

PRINTER PRESENTER UNIT
MODEL PPU-700/700II
User's Manual

WEEE MARK

En If you want to dispose this product, do not mix with general household waste. There is a separate collection systems for used electronics products in accordance with legislation under the WEEE Directive (Directive 2002/96/EC) and is effective only within European Union.

Ge Wenn Sie dieses Produkt entsorgen wollen, dann tun Sie dies bitte nicht zusammen mit dem Haushaltsmüll. Es gibt im Rahmen der WEEE-Direktive innerhalb der Europäischen Union (Direktive 2002/96/EC) gesetzliche Bestimmungen für separate Sammelsysteme für gebrauchte elektronische Geräte und Produkte.

Fr Si vous souhaitez vous débarrasser de cet appareil, ne le mettez pas à la poubelle avec vos ordures ménagères. Il existe un système de récupération distinct pour les vieux appareils électroniques conformément à la législation WEEE sur le recyclage des déchets des équipements électriques et électroniques (Directive 2002/96/EC) qui est uniquement valable dans les pays de l'Union européenne.

Les appareils et les machines électriques et électroniques contiennent souvent des matières dangereuses pour l'homme et l'environnement si vous les utilisez et vous vous en débarrassez de façon inappropriée.

Sp Si desea deshacerse de este producto, no lo mezcle con residuos domésticos de carácter general. Existe un sistema de recogida selectiva de aparatos electrónicos usados, según establece la legislación prevista por la Directiva 2002/96/CE sobre residuos de aparatos eléctricos y electrónicos (RAEE), vigente únicamente en la Unión Europea.

It Se desiderate gettare via questo prodotto, non mescolatelo ai rifiuti generici di casa. Esiste un sistema di raccolta separato per i prodotti elettronici usati in conformità alla legislazione RAEE (Direttiva 2002/96/CE), valida solo all'interno dell'Unione Europea.

Du Deponeer dit product niet bij het gewone huishoudelijk afval wanneer u het wilt verwijderen. Er bestaat ingevolge de WEEE-richtlijn (Richtlijn 2002/96/EG) een speciaal wettelijk voorgeschreven verzamelsysteem voor gebruikte elektronische producten, welk alleen geldt binnen de Europese Unie.

Da Hvis du vil skille dig af med dette produkt, må du ikke smide det ud sammen med dit almindelige husholdningsaffald. Der findes et separat indsamlingsssystem for udtjente elektroniske produkter i overensstemmelse med lovgivningen under WEEE-direktivet (direktiv 2002/96/EC), som kun er gældende i den Europæiske Union.

Por Se quiser deitar fora este produto, não o misture com o lixo comum. De acordo com a legislação que decorre da Directiva REEE – Resíduos de Equipamentos Eléctricos e Electrónicos (2002/96/CE), existe um sistema de recolha separado para os equipamentos electrónicos fora de uso, em vigor apenas na União Europeia.

Pol Jeżeli zamierzasz pozbyć się tego produktu, nie wyrzucaj go razem ze zwykłymi domowymi odpadkami. Według dyrektywy WEEE (Dyrektywa 2002/96/EC) obowiązującej w Unii Europejskiej dla używanych produktów elektronicznych należy stosować oddzielne sposoby utylizacji.



Declaration of Conformity

This printer conforms to the following Standards:

The Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, the RoHS Directive 2002/95/EC, and the WEEE Directive 2002/96/EC.

LVD : EN60950-1

EMC : EN55022 Class A
EN61000-3-2
EN61000-3-3
EN55024

This declaration applies only to the 230-V model.

IMPORTANT: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

CAUTION: Use shielded cable for this equipment.

Sicherheitshinweis

Die Steckdose zum Anschluß dieses Druckers muß nahe dem Gerät angebracht und leicht zugänglich sein.

For Uses in Canada

This digital apparatus does not exceed the class A limits for radio noise emissions from digital apparatus, as set out in the radio interference regulations of the Canadian department of communications.

Pour L'utilisateurs Canadiens

Cet appareil numérique ne dépasse pas les limites de catégorie A pour les émissions de bruit radio émanant d'appareils numériques, tel que prévu dans les règlements sur l'interférence radio du département Canadien des communications.

GENERAL PRECAUTIONS

1. The information contained in this manual is subject to change without prior notice.
2. Reproduction or transfer of part or all of this manual in any means is prohibited without permission from CITIZEN SYSTEMS.
3. Except explained elsewhere in this manual, do not attempt to service, disassemble, or repair this product.
4. Note that CITIZEN SYSTEMS is not responsible for any damage attributable to incorrect operation/handling or improper operating environments that are not specified in this manual.
5. Operate this printer only as described in this manual. Failure to do so may cause accidents or other problems.
6. Data are basically for temporary use and not for storage for a long period or permanently. Please note that CITIZEN SYSTEMS is not responsible for damage or lost profit resulting from the loss of data caused by accidents, repairs, tests or other occurrence.
7. If you find loss of information, error, or uncertain matter, please contact your CITIZEN SYSTEMS dealer.
8. Please note CITIZEN SYSTEMS is not responsible for anything that may occur from operating this printer regardless of what is stated in "7" above.

CAUTION

This is a Class A information technology equipment based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

SAFETY PRECAUTIONS ... WHICH SHOULD BE STRICTLY OBSERVED

Before using this product for the first time, carefully read these SAFETY PRECAUTIONS. Incorrect operation may result in unexpected accidents (fire, electric shock, or injury).

- After having read this manual, keep it in a safe, readily accessible place for future reference.
- Some of the descriptions contained in this manual may not be relevant to some printer models.

In order to prevent injury hazard to operators, third parties or damage to property, special warning symbols are used in this user's manual to indicate important items to be strictly observed.

The following describes the degree of hazard and damage that could occur if the printer is improperly operated by ignoring the instructions indicated by the warning symbols.

WARNING

Neglecting the precautions indicated by this symbol may result in fatal or serious injury.

CAUTION

Neglecting the precautions indicated by this symbol may result in injury or damage to properties.



This symbol is used to alert your attention to important items.



This symbol is used to alert you to the danger of electric shock or electrostatic damage.



This symbol denotes a request to unplug the printer from the wall outlet.



This symbol is used to indicate the "information" on the use, or the like.



This symbol is used to indicate prohibited actions.

WARNING

Do not use or store this product in a place where it will be exposed to:

- Flames or moist air
- Direct sunlight
- Hot airflow or radiation from a heating device
- Salty air or corrosive gases
- Ill-ventilated atmosphere
- Chemical reactions in a laboratory
- Airborne oil, steel particles, or dust
- Static electricity or strong magnetic field
- **Neglecting these warnings may result in printer failure, overheating, emission of smoke, fire, or electric shock.**



Do not drop any foreign object nor spill liquid into the printer. Do not place any object on the printer either.

- Do not drop any metallic object such as paper clip, pin or screw into the printer.
- Do not place a flower vase, pot or cup containing water on the printer.
- Do not spill coffee, soft drinks or any other liquid into the printer.
- Do not spray insecticide or any other chemical liquid over the printer.
- Never use organic cleaning solvent such as alcohol, paint thinner, trichloroethylene, benzene, or ketone.
- **A metallic foreign object, if accidentally dropped into the printer, may cause printer failure, fire, or electric shock. Should it occur, immediately turn the printer off, unplug it from the supply outlet, and call your local CITIZEN SYSTEMS dealer.**



Do not handle the printer in the following ways:

- Do not allow the printer to sustain strong impacts or hard jolts (e.g., trampling, dropping, striking with a hard edge).
- Never attempt to disassemble or modify the printer.
- **Neglecting to handle properly may result in printer failure, overheating, emission of smoke, fire, or electric shock.**



Install, use, or store the printer out of the reach of children.

- **Electric appliances could cause an unexpected injury or accident if they are handled or used improperly.**
- **Keep the power cord and signal cables out of the reach of children. Also children should not be allowed to gain access to any internal part of the printer.**
- **The plastic bag the printer came in must be disposed of properly or kept away from children. Wearing it over the head may lead to suffocation.**



WARNING

Please observe the following precautions for power source and power cord:

- Do not plug or unplug the power cord with a wet hand.
- Use the printer only at the specified supply voltage and frequency.
- Use only the specified AC adapter with the printer.
- Check to make sure that the supply outlet from which the printer is powered has a sufficient capacity.
- Do not supply the printer from a power strip or current tap shared with other appliances.
- Do not plug the power cord into a supply outlet with dust or debris left on its plug.
- Do not use a deformed or damaged power cord.
- **Neglecting to handle properly may result in printer failure, emission of smoke, fire, or electric shock.**
- **An overload may cause the power cord to overheat or fire or the circuit breaker to trip.**
- Do not use the printer while the power cord is loaded with anything or it is trampled on.
- Do not use or carry the printer with its power cord bent, twisted, or pulled.
- Do not attempt to modify the power cord unnecessarily.
- Do not lay the power cord in the neighbor of a heating device.
- **Neglecting these cautions may cause wires or insulation to break, which could result in leakage, electric shock, or printer failure. If a power cord sustains damage contact your CITIZEN SYSTEMS dealer.**
- Do not leave things around the supply outlet.
- Supply power to the printer from a convenient wall outlet, readily accessible in an emergency.
- **The printer may not be immediately shut down in an emergency.**
- Insert the power plug fully into the supply outlet.
- If the printer is likely to be out of use for a long time, leave it disconnected from its supply outlet.



CAUTION

Do not use or store this product in a place where it will be exposed to:

- Flames or moist air
- Direct sunlight
- Hot airflow or radiation from a heating device
- Salty air or corrosive gases
- Ill-ventilated atmosphere
- Chemical reactions in a laboratory
- Airborne oil, steel particles, or dust
- Static electricity or strong magnetic field
- **Otherwise failure, smoke, ignition, fire, or electric shock may occur.**
- Place the printer on a flat, stable surface without vibration.
- **Otherwise dropping may cause injury.**



Do not use the printer under the following conditions.

- A state where the printer ventilation holes are blocked by a nearby wall or something
- A state where any object is placed on the printer
- A state where the printer is covered or wrapped by a cloth or bed clothing
- **Be careful about internal heat buildup, which could cause fire and deform the case.**
- Avoid using the printer near a radio or TV set or from supplying it from the same outlet as these appliances.
- Avoid using the printer interconnected with a cable or cord that has no protection against noise. (For interconnections, use shielded or a twisted pair of cables and ferrite cores, or other anti-noise devices.)
- Avoid using the printer with a device that is a strong source of noise.
- **The printer may have an adverse effect on nearby radio or TV transmissions. There may also be cases when nearby electrical appliances adversely influence the printer, causing data errors or malfunction.**



Use the printer with its grounding post connected to a convenient grounding facility.

- **If leakage occurs electric shock may result.**

Do not connect the printer's grounding post onto any of the following facilities.

- Utility gas piping
 - **A gas explosion could result**
- Telephone line ground
- Lightning rod
 - **If lightning strikes a large surge of current may cause fire or shock.**
- Utility water pipes
 - **Plastic water pipes should not be used for grounding. (Those approved by a Waterworks Department may be used.)**



Before connecting or disconnecting the grounding lead to or from the printer, always unplug it from supply outlet.

CAUTION

Please observe the following precautions for power source and power cord:

- Use the printer only at the specified supply voltage and frequency.
- Use only the specified AC adapter with the printer.
- Check to make sure that the supply outlet from which the printer is powered has a sufficient capacity.
- Do not supply the printer from a power strip or current tap shared with other appliances.
- Do not plug the power cord into a supply outlet with dust or debris left on its plug.
- **Neglecting to handle properly may result in printer failure, emission of smoke, fire, or electric shock.**
- **An overload may cause the power cord to overheat or fire or the circuit breaker to trip.**
- Do not leave things around the supply outlet.
- Use the printer near a convenient wall outlet, readily accessible in an emergency.
- **Otherwise the printer may not be immediately shut down in an emergency.**
- Insert the power plug fully into the supply outlet.
- If the printer is likely to be out of use for a long time, leave it disconnected from its supply outlet.



Plug or unplug the power cord or other cables with the power off and by holding the plug or connector.

Do not use the power cord or other signal cables under the following conditions.

- A state where the power cord or cable is loaded by something or trampled on.
- A state where the printer is used or carried with its power cord bent, twisted, or pulled
- Do not lay the power cord in the neighbor of a heating device.
- Do not attempt to modify the power cord unnecessarily.
- **Neglecting these cautions may cause wires or insulation to break, which could result in leakage, electric shock, or printer failure. If a power cord sustains damage contact your CITIZEN SYSTEMS dealer.**



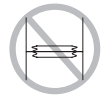
Be sure to firmly insert the cable plug into its mating socket.

- **A cross connection may damage the printer's internal electronics or the host system's hardware.**

CAUTION

To prevent possible malfunction or failure observe the following.

- Avoid operating the printer without paper properly loaded.
- Avoid the use of paper not complying with specifications.
- **Otherwise thermal print head may be damaged and may result in poor print quality.**
- Do not drop any metallic object such as paper clip, pin or screw into the printer.
- Do not spill coffee or any other liquid into the printer.
- Do not spray insecticide or any other chemical liquid over the printer.
- **A metallic foreign object, if accidentally dropped into the printer, may cause printer failure, fire, or electric shock. Should it occur, immediately turn the printer off, unplug it from the supply outlet, and call your local CITIZEN SYSTEMS dealer.**
- Avoid using torn pieces of paper or spliced with plastic adhesive tapes.
- Avoid forcibly pulling already loaded paper by hand.
- **Otherwise paper jam may occur. If paper jam occurs, remove it correctly by referring to “Removing Jammed Paper” in this manual.**
- Do not allow the printer to sustain strong impacts or hard jolts (e.g., trampling, dropping, striking with a hard edge).



To prevent injury and printer failures from worsening, observe the following:

- Do not touch the printing surface of the thermal head.
- Do not touch any of the moving parts (e.g., paper cutter, gears, active electrical parts) while the printer is working.
- In case of trouble do not attempt to repair the printer. Ask CITIZEN SYSTEMS service for repair.
- Be careful that the paper cover does not entrap your hands or fingers.
- Be careful with sharp edges on the printer. Don't allow them to injure you or damage property.
- **May result in electric shock, burn, or injury.**
- **If the printer emits smoke, an odd smell, or unusual noise while printing, immediately abort the current print session and unplug the printer from the supply outlet.**



DAILY MAINTENANCE

Observe the following precautions for daily maintenance.

- When cleaning the printer, always turn it off and unplug it from the supply outlet.
- Use a soft, dry cloth for cleaning the surface of the printer case.
- For severe stains, use a soft cloth slightly dampened with water.
- Never use organic cleaning solvent such as alcohol, paint thinner, trichloroethylene, benzene, or ketone. Never use a chemically processed cleaning cloth.
- To remove paper chips, use a soft brush.
- When transporting the printer, remove the paper roll from its paper holder.



CAUTION

- **The thermal head is at a dangerously high temperature immediately after printing. Allow it to cool off before launching maintenance work.**
- Clean the thermal head by wiping the dust off the surface of the heating element on the print head with gauze slightly moistened by alcohol.

CAUTION

- **Do not touch the heating element of the print head by bare hand or via metal strip.**
- **The thermal head is at a dangerously high temperature immediately after printing. Allow it to cool off before launching maintenance work.**
- Clean the presenter by wiping the dust off the surface of the rubber roller with gauze slightly moistened by alcohol.

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1. GENERAL OUTLINE

The PPU-700/PPU-700II are a printer designed for use with a broad array of terminal equipment including data, measuring instruments, outdoor information, or as a presenter for issuing various kinds of tickets and coupon tickets.

With extensive features, it can be used in a wide range of applications.

To obtain the best results from the PPU-700/PPU-700II printers, please read the instructions in this manual thoroughly.

1.1 Features

- (1) Paper side-insert mechanism facilitating paper insertion and maintenance.
- (2) Paper width can be chosen among 58, 67, 80, and 82.5 mm.
- (3) Line thermal printing allows high-speed, low-noise printing.
- (4) Allows collection of paper not received. (Paper collection mechanism)
- (5) Small size and light weight requiring minimum installation space.
- (6) Long-life head and high reliability with simple mechanism.
- (7) Built-in input buffer.
- (8) Barcode printing is available with special command.
- (9) Page mode allows free layout of printing.
- (10) User-defined characters and logos can be registered in the flash memory.
- (11) User-designed characters can be registered.
(94 Kanji characters, 95 ANK characters)
- (12) Detection of black mark is available. (Option)
- (13) Free layout of each unit.
- (14) Large-sized roll paper can be used. (Option)
- (15) Built-in buzzer
- (16) Various kinds of customization are available.
- (17) 2-color printing

1.2 Unpacking

After unpacking the printer, confirm that the following are provided.

- Printer: 1
- User's Manual: 1



CAUTION!

- Place the printer on the equipment positioned horizontally and stably.
- Avoid installation near heater or in direct sunlight.
- Avoid use in the environment with high temperature, high humidity, and very dirty.
- Avoid dew condensation. In the case of dew condensation, keep power off till dew condensation is cleared.

2. BASIC SPECIFICATIONS

2.1 Model Classification

The printer models are classified by the following designation method:

2.1.1 PPU-700/PPU-700II Series

PPU-700 - R U M1
PPU-700II - R U M1

Model Name

Interface

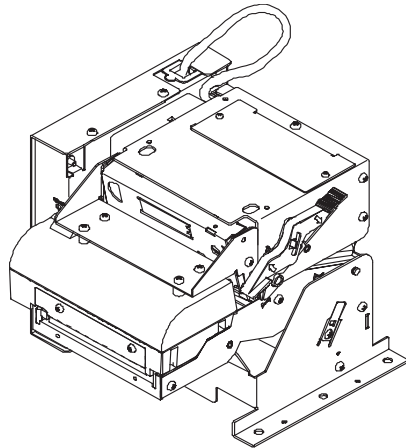
R, RS: Serial (RS-232C)
P, PA: Parallel (IEEE 1284 compliant)
U, UB: USB

Character Set

U: International
K: Japan (Supporting Kanji code)

Black Mark Sensor Position (Option)

None: No Sensor (Standard)
M1: Rear Left
M2: Rear Right (Head Up Lever side)
M3: Left of Print Surface



2.1.2 Option

(1) PHU Series (Paper Feed Unit)

PHU-3 3 1 S

Model Name

Shaft length

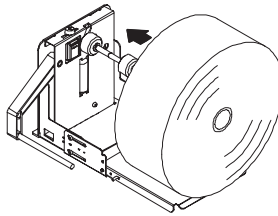
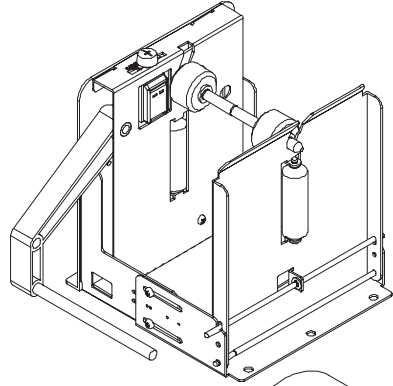
3: Paper width 58 to 82.5 mm (Standard)
2: Paper width 58 mm only

PNE Sensor

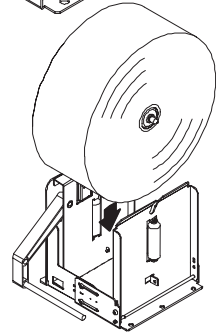
1: 1 Sensor (Standard)
2: 2 Sensors

Paper setting

S: Side (Standard)
T: Top



PHU-3**S



PHU-3**T

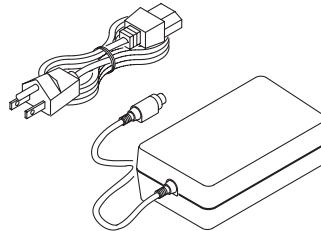
(2) 36AD2 Series (AC Adapter)

36AD2 - U

Model Name

AC Cable

U: USA (120V 3-core cord)
E: Europe (230V Class I Cord)
J: Japan (100V 3-core cord)



2.2 Basic Specifications

Item \ Model	PPU-700-RU/PPU-700II-RSU PPU-700-PU/PPU-700II-PAU PPU-700-UU/PPU-700II-UBU	PPU-700-RK/PPU-700II-RSK PPU-700-PK/PPU-700II-PAK PPU-700-UK/PPU-700II-UBK
Print method	Line thermal dot print method	
Print width	80 mm/640 dots	
Dot density	8 × 8 dots/mm (203 dpi)	
Print speed	150 mm/sec (max., Print density level 2), (1200 dot lines/sec)	
Number of print columns	Font A: 48 columns, 12 × 24 dots Font B: 64 columns, 9 × 17 dots Font C: 72 columns, 8 × 16 dots	
	Kanji Font A: 24 columns, 24 × 24 dots Kanji Font B: 36 columns, 16 × 16 dots	
Character size	Font A: 1.50 × 3.00 mm Font B: 1.13 × 2.13 mm Font C: 1.00 × 2.00 mm	
	Kanji Font A: 3.00 × 3.00 mm Kanji Font C: 2.00 × 2.00 mm	
Character type	Alphanumeric characters, International characters, PC850, 852, 857, 858, 860, 863, 865, 866, WPC1252, Katakana	
	Kanji (JIS Level 1, Level 2)	
User memory	256 KB (Capable of registering user-defined characters and logos)	
Barcode type	UPC-A/E, JAN (EAN) 13 columns/8 columns, ITF, CODE 39, CODE 128, CODABAR, CODE 93	
Line spacing	4.23 mm (1/6 in.), selectable by use of command	
Paper (See paper spec.)	Thermal paper roll Width: 58 to 82.5 mm External diameter: ϕ 203 mm max. (when using PHU) Core: Internal diameter: ϕ 25.4 mm, Outer diameter: ϕ 30 mm or more Paper thickness: 65 to 150 μ m	
Presenter	Standard length: 90 mm	
Interface	Serial (RS-232C compliant), Parallel (IEEE1284 compliant), USB	
Input buffer	4K bytes/72 bytes	
Supply voltage	DC 24V \pm 7%	
Power consumption	100 W	
AC adapter specification	Rated input: AC 100V to 240V, 50/60 Hz, 150 VA Rated output: DC 24V, 2A	
	Type	36AD2-U 36AD2-E 36AD2-J
Weight	2.1 kg	
Outside dimensions	163.2 (W) × 176 (D) × 144 (H) mm (See external view)	
Operating temperature and humidity	5 to 40°C, 35 to 85% RH (No dew condensation)	
Storage temperature and humidity	-20 to 60°C, 10 to 90% RH (No dew condensation)	

Item	Model	PPU-700-RU/PPU-700II-RSU PPU-700-PU/PPU-700II-PAU PPU-700-UU/PPU-700II-UBU	PPU-700-RK/PPU-700II-RSK PPU-700-PK/PPU-700II-PAK PPU-700-UK/PPU-700II-UBK
Reliability	Print head life: 150 Km, 100 million pulses (At normal temperature, humidity with recommended paper used) Auto cutter life: 1 million cuts (At normal temperature, humidity, with paper thickness of 0.065 mm)		
Safety Standard *1	UL, C-UL, FCC Class A	TUV, GS, CE marking	VCCI Class A

Note:

*1: Represents the safety standards acquired when CITIZEN SYSTEMS-made AC adapter (36AD2 series) is used.

2.3 Print Paper Specifications

2.3.1 Specified Paper

Thermal Paper Roll

- Type: Heat-sensitive paper
- Paper width: 58 mm, 67 mm, 80 mm, 82.5 mm
- Paper thickness: 0.065 to 0.150 mm
- Roll diameter: ϕ 203 max.
- Print surface: Outer side of the roll (surface)
- Core: ϕ 25.4 (inner diameter),
 ϕ 30 mm or more (outer diameter)
- Recommended paper: Nippon Paper Industries TF50KS-E, EC
Mitsubishi Paper Mills F230AA

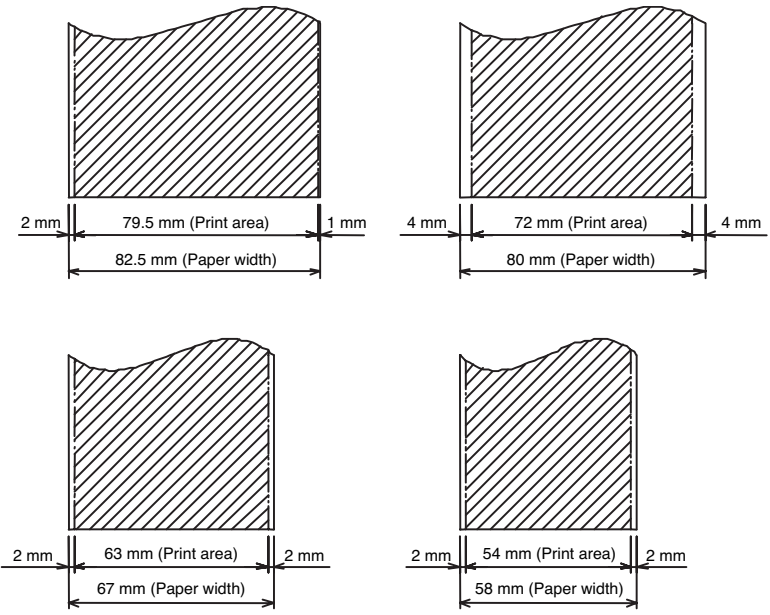
Or other equivalent paper



CAUTION!

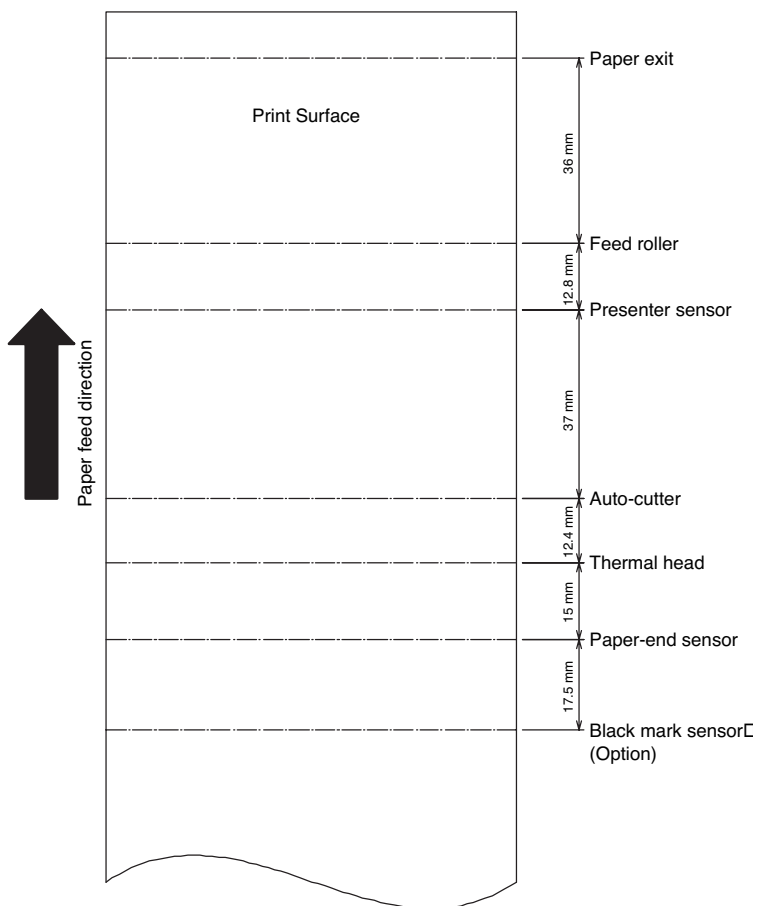
- Paper not complying with the specifications may cause some departure in print tone.
- Adjust the print tone with the DIP switch. (See "7.2 Memory Switch Functions".)
- Do not paste paper end to the core.
- If printed documents are exposed to a particular chemical or oil afterwards, coloration or faint letters may result.
- Rubbing the document surface with your nail or metallic device may cause coloration.
- Coloration occurs at a temperature of around 70°C or above. Keep documents away from heat, moisture, or light.

2.3.2 Print Position

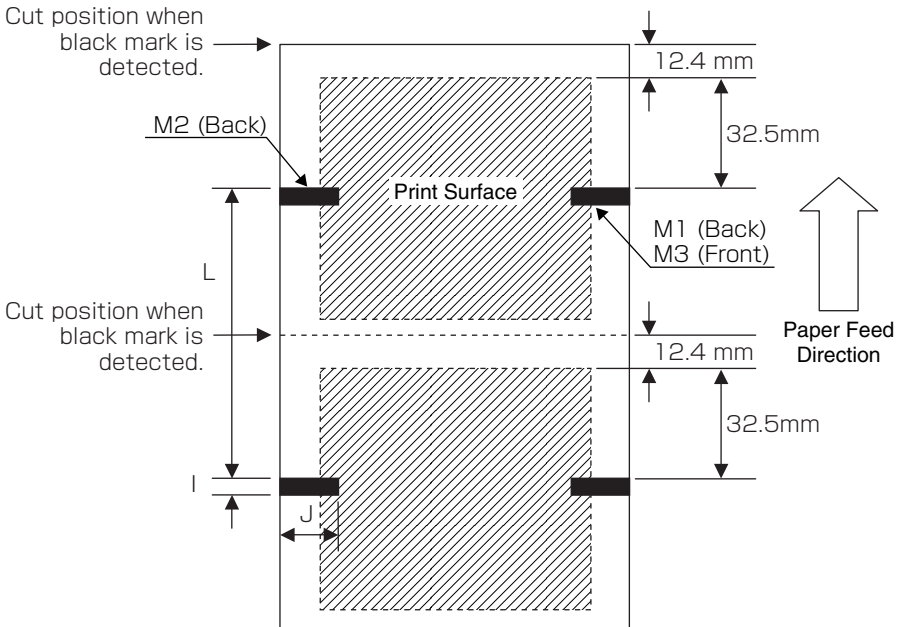


* Hatched portion: Printable area

2.3.3 Print Head and Paper Cut Position



2.3.4 Black Mark Layout and Operating Condition

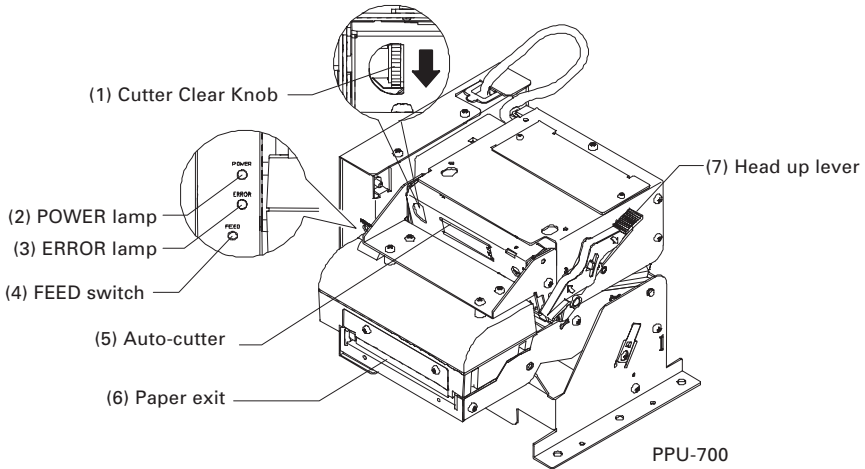


Symbol	Item	BM Paper
I	Black mark length	5 to 10 mm
J	Black mark width	10 mm min.
L	Black mark pitch	100 mm ~ 3000 mm

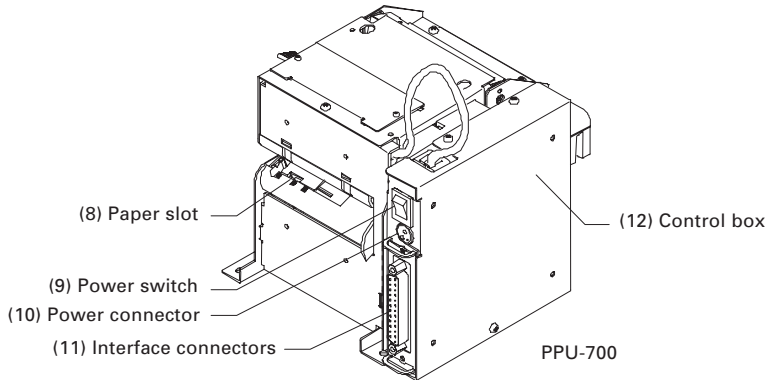
- Black marks are selected at two places on the back and one place on the front (PCS value is 0.9 or more).
- * BM position is an option of factory shipment.
- Though printing is available on the printing side having a black mark on the back, print density may become thin depending on the type of paper; therefore, user's notice such as printing on the place without black mark is necessary.
- Distance between black mark and black mark sensor is approx. 32.5 mm. If black mark is detected within this distance, next black mark is detected.
- Cut position when black mark is detected by the GS+S command (black mark detection command) is about 45 mm with the top of black mark used as a reference.
- Amount of automatic paper feed at the detection of black mark can be set by the ESC Y n1 n2 command.
- Basically cut command can be executed in any condition. If minimum distance for issuing a ticket (80 mm) is not satisfied, paper feed as much as the shorted amount is added by the printer.
- * The user is requested to prepare the printing layout in consideration of the above regulations.

3. APPEARANCE AND COMPONENTS PARTS

3.1 Printer

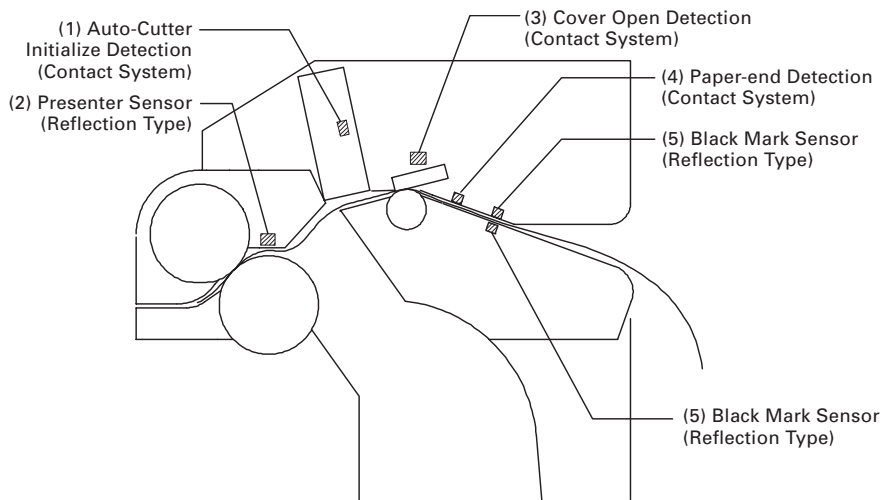


- (1) Cutter Clear Knob
Operated at the occurrence of cutter error.
- (2) POWER lamp
Lights when the printer is powered on.
- (3) ERROR lamp
Lights or blinks at the occurrence of error.
- (4) FEED switch
This switch, when pressed, feeds and cuts paper and ejects the paper from the presenter.
- (5) Auto-cutter
Cuts the printed paper.
- (6) Paper exit
- (7) Head up lever
Used when setting paper or for maintenance.



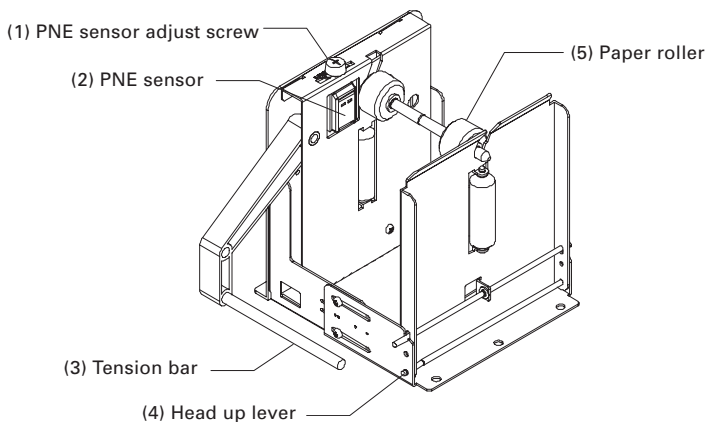
- (8) Paper slot
- (9) Power switch
Switch to turn ON/OFF presenter power.
- (10) Power connector
Connector for power supply from outside.
- (11) Interface connectors
Connects the interface cable for communication. Serial, parallel, and USB connectors are provided.
- (12) Control box
Control board is contained.
- (13) Buzzer
Located on the control board and sounds at the occurrence of error, etc.

3.2 Detector Position

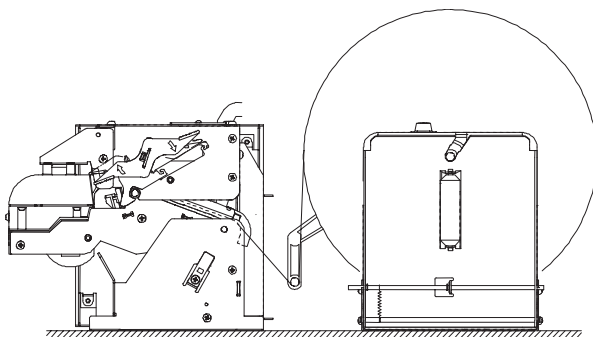


- (1) Auto-Cutter Initialize Detection (Contact System)
Detects the position of cutter blade.
- (2) Presenter Sensor (Reflection Type)
Detects the presence or absence of paper and paper jam.
- (3) Cover Open Detection (Contact System)
Detects open and close of paper guide.
- (4) Paper-end Detection (Contact System)
Detects presence and absence of paper supplied
- (5) Black Mark Sensor (Reflection Type): Option
Detects Black Mark.

3.3 PHU-3*** (Paper Feed Unit) (Option)



- (1) PNE sensor adjust screw
Screw to adjust the amount of paper by moving the sensor position.
- (2) PNE sensor
Sensor to detect that paper is low.
- (3) Tension bar
Absorbs the shock at the rotation of paper roll.
- (4) Head up lever (PHU-3***T: Not provided for paper top set type)
Used for opening the side door for paper setting.
- (5) Paper roller
Used for supporting paper roll.



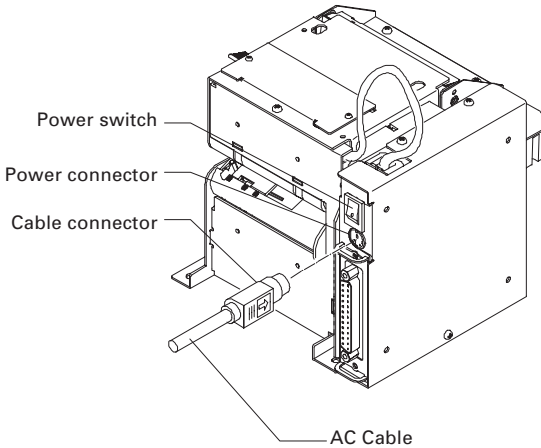
Paper Feed Unit Installation

For detailed dimensions, refer to "Appendix-3 PPU-700 PUU-3*** (Paper Feed Unit) Installation".

4. OPERATION

4.1 Connecting AC Adapter and AC Cable

1. Turn the printer power off.
2. Confirm the direction of the cable connector of the AC adapter and insert it into the power connector until it is locked.

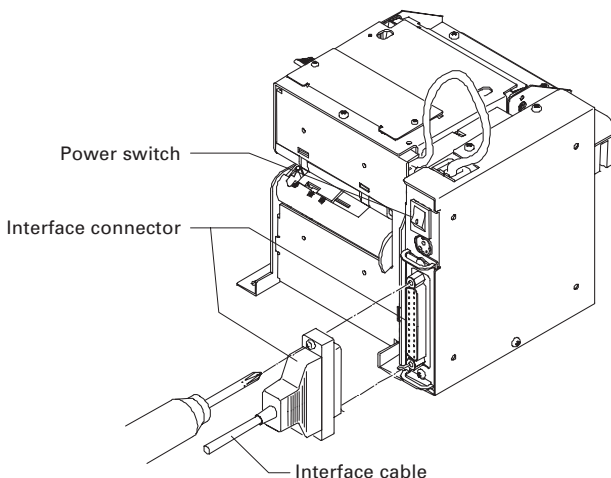


CAUTION!

- Keep DC 24 V \pm 7% for supply voltage.
- AC power supply must be separated from the equipment that may cause noise.
- When lightning is coming, unplug the AC cable from the wall outlet and do not use the printer. Lightning strike may cause a fire or electric shock.
- Always hold the connector portion when attaching or removing the cable connector of the AC adapter.
- Do not pull the AC cable. Otherwise, the cord may be damaged resulting in a fire, electric shock, or disconnection.
- Keep the AC cable off any heating instrument. The cover of the cable may be melt resulting in a fire or electric shock.
- If you leave the printer unused for a long period, keep the AC cable unplugged from the wall outlet for safety purpose.

4.2 Connecting Interface Cables

1. Turn the printer power off.
2. Connect the interface connector in the correct direction.
3. Fix the interface connector using a screwdriver.
4. Connect the other end of the interface cable to the host.

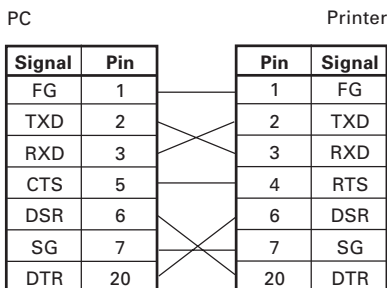


CAUTION!

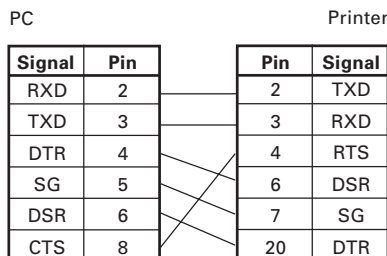
- Confirm the pin arrangement for the interface connector and cable. Wrong wiring may result in fault, malfunction, or the like of the computer as well as the printer.
- Always hold the connector when connecting or disconnecting the interface cable. Holding the cable may cause disconnection of the cable core.
- Confirm that the interface cable is connected securely. Poor contact may result in a failure in communication.

For serial interface cable, use the one with the following connection.

25-pin - 25-pin cable

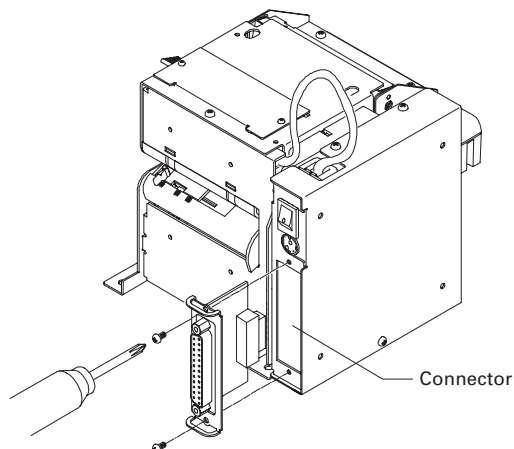


9-pin - 25-pin cable



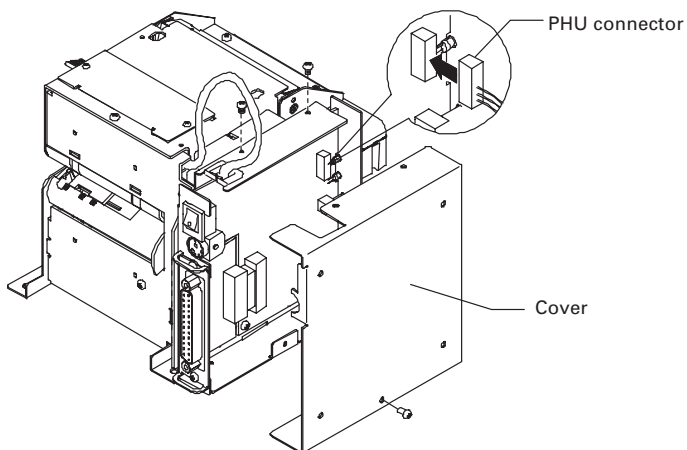
4.3 Interface Board Change

1. Turn the printer power off.
2. Remove two screws from the places shown in the figure below and detach the interface board.
3. Firmly connect the connector of the interface board to be changed.
4. Fix with screws.



4.4 Connecting PHU (Paper Feed Unit)

1. Turn the printer power off.
2. Remove the three screws on the control box and open the cover.
3. Connect the PHU connector to the connector on the printed board in the control box shown in the following figure.



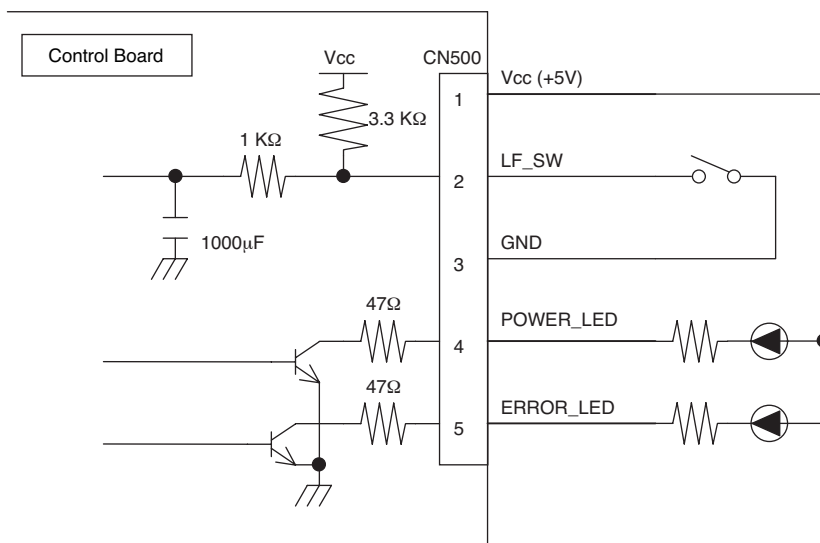
4.5 Connector for Operation Panel (CN500)

Pin Assignment

Pin No.	Signal Name	Input/Output	Function
1	Vcc	—	Power supply for circuit (+5V)
2	LF_SW	Input	LF switch input (paper feeding)
3	GND	—	GND for circuit
4	POWER_LED	Output	POWER_LED output
5	ERROR_LED	Output	ERROR_LED output

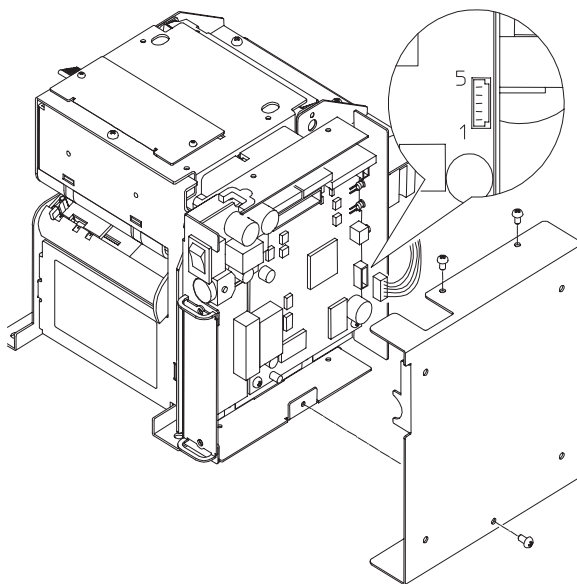
Connector used: 53014-0510 (Molex)

Connection Example



CAUTION!

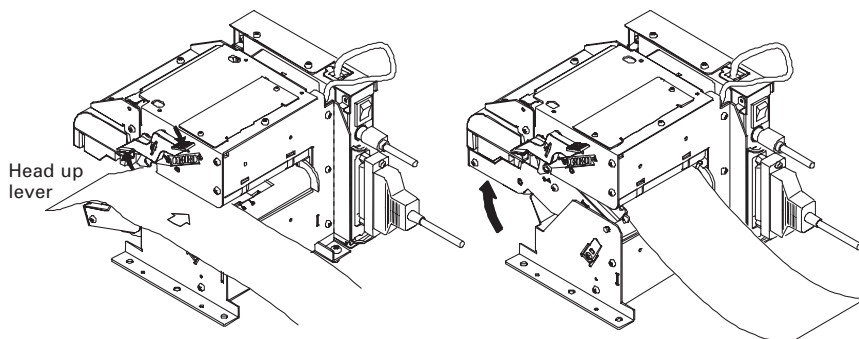
- POWER LED and ERROR LED are provided with a resistor of 47Ω at the circuit side. When using LED, connect the resistor to conform to the rating of the LED. (Saturation voltage across collector and emitter of transistor $V_{CE(sat)} = 0.25V$ (max.))
- LF_SW input terminal has the above circuit configuration. A ceramic capacitor is provided at the circuit side to prevent chattering. Note that chattering may be large depending on the switch.



4.6 Setting/Replacing Paper Roll

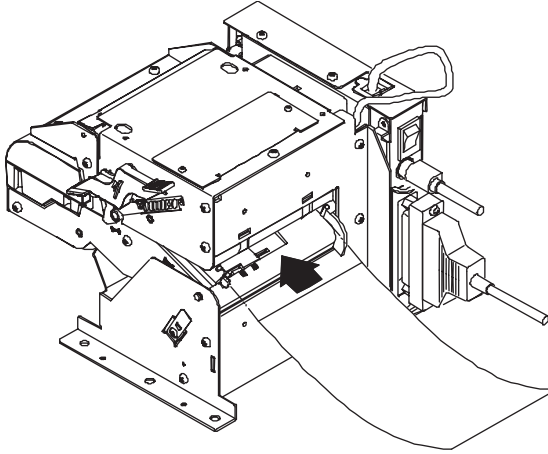
4.6.1 Paper Setting from Paper Side-in

1. Open the paper guide with the head up lever.
2. Cut the top end of the paper roll at about right angle to the roll direction. (Fig. 4-1)
3. Insert a paper roll.
4. Confirm that the roll paper end is rest in the guide. Close the paper guide.
5. Roll paper is automatically loaded and paper initializing operation starts.
6. When paper initialize operation is finished, the printer is ready for printing.



4.6.2 Paper Setting by Auto-loading

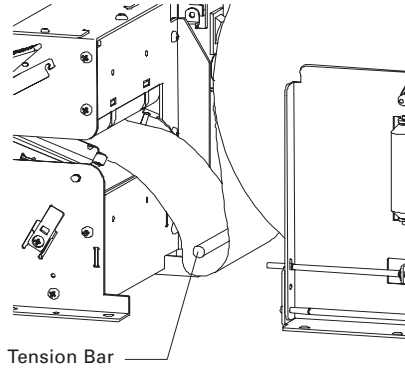
1. Keep the paper guide closed.
2. Cut the end of the roll paper almost at right angle. (Fig. 4-1)
3. Insert the roll paper from the paper slot till it gets a drag.
4. Paper is detected and automatically fed for a certain time and then paper initialize operation starts.
5. When paper initialize operation is finished, the printer is ready for operation.
6. When paper feeding fails, extract the paper once and repeat the procedure from step 3.



4.6.3 When Using PHU-3 *** (Paper Feed Unit)

When using the PHU-3*** (Paper Feed Unit), always pass the paper over the tension bar.

This feature serves as a shock absorber against the shock during rotation of paper roll thereby preventing deformed character, meandering paper feed, breakage of paper feed mechanism.



CAUTION!

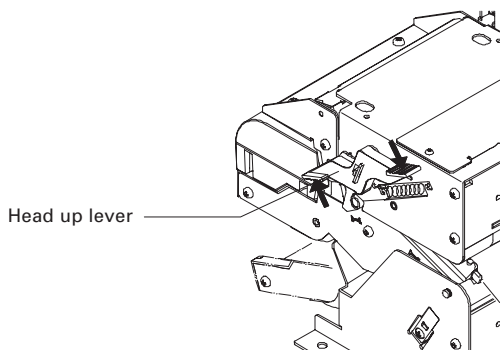
- Always use the specified paper roll.
- Use of paper other than specified may result in disclaimer of warranties for print quality, head life, presenter feature, etc.
- Do not set the roll paper with fuzzy or bent edge. Otherwise, paper jam or wrong paper insertion may occur.
- If roll paper is slackened, rewind the roll to remove the slack.
- If roll paper is set with a slant, open the guide using the head up lever and correct the roll position or remove the roll paper and retry setting the paper again.
- During auto-loading, do not touch the roll paper. Otherwise, wrong paper feed or paper skew may occur.
- During printing, do not hold or touch the roll paper. Otherwise, paper jam may occur.
- After paper setting, the printer enters the print ready state. Note that if data remains in the buffer, printing starts after paper setting is completed.



Fig. 4-1

4.7 Removing the Remaining Paper Roll

1. Operate the head up lever.
2. The guide opens. Remove the roll paper.

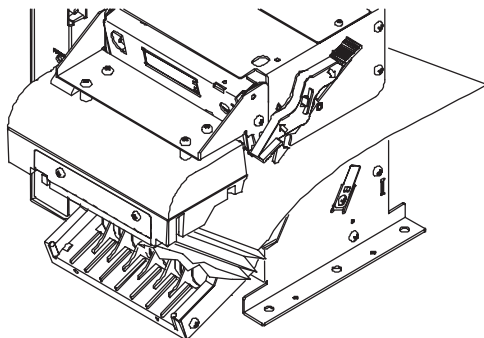


CAUTION!

The thermal head is at a high temperature immediately after printing. Sufficient care must be taken in the work just after printing.

4.8 Removing Jammed Paper

1. Turn the printer power off.
2. Cut the roll paper at the point near the paper slot.
3. Operate the head up lever to open the guide.



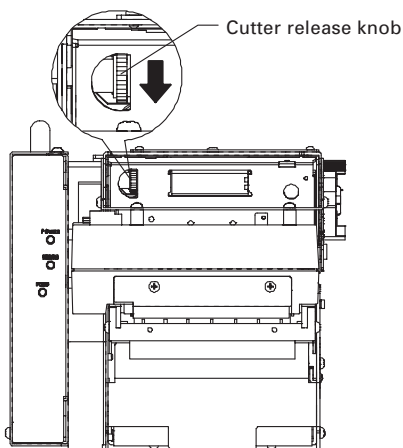
CAUTION!

- Do not access the printer head just after printing operation because the print head remains hot.
- Do not touch the surface of the heated portion of the head with a bare hand or with a metal tool.

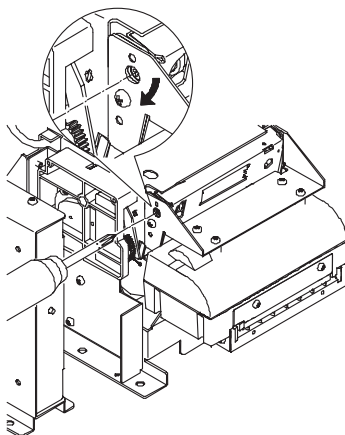
4.9 Removing Cutter Lock

When cutter lock is used, opening the guide with the head up lever may fail. Forced opening may cause a break. Remove cutter lock in the following procedure.

1. Press the FEED switch or turn the printer power off and then on. The auto-cutter starts initialize operation to restore the cutter.
2. If the above operation is not successful for restoring the cutter, turn off the printer and turn the cutter release knob of the auto-cutter in the arrow direction using a pointed tool (such as pincette or ball-point pen). The blade of the auto-cutter will be restored.
3. Remove the paper remainder on the blade of the cutter by using tweezers or the like.



4. When the control box is set apart from the printer, turn the cross hole shown in the figure in the arrow direction to restore the blade.

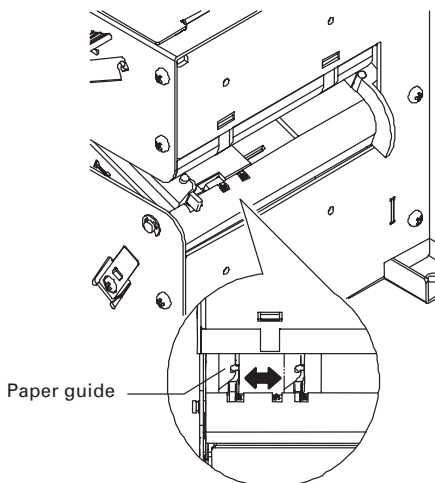


4.10 Changing Paper Width

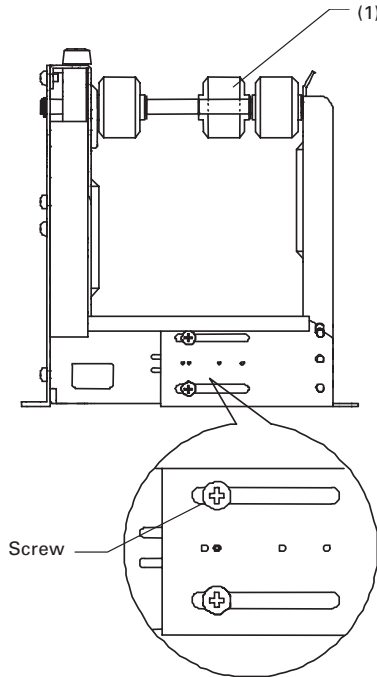
The printer can accept four kinds of paper widths: 82.5 mm, 80 mm, 67 mm, and 58 mm.

Use the following procedure to set the paper width.

1. **Move the paper guide of the paper slot at the back of the printer to meet the paper width.**
(Changing print width is available with a command. For details, refer to Command Reference.)



2. When using the paper holder (PHU-3***), loosen the screws (4 places including other side) shown in the figure, adjust the holder to the specified width, and then tighten the screws.
When the paper width is 58 mm or 67 mm, remove the E ring and move the paper roller located at position (1) in the figure.



4.11 FEED Switch

1. The FEED switch, when pressed, feeds paper, cuts the paper, and then ejects the paper.

4.12 Paper End

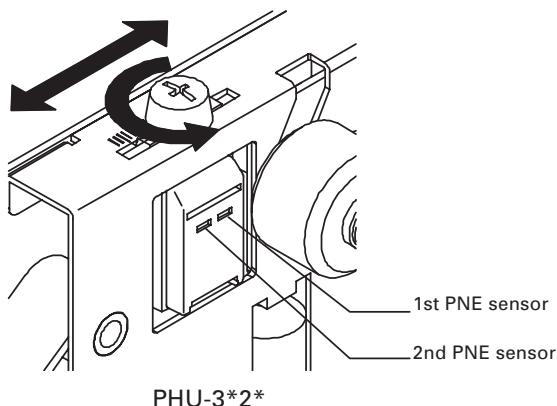
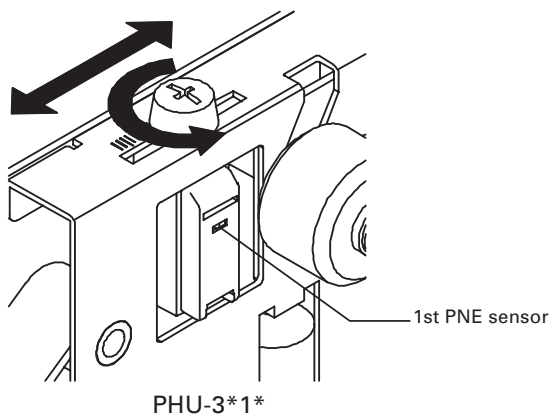
1. If no print paper is present in the printer, Busy, Fault, and PError alarms are sent to the computer through the parallel interface or DTR output is sent to the printer through the serial interface.
2. If data remains in the buffer, printing occurs after supplying paper.
3. Set a new paper roll in accordance with "4.5 Setting/Replacing Paper Roll".
4. After paper setting, Busy (DTR), Fault, and PError outputs are cleared.

4.13 Paper Near-End Sensor (When PHU-3*** is used)

1. When the print paper remainder becomes low, the Paper Near-End (PNE) sensor sends a signal to the computer telling the paper is low and stops printing. This function is enabled or disabled by the memory switch. For memory switch setting, refer to "7.2 Memory Switch Functions (MSW2-8)".
2. The PNE sensor can be adjusted in the following range by loosening the top screw.
3. Set a new paper roll in accordance with "4.5 Setting/Replacing Paper Roll".

Type	Number of PNE Sensors	Adjustable Range (Outer Diameter of Rolled Paper)	
		1st PNE Sensor	2nd PNE Sensor
PHU-3*1*	1	$\phi 23.6$ to $\phi 50$	—
PHU-3*2*	2	$\phi 23.6$ to $\phi 40$	$\phi 33.6$ to $\phi 50$

Note: For PHU-3*2*, the space between the 1st PNE sensor and the 2nd PNE sensor shall be fixed at 5 mm.



4.14 Paper Retraction

1. This printer has a function of automatically collecting the ejected paper. This function is enabled or disabled by the memory switch. For memory switch setting, refer to “7.2 Memory Switch Functions”.
2. After print paper is cut, paper is collected after a certain period of time has passed with the presenter loaded with paper.
3. The time can be adjusted by a command.
4. Before collecting the ejected paper, allow a space for paper path at the mounting area and at the bottom of the printer and prepare a collection box. For details, refer to “5.2 Notes on Paper Collection Hole and Collection Path”.

4.15 Self-printing

1. This printer has a function of printing a set of predetermined characters. Turn on the printer while pressing the FEED switch. Hold the FEED switch pressed for about 1 second and then release the FEED switch. Then the printer starts self-printing. Model name, ROM version, DIP switch status, memory switch status, and built-in characters are printed.
2. After self-printing is completed, the printer performs initialize operation and is ready for printing.



CAUTION!

Do not print with low paper supply.

4.16 Hexadecimal Dump Feature

1. This printer has the function to print data sent from the host in hexadecimal numbers and the corresponding characters. With the printer cover open and pressing and holding the FEED switch, turn the printer power on and then close the cover. The printer starts initialization and prints “HEX DUMP PRINT MODE” followed by printing of data received thereafter in hexadecimal numbers and characters.
2. After the printer stops printing, turn the printer power off or press the FEED switch three times or apply a reset signal from the interface, then the printer executes initialization and enters the standby state.



CAUTION!

- Do not print in paper low condition.
- If there is no character corresponding to data, the printer prints “..”.
- During hexadecimal dump printing, commands other than DLE EOT, DLE ENQ, and DLE DC4 provide no function.
- If the print data is less than a line, printing is caused by the occurrence of a certain offline factor (pressing the FEED switch or the like).

4.17 Operation Panel and Error Indication

(1) POWER LED (Green)
















ON: Lights while power is supplied.

OFF: Goes off while power is not supplied.

Blinking: Blinks while some operation is in process.

(2) ERROR LED (Red)

The ON/Blink status indicates the status of the error. Blinking also occurs while the printer is waiting for macro execution. (For details, refer to Command Details and Macro execution command.)

ERROR	POWER LED	ERROR LED	BUZZER
Paper end	Lights	Lights	
Paper near-end	Lights	Lights	—
Cover open	Lights	Lights	
Cutter motor lock	Lights		
Head overheat	Lights		—
Memory check error		Lights	—
Low voltage error	Lights		—
High voltage error	Lights		—
Sum check error			—
Presenter error	Lights		
Black marked paper detection error	Lights		
Macro execution wait	Lights		—

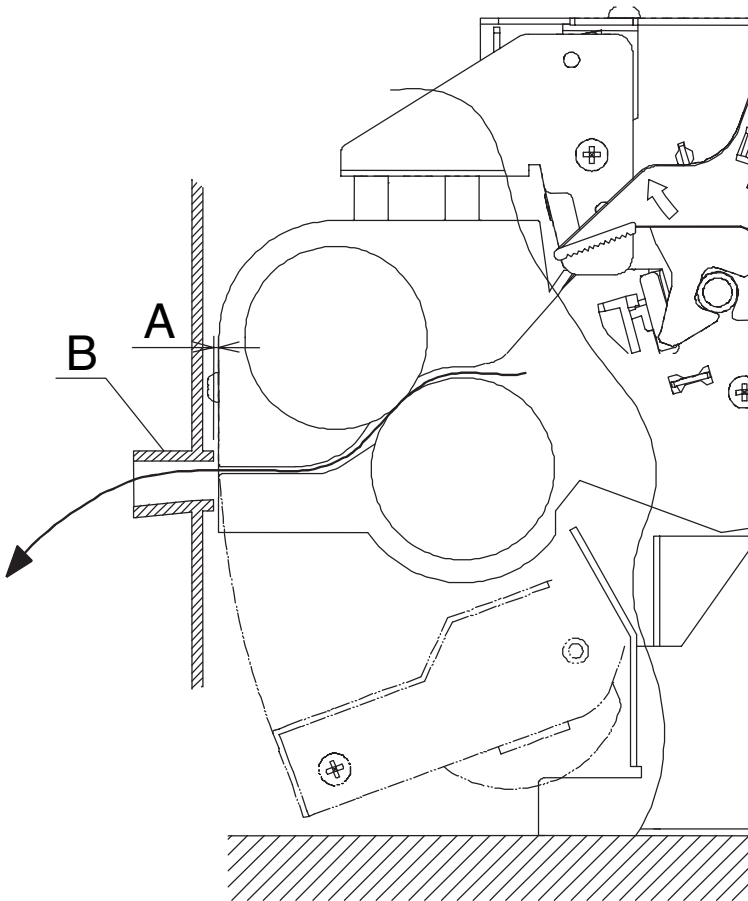
Description of Errors

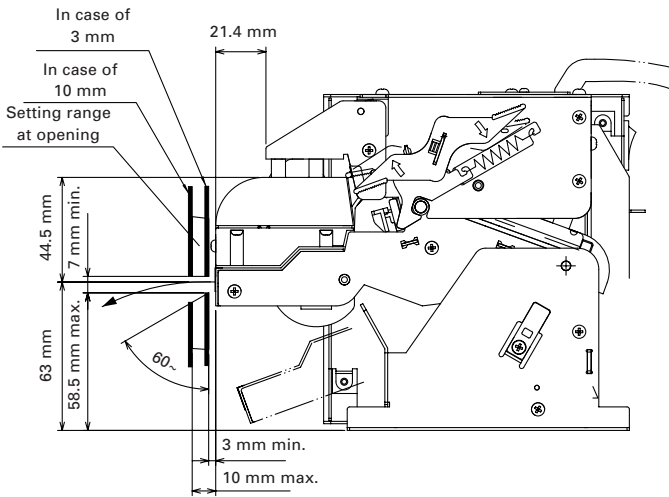
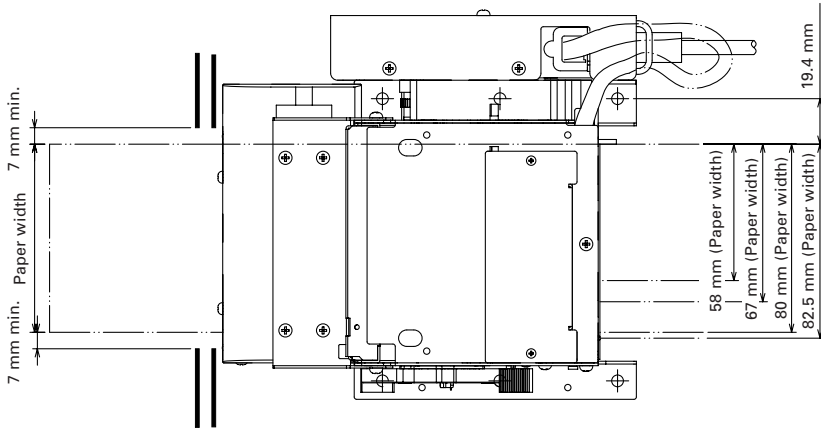
- **Paper end**
When the paper roll has run out, the Paper end sensor located in the paper path near the print head detects the end of the paper roll, causing the PE to be output and the printing to stop.
- **Paper near-end**
When the paper roll diameter is reduced to the lower limit, the Paper near-end sensor is activated and causes the PE to be output, indicating that the paper supply has become low.
- **Cover open**
When the cover is open, the cover open sensor reacts to stop the printing operation.
- **Head overheat**
To protect the print head from overheating, the head temperature sensor is activated if the head temperature rises over approx. 65°C, causing ERROR to be output and the printing to stop. Printing resumes automatically when the head temperature lowers below 60°C.
- **Cutter motor lock**
While the cutter motor is running, if the cutter position sensor inside the cutter unit keeps ON or OFF for approx. 1 second or more, the printer judges that the motor has locked, causing the cutter operation and printing operation to stop. (See “4.8 Removing Cutter Lock”.)
- **Low voltage error**
This error occurs when the voltage supplied to the printer is too low. If this error occurs, turn the printer power off immediately.
- **High voltage error**
This error occurs when the voltage supplied to the printer is too high. If this error occurs, turn the printer power off immediately.
- **Presenter error**
This error occurs when the presenter cannot eject paper or it cannot collect the ejected paper. To clear this error, remove the jammed paper or press the FEED switch.
- **Black mark detection error**
This error occurs when the printer cannot detect the black mark. If this error occurs, turn the printer power off and confirm the paper and memory switch setting.

5. NOTES ON EXTERIOR DESIGN

5.1 Notes on Paper Exit

1. Use consideration to prevent the ejected paper from entering the gap of the exterior case. (Dimension A must be minimum.)
2. Avoid the shape that may obstruct the paper ejected from the presenter unit.
3. Use consideration to design the shape that may prevent entry of dust, drops of water from the outside. (Portion B)
4. Keep a space enough to open the paper guide for maintenance purpose.

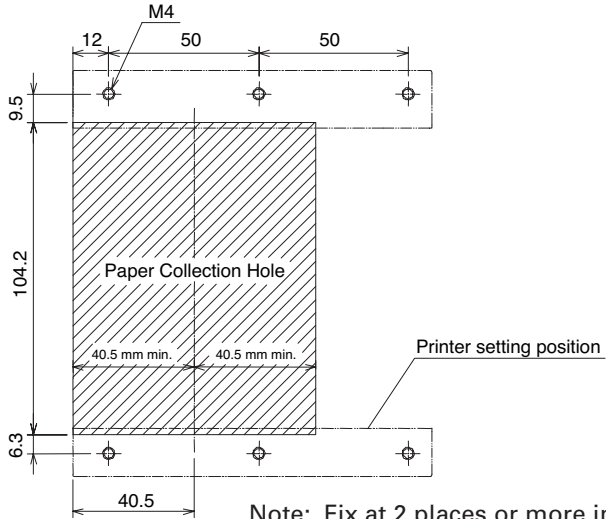




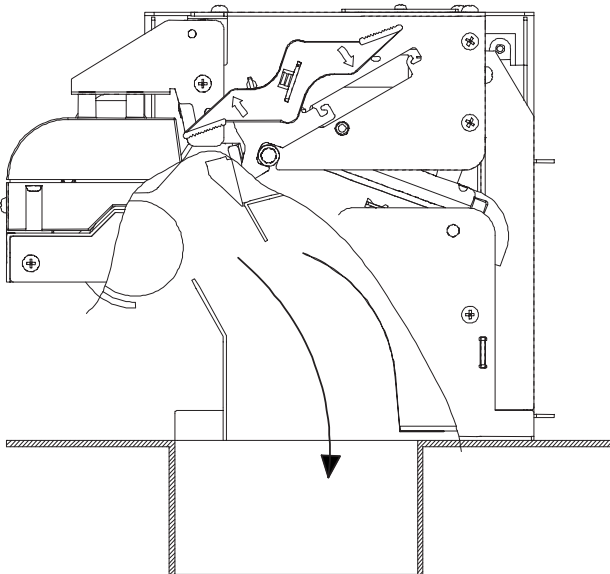
5.2 Notes on Paper Collection Hole and Collection Path

When implementing paper collection, be sure to prepare the paper collection hole as shown below.

Be careful to prevent irregularity, burr, etc. along the collecting path. Otherwise paper jam may occur.

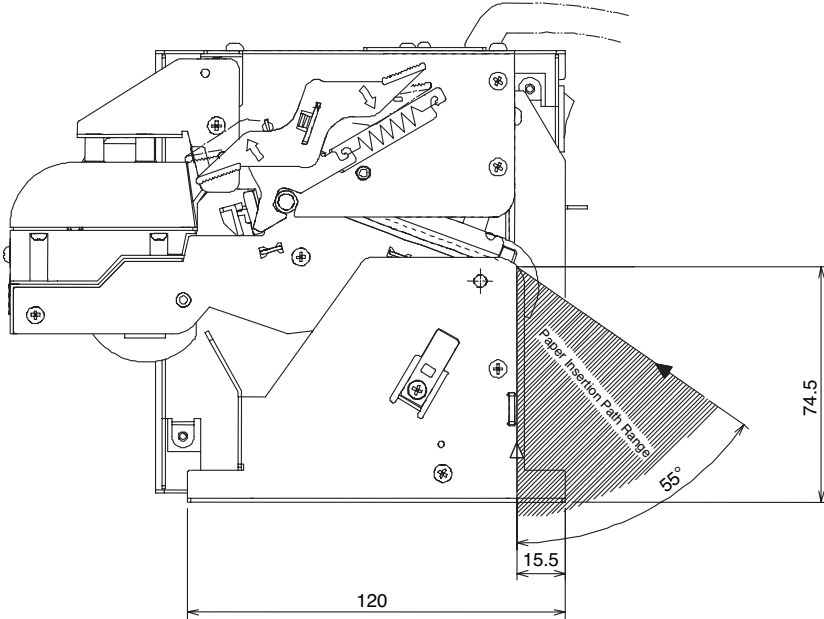


Note: Fix at 2 places or more in one side totaling 4 places or more.



5.3 Notes on Paper Insertion Path

When feeding paper without using optional PHU-3***, set the paper path in the following range. When using a large-diameter paper roll, be sure to provide a shock absorber to prevent shock during rotation of paper roll.

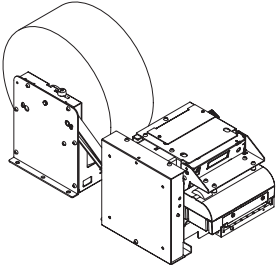
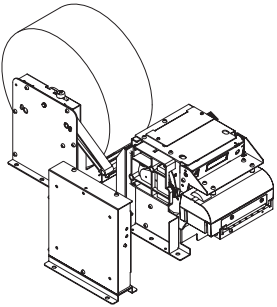
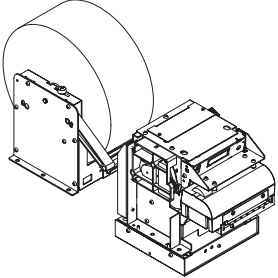
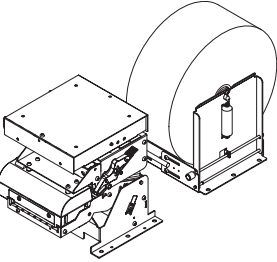
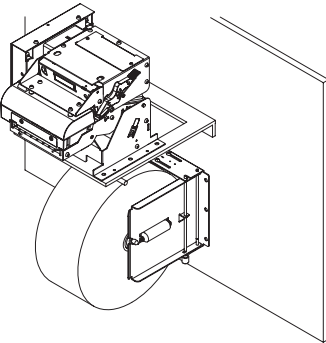
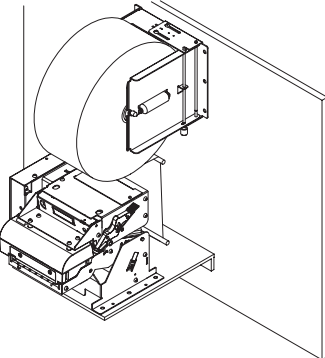


5.4 PHU-3*** (Paper Feed Unit) Installation

Refer to "Appendix-3. PPU-700 PUU-3*** (Paper Feed Unit) Installation".

5.5 Layout Examples of Control Box

Separation of Control Box from Printer allows you to enjoy free layout.

Layout Example (1/3)	
	
Basic Type	Example 1) With board installed separately.
Layout Example (2/3)	
	
Example 2) With board installed below the printer.	Example 3) With board installed above the printer.
Layout Example (3/3)	
	
Example 4) With paper holder installed under the printer.	Example 5) With paper holder installed above the printer.

6. DIP SWITCHES

6.1 Setting DIP Switches

The DIP switch is located on the serial interface board of the printer. DIP switch setting with the printer power on is not valid. After setting, turn the printer power on.

1. Turn the printer power off.
2. Remove the screw from the board. (Be sure not to have the screw be lost.)
3. Slide the interface board to remove it.
4. Set the DIP switch.
5. After setting, remount the interface board and screw it.



CAUTION!

- Pay attention to the edge of the interface board.
- The screw used is M2 × 3 mm. Do not use screws of other size. (If the screw is lost, use the screw of the same size. Do not use longer size.)
- Turn the printer power off before setting DIP switches. Otherwise, a failure may occur.
- Do not use keen edged tool when setting the DIP switch.
- Do not use the printer with the interface board removed.

6.2 DIP Switch Functions

DIP Switches

Switch No.	Function	ON	OFF	Factory Setting
1	Setting and selecting condition for communication	DIP switch setting is enabled.	DIP switch setting is disabled.	ON
2	Communication mode	Xon/Xoff	DTR/DSR	OFF
3	Bit length	7-bit	8-bit	OFF
4	Parity check	With parity	No parity	OFF
5	Selecting parity	Even parity	Odd parity	OFF
6	Selecting baud rate	(See Table 1)		ON
7				ON
8	INIT	Reset	Disabled	OFF

Table 1 Selecting baud rate

Baud Rate (bps)	Switch No.	
	6	7
2,400	OFF	OFF
4,800	ON	OFF
9,600	OFF	ON
19,200	ON	ON

7. MEMORY SWITCHES

7.1 Setting Memory Switches

Memory switch is a generic name for the following.

- (1) Memory switches MSW1, MSW2, MSW3, MSW4
- (2) Customize value
- (3) Condition for communication through serial interface

The memory switch can be selected, changed, or written by the combination of three actions: pressing the FEED switch, pressing and holding the FEED switch, and opening or closing the paper cover.

1. Entering memory switch setting mode

Set paper to the printer and keep the printer cover open. With the FEED switch pressed and held, turn the printer power on, and then press the FEED switch twice. Close the cover. If the current settings of the memory switch, etc. are printed, the printer is now in the memory switch setting mode.

2. Selecting memory switch

When the FEED switch is pressed short (within 2 seconds), printing occurs in the order of "MSW1" → "MSW2" → "MSW3" → "MSW4" → "Write/Factory Setting" → "MSW1" → repeatedly. When the memory switch you want to change is reached, press and hold the FEED switch (for more than 2 seconds).

3. Selecting each switch item

There are eight setting items for each switch. Press and hold the FEED switch for long (within 2 seconds), the printer goes to the next item and prints the current setting of the item. Repeat pressing and holding till the item you want to change setting is reached.

4. Changing the setting

When the item you want to change is reached, press the FEED switch short. The changed set value is printed. To return to the previous setting press the FEED switch short. When you press the FEED switch long, the set value is accepted and then the printer goes to the next setting item.

5. Returning to the memory switch select mode

When the setting of the desired content is completed, open the paper cover and then close the paper cover. This allows the printer to print the setting of the changed memory switch.

6. Saving the setting and exiting the memory switch setting mode

Press the FEED switch short to move to "Write/Factory Setting". Then press and hold the FEED switch. The printer prints the content of new setting and exits the memory switch setting mode to return to the normal standby state.

* Unless saving the setting is executed, the changed setting cannot be enabled.

7. Initializing the memory switch

When you want to return the memory switch setting to the initial state, go to "Write/Factory Setting" in the above procedure. Here, open the paper cover and press and hold the FEED switch. This allows the printer to return to the initial state.

* All the memory switch settings are returned to the factory set values.

7.2 Memory Switch Functions

Model PPU-700

No.	Function	OFF	ON
MSW1-1	Power ON Info	● Valid	Not send
MSW1-2	Buffer Size	● 4K bytes	45 bytes
MSW1-3	Busy Condition	● Full/Err	Full
MSW1-4	Receive Error	● Print ?	Invalid
MSW1-5	CR Mode	● Ignored	LF
MSW1-6	Reserved	● Fixed	—
MSW1-7	DSR Signal	● Invalid	Valid
MSW1-8	INIT Signal	● Invalid	Valid
MSW2-1	Reserved	—	● Fixed
MSW2-2	Reserved	—	● Fixed
MSW2-3	Spool print	Invalid	● Valid
MSW2-4	Full col print	CBM1000	● EPSON
MSW2-5	Resume aft PE	● Print next line	Print top
MSW2-6	Reserved	● Fixed	—
MSW2-7	Reserved	● Fixed	—
MSW2-8	PNE sensor	● Valid	Invalid
MSW3-1	Resum Ctrr Err	● Valid	Invalid
MSW3-2	Resum Open Err	● Close	Command
MSW3-3	Parallel 31 Pin	● Valid	Invalid
MSW3-4	Paper Select	● Thermal	Black MK
MSW3-5	Reserved	● Fixed	—
MSW3-6	Reserved	● Fixed	—
MSW3-7	Emulation	● PPU-231	TM-L90
MSW3-8	Open w/Printing	● Auto	Possible
MSW4-1	Reserved	● Fixed	—
MSW4-2	Reserved	● Fixed	—
MSW4-3	Pape Top Feed	● Valid	Invalid
MSW4-4	Collect mode	● Invalid	Valid
MSW4-5	Collecti Direction	● Rear	Front
MSW4-6	Collect Method	● General	Direct
MSW4-7	Print Continue	● Invalid	Valid
MSW4-8	Reserved	● Fixed	—

● Default (Factory shipment)

Model PPU-700II

No.	Function	OFF	ON
MSW1-1	Power ON Info	● Valid	Not send
MSW1-2	Buffer Size	● 4K bytes	45 bytes
MSW1-3	Busy Condition	● Full/Err	Full
MSW1-4	Receive Error	● Print ?	Invalid
MSW1-5	CR Mode	● Ignored	LF
MSW1-6	Reserved	● Fixed	—
MSW1-7	DSR Signal	● Invalid	Valid
MSW1-8	INIT Signal	● Invalid	Valid
MSW2-1	Reserved	—	● Fixed
MSW2-2	Reserved	—	● Fixed
MSW2-3	Spool print	Invalid	● Valid
MSW2-4	Full col print	CBM1000	● EPSON
MSW2-5	Resume aft PE	● Print next line	Print top
MSW2-6	Reserved	● Fixed	—
MSW2-7	Reserved	● Fixed	—
MSW2-8	PNE sensor	● Valid	Invalid
MSW3-1	Resum Ctrr Err	● Valid	Invalid
MSW3-2	Resum Open Err	● Close	Command
MSW3-3	Parallel 31 Pin	● Valid	Invalid
MSW3-4	Paper Select	● Thermal	Black MK
MSW3-5	Reserved	● Fixed	—
MSW3-6	Reserved	● Fixed	—
MSW3-7	Emulation	● PPU-231	TM-L90
MSW3-8	Open w/Printing	● Auto	Possible
MSW4-1	Reserved	● Fixed	—
MSW4-2	Reserved	● Fixed	—
MSW4-3	Pape Top Feed	● Valid	Invalid
MSW4-4	Collect mode	● Invalid	Valid
MSW4-5	Collecti Direction	● Rear	Front
MSW4-6	Collect Method	● General	Direct
MSW4-7	Print Continue	● Invalid	Valid
MSW4-8	Reserved	● Fixed	—

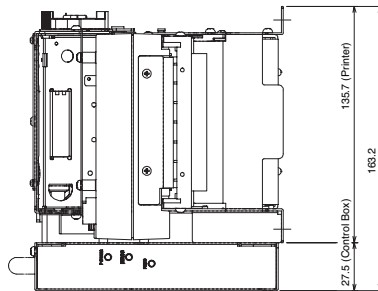
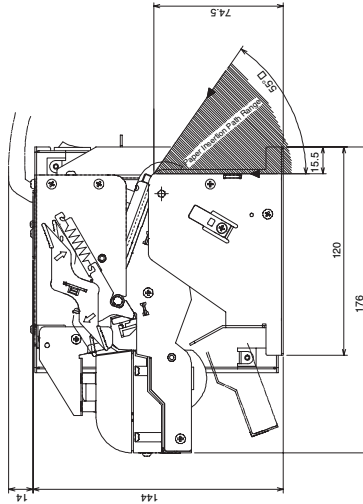
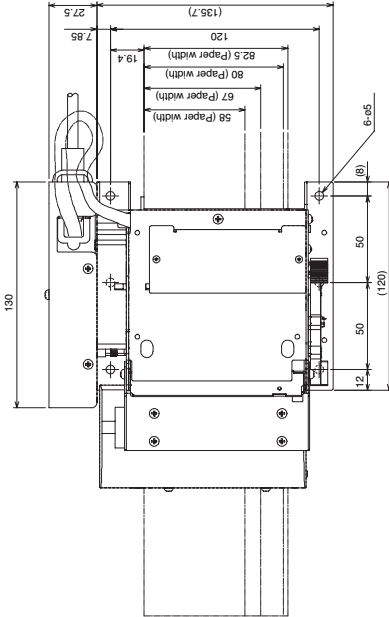
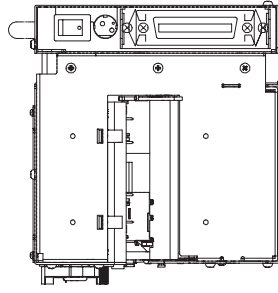
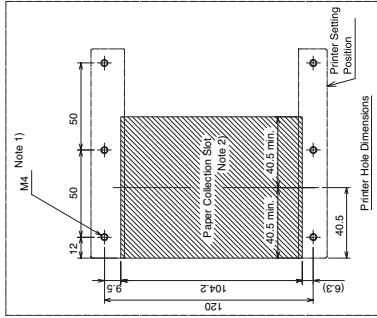
● Default (Factory shipment)

Switch No.	Setting	0 (OFF)	1 (ON)
Memory SW5-1	Buzzer	Valid	Invalid
SW5-2	Reserved	Fixed	-
SW5-3	USB Mode	Virtual COM	Printer Class
SW5-4	Reserved	Fixed	-
SW5-5	Reserved	Fixed	-
SW5-6	Reserved	Fixed	-
SW5-7	Clear PNE LED	Auto	Set Paper
SW5-8	Reserved	Fixed	-

Switch No.	Setting	Default	Set Values
Memory SW7-1	Baud Rate	9600 bps	1200 bps, 2400 bps, 4800 bps, 9600 bps, 19200 bps, 38400 bps
SW7-2	Data Length	8bits	7bits, 8bits
SW7-3	Stop Bit	1bit	1bit, 2bits
SW7-4	Parity	NONE	NONE, EVEN, ODD
SW7-5	Flow Control	DTR/DSR	DTR/DSR, XON/XOFF
SW7-6	Reserved	-	
SW7-7	VCom Protocol	PC Setting	PC Setting, DTR/DSR, XON/XOFF
Memory SW8-1	Print Width	576 dots	
SW8-2	Paper Color	1 Color Normal	1 Color Normal, Color Normal

APPENDIX-1. PPU-700 EXTERNAL VIEW

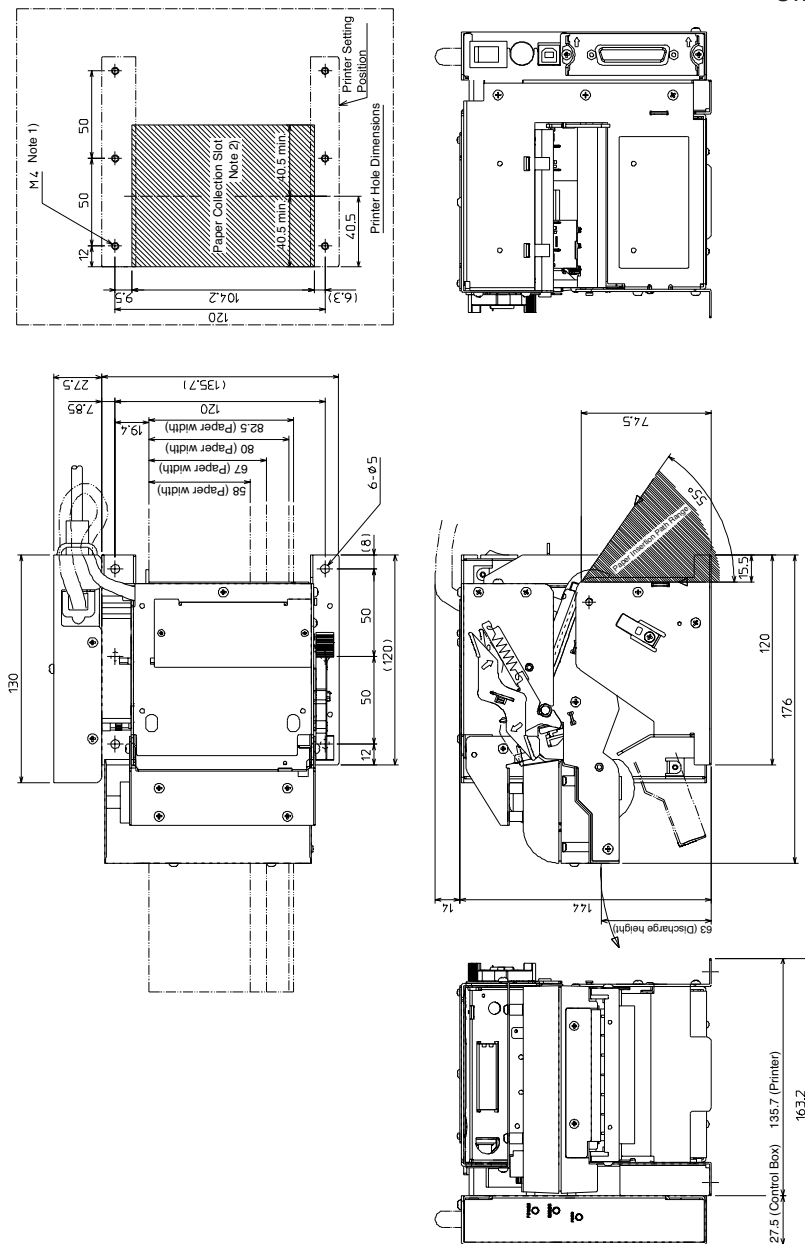
Unit: mm



Notes: 1) Fix at 2 places or more in one side totaling 4 places or more.
 2) When collecting paper, be sure to prepare a paper collection hole.

APPENDIX-2. PPU-700II EXTERNAL VIEW

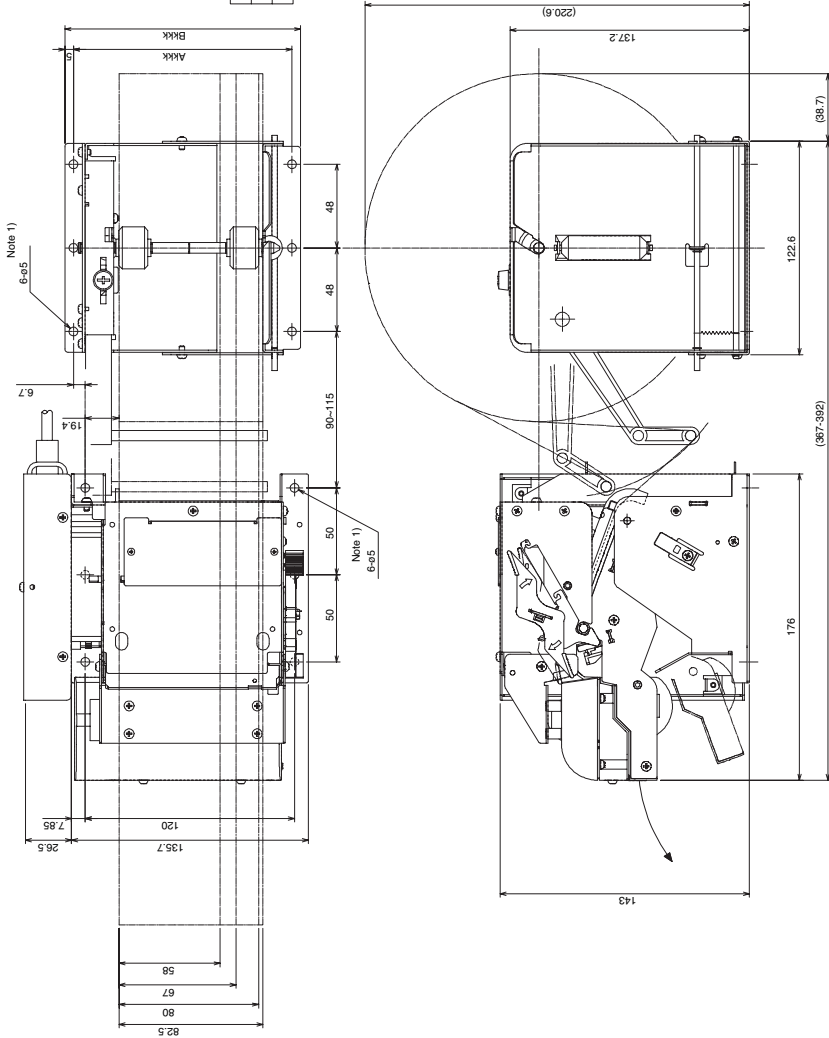
Unit: mm



Notes: 1) Fix at 2 places or more in one side totaling 4 places or more.
 2) When collecting paper, be sure to prepare a paper collection hole.

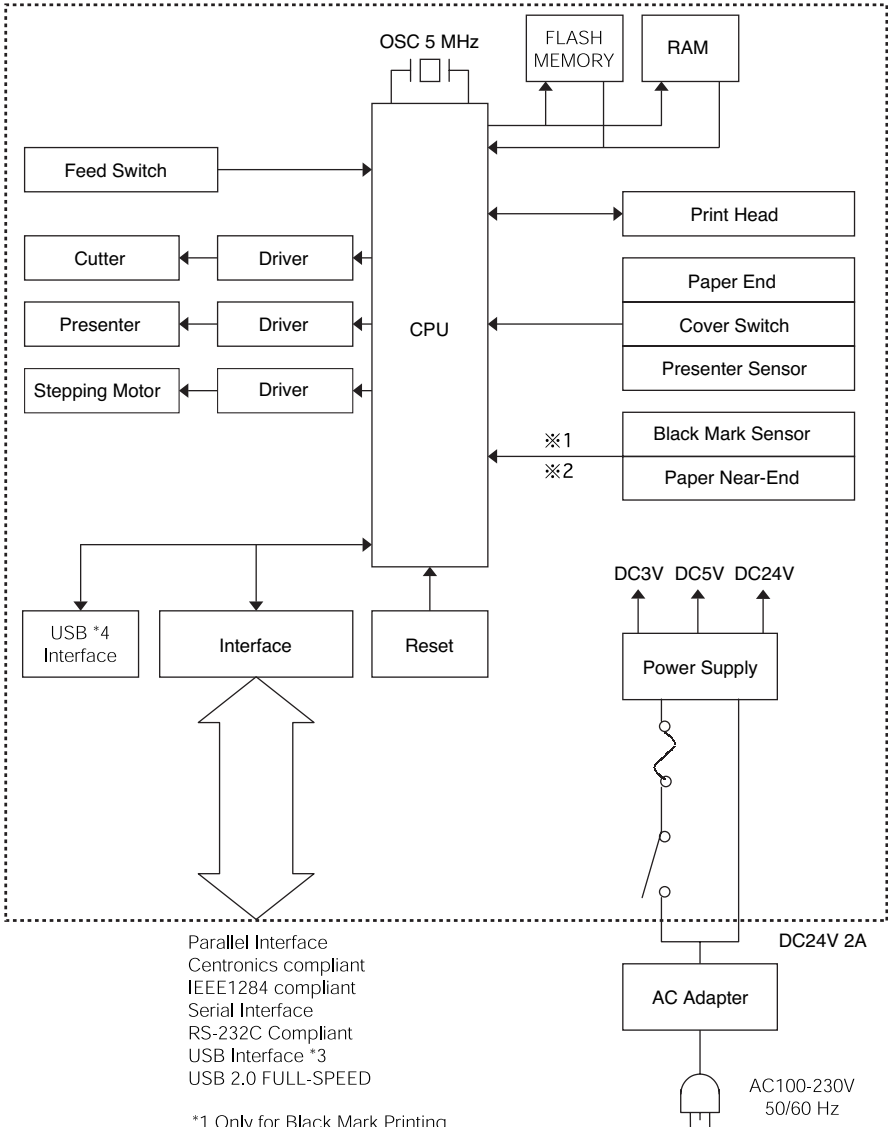
APPENDIX-3. PPU-700 PHU-3*** (PAPER FEED UNIT) INSTALLATION

Paper width	58	67	80	82.5
Dimension A	103.2	112.2	125.2	127.7
Dimension B	113.2	122.2	135.2	137.7



Note: 1) Fix at 2 places or more in one side totaling 4 places.

APPENDIX-4. BLOCK DIAGRAM



Parallel Interface
Centronics compliant
IEEE1284 compliant
Serial Interface
RS-232C Compliant
USB Interface *3
USB 2.0 FULL-SPEED

*1 Only for Black Mark Printing
*2 Option
*3 PPU-700 Only
*4 PPU-700II Only

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