

User Manual

Meeteasy Interactive Teleconference System

Shenzhen Haohuitong Technology Ltd.

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Preface

Meeteasy Interactive Teleconference System (Multi Teleconference System) (hereinafter referred to as Meeteasy) is the interactive Teleconference system developed by Shenzhen Haotuitong Technology Ltd. It has the characteristics of good voice behavior of many-headed conversations in Teleconference, powerful functions, easy operation, quick building speed for teleconference and cost saving.

Meeteasy uses an innovative technology to solve the interference by the tone signal in Teleconference when using analog telephone line, as the interference may come when the line is hanged up or broken off during the conference. When the tone signal (busy tone or other) enters the conference, Meeteasy will judge which line it comes from and hang up the line to ensure a smooth continuing of the conference.

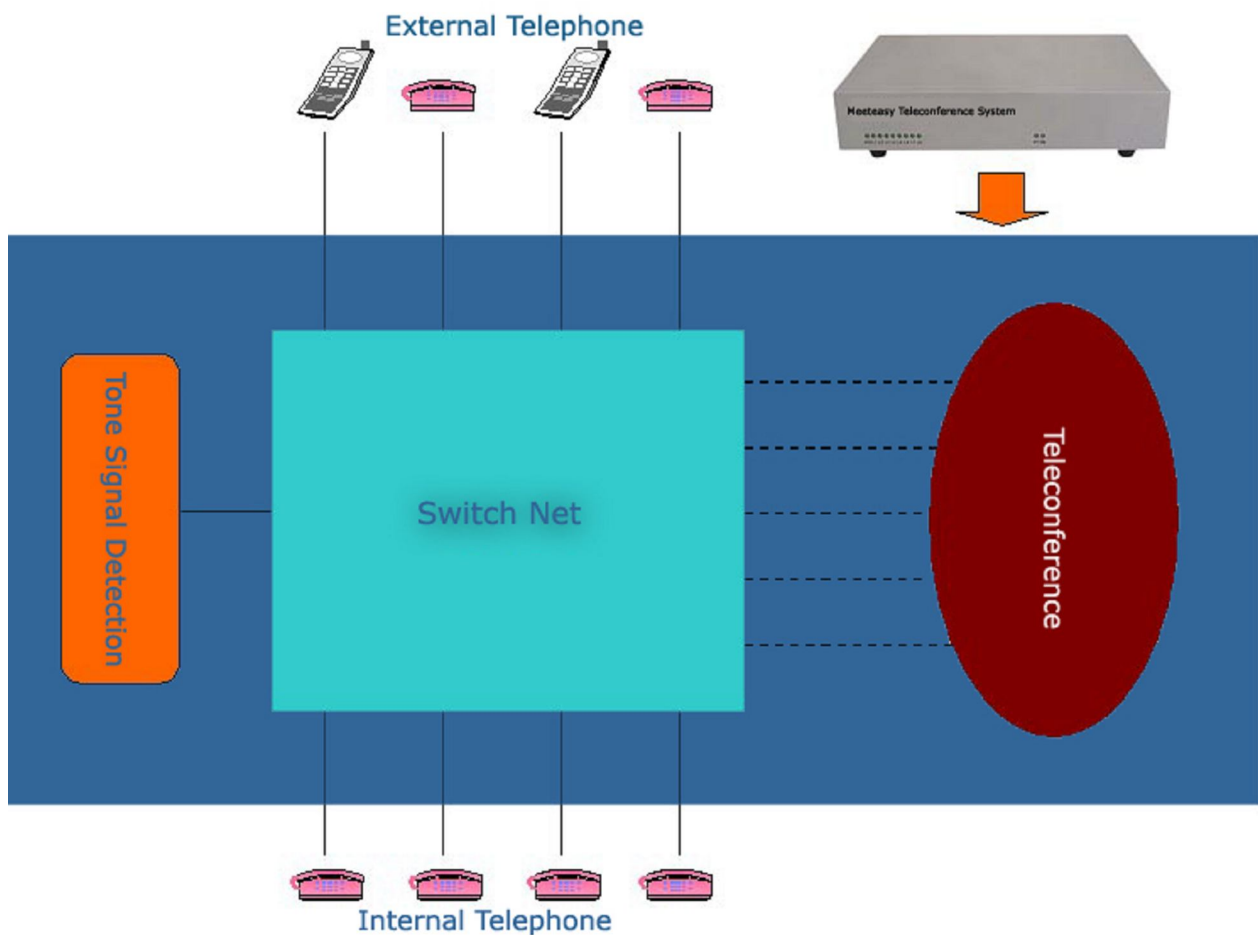
With high quality and low cost characteristics, Meeteasy can realize the dreams of Teleconference for those organizations and individuals who want to reach it.



Sketch Map 1: The Presentation of Meeteasy Interactive Teleconference System

I. Structure and Ports of The System

Meeteasy is modularized designed and composed of interface port unit, switch net, conference unit, tone signal detection unit, calling analysis and management unit, voice answering unit, administration unit, power unit, etc. The main structure is as following Sketch 2:



Sketch Map 2:the Sketch Map of Structure and Principle of Meeteasy

Switching Net is the core and basis of the system. All extension calls through internal lines or trunk calls through external lines can enter the Teleconference by Switching Net. Tone Signal Detection ensures the conference to continue smoothly by finding out which participant hangs up his phone or his line is broken off, then

Meeteasy will hang up the trunk line. For the busy tone signal will enter the conference from the trunk lines.

The system uses rectangle chest of two models (I& II).

Chest of Model I:

- Dimension: 260mm; 175mm;50mm
- Available for one Meeteasy system
- Weight: about 1.8Kg
- For 6 parties conference (Multi-party Teleconference)



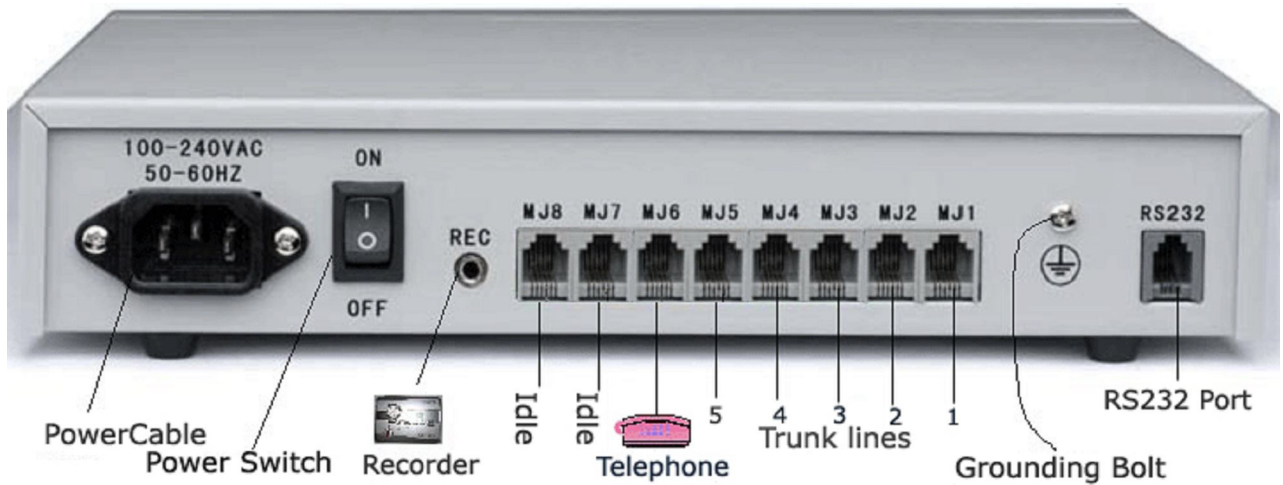
SYS: System Running Indication, flash 10 times/s. BTY: Power Supply Indication, light on if normal.
L1-L8: Line Status Indication, light on if line is used. RING: Ring Power Indication, flash 25 times/s.

Sketch Map 3: Model I case Front view and light meaning

Total 8 ports for trunk or extension, 1 recording port and 1 RS232 port (for future use) are arranged at the back of chest. The type of line port is RJ11. When installation, the user's telephone lines shall match the ports, and the connection way is: trunk port with trunk line, and extension port with extension line.

Example as Sketch Map 4:

Back view and line's connection of 5 trunks, 1 extension; when use Model I case.



Sketch Map 4: Back View & Lines Connection of Meeteasy Model I

Chest of Model II:

- Size: 19 inch
- Dimension: 440mm; 175mm; 50mm
- Weight: about 2.8Kg
- Available for one or two Meeteasy sub-systems (share the same power supply, ring power and chest)
- The two sub-systems can be used by independence or by interconnect.

By independence: configuration, connection method & function are same to 2 Model I systems.

By interconnect: can totally build a 10-party Teleconference at most.

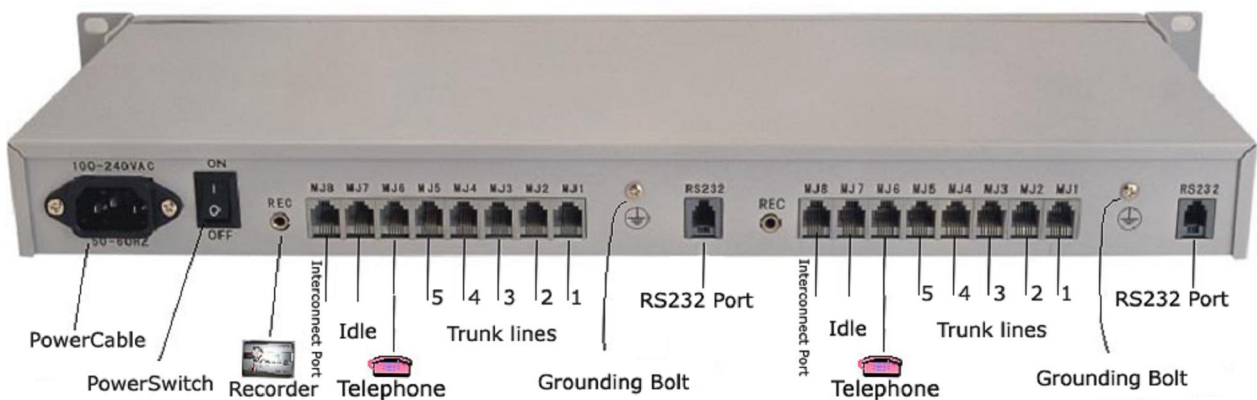
Light meaning of Model II is as same to Model I and Front View of Chest is as follow Sketch Map 5:



SYS: System Running Indication, flash 10 times/s BTY: Power Supply Indication, light on if normal
 L1-L8: Line Status Indication, light on if line is used RING: Ring Power Indication, flash 25 times/s

Sketch Map 5: Front View of Meeteasy Model II

Back view and line's connection of ; 10 trunks, 2 extensions; is as Sketch Map 6:



Sketch Map 6: Back View of Meeteasy Model II (10 trunks, 2 extensions)

By independence:

Each sub-system of ; 5 trunks, 1 extension; can build a 6-party Teleconference.

By interconnect:

Totally the two sub-systems can build a 10-party Teleconference at most.

For the connecting method and operation of interconnect, please refer to the Article 8 of Chapter VII (Sketch Map 8).

For detailed configuration information of trunk and extension ports, please refer

to the Configuration List of Chapter VIII.

II. Brief Introduction of Application Modes

Meeteasy System, with a flexible design, can support the following applications, among them your selection belongs to No. ____ application.

1. Multi-party Teleconference Bridge

Compared with similar products in market, Meeteasy has some advantages as following:

- Excellent voice behavior
- Cancellation disturbance of tone signal
- Powerful functions
- Good stability and reliability
- Easy installation and operation
- Quick Conference Building speed
- Cost saving.

Typical configurations:

- ; 5 trunks, 1 extension; (Model I case), for 6-party Teleconference
- ; 10 trunks, 2 extensions; (Model II case), for 10-party Teleconference

Moreover, through intercommunication with Video Conference system or connection with data & graphic network, Meeteasy's functions will be added to original system or network.

2. Additional Teleconference Function on Present Telephone Line

Typical configuration:

- ; 4 trunks, 4 extension (Model I case); , for 5-party Teleconference

No matter Meeteasy is power-on or power-off, all 4 telephones will work well with the 4 trunk lines. Further more, the user can Build a multi-party Teleconference at any time, or forward the bilateral conversation to multi-party conversations.

3. Additional Function on Present Network

With a Branch Exchange, or a virtual network (CENTREX) or IP Gateway, users may enjoy an additional function of Multi-party Teleconference on the existing network. In this case, all telephones will share Meeteasy Multi-Party Teleconference System.

Typical configuration is the same to application mode 1.

4. Extending & Backup of Videoconference

The combination of Meeteasy Interactive Teleconference System and Meeteasy Teleconference sound System can extend and backup the Video Conference, so as to strengthen the reliability and flexibility of remote conference system, and reduce the cost by the participation via telephone.

5. Tele-commanding System

Meeteasy can be used for tele-commanding application.

Typical configuration is same as application mode 1 or 2.

6. Telecom System for Emergency Response

Meeteasy can be used for tele-commanding application, coordination on job so as to make quick response to emergency or incident.

Typical configuration is as application mode 1 or 2.

7. IP Teleconference Solution

By connecting to IP telephone Gateway's Subscriber ports with Meeteasy's trunk ports, Meeteasy can build a Teleconference via IP network with an excellent voice behavior.

Typical configuration is as application mode 1 or 2.

8. Teleconference by Common Telephone and IP telephone (Composed Network)

By connecting to IP telephone Gateway's Subscriber ports and common telephone line with Meeteasy's trunk port, Meeteasy may build a composed Teleconference of IP and PSTN networks.

9. Expands the Conference Size and Saves Expense & Resources through Remote Network Connection.

Two or more Meeteasy systems can be interconnected together by telephone line (refer to Sketch Map 7) to build a larger Teleconference. Only one telephone line between each system is needed and the cost can be reduced for a lot.

Typical configuration is as application mode 1 or 2.

III. Functions of The System

1. Build Conference through Call-in mode, contains three kinds of access including Password checking mode, direct access mode and Manual forwarding mode.
2. Build Conference through Call-out mode.
3. Build Conference through above two ways simultaneously.
4. Detect the tone signal (busy or jam) and hang up the relative line

automatically.

Hang up the relative trunk line and release the connection if the outside participant exits from the Conference; meanwhile, the Conference will go on without break off.

5. The Conference Builder can dial telephone number to dismiss the relative participant.
6. The Conference Builder can monitor the condition of participants by tone or by light prompts, e.g. joining or departure.
7. Record the Conference by voice output port.
8. Switch from 2 party conversation to Multi-party teleconference easily without a pause.
9. Increase the conference party of the system one by one easily.
10. Cost saving through remote teleconference interconnection.
11. The trunk port may be connected with the public telephone line, Branch Exchange, subscriber line of IP Gateway, Router, etc.
12. Recognize the system's configuration automatically.

IV. System Performance

1. Voice Behavior

In the Meeteasy multi-party Teleconference, all participants may talk freely.

An international standard 3-element matching mode is used for impedance of ports in extension line and trunk line; the transmission specification of the port meets China's national technical standards; moreover, echo cancellation is used in

conference units to get a clear and loud voice effect.

The excellent voice effect makes Meeteasy to be used in any network environment, such as to build an interactive Teleconference by connecting to IP Gateway.

2. Tone Signal detection and hang up the relative line

The system may automatically find out the source of tone signal (busy or jam), hang up the relative line, then the conference can continue without break off.

3. Protect system from lightning strike

The over current & over voltage protections in the system meet the requests of ITU K.20 standards. Except installing the grounding line, the user does not need to equip the other thunder-proof facilities.

4. Reliability

- Real-time operation system: supports multiple process and concurrent program for task
- Error compatible design: prevents the system from breakdown
- Telephone will still work even power off (optional)

5. Power Supply and Consumption

- Power supply: 100-240V, 50-60HZ alternating current power
- Power consumption: about 10W under full load

V. Installation

The chest of Meeteasy Model II can be installed into a 19-inch standard case.

Better place the chests of Model I and II on the table to monitor the conditions

e.g. the status of ports, running indication of system, etc.

If a private equipment room or shelf is provided, installing Meeteasy system in the equipment room or near the shelf is suggested for more convenient maintenance and linkage.

Install the Meeteasy system in dry, airy and clean place.

1. Installation of Grounding Line

As thunder may be leaded to system through the trunk line, so grounding line shall be installed as an important operation for the purpose of lightning proof.

The lightning protection design of Meeteasy System is according to the standards of ITU (International Telecom Union) K.20, so the user does not need to spend too much in lightning protection but only connect the system to ground steadily.

Ground lead of alternative current power is not sufficient; this grounding can't reach the requirement, so that we suggest a specific reliable grounding line for the system. For more details of grounding information, customers may consult the personnel in telecommunication or our customer service department.

Only alternative current socket with grounding line is permitted in this system, alternative current socket with fire wire and neutral wire only shall Not be used!

2. Connection of Telephone Line

Type of the port in Meeteasy is RJ11. Users shall connect the telephone lines accordingly, e.g. trunk port to trunk line, and extension port to telephone (refer to Sketch Map in Chapter I).

For the configuration of trunk and extension ports, please refer to the configuration list in Chapter VIII.

3. Plug in the power socket and power on to start up the system after the connection of grounding and telephone line.

VI. Operation Basis of The System

1. Allocation & Use of Telephone Line

The system gives a telephone number for each extension line, whatever the position of extension ports is:

- From the front view, numbers in turn from left to right (MJ1 -> MJ8 or L1 -> L8, hereinafter as the same) are: 21, 22 and 23 respectively.
- For two extension lines, the number may stop by 22, and number over 22 will be vacant.
- For one extension line, the number is 21 only.
- Users may use extension number to dial or forward the call.
- Dial 9 for call out.

Each time of dialing 9 will select a free trunk line in turn from left to right (MJ1 -> MJ8 or L1 -> L8).

For the purpose to specify a trunk to call-out, the system also gives an extension number for each trunk line e.g. 61, 62, 63, 64, 65, etc. from left to right in turn (MJ1 -> MJ8 or L1 -> L8).

- For two trunk lines, the number will stop at 62, all spaces over 62 are vacant
- For four trunk lines, the number will stop at 64, all spaces over 64 are vacant
- Dial the extension number of the trunk line to call out

Example:

The extension No. 22 dials 9 to call out, selecting a free trunk line from left to right; but if dials 63, it may select the third trunk line (63) to call out.

2. Allocation & Use of Conference Number

Since each sub-system can build a 6-party Teleconference at most, Meeteasy provides 6 conference numbers as 51, 52, 53, 54, 55 & 56 at most, and 7 dismissing numbers to cancel the conference connections as 31, 32, 33, 34, 35, 36 & 30.

- Each conference number is one-time available only; otherwise, the dialer may receive the busy tone
- When the participant exits from conference, the conference number he used will be released and available again
- Extension may dial the conference number to enter the meeting directly
- Extension may forward the trunk call or other internal calls into the meeting
- Extension may dial a dismissing number to release the relative participant

Example:

The extension dials 32 to enforce Party 2 to exit from the meeting; or dials 30 to dismiss the whole conference.

VII. Detailed Functions & Operating Steps

1. Call-in mode to build Teleconference

According to the configuration of the system, there are three kinds of access to the conference for trunk participants: password checking, direct access and manual forwarding.

1.1 Steps of Password Checking:

- With an voice module, the participants through trunk may access by password checking

- The system has auto-answer function
- Input correct password by following the system's indications
- Default password 1234 is set when shipped
- Once pass, the participant may enter the conference successfully
- If fail, two more times of password re-inputting would be available
- Any wrong inputting of password at the third time will lead to a hang up of trunk line

The 4-digit Arabic password number can be set and modified as follows:

- Pick up telephone, dial *01*ABCD# (i ABCD i means password that may cover the original).
- The modification will be kept in Flash Memory and will not be lost when shut off the system.

Supposed the password is 1111, the trunk participant may enter the Teleconference directly; if 2222, the access shall be forwarded by manual operation, so that these two special passwords shall not be used as common password for checking.

The modification operation between 2222 and other passwords shall go into effect after resuming the system, while for the other changes, no need to shut off and resume the system.

For access to conference, the trunk participant needs to use a conference number as 51, 52, 53, 54 or 55 in turn from left to right; therefore, the extension participant

may directly dial the unused numbers (e.g. 56 or 55) for access.

In the system without voice module, set some other passwords except 2222, then the trunk call will make an access to the conference directly; otherwise, it needs to be forwarded by manual operation.

1.2 Steps of manual forwarding

1.2.1 First Call-in from trunk:

- The Conference Builder may accept the trunk call to begin a bilateral conversation
- The Conference Builder presses the Hook (or ; Flash; key), then the trunk call enters condition of waiting (music)
- When hearing the tone signal again, The Conference Builder follows the prompts to dial conference number (e.g. 51)
- When a tone ; Beep; is heard, it means access allowed
- The Conference Builder shall hang up, and the waiting participant from trunk goes into the meeting (e.g. No.51). (Notice: Time of pressing Hook or Flash key shall not exceed 0.14-0.6 seconds).

1.2.2 2nd, 3rd, 4th and 5th Call-in from Trunk Call:

- Through unused trunk lines, and same steps as above (via numbers 52, 53, 54, 55)
- The Conference Builder may use the way of Call-out (see in call-out mode) to leading the 2nd, 3rd, 4th, etc. participants (by numbers 52, 53, 54, 55) into the meeting
- All participants may talk freely after going into the meeting

1.2.3 The Conference Builder dials his conference number (e.g. 56) to enter the conference; then the Building for Conference finishes.

When making a wrong dial in Conference Building, the Builder may press the Hook again to resume the original talk.

2. Call-out mode to build Teleconference

2.1 Operation Steps:

- The Conference Builder follows extension prompts to dial 61 to select No. 1 trunk line
- Then the Conference Builder Follows trunk prompts to dial the trunk participant;s numbers, the two parties begin a conversation afterwards
- The Conference Builder presses Hook (or Flash key), when hearing the tone signal again, dials the Conference number (e.g. 51)
- When the tone ;Beep; is heard, it means access passes
- The Conference Builder may hang up, and the waiting participant from trunk goes into the meeting (e.g. No.51) (Notice: Time of pressing Hook or Flash key shall not exceed 0.14-0.6 second).

2.2 Building steps for the 2nd, 3rd, 4th or 5th participant are same as above:

- The Conference Builder dials 62, 63, 64 or 65 to select No. 2, 3, 4, or 5 trunk line respectively
- Then dials the trunk participant;s telephone number
- The two parties begin a conversation afterwards
- The Conference Builder presses Hook or Flash key, when hearing the tone signal again, dials the Conference number e.g. 52, 53, 54 or 55

- Once succeeds, participants may talk freely in conference.

2.3 The Conference Builder dials his conference number to enter the conference (e.g. 56), then the building for Conference finishes.

When making a wrong dial in Conference Building, the Builder may press the Hook again to resume the original talk.

Ways of Call-in and Call-out can be used simultaneously.

3. If the participant from trunk exits, the system may automatically check out the source of tone signal (busy or jam), then hang up the relative trunk line and release the connection; meanwhile, the Conference can continue without break off;

If the extension participant exits, the system will also release the connection to it; in this case, a temporary tone signal (busy) will be heard.

When the trunk participant exits, the tone he may hear is as below:

- Exits by fixed phone: busy tone (at interval of 0.35S)
- Exits by mobile phone: jam tone (at interval of 0.7S)

Meeteasy may check out tone signal (busy or jam) to release the relative connection. Time for Meeteasy to confirm the tone signal is about 5 seconds. In case of other unexpected tone signals, the Conference Builder may release the connection as ; Article 4; below.

4. The Conference Builder dials designated number to dismiss the participant

The Conference Builder may dismiss some participants by extension phone, so he shall remember all participants; conference numbers.

The detailed operation procedures:

- The Conference Builder hangs up to exit from the conference
- Pick up the phone handset and dial ; 3 + conference Number; (e.g. 31, 32, 33, 34, 35, or 36) to dismiss the connection of some designated participant.
- Dial the free conference number to go into the conference again
- Dial ; 30; to dismiss all conference connections

If some participants exit, the trunk line he used will be released automatically and available again; meanwhile, the Conference can continue without break off.

5. The Conference Builder can monitor the conditions of all participants by tone or light prompts.

- A tone prompt will be heard to all when a participant enters or leaves.
- Each access will use a port (extension or trunk). The light of port will be on if it's used, otherwise it will be off.

6. Record or broadcast the Conference

- Recording equipments e.g. recorder, recording pen, etc, can be connected to Meeteasy to record the conference by its Record Port and a record line. Conversations in conference may be taken down in loud and clear sound.
- The conversation not in conference will not be recorded. If necessary, the two parties need to forward their talk into conference before record.
- Output voltage from Record Port for voice signal is: -1.5V~+1.5V
- By connecting to Speaker, the voice of Teleconference can be outputted

7. Change from 2-party conversation to Multi-party Teleconference without pause

The procedure for this purpose is the combination of above two modes for

building teleconference.

When required, talkers inside the system may forward the calls into the conference, and call more participants by method of Call-out.

8. Single system may build a 6-party Teleconference, dual systems may build a 10-party Teleconference, and triple systems may build a 14-party conference. Each additional system can add 4 parties.

Several Meeteasy systems can be distributed in several places and be interconnected together to build a larger teleconference. This connection can be done by telephone lines in public telephone network or by other equipments. It can save the cost of toll call.

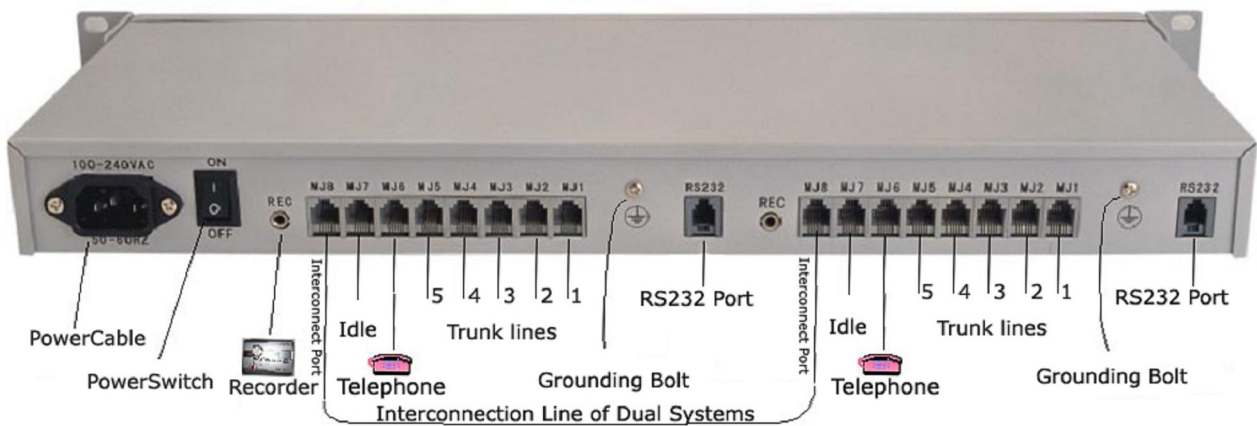
Example of interconnection via public telephone line is as Sketch Map 7:

Through the first Meeteasy system, the Conference Builder in China can dial to enter Teleconference System in USA, and then forward the meeting conversations of USA to China. A combined Multi-party Teleconference of China and USA is then built. Supposed both China and USA have 4 parties respectively, they may form a 8-party conference afterwards.



Sketch Map 7: Two Meeteasy Systems Interconnected Via A Toll Line

By Meeteasy's interconnection ports (as Sketch Map 8), two 6-party sub-systems can form a 10-party interactive system directly. Each sub-system builds a 5-party teleconference, and a 10-party teleconference is then built by two sub-systems. In this case, a special 4-core telephone line shall be used in connection, and the two sub-systems are interconnected by MJ8. (Configuration shall be made inside the system by Shenzhen Jingsheng Telecom Technology Co., Ltd., or its agent.) The same method can be used to integrate more systems and make a large interactive Teleconference system.



Sketch Map 8: View on Interconnection of Meeteasy Dual Sub-systems

9. Remote Network Connection Saves Toll Call Expense

As Sketch Map 7, two or more sub-system can be interconnected by few toll paths in order to put all participants of each system into one conference. Thus the toll expense is reduced.

Method of interconnection: regard one system as a participant to the other one. Operation steps are same to above ; Article 8; .

10. Network Connection with PSTN, Branch Exchange, IP telephone Gateway and Router

Meeteasy can adapt to various network situation, e.g. public telephone network, user;s Branch Exchange, IP telephone gateway, Router, etc. then maximize the use of resources, facilitate the operation and save cost.

10.1 Connection with User;s Branch Exchange

Meeteasy will form a Teleconference center when connected to user;s Branch Exchange extensions. (Extension ports of User;s Branch Exchange connect to the trunk ports of Meeteasy).

10.2 Connection with IP telephone Gateway

Meeteasy can be connected to Subscriber port of IP Telephone Gateway, by its trunk port. The method of usage is same as the connection with PSTN.

Meeteasy also can be connected to Office port of IP Telephone Gateway, by its extension port.

10.3 Connection with Router

The same connection as IP telephone Gateway, and the same usage method as IP telephone Gateway.

10.4 Composed Connection

Supporting the connection of above three methods.

10.5 Selective Function of Route

In above connection, when need to designate a route for call-out, the user can do it through the trunk line connected to the route. Number for first trunk line is 61, second is 62, then 63, 64, 65, etc. (Dial 9 to use the first trunk line, then select the other trunk line in turn).

11. Automatic Recognition to System's Configuration

Each trunk or extension port of Meeteasy has a relative module, that's why the flexible configuration can be used according to user's needs.

The ability of automatic module recognition ensures the fulfillment of above function.

VIII. Configuration & Accessory

Configuration List:

System 1:

| No. of Port | MJ1 | MJ2 | MJ3 | MJ4 | MJ5 | MJ6 | MJ7 | MJ8 |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Trunk Port | | | | | | | | |
| Extension Port | | | | | | | | |
| Voice Module | | | | | | | | |
| Interconnection | | | | | | | | |

System 2:

| No. of Port | MJ1 | MJ2 | MJ3 | MJ4 | MJ5 | MJ6 | MJ7 | MJ8 |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Trunk Port | | | | | | | | |
| Extension Port | | | | | | | | |
| Voice Module | | | | | | | | |
| Interconnection | | | | | | | | |

Accessory:

- 1、 One voice output cable of Teleconference (for recorder, etc.)
- 2、 One power cable
- 3、 Telephone lines
- 4、 One User Manual
- 5、 One guarantee Maintenance Card