLUNGER BLOCK | | | | | | | | | |
| 8-1x | BZ398338 | Brake Plunger Block Comp. | KH.KD.KF | 1 | 8-60 | ES250064 | Micro Switch V-1A44 U/L | 25-1-7 | 2 |
| 8-2 | EP398610 | Plunger Solenoid | | | 8-61 | ZW414066 | Screw, binding head 3x25 | | 2 |
| | | SDC-10-M-C-100V | 44-1-36 | 1 | 8-62 | MZ472904 | Shut-off Arm Stopper | KH-1006 | 1 |
| 8-3x | ER376424 | Spark Quencher U/L | | | 8-63 | ZW417137 | Screw, binding head 3x4 | | 4 |
| | | 0.1μ+120 500WV | 41-1-36 | 1 | 8-64 | MZ499634 | Stopper Rubber (KH) | KH-1037 | 4 |
| 8-4 | MZ396911 | Plunger Bracket | KD-1028 | 1 | 8-65 | MZ434237 | KD Spring Hanger | KD-A1007 | 1 |
| 8-5x | ZW201835 | Screw, binding head 3x5 | | 4 | 8-66 | MZ486450 | Roller Arm Stopper | KH-1033 | 1 |
| 8-6 | MZ396977 | Brake Plunger Joint | KD-1039 | 1 | 8-67 | ZW323728 | Screw, binding head 3x5 | | 2 |
| 8-7x | ZW257477 | Connecting Pin | RD-211 | 1 | 8-68 | MZ396832 | Brake Slide, w/pin | KD-1044 | 1 |
| 8-8x | ZW270088 | 'E' Ring 1.9M | 6-1-9 | 1 | 8-69 | MZ397181 | Lever Cushion | KD-1069 | 1 |
| | | | | | 8-70 | ZW482545 | Washer (Polyslider) | | |
| | | | | | | | D4.1x10x0.13t | | 5 |
| 8-9x | BZ482297 | Pinch Roller Plunger Block | Comp. KH.KD.KF | 1 | 8-71 | ZW270101 | 'E' Ring 3M | 6-1-9 | 1 |
| 8-10 | EP441990 | Plunger 1660THI Solenoid | 44-1-45 | 1 | 8-72 | ML396742 | Brake Lever, w/pin | KD-1041 | 1 |
| 8-11x | ER376424 | Spark Quencher U/L | | | 8-73 | ZG465478 | Brake Lever Spring | KD-1092 | 1 |
| | | 0.1μ+120 500WV | 41-1-36 | 1 | 8-74x | ZW290283 | 'U' Ring 2.85M | 6-1-1 | 4 |
| 8-12 | MZ396911 | Plunger Bracket | KD-1028 | 1 | 8-75 | ML314976 | Brake Lever A (Take-up) | MR-210 | 1 |
| 8-13x | ZW323728 | Screw, binding head 3x5 | | 3 | 8-76 | MB314987 | Brake Band | MR-213 | 2 |
| 8-14 | MZ396966 | Plunger Joint, w/pin | KD-1033 | 1 | 8-77 | MZ314998 | Brake Band Retaining Plate | MR-212 | 4 |
| 8-15 | ZW257477 | Connecting Pin | RD-211 | 1 | 8-78 | MZ315000 | Brake Band Support | MR-214 | 2 |
| 8-16 | MZ396944 | Pinch Roller Arm Joint | RD-1031 | 1 | 8-79 | ZW323728 | Screw, binding head 3x5 | | 8 |
| 8-17x | ZW270088 | 'E' Ring 1.9M | 6-1-9 | 1 | 8-80 | ZG315011 | Brake Lever Spring | MR-116 | 2 |
| 8-18 | ZW345442 | Washer (Nylon)D4.2x9x1t | | 1 | 8-81 | ML396810 | Brake Lever B (Supply) | KD-1038 | 1 |
| 8-19x | ZW270101 | 'E' Ring 3M | 6-1-9 | 1 | 8-82x | MZ467111 | Servo Motor Shield | KD-A1010 | 2 |
| 8-20 | MZ396933 | Pinch Roller Arm, w/shaft | KD-1030 | 1 | 8-83x | EJ254970 | Lug Plate KP1L1 | 33-3-3 | 1 |
| 8-21 | ZW273960 | M4 Nut | | 3 | 8-84 | ML472950 | Impedance Roller Arm, | | |
| 8-22 | MZ802980 | Spring Holder | RD-276 | 2 | | | w/guide | KH-1018 | 1 |
| 8-23 | ZG428927 | Pinch Roller Spring B | KD-1032 | 1 | 8-85 | MZ473005 | Arm Shaft Metal | KH-1015 | 1 |
| | | | | | 8-86 | ZG472994 | Tension Spring | KH-1017 | 1 |
| | | | | | 8-87 | ZW472983 | Z Roller Washer | KH-1043 | 1 |
| | | | | | 8-88x | ZW270101 | 'E' Ring 3M | 6-1-9 | 1 |
| | | | | | 8-89 | ZW273363 | M9 Hexagon Nut | RD-54 | 1 |
| | | | | | 8-90 | ZW499443 | Washer (Nylon)D5.1x7.8x0.2t | | 1 |
| | | | | | 8-91 | ZW397157 | Graduated Washer | KD-1036 | 1 |
| 8-24x | BS482354 | Speed Change Switch Block | Comp. KH.KF | 1 | 8-92 | ZW273778 | M3 Earth Lug | | 1 |
| | | | | | 8-93 | ZW413155 | Screw, binding head 3x6 | | 1 |
| 8-25 | MZ473455 | Speed Change Switch Stand | KH-2010 | 1 | 8-94 | ZW243516 | Screw, Pinch Roller | XR-100 | 1 |
| 8-26 | MZ402377 | Micro Insulator D | KD-2050 | 2 | 8-95 | ZG208091 | Impedance Arm Spring | RD-39 | 1 |
| 8-27 | ES250064 | Micro Switch V-1A44 U/L | 25-1-7 | 2 | 8-96 | EA473016 | Sensing P.C. Board | KH-1013 | 1 |
| 8-28 | MS438254 | Micro Switch Shaft | KF-2023 | 3 | 8-97 | MH473027 | Tape Guide Prop | KH-1028 | 1 |
| 8-29 | ZW270088 | 'E' Ring 1.9M | 6-1-9 | 6 | 8-98 | MZ473038 | Sensing Guide B | KH-1014 | 1 |
| 8-30 | ML397383 | Speed Change Switch Lever 2 | KD-2016 | 1 | 8-99 | ZW433001 | Set Screw, hexagon socket | | |
| 8-31 | ZW425733 | Washer (ALP)D3.1x8x1t | | 2 | | | 3x5(cup) | | 1 |
| | | | | | 8-100 | MZ473040 | Sensing Pole | KH-1015 | 1 |
| | | | | | 8-101 | ZW413741 | Screw, binding head 3x8 | | 1 |
| | | | | | 8-102 | ZW413155 | Screw, binding head 3x6 | | 2 |
| | | | | | 8-103 | MZ486448 | Print Reinforcement Board | KH-1032 | 1 |
| 8-32 | MZ472814 | Mech. Frame | KD-1001 | 1 | 8-104 | MZ397214 | Insulator Liner A | KD-1031 | 1 |
| 8-33 | MS397001 | Pinch Roller Arm Shaft | KD-1002 | 1 | 8-105x | MB303535 | Counter Belt D91x1.6 | 3A-607 | 1 |
| 8-34x | ZW274026 | M5 Spring Washer | | 1 | 8-106 | ES482938 | Push Switch JH-3 | 25-5-1 | 1 |
| 8-35x | ZW413278 | M5 Nut | | 1 | 8-107 | SB474041 | Push Button 2 | KH-1023 | 1 |
| 8-36 | MS397012 | Brake Lever Shaft | KD-1003 | 1 | 8-108x | ZW444273 | Iso Screw, binding head 3x4 | | 2 |
| 8-37x | ZW413188 | M4 Nut | | 4 | 8-109x | EJ310871 | 18P Multi-Jack J-2 | | |
| 8-38 | MS465480 | Brake Lever Shaft B | KD-1093 | 1 | | | 3250-018-001 | 31-4-1 | 1 |
| 8-39x | ZW273756 | M3 Nut | | 1 | 8-110x | EJ347670 | 22P Multi-Jack-3 | | |
| 8-40 | MS397023 | Tension Arm Shaft | KD-1004 | 1 | | | 3250-022-001S | 31-4-3 | 1 |
| 8-41 | HZ397034 | Head Base Prop | KD-1005 | 4 | 8-111 | EJ450573 | 9P Mate-N-Lock Cap Housing | | |
| 8-42x | ZW416687 | Screw, binding head 4x8 | | 4 | | | 1-480277-0 | 52-1- | 1 |
| 8-43 | MZ317373 | Brake Lever Prop | MR-102 | 2 | 8-112x | HZ243191 | Pin Contact 60511-1 | 52-1- | 7 |
| 8-44 | MH487888 | Sensing Table Prop B | KH-1034 | 2 | 8-113 | EJ222748 | Sub Magnale Socket #311SG | 31-1-9 | 1 |
| 8-45x | ZW413741 | Screw, binding head 3x8 | | 8 | 8-114x | MZ302400 | Remote Control Socket Mt. | | |
| 8-46x | MZ397045 | Sys. Con. Connector Prop | KD-1006 | 4 | | | Plate | RX-15 | 1 |
| 8-47x | ZW273778 | M3 Earth Lug | | 1 | 8-115 | EJ368785 | 14P Multi-Jack 3250-014-001 | 31-4-1 | 1 |
| 8-48 | MZ397080 | Spring Hanger | KD-1010 | 2 | 8-116x | MH487890 | Servo P.C. Board Prop | KH-1053 | 2 |
| 8-49 | ZW323728 | Screw, binding head 3x5 | | 4 | 8-117 | ZW417137 | Screw, binding head 3x4 | | 2 |
| 8-50 | MC399521 | Counter M-470D | 9-1-14 | 1 | 8-118 | EZ397135 | Center Frame | KD-1053 | 1 |
| 8-51 | MZ397078 | Counter Base | KD-1009 | 1 | 8-119x | EZ397743 | P.C. Board Prop | KD-244 | 3 |
| 8-52 | ZW323728 | Screw, binding head 3x5 | | 2 | 8-120 | EC348704 | Elect./C. 2200 μF 35WV | | |
| 8-53 | MZ112133 | Micro Switch Table | KH-2059 | 1 | | | (Lug type) | 24-105-3 | 1 |
| 8-54 | MZ250413 | Micro Insulator C | RC-127 | 2 | 8-121 | MZ472858 | Connector Plate | KH-1044 | 1 |
| 8-55 | ES250064 | Micro Switch V-1A44 U/L | 25-1-7 | 2 | 8-122 | EJ378944 | U/L AC Socket S-I 9122 | 31-1-7 | 1 |
| 8-56 | ZW439514 | Screw, binding head 3x18 | | 2 | 8-123 | EZ382263 | Strain Relief SR-4K-4 | 2-7-1 | 1 |
| 8-57 | ZW323728 | Screw, binding head 3x5 | | 2 | 8-124x | EZ246936 | Strain Relief SR-6W-1 (3 core) | 2-7-8 | 1 |
| 8-58 | EC273464 | MP/C. 0.1 μF(M) 350WVDC | (Tub. type) 24-9-4 | 1 | 8-125 | EZ374894 | U/L AC Cord 3M | 26-3-3 | 1 |
| 8-59 | ZW422965 | Screw, pan head 3x15 | | 2 | | | | | |

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|--------------------------------------|---------------|------|
| 8-126x | EZ315448 | Australia Cord | 26-3-11 | 1 |
| 8-127 | EJ205975 | Cramp Terminal 1-SD | 32-1-7 | 9 |
| 8-128 | EZ397124 | Cycle Change Switch Plate B | KD-1055 | 1 |
| 8-129x | ZW201150 | Screw, truss head 3x6(black) | | 6 |
| 8-130x | ZW374128 | Iso Screw, truss head 3x8 (black) | | 2 |
| 8-131x | ZW447761 | Tapping Screw #2 3x6(BR) (black) | | 4 |
| 8-132 | EJ326430 | 11P Short Plug A | 42-1-25 | 1 |
| 8-133 | MS408497 | Switch Lever Shaft | KD-1080 | 1 |
| 8-134 | ML409083 | Micro Switch Lever | KD-1081 | 2 |
| 8-135 | ZW259683 | Washer (Nylon)D3x5x1t | | 1 |
| 8-136x | ZW270088 | 'E' Ring 1.9M | 6-1-9 | 1 |
| 8-137 | ML492906 | Shut-off Lever B, w/metal | KD-1052 | 1 |
| 8-138 | MZ473073 | Sensing Collar | KH-1030 | 1 |
| 8-139 | ZW492063 | Insulator Washer | KH-2056 | 1 |
| 8-140 | MZ473051 | Sensing Top | KH-1028 | 1 |
| 8-141 | HZ317632 | Insulator Collar A | MR-36 | 1 |
| 8-142 | ZW273633 | M2.3 Earth Lug | | 1 |
| 8-143 | ZW484828 | Screw, binding head 2.3x25 | | 1 |
| 8-144 | ZG409015 | Tension Arm Spring C | KD-1079 | 1 |
| 8-145x | ZW290283 | 'U' Ring 2.85M | 6-1-1 | 1 |
| 8-146 | ZG407575 | Shifter Lever Spring | KD-1078 | 1 |
| 8-147 | MZ317406 | Brake Band Guide, w/base | MR-120 | 2 |
| 8-148 | ZW323728 | Screw, binding head 3x5 | | 4 |
| 8-149x | MP424023 | Pinch Roller (KD) | KD-1084 | 1 |
| 8-150 | SZ397517 | Corner Angle A (left) | KD-6003A | 1 |
| 8-151 | SZ397528 | Corner Angle B (right) | KD-6003B | 1 |
| 8-152 | SZ473725 | Mech. Panel Reinforcement Plate | KH-1064 | 2 |
| 8-153 | ZW413741 | Screw, binding head 3x8 | | 8 |
| 8-154 | MZ514653 | Plunger Joint B, w/pin | KH-2060 | 1 |
| 8-155 | SZ473681 | Side Chassis A, w/angle (right) | KH-6010A | 1 |
| 8-156 | SZ473692 | Side Chassis B, w/angle (left) | KH-6010B | 1 |
| 8-157x | ZW290248 | U type Speed Nut M4 #1 (small) | 6-3-1 | 6 |
| 8-158 | ZW290250 | U type Speed Nut M4 #1 (large) | 6-3-2 | 10 |
| 8-159x | ZW200610 | Tapping Screw 4x12(truss) | | 6 |

FIG. 9 PHOTO OF TAPE SPEED SWITCH
P.C. BOARD (KH-2011)

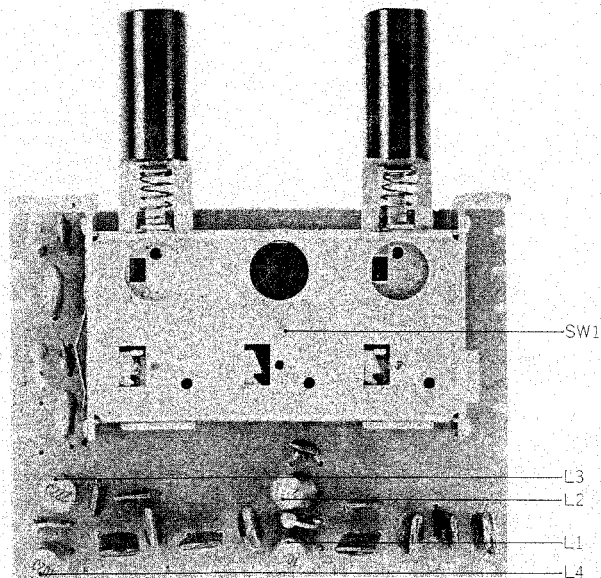
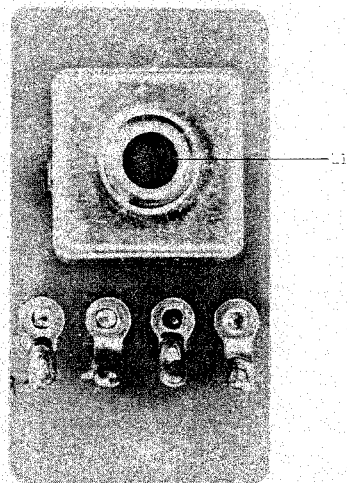


FIG. 10 PHOTO OF
COIL P.C. BOARD (KD-1097)



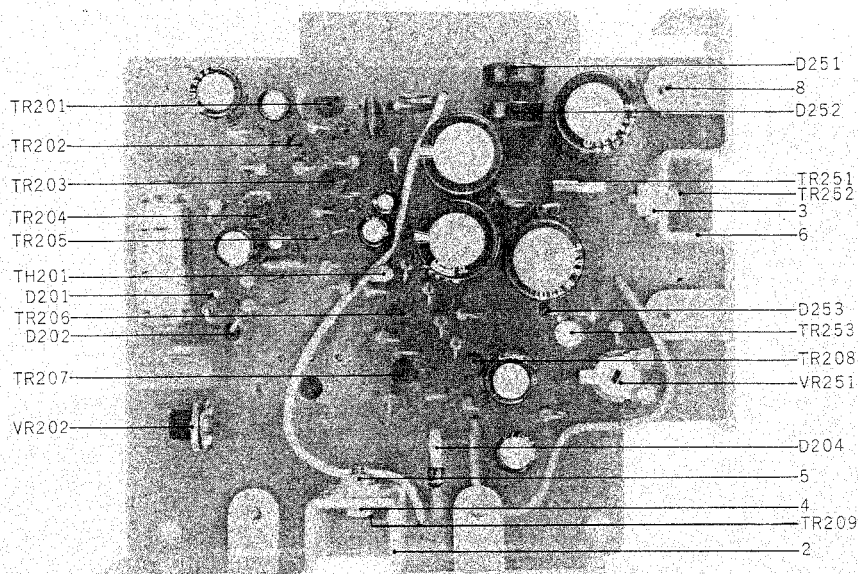
TAPE SPEED SWITCH
P.C. BOARD (KH-2011) BLOCK

| Symbol No. | Parts No. | Description | Q'ty |
|---------------------------------|-----------|--|------|
| 9-1x | BA482387 | Tape Speed Switch P.C. Board Comp. (KH-2011) | 1 |
| 9-L1 | EO243977 | Ferri Inductor FL7H 1MH(J) | 1 |
| 9-L2, 3 | EO458932 | Ferri Inductor FL7H 2.2MH(J) | 2 |
| 9-L4 | EO243977 | Ferri Inductor FL7H 1MH(J) | 1 |
| 9-SW1 | ES472645 | Push Switch SPM025N | 1 |
| Capacitor, Vertical Type | | | |
| 9-C1 | EC379157 | Mylar 0.033 μ F(J) 50WV | 1 |
| 9-C2 | EC389485 | Mylar 0.018 μ F(J) 50WV | 1 |
| 9-C3 | EC379157 | Mylar 0.033 μ F(J) 50WV | 1 |
| 9-C4 | EC368335 | Mylar 0.022 μ F(J) 50WV | 1 |
| 9-C5 | EC250975 | Mylar 0.015 μ F(J) 50WV | 1 |
| 9-C6 | EC411827 | Mylar 0.0082 μ F(J) 50WV | 1 |
| 9-C7 | EC379157 | Mylar 0.033 μ F(J) 50WV | 1 |
| 9-C8 | EC389485 | Mylar 0.018 μ F(J) 50WV | 1 |
| 9-C9 | EC379192 | Mylar 0.039 μ F(J) 50WV | 1 |
| 9-C10 | EC250975 | Mylar 0.015 μ F(J) 50WV | 1 |
| 9-C11 | EC368335 | Mylar 0.022 μ F(J) 50WV | 1 |
| 9-C12 | EC350875 | Mylar 0.001 μ F(J) 50WV | 1 |
| 9-C13 | EC329848 | Hi-Q 100PF(J) 50WV | 1 |
| 9-C14 | EC350875 | Mylar 0.001 μ F(J) 50WV | 1 |
| 9-C15 | EC329848 | Hi-Q 100PF(J) 50WV | 1 |
| 9-C16 | EC411827 | Mylar 0.0082 μ F(J) 50WV | 1 |
| Resistor, Stopper Type | | | |
| 9-R1 | ER362441 | Carbon RD1/4 1.8k(J) | 1 |
| 9-R2 | ER399060 | Carbon RD1/4 9.1k(J) | 1 |
| 9-R4 | ER399060 | Carbon RD1/4 9.1k(J) | 1 |
| 9-R6 | ER362441 | Carbon RD1/4 1.8k(J) | 1 |

COIL P.C. BOARD (KD-1097) BLOCK

| Symbol No. | Parts No. | Description | Q'ty |
|------------|-----------|---------------------------------|------|
| 10-1x | BA495808 | Coil P.C. Board Comp. (KD-1097) | 1 |
| 10-L1 | EO403446 | Variable Coil VI2031 SC-01 | 1 |
| 10-2x | EZ495843 | Coil Retaining Angle | 1 |
| 10-3x | ZW413155 | Screw, binding head 3x6 | 2 |

FIG. 11 PHOTO OF SERVO P.C. BOARD (KH-1011)

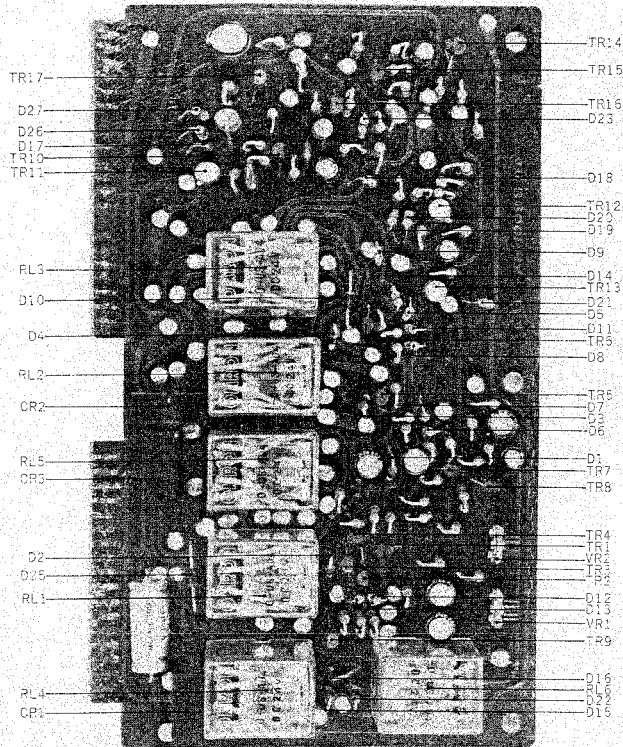


SERVO P.C. BOARD (KH-1011) BLOCK

| Symbol No. | Parts No. | Description | Q'ty | Symbol No. | Parts No. | Description | Q'ty |
|-------------|-----------|--|------|---------------|-----------|---|------|
| 11-1x | BA482332 | Servo P.C. Board Comp. (KH-1011) | 1 | 11-C210 | EC424080 | Styrol 0.051 μ F(F) 50WV (Tub. type) | 1 |
| 11-TR201 | ET379462 | Transistor 2SC711(D)(E) | 1 | 11-C211 | EC438524 | Mylar 0.27 μ F(H) 100WV | 1 |
| 11-TR202 | ET356984 | Transistor 2SA564(R) | 1 | 11-C213 | EC220994 | Elect. 10 μ F 25WV | 1 |
| 11-TR203, 4 | ET379462 | Transistor 2SC711(D)(E) | 2 | 11-C215 | EC368280 | Solid Aluminum 33 μ F 6.3WV | 1 |
| 11-TR205 | ET356984 | Transistor 2SA564(R) | 1 | 11-C216 | EC220151 | Elect. 100 μ F 25WV | 1 |
| 11-TR206 | ET398777 | Transistor 2SC711(G)(F) | 1 | 11-C251, 2 | EC403468 | Elect. 330 μ F 50WV | 2 |
| 11-TR207 | ET379462 | Transistor 2SC711(D)(E) | 1 | 11-C253 | EC372148 | Elect. 220 μ F 35WV | 1 |
| 11-TR208 | ET399936 | Transistor 2SC945(R)(S) | 1 | 11-C254 | EC331817 | Elect. 470 μ F 25WV | 1 |
| 11-TR209 | ET403042 | Transistor 2SD234(Y) | 1 | 11-C255 | EC350684 | Elect. 22 μ F 25WV | 1 |
| 11-TR251 | ET408971 | Transistor 2SC1013 | 1 | 11-C257 | EC450281 | Elect. 0.47 μ F 50WV | 1 |
| 11-TR252 | ET403042 | Transistor 2SD234(Y) | 1 | | | Resistor, Stopper Type | |
| 11-TR253 | ET391138 | Transistor 2SC968(3)(4) | 1 | 11-R201 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 11-D201, 2 | ED224526 | Silicon Diode 10D1 | 2 | 11-R202 | ER362441 | Carbon RD1/4 1.8k(J) | 1 |
| 11-D204 | ED224526 | Silicon Diode 10D1 | 1 | 11-R203 | ER357456 | Carbon RD1/4 2.2k(J) | 1 |
| 11-D251 | ED329130 | Silicon Diode 10DC-1(black) | 1 | 11-R204 | ER212264 | Carbon RD1/4 2.2k(J) | 1 |
| 11-D252 | ED329128 | Silicon Diode 10DC-1(red) | 1 | 11-R205, 6, 7 | ER336442 | Carbon RD1/4 10k(J) | 3 |
| 11-D253 | ED384096 | Zener Diode RD-9A | 1 | 11-R208 | ER361642 | Carbon RD1/4 47(J) | 1 |
| 11-TH201 | ED321390 | Thermister 41D26 | 1 | 11-R209 | ER211757 | Carbon RD1/4 100k(J) | 1 |
| 11-VR202 | EV498060 | Semi-fixed Volume V10K8-1-5 2k B(4US) | 1 | 11-R210 | ER357456 | Carbon RD1/4 2.2k(J) | 1 |
| 11-VR251 | EV484863 | Semi-fixed Volume V10K8-4-2 1k B | 1 | 11-R211 | ER212681 | Carbon RD1/4 330(J) | 1 |
| 11-2 | EZ407586 | Heat-sink Plate B | 1 | 11-R212 | ER403187 | Carbon RD1/4 10k(F)(P type) | 1 |
| 11-3 | ZW392940 | Insulator Washer 1 G-473025-1 | 2 | 11-R213 | ER403097 | Carbon RD1/4P 9.1k(C) (P type) | 1 |
| 11-4 | ZW421806 | Screw, pan head 3x8 | 2 | 11-R214 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 11-5 | ZW273756 | M3 Nut | 4 | 11-R217 | ER306887 | Carbon RD1/4 15k(J) | 1 |
| 11-6 | EZ474017 | Heat-sink Plate | 1 | 11-R218 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 11-7x | ZW413155 | Screw, binding head 3x6 | 2 | 11-R219 | ER357456 | Carbon RD1/4 2.2k(J) | 1 |
| 11-8 | ZW413741 | Screw, binding head 3x8 | 2 | 11-R220 | ER211667 | Carbon RD1/4 100(J) | 1 |
| 11-9x | ZW273802 | M3 Toothed Lock Washer | 1 | 11-R221 | ER213030 | Carbon RD1/4 5.6k(J) | 1 |
| 11-10x | EZ473400 | Servo P.C. Board Collar | 2 | 11-R222, 3 | ER357456 | Carbon RD1/4 2.2k(J) | 2 |
| 11-11x | ZW413155 | Screw, binding head 3x6 | 2 | 11-R224, 5 | ER211465 | Carbon RD1/4 1k(J) | 2 |
| | | Capacitor, Vertical Type | | 11-R226 | ER304290 | Carbon RD1/4 10(J) | 1 |
| 11-C201 | EC398957 | Mylar 0.1 μ F(M) 50WV | 1 | 11-R227 | ER306887 | Carbon RD1/4 15k(J) | 1 |
| 11-C202 | EC251190 | Mylar 0.056 μ F(K) 50WV | 1 | 11-R228 | ER424078 | Carbon RD1/4 51(J) | 1 |
| 11-C203 | EC331705 | Elect. 22 μ F 16WV | 1 | 11-R229 | ER304402 | Carbon RD1/4 470(J) | 1 |
| 11-C204 | EC379787 | Mylar 0.0039 μ F(J) 50WV | 1 | 11-R251 | ER357456 | Carbon RD1/4 2.2k(J) | 1 |
| 11-C205 | EC320051 | Elect. 10 μ F 16WV | 1 | 11-R252 | ER212681 | Carbon RD1/4 330(J) | 1 |
| 11-C206 | EC250661 | Mylar 0.0015 μ F(K) 50WV | 1 | 11-R253 | ER343078 | Carbon RD1/4 2.7k(J) | 1 |
| 11-C207 | EC220151 | Elect. 100 μ F 25WV | 1 | 11-R254 | ER357456 | Carbon RD1/4 2.2k(J) | 1 |
| 11-C208 | EC350684 | Elect. 22 μ F 25WV | 1 | 11-R255 | ER306843 | Carbon RD1/4 1.2k(J) | 1 |
| 11-C209 | EC329850 | VFM 220PF(J) 50WV | 1 | 11-R256 | ER447682 | Solid RC1/2 47(J) | 1 |
| | | | | 11-R257 | ER347038 | Carbon RD1/4 270(J) | 1 |

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 12 (A) PHOTO OF
SYS. CON. P.C. BOARD (KH-1009)



| Symbol No. | Parts No. | Description | Q'ty |
|---------------------------------|-----------|--|------|
| Capacitor, Vertical Type | | | |
| 12-C1 to 4 | EC220612 | Elect. 33 μ F 25WV | 4 |
| 12-C5 | EC350684 | Elect. 22 μ F 25WV | 1 |
| 12-C6 | EC220994 | Elect. 10 μ F 25WV | 1 |
| 12-C7 | EC308711 | Mylar 0.047 μ F(K) 50WV | 1 |
| 12-C8 | EC220994 | Elect. 10 μ F 25WV | 1 |
| 12-C10, 11 | EC220994 | Elect. 10 μ F 25WV | 2 |
| 12-C12, 3, 4 | EC450055 | Elect. 1 μ F 25WV | 3 |
| 12-C16 | EC273464 | MP 0.1 μ F(M) 350VWDC (Tub. type) | 1 |
| 12-C17 | EC220432 | Elect. 2.2 μ F 25WV | 1 |
| 12-C19 | EC220151 | Elect. 100 μ F 25WV | 1 |
| 12-C20 | EC250885 | Mylar 0.01 μ F(K) 50WV | 1 |

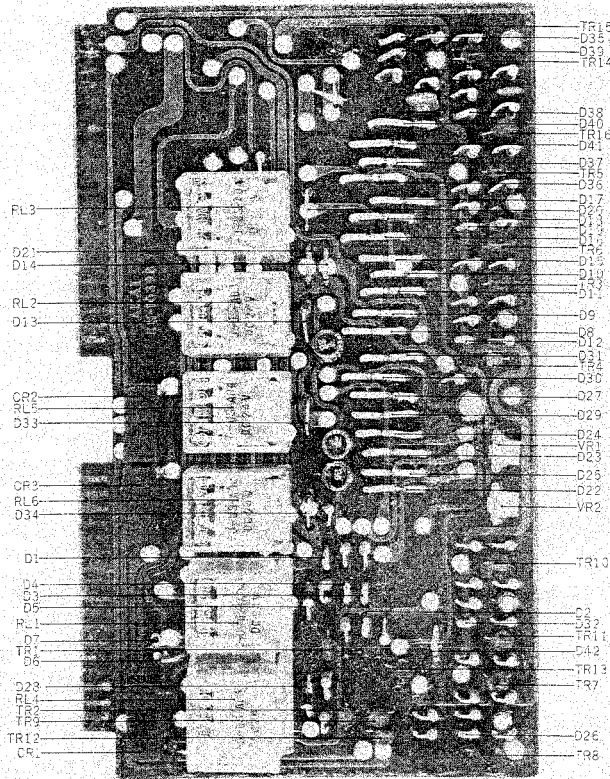
| Symbol No. | Parts No. | Description | Q'ty |
|-------------------------------|-----------|---------------------------|------|
| Resistor, Stopper Type | | | |
| 12-R1 | ER211465 | Carbon RD1/4 1k(J) | 1 |
| 12-R2 | ER362485 | Carbon RD1/4 330k(J) | 1 |
| 12-R3 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 12-R4, 5 | ER212883 | Carbon RD1/4 4.7k(J) | 2 |
| 12-R6 | ER362485 | Carbon RD1/4 330k(J) | 1 |
| 12-R7 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 12-R8 | ER211465 | Carbon RD1/4 1k(J) | 1 |
| 12-R9 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 12-R10 | ER357456 | Carbon RD1/4 2.2k(J) | 1 |
| 12-R11 | ER343078 | Carbon RD1/4 2.7k(J) | 1 |
| 12-R12 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 12-R13 | ER357456 | Carbon RD1/4 2.2k(J) | 1 |
| 12-R14 | ER343078 | Carbon RD1/4 2.7k(J) | 1 |
| 12-R15, 6 | ER357535 | Carbon RD1/4 39k(J) | 2 |
| 12-R17 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 12-R18 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 12-R19 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 12-R20, 1 | ER362485 | Carbon RD1/4 330k(J) | 2 |
| 12-R22, 3 | ER357535 | Carbon RD1/4 39k(J) | 2 |
| 12-R24, 5 | ER212883 | Carbon RD1/4 4.7k(J) | 2 |
| 12-R26 | ER357456 | Carbon RD1/4 2.2k(J) | 1 |
| 12-R27 | ER343078 | Carbon RD1/4 2.7k(J) | 1 |
| 12-R28, 9 | ER391623 | Metal Oxide Film 1W 1k(K) | 2 |
| 12-R30 | ER357456 | Carbon RD1/4 2.2k(J) | 1 |
| 12-R31 | ER213300 | Carbon RD1/4 680(J) | 1 |
| 12-R32 | ER306843 | Carbon RD1/4 1.2k(J) | 1 |
| 12-R33 | ER213300 | Carbon RD1/4 680(J) | 1 |
| 12-R34 | ER211667 | Carbon RD1/4 100(J) | 1 |
| 12-R35, 6 | ER212883 | Carbon RD1/4 4.7k(J) | 2 |
| 12-R37, 8 | ER213030 | Carbon RD1/4 5.6k(J) | 2 |
| 12-R39 | ER357412 | Carbon RD1/4 220(J) | 1 |
| 12-R40 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 12-R41 | ER211465 | Carbon RD1/4 1k(J) | 1 |
| 12-R42 | ER213030 | Carbon RD1/4 5.6k(J) | 1 |
| 12-R43 | ER211465 | Carbon RD1/4 1k(J) | 1 |
| 12-R44 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 12-R45 | ER343078 | Carbon RD1/4 2.7k(J) | 1 |
| 12-R46 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 12-R47, 8, 9 | ER212264 | Carbon RD1/4 22k(J) | 3 |
| 12-R50, 1 | ER212883 | Carbon RD1/4 4.7k(J) | 2 |
| 12-R52, 3 | ER212264 | Carbon RD1/4 22k(J) | 2 |
| 12-R54 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 12-R55 | ER346601 | Carbon RD1/4 4.7k(J) | 1 |
| 12-R56, 7 | ER212264 | Carbon RD1/4 22k(J) | 2 |
| 12-R58 | ER493110 | Carbon RD1/4 2.2k(J) | 1 |

SYS. CON. P.C. BOARD (KH-1009) BLOCK

| Symbol No. | Parts No. | Description | Q'ty |
|---------------|-----------|--|------|
| 12-1x | BA482365 | Sys. Con. P.C. Board Comp. (KH-1009) | 1 |
| 12-TR1 to 10 | ET398711 | Transistor 2SC945(Q)(R) | 10 |
| 12-TR11 to 13 | ET338894 | Transistor 2SC968(3) | 3 |
| 12-TR14 to 17 | ET398711 | Transistor 2SC945(Q)(R) | 4 |
| 12-D1 to 4 | ED224526 | Silicon Diode 10D1 | 4 |
| 12-D5 to 9 | ED219464 | Germanium Diode 1N34A | 5 |
| 12-D10 | ED224526 | Silicon Diode 10D1 | 1 |
| 12-D11 to 14 | ED219464 | Germanium Diode 1N34A | 4 |
| 12-D15 to 17 | ED224526 | Silicon Diode 10D1 | 3 |
| 12-D18 to 21 | ED219464 | Germanium Diode 1N34A | 4 |
| 12-D22 | ED224526 | Silicon Diode 10D1 | 1 |
| 12-D23 | ED219464 | Germanium Diode 1N34A | 1 |
| 12-D25 | ED224550 | Silicon Diode 10D4 | 1 |
| 12-D26, 7 | ED219464 | Germanium Diode 1N34A | 2 |
| 12-RL1 to 6 | EP344136 | Relay MY4-0-US-AD4-24V | 6 |
| 12-CR1 to 3 | ER376424 | Spark Quencher U/L 0.1 μ +120 500WV | 3 |
| 12-VR1 | EV426936 | Semi-fixed Volume V10K-5 30k B | 1 |
| 12-VR2 | EV221826 | Semi-fixed Volume V10K-5 10k B | 1 |

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 12 (B) PHOTO OF
SYS. CON. P.C. BOARD (KH-1039)

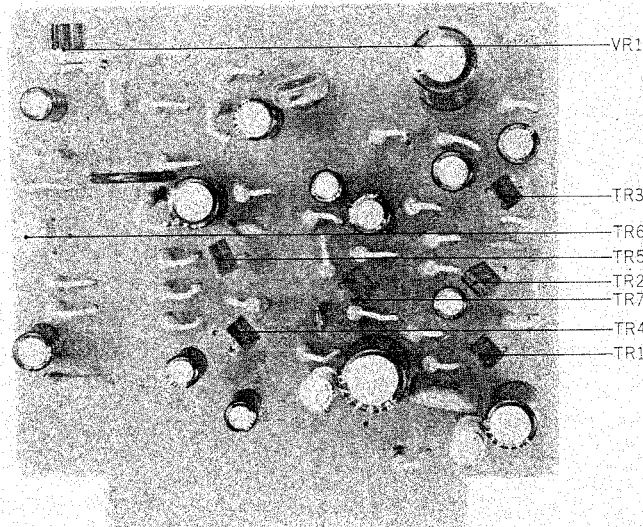


| Symbol No. | Parts No. | Description | Q'ty |
|-------------|-----------|--|------|
| | | Capacitor, Vertical Type | |
| 12-C1, 2 | EC450527 | Elect. 4.7 μ F 25WV | 2 |
| 12-C3 to 5 | EC456041 | Elect. 33 μ F 25WV | 3 |
| 12-C6 | EC273464 | MP 0.1 μ F (M) 350WVDC (Tubular type) | 1 |
| 12-C7 to 10 | EC220432 | Elect. 2.2 μ F 25WV | 4 |
| 12-C11 | EC220994 | Elect. 10 μ F 25WV | 1 |
| 12-C12 | EC336126 | Elect. 47 μ F 25WV | 1 |
| 12-C13 | EC251190 | Mylar 0.056 μ F (K) 50W V | 1 |
| 12-C14 | EC251087 | Mylar 0.022 μ F (K) 50W V | 1 |

SYS. CON. P.C. BOARD (KH-1039) BLOCK

| Symbol No. | Parts No. | Description | Q'ty |
|--------------|-----------|---|------|
| 12-2x | BA515520 | Sys. Con. P.C. Board (KH-1039) | 1 |
| 12-TR1 | ET515722 | Transistor 2SC711 (D)(E)(F) | 1 |
| 12-TR2 | ET515700 | Transistor 2SA628 (D)(E)(F) | 1 |
| 12-TR3 | ET515722 | Transistor 2SC711 (D)(E)(F) | 1 |
| 12-TR4 | ET515733 | Transistor 2SC945 (P)(Q)(R)(S) | 1 |
| 12-TR5 | ET515722 | Transistor 2SC711 (D)(E)(F) | 1 |
| 12-TR6 | ET515733 | Transistor 2SC945 (P)(Q)(R)(S) | 1 |
| 12-TR7, 8 | ET515722 | Transistor 2SC711 (D)(E)(F) | 2 |
| 12-TR9 | ET515700 | Transistor 2SA628 (D)(E)(F) | 1 |
| 12-TR10, 1 | ET515722 | Transistor 2SC711 (D)(E)(F) | 2 |
| 12-TR12 | ET515700 | Transistor 2SA628 (D)(E)(F) | 1 |
| 12-TR13 | ET515880 | Transistor 2SA696 (C)(D) | 1 |
| 12-TR14 | ET515722 | Transistor 2SC711 (D)(E)(F) | 1 |
| 12-TR15 | ET515700 | Transistor 2SA628 (D)(E)(F) | 1 |
| 12-TR16 | ET515722 | Transistor 2SC711 (D)(E)(F) | 1 |
| 12-D1 to 4 | ED514721 | Silicon Diode WG-599 | 4 |
| 12-D5 | ED224526 | Silicon Diode 10D1 | 1 |
| 12-D6, 7 | ED224550 | Silicon Diode 10D4 | 2 |
| 12-D8 to 12 | ED514721 | Silicon Diode WG-599 | 5 |
| 12-D13 | ED224526 | Silicon Diode 10D1 | 1 |
| 12-D14 to 19 | ED514721 | Silicon Diode WG-599 | 6 |
| 12-D20 | ED224526 | Silicon Diode 10D1 | 1 |
| 12-D21 to 27 | ED514721 | Silicon Diode WG-599 | 7 |
| 12-D28 | ED224526 | Silicon Diode 10D1 | 1 |
| 12-D29 to 32 | ED514721 | Silicon Diode WG-599 | 4 |
| 12-D33, 34 | ED224526 | Silicon Diode 10D1 | 2 |
| 12-D35 to 42 | ED514721 | Silicon Diode WG-599 | 8 |
| 12-RL1 to 6 | EP344136 | Relay MY4-O-US-AD4-24V | 6 |
| 12-CR1 to 3 | ER376424 | Spark Quencher 0.1 μ +120 500WV | 3 |
| 12-VR1, 2 | EV513562 | Semi-fixed Volume V10K8-1-5 100k B 4US | 2 |
| 12-R1 | ER211757 | Carbon RD1/4 100k (I) | 1 |
| 12-R2, 3 | ER320207 | Carbon RD1/4 47k (J) | 2 |
| 12-R4 | ER211465 | Carbon RD1/4 1k (J) | 1 |
| 12-R5, 6, 7 | ER212883 | Carbon RD1/4 4.7k (J) | 3 |
| 12-R8 | ER429996 | Carbon RD1/4 470k (I) | 1 |
| 12-R9 | ER346601 | Carbon RD1/4 47k (J) | 1 |
| 12-R10 to 12 | ER212883 | Carbon RD1/4 4.7k (J) | 3 |
| 12-R13 | ER211465 | Carbon RD1/4 1k (J) | 1 |
| 12-R14 | ER336442 | Carbon RD1/4 10k (J) | 1 |
| 12-R15 | ER212883 | Carbon RD1/4 4.7k (J) | 1 |
| 12-R16 | ER211465 | Carbon RD1/4 1k (J) | 1 |
| 12-R17, 8 | ER212883 | Carbon RD1/4 4.7k (J) | 2 |
| 12-R19 | ER211465 | Carbon RD1/4 1k (J) | 1 |
| 12-R20 | ER336442 | Carbon RD1/4 10k (J) | 1 |
| 12-R21 | ER212883 | Carbon RD1/4 4.7k (J) | 1 |
| 12-R22 | ER211465 | Carbon RD1/4 1k (J) | 1 |
| 12-R23, 4 | ER212883 | Carbon RD1/4 4.7k (J) | 2 |
| 12-R25 | ER211465 | Carbon RD1/4 1k (J) | 1 |
| 12-R26 | ER336442 | Carbon RD1/4 10k (J) | 1 |
| 12-R27 | ER212883 | Carbon RD1/4 4.7k (J) | 1 |
| 12-R28 | ER211465 | Carbon RD1/4 1k (J) | 1 |
| 12-R29 to 31 | ER212883 | Carbon RD1/4 4.7k (J) | 3 |
| 12-R32 | ER211465 | Carbon RD1/4 1k (J) | 1 |
| 12-R33 | ER336442 | Carbon RD1/4 10k (J) | 1 |
| 12-R34 | ER212883 | Carbon RD1/4 4.7k (J) | 1 |
| 12-R35 | ER211465 | Carbon RD1/4 1k (J) | 1 |
| 12-R36 | ER304290 | Carbon RD1/4 10 (J) | 1 |
| 12-R37 | ER336442 | Carbon RD1/4 10k (J) | 1 |
| 12-R38 | ER399723 | Carbon RD1/4 4.7k (J) | 1 |
| 12-R39, 40 | ER212883 | Carbon RD1/4 4.7k (J) | 2 |
| 12-R41 | ER211465 | Carbon RD1/4 1k (J) | 1 |
| 12-R43 | ER336442 | Carbon RD1/4 10k (J) | 1 |
| 12-R44 | ER212883 | Carbon RD1/4 4.7k (J) | 1 |
| 12-R45 | ER346601 | Carbon RD1/4 47k (J) | 1 |
| 12-R46, 7 | ER211465 | Carbon RD1/4 1k (J) | 2 |
| 12-R48 | ER336442 | Carbon RD1/4 10k (J) | 1 |

FIG. 13 PHOTO OF REC. AMP. P.C. BOARD (KH-5013)

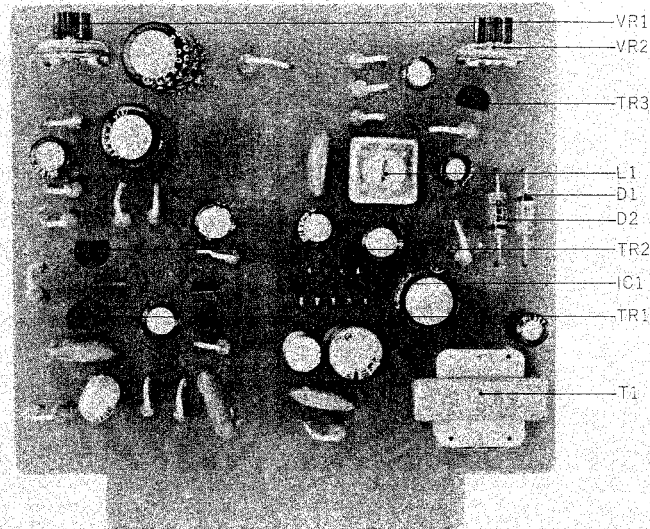


REC. AMP. P.C. BOARD (KH-5013) BLOCK

| Symbol No. | Parts No. | Description | Q'ty | Symbol No. | Parts No. | Description | Q'ty |
|------------|-----------|---|------|------------|-----------|----------------------------------|------|
| 13-1x | BA482490 | Rec. Amp. P.C. Board Comp. (KH-5013) | 1 | | | Resistor, Stopper Type | |
| 13-TR1, 2 | ET234843 | Transistor 2SC458LG(B)(C) | 2 | 13-R1 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 13-TR3 | ET329242 | Transistor 2SC454(C) | 1 | 13-R2, 3 | ER383758 | Carbon RD1/4 180k(J)(noiseless) | 2 |
| 13-TR4 | ET234843 | Transistor 2SC458LG(B)(C) | 1 | 13-R4 | ER349942 | Carbon RD1/4 8.2k(J) | 1 |
| 13-TR5 | ET329242 | Transistor 2SC454(C) | 1 | 13-R5 | ER212681 | Carbon RD1/4 330(J) | 1 |
| 13-TR6 | ET338894 | Transistor 2SC968(3) | 1 | 13-R6 | ER342933 | Carbon RD1/4 27k(J) | 1 |
| 13-TR7 | ET234832 | Transistor 2SC458LG(B) | 1 | 13-R7, 8 | ER346994 | Carbon RD1/4 18k(J) | 2 |
| 13-VR1 | EV221826 | Semi-fixed Volume V10K-5 10k B | 1 | 13-R9, 10 | ER212477 | Carbon RD1/4 3.3k(J) | 2 |
| | | Capacitor, Vertical Type | | 13-R11 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 13-C1 | EC220612 | Elect. 33 μ F 25WV | 1 | 13-R12 | ER383758 | Carbon RD1/4 180k(J) (noiseless) | 1 |
| 13-C2 | EC432810 | Elect. 10 μ F 16WV(noiseless) | 1 | 13-R13 | ER346601 | Carbon RD1/4 47k(J) | 1 |
| 13-C3 | EC290586 | VFM 470PF(K) 50WV | 1 | 13-R14 | ER211858 | Carbon RD1/4 12k(J) | 1 |
| 13-C4 | EC220465 | Elect. 22 μ F 6.3WV | 1 | 13-R15 | ER211465 | Carbon RD1/4 1k(J) | 1 |
| 13-C5 | EC487394 | VFM 47PF(K) 50WV | 1 | 13-R16 | ER352045 | Carbon RD1/4 3.9k(J) | 1 |
| 13-C6 | EC329771 | Elect. 47 μ F 6.3WV | 1 | 13-R17, 8 | ER213030 | Carbon RD1/4 5.6k(J) | 2 |
| 13-C7 | EC350684 | Elect. 22 μ F 25WV | 1 | 13-R19 | ER450011 | Carbon RD1/4 120k(J) | 1 |
| 13-C8 | EC220678 | Elect. 47 μ F 25WV | 1 | 13-R20 | ER213467 | Carbon RD1/4 820(J) | 1 |
| 13-C9 | EC432810 | Elect. 10 μ F 16WV(noiseless) | 1 | 13-R21 | ER211757 | Carbon RD1/4 100k(J) | 1 |
| 13-C10 | EC250604 | Mylar 0.001 μ F(K) 50WV | 1 | 13-R23 | ER352045 | Carbon RD1/4 3.9k(J) | 1 |
| 13-C11 | EC220994 | Elect. 10 μ F 25WV | 1 | 13-R24 | ER362441 | Carbon RD1/4 1.8k(J) | 1 |
| 13-C12 | EC220465 | Elect. 22 μ F 6.3WV | 1 | 13-R25 | ER363644 | Carbon RD1/4 560(J) | 1 |
| 13-C13 | EC220151 | Elect. 100 μ F 25WV | 1 | 13-R26 | ER342933 | Carbon RD1/4 27k(J) | 1 |
| 13-C14 | EC320051 | Elect. 10 μ F 16WV | 1 | 13-R27 | ER361528 | Carbon RD1/4 56k(J) | 1 |
| 13-C16 | EC220465 | Elect. 22 μ F 6.3WV | 1 | 13-R28 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 13-C17 | EC487394 | VFM 47PF(K) 50WV | 1 | 13-R29 | ER380755 | Carbon RD1/4 6.2k(J) | 1 |
| 13-C18 | EC320040 | Elect. 47 μ F 16WV | 1 | 13-R30 | ER212681 | Carbon RD1/4 330(J) | 1 |
| 13-C19 | EC302253 | Mylar 0.15 μ F(K) 50WV | 1 | 13-R31 | ER211858 | Carbon RD1/4 12k(J) | 1 |
| 13-C20 | EC220994 | Elect. 10 μ F 25WV | 1 | 13-R32 | ER352045 | Carbon RD1/4 3.9k(J) | 1 |
| 13-C23 | EC320051 | Elect. 10 μ F 16WV | 1 | 13-R33 | ER211465 | Carbon RD1/4 1k(J) | 1 |
| 13-C24 | EC220994 | Elect. 10 μ F 25WV | 1 | 13-R34 | ER349784 | Carbon RD1/4 390(J) | 1 |
| 13-C25 | EC423562 | VFM 470PF(J) 50WV | 1 | 13-R35 | ER212477 | Carbon RD1/4 3.3k(J) | 1 |

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 14 PHOTO OF P.B. AMP. P.C. BOARD (KH-5014)



P.B. AMP. P.C. BOARD (KH-5014) BLOCK

| Symbol No. | Parts No. | Description | Q'ty | Symbol No. | Parts No. | Description | Q'ty |
|---------------------------------|-----------|--------------------------------------|------|-------------------------------|-----------|---------------------------------|------|
| 14-1x | BA482501 | P.B. Amp. P.C. Board Comp. (KH-5014) | 1 | 14-C15 | EC290564 | VFM 220PF(K) 50WV | 1 |
| 14-IC1 | EI412413 | Line Amp. I.C. LD-3141 | 1 | 14-C16 | EC220364 | Elect. 100 μ F 6.3WV | 1 |
| 14-TR1, 2 | ET399868 | Transistor 2SC871(F) | 2 | 14-C17 | EC220994 | Elect. 10 μ F 25WV | 1 |
| 14-TR3 | ET398711 | Transistor 2SC945(Q)(R) | 1 | 14-C18 | EC450055 | Elect. 1 μ F 25WV | 1 |
| 14-D1, 2 | ED219464 | Germanium Diode 1N34A | 2 | 14-C19 | EC320051 | Elect. 10 μ F 16WV | 1 |
| 14-T1 | BT247768 | Head Phone Trans. N19-5921S | 1 | 14-C20 | EC450055 | Elect. 1 μ F 25WV | 1 |
| 14-L1 | EO262484 | DM Coil 10MH | 1 | Resistor, Stopper Type | | | |
| 14-VR1 | EV221850 | Semi-fixed Volume V10K-5 20k B | 1 | 14-R1, 2 | ER427083 | Carbon RD1/4 330k(J)(noiseless) | 2 |
| 14-VR2 | EV398812 | Semi-fixed Volume V10K-5 5k B | 1 | 14-R3 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| Capacitor, Vertical Type | | | | 14-R4 | ER212681 | Carbon RD1/4 330(J) | 1 |
| 14-C1 | EC432810 | Elect. 10 μ F 16WV(noiseless) | 1 | 14-R5 | ER357570 | Carbon RD1/4 150k(J) | 1 |
| 14-C2 | EC220678 | Elect. 47 μ F 25WV | 1 | 14-R6 | ER342933 | Carbon RD1/4 27k(J) | 1 |
| 14-C3 | EC290586 | VFM 470PF(K) 50WV | 1 | 14-R7 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 14-C4 | EC329771 | Elect. 47 μ F 6.3WV | 1 | 14-R8 | ER212477 | Carbon RD1/4 3.3k(J) | 1 |
| 14-C5 | EC377212 | VFM 47PF(J) 50WV | 1 | 14-R9 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 14-C6 | EC329771 | Elect. 47 μ F 6.3WV | 1 | 14-R10 | ER380711 | Carbon RD1/4 220k(J) | 1 |
| 14-C7 | EC429851 | VFM 680PF(J) 50WV | 1 | 14-R11 | ER349907 | Carbon RD1/4 33k(J) | 1 |
| 14-C8 | EC250841 | Mylar 0.01 μ F(J) 50WV | 1 | 14-R12 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 14-C9 | EC220994 | Elect. 10 μ F 25WV | 1 | 14-R13 | ER304402 | Carbon RD1/4 470(J) | 1 |
| 14-C10, 1 | EC220151 | Elect. 100 μ F 25WV | 2 | 14-R14 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 14-C12 | EC432810 | Elect. 10 μ F 16WV(noiseless) | 1 | 14-R15 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 14-C13 | EC290564 | VFM 220PF(K) 50WV | 1 | 14-R16 | ER429996 | Carbon RD1/4 470k(J) | 1 |
| 14-C14 | EC329771 | Elect. 47 μ F 6.3WV | 1 | 14-R17, 8 | ER357456 | Carbon RD1/4 2.2k(J) | 2 |

FIG. 15 PHOTO OF
OSC. P.C. BOARD (KH-5015)

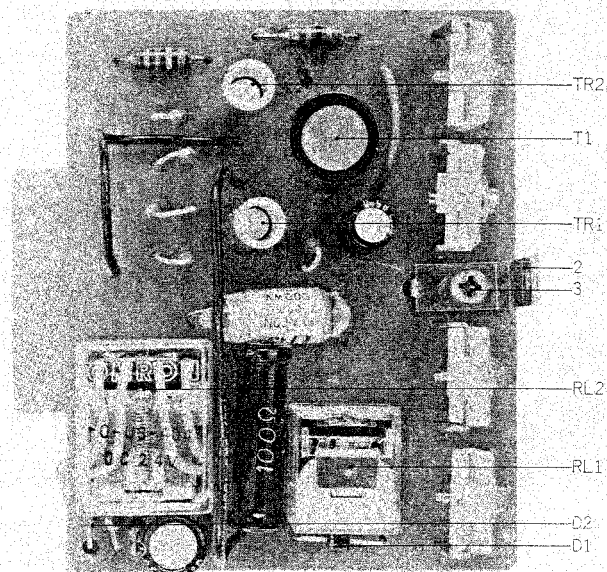
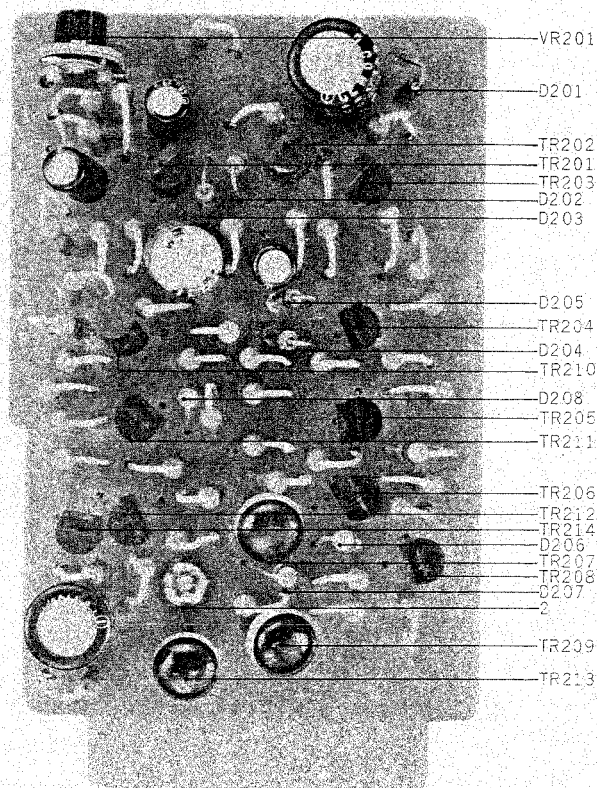


FIG. 16 PHOTO OF COM DETECTOR
P.C. BOARD (RD-A514)



OSC. P.C. BOARD (KH-5015) BLOCK

| Symbol No. | Parts No. | Description | Q'ty |
|---------------------------------|-----------|---------------------------------|------|
| 15-1x | BA482512 | OSC. P.C. Board Comp. (KH-5015) | 1 |
| 15-TR1, 2 | ET304255 | Transistor 2SC971(2)(3)(red) | 2 |
| 15-T1 | EO383365 | OSC. Coil OT-204 | 1 |
| 15-D1, 2 | ED224526 | Silicon Diode 10D1 | 2 |
| 15-RL1 | EP383321 | Relay TECK-36 DC22V 1000 | 1 |
| 15-RL2 | EP344136 | Relay MY4-O-US-AD4-24V | 1 |
| 15-2 | EZ425226 | P.C. Board Retaining Metal | 1 |
| 15-3 | ZW413155 | Screw, binding head 3x6 | 1 |
| 15-4x | ZW273756 | M3 Nut | 1 |
| Capacitor, Vertical Type | | | |
| 15-C1 | EC350684 | Elect. 22 μ F 25WV | 1 |
| 15-C2, 3 | EC250841 | Mylar 0.01 μ F(J) 50WV | 2 |
| 15-C4 | EC442080 | Plustic Film 4500PF(J) 500WV | 1 |
| 15-C5 to 8 | EC425250 | Trimmer A-1P3-3 70PF | 4 |
| 15-C9 | EC220151 | Elect. 100 μ F 25WV | 1 |
| Resistor, Stopper Type | | | |
| 15-R1 | ER426892 | Solid RC1/2W 2.4k(J) | 1 |
| 15-R2 | ER251684 | Wire-wound 2WL 100(K) (L type) | 1 |
| 15-R3, 4 | ER315944 | Carbon RD1/4 3.3(J) | 2 |
| 15-R5 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 15-R6 | ER304402 | Carbon RD1/4 470(J) | 1 |
| 15-R7 | ER455848 | Solid RC1/2W 27(J) | 1 |
| 15-R8 | ER347038 | Carbon RD1/4 270(J) | 1 |
| 15-R9 | ER211667 | Carbon RD1/4 100(J) | 1 |
| 15-R10 | ER361642 | Carbon RD1/4 47(J) | 1 |

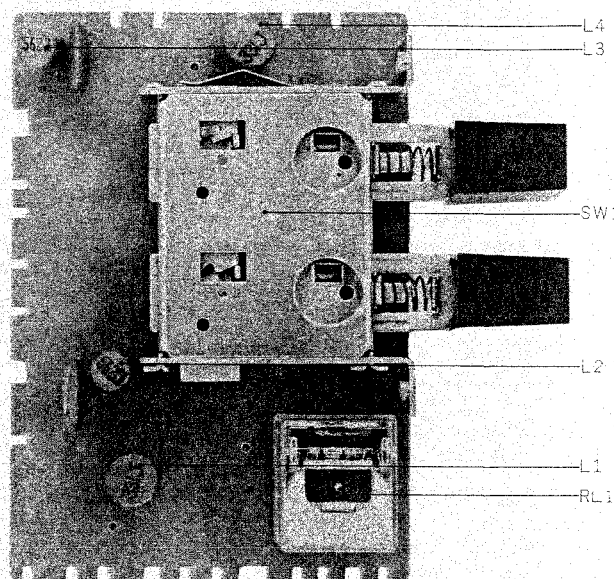
COM DETECTOR

P.C. BOARD (RD-A514) BLOCK

| Symbol No. | Parts No. | Description | Q'ty |
|---------------------------------|-----------|---|------|
| 16-1x | BA482523 | COM Detector P.C. Board Comp. (RD-A514) | 1 |
| 16-TR201 | ET380834 | Transistor 2SC711(E) | 1 |
| 16-TR202,3,4 | ET371935 | Transistor 2SC711(D) | 3 |
| 16-TR205, 6 | ET380834 | Transistor 2SC711(E) | 2 |
| 16-TR207 | ET383466 | Transistor CDC9000-1(B) | 1 |
| 16-TR208 | ET380834 | Transistor 2SC711(E) | 1 |
| 16-TR209 | ET383466 | Transistor CDC9000-1(B) | 1 |
| 16-TR210, 1 | ET371935 | Transistor 2SC711(D) | 2 |
| 16-TR212 | ET380834 | Transistor 2SC711(E) | 1 |
| 16-TR213 | ET383466 | Transistor CDC9000-1(B) | 1 |
| 16-TR214 | ET380834 | Transistor 2SC711(E) | 1 |
| 16-D201 | ED321243 | Zener Diode 1N759A | 1 |
| 16-D202 to 8 | ED219464 | Germanium Diode 1N34A | 7 |
| 16-VR201 | EV221837 | Semi-fixed Volume V10K-5 | 1 |
| 100k B | | | |
| 16-2 | ZW201971 | Screw, binding head 3x12 | 1 |
| 16-3x | EZ348647 | Micro Switch Collar C | 1 |
| 16-4x | EZ473477 | COM P.C. Board Mt. Part | 1 |
| 16-5x | ZW273756 | M3 Nut | 1 |
| Capacitor, Vertical Type | | | |
| 16-C201 | EC220151 | Elect. 100 μ F 25WV | 1 |
| 16-C202 | EC313108 | Elect. 1 μ F 50WV | 1 |
| 16-C203 | EC220364 | Elect. 100 μ F 6.3WV | 1 |
| 16-C204 | EC450281 | Elect. 0.47 μ F 50WV | 1 |

| Symbol No. | Parts No. | Description | Q'ty |
|-------------------------------|-----------|-------------------------|------|
| 16-C205 | EC350706 | Elect. 4.7 μ F 16WV | 1 |
| 16-C206 | EC220127 | Elect. 100 μ F 16WV | 1 |
| Resistor, Stopper Type | | | |
| 16-R201 | ER363644 | Carbon RD1/4 560(J) | 1 |
| 16-R202 | ER346601 | Carbon RD1/4 47k(J) | 1 |
| 16-R203 | ER212174 | Carbon RD1/4 180k(J) | 1 |
| 16-R204 | ER346601 | Carbon RD1/4 47k(J) | 1 |
| 16-R205 | ER306887 | Carbon RD1/4 15k(J) | 1 |
| 16-R206 | ER363644 | Carbon RD1/4 560(J) | 1 |
| 16-R207 | ER361642 | Carbon RD1/4 47(J) | 1 |
| 16-R208 | ER346601 | Carbon RD1/4 47k(J) | 1 |
| 16-R209 | ER357456 | Carbon RD1/4 2.2k(J) | 1 |
| 16-R210 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 16-R211 | ER357456 | Carbon RD1/4 2.2k(J) | 1 |
| 16-R212 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 16-R213 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 16-R214 | ER361642 | Carbon RD1/4 47(J) | 1 |
| 16-R215 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 16-R216 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 16-R217, 8 | ER213030 | Carbon RD1/4 5.6k(J) | 2 |
| 16-R219 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 16-R220 | ER361642 | Carbon RD1/4 47(J) | 1 |
| 16-R221 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 16-R222 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 16-R223, 4 | ER371946 | Carbon RD1/4 2k(J) | 2 |
| 16-R225 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 16-R226 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 16-R227 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 16-R228 | ER380913 | Carbon RD1/4 33(J) | 1 |
| 16-R229, 30 | ER213030 | Carbon RD1/4 5.6k(J) | 2 |
| 16-R231 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 16-R232 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 16-R233 | ER213030 | Carbon RD1/4 5.6k(J) | 1 |
| 16-R234 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 16-R235 | ER361642 | Carbon RD1/4 47(J) | 1 |
| 16-R236 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 16-R237 | ER361642 | Carbon RD1/4 47(J) | 1 |
| 16-R238 | ER213030 | Carbon RD1/4 5.6k(J) | 1 |
| 16-R239 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 16-R240 | ER336442 | Carbon RD1/4 10k(J) | 1 |
| 16-R241 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 16-R242, 3 | ER371946 | Carbon RD1/4 2k(J) | 2 |
| 16-R244 | ER212883 | Carbon RD1/4 4.7k(J) | 1 |
| 16-R245 | ER362441 | Carbon RD1/4 1.8k(J) | 1 |
| 16-R246 | ER349942 | Carbon RD1/4 8.2k(J) | 1 |
| 16-R247 | ER357456 | Carbon RD1/4 2.2k(J) | 1 |

**FIG. 17 PHOTO OF TRACK SELECTOR
P.C. BOARD (KH-5011)**



**TRACK SELECTOR
P.C. BOARD (KH-5011) BLOCK**

| Symbol No. | Parts No. | Description | Q'ty |
|------------|-----------|--|------|
| 17-1x | BA482477 | Track Selector P.C. Board Comp. (KH5011) | 1 |
| 17-D1 | ED224526 | Silicon Diode 10D1 | 1 |
| 17-L1 | EO495527 | Ferri Inductor FL9H 330 μ H(\emptyset) | 1 |
| 17-L2, 3 | EO424888 | Ferri Inductor FL5H 5.6MH(\emptyset) | 2 |
| 17-L4 | EO495527 | Ferri Inductor FL9H 330 μ H(\emptyset) | 1 |
| 17-RL1 | EP383321 | Relay TECK-36 DC22V 1000 | 1 |
| 17-SW1 | ES411805 | Push Switch UM21620C | 1 |
| 17-C1, 2 | EC337487 | Hi-Q Capacitor 470PF(J) 50WV | 2 |

FIG. 18 PHOTO OF MONITOR SWITCH
P.C. BOARD (KH-5012)

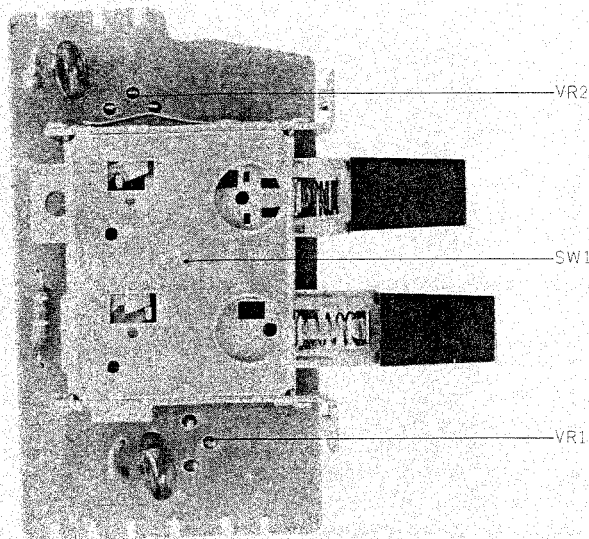
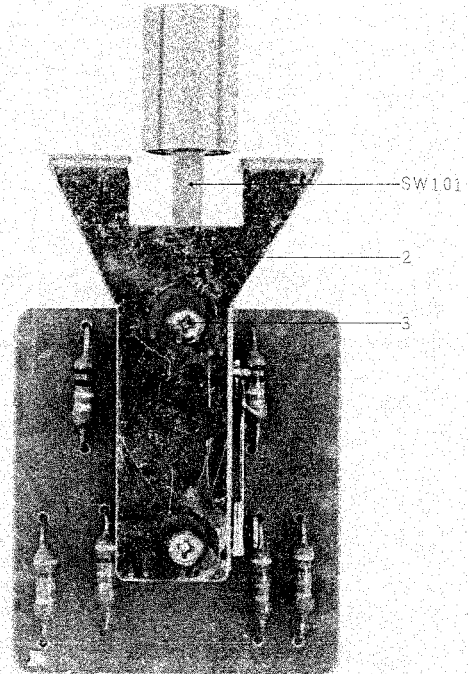


FIG. 19 PHOTO OF COM SWITCH
P.C. BOARD (RD-525)



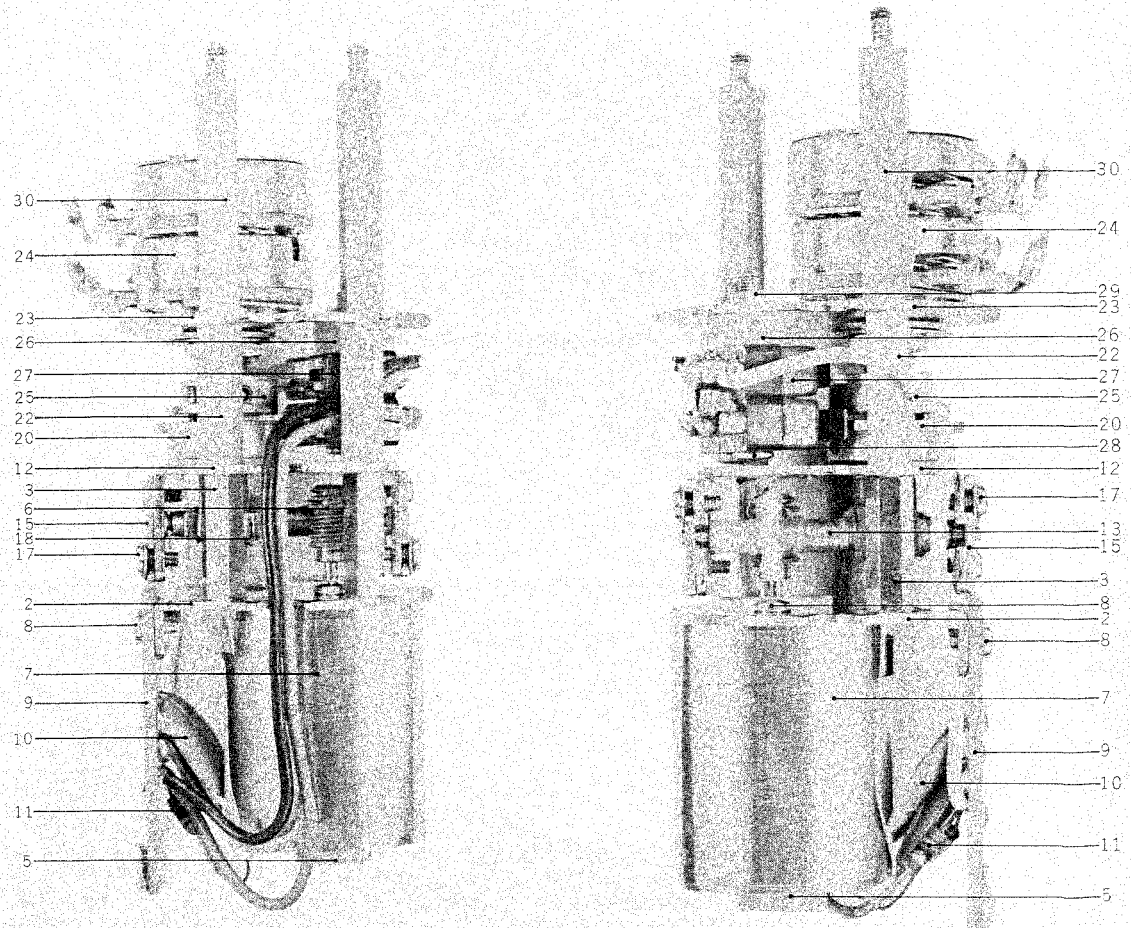
**MONITOR SWITCH
P.C. BOARD (KH-5012) BLOCK**

| Symbol No. | Parts No. | Description | Q'ty |
|-------------------------------|-----------|---|------|
| 18-1x | BA482488 | Monitor Switch P.C. Board Comp. (KH-5012) | 1 |
| 18-VR1, 2 | EV482962 | Semi-fixed Volume V-10K5-2-4 5k B, w/knob | 2 |
| 18-SW1 | ES245103 | Push Switch UM21220J | 1 |
| 18-C1, 2 | EC389496 | Mylar 0.068 μ F(J) 50WV (Vert. type) | 2 |
| Resistor, Stopper Type | | | |
| 18-R1 | ER212264 | Carbon RD1/4 22k(J) | 1 |
| 18-R2 | ER364994 | Carbon RD1/4 39k(J) (Insu. type) | 1 |
| 18-R3 | ER212264 | Carbon RD1/4 22k(J) | 1 |

COM SWITCH P.C. BOARD (RD-525) BLOCK

| Symbol No. | Parts No. | Description | Q'ty |
|---------------------------------|-----------|--------------------------------------|------|
| 19-1x | BA482455 | COM Switch P.C. Board Comp. (RD-525) | 1 |
| 19-SW1 | ES482872 | Push Switch UEG62BP, without knob | 1 |
| 19-2 | EZ472490 | COM Switch Mt. Part | 1 |
| 19-3 | ZW202331 | Screw, round head 2.6x4 | 2 |
| Resistor, Insulator Type | | | |
| 19-R101 to 104 | ER329308 | Carbon RD1/4 47k(J) | 4 |
| 19-R105, 6 | ER213715 | Carbon RD1/4 100k(J) | 2 |

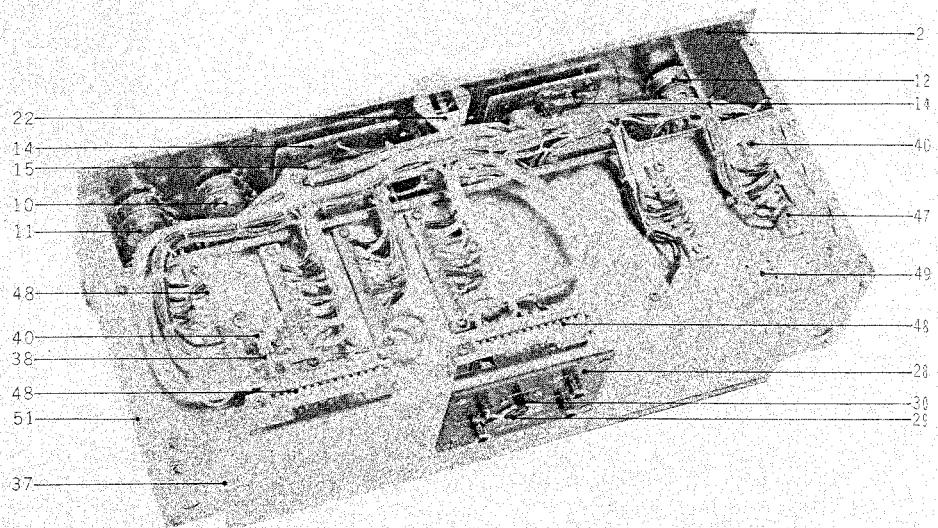
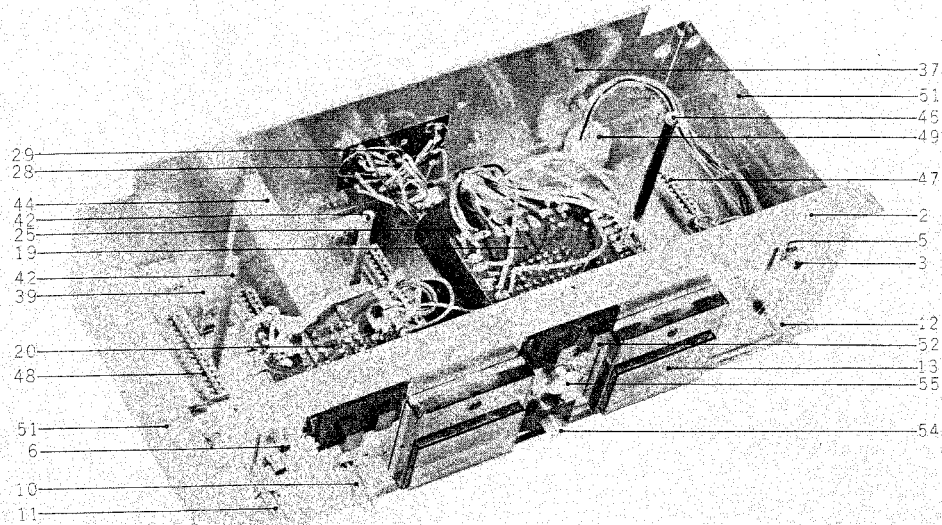
FIG. 20 PHOTO OF COM MECHANISM BLOCK



COM MECHANISM BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty | Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|--|---------------|------|----------|-----------|---|---------------|------|
| 20-1x | BM482466 | COM Mechanism Block Comp. | KH-RDG | 1 | 20-16x | ZW269785 | M2.3 Toothed Lock Washer | | 6 |
| 20-2 | EZ262181 | COM Motor Frame | RD-591 | 1 | 20-17 | ZW201914 | Screw, binding head 2.3x5 | | 4 |
| 20-3 | EZ262091 | COM Prop C | RD-590 | 3 | 20-18 | MS252887 | Main Gear Shaft, w/gear | RD-585 | 1 |
| 20-4x | ZW200362 | Screw, countersunk head 3x5 D=5 | | 3 | 20-19x | ZW383332 | Washer (PBP)D3.1x5x0.1t | | 2 |
| 20-5 | BM250514 | Micro Motor FM-36K 108700 | 53-1-1 | 1 | 20-20 | EZ383130 | Clutch A, w/pin | RD-A509 | 1 |
| 20-6 | EZ262023 | COM Worm-Gear B | RD-597 | 1 | 20-21x | ZW313470 | Set Screw 3x6.5(cup) | | 3 |
| 20-7 | EZ262067 | COM Shield | RD-593 | 1 | 20-22 | EZ262080 | COM Prop B | RD-578 | 2 |
| 20-8 | ZW201914 | Screw, binding head 2.3x5 | | 4 | 20-23 | EZ262102 | COM Switch Base | RD-577 | 1 |
| 20-9 | EA383128 | Terminal P.C. Board | RD-A512 | 1 | 20-24 | EV326160 | Dual-axial 2-throw/Vol. V24L5G(SP) N12.5R-100kx1 | 3-6-1-5 | 1 |
| 20-10 | EC228745 | Ceramic/C. YZ 0.1 μF(Z) 50WV | 24-5-30 | 3 | 20-25 | EZ383141 | Clutch B | RD-A510 | 1 |
| 20-11 | ER230185 | Solid/R. RC1/4W 33(K) | 35-5-1 | 2 | 20-26 | ZW383152 | Switch Insulator Washer | RD-A511 | 1 |
| 20-12 | EZ218147 | Gear Frame | RD-582 | 1 | 20-27 | ES250020 | Micro Switch S-1AL | Z-5-1-9 | 2 |
| 20-13 | MS222693 | Sub Gear Shaft, w/gear | RD-584 | 1 | 20-28 | ZW383343 | Screw, binding head 2.3x22 | | 2 |
| 20-14x | ZW259334 | Washer (Polyslider) D2.05x3.5x0.25t | | 2 | 20-29 | ZW273690 | M2.3 Nut | | 2 |
| 20-15 | EZ228857 | Center Plate | RD-583 | 2 | 20-30 | MH473488 | COM Mt. Prop | KH-5005 | 3 |
| | | | | | 20-31x | EZ262056 | COM Rubber Shield | RD-595 | 1 |

FIG. 21 PHOTO OF AMP. ASSEMBLY BLOCK



AMP. ASSEMBLY BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------------------------|-----------|--|---------------|------|
| AMP. FRAME BLOCK | | | | |
| 21-1x | BZ482444 | Amp. Frame Block Comp. | KH | 1 |
| 21-2 | EZ472577 | Amp. Chassis A | KH-5001 | 1 |
| 21-3 | EJ442078 | Mic. Jack 3PMJ4 | 31-2-36 | 1 |
| 21-4x | ZW482927 | Washer (SPC)D9.2x14x0.5t | | 1 |
| 21-5 | ZW375153 | E Jack Nut | | 3 |
| 21-6 | EJ433844 | Mic. Jack 2PMJ4 | 31-2-35 | 2 |
| 21-7x | EZ225180 | Nylon Collar, Jack | LD-520 | 2 |
| 21-8x | ZW492884 | Washer (Fiber)D9.2x14x0.5t | | 2 |
| 21-9x | ER213647 | Carbon/R. RD1/4 10k(J) (Insu. type) | 35-9-5 | 2 |
| 21-10 | EV472588 | Dual-axial Double/Vol. D24N 50k Ax2 (Line) | 36-3-38 | 1 |
| 21-11 | EV472590 | Dual-axial Double/Vol. D24N 100k Ax2 (Mic) | 36-3-39 | 1 |
| 21-12 | EV403661 | Double/Vol. (Frictional) DJ20A 10k Ax2 (Line out) | 36-3-27 | 1 |
| 21-13 | EM472612 | VU Meter KL-250B-13 | 46-1-56 | 2 |
| 21-14 | EA472601 | Meter P.C. Board | KH-5007 | 2 |
| 21-15 | EL295312 | No. 2 Lamp 8V 0.2A | 28-2-8 | 4 |
| 21-16x | ZG317968 | Angle Spring | MR-14 | 6 |
| 21-17x | ZW424495 | Washer (SPC)D3.1x8x1t | | 2 |
| 21-18x | ZW348107 | M3 Iso Nut | | 6 |
| 21-19 | BA482477 | Track Selector P.C. Board Comp. (KH-5011) | | 1 |
| 21-20 | BA482488 | Monitor Switch P.C. Board Comp. (KH-5012) | | 1 |
| 21-21x | ZW371856 | Iso Screw, binding head 3x5 | | 2 |
| 21-22 | BA482455 | COM Switch P.C. Board Comp. (RD-525) | | 1 |
| 21-23x | ZW323728 | Screw, binding head 3x5 | | 2 |
| 21-24x | SZ510197 | COM Insulator Plate | KH-5029 | 1 |
| 21-25 | BM482466 | COM Mechanism Block Comp. | KH RDG | 1 |
| 21-26x | ZW273756 | M3 Nut | | 3 |
| JACK PLATE BLOCK | | | | |
| 21-27x | BZ482534 | Jack Plate Block Comp. | KH | 1 |
| 21-28 | EJ452046 | RDG Line Jack Plate | 31-5-43 | 1 |
| 21-29 | EJ378990 | 5P Din-Jack S-1 8123 | 31-1-1 | 1 |
| 21-30 | ES379045 | 6P Slide Switch SJ-0282 | 25-3-36 | 1 |
| 21-31x | ZW410231 | Screw, pan head 2.6x5 | | 2 |
| 21-32x | ZW273778 | M3 Earth Lug | | 1 |
| 21-33x | ER324685 | Carbon/R. RD1/4 33k(J) (Insu. type) | 35-9-5 | 2 |
| 21-34x | ER213873 | Carbon/R. RD1/4 150k(J) (Insu. type) | 35-9-5 | 2 |
| 21-35x | ER345712 | Carbon/R. RD1/4 22k(J) (Insu. type) | 35-9-5 | 2 |
| 21-36x | ER213647 | Carbon/R. RD1/4 10k(J) (Insu. type) | 35-9-5 | 2 |
| AMP. ASSEMBLY BLOCK | | | | |
| 21-37 | UM472522 | Amp. Chassis B | KH-5002 | 1 |
| 21-38 | EA472533 | Rec. Relay P.C. Board | KH-5009 | 1 |
| 21-39 | EP383321 | Relay TECK-36 DC22V 1000 | 47-2-20 | 1 |
| 21-40 | ZW447772 | Tapping Screw 3x6(BR) | | 23 |
| 21-41x | ZW273778 | M3 Earth Lug | | 4 |
| 21-42 | MH472544 | P.C. Board Retaining Prop | KH-5008 | 2 |
| 21-43x | ZW417150 | Screw, pan head 4x6 | | 2 |
| 21-44 | EZ472555 | Rec. Amp. Shield | KH-5017 | 1 |
| 21-45 | MH472566 | OSC. Retaining Prop | KH-5022 | 1 |
| 21-46x | ZW413155 | Screw, binding head 3x6 | | 1 |
| 21-47 | EJ482793 | 10P Multi-Jack 3250-010-001 | 31-4-21 | 2 |
| 21-48 | EJ368785 | 14P Multi-Jack 3250-014-001 | 31-4-14 | 6 |
| 21-49 | EJ300508 | 9P Mate-N-Lock Plug Housing 1-480274-0 | 52-1-7 | 1 |
| 21-50x | EJ373634 | Socket Contact 61115-1 | 52-1-1 | 7 |
| 21-51 | EZ473771 | Side Frame | KH-5003 | 2 |
| 21-52 | SK474107 | Push Knob | KH-5020 | 4 |
| 21-53x | EZ473782 | Card Retainer A | KH-5018 | 1 |
| 21-54 | SK436252 | Knob B | KF-2019 | 1 |
| 21-55 | SK493018 | COM Knob | KH-5028 | 1 |

FIG. 22 PHOTO OF FINAL ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty | Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|--------------------------|-----------|---------------------------------------|---------------|------|-----------------------------|-----------|--|---------------|------|
| MECH. PANEL BLOCK | | | | | FINAL ASSEMBLY BLOCK | | | | |
| 22-1x | BZ482264 | Mech. Panel Block Comp. | KH | 1 | 22-34x | SZ382230 | Ventilator (upper) | RD-A 404 | 1 |
| 22-2 | SP473556 | Mech. Panel | KH-6001 | 1 | 22-35x | ZW439661 | Screw, truss head 3x14 (without groove) | | 4 |
| 22-3 | SE486088 | Counter Escutcheon B | KD-6008 | 1 | 22-36x | ZW273756 | M3 Nut | | 4 |
| 22-4 | SZ473567 | Reel Protector | KH-6003 | 2 | 22-37x | SZ382241 | Ventilator Retaining Plate | RD-A 405 | 1 |
| 22-5x | ZW417137 | Screw, binding head 3x4 | | 12 | 22-38x | ZW200610 | Tapping Screw #1 4x12(truss) | | 1 |
| 22-6 | SC473578 | Head Cover Base | KH-6004 | 1 | 22-39 | SZ377190 | LM Rubber Foot | LM-404 | 4 |
| 22-7 | SM473591 | Pause Name Plate | KH-6009 | 1 | 22-40x | ZW419646 | Washer (SPC)D4.5x9.8x0.5t | | 4 |
| 22-8 | SZ409320 | Illumination Escutcheon (orange) | 61-5023 | 1 | 22-41x | ZW403571 | Wood Screw, round head 4.5x20 | | 4 |
| 22-9x | SZ473580 | Head Cover Rotation Base | KH-6005 | 1 | FINAL ASSEMBLY BLOCK | | | | |
| 22-10x | ZW413741 | Screw, binding head 3x8 | | 2 | 22-42 | SP473703 | Sash A (right) | KH-Ø23A | 1 |
| 22-11x | SZ492030 | Ball Case | KH-6034 | 1 | 22-43 | SP473714 | Sash B (left) | KH-Ø23B | 1 |
| 22-12x | MV269965 | Steel Ball D4 | | 1 | 22-44x | ZW200384 | Screw, countersunk head 3x6 | | 2 |
| 22-13x | ZG249107 | Ball Retaining Spring | RD-632 | 1 | 22-45 | ZW408418 | Panel Washer | KD-Ø29 | 2 |
| 22-14x | ZW383883 | Set Screw 5x4(flat) | | 1 | 22-46 | ZW203084 | Screw, oval countersunk head 3x8 | | 2 |
| 22-15 | EZ426780 | Illumination Escutcheon (red) | 61-5023 | 1 | 22-47x | ZW201150 | Screw, truss head 3x6 (black) | | 2 |
| 22-16 | SC473602 | Head Cover | KH-6008 | 1 | 22-48 | SZ483737 | Panel Washer B (black) | KD-Ø29 | 2 |
| 22-17 | SM473613 | Head Cover Plate | KH-6024 | 1 | 22-49 | ZW482815 | Screw, oval countersunk head 3x8 | | 2 |
| 22-18x | MS473624 | Head Cover Shaft | KH-6007 | 1 | 22-50x | ZW259806 | Washer (SPC)D4.5x12.8x1t | | 6 |
| 22-19x | SZ473635 | Rolling Sleeve | KH-6006 | 1 | 22-51x | ZW487833 | Tapping Screw #1 4x50(truss) | | 4 |
| 22-20x | ZW434160 | Set Screw, hexagon socket 3x3(cup) | | 2 | 22-52x | SZ377190 | LM Rubber Foot | LM-Ø4 | 4 |
| 22-21x | ZW482657 | Set Screw, hexagon socket 4x3(cup) | | 1 | 22-53x | ZW419646 | Washer (SPC)D4.5x9.8x0.5t | | 4 |
| 22-22x | SZ487877 | Stopper Rubber | KH-6033 | 2 | 22-54x | ZW434283 | Tapping Screw #1 4x30(truss) | | 4 |
| 22-23x | SZ473646 | Stopper Rubber | KH-1020 | 2 | 22-55x | ZW200621 | Tapping Screw #1 4x25(truss) | | 2 |
| AMP. PANEL BLOCK | | | | | 22-56 | SK425158 | Pinch Roller Cap | MS-Ø20 | 1 |
| 22-24x | BZ482253 | Amp. Panel Block Comp. | KH | 1 | 22-57 | MP424023 | Pinch Roller (KD) | KD-Ø24 | 1 |
| 22-25 | SP473804 | Amp. Panel | KH-6018 | 1 | 22-58 | SK474063 | Volume Knob B | KH-Ø 11 | 3 |
| 22-26 | SC473815 | VU Meter Cover | KH-6020 | 2 | 22-59x | ZW487844 | Set Screw, hexagon socket 3x7(cup) | | 3 |
| 22-27x | ZW487866 | Screw, round head 2.6x6 | | 6 | 22-60 | SK474074 | Volume Knob A | KH-Ø 12 | 3 |
| 22-28 | EZ397890 | Rec. Button Escutcheon | KD-5003 | 1 | 22-61x | ZW433001 | Set Screw, hexagon socket 3x5(cup) | | 3 |
| 22-29 | SZ492941 | COM Guide | KH-6036 | 1 | 22-62x | EZ436217 | Collar, Jack | MC-Ø6 | 3 |
| 22-30 | SZ436151 | Lamp Escutcheon (red) | DF-6025 | 1 | 22-63x | SZ473501 | Ventilator Panel (back) | KH-Ø 25 | 1 |
| CASE BLOCK | | | | | 22-64x | ZF324448 | Tapping Screw #1 3x10(truss) | | 4 |
| 22-31 | BC482242 | Case Block Comp. | KH | 1 | 22-65x | EF444183 | Fuse 1.5A 250V | 39-1-1 | 1 |
| 22-32x | SZ439694 | Case Corner Angle | KD-6031 | 2 | 22-66x | EF277413 | Fuse ST-2 2A | 39-1-2 | 1 |
| 22-33x | ZW447963 | Tapping Screw #1 3x10(truss) | | 8 | 22-67x | EF338387 | Fuse ST-2 1.5A | 39-1-3 | 1 |

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

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| BA482387 | 6-19x | EC220994 | 14-C9 | EC438524 | 11-C211 | EO262484 | 14-L1 | ER212883 | 12-R15 |
| BA482387 | 9-1x | EC220994 | 14-C17 | EC442080 | 15-C4 | EO383365 | 15-T1 | ER212883 | 12-R17,8 |
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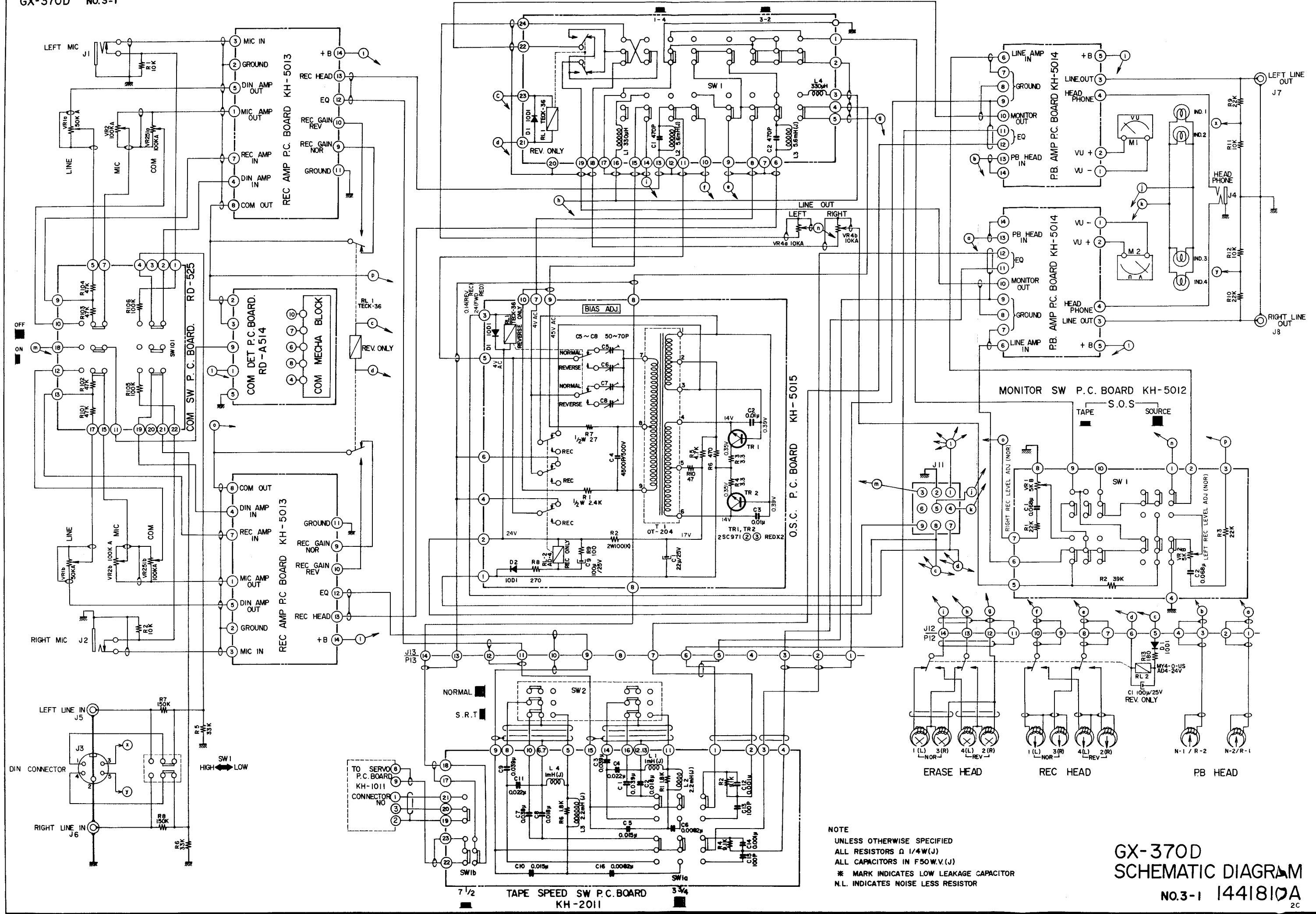
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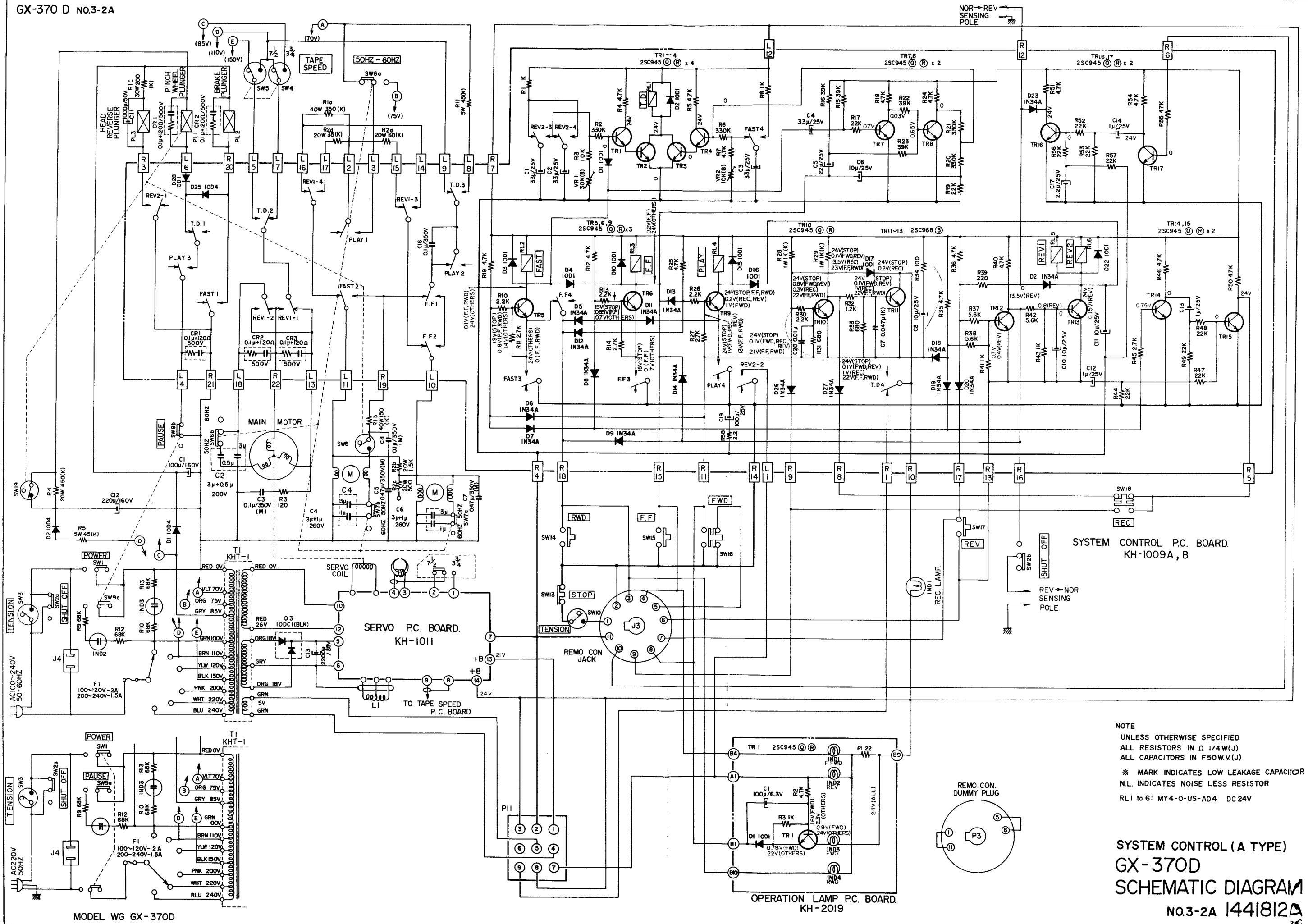
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SECTION 3
SCHEMATIC DIAGRAM

GX-370D SCHEMATIC DIAGRAM



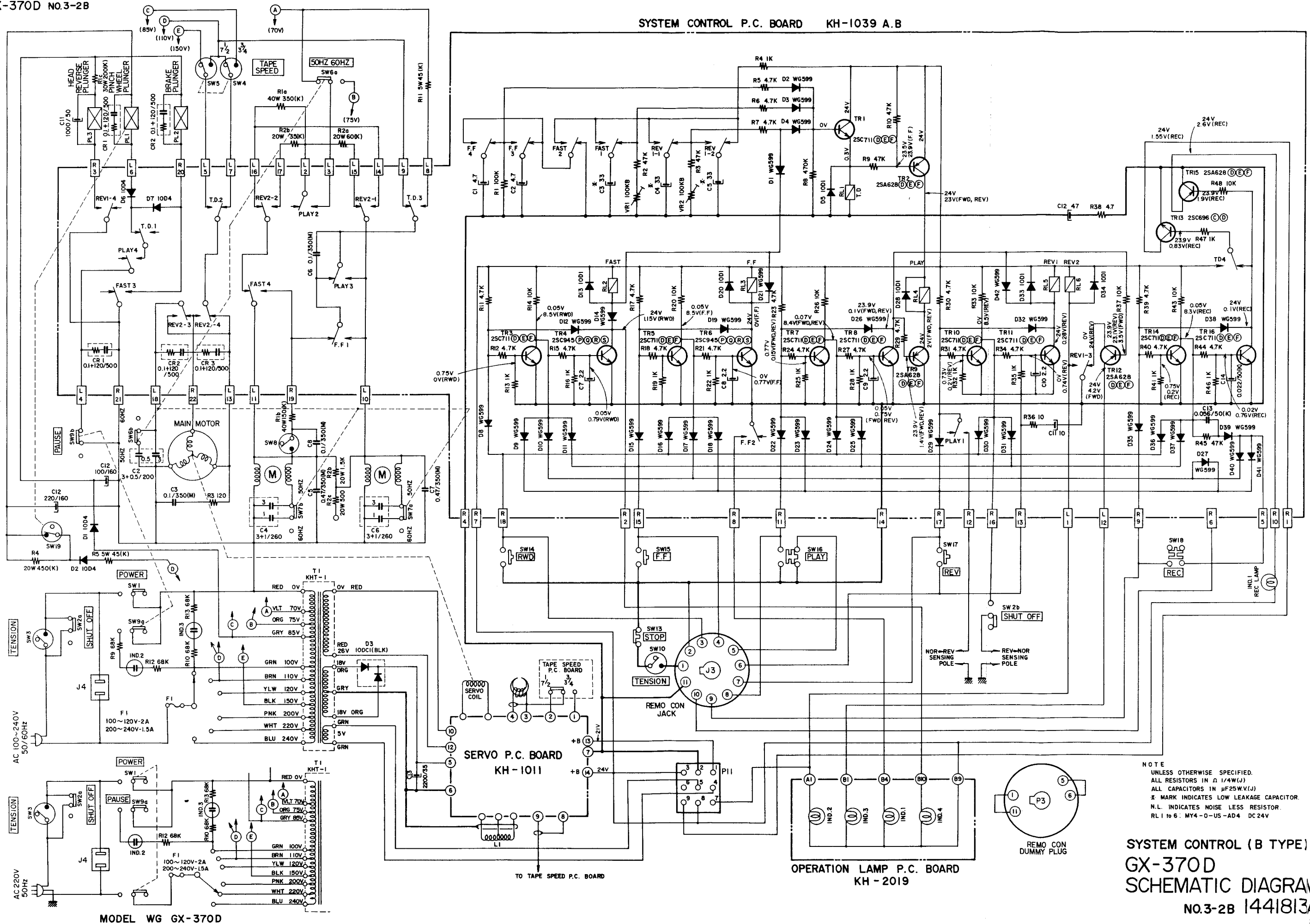
NOTE
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 ALL RESISTORS Ω 1/4W(J)
 ALL CAPACITORS IN F50W.V.(J)
 * MARK INDICATES LOW LEAKAGE CAPACITOR
 N.L. INDICATES NOISE LESS RESISTOR



NOTE
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN Ω 1/4W(J)
 ALL CAPACITORS IN F50W.V(J)
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 N.L. INDICATES NOISE LESS RESISTOR
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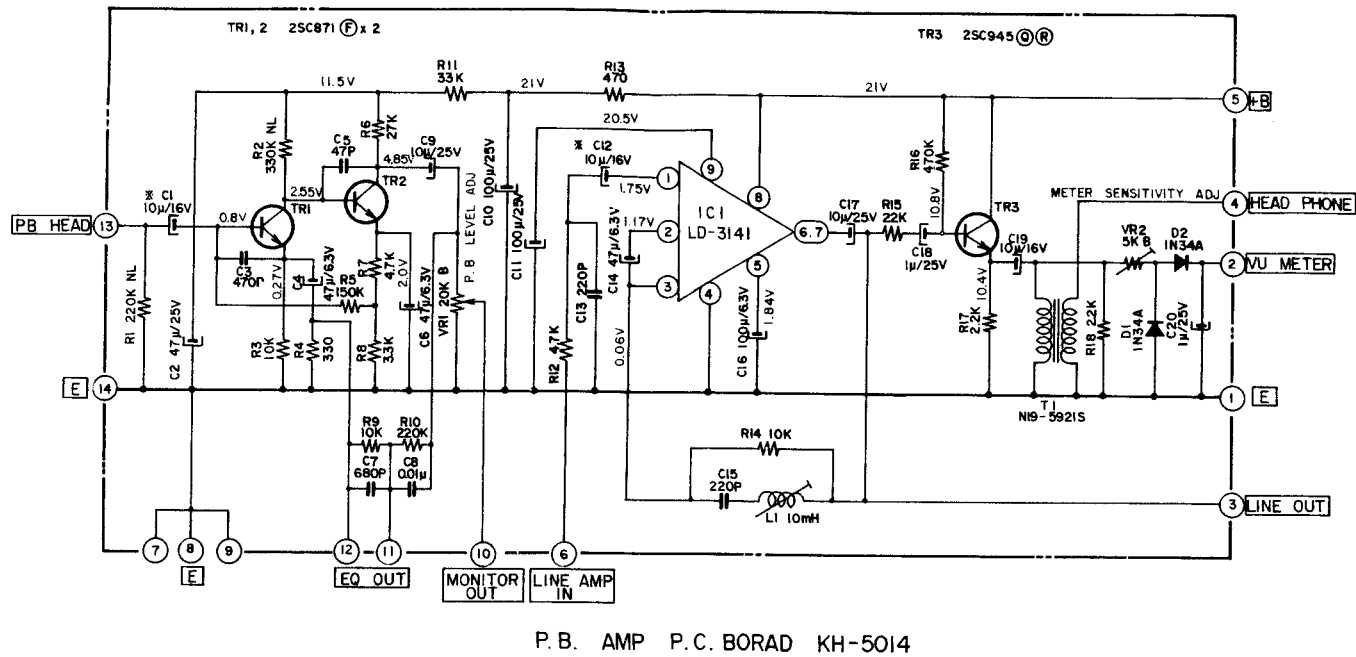
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SYSTEM CONTROL P.C. BOARD KH-1039 A.B

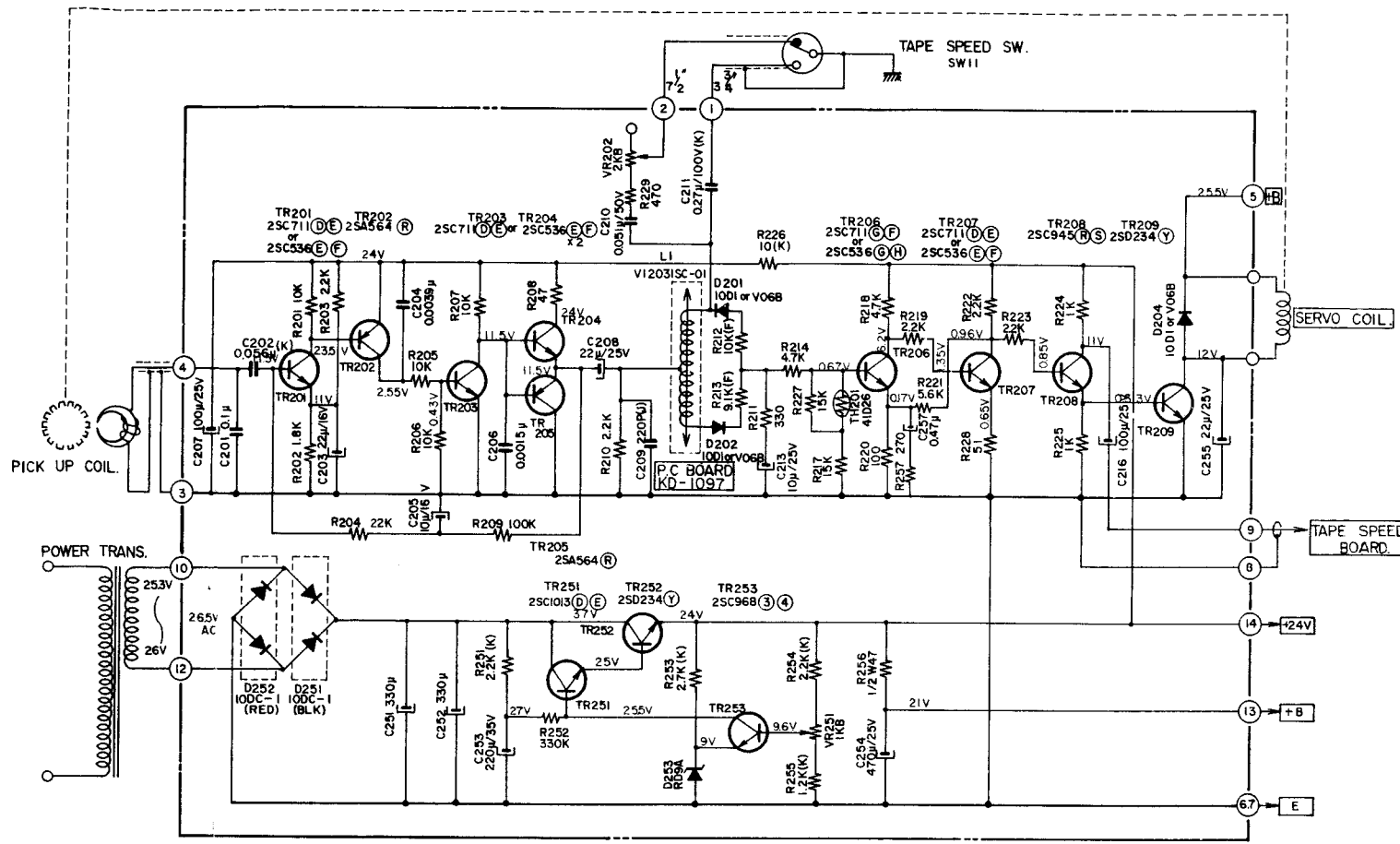


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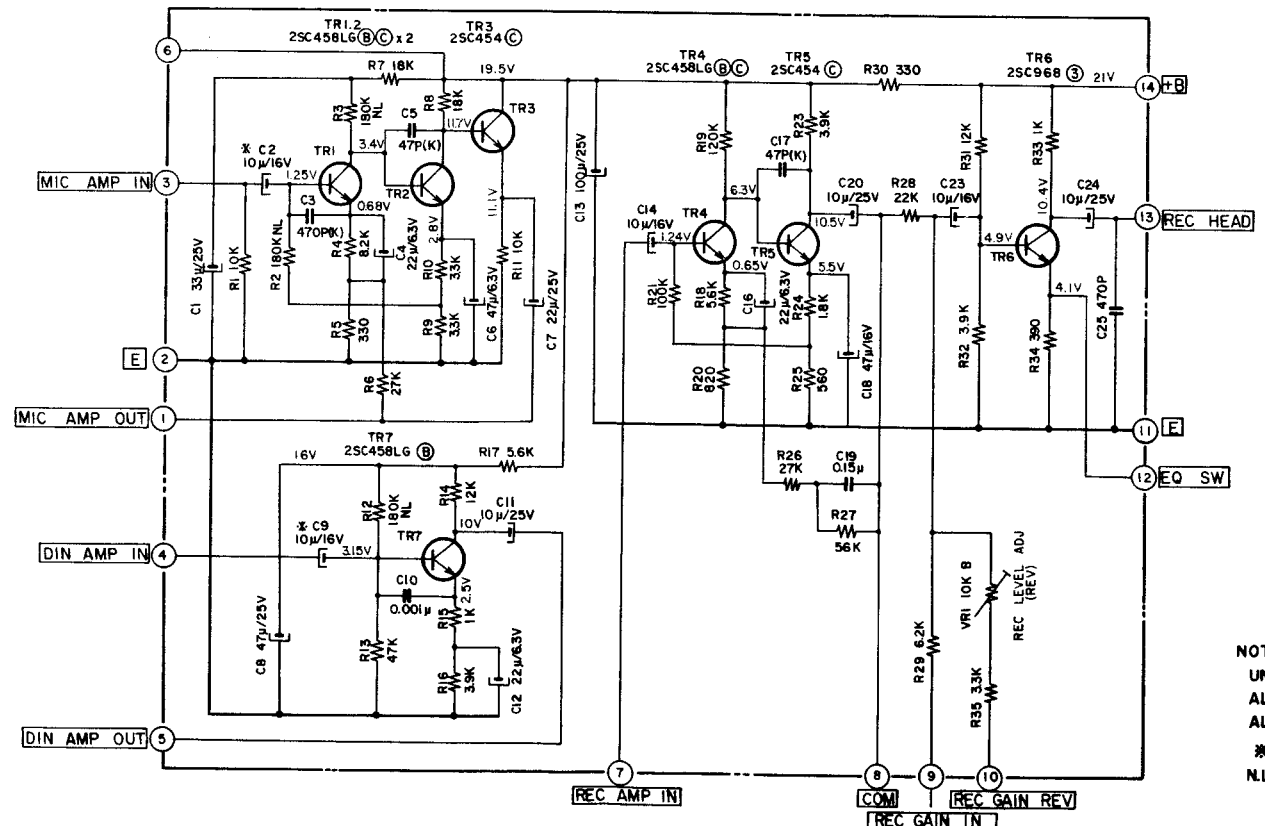
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P. B. AMP P. C. BOARD KH-5014



SERVO P. C. BOARD KH-1011



REC AMP P. C. BOARD KH-5013

