EXHIBIT B

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

"Description of Circuit Functions"

Circuit Description

Model: 26998D

The following circuit description is for Model 26998D and base on the Circuit diagram and Block diagram.

Handset Unit

1. **Receiving Path**

   The receiving path is established as below sections.

   Low Noise Amplifier (LNA)

   RF signal is being filtered by the Duplexer DP1, and input to the Low Noise Amplifier Q3 before output U1.

   IF Amplifier

   The composite IF is input and further amplified by the IF Amplifier section of U1 (input pin 32). The amplified IF is again trimmed through the 2nd Ceramic Filter CF1. The filtered IF is input to the FM Demodulator section of U1 (input pin 29).

   FM Demodulator and Expander

   The 2nd composite IF is demodulated by the Quadrature tank coil IF1. The recovered audio is then input to the Expander section of U1 for de-emphasis.

   AF Amplifier

   The de-emphasized signal is then trimmed and amplified through the AF Amp section of U1 (output pin 49/50/51) before being output to the Speaker

2. **Transmitting Path**

   The transmitting path is established by below sections.

   Microphone Amplifier and Compressor

   Audio Frequency picked up by the handset microphone is amplified by internal Mic Amplifier section of U1 through input pin 13. The amplified AF signal is then input to the compressor section of U1 for pre-emphasis.

   RF power amplifier

   The Frequency Modulated signal is amplified by the RF Amp inside U1 and is propagated through the Antenna via the Duplexer.

Base Unit

1. **Receiving Path**

The receiving path is established as below sections

Low Noise Amplifier (LNA)

RF signal is being filtered by the Duplexer DP1, and input to the Low Noise Amplifier Q3 before output U1.

IF Amplifier

The composite IF is input and further amplified by the IF Amplifier section of U1 (input pin 32). The amplified IF is again trimmed through the 2nd Ceramic Filter CF1. The filtered IF is input to the FM Demodulator section of U1 (input pin 29).

FM Demodulator and Expander

The 2nd composite IF is demodulated by the Quadrature tank coil IF1. The recovered audio is then input to the Expander section of U1 for de-emphasis.

AF Amplifier

The de-emphasized signal is then trimmed and amplified through the AF Amp section of U1 (output pin 49/50/51) before being output to the Speaker

2. **Transmitting Path**

The transmitting path is established by below sections.

Audio Amplifier and Compressor

Audio Frequency from the Line Interface is amplified by internal Mic Amplifier section of U1 through input pin 13. The amplified AF signal is then input to the compressor section of U1 for pre-emphasis.

RF power amplifier

The Frequency Modulated signal is amplified by the RF Amp inside U1 and is propagated through the Antenna via the Duplexer.

3. **Telephone Line Interface**

The telephone line interface circuit is established by below stages:

Audio Power Amplifier

Q2 & Q3 are built as an audio amplifier, according to high current output requirement for line interface.

Line Relay & Isolation

Line isolation mainly performed by two transistors (Q6 and Q1). Q1 also has a function of controlling the line-seize. Both audio input and output will through transistor Q6.

Ring Detect circuitry

Q19 is used as AC amplifier for picks up the ring signal, which is input through resistor R52 and (3.6M-ohm) and capacitor C37 (10nF, 500Volt) as DC isolation from the telephone line.

Caller ID Circuit

The CAS tone and the FSK signal are input from the audio transformer and couple from the telephone line through C5 and C6

Answering Machine

i). Base Unit and PSTN interface.

The interface between the base unit and the PSTN is the hybrid transformer. As a call is coming from the PSTN, the ring detect circuit does the function of alert the BASE MCU and the DSP. A Line on/off control circuit is provided both for the MCU and TAD to form a subscriber loop. Behind the hybrid transformer, a audio amplifier and pre-amplifier are used as a base-band filter before the human voice transmitted to the PSTN. The function of the Caller ID receiver decode the Caller ID signal for the PSTN to the B/U MCU and the MCU transfers the CID signal to the HS unit. A base-band audio-amp is used for adjust the frequency response of the in-coming signal from the tel. line before the audio signal is modulated by the RF module or digitized by the DSP.

ii) Base unit and Memory machine interface.

There are six major peripherals between the base unit and the memory machine. The ON/OFF hook detection circuit indicates whether the telephone line is occupied by the HS unit or not. The FLASH memory performs the Non-volatile data storage for DSP key parameters and audio PCM data. The association of the power-up reset and power-down circuit perform the function of H/W power up reset and memory machine message retention during failure of 9VDC power adapter. A photo-coupler and a transistor network perform the parallel-phone detection for TAD and an isolation with the tel. network during over-voltage condition. A condenser microphone and a low-power audio amp perform the voice recording and playback. A dual-digit, 7-segment LED

is used as a message counter of the TAD. A 1P2T switch is used for response of the ring count of the TAD.

iii). Memory machine and local H/S interface.

The line output of the DSP can be routed to the local H/S through the analogue switch, which is controlled by the HS remote pin of the MCU. The unit can be remote access by the far end user after entering three digit security code. The Default security code is "123" and it can be programmed from the local handset. This three-digit code can be any combination in between 000 to 999. User can be turn on/off the answerer by remote operation. If the unit is turn on, i.e. in answer on mode, it can answer the incoming call in the 3^{rd} or 5^{th} ring. If the unit is turn off i.e. in answer off mode, it can answer the incoming call in the 10^{th} ring.