

3-2 Adjusting the automatic tuning mechanism

(1) Adjusting the reversing mechanism

When the tuner or the micro switch is replaced, move the tuner by pushing the search buttons and see if the micro switch operates correctly (See if the pointer reverses its directions at the both ends of the dial scale). If it does not, adjust the contact condition of the reversing lever as shown in Fig. 3-6

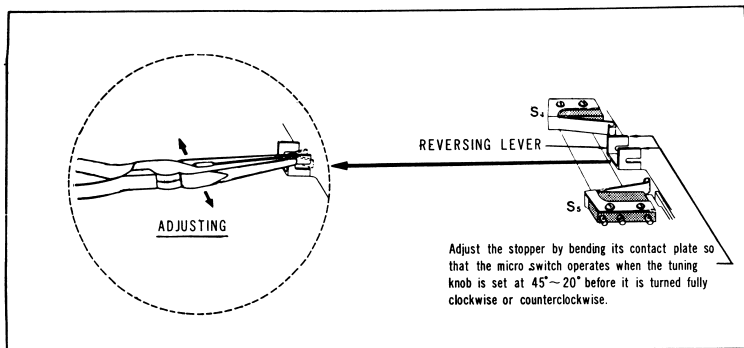


Fig. 3-6

(2) Adjusting the magnet hook

- ① Adjust the gap between the hook and the magnet with the hook gap adjuster to make it 2mm.
- ② Adjust the gap between the carrier gear and the end of magnet by bending the hook to make it 0.7mm.
- ③ Check if the magnet hook operates at 10.5V and if it does not adjust the tension of the spring by changing the position of spring end. (See Fig. 3-7)

■ Do not lubricate the magnet hook.

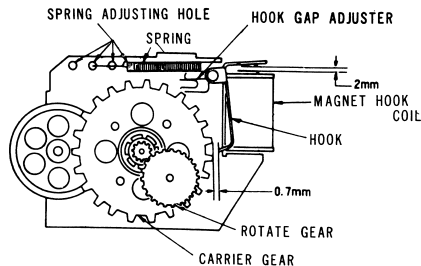


Fig. 3-7

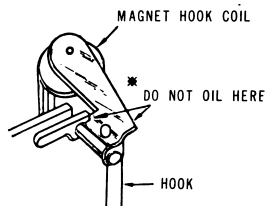


Fig. 3-8

3-3 Explanation of foot switch

- (1) Foot switch circuit as shown in Fig. 3-9 is connected in parallel with the start switch inside the set.
- (2) Search direction can not be changed by foot switch since it merely serves as a start switch.

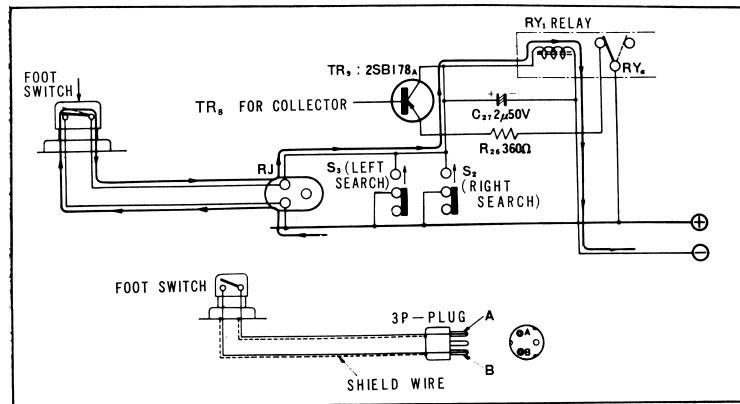
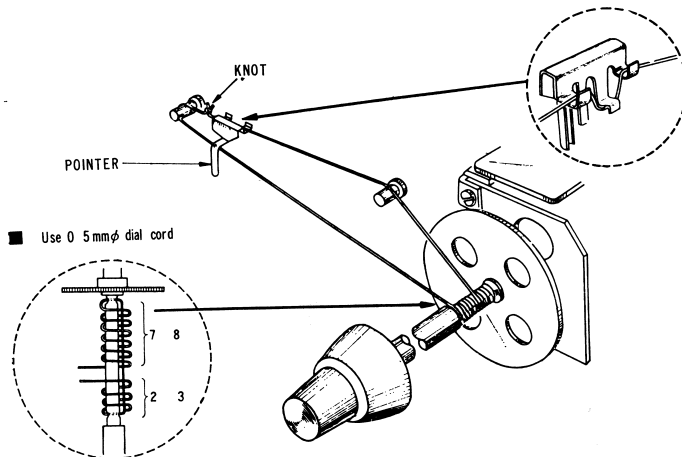
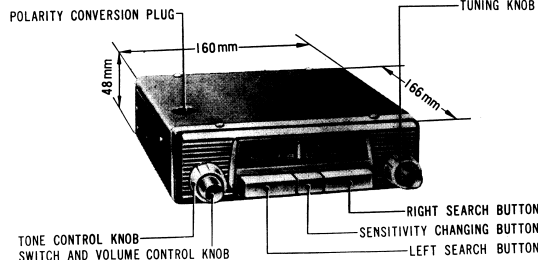


Fig. 3-9

3-4 How to put on dial cord



※ Turn shaft fully counterclockwise and wind the cord around the shaft as shown in the picture.



### 3 SERVICE POINTS

#### 3-1 Adjusting points

##### (1) Adjusting procedure

- IFT adjusting of radio
- Tracking of OSC, RF and ANT.
- IFT adjusting of trigger
- R<sub>1</sub> adjusting

##### (2) Preparation before adjusting

- Power supply voltage: DC 13.2V
- Search sensitivity changeover button: Distant position (max. sensitivity) — button is not depressed.
- R<sub>3</sub>: Short-circuit
- R<sub>21</sub>, R<sub>22</sub> (variable resistors): Adjust for max. volume and treble tone.
- Dummy antenna: Connect the antenna receptacle of radio set and the signal generator by means of dummy antenna. (See Fig. 3-1)
- Signal generator output: modulation freq. 400%, 30% modulation.

##### (3) Adjusting procedure for radio (See Fig. 3-2)

Adjusting step	Adjusting point		Signal frequency	Radio dial position	Remarks
1	IFT adjustment	IFM <sub>2</sub> (black)	455kc	In vicinity of 1500kc where there is no station	Repeat adjustment 3~4 times for maximum output
2		IFM <sub>1</sub> (white)	"		
3		T <sub>2</sub> (blue)	"		
4		T <sub>1</sub> (pink)	"		
5	Tracking adjustment	Core of oscillator coil L <sub>4</sub> (red)	510kc	Lowest receiving point (left end)	Repeat adjustment 3~4 times so that signals can be received both at lowest and highest points
6		Oscillator trimmer C <sub>12</sub>	1650kc	Highest receiving point (right end)	
7	Matching adjustment of RF and ANT.	RF trimmer C <sub>8</sub>	1400kc	1400kc	Adjust for maximum output
8		ANT. trimmer C <sub>3</sub>	"	"	

■ When the radio set is installed as well as when the antenna is replaced, ANT trimmer C<sub>3</sub> must be adjusted in the way mentioned above.

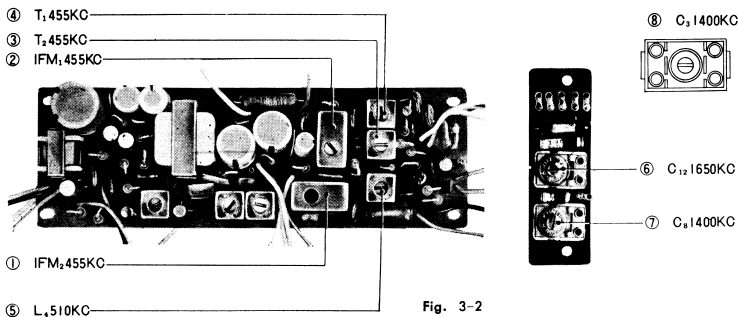


Fig. 3-2

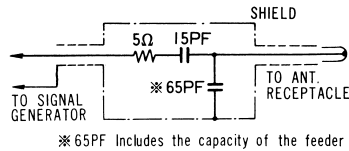


Fig. 3-1

##### (4) Adjusting procedure for trigger

Adjusting step	Adjusting point	Signal frequency	Radio dial position	Remarks
1	T <sub>5</sub> (Yellow)	455kc	Highest frequency receiving point (right end)	Adjust for max. voltage (DC) across R <sub>20</sub> (10kΩ) (See Fig. 3-4).
2	T <sub>4</sub> (Green)	"		
3	T <sub>3</sub> (Orange)	"		

- Since the freq. band characteristics of trigger IFT is sharper than radio IFT, the output voltage changes quite sensitively to the movement of the dust core.
- When radio IFT is replaced the trigger IFT should be re-adjusted with the procedure above.
- Also when trigger IFT itself is replaced it must be adjusted. In this case be sure not to re-adjust other IFT than the replaced one itself.

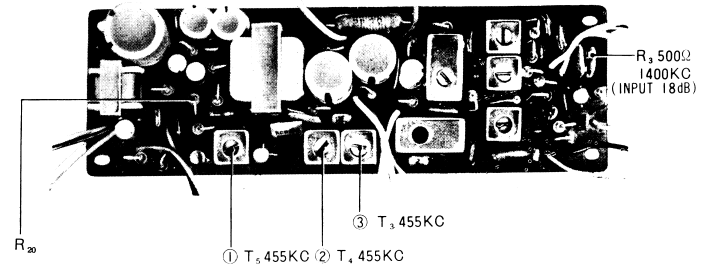


Fig. 3-3

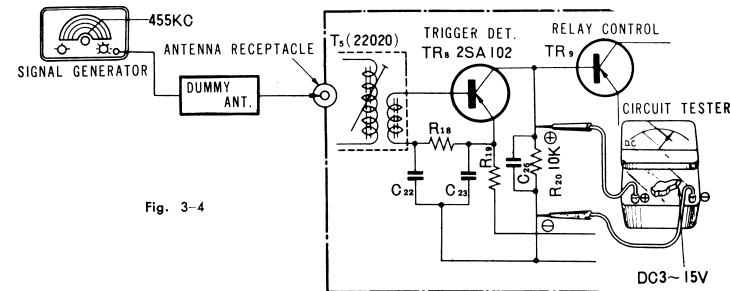


Fig. 3-4

##### (5) Adjusting procedure for R<sub>3</sub> (variable resistor)

Adjusting step	Signal frequency	Remarks
R <sub>3</sub>	1400kc (input 18dB)	Adjust so that output becomes 500mW.

■ Output, 500mw: approx. 2V (AC) when output load resistance is 8Ω.

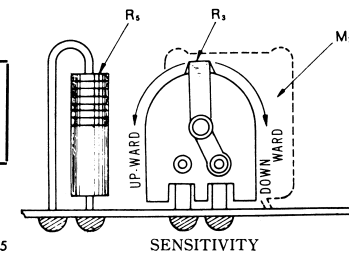
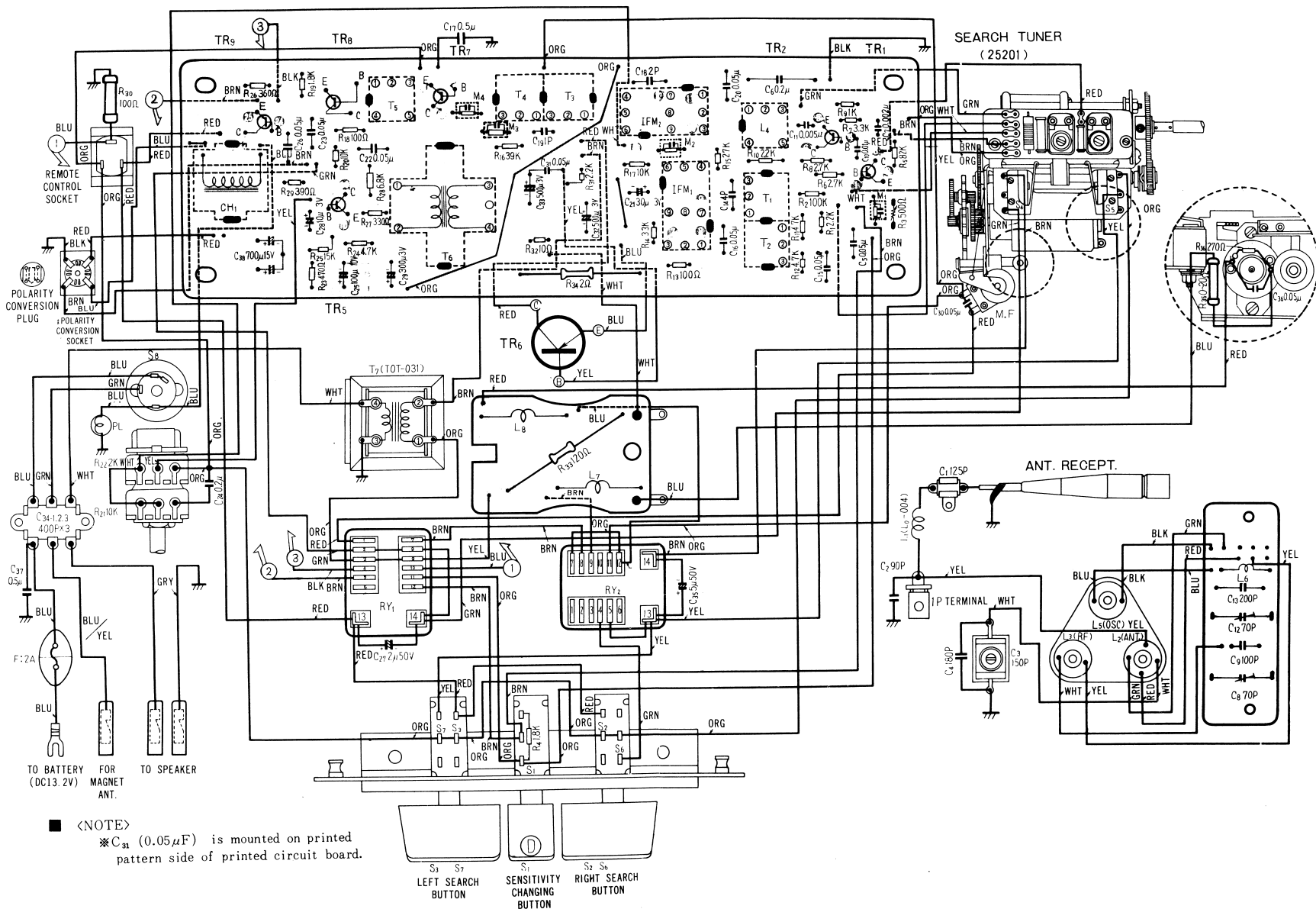
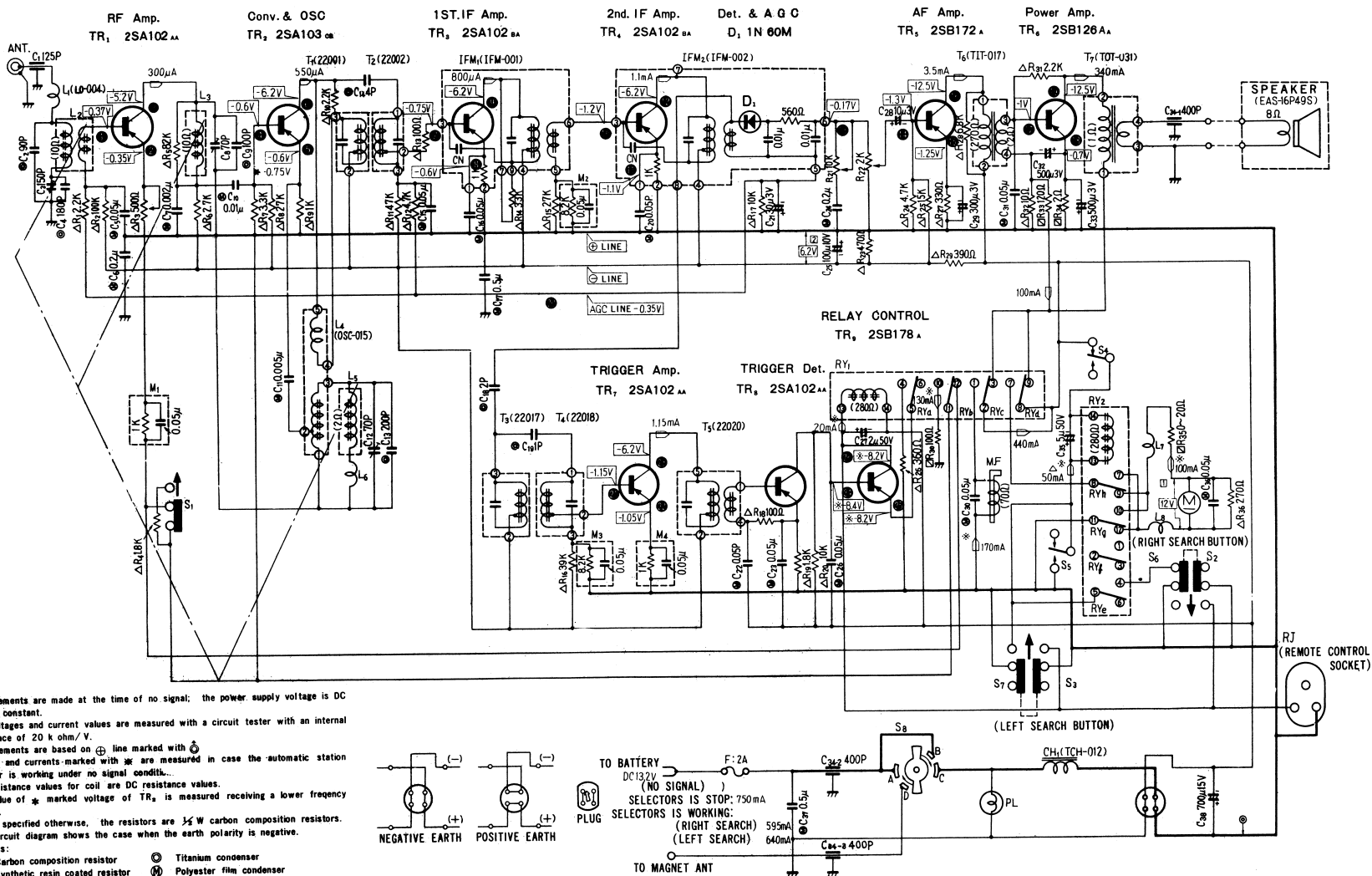


Fig. 3-5

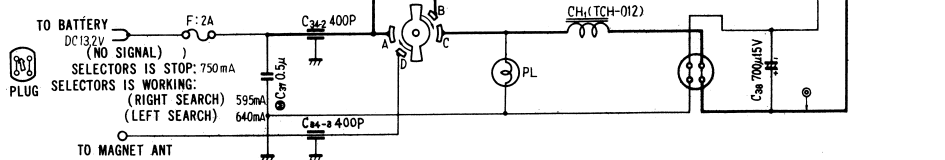
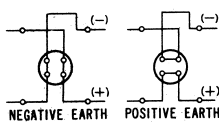
CR-1481 PRINTED CIRCUIT BOARD



CR-1481 CIRCUIT DIAGRAM



- 1) Measurements are made at the time of no signal; the power supply voltage is DC 13.2V constant.
- 2) The voltages and current values are measured with a circuit tester with an internal resistance of 20 k ohm/V.
- 3) Measurements are based on ⊕ line marked with ⊕.
- 4) Voltage and currents marked with \* are measured in case the automatic station selector is working under no signal condition.
- 5) The resistance values for coil are DC resistance values.
- 6) The value of \* marked voltage of TR<sub>2</sub> is measured receiving a lower frequency station.
- 7) If not specified otherwise, the resistors are 1/2 W carbon composition resistors.
- 8) This circuit diagram shows the case when the earth polarity is negative.
- 9) Symbols:



R	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17.18	19	20	21	22.23.26	24	25.30.27.23.28	28	29	30	31	32	33	34	35	36
C	1,2	3	4	5,6	7	8	9,10	11	12	13	14,12,13	15	16	17	18	19	20	21,23,37	22	24,25	26,34,2,3	27	28	29	30	31	32	33	34	35	36	38
L, T, CH Th M	L <sub>1</sub>	L <sub>2</sub>	M <sub>1</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub>	T <sub>1</sub>	T <sub>2</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub>	T <sub>1</sub>	T <sub>2</sub>	IFM <sub>1</sub>	T <sub>3</sub>	M <sub>2</sub>	M <sub>3</sub>	M <sub>4</sub>	T <sub>5</sub>	IFM <sub>2</sub>	T <sub>6</sub>	T <sub>7</sub>	CH <sub>1</sub>	T <sub>7</sub>	L <sub>7</sub>	L <sub>8</sub>	L <sub>9</sub>	L <sub>10</sub>	L <sub>11</sub>		