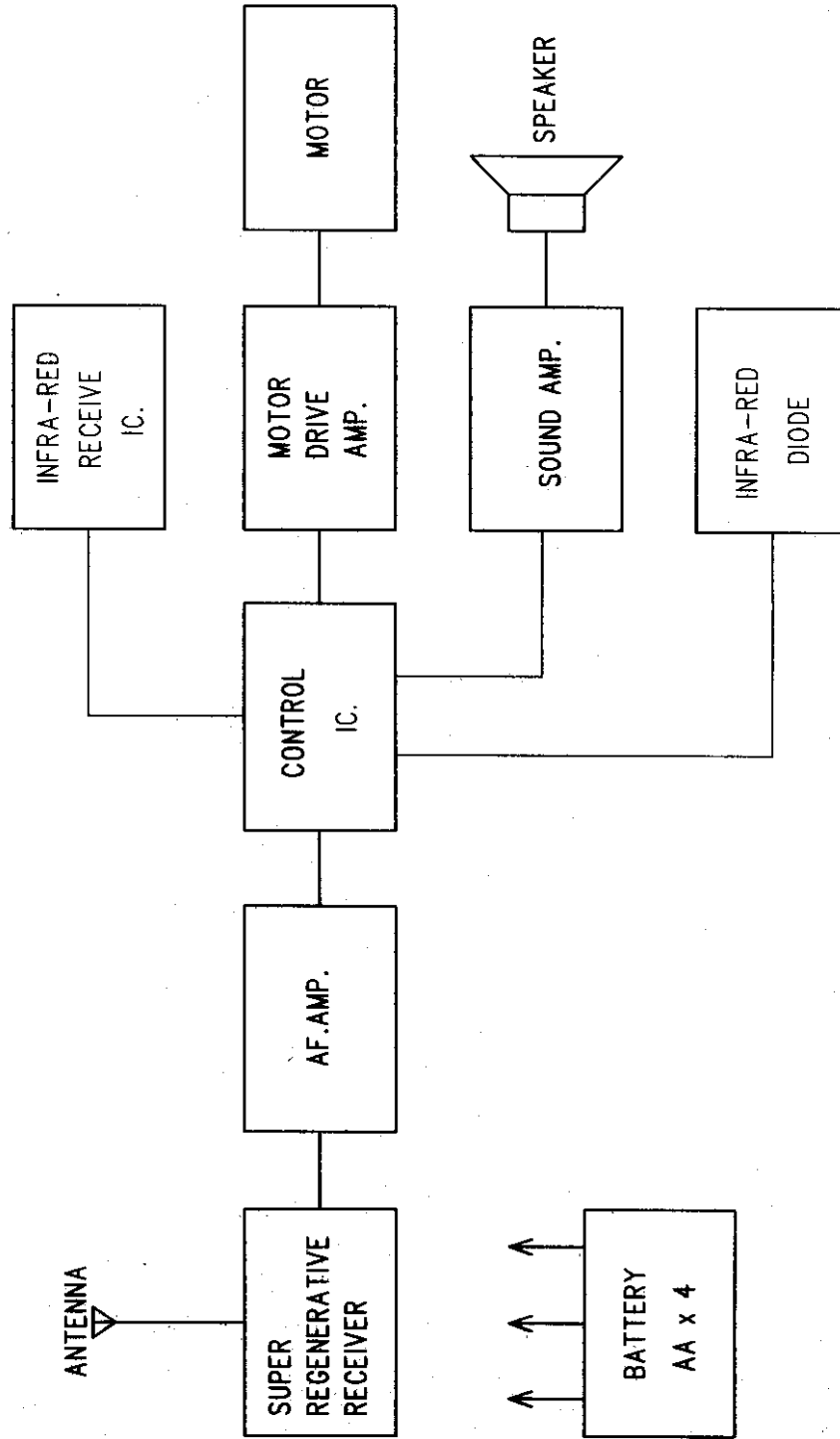


# PCB:NO.RD3310 RECEIVER BLOCK DIAGRAM

FCC ID : CVTRD3310H

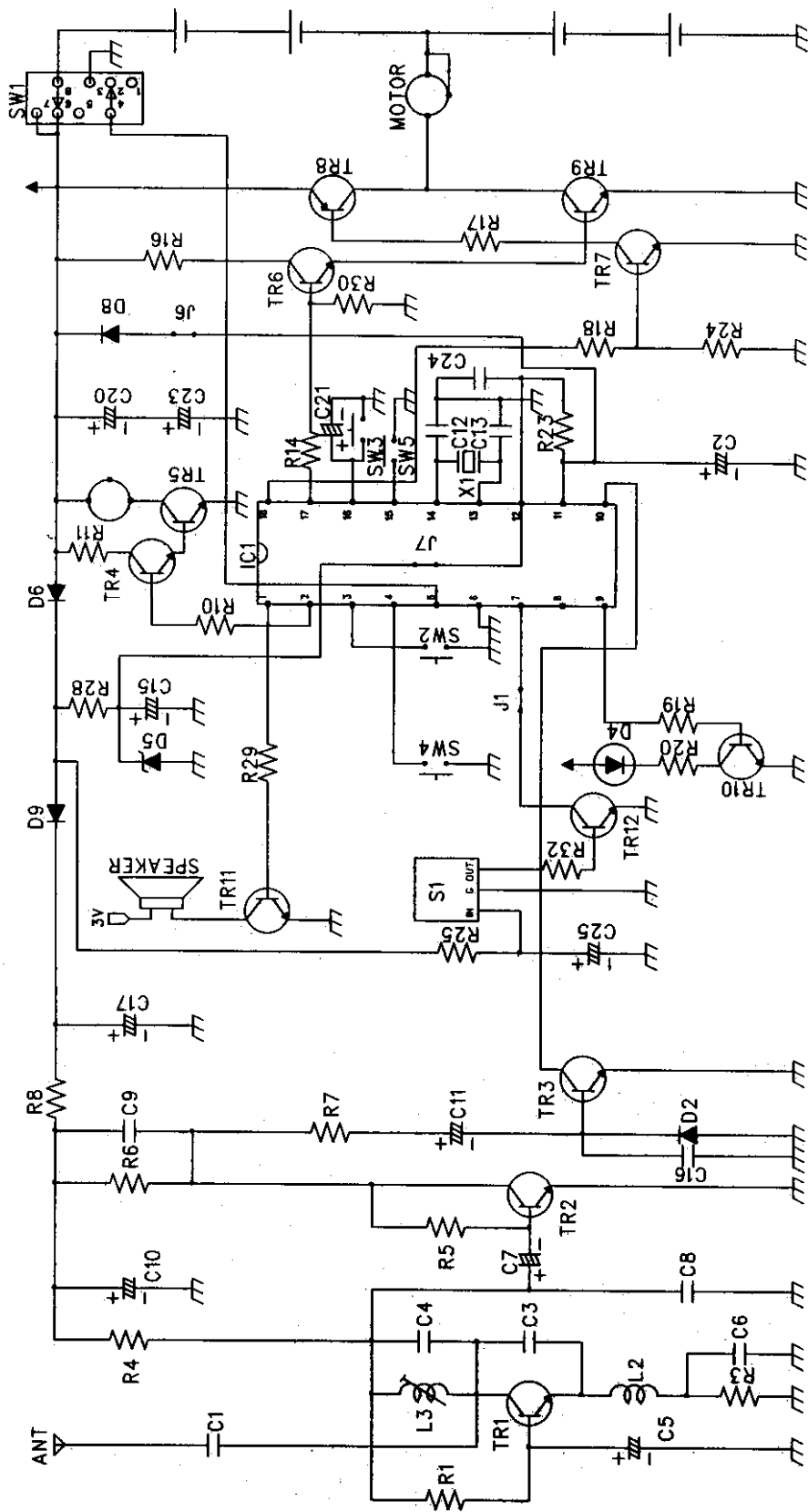


## **RD3310-4 CIRCUIT EXPLANATION**

**FCC ID : CVTRD3310H**

- 1) The RF. (Radio Frequency) inputted through The ANT. is passed to the Super-regenerative receiver, formed by TR1, where the Action Signal is detected.
- 2) The Action Signal is amplified by TR2 and TR3.
- 3) The Action Signal is decoded in the control IC1., and is sent to each output terminal.
- 4) TR6,7,8 and 9 form the motor drive control circuit.
  - (4-1) Forward motion.  
IC1.18P. is turned Hi, and TR7 and 8 are turned on.  
Consequently sending electric power to the motor for forward motion.
  - (4-2) Backward motion.  
IC1.17P. is turned Hi, and TR6 and TR9 are turned on.  
sending electric power to the motor for backward motion.
- 5) Sound outputting circuit
  - (5-1) TR11 form audio amplifier for speaker.
  - (5-2) IC1.1P is outputting sound.
- 6) TR10 and D4 are formed outputting circuit for Ray gun.  
IC.1 9P is turned Hi when IC is receiving signal of fire movement.  
Consequently, TR10 turned on for sending electric power to (LED) D4.  
Then D4 outputs Infrared rays  
At this time, IC1.1P outputs the sound of the firing.
- 7) S1 and TR12 are formed the circuit which detects attack from the enemy side. TR12 is waked up by S1 when S1 is detecting Infrared rays from the enemy side. TR12 informs to IC1 that there is attack from the enemy side.  
At this time, IC1.1P outputs the sound that attack was taken.
- 8) The circuit that the movement when attack is taken is controlled

- (8-1) TR4 and TR5 turned on when attack was taken. Consequently motor is active.
- (8-2) The situation of the attack is counted with SW3. And, there is even a trigger that stops a motor in SW3.
- (8-3) When attack is taken three times, the neck of the robot is separated by the spring. SW5 opens, and a game end when the neck of the robot leaves it.
- (8-4) The number of times that attack was taken is reset with SW2.



FCC ID : CVTRD3310H  
DRIVING PCB:NO.RD3310

# NO. RD3310 PCB. LIST

FCC ID : CVTRD3310H

| NO. | DESCRIPTION | CODE  | PARTS NAME            | NOTE |
|-----|-------------|-------|-----------------------|------|
| 1   | I.C.        | IC 1  | HT48C10-005C          |      |
| 2   |             | IC 2  | PTC-715TM             |      |
| 3   |             | TR 1  | 2SC3800 or equivalent |      |
| 4   |             | TR 2  | 2SC945Q or equivalent |      |
| 5   |             | TR 3  | 2SC945Q or equivalent |      |
| 6   |             | TR 4  | 2SC945Q or equivalent |      |
| 7   |             | TR 5  | KTC3203 or equivalent |      |
| 8   |             | TR 6  | 2SC945Q or equivalent |      |
| 9   |             | TR 7  | 2SC945Q or equivalent |      |
| 10  |             | TR 8  | KTAL273 or equivalent |      |
| 11  |             | TR 9  | KTC3205 or equivalent |      |
| 12  |             | TR 10 | KTC3203 or equivalent |      |
| 13  |             | TR 11 | KTC3203 or equivalent |      |
| 14  |             | TR 12 | 2SC945Q or equivalent |      |
| 15  |             | TR 13 |                       |      |
| 16  | DIODE       | D 1   |                       |      |
| 17  |             | D 2   | 1SS133 or equivalent  |      |
| 18  |             | D 3   |                       |      |
| 19  |             | D 4   | 1E-0530HP             |      |
| 20  |             | D 5   | WZ3.3                 |      |
| 21  |             | D 6   | 6.0 ohm               |      |
| 22  |             | D 7   |                       |      |
| 23  |             | D 8   | 1SS133 or equivalent  |      |
| 24  |             | D 9   | 1SS133 or equivalent  |      |
| 25  | RESISTOR    | R 1   | 150K                  |      |
| 26  |             | R 2   |                       |      |
| 27  |             | R 3   | 680                   |      |
| 28  |             | R 4   | 4.7K                  |      |
| 29  |             | R 5   | 470K                  |      |
| 30  |             | R 6   | 10K                   |      |
| 31  |             | R 7   | 1K                    |      |
| 32  |             | R 8   | 330                   |      |
| 33  |             | R 9   |                       |      |
| 34  |             | R 10  | 1K                    |      |
| 35  |             | R 11  | 100 (1/4W)            |      |
| 36  |             | R 12  |                       |      |
| 37  |             | R 13  |                       |      |
| 38  |             | R 14  | 1K                    |      |
| 39  |             | R 15  |                       |      |
| 40  |             | R 16  | 100 (1/4W)            |      |
| 41  |             | R 17  | 100 (1/4W)            |      |
| 42  |             | R 18  | 1K                    |      |
| 43  |             | R 19  | 470                   |      |
| 44  |             | R 20  | 56 (1/2W)             |      |
| 45  |             | R 21  |                       |      |
|     |             | R 22  |                       |      |
|     |             | R 23  | 120K                  |      |
|     |             | R 24  | 10K                   |      |
|     |             | R 25  | 100                   |      |

|    |             |      |                         |            |
|----|-------------|------|-------------------------|------------|
| 46 |             | R 26 | -                       |            |
| 47 |             | R 27 | -                       |            |
| 48 |             | R 28 | 100                     |            |
| 49 |             | R 29 | 470                     |            |
| 50 |             | R 30 | 10K                     |            |
| 51 |             | R 31 | -                       |            |
| 52 |             | R 32 | 100K                    |            |
| 53 |             | R 33 | -                       |            |
| 54 | CAPACITOR   | C 1  | 10p(C)                  |            |
| 55 |             | C 2  | 2.2(E)                  |            |
| 56 |             | C 3  | 33p(C)                  |            |
| 57 |             | C 4  | 5p(C)                   |            |
| 58 |             | C 5  | 4.7(E)                  |            |
| 59 |             | C 6  | 222(M)                  |            |
| 60 |             | C 7  | 0.1(E)                  |            |
| 61 |             | C 8  | 103(M)                  |            |
| 62 |             | C 9  | 223(M)                  |            |
| 63 |             | C 10 | 100(E)                  |            |
| 64 |             | C 11 | 1(E)                    |            |
| 65 |             | C 12 | 100p(C)                 |            |
| 66 |             | C 13 | 100p(C)                 |            |
| 67 |             | C 14 | -                       |            |
| 68 |             | C 15 | 220(E)                  |            |
| 69 |             | C 16 | 103(C)                  |            |
| 70 |             | C 17 | 100(E)                  |            |
| 71 |             | C 18 | -                       |            |
| 72 |             | C 19 | -                       |            |
| 73 |             | C 20 | 100(E)                  |            |
| 74 |             | C 21 | 1(E)                    |            |
| 75 |             | C 23 | 100(E)                  |            |
| 76 |             | C 24 | 223(C)                  |            |
| 77 |             | C 25 | 100(E)                  |            |
| 78 | INDUCTOR    | L 2  | SP 3.3uH                |            |
| 79 |             | L 3  | S6.5T                   |            |
| 80 | JUMPER      | J 1  | 10 ohm                  |            |
| 81 |             | J 2  | -                       |            |
| 82 |             | J 3  | -                       |            |
| 83 |             | J 4  | -                       |            |
| 84 |             | J 5  | -                       |            |
| 85 |             | J 6  | WIRE 60mm               |            |
| 86 |             | J 7  | WIRE 40mm               |            |
| 87 | EXTRA PARTS | EP 1 | SPEAKER (OD 27)         | OUT OF PCB |
| 88 |             | EP 2 | 2TA4.0MG                |            |
| 89 |             | EP 3 | MAIN SW :SS023D05-G6    |            |
| 90 |             | EP 4 | MICRO SW :LF-101 x 2    | OUT OF PCB |
| 91 |             | EP 5 | PUSH SW :SOA 111 RS/R66 |            |
| 92 |             | EP 6 | -                       |            |
| 93 |             | EP 7 | PCB:NO.RD3310           |            |

RESISTOR... No mark: 1/6W, ±5% INDUCTOR... 100mA, ±10%

CAPACITOR: (C)=CERAMIC... 50WV, ±80-20%

: (M)=MYLAR... 50WV, No mark(K-rank) : ±10%, J-rank: ±5%

: (E)=ELECTROLYTIC... 16WV, ±20%

: (T)=TANTALUM... 35WV, ±10%