User's manual

Model:P168

P190

1, Description

Follow me GSM PSTN gateway with LCR has the function of choosing the route Automatically.

When users dial out from the device,it will check the prefix number.Users just need to pre set it in the unit,then it will call out through GSM/PSTN according to the presetting rules.A lso,both GSM and PSTN support call-in.

When you are in calls through GSM line,if another call arrives at PSTN,the caller will hear busy tone,and vice versa.

If PSTN line is off, it will dial out from GSM SIM card without distinguishing at high cost.

If the SIM card is off or no signal, call will dial out from PSTN line.

PSTN land line hot-line function. Once PSTN Fixed telephone gets incoming call, GSM would call an assigned number automatically immediately.

It offers the manual service in both GSM and PSTN, for automated telemarketing machine.

2, Features:

1)Strong signal with high gain antenna. clear voice

2) caller ID display

3)IMEI changeable (optional)

4)Backup lithium-ion battery(optional)

5)SIM Card supported(1.8V,3V)

6)Supports DTMF 2'nd dialing out

7)Locking PIN / network (optional)

8)Hides subscriber ID (been sent out)

9)Connects Alarm systems for security use

10)Provides reversal polarity signal for metering

11)Compatible to most telephones, PBX and VoIP gateways

12)Provides optimized circuit connecting the exchange device for Extension

13) Simple to install and easy to maintain

14)Steady module and reliable design ensures good performance

15)Provides optimized circuit directly connecting the exchange device for extensions

16) Suitable for wide voltage range and low power consumption

17) Suitable for all kinds of weather and environment

18) RJ-11 ports (1 FXO for PSTN line and 1 FXS port)

19)Auto-select economic route(Low-cost routing LCR function)

20)When GSM is unavailable,calls will be forced to dial out from PSTN.

21)When not connecting to PSTN line,GSM will provide the forced dial-out function.

22)Routing between PSTN and GSM

Users can program the numbers they need to dial through GSM. The Follow Me GSM G ateway will choose the proper path (GSM or PSTN) to make the phone call - This is ideal when calling work colleagues and can be used for further cost savings when calling mobil e phones on other networks depending upon the mobile phone tariff.
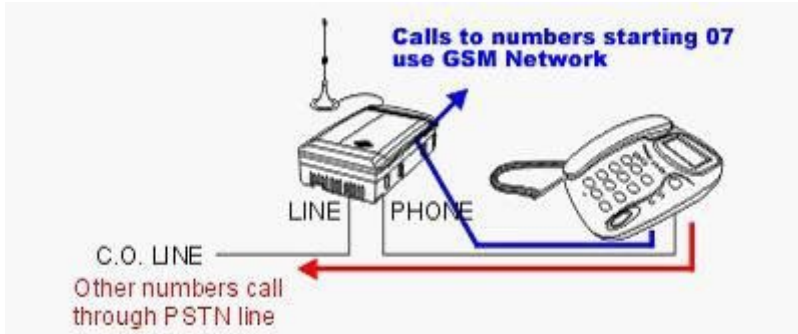

23)ACR Dialler (Automatic Call Routing)

In addition to GSM/PSTN router, the Follow Me GSM Gateway also has all features of an ACR dialer providing users with the ability to use alternative telephone companies and c alling cards for cheaper PSTN calls.
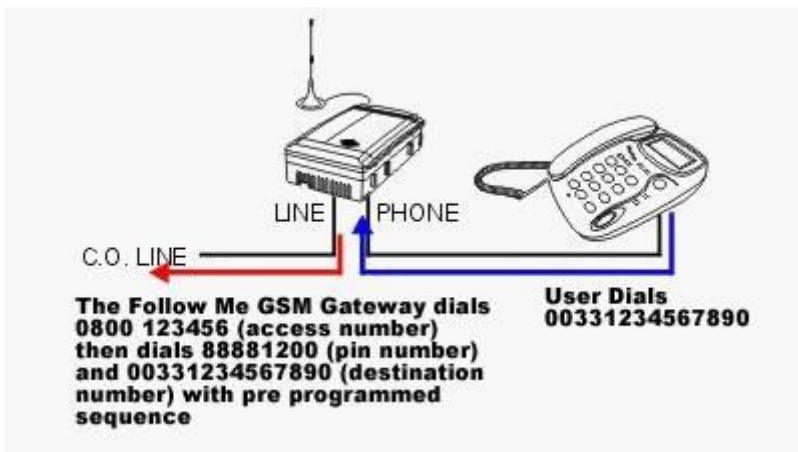

24)Answering a GSM Phone Call by Normal Telepohone

When the handset receives a call, the normal telephone will ring. User can then pick up t he handset and answer the call.
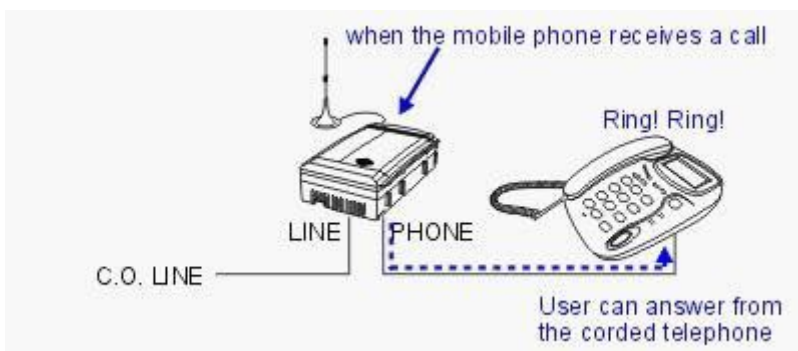

25)Call Diverter (Follow Me)

When users are out of the home or office, they can set the number where they are. If any body calls them from the landline PSTN number, the unit will forward this call to the numb er through the mobile phone. It also works in opposite direction.
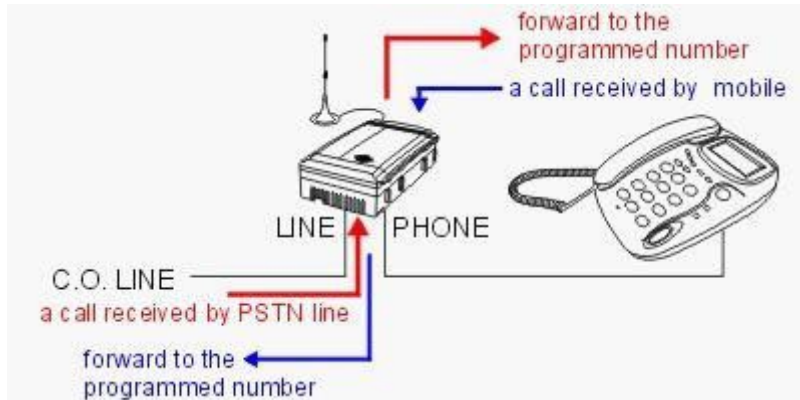
26)Transit between PSTN and GSM Network
Users can call into the Follow Me GSM Gateway device to the landline PSTN number, an d then dial out from the GSM,
or in opposite direction enabling mobile users to call into the GSM Gateway and make a call over the landline (ideal when making international calls).
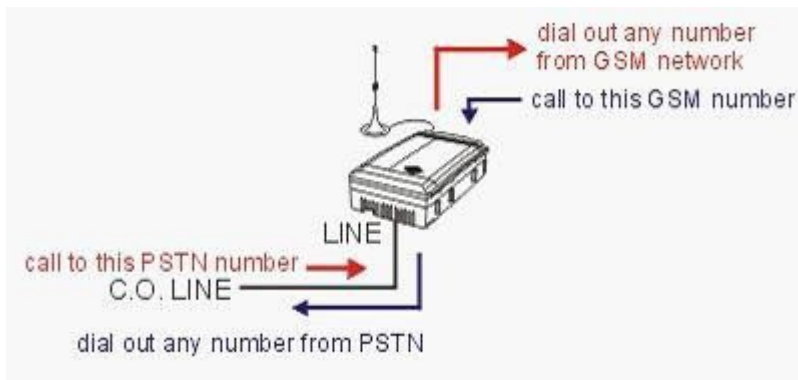
27)Use GSM as a PSTN Line
Under some conditions, the PSTN line is not available. Users can still use a normal telep hone or PBX through the GSM network.

3, Specifications:

1) Air interface standard: GSM850/1900Mhz,900/1,800Mhz phase 2+ full band

2) Frequency ranges:

A) GSM 850   GSM 1900:

I) Transmission: 869.2 ~ 893.8MHz   I) Transmission: 1, 930 ~ 1, 990MHz

Ii) Reception: 824.2 ~ 848.2MHz   Ii) Reception: 1, 850 ~ 1, 910MHz

B) GSM 900:   GSM 1800:

I) Transmission: 890 ~ 915MHz   I) Transmission: 1, 710 ~ 1, 785MHz

Ii) Reception: 935 ~ 960MHz   Ii) Reception: 1, 805 ~ 1, 880MHz

3) Channel space: 200kHz

4) Max power: 0.25W / 0.5W

5) Consumption:

A) Immobility: <25mAh

B) Transmission: <400mAh

6)Input: AC100 - 230V, 50 / 60Hz

7)Output: 12V 1A

8) Sensitivity: -105dB

9) AC power: DC 10V - 20V

10) Dial tone frequency: 450MHz (standard)

11)Connector of power: US,EU, UK,AU types

12)User line, bell signal: In line with GB/T15279

13) Switching type / transforming type AC adapter (optional)

14) Antenna amplifying: 3.5dB (omni-direction), 12dB (certain direction/chosen direction)

15)Connection mode: RJ-11 phone socket

16)Antenna connection: SMA antenna connection

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
Ac- adapter	1pcs	AC-110-240V, DC5V/1A
Antenna	1pcs	Magnetic Antenna with 3m
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
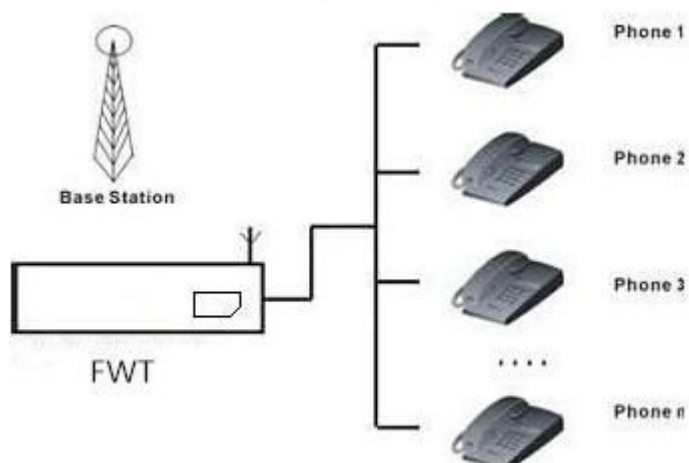
Draw your attention: Because there are many types of ordinary telephone and their electric parameters are different. In order to avoid mutual disturbance between telephone and terminal and affect voice quality. The distance between telephone and terminal is 1.5m at least.

## 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
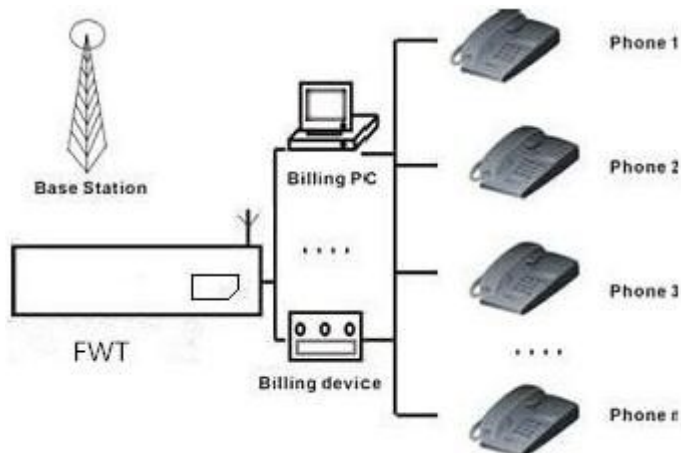
3) The installation for connecting to PBX for call extensions

If users want to connect small PBX to this terminal, connect terminal's "Phone port" to the PBX.
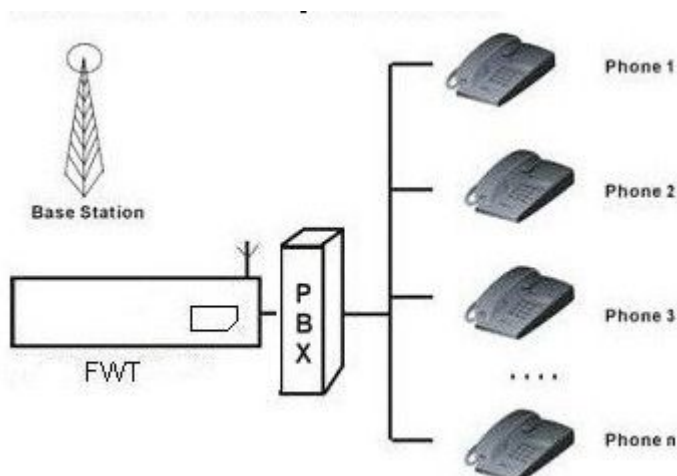
4)　connecting VoIP gateway for Call Termination

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.
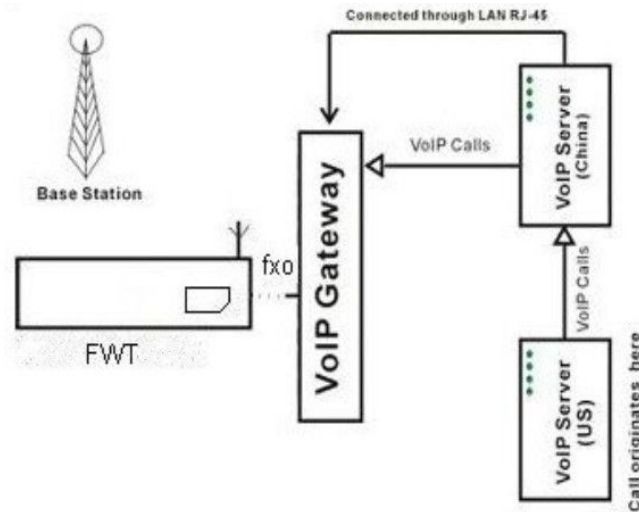
5)connecting to alarm system for Security

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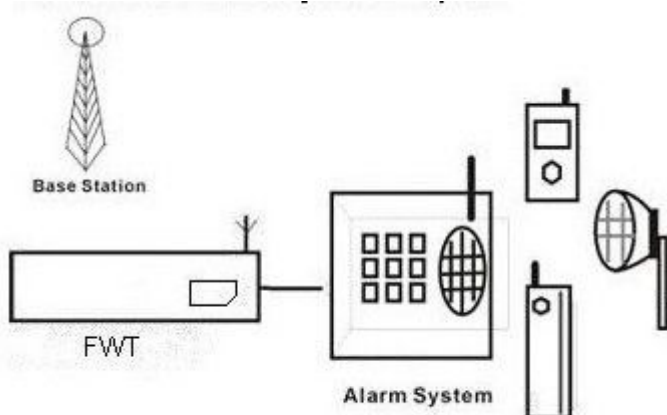
7, Setting part

PSTN →GSM

Connect FWT PSTN port to telephone by telephone line , insert sim card into FWT.Pick up after telephone is ready, users can set according to below commands after telephone beeps.

Manual service switch when PSTN as called party. press the call button during talking, wait two seconds and telephone would show P-, then input new transferred number and hang up.

1) *00#013#8# ----close function. (PSTN as called party, incoming calls can't transferred to GSM)

2) * 00 # 013 # 9 # ------open function. PSTN as called party, incoming calls transferred to GSM.

3) *00#014#0# ----close function. (PSTN as called party, incoming calls transferred to GSM,but can't call an assigned number automatically)

4) * 00 # 014 # 1 # ------open function. PSTN as called party, incoming calls transferred to GSM and then gsm call an assigned number automatically.

3) * 00 # 041 # 02 * 13xxxxxx # ------set assigned telephone number.

Tips: After the successful set in each command, there will be beep. If error, pls hang up and start again.

*00#037#99#   Incoming call would transfer to GSM from PSTN within a setting time if no one answers phone. (00~99seconds. 00 means close this function)

*00#041#02*11111111#   open. PSTN as called party, transfer to GSM, and then transfer call to an assigned telephone number. 11111111 stands of the assigned telephone number which should be forwarded to GSM.

*00#042#01*137#   set permitted calling out prefix numbers and numbers from PSTN. 32 groups can be set. 137 stands of prefix number.

*00#043#AA*11111111# set forbidden calling out telephone number or prefix number. AA: 01~64 （01 is series number）64 groups can be set.   11111111 stands of telephone number or prefix number.

 GSM→PSTN

1) rout call from GSM to PSTN: pick up telephone and press #, then PSTN gets through.

*00#013#1# ---open this function.

*00#013#0# ----close this function.

2) GSM answers, call can be transferred to PSTN. white list feature, a fixed telephone number, or free dial.

* 00 # 013 # 2 #   GSM as called party, close white list
* 00 # 013 # 3 #   GSM as called party, open white list

* 00 # 013 # 4 #   Close function. GSM as called party, open white list, incoming call is transferred to an assigned number.   (Free Dial)
* 00 # 013 # 5 #   open function. GSM as called party, open white list, incoming call is transferred to an assigned number.

* 00 # 013 # 6 #   open function.GSM as called party, close white list,   incoming call is transferred to a fixed number.   (Free Dial)
* 00 # 013 # 7 #   close function.GSM as called party, close white list,   incoming call is transferred to a fixed number.
Set white and black lists.

*00#040#AA*1111111#   AA: 01~32   1111111 means white lists which are permitted to call in numbers. 32 telephone numbers can be set.
*00#043#AA*1111111#   AA: 01~64   1111111 means black lists which are forbidden to call in numbers.   64 telephone numbers can be set.
*00#044#IP#   IP:1~16

3) Manual service switch when GSM as called party. press the call button during talking, wait two seconds and telephone would show P-, then input new transferred number and hang up.

* 00 # 000 # restore factory settings
*00#014#2#   close. Forbid dial when transfer(default)
*00#014#3#   open. Forbid dial when transfer
*00#020#0#   clear white list
*00#020#1#   clear 64 groups forbidden outgoing calls
*00#020#2#   clear 32 groups numbers which rout to PSTN
*00#030#A*BB#   volume adjustment. A is SPEAKER, BB is MIC
                      A: 0 ~ 9 // Default: A: 6
                      BB: 00 ~ 15 // default: BB: 08
* 00 # 035 # 123451234512345 # Set imei number (optional)
* 00 # 036 # YYMMDDHHMMSS # setup time

* 00 # 040 # AA * white list #   AA: 01 ~ 32 white list: allows incoming number
* 00 # 043 # AA * ban outgoing calls #   AA: 01 ~ 64, Ban dial numbers or prefix numbers
* 00 # 044 # IP #   IP: 1 ~ 16

SMS:

*00#** 11111**   11111 stands of numbers which would call GSM back.

*00#** 11111##   11111 stands of numbers which PSTN will call.