# GSM Fixed Wireless Terminal
# User's Manual

Model: B115

Model: B116

Model: B168

Model:B190

Model: B198

# 1, General Description

GSM FWT is a GSM to Analog Converter (single port, insert 1 sim card only), the device can produce a FXS line to allow a regular phone to be connected and used just like a local landline (PSTN) except your calls will go out the GSM network.

This device can both receive and make calls. Users can dial the local calls, domestic and international calls with this Terminal connecting with a common wired desktop phone and a standard SIM card..

It is not a VOIP gateway, nor a GSM+VOIP gateway; It is a GSM Fixed Wireless Terminal that produces a Analog FXS phone line.

Application areas:

Remote country, Mountains, Dwelling house with weak signals, Public telephone shops

Offices, Removable places such as Ships, Trains, and Long distance buses.

The main applications:

Connect the RJ-11 FXS line to connect Ordinary telephone set for voice call.

Connect PBX for call extension.

Connect billing systems for public phone use.

Connect VoIP gateway to realize VoIP call termination.

Connect alarm system for security purpose. etc.

# 2, Features:

1) It is a 1 channel GSM Gateway which has 2 RJ-11 outputs for extensions;

2) It can connect with ordinary telephone set, PBX , VOIP Gateway, Billing meter etc. ;

3) Dialing tone frequency:450hz;

4) Employ Industrial module to make;

5) SIM card supported (1.8V, 3V);

6) Caller ID display. Time and date display, the power supply of battery can display at the same time on the LCD.

7) DTMF Dialing;

8) Bell signal;

9) Polarity reversal;

10) The RJ-11 socket which connect the phone or billing system for metering purpose;

11) Antenna socket (SMA);

12) Working status and Signal Strength by LED indicator;

13) IMEI Change (optional).

14) Supports modem mode.

15) Automatically connects to IP network when dialing long distance (optional)

16) Dial number Block (Optional)

17) Incoming number Block (Optional)

18) Volume adjustment. Time and date setting.

19) Auto card-locking and net-locking.

20) Back up Li-ion battery (Optional) 7.2V 750mAh.standby 24hrs, talking time: 2hrs.

# 3, Technical Specifications

1) Networks support:

**GSM** 900/1800MHz; **GSM** 850/900/1800/1900MHz

All models support GSM dual band and quad band.

**CDMA 800Mhz 2000 1X   (optional)**

2)Frequency ranges:

A) GSM 850

I) Transmission: 869.2 ~ 893.8MHz

Ii) Reception: 824.2 ~ 848.2MHz

B) GSM 900:

I) Transmission: 890 ~ 915MHz

Ii) Reception: 935 ~ 960MHz

C) CDMA800:

I) Transmission: 869 ～894MHz

GSM 1900:

I) Transmission: 1, 930 ~ 1, 990MHz

Ii) Reception: 1, 850 ~ 1, 910MHz

GSM 1800:

I) Transmission: 1, 710 ~ 1, 785MHz

Ii) Reception: 1, 805 ~ 1, 880MHz

Ii) Reception: 824  ～849MHz

3) Phone interface: supply RJ-11 Phone Interface

4) Hanging voltage: 45V

5) Picking off voltage: 30mA / 41mA

6) Dialing tone Frequency: 450Hz

7) Antenna interface: Antenna amplifying>2.5db

8) Sensitivity:<-104DBM

9) Transmitting power<3W

10) Color: White /Black (optional)

11) AC-Adapter interface: Input: AC 110~240VAC    50~60Hz Output: 5DC 1A.

12) AC-Adapter type: EU,US,AU,British can be optional

13) Stand by hours: 24 Hours

14) Talk time: 2 Hours

15) Charging time: 6 hours

16) Power consumption:

Static≤25MA                emission≤500MA

17) Peak power consumption: 0.25W/0.5W

18) Receive sensitivity: -104db

19) Antenna increment: All directions: 5.0db        Certain/Selection: 12db

# 4, Operation Circumstance:

Operation temperature: -10c~60C

Storage temperature:-20C~70C

Operation humidity:45%-95%

Atmosphere pressure:86-106Kpa

Environment noise: <60DB

Transmitting Power:2W

Sensitivity: <-104dbm

Antenna Amplifying: >2.5db

Dialing frequency: 450Hz

Hanging voltage: 45V

Picking current: 30mA/41mA

# 5, Packing List

| Name | Quantity | Remark |
|---|---|---|
| Fwt | 1pcs | Dual band or Quad band |
| Ac- adapter | 1pcs | AC-110-240V, DC5V/1A |
| Antenna | 1pcs | Magnetic Antenna with 3m cable |
| User's Manual | 1pcs | English |

Device size:

  G.W: 0.5kg per set (included adapter, antenna and manual).

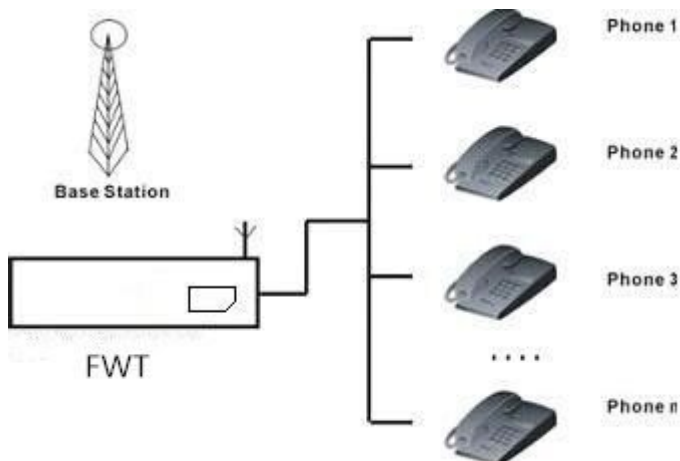20pcs/CTN, 11KG/CTN, CTN Size: 42*38*26cm

# 6, Installation and Connection

The terminal asks for 110- 220V AV power supply. It must be installed in the area where the GSM network can cover. The strength of the signal can affect the quality of voice.

1.  Screw off the screws that are on the back of the terminal, Insert SIM card for every Sim card holder, and then tighten the screws.
2.  Install antenna. In order to ensure the quality of voice, antenna must be put beyond 1.5M from the telephone and terminal.
3.  Antenna and the terminal can't be close to the TV set, computer, and radiogram. They would disturb the signal of the terminal.
4.  On end of the telephone line connects to the "Phone" port of the terminal, the other end connects to telephone.
5.  "Power" port connects to power adapter that is connected to 110-220V AC power supply.

**1) The Installation for Connecting to Ordinary Telephone**
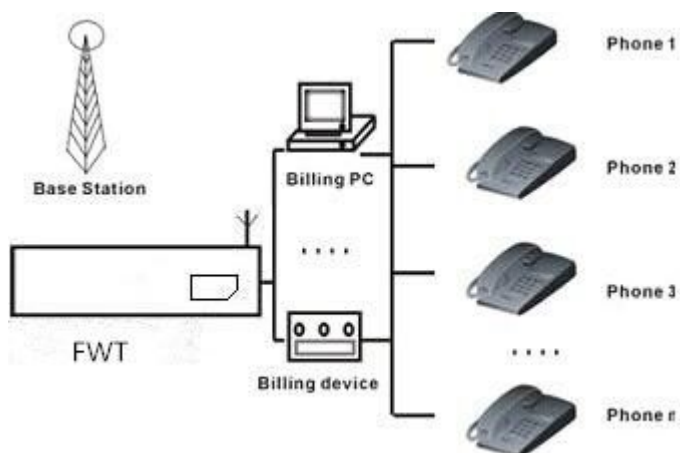
The Sketch for connecting ordinary Telephone





**Draw your attention:** Because there are many types of ordinary telephone and their electric parameters are different. In order to avoid mutual disturbance between telephone and terminal and affect voice quality. The distance between telephone and terminal is 1.5m at least.

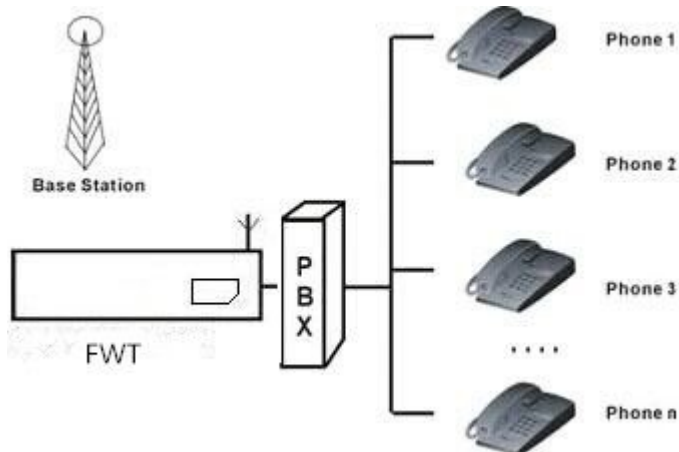**2) The installation for connecting to billing device for metering**
If the users demand to register cost during calls, billing device can be connected between terminal and ordinary telephone. Billing device register cost according to the anti-polarity signal that is provided by terminal.

The sketch for connecting to Billing device or Computer charging system



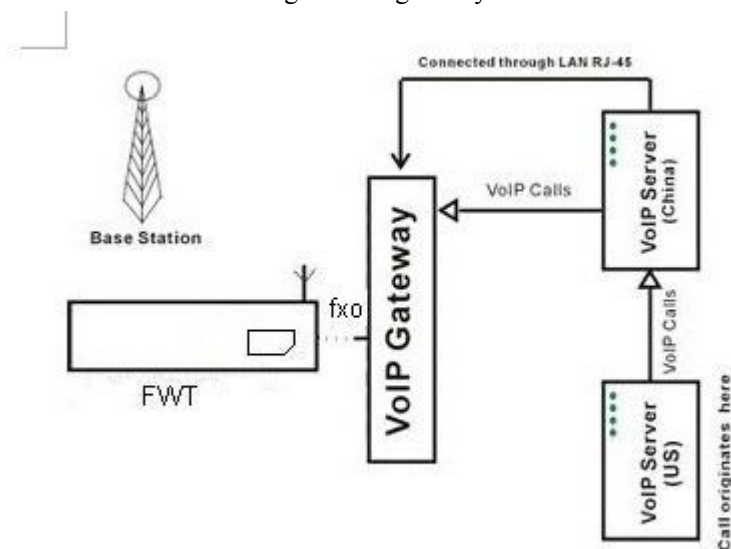**3) The installation for connecting to PBX for call extensions**
If users want to connect small PBX to this terminal, connect terminal's "Phone port" to the PBX.

**4) The installation for connecting VoIP gateway for Call Termination**

Suppose a VoIP call originates from US, which was transferred from US Server to China Server on VoIP, finally the call will be terminated from internet to GSM network and to be sent out to the destination answer side.
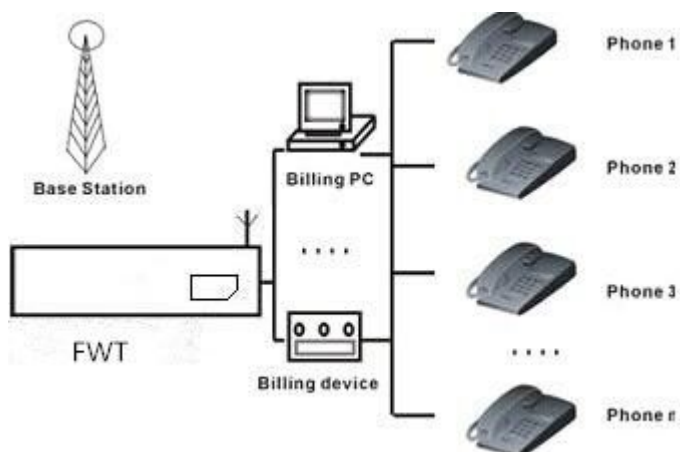
The sketch for connecting to VoIP gateway



**5) The installation for connecting to alarm system for Security**

The GSM FWT can substitute the PSTN for connecting to alarm system for security purpose when PSTN failure or not available.

The sketch for connecting to alarm system

# 7, Function Setting

*00#000#　　　　Restore to factory default setting

*00#010#　　　　Lock SIM Card automatically

*00#011 #　　　　Lock the SIM Card manual (Terminal would offer new PIN code "4321" automatically,
SIM card original PIN Code is "1234")

*00#012#　　　　Unlock the SIM Card,　PIN code is "1234"

*00#013#　　　　Lock the China Mobile Networks

*00#014#　　　　Lock the China Unicom Networks

*00#015#　　　　Cancel the Networks locking setting

*00#089#　　　　change auto card lock into manual car lock.

*00#056#123451234512345#　Change IMEI.　　15 digitals in EIMI number. 123451234512345 stands of IMEI number

**Dial number Block (Optional Setting)**

(Max for 10 groups)

*00#020#AB#　　The number start with "AB" is blocked

*00#029#XYZ#　　The number start with "XYZ" is blocked.

For example:

1. number is beginning with 44 (e.g. the numbers are 4400001,44000002 etc.)

2. Take up the phone or press the " Hand free" key.

2. Input "*00#020#44#",then all of the numbers which start with 44 is blocked to dial.

3. Input "*00#020#82#",Start banned dialing group.

Users can also forbid the numbers start with CD, EF, GH etc. 10 groups Max.


Delete this setting:

1 .Take up the phone or press the " Hand free " key.

3. Input " *00#081#" ,all calls are allowed again.


**Incoming number Block (Optional Setting)**

1 .Take up the phone or press the " Hand free " key.

Input " *00#051#" , block all of the incoming calls.

**Volume Adjustment**

1.Take up the phone or press the "Hand free" key.

2. Input "*00#058#3*01#," or "*00#058#9*15 #"

Speak volume adjustment:

the number 01 stand for the Min sound and the number 15 stand for the Max sound.

Earphone volume adjustment:

the number 3 stand for the Min sound and the number 9 stand for the Max sound.

**Time and Date Setting**

The time and date form is YY/MM/DD/HH/MM (year/month/date/hour/minute ),

1 .Take up the phone or press the "Hand free"key.

2. Input "*00#057#YYMMDDHHMM#" .

**Troubleshooting**

| Trouble | Reasons | Solution |
|---------|---------|----------|
| LCD Display 03 ; LED Display SIM light; | 1 . No signal or the signal is too weak; 2. number card contact is bad; 3. communication module is bad; | 1 . Check the antenna and install it again. 2.Replace number card or wipe contact surface; install the SIM card again. 3.Replace communication module. |
| Standby state 'INUSE "light, no flicker; Telephone dial-up no reaction | integrated circuit board bad, Telephone bad | 6. check line or replace telephone 7. Replace new integrated circuit board. |
| Equipment use anomaly | | Factory default Hand free Input *00#000# |

# **Warranty Card**

Please fill in the blanks carefully, and keep it properly as the voucher for warranty.

| Type of Equipment | | | |
|---|---|---|---|
| User's name | | Contact with: | |
| Contact Tel.no. | | | |
| Address | | | |
| Date of Ex-works | | | |
| Date of Maintenance | Damage | Management | Maintainer |
| | | | |
| | | | |
| | | | |
| Sales Agent (Stamp) | | Purchasing Date | |