EXHIBIT B

[FCC Ref. 2.1033(b)(4)]

"Description of Circuit Functions"

BASE UNIT

1.TEL-LINE INTERFACE
2. RING DETECT
3. POWER SUPPLY
4. AUDIO AMPLIFIER AND COMPANDOR
5. DTMF GENERATOR
6. RSSI CONTROL
7. DATA COMMUNICATION INTERFACE
8.INTERCOM FUNCTION
9.SPEAKER PHONE OPERATION
10.BASE RF MODULE

PORTABLE UNIT

1. LOW BATTERY DETECTION CIRCUIT
2. BUZZER
3. INDICATOR CATEGORY
4. AUDIO AMPLIFIER AND COMPANDOR
5. PORTABLE RF MODULE

BASE UNIT

1. TEL-LINE INTERFACE

TEL-LINE INTERFACE CIRCUIT CONSISTS OF A RELAY, DIODE BRIDGE (D1,D2,D3,D4), TRANSFORMER (TR1) AND SPEECH NETWORK CIRCUIT AS FOLLOWS FIG.1
A DC LOOP IS CONFIGUED WHEN CPU PIN 15 ARE SET HI.
THE LOOP CURRENT FLOWS AS FOLLOWS :
TEL LINE → F1 → RELAY-RL1→ R1 → D1, D2, D3, D4 → TRANS-TR1
THE PULSE SIGNAL FROM CPU PIN 15 ARE TRANSMITTED THROUGH LS1 TO TURN ON AND OFF THE TEL-LINE.

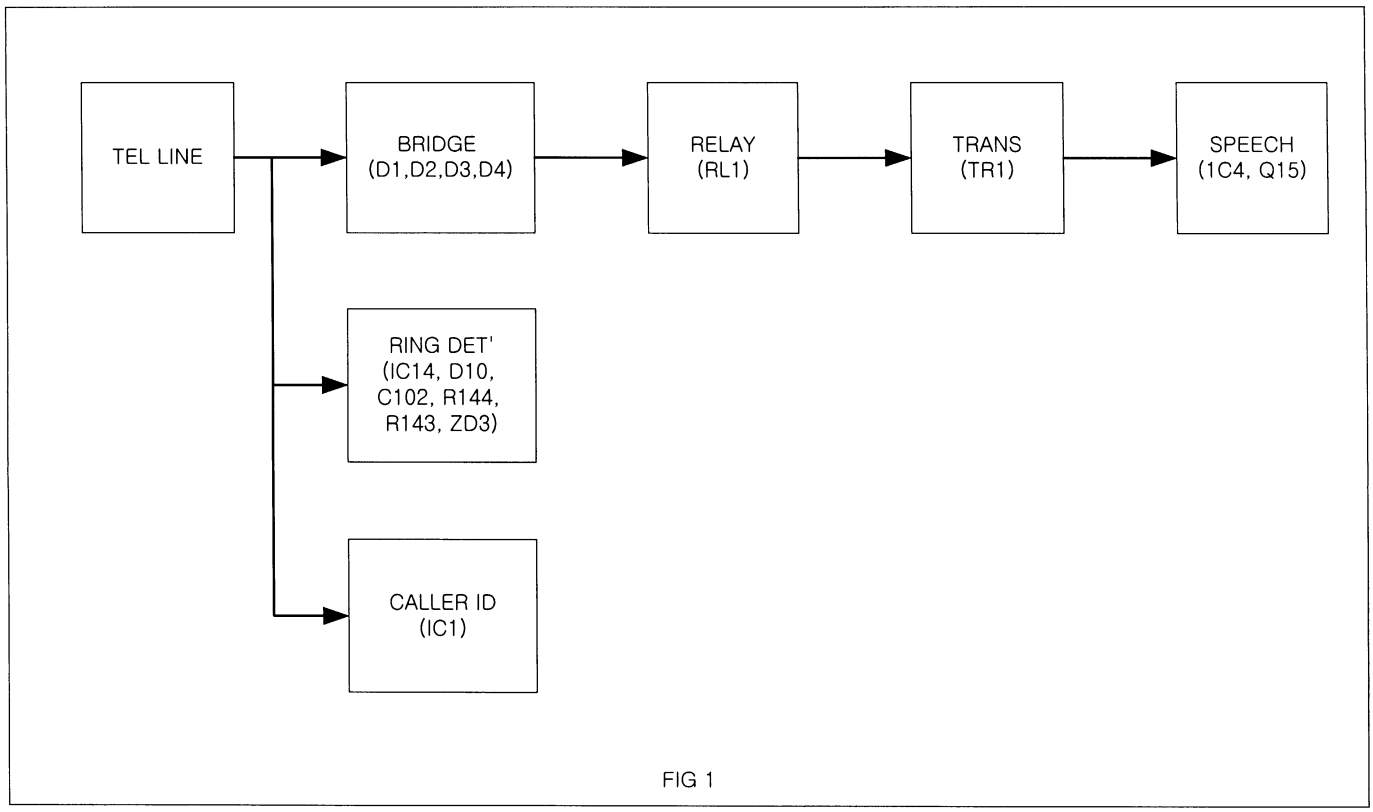

FIG 1

2. RING DETECT

THE RING SIGNAL SUPPLIED BETWEEN T101 AND RING PASSES THROUGH THE FOLLOWING PROCEDURES AND IS DETECTED BY THE CPU.

TIP/RING → F1→ C102, R143, ZD3, R144, D10→OPTOCOUPLER (IC14) →
→ CPU PIN61

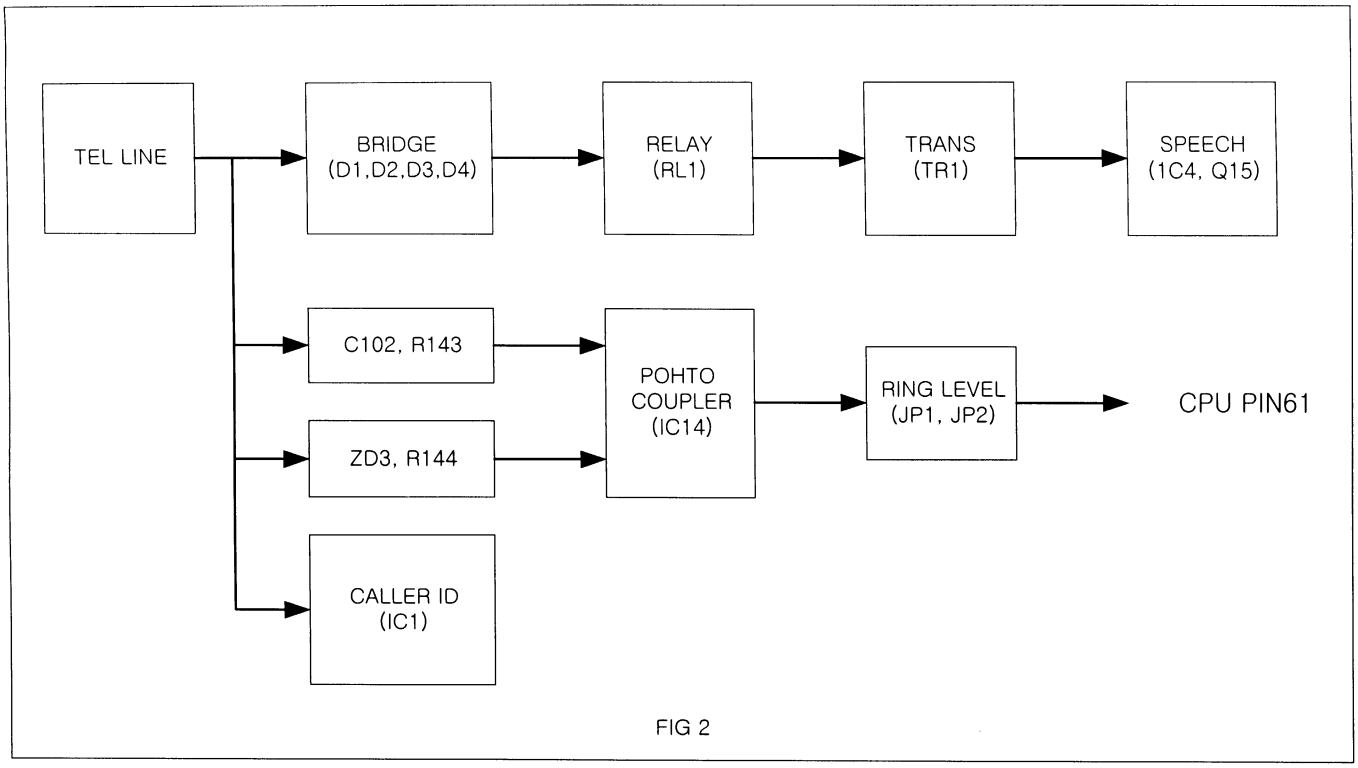

FIG 2

3. POWER SUPPLY

THE OUTPUT VOLTAGE OF IC12 IS REGULATED 5V AND THIS VOLTAGE IS USED BY MAIN SUPPLYIING VOLTAGE OF CPU AND TX,RX POWER.

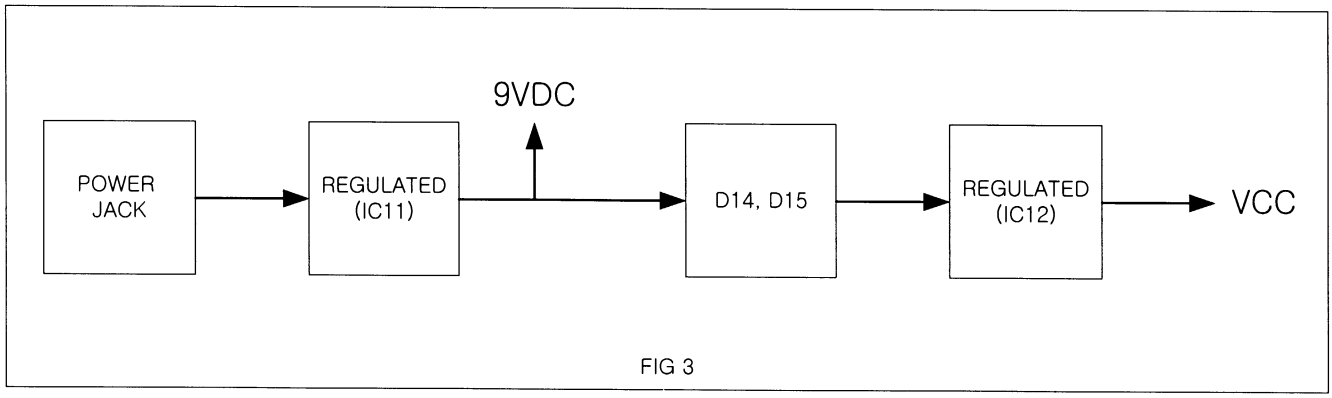

FIG 3

4. AUDIO AMPLIFIER AND COMPANDOR

4-1 TX PART:

THE TRANSMITTED SIGNALS FROM TELEPHONE LINE ARE FEED TO COMPANDOR IC(IC3) THROUGH THE AUDIO AMPLIFIER AND THE RECEIVED SIGNALS FROM TELEPHONE LINE ARE ALSO FEED TO AUDIO AMPLIFIER THROUGH THE SPEECH NETWORK CIRCUIT.

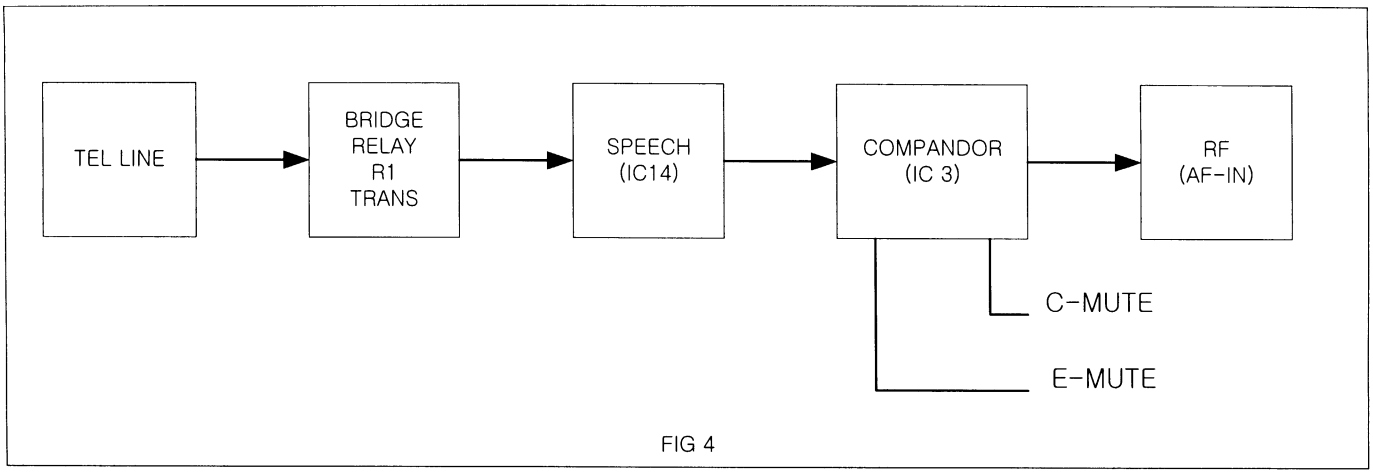

FIG 4

4-2 RX PART:

THE RECEIVED SIGNALS FROM AF OUT OF RF MODULE, FEED TO COMPANDOR FOR NOISE ELIMINATION. THIS SIGNAL THROUGH MATCHING TRANS T1, ALSO FEED TO TELEPHONE LINE THROUGH THE SPEECH NETWORK CIRCUIT TO. TRANSFER TO OTHER PARTY.

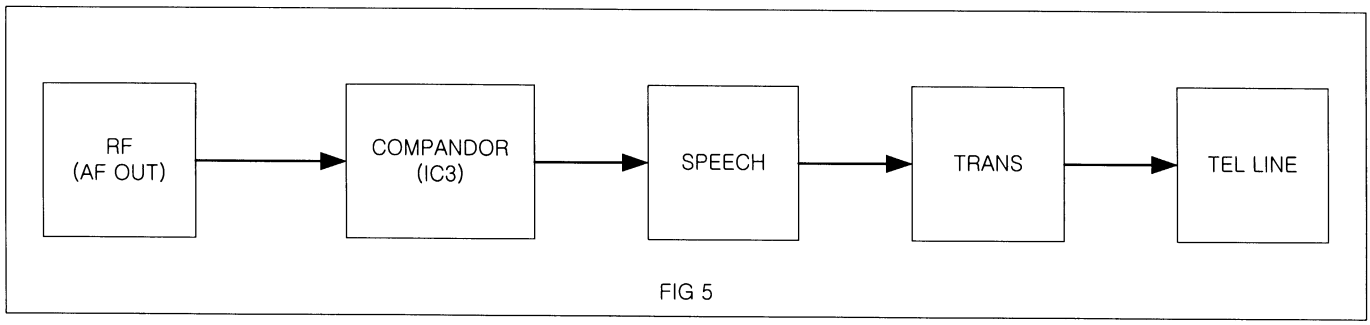

FIG 5

5. DTMF GENARATOR

THE U4 DTMF GENERATOR IS INTENDED TO PROVIDE DUAL-TONE MULTI-FREQUENCY (DTMF) FOR TONE DIALLING SYSTEM.

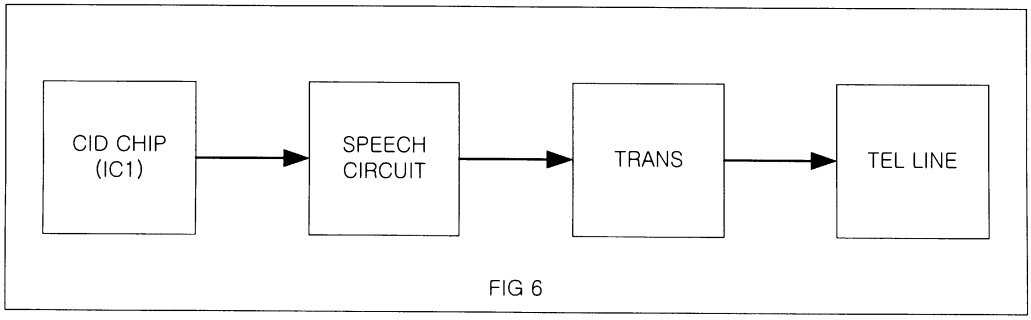

FIG 6

6. RSSI CONTROL

RSSI LEVEL OUTPUT FROM THE IF IC THROUGH IC2-C OP AMP OUT OF IS DETECTING BY PIN 80 OF CPU.

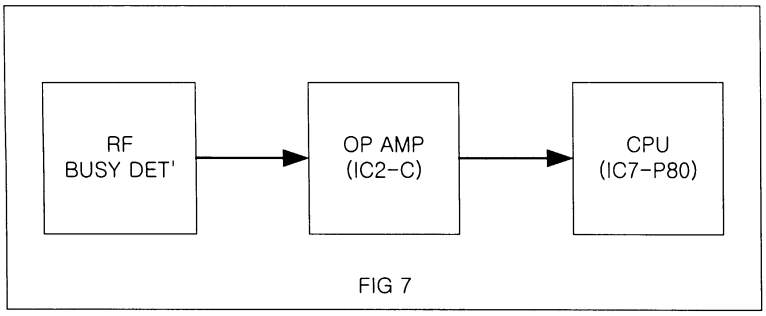

FIG 7

7. DATA COMMUNICATION INTERFACE.

* DATA COMMUNICATION IS OPERATED SERIAL OUTPUT

7-1 PIN 21(RX DATA) OF CPU :

DATA SIGNAL WILL RECEIVE FROM THE PORTABLE UNIT AS THROUGH FILTER CIRCUIT IC2-A,D AND DATA SIGNAL INPUT PIN 8 (RX DATA) OF CPU

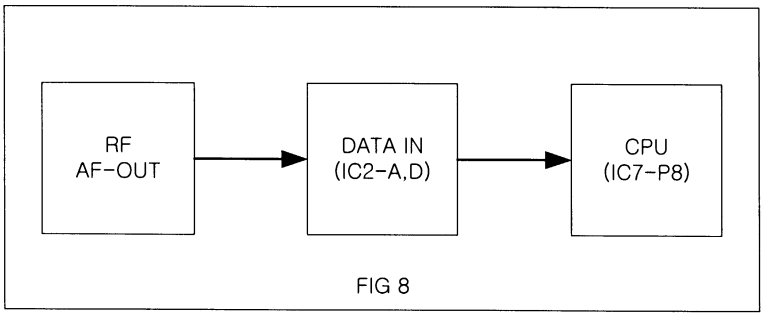

FIG 8

7-2 PIN 27 (TXDATA) OF CPU :

DATA SIGNAL WILL SEND TO THE PORTABLE UNIT AS THROUGH PIN 27(TX DATA) OF CPU

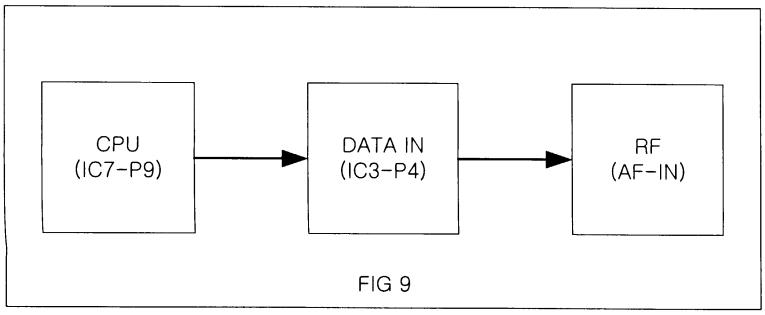

FIG 9

8. PAGING FUNCTION

PAGING FUNCTION CAN BE SELECTED EITHER FROM BASE TO PORTABLE UNIT. THE INTERCOM FUNCTION CAN BE ENABLED BY PRESSING THE PAGING KEY IN THE BASE SET.

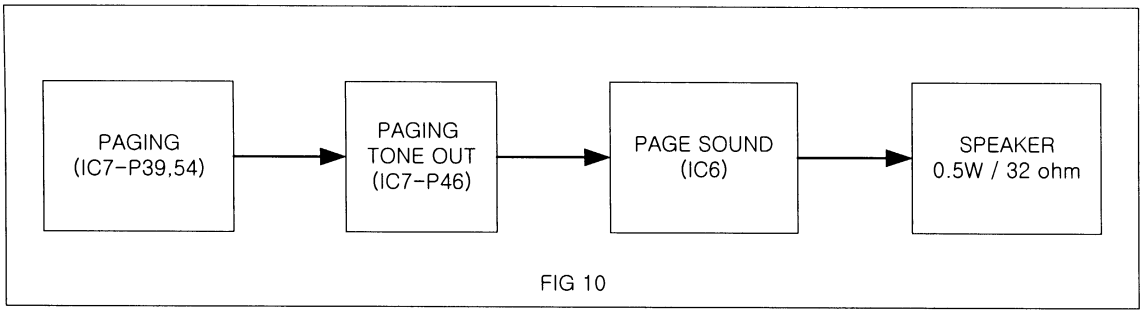

FIG 10

10. SPEAKER-PHONE OPERATION

9-1 TX PART:

THE TRANSMITTED SIGNALS FROM TELEPHONE LINE ARE FEED TO SPEAKER-PHONE IC(IC5) THROUGH THE AUDIO AMPLIFIER AND THE RECEIVED SIGNALS FROM TELEPHONE LINE ARE ALSO FEED TO AUDIO AMPLIFIER THROUGH THE SPEECH NETWORK CIRCUIT.

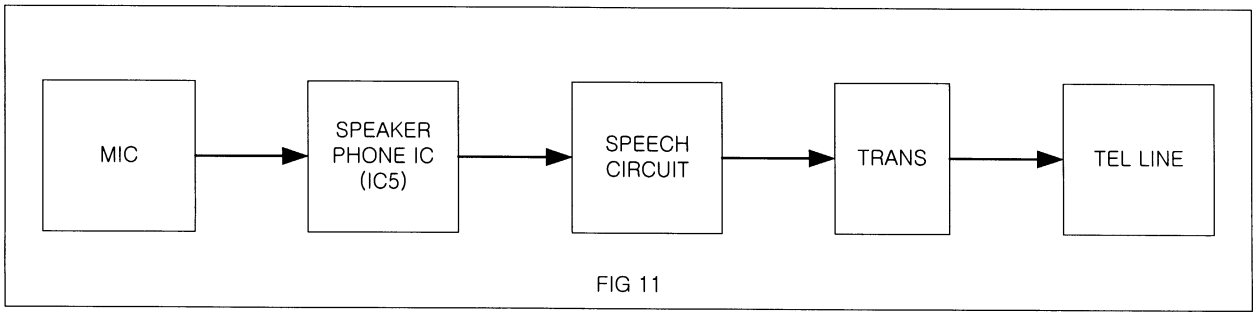

FIG 11

9-2 RX PART:

THE RECEIVED SIGNALS FROM AF OUT OF RF MODULE, FEED TO COMPANDOR FOR NOISE ELIMINATION. THIS SIGNAL THROUGH MATCHING TRANS T1, ALSO FEED TO TELEPHONE LINE THROUGH THE SPEECH NETWORK CIRCUIT TO. TRANSFER TO OTHER PARTY.

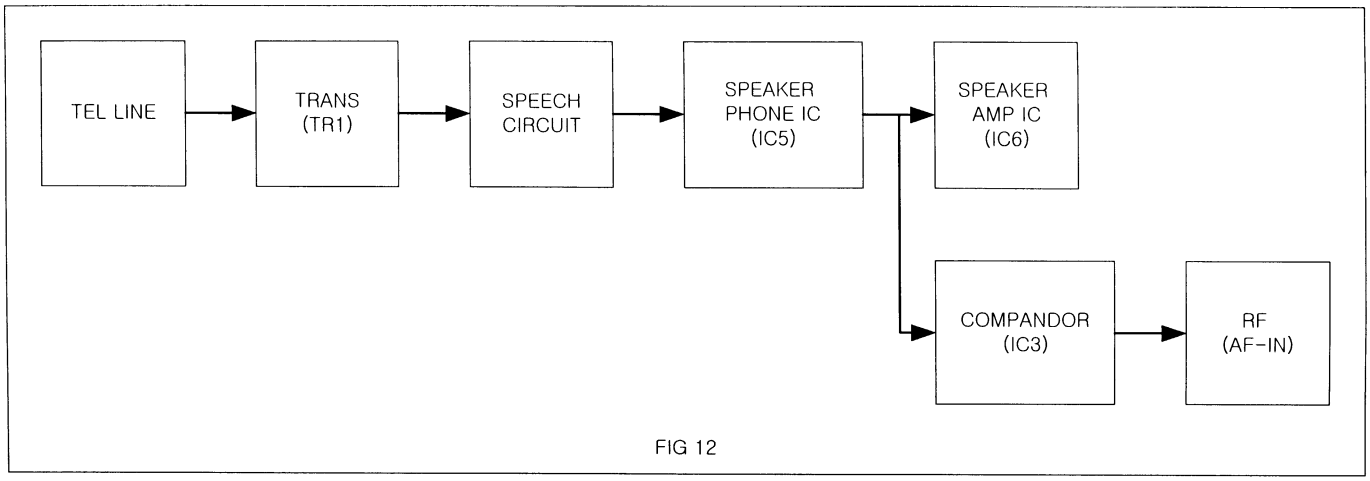
TEL LINE
TRANS
(TR1)
SPEECH
CIRCUIT
SPEAKER
PHONE IC
(IC5)
SPEAKER
AMP IC
(IC6)
COMPANDOR
(IC3)
RF
(AF-IN)

FIG 12

10. BASE RF MODULE

10-1. RX PART

THE RECEIVER FRONT-END CONTAINS A BAND PASS FILTER, AN RF LOW NOISE AMPLIFIER, A ACTIVE TRANSISTOR MIXER, A MONOLITHIC CRYSTAL FILTER AND 10.7MHz IF AMPLIFIER. ALSO IT INCLUDES BUFFER AMPLIFIERS FOR THE GENERATION OF LOCAL OSCILATOR POWER.

THIS FRONT-END RECEIVER RECEIVES AN RF SIGNAL FROM THE ANTENNA. AND RF SIGNALS WITHIN THIS FREQUENCY RANGE IS 2.475GHz~2.476GHz PASS THROUGH RF AMP AND BAND PASS FILTER.

AFTER PASSING THROUGH THE SAW FILTER, THE SIGNAL IS MIXED WITHIN 1'ST LOCAL FREQUENCY FROM VOLTAGE CONTROLLED OSCILLATOR.

THE SIGNAL IS AMPLIFIED ON THE IF AMP TRANSISTOR AND THE SIGNAL PASS THROUGH THE CERAMIC FILTER (10.7MHz).

AFTER THE IF SIGNAL PASS THE CERAMIC FILTER, THE SIGNAL ENTER BY THE FM IF (INTERMEDIATE FREQUENCY) I C.

AND THE SIGNAL IS MIXED IN THE FM IF IC (KA3361).

THE SIGNAL PASS THROUGH THE CERAMIC FILTER (450KHz).

THE OUTPUT SIGNAL IN THE FM IF IC STREAMS FROM THE AF-OUT TEMINAL OF THE CONNECTOR 1 TO THE BASE.

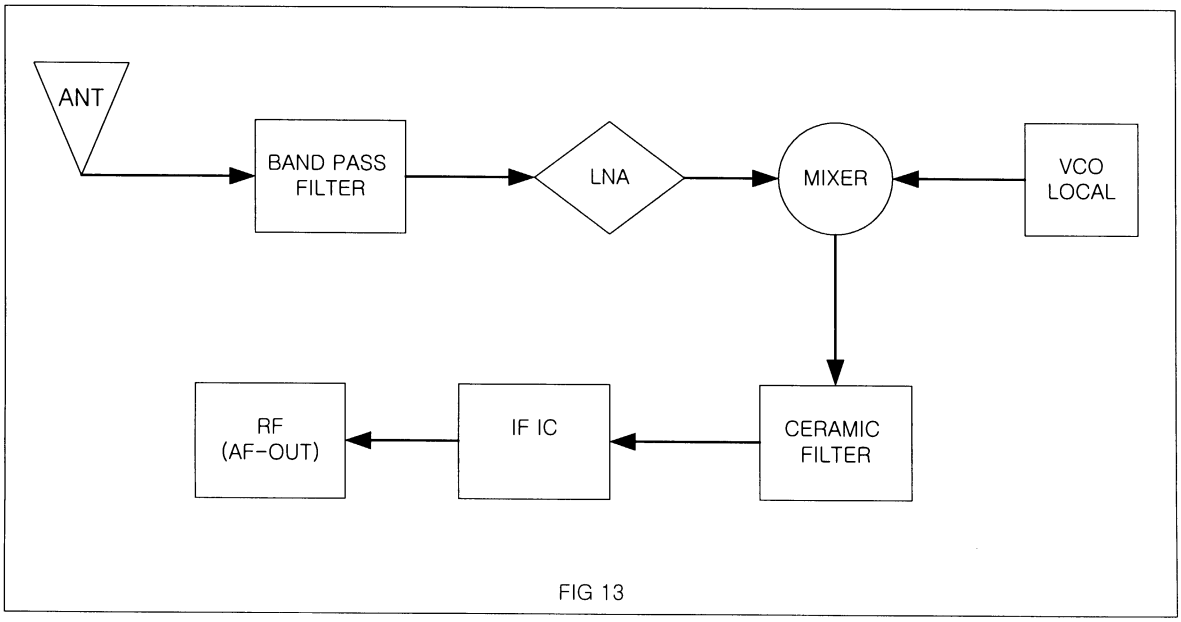

FIG 13

10-2. TX PART

THE SIGNAL IS MADE TO THE BASE, ENTER BY THE AF-IN TERMINAL OF THE CONNECTOR 1.
THE SIGNAL SEND THE MOD TERMINAL OF THE TX VCO.
THE SIGNAL IS MIXED IN THE TX VCO MIXING THE RF SIGNAL, THE RF SIGNAL ADJUST THE TRIMMER CAPACITOR (VC1).
THE RF SIGNAL ENTER BY THE TRANSMITION POWER AMP TRANSISTOR
ENTER BY THE BAND PASS FILTER.
THE RF SIGNAL PASS THROUGH THE SAW FILTER, TOWARDS THE ANT.
THE LAST TRANSMITTION RF SIGNAL IS 2.403GHz~2.405GHz

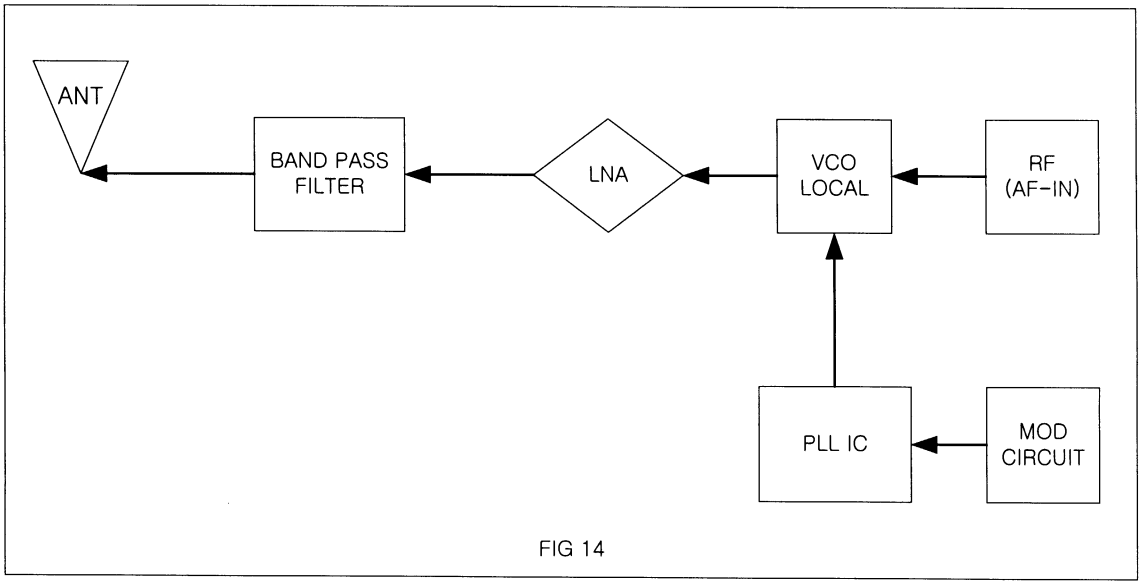

FIG 14

PORTABLE UNIT

1. LOW BATTERY DETECTION CIRCUIT

TRANSISTOR Q2,Q3,Q4,Q5 IS CONTROLLED BY BATTERY VOLTAGE.
IF THE VOLTAGE OF BATTERY PACK IS BELOW 3.4V, CHANGED FROM HIGH TO LOW AT PIN 30 OF CPU THEN CPU BECOMES TO RECOGNIZE TO LOW VOLTAGE OF BATTERY PACK

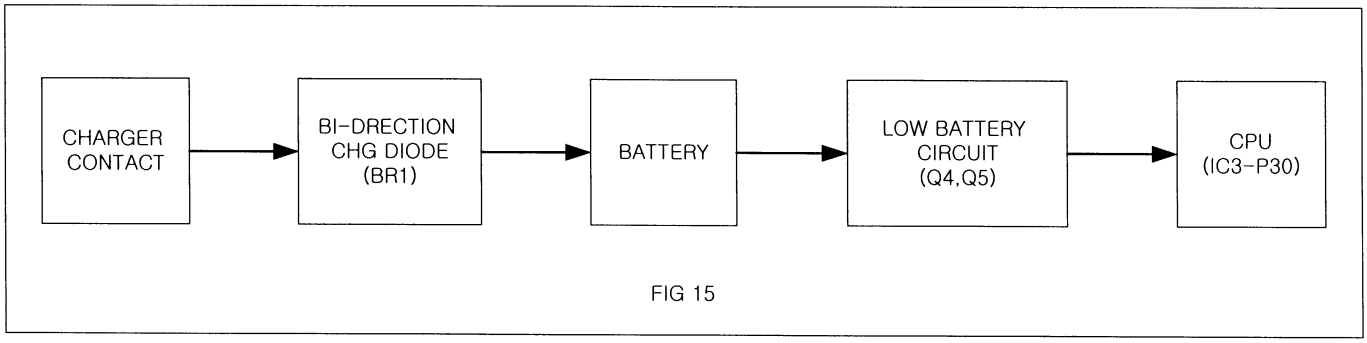

FIG 15

2. BUZZER

BUZZER IS CONTROLLED BY PIN 49 OF CPU DURING RECEIVED RING SIGNAL AND KEY INPUT

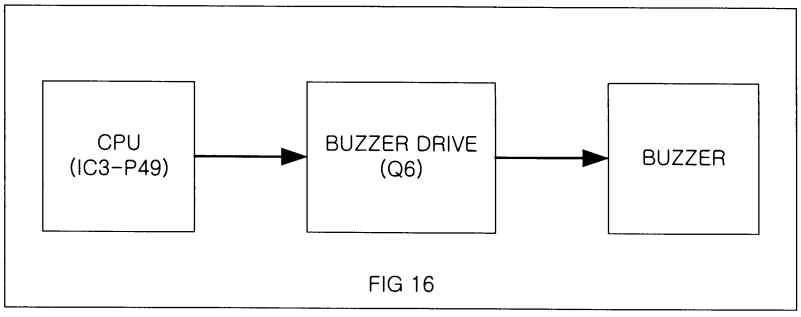

FIG 16

3. INDICATOR CATEGORY

ALL INDICATOR IS DISPLAYED AT LCD WINDOW BY THE CPU CONTROL

4. AUDIO AMPLIFIER AND COMPANDOR

4-1 TX PART

THE TRANSMITTED SIGNALS FROM MIC ARE FEED TO COMPANDOR IC1 THROUGH AUDIO AMPLIFIER IC1A AND SIGNALS INPUT RF MODULE AF-IN

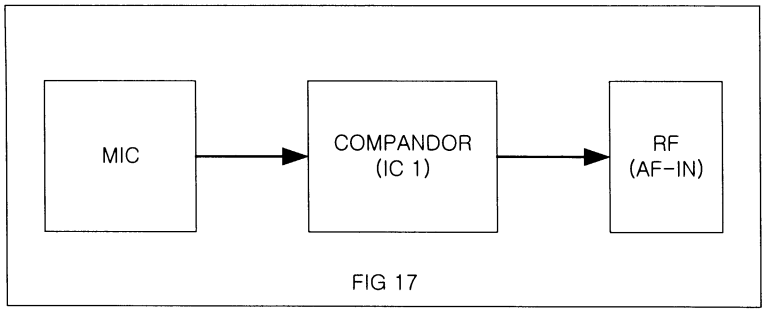

FIG 17

4-2 RX PART

THE RECEIVED SIGNALS FROM AF OUT CONTAIN SIGNALS AND PASS ONLY THROUGH COMPANDOR FOR NOISE ELIMINATION AND SIGNAL INPUT AUDIO AMPLIFIER.

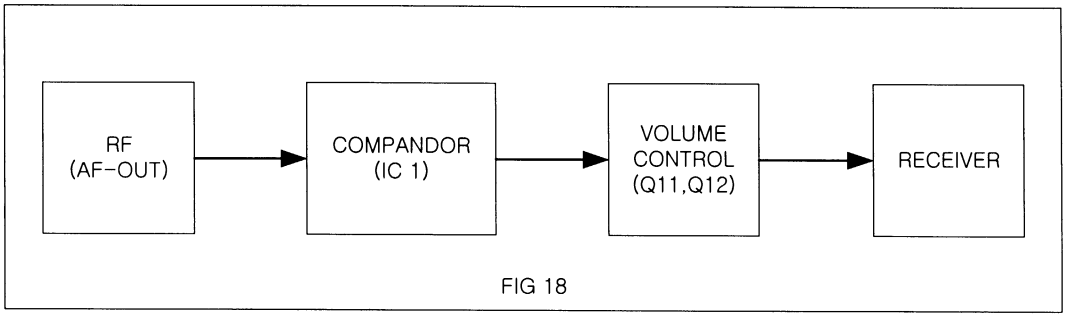

FIG 18

5. PORTABLE RF MODULE

5-1. RX PART

THE RECEIVER FRONT-END CONTAINS A BAND PASS DUPLEX FILTER, AND RF LOW NOISE AMPLIFIER, A ACTIVE TRANSISTOR MIXER, A CERAMIC FILTER AND 10.7MHz "IF" AMPLIFIER. ALSO IT INCLUDES BUFFER AMPLIFIERS OR THE GENERATION OF LOCAL OSCILATOR POWER.

THIS FRONT-END RECEIVES AN RF SIGNAL FROM THE ANTENNA.

AND RF SIGNALS WITHIN THIS FREQUENCY RANGE IS 2.403GHz~2.405GHz

PASS THROUGH BAND PASS FILTER AND RF AMP .

AFTER PASSING THROUGH THE BAND PASS FILTER, THE SIGNAL IS MIXED WITHIN 1'ST LOCAL FREQUENCY FROM VOLTAGE CONTROLLED OSCILLATOR.

THE SIGNAL IS AMPLIFIED ON THE IF AMP TRANSISTOR . AND THE SIGNAL PASS THROUGH THE MONOLITHIC CRYSTAL FITER (10.7MHz) AFTER THE IF SIGNAL PASS THE CERAMIC FILTER, THE SIGNAL ENTER BY THE FM IF (INTERMEDIATE FREQUENCY) IC.

AND THE SIGNAL IS MIXED IN THE FM IF IC (KA3361).

THE SIGNAL PASS THROUGH THE CERAMIC FILTER (450KHz).

THE OUTPUT SIGNAL IN THE FM IF IC STREAMS FROM THE AF-OUT TO AUDIO AMP .

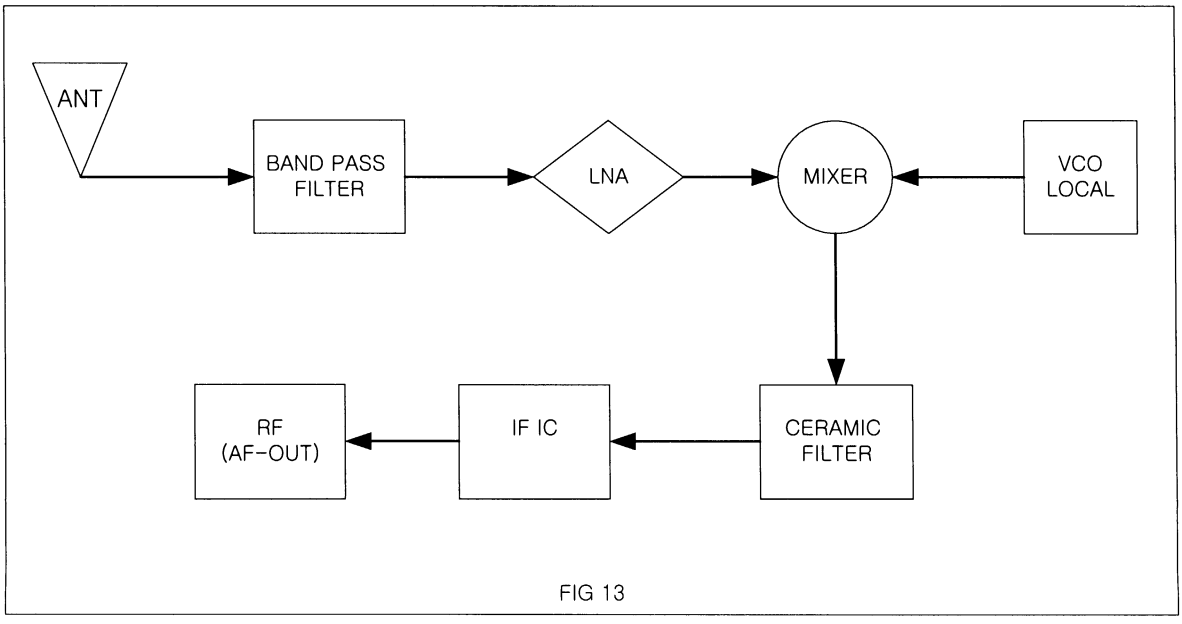

FIG 13

5-2. TX PART

THE SIGNAL IS MADE TO THE PORTABLE, ENTER BY THE AF-IN TERMINAL.
THE SIGNAL SEND THE MOD TERMINAL OF THE TX VCO.
THE SIGNAL IS MIXED IN THE TX VCO MIXING THE RF SIGNAL, THE RF SIGNAL
ADJUST THE TRIMMER CAPACITOR (VC1).
THE RF SIGNAL ENTER BY THE TRANSMITION POWER AMP TRANSISTOR
THE SIGNAL IS AMPLITUDE IN THE POWER AMP TRANSISTOR .
ENTER BY THE SAW FILTER.
THE RF SIGNAL PASS THROUGH THE SAW FILTER, TOWARDS THE ANT.
THE LAST TRANSMITTION RF SIGNAL IS 2.475GHz~2.476GHz.

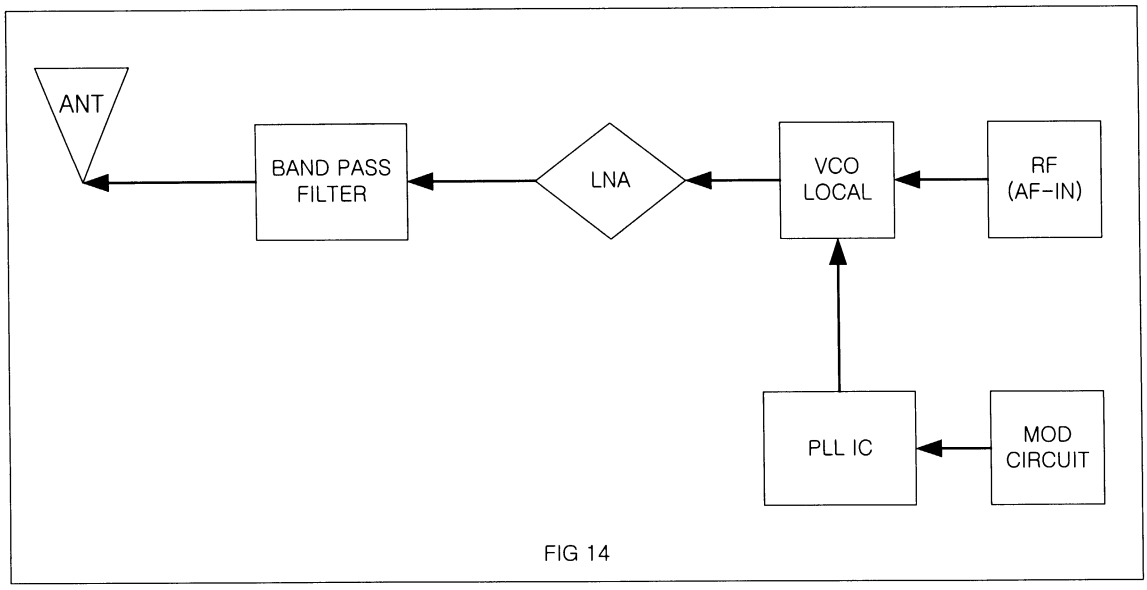

FIG 14