ADDITIONAL

# Service Manual

PIONEER

ORDER NO.
ARP-112-0

STEREO TURNTABLE

# PL-430 WE,WB,WP,R

MODEL PL-430 COMES IN FOUR VERSIONS DISTINGUISHED AS FOLLOWS:

| Type | Voltage | Remarks |
|---|---|---|
| WE | 220V – 240V | Europe model |
| WB | 220V – 240V | United kingdom model |
| WP | 220V – 240V | Oceania model |
| R | 110V – 120V/220V – 240V (switchable) | General export model |

- The basic performance of the PL-430/WE, WB, WP and R types is the same as the PL-4/KUT type. Please refer to the PL-4/KUT type service manual (ART-709) with the exception of the supplements.

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# 1. SPECIFICATIONS

## Motor and Turntable

Drive System . . . . . Direct-drive
Motor . . . . . DC servo motor
Turntable Platter . . . . . 310mm diam. aluminum alloy die-cast
Speeds . . . . . 33-1/3 and 45rpm
Wow and Flutter . . . . . Less than *0.014% (WRMS)
0.025% (WRMS)
0.035% (DIN)

Values marked with an "*" designate the wow and flutter for motor, and do not include the cartridge or tonearm load.

Signal-to-Noise Ratio . . . . . More than 78dB (DIN-B)
(with Pioneer cartridge model PC-220)

## Tonearm

Type . . . . . Static-balance type, Straight pipe arm
Effective Arm Length . . . . . 221mm
Overhang . . . . . 15.5mm
Usable Cartridge Weight . . . . . 3g (min.) to 8g (max.)

## Subfunctions

Auto-return mechanism, Anti-skating force control, Stylus pressure direct-readout counterweight, Cueing device, Strobe light, Free stop hinges

## Miscellaneous

Power Requirements
WE, WB, WP models . . . . . AC220-240V~, 50, 60Hz
R model . . . . . AC110-120/220-240V~ (switchable), 50, 60Hz
Power Consumption . . . . . 12W
Dimensions . . . . . 420(W) x 108(H) x 367(D)mm
16-1/2(W) x 4-1/4(H) x 14-7/16(D)in.
Weight . . . . . 5.8kg/12 lb 13 oz

## PC-220 Specifications (WE, WB, WP models only)

Type . . . . . Moving magnet type
Stylus . . . . . 0.5 mil diamond (PN-220)
Output Voltage . . . . . 2.5mV
(1kHz, 50mm/s Peak velocity, LAT)
Tracking Force . . . . . 1.7g to 2.3g (proper 2g)
Frequency Response . . . . . 10 to 30,000 Hz
Recommended Load . . . . . 50kΩ
Weight . . . . . 5.5g

## PC-3MC Specifications (R model only)

Type . . . . . Moving coil type
Stylus . . . . . 0.5mil diamond (PN-3MC)
Output Voltage . . . . . 2.5mV
(1kHz, 50mm/s Peak velocity, LAT)
Tracking Force . . . . . 1.7g to 2.3g (proper 2g)
Frequency Response . . . . . 10 to 32,000Hz
Recommended Load . . . . . 50kΩ
Weight . . . . . 3.1g

## Accessories

EP Adapter . . . . . 1
Operating Instructions . . . . . 1

*NOTE:*
*Specifications and design subject to possible modification without notice, due to impromements.*

# 2. CONTRAST OF MISCELLANEOUS PARTS

*NOTES:*

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★ .*
  ★★ *GENERALLY MOVES FASTER THAN* ★
  ***This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.***

| Mark | Symbol & Description | Part No. | | | | |
|---|---|---|---|---|---|---|
| | | PL-4/KUT | PL-430/WE | PL-430/WB | PL-430/WP | PL-430/R |
| | Panel | PNX-348 | PNX-457 | PNX-457 | PNX-457 | PNX-457 |
| | Front name plate (C) | PAM-076 | PAM-089 | PAM-089 | PAM-089 | PAM-089 |
| | Front name plate (E) | PAM-078 | PAM-090 | PAM-090 | PAM-090 | PAM-090 |
| | SP knob (A) unit | PAD-088 | . . . | . . . | . . . | . . . |
| | SP knob (E) unit | . . . | PAD-098 | PAD-098 | PAD-098 | PAD-098 |
| | C knob unit | PAD-093 | . . . | . . . | . . . | . . . |
| | C knob (C) unit | . . . | PAD-107 | PAD-107 | PAD-107 | PAD-107 |
| | Rubber mat assembly | PEA-057 | PEA-057 | PEA-057 | PEA-057 | PEA-057 |
| ⚠ ★★ | Microswitch | PSF-020 | PSF-020 | PSF-020 | PSF-020 | PSF-020 |
| ⚠ ★ | Power transformer (120V) | PTT-119 | . . . | . . . | . . . | . . . |
| ⚠ ★ | Power transformer (220V–240V) | . . . | PTT-143 | PTT-143 | PTT-143 | . . . |
| ⚠ ★ | Power transformer (110V–120V/220V–240V) | . . . | . . . | . . . | . . . | PTT-121 |
| ⚠ | AC power cord | PDG-023 | PDG-025 | PDG-026 | PDG-027 | PDG-028 |
| ⚠ ★★ | Neon lamp | PEL-046 | PEL-049 | PEL-049 | PEL-049 | PEL-046 |
| ⚠ ★★ | Line voltage selector | . . . | . . . | . . . | . . . | PSB-011 |
| | PU cord | PDE-064 | PDE-044 | PDE-044 | PDE-044 | PDE-044 |
| | Operating instructions | PRB-191 | PRD-078 | PRB-213 | PRB-213 | PRB-213 |
| | Packing case | PHG-441 | PHH-003 | PHH-003 | PHH-003 | PHH-003 |
| | Power supply assembly | XWR-006 | XWR-016 | XWR-016 | XWR-016 | XWR-018 |

# 3. ELECTRICAL PARTS LIST

*NOTES:*

- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

  *Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).*

  | | | | |
  |---|---|---|---|
  | *560Ω* | *56 × 10¹* | *561 .....* | *RD¼PS 5 6 1 J* |
  | *47kΩ* | *47 × 10³* | *473 .....* | *RD¼PS 4 7 3 J* |
  | *0.5Ω* | *0R5* | *.....* | *RN2H 0 R 5 K* |
  | *1Ω* | *010* | *.....* | *RS1P 0 1 0 K* |

  *Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).*

  | | | | |
  |---|---|---|---|
  | *5.62kΩ* | *562 × 10¹* | *5621 ....* | *RN¼SR 5 6 2 1 F* |

- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★ .*

  *★★ GENERALLY MOVES FASTER THAN ★*

  *This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.*

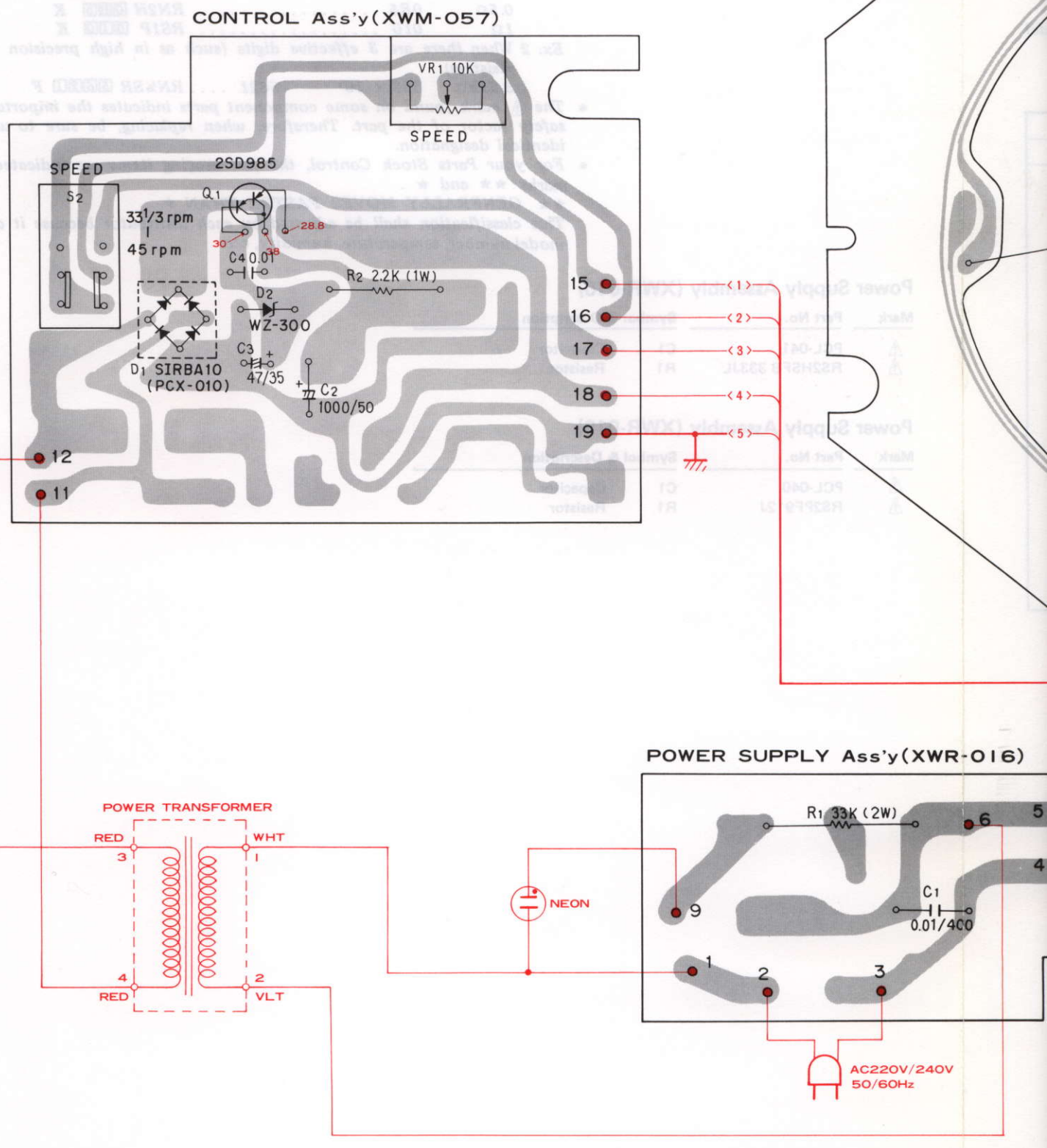
## Power Supply Assembly (XWR-016)

| Mark | Part No. | Symbol & Description | |
|---|---|---|---|
| ⚠ | PCL-041 | C1 | Capacitor |
| ⚠ | RS2HSFB 333JL | R1 | Resistor |

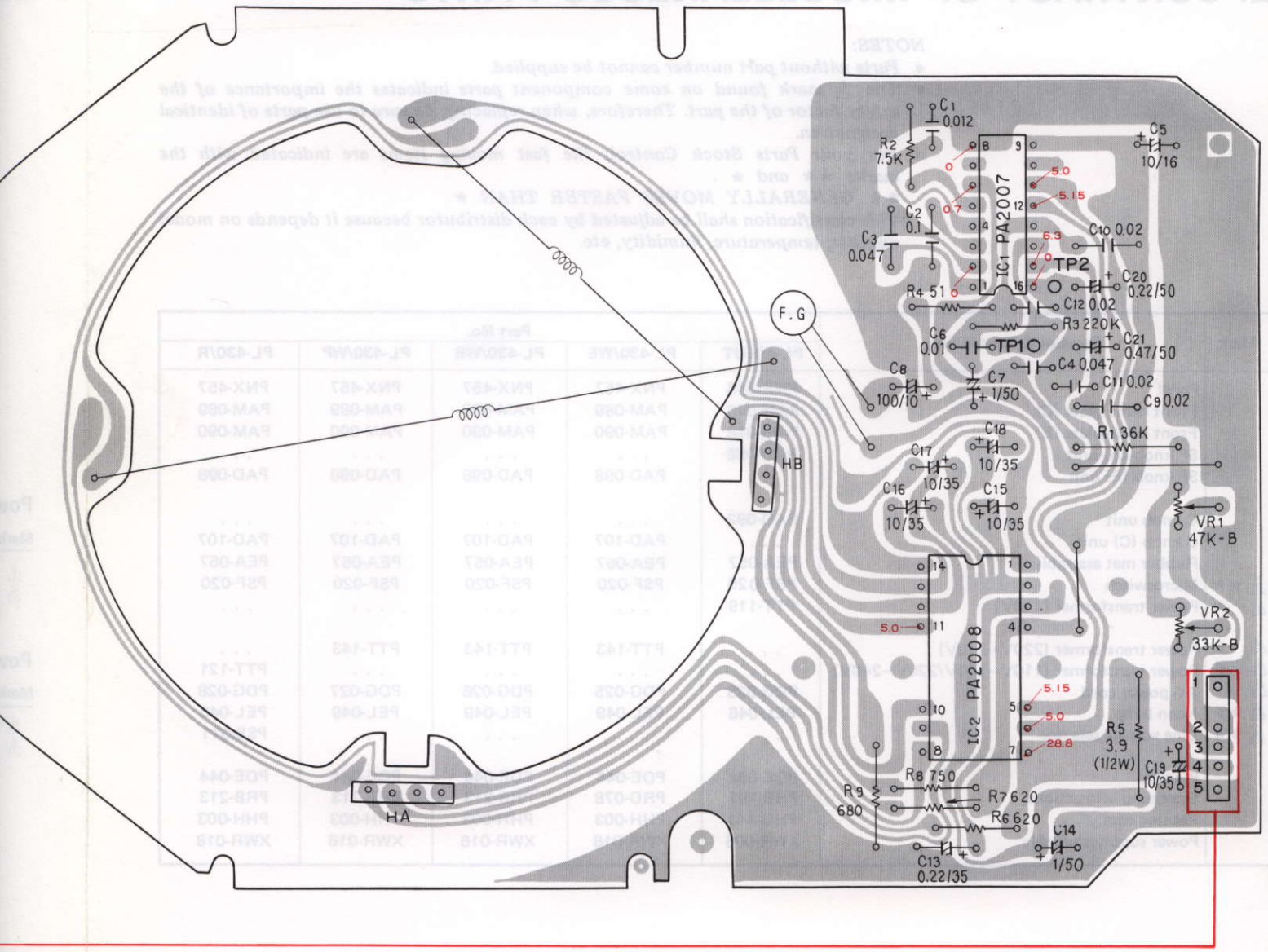
## Power Supply Assembly (XWR-018)

| Mark | Part No. | Symbol & Description | |
|---|---|---|---|
| ⚠ | PCL-040 | C1 | Capacitor |
| ⚠ | RS2PF912J | R1 | Resistor |

# 4. P.C. BOARD CONNECTION DIAGRAM

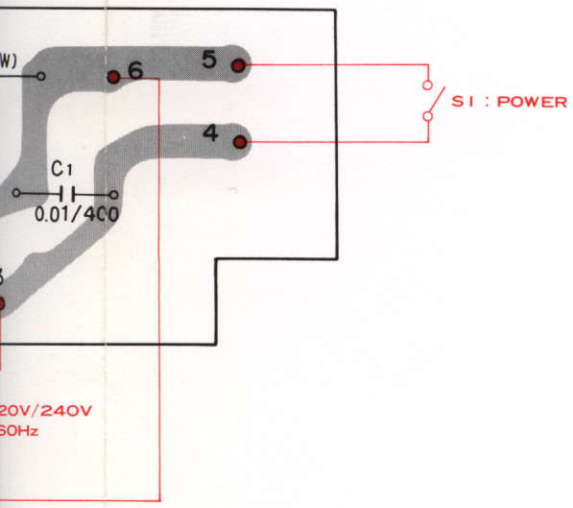


## MOTOR CONTROL Ass'y(PWM-060)

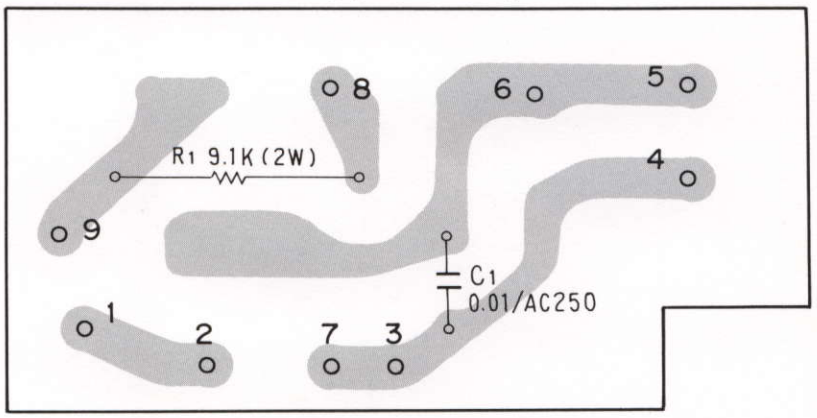



A B C

## 'y(XWR-016)




## POWER SUPPLY Ass'y(XWR-018)

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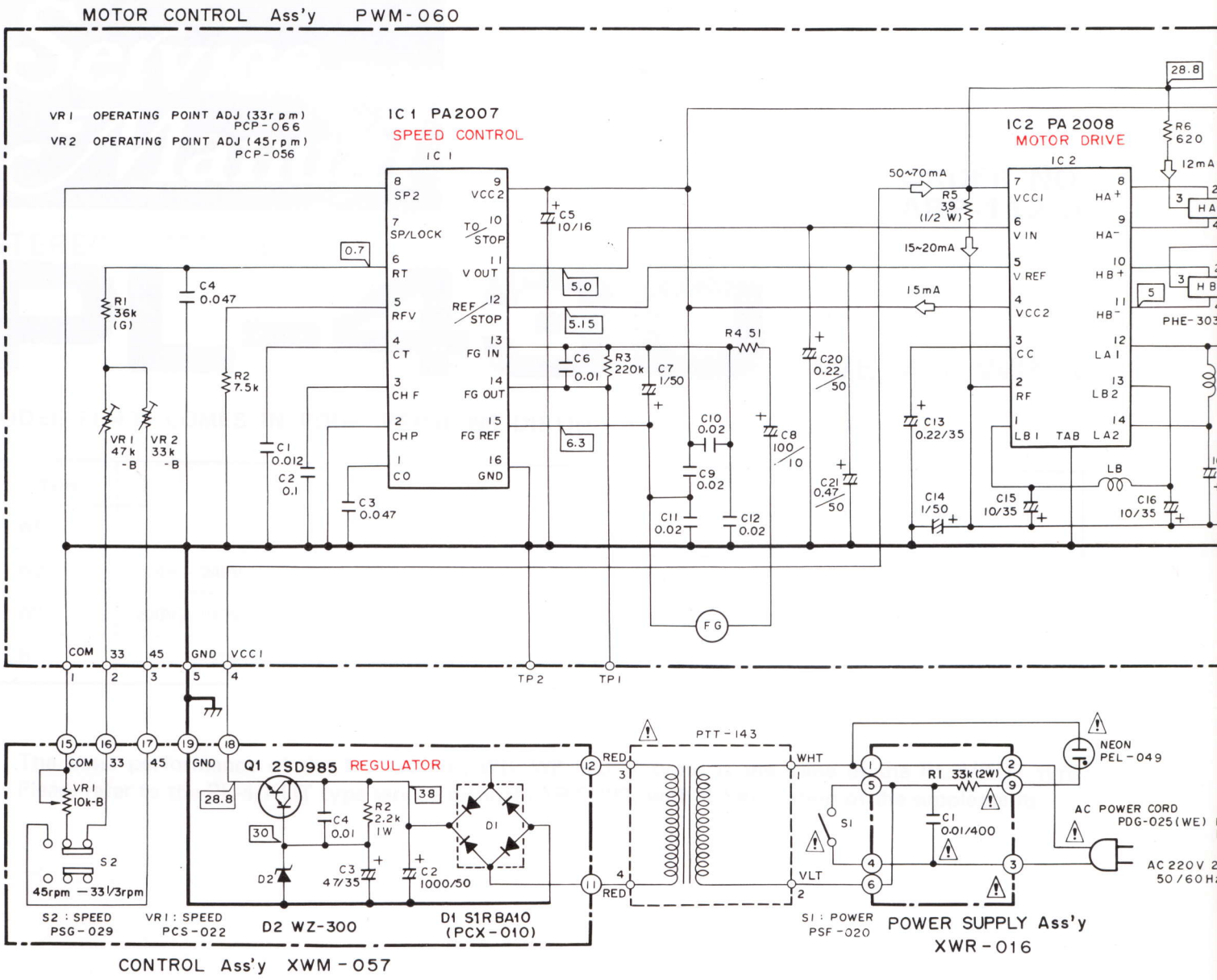
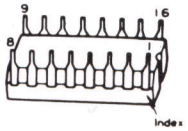
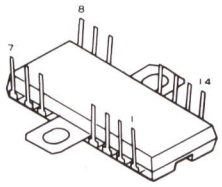
# 5. SCHEMATIC DIAGRAM



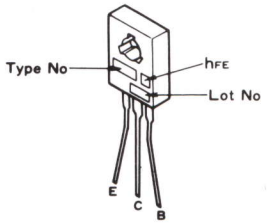

**PA2007**

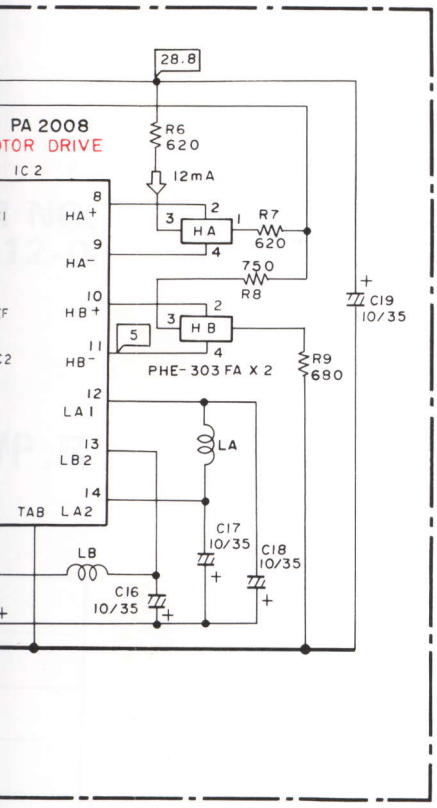



**PA2008**




**2SD985**






1. RESISTORS:
   Indicated in Ω, ¼W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10% (M) : ± 20% tolerance

2. CAPACITORS:
   Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
   Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:
   : DC voltage (V) at no input signal
   mA : DC current at no input signal

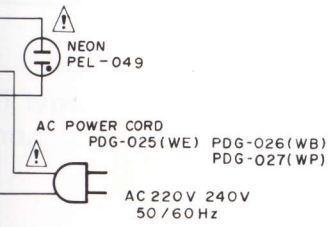
4. OTHERS:
   : Adjusting point.
   The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

   This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

SWITCHES:

| | | |
|---|---|---|
| S1 : POWER | ON — OFF |
| S2 : SPEED | 33 1/3 rpm — 45 rpm |

The underlined indicates the switch position.




Ass'y

FE

Lot No

*NOTE:*
***The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.***

POWER SUPPLY CIRCUIT FOR R TYPE