

RECORDER

3500 SERIES



()

portable recorder

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1.

1-1

- 1) 250V
- 2) Fuse , SW OFF

1-2

- 1) , SW OFF
- 2) Fuse (1.5 - , 3.2.1 , 3.2.5- fuse)
- 3) , +, -
- 4) , 가
- 5) Pen
 - PEN UP
 - [MEAS./ZERO] switch , ZERO
 - PEN CAP ,

1-3

- 1) PEN . (PEN .)
- 2) Chart speed 120mm/ , roll ink
Ink가 pen 가 .)
- 3) pen cap . Cap ,
pen cap pen ink
가 .
- 4) , (SE-10Z-2), ROLL (SE-10)

1-4

1.4.1

1.4.2

.....	1			
.....	1			
cord	.....	1		
cord	.....	1	pen : 1, 2pen : 2, 3pen : 3	
ink pen	.....	1	pen : 1, 2pen : 2, 3pen : 3	
DC plug	.....	1		
.....	.....	1		

1.5

, DC , .
100V, 115V, 220V, 240V , -10% ~ +10%
 250V .
 48~62Hz .
 DC 12V~27V .
 1.5V 6 .

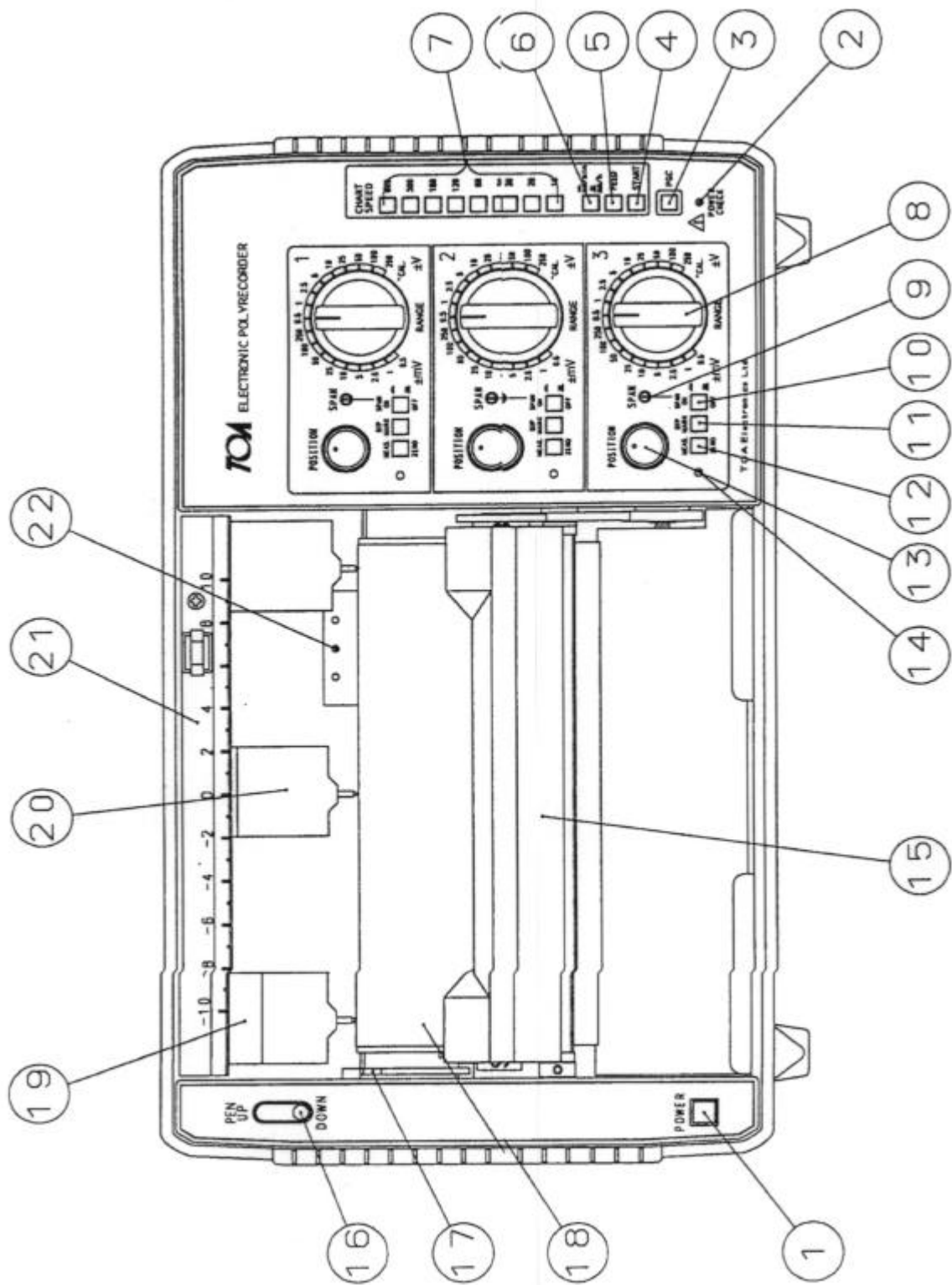
, 100V [LINE SELETOR] switch가
 DC, 가 .
 (3-2-6)

1.6

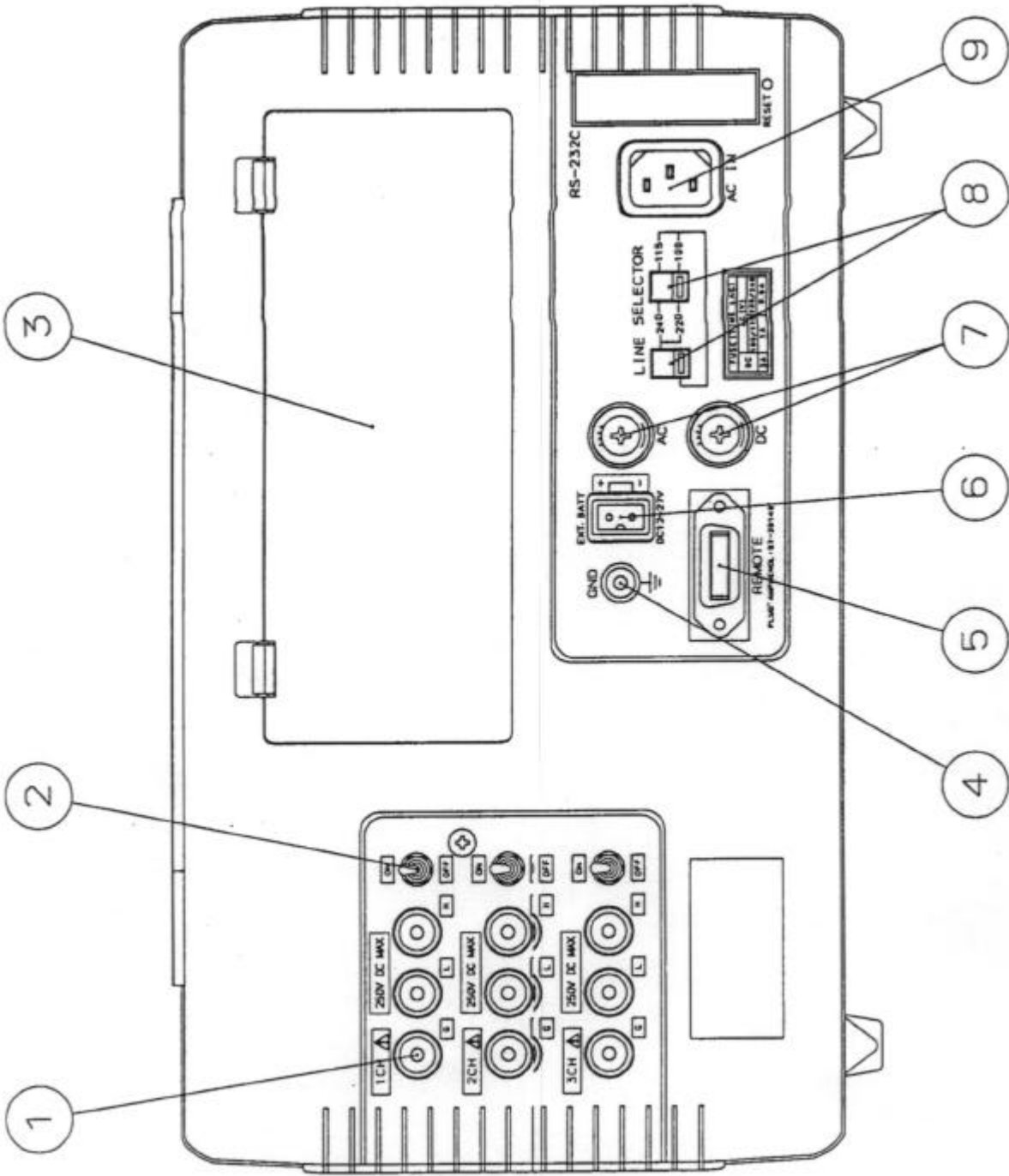
, [] .

1.7

cord , control , 14pin , 3P cord plug가 .



EPR - 3500 SERIES
 (EPR - 3531 3 PEN)



EPR - 3500 SERIES
 (EPR - 3531 3 PEN)

2.

2.1

section , switch, , Lever,
2-1, 2-2 .

2.2 (2-1)

[POWER] switch ON-OFF switch .

ON(), OFF() .

[POWER CHECK] Lamp ON . ,

[PGC] switch (Option) ON-OFF switch

ON(), OFF()

PGC set [PCG] switch

[START] switch switch . ON,

OFF .

[FEED] switch switch , 300mm/min 가

. ink pen .

[mm/min, mm/h] switch mm/min mm/h

switch .

[CHART SPEED] switch switch .

[RANGE] switch . , CAL

[SPAN] volume [SPAN] switch ON , volume ,

span 20% . 20%

span ,

[SPAN] switch switch ON , [SPAN] volume

가 . OFF ,

span 가 .

[DIP MARK] switch switch pen 2.5 .

[MEAS.ZERO] switch switch MEAS. , 가

ZERO ,

가 .

[POSITION] pen zero , pen

. [MEAS./ZERO] switch가 ZERO

ON channel CHANNEL switch가 ON .

diode

- chart cover
- chart block
- pen
- plate
- 1 [PEN] Lever
- 2 CHART SET Lever
- 3 CHART block
- 4 PEN holder
- holder pen
- 5 PEN
- disposable cariridge ink pen
- 6 ㉞
- 10
- 7 PEN cap pin
- pen pen cap pin

2.3 (2-2)

cord , (H) 가 earth
 inpedance , (L) inpedance
 (G) , 3-4-1

channel switch channel
 switch

BOX cover

[GND]

[REMOTE] connector control connector

[EXT.BATT] concent DC (DC 12~27V) concent

Plug

Fuse holder AC , DC fuse

[LINE SELECTOR] switch

2 slide switch switch 100, 115,
 220, 240V

connector cord connector

3.

3.1

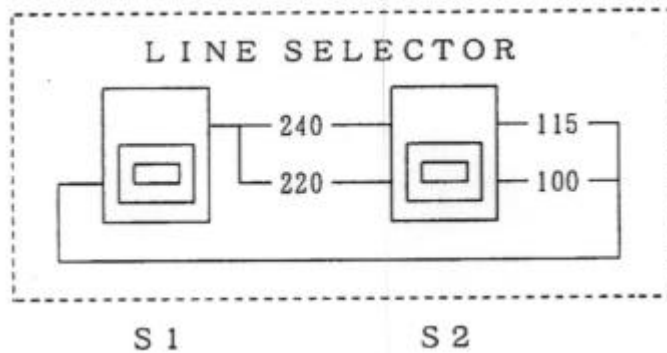
3.2

[POWER] switch OFF

3.2.1

1) [1.5] , Line

2) Line 3-1 [LINE SELECTOR] switch
 , 240V Line 25V가 Line ±10%



[LINE SELECTOR] Switch 100V

3-1

Line	S1	S2
110V		
115V		
220V		
240V		

3) [FUSE] Holder

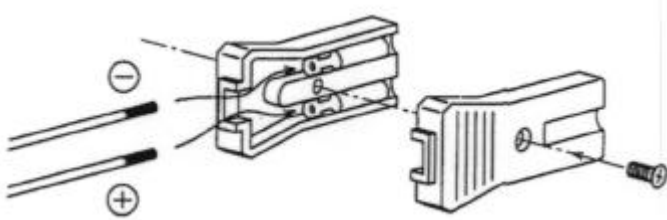
Fuse

	Fuse Type
110V, 115V	1A dymurac fuse
220V, 240V	0.5A dymurac fuse
DC	3A dymurac fuse

, Fuse .

- 4) cord [AC IN] Reselectacle , .
- 5) [POWER] switch . [POWER CHECK] Lamp가 , .

3.2.2 DC



- 1) 2P plug lead 3-2 .

- 2) plug EXT. BATT concent Lead DC

lead	DC		DC
1 pen	... 0.4A		
2 pen	... 0.6A		
3 pen	... 0.8A		

DC , plug .

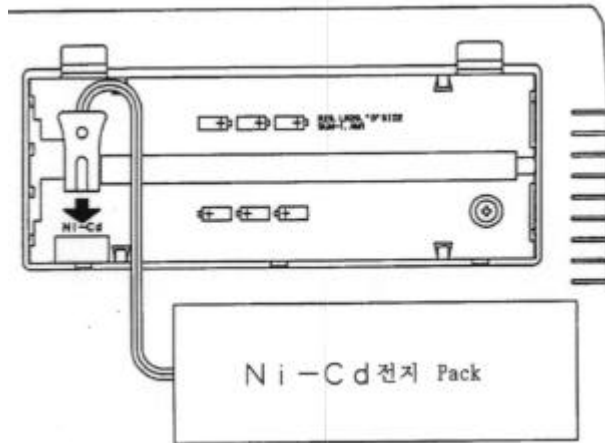
3.2.3

- 1) cover .
- 2) Holder 6 , +, - .
- 3) , cover .

, 가

3.2.4 Ni-cd (Option)
 option() , 가 Ni-cd 가
 , pro-tein ,
 AC , .

- 1) cover .
- 2) Holder Ni-cd socket Ni-cd pack plug .



- 3) Ni-cd pack Holder , cover .
- 4) AC AC cord AC concent
 power switch ON
 , 12 80% .

Ni-cd pack 가 .



3.2.5 Fuse

AC Line DC Line Fuse
 [FUSE] Holder(3-4)
 , +driver Fuse Holder

3-4

3.2.6 AC , DC ,
 AC Line ,
 , Battery , 12V Battery

14V , 28V Battery
 AC Line
 가 AC Line

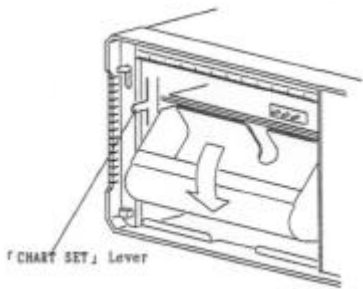
가 , ,

() AC 14V
 14V
 AC

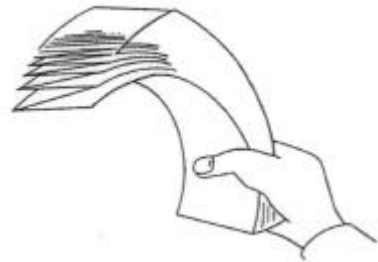
3.3

3.3.1

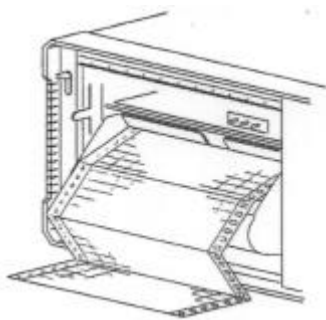
1)



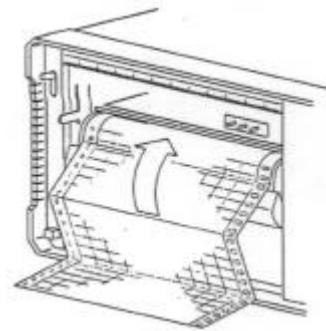
3-5
 (a) [CHART SET] Lever
 , 3-5
 가



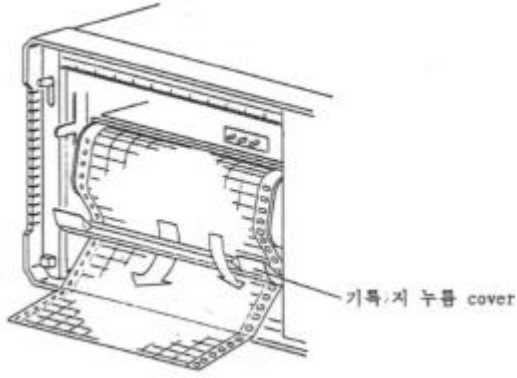
3-6
 (b)



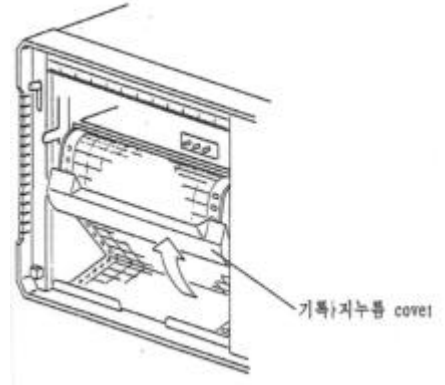
3-7
 (c)
 30cm



3-8
 (d)
 Lock



(e) 3-9
cover
cover



(f) 3-10
sprocket ()
cover
Lock
cover

2) Roll
Roll

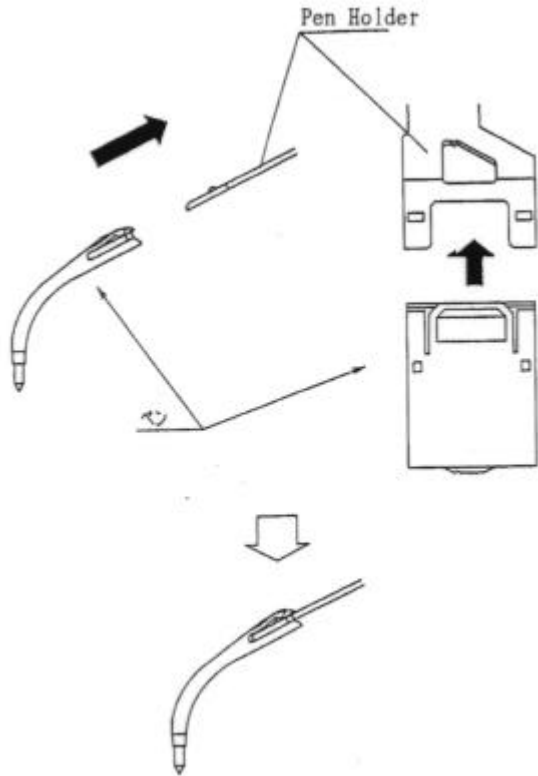
(b)

(SE-10Z-2), Roll (SE-10)

3.3.2 Pen

pen

pen up



1) pen cap , pen
 pen chart chart Drum

, Pen Holder
 Lock

2) Pen

3) Pen Holder 1 channel, 2channel ...

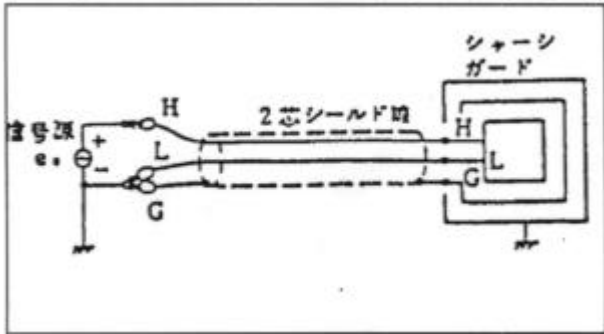
4) Pen Pen cap pen cap pin
 , pen , pen cap

3.4.1 Lead

3P lead

(H) + 가 , pen
3-12 ~ 3-14

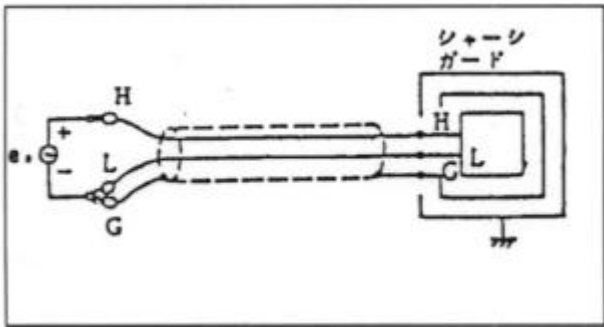
3P cord



3-12

1)

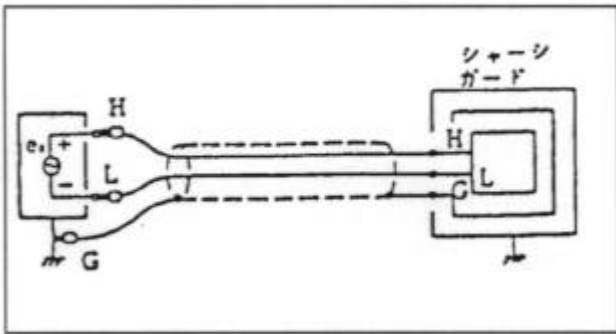
G



3-13

2)

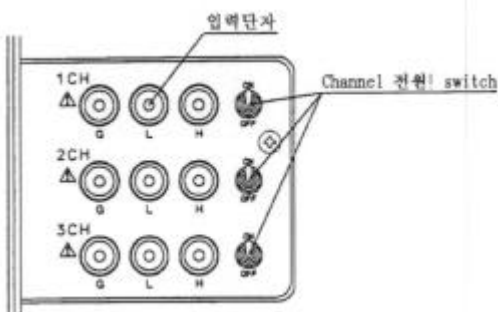
L G



3-14

3)

3.4.2 channel



channel switch
channel ON

channel , channel switch OFF

가

Main power switch channel switch가 OFF , SET

3.4.3 Range

Range

scale , set

V range ... DC 250V

mV range ... DC 30V

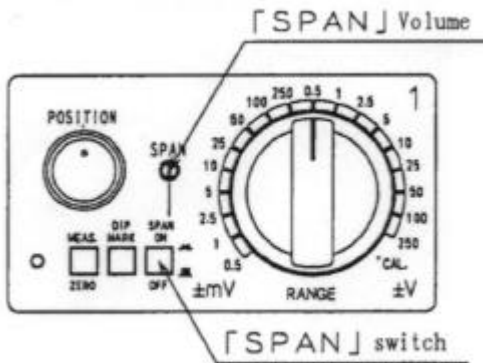
Range

Full

3.4.4 chart speed

speed

3.4.5 [SPAN] switch ON, OFF



OFF

span

span 가

panel [SPAN] switch

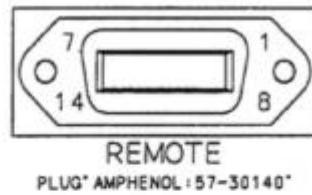
ON , [SPAN] volume , ±

20% 가 가

3-16

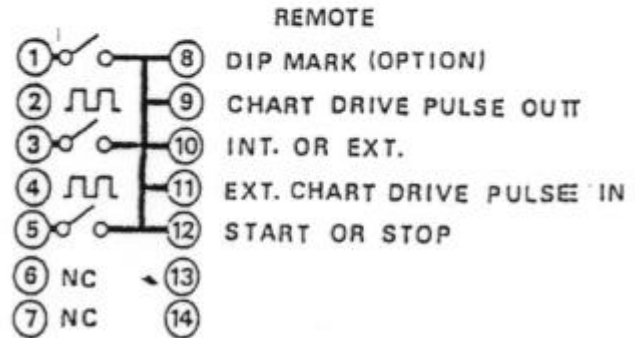
3.4.6 REMOTE()

chart speed chart
 start/stop, DIP mark (option)
 TTL Level
 open/short remote control가



[REMOTE] connector Amphenol
 14 pin plug cable

[REMOTE] connector pin
 3-17



1) INT. or EXT (or
 chart speed
 [~] 가 open
 pannel chart speed

2) EXT. CHART DRIVE PULSE IN() 3-17
 chart speed가
 14P connector , INT, or EXT. [~] short , pannel chart
 speed , chart speed EXT. CHART DRIVE PULSE IN
 [~] TTL Level pulse
 1pulse 0.05mm chart가
 chart speed L(mm/h mm/min) pulse f(P.P.S)
 $L = 180 f \text{ mm/h}$ $L = 3f \text{ mm/min}$ 가
 pulse (f max.) 200P.P.S

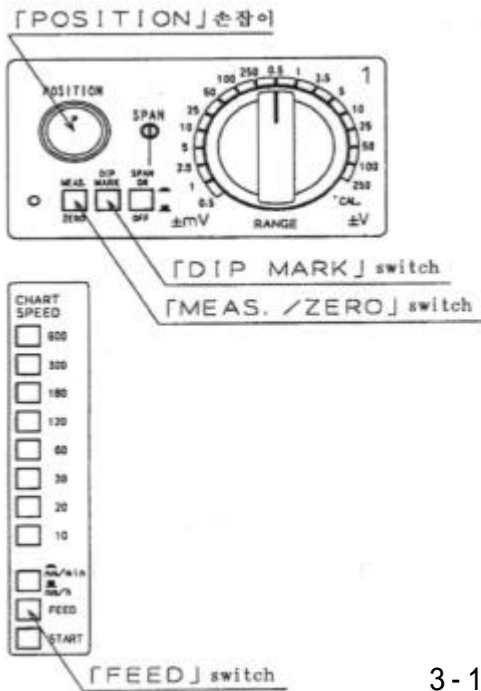
3) CHART DRIVE PULSE OUT ()
 INT. or EXT. [~] open , [~] pannel chart
 speed pulse가 , [~] short ,
 [~] pulse pulse가 [~]
 2 Recorder , 1 master [~] , ,
 slep INT. or EXT. [~] short [~] , 2
 Recorder chart speed ,
 2 , 3 ... 가 가

4) START or STOP(start, stop)
 [~] 가 open , chart short chart가

DIP mark (DIP mark)
 [~] pen , Data DIP mark

option

3.4.7



- 1) [PEN] Lever , [POSITION] [FEED] switch start
- 2) CHART [START] switch ON, [MEAS./ZERO] switch MEAS.
- 3) [MEAS./ZERO] switch ZERO pen
- 4) [DIP MARK] switch 2.5

3-18

- 1) , CHART [START] switch OFF, [PEN] lever [FEED] switch
- 2) Data , missing Roll , chart cover , data
- 3) , 3.4.7

3.5.2

- 1) 3.5.1 1), 2) , [POWER] switch OFF

, pen pen holder , pen pen cap

4.

4.2 Pen
 Pen , 1,600m 가 . ink가 , Pen
 가 Pen , Pen
 Pen , 1 poly bag

4.3 panel [POWER CHECK] lamp가 ,
 , , ,
 , chart speed, maker

		chart speed	1pen	2pen	3pen
	0.01 Hz Sine 150mm	60mm/h	40H	22H	12H
4.4	"	"	14H	8H	5.5H

[MEAS./ZERO]switch "ZERO" [POSITION] ZERO ,
 [PANGE] "CAL" [MEAS./ZERO]switch "MEAS."
 [SPAN]switch "ON" , pen , [SPAN]volium ,
 , [SPAN]switch "OFF" ,
 span

portable recorder

5.

3 ,
 , start feel , plate ,
 , , , Memory card
 data , 1.2.3. need option

6.

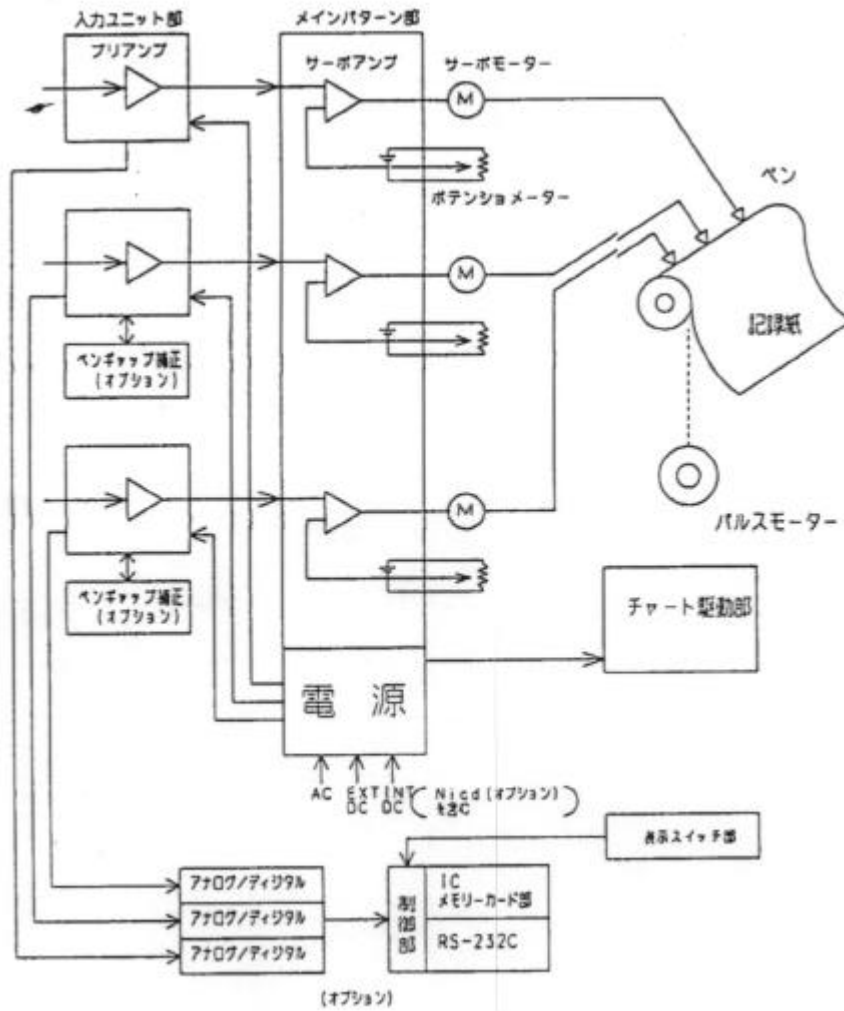
, pen

servo

main pattern ,

chart

3



...
 P e n ... 1~3 pen
 ...
 ... dis potable felt pen
 F i e l d P e n ... 1 pen CH1 赤()
 ... 2 pen CH1 赤, CH2 祿()
 ... 3 pen CH1 赤, CH2 祿, CH3 靑()
 r a n g e ... $\pm 1.5, 2.5, 5, 5, 10, 25, 50, 100, 250$ mV & V 18 range
 ... $2M\Omega$
 ... $10k\Omega$
 ... $\pm 0.5\%$ (, range)
 range 250mV
 ... $\pm 0.2\%$
 r a n g e ... $\pm 0.25\%$
 ... ZERO : $0.6 \mu V$ / $+0.075\%$ of range/
 FS : 0.075% of range/
 ... 150mm
 P e n ... 5mm
 P e n s p e e d ... 800mm/sec(AC 100V)
 ... range 가
 s p a n A D J full scale $\pm 20\%$, OFF switch (panel)
 s p a n ... range CAL. — span ADJ. 가
 c h e c k ... panel switch 가
 ... x : ink roll (SE-10) 150mm x 20m
 ink (SE-10Z-2) 150mm x 15m
 ... 10, 20, 30, 60, 120, 180, 300, 600mm/h & mm/min 16
 panel , 0.05mm/pulse
 ... $\pm 0.25\%$ ()
 P e n ... Pen
 f e e d ... 300mm/min
 ...
 ... V range : DC 250V, mV range : DC 30V ()
 ... 0~40 , 40~80% RH
 ... (1.5V) x 6
 Option Nickel cadmium pack ()
 AC 100, 115, 220, 240V, $\pm 10\%$ 50/60Hz(SW)
 ... AC 100V 1pen 12VA
 2pen 15VA
 3pen 18VA
 ... 355() x 200() x 212()mm
 ... 1pen 5.8kg, 2pen 6.3kg, 3pen 6.8kg

control ... start, stop

battery check ... LED () dis marker (Option)

7.2 ... channel (2.5)

• dis portable felt pen

• ()

• cord ... channel (2.5)

• cord ... 1 (SE-10Z-2)

• DC plug ... 1

• ... 1pen

... 1

7.3 ... 1

•

• dis portable felt pen ... ink (SE-10Z-2)

... ink roll (SE-10)

... P - 1 2

A :

C :

0 1 1 2 : (: 0 1, : 0 2, : 0 3)

dis potable pen , ,

.

.

:

:

가 120mm/h

8. Option

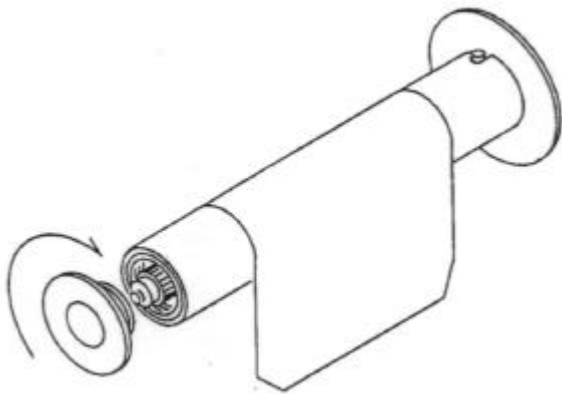
roll

8.1.1

roll (3-3-1)
 , chart bobbin , 30cm]

8.1.2

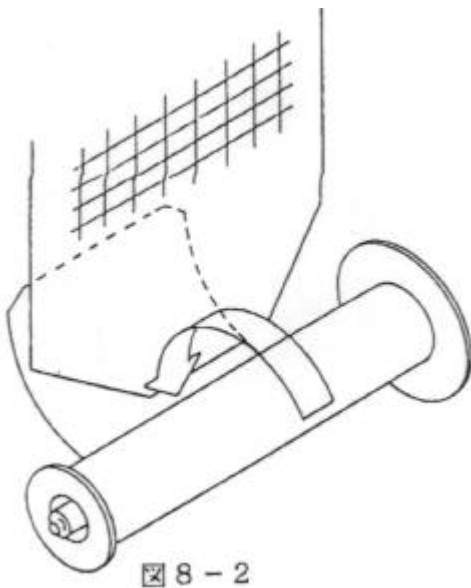
chart bobbin set



bobbin , chart
 bobbin 가 8-1
 bobbin , bobbin
 set chart

8.1.3

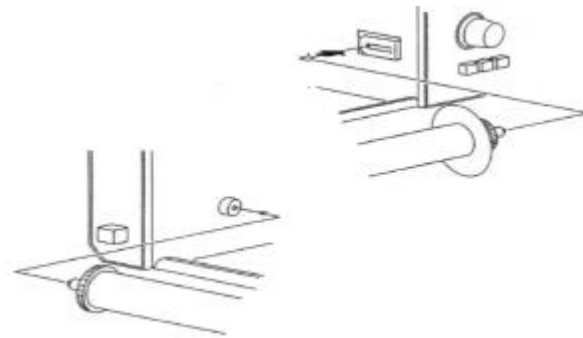
chart bobbin set
 8-1



, 8-2 chart bobbin
 4~5

8.1.4

chart, bobbin , panel



8-3

가
torque torque가
가

8.2 acryl

가

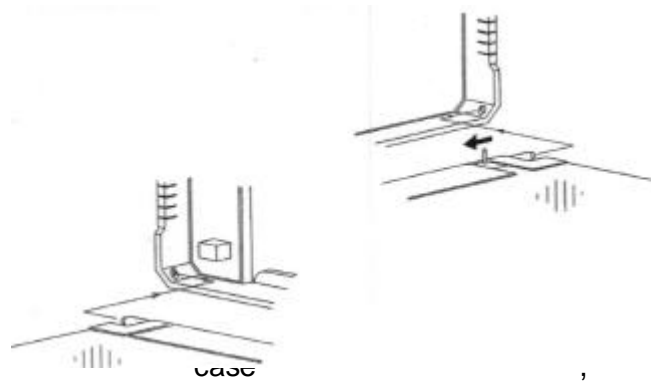
8.2.1

case

slide pin

slide

slide



slide

case 8-4

slide pin

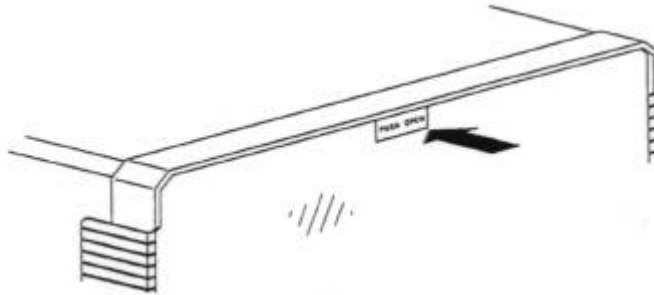
8.2.2

[PLSE OPEN]seal

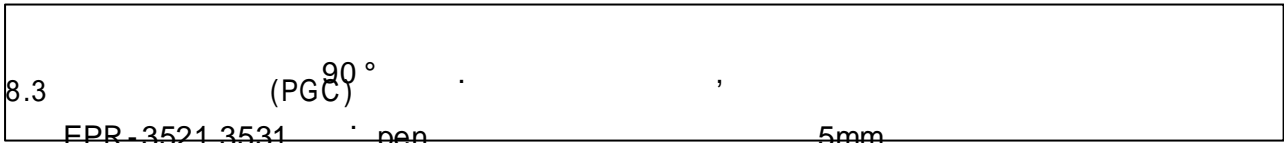
가

, lock

lock



8-5



channel 가 8-6

channel 5mm

Compensator) 8-6 8-7

가 EPR-3500 series PGC board

channel chart x data channel data 300mm/min speed data

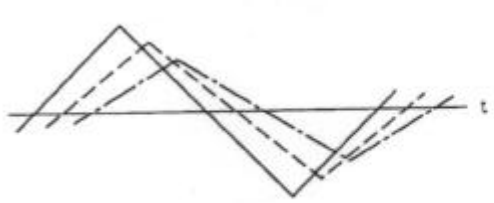


그림 8-6

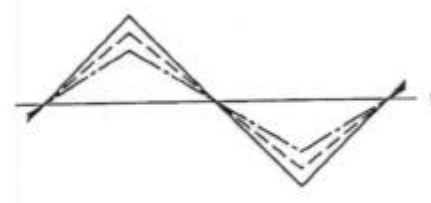


그림 8-7

	2 pen	3 pen
PGC-3000	1	2

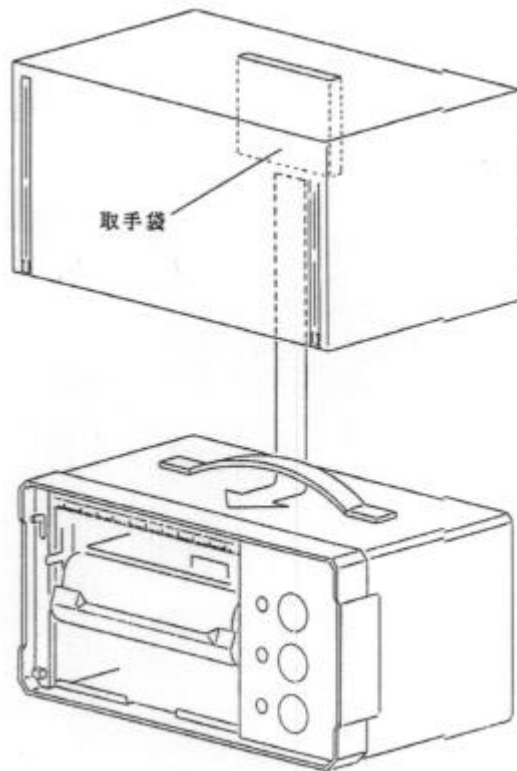
8.4 dip mark

3-4 REMOTE

8.5 Ni-cd pack ()
 Nickel cadmium pack , 2800mmAH
 가 2 , 3-2-4 Ni-cd

8.6 Vinyl cover
 (가), tunnel ,
 , data , 가 vinyl
 , vinyl jack 가 , data

8.6.1 Vinyl cover
 1) case , vinyl cover 8-8
 vinyl cover



8-8

9. (EPR=3500 series)

