

## **8X00 Handset Circuit Description**

### **1.     *RF Transmitter***

It modulates (FM) the voice or data onto a carrier frequency. It then amplifies the carrier power and feeds it to the antenna.

### **2.     *RF Receiver***

It receives the modulated RF signal from the base through the antenna. It then demodulates it to recover the voice or data.

### **3.     *Audio Amplifiers***

There are two main paths of audio amplifiers. The transmit audio amplifiers are used to provide audio signal amplification from the microphone before being modulated onto the RF. The receive audio amplifiers are used to provide audio signal amplification to the recovered audio before it is fed to the ear piece.

### **4.     *Keypad***

It is used to provide information to the microprocessor.

### **5.     *Data Transfer and Battery Charge Circuitry***

The data transfer and battery charge circuitry are connected to three metal pins. These pins allow the base unit to charge the handset battery and to transfer the security data to handset microprocessor.

### **6.     *Power Management***

The power management circuitry is controlled by the microprocessor. It turns on or off the power supply to the transmitter or receiver.

### **7.     *Low Battery Detect***

It provides a feedback when the battery voltage is below a certain level.

### **8.     *Alerter Generator***

It is the interface between the microprocessor and the alerter. Its function is to provide the alerter with the audio signal when the phone rings and so on.

### **9.     *Reset Circuitry***

It resets the microprocessor to a known state during power up or when the handset is in cradle.

## **8X00 Base Circuit Description**

### ***1. RF Transmitter***

It modulates (FM) the voice or data onto a carrier frequency. It then amplifies the carrier power and feeds it to the antenna.

### ***2. RF Receiver***

It receives the modulated RF signal from the handset through the antenna. It then demodulates it to recover the voice or data. The data will be fed to microprocessor while the voice will be directed to the network interface circuit.

### ***3. Audio Amplifiers***

There are two main paths of audio amplifiers that are interfacing with the RF circuitry. The base transmit audio amplifiers are used to provide audio signal amplification from the tip/ring line before being modulated onto the RF. The receive audio amplifiers are used to provide audio signal amplification to the recovered audio before it is fed to tip/ring via a transformer. There are also audio amplifiers to support the speakerphone which provide the amplifications for the audio signals from microphone to tip/ring and from tip/ring to speaker.

### ***4. Keypad***

It is used to provide information to the base microprocessor.

### ***5. Data Transfer and Battery Charge Circuitry***

The data transfer and battery charge circuitry are connected to three metal pins. These pin allow the base unit to charge the handset battery and to transfer the security data to handset microprocessor. The base can charge two handsets simultaneously.

### ***6. Power Management***

The power management circuitry is controlled by the microprocessor. It turns on or off the power supply to transmitter.

### ***7. Network Interface***

The main function of the network interface is to provide audio interface signal between the base transmitter/receiver/speakerphone and the tip/ring.

### ***8. Alerter/DTMF Generator***

It provides DTMF tone to both speakerphone amplifier and network interface. It is also providing the key beep signal and ringing signal.

**9. Ringer ON/OFF Button**

It is used to on/off the base ringer.

**10. Pulse/DTMF Switch**

It is used to select pulse dialing or DTMF dialing.

**11. Voltage Regulator**

It is providing a regulated 5Vdc for some of the base circuitry operation.

**12. Power Adaptor**

It converts 120Vac to 9Vdc.

**13. Reset Circuitry**

It resets the microprocessor to a known state during power up.

**14. Digital Security Coding**

There is a 16-Bit pseudo-random security code generate by the MCU to handset when handset is cradle to base. This is done through the rightmost charge contact.

**15.**



**ASTRALINK TECHNOLOGY PTE LTD**

26 Ayer Rajah Crescent #07-03 Singapore 139944  
Tel: (65) 777-0076 Fax: (65) 778-8805

Federal Communications Commission  
Equipment Authorization Division  
Application Processing Branch  
7435 Oakland Mills Rd.  
Columbia, MD 21046

Subject : FCC Part 15 Certification Application for  
Astralink Technology Pte. Ltd  
Model CF8300/CF8100  
FCC ID : MSUCF8000A  
Marstech Report No. 98378

Gentlemen :

We hereby attached the following statement regarding information on our digital security coding for the above mentioned cordless phone model.

There is a 16-Bit pseudo-random security code generated by the MCU to handset when handset is cradle to base. This is done through the rightmost charge contact.

Pse do not heisitate to seek our clarification should the need arise.

Yours very truly,

Dated this 2 October, 1998

Applicant: Astralink Technology Pte Ltd

By: .....

A handwritten signature in black ink, appearing to be "Michael Lee", written over a dotted line.

Michael Lee  
Project Manager

FCC ID: MSUCF8000A  
EXHIBIT B(1)-4  
Marstech Report No. 98378D