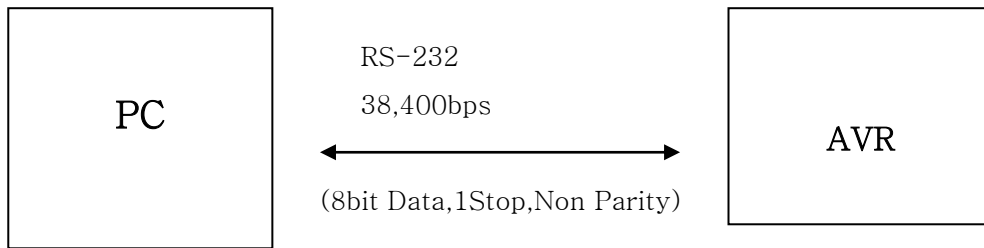
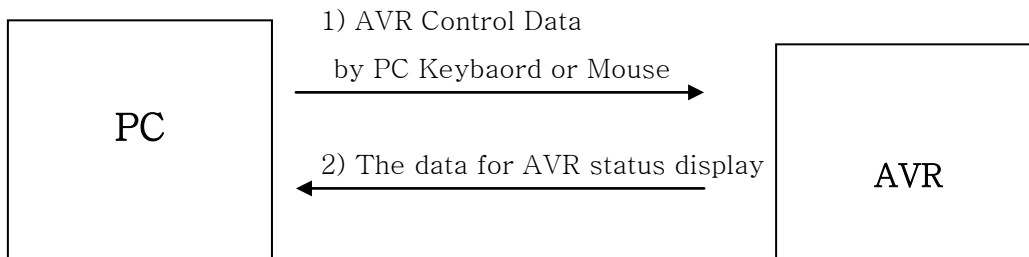


# RS-232 Protocol

## 1. Hardware Structure



## 2. Command Block map.



### 2.1 Data Communication Format

6 Bytes	1 bytes			2 bytes
Transmission	Data type	Length	Information Field	Check word

#### 1) Transmission reconnection code

“PCSEND”(ASCII) 1) AVR Control Data by PC Keyboard or Mouse

“MPSEND”(ASCII) 2) Data for AVR status display on PC.

#### 2) Data type

- a. In case of Remote Control through PC: 2
- b. In case of AVR status display on PC: 3

#### 3) Length

Information Field`s Byte

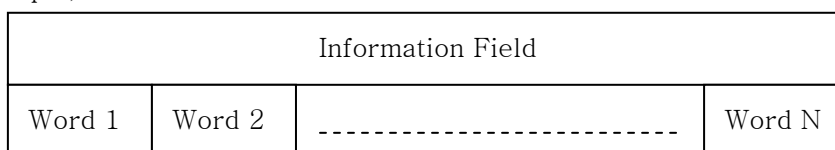
- a. In case of Remote Control through PC: 4
- b. In case of AVR status display on PC: 48

#### 4) Information Field : In hex code`s Data

#### 5) Check word (Remark : If Error happens, disregard the received data)

It is exclusive-or value data of Information Field in Word unit

Example)



$$\text{Check word} = (\text{Word 1} \wedge \text{Word 2} \wedge \dots \wedge \text{Word N})$$

### 3. Information Field

#### 3.1 IN case of Remote Control through PC

length: 4

Information Field

COMMAND → AVR	1st	2nd	3rd	4th
POWER ON	80	70	C0	3F
POWER OFF	80	70	9F	60
MUTE	80	70	C1	3E
AVR	82	72	35	CA
DVD	80	70	D0	2F
CD	80	70	C4	3B
TAPE	80	70	CC	33
VID1	80	70	CA	35
VID2	80	70	CB	34
VID3	80	70	CE	31
VID4	80	70	D1	2E
VID5	80	70	F0	0F
AM/FM	80	70	81	7E
6CH/8CH	82	72	DB	24
SLEEP	80	70	DB	24
SURR	82	72	58	A7
DOLBY	82	72	50	AF
DTS	82	72	A0	5F
DTS NEO:6	82	72	A1	5E
LOGIC7	82	72	A2	5D
STEREO	82	72	9B	64
TEST TONE	82	72	8C	73
NIGHT	82	72	96	69
1	80	70	87	78
2	80	70	88	77
3	80	70	89	76
4	80	70	8A	75
5	80	70	8B	74
6	80	70	8C	73
7	80	70	8D	72
8	80	70	8E	71
9	80	70	9D	62

Information Field

COMMAND -> AVR	1st	2nd	3rd	4th
0	80	70	9E	61
TUNE UP	80	70	84	7B
TUNE DOWN	80	70	85	7A
VOL UP	80	70	C7	38
VOL DOWN	80	70	C8	37
PRESET UP	82	72	D0	2F
PRESET DOWN	82	72	D1	2E
DIGITAL	82	72	54	AB
DIGITAL UP	82	72	57	A8
DIGITAL DOWN	82	72	56	A9
FMMODE	80	70	93	6C
DELAY	82	72	52	AD
DELAY UP	82	72	8A	75
DELAY DOWN	82	72	8B	74
COM SET	82	72	84	7B
COM UP	82	72	99	66
COM DOWN	82	72	9A	65
SPEAKER	82	72	53	AC
SPEAKER UP	82	72	8E	71
SPEAKER DOWN	82	72	8F	70
CHANNEL	82	72	5D	A2
RDS	82	72	DD	22
DIRECT	80	70	9B	64
CLEAR	82	72	D9	26
MEMORY	80	70	86	79
MULTIROOM	82	72	DF	20
MULTIROOM UP	82	72	5E	A1
MULTIROOM DOWN	82	72	5F	A0
OSD	82	72	5C	A3
OSD LEFT	82	72	C1	3E
OSD RIGHT	82	72	C2	3D
SURR UP	82	72	85	7A
SURR DOWN	82	72	86	79

Information Field

COMMAND -> AVR	1st	2nd	3rd	4th
PRESCAN	80	70	96	69
DIMMER	80	70	DC	23
FAROUDJA	82	72	C6	39

3.2 In case of Normal AVR status display mode.

length: 48

information field data address	AVR MODE -> PC	information field data value
0	F0 (ID code)	1bytes
1-14	FL UPPER (14byte)	14bytes
15	Reserve	1bytes
16	F1 (ID code)	1bytes
17-30	FL Down (14byte)	14bytes
31	Reserve	1bytes
32	F2 (ID code)	1bytes
33-46	FL ICON (14byte)	14bytes
47	Reserve	1bytes