

EXHIBIT E

DESCRIPTION OF ELECTRICAL CIRCUITRY

BASE UNIT:

A) WHEN A BELL SIGNAL ENTERS FROM TEL LINE

- 1) The bell detection circuit, i.e., the transistor (Q101) begins to operate and its output is inputted to pin 64 of IC501(DSP).
- 2) To obtain a display synchronized with the bell signal, an IN USE signal is output from pin 67 of IC501(DSP) and C-ID LED(LED842) is lighted up.

3) A portable phone receives a bell from the base station.

When the portable phone is switched from the STANDBY to TALK, the base station receives a carrier modulated by data indicating the switch from STANDBY to TALK.

The data demodulated at the base station is inputted to pin 71 and 72 of IC501, and passes through Q121 to make the circuit relay, then, release the muting and enables talk.

B) WHEN A LINE LOOP IS MADE BY A PORTABLE PHONE

- 1) When the operator of the portable phone switches STANDBY to TALK, the TALK mode data enters the base station and is demodulated at the RF Unit of the base station, and is inputted to pin 71 and 72 of IC501.
- 2) In this time, an IN USE signal is output from pin 65 of IC501, and the IN USE LED (LED843) is lighted up.

C) RECIEVER UNIT OPERATION

- 1) A signal is received by the antenna, and passes through the 2.4015 to 2.4705GHz band pass filter L106 and Low Noise Amplifier (IC106), and is inputted to the pin 8 and 9 of IC101.
- 2) The received signal and local signal made by VCO (1.601~1.647GHz) are mixed in IC101 to obtain digitized audio signal.
- 3) This digitized audio signal is fed to pin 71 of IC501.
- 4) This audio signal is transmitted to the telephone line by IC501.

D) TRANSMISSION UNIT OPERATION

- 1) An audio signal from the line passes through the interface transistor (Q121).
- 2) The audio signal is inputted to pin 38 of IC501.
- 3) This audio signal is code by IC 501 and output from pin 72 of IC501
- 4) This modulated signal goes through Balun (T101) and Power Amplifier (IC105), and output to the antenna.

EXHIBIT E

PORTABLE UNIT:

A) RECEIVER UNIT OPERATION

- 1) A signal from the base unit is received by the antenna, and passes through the 2.4015 to 2.4705GHz band pass filter L106.
And the signal is amplified by the Low Noise Amplifier (IC106), and is inputted to the pin 8 and 9 of IC101.
- 2) The received signal and local signal made by VCO(1.601 to 1.647GHz) are mixed in IC101 to obtain digitized audio signal.
- 3) This digitized audio signal is fed to pin 71 of IC201.
- 4) This audio signal goes to pin 32 and 33 of IC201, and output to speaker.

B) TRANSMISSION UNIT OPERATION

- 1) When selected TALK switch to TALK, the detect switch of IC201 becomes ON and get into TALK mode.
- 2) The audio signal from microphone is inputted to pin 41 and 42 of IC201.
- 3) This audio signal is coded by IC201 and output from pin 72 of IC201.
- 4) This modulated signal goes through Balun (T101) and Power Amplifier (IC105), and outputs to the antenna.