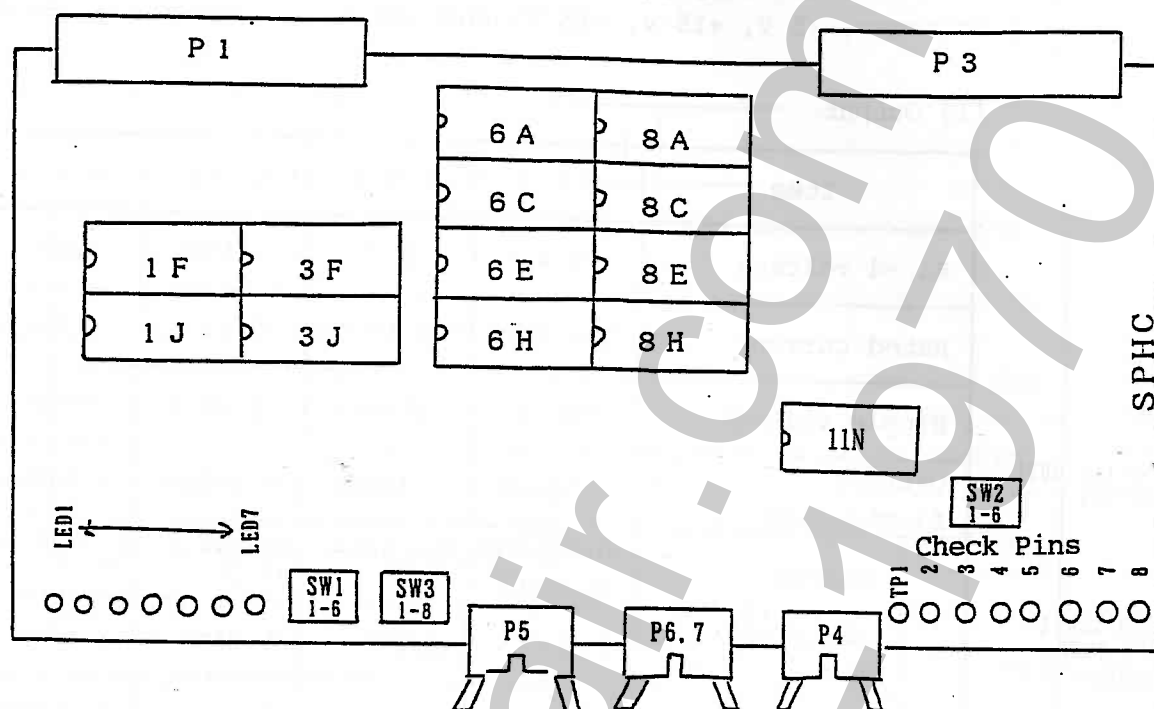## 2-2 System Control Unit (SPHC Board)

This is a CPU board to monitor the entire controller.

2-2-1 Connectors

Symbol	Name	Description
P 1		System bus
P 2		Local bus
P 3	S L B U S	S L B U S
P 4	RS232C1	RS232C port CH1
P 5	RS232C2	RS232C port CH2
P 6	RS232C3	RS232C port CH3 (board side)

2-2-2 Check Pins

Symbol	Name	Description
T P 1	G	Logic ground (black)
P 2	+ 5 V	Logic power 5 V
P 3	+ 1 2 V	RS232C driver power +12 V
P 4	− 1 2 V	RS232C driver power -12 V
P 5	+ 2 4 V	general purpose I/O power 24 V (this board unused)
P 6	T P	SLBUS signal (+)
P 7	T N ·	SLBUS signal (-)
P 8	T X E	SLBUS transmission/reception selector signal H: Transmission, L: Reception

2-2-3 LED Indicators

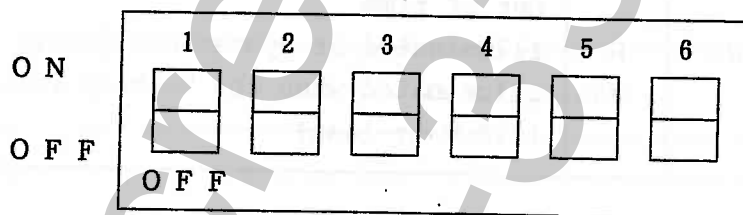| Symbolol	Name	Color	Description
L E D 1	R D Y	G	Illuminated at normal time
2	R U N	G	Illuminated when the CPU runs
3	S L B U S	G	Blinking at SLBUS communication time
4	F A I L	R	Illuminated when the board has a error
5	W D T 1	R	Illuminated when the watchdog timer runs out of time
6	P E R R	R	Illuminated at system RAM parity error time
7	B A T	R	Illuminated when the battery voltage drops (2.8 V or less)

2-2-4 Setting the DIP Switches

(1) SW1 ----- Setting the system start-up mode

```
┌── O P E N ────────────────┐
  1      2     3     4     5     6
┌───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┐
│   │   │   │   │   │   │   │   │   │   │   │   │
└───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┘
```
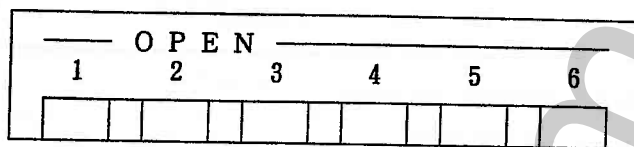
Bit	Description	Setting at ROM Mode
1	Specifies the system start-up mode	Closed
2	DOS start-up ----- All bits 1, 2, and 3 open	Open
3	ROM start-up ----- Bits 1 and 3 closed	Closed
4	At DOS start-up mode	Open
5	Specifies the data format forthe system console	Open
6	Unused	Open

(2) SW2 ----- Setting the SLBUS mode

```
            1     2     3     4     5     6
O N     ┌───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┐
        │   │   │   │   │   │   │   │   │   │   │   │
OFF     └───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┘
OFF
```

Bit	O N	O F F	Standard
1			O F F
2			O F F
3			O F F
4			O F F
5			O F F
6			O F F

(3) SW3 ----- Setting the system mode

```
 —— O P E N ——
  1    2    3    4    5    6    7    8
┌──┬──┬──┬──┬──┬──┬──┬──┐
│  │  │  │  │  │  │  │  │
└──┴──┴──┴──┴──┴──┴──┴──┘
```

(a) 1, 2 and 3 of SW3 ··· Type of display system.

Bit			Contents
1	2	3	
			Color CRT
C			Plasma display
	C		8 colors liquid crystal
C	C		EL display, 16 graduation

(Note) Space is open. C means close.

(b) 4, 5, 6, 7 and 8 of SW3 ··· Type of program when rising.

Bit					Contents
4	5	6	7	8	
					S-Ⅲ
			C		Board initialize
				C	M16-Ⅲ
		C		C	M16-Ⅲ +NCIF
			C	C	OS by RS 232C #2
		C	C	C	Yu-Yu Memory
	C	C	C	C	Function test
C	C	C	C	C	Test system program

(Note) Space is open and C means close.

2-2-5 Installing the System ROM

(1) Main CPU program memory

The ROM label is inscribed as shown below. Install in accordance with location.

```
┌─────────────────┐
│   S x R y y      │ ---------- Version
│   — z z          │
│ > 6 A            │ ---------- Location
│                  │
│   S P H C        │ ---------- Board Name
└─────────────────┘
```

(2) SLBUS program memory

The ROM label is inscribed as shown below. Install in accordance with location.

```
┌─────────────────┐
│   Y x R y y      │ ---------- Version
│   — z z          │
│ > 1 A            │ ---------- Location
│                  │
│   S P H C        │ ---------- Board Name
└─────────────────┘
```