

**EXHIBIT B**

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

"Description of Circuit Functions"

# Circuit Description

Model: 26928D

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The following circuit description is for Model 26928D 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 2<sup>nd</sup> Ceramic Filter CF1. The filtered IF is input to the FM Demodulator section of U1 (input pin 29).

#### FM Demodulator and Expander

The 2<sup>nd</sup> 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 2<sup>nd</sup> Ceramic Filter CF1. The filtered IF is input to the FM Demodulator section of U1 (input pin 29).

#### **FM Demodulator and Expander**

The 2<sup>nd</sup> 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.