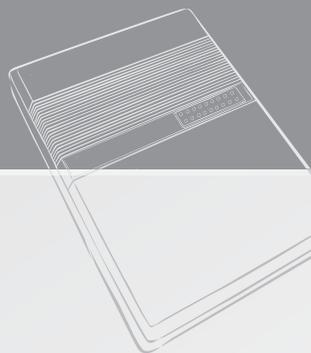
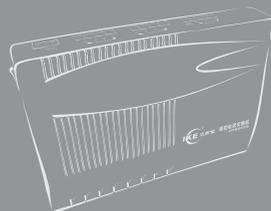
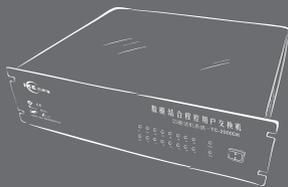
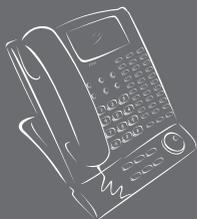


PABX

Private Automatic Branch Exchange



Instruction Manual

Chapter 1: Brief Introduction

1.1 Model Introduction -----1
1.2 Technical Index -----2
1.3 Structure and Names -----3
1.4 PC Connecting Line Explanation -----14

Chapter 2: Before Programming

2.1 Unlock System Password -----15
2.2 Change System Password -----15

Chapter 3: About Internal Call

3.1 Internal Call -----16
3.2 Internal Call Transfer (Between Extensions) -----16
3.3 Conference (Internal 3-party) -----17
3.4 Ringback Automatically When the Called Extension Becomes Free -----17
3.5 Call Operator -----17
3.6 Access CO Line Code & Access Operator Code Assignment -----17

Chapter 4: About External Call

4.1 Outside (CO) Line Connection Assignment ----- 18
 4.1.1 CO Line Connection for No.1 CO Line Card -----18
 4.1.2 CO Line Connection for No.2 CO Line Card -----18
4.2 Access Outside (CO) Line Operating -----18
 4.2.1 Access CO Line by Dial 0 or 9 -----18
 4.2.2 Access CO Line Directly -----19
 4.2.3 Access Preferred CO Line -----19
 4.2.4 Personal Speed Dialing -----19
 4.2.5 Access CO Line by Outward Code (Least Cost Route) -----19
4.3 Related Settings -----20
 4.3.1 Outward Code Assignment (Least Cost Route) -----20
 4.3.2 Direct / Non-Direct Access CO Line Assignment -----20
 4.3.3 Assign Speed Dialing Number for Phone Number -----21
 4.3.4 IP Code of CO Line ----- 21

Chapter 5: Call Permission Management

5.1 Personal Account ----- 22
 5.1.1 Personal Account Assignment -----22
 5.1.2 Change Password of Certain Account -----22
 5.1.3 Make External Call by Personal Account-----22
5.2 Executive Busy Override (EBO) ----- 22

Table of Contents

- Functions -	-Page -
5.3 Monitoring and Recording Function -----	23
5.3.1 CO Line is Monitor Recorded (Permit / Forbid) -----	23
5.3.2 Extension is Monitor Recorded (Permit / Forbid) -----	23
5.4 Extension is Permitted Use Certain CO Line Only -----	23
5.5 Exclusive CO Line of Superior Extension -----	24
5.6 Extension and CO Line Groupings -----	24
5.6.1 Extension Groupings -----	24
5.6.2 CO Line Groupings -----	24
5.7 Application of Function 5.4 / 5.5 / 5.6. -----	25
5.8 Front Digits of Phone Number Management -----	25
5.8.1 Forbidden Phone Number -----	25
5.8.2 Permitted Phone Number -----	26
5.8.3 Clear Group of Front Digits-----	26
5.9 Extension Class Assignment -----	26
5.9.1 Class Assignment for Certain Extension -----	26
5.9.2 Class Assignment for All Extensions -----	26
5.9.3 Cancelling Class Assignment -----	27
5.10 Application of Function 5.8 and 5.9. -----	27
5.11 External Call is Time-limited -----	27

Chapter 6: About Incoming Call

6.1 Answer Incoming Call -----	28
6.1.1 By Ringing Extension -----	28
6.1.2 By Non-Ringing Extension (Call Pick Up) -----	28
6.2 Incoming Call Transferring -----	28
6.3 3-Party Conference (1 CO & 2 Extensions) -----	29
6.4 Flash Time -----	29
6.5 Call on Holding -----	29
6.6 Busy Transferred -----	30
6.7 Unconditional Transferred -----	30
6.8 Call Transferred to Secretary -----	30
6.9 Do Not Disturb (DND) -----	31
6.10 Extension Ring by Turns -----	31
6.11 Assign Fax Extension for Receive Fax Automatically -----	31
6.12 External Caller Reaches Extension by One-Touch Dialing (at DISA mode) ----	32
6.12.1 One-Touch Dialing Assignment (Permitted / Forbidden)-----	32
6.12.2 Assign Extension Numbers for a Numeric Button-----	32

- Functions -

-Page -

Chapter 7: Extension Management

7.1 Attendant Extensions Assignment -----	33
7.2 Ring Extensions Assignment For Operator Attendant Service -----	33
7.2.1 Ringing Extensions of Certain CO Line -----	33
7.2.2 Clear Ringing Extensions of Certain CO Lines -----	33
7.2.3 Assign Parameters of CO Line (MN) the Same as CO Line (AB) -----	34
7.2.4 Assign Parameters of All CO Lines the Same as CO Line MN -----	34
7.3 Answering Mode Assignment -----	34
7.3.1 Operator Answering Mode -----	34
7.3.2 Auto-Attendant Answering Mode -----	34
7.4 Outgoing Message (OGM) For Auto-Attendant Service -----	35
7.4.1 OGM Recording -----	35
7.4.2 Listen Recorded Message -----	35
7.5 Service Mode Changed Assignment -----	35
7.5.1 Time Service Mode Changed -----	35
7.5.2 Day Service Mode Changed -----	36
7.5.3 Cancel All Settings of Service Mode Changed -----	36
7.6 Extension Number Management -----	36
7.6.1 Define Four Digits for All Extension Numbers -----	36
7.6.2 Extension Number Length Assignment -----	37
7.6.3 Restore All Extension Numbers -----	37
7.6.4 Clear All Extension Numbers-----	37
7.6.5 Extension Number Assignment-----	37
7.7 Extension Password Management -----	38
7.7.1 Extension Password Assignment -----	38
7.7.2 Restore Extension Password to Factory Setting-----	38
7.7.3 Lock Extension by Password -----	38
7.7.4 Unlock Extension Password -----	39
7.8 Factory Settings (Default) -----	39
7.9 Report Extension number and its Port Number -----	39

Chapter 8: Auxiliary Functions

8.1 Remote Programming -----	40
8.2 Broadcasting -----	40
8.3 Verify External Inputted Music -----	40
8.4 Change System Time -----	41
8.5 Charge Mode for Billing -----	41
8.6 Billing Memory Cleared -----	41
8.7 Pulse and Tone Mode Setting -----	41

8.8 Telephone Type Assignment -----	42
8.9 Door Bell and Gate Lock Function -----	43
8.9.1 Ringing Extension for Door Bell -----	43
8.9.2 Unlock -----	43
8.10 Voice Mail Function -----	44
8.10.1 External Caller Leave Message -----	44
8.10.2 Listen New Message -----	45
8.10.3 Call Transferred to Voice Mailbox-----	45
8.10.4 Manage Voice Mailbox-----	45
8.10.5 Examples of Prompted Message-----	46

=====

 **Attentions!**

- 1 Keep the unit away from heating appliances and electrical noise generating devices such as motors and televisions, these noise sources can interfere with performance of machine.
- 2 Keep away from AC power source when install the telephone cables.
- 3 Avoid using the same power supply outlet for computers and other office equipments, otherwise, the system operation may be interrupted by the induction noise.
- 4 Unplug during install or remove the expansion boards, and the boards should be installed or removed vertically to avoid short circuit.
- 5 After system is started, if it does not operate properly, please restart it, if it is still works improperly, please contact with your dealer.
- 6 This unit should be kept free of dust, moisture, high temperature and vibration, and should not be exposed to direct sunlight.
- 7 Never attempt to insert wires, pins, etc. into the vents or holes of unit.
- 8 Do not use benzine, thinner, or the like, or any abrasive powder to clean the cabinet, wipe it with a soft cloth.
- 9 Machine have built-in lightning arrester, but if user equip external arrester for machine can enhance anti-lightning ability.

Chapter 1: Brief Introduction

1.1 Models Introduction

😊 Thank you for use our products, this manual is used for following models, please check purchased model first in order programming and operating are corresponding.

No	Model	Structure	CO lines	Extensions	Current Model (Purchased)
1	TC-2000AC	Fixed	2 / 3 / 4	8 / 16 / 24 / 32	
2	TC-2000HC	Expandable	2 / 4 / 6	4/8/12/16/20/24/28/32	
3	TC-2000BC	Expandable	8 / 12 / 16	16/24/32/40/48 ...128	
4	TC-2000VC	Expandable	8 / 16	32 / 40 / 48 / 56 / 64	
5	TC-2000DC	Expandable	8 / 12 / 16	16/24/32/40/48 ...128	
6	TC-2000AK	Fixed	3 / 4	8 / 16	
7	TC-2000HK	Expandable	2 / 4 / 6	4/8/12/16/20/24/28/32	
8	TC-2000VK	Expandable	8 / 16	32 / 40 / 48 / 56 / 64	
9	TC-2000DK	Expandable	8 / 12 / 16	16/24/32/40/48 ...128	
10	TC-2000T	Expandable	8 / 12 / 16	16/24/32/40/48 ...240	
11	TC-308ACV	Fixed	3	8	
12	TC-416ACV	Fixed	4	16	
13	TC-416AKV	Fixed	4	16	



1. Only model TC-2000AK / HK / VK / DK / AKV are support our Key Telephone, also allows support normal telephone, please refer instruction 8.8 and manual of Keyphone for more details. Other models only support normal telephone.
2. Only model TC-308AK is support door bell and gate lock function, please refer instruction 8.9.
3. Only model TC-308ACV / 416ACV / 416AKV are support Voice Mailbox function, please refer instruction 8.10.
4. All of models are support our PC Business Management software, please install supplied software and refer its HELP file for more details.
5. Please read this manual carefully, we have noted for some instructions which is different.

Chapter 1: Brief Introduction

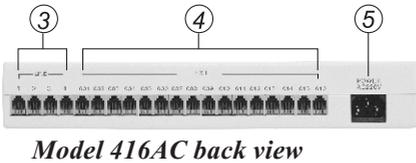
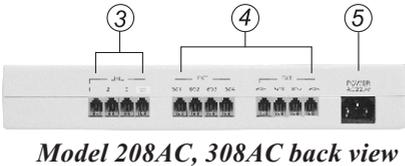
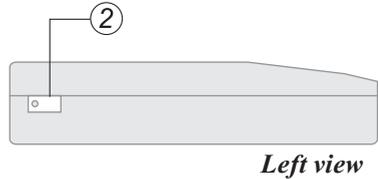
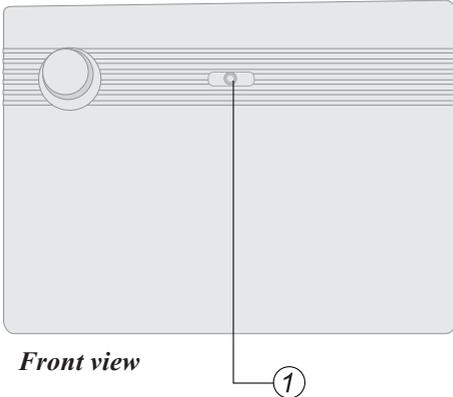
1.2 Technical Index

No	Names	Specifications
1	Communicate Channel	* Model: TC-2000AC / HC / AK / HK / ACV / AKV: 7 channels * Model: TC-2000T / BC / VC / DC / DK / VK : 15 channels
2	Transmission Attributes	* Extension to extension $\leq 1.5\text{dB}$ * Extension to trunk line $\leq 2.0\text{dB}$
3	Ringling current	* Model: TC-2000AC / AK / ACV / AKV: Ac65v / 50Hz * Model: TC-2000BC / HC / VC / DC: Ac65v / 25Hz TC-2000HK / VK / DK : Ac65v / 25Hz TC-2000T: Ac 95v / 25Hz
4	Degree of Unbalance about earth	* 300Hz ~ 600Hz $\leq 40\text{dB}$ * 600Hz ~ 3400Hz $\leq 46\text{dB}$
5	Dial mode	DTMF
6	Signal tone	* CO line: Tone from local telecom office; * Internal dial tone: 450Hz, continuous sine wave; * Internal ringback tone: 450Hz, sine wave, 1s on / 4s off; * Internal busy tone: 450Hz, sine wave, 0.3s on / 0.3s off; * Internal confirmation tone: 450Hz, sine wave, 1s on; * Internal error tone: 450Hz, sine wave, 0.3s on / 0.3s off.
7	Caller ID	* Receive: Auto adapt DTMF, FSK (Bell .202) * Send: FSK (Bell. 202)
8	Power supply	* Model: TC-2000AC / AK / ACV / AKV: AC220V $\pm 10\%$ /12W. * Model: TC-2000HC / HK: AC80V~260V / 35W. * Model: TC-2000VC /DC: AC80V ~ 260V/ 60W. TC-2000 VK / DK: AC80V ~ 260V/ 60W * Model: TC-2000BC: Normal Power: AC220V $\pm 10\%$ /30W Use Power Switch: AC80V~260V / 30W(optional) * Model: TC-2000T: Normal Power: AC220V $\pm 10\%$ /90W Use Power Switch: AC80V~260V / 90W(optional)
9	Backup battery	* Model: HC/HK/DC/DK are support internal battery, VC/VK are support external battery. * Model: TC-2000HC / HK battery: 6V / 4.5AH * 1pcs, charge current $\leq 1\text{A}$. * Model: TC-2000BC/VC/DC/VK/DK battery : 12V/7AH * 4pcs, charge current $\leq 200\text{mA}$. * Model: TC-2000T: * 12V/7AH, charge current $\leq 200\text{mA}$ Backup battery is optional for TC-2000BC/TC-2000T

Chapter 1: Brief Introduction

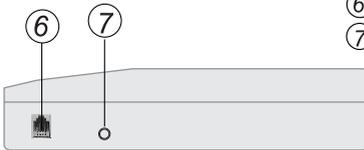
1.3 Structure and Names

1.3.1 TC-2000AC



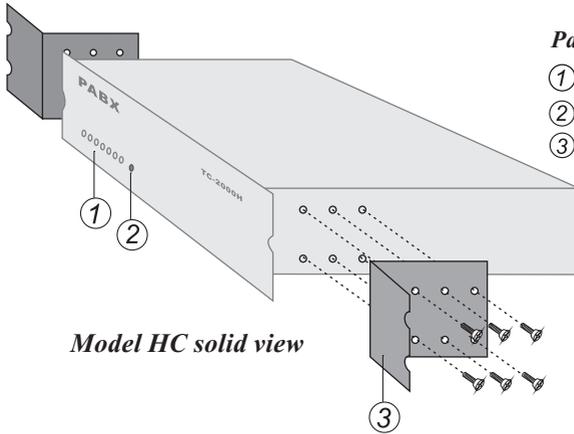
Part Names:

- ① LED
- ② Power switch
- ③ CO line jack
- ④ Extension jack
- ⑤ Power socket
- ⑥ Rj11 for connect with PC COM port
- ⑦ External music inputted port



Right view

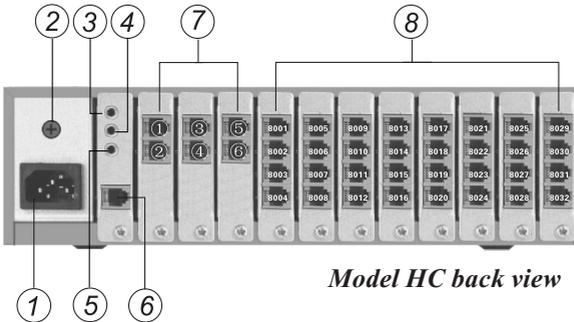
1.3.2 TC-2000HC



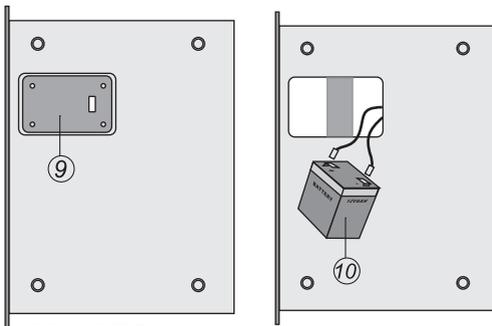
Model HC solid view

Part Names:

- ① LED
- ② Power switch
- ③ Rack mount panel (option)



Model HC back view

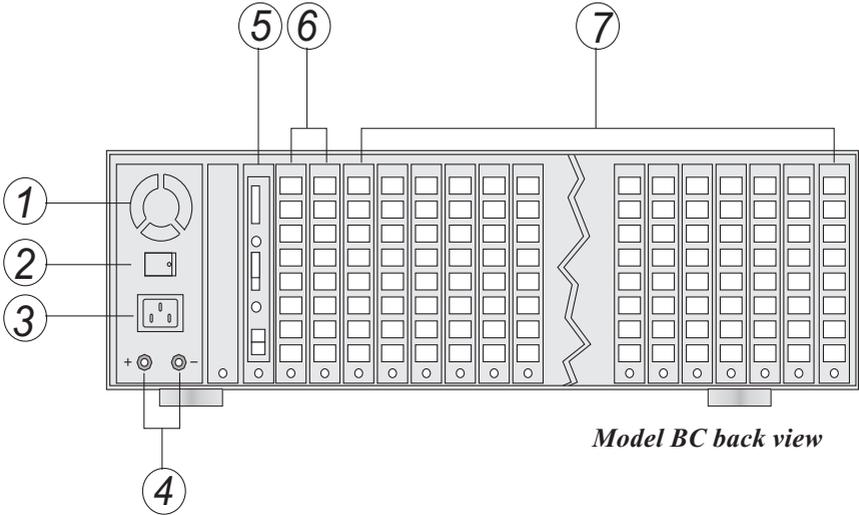


Model HC bottom view

Part Names:

- ① Power socket
- ② Power fuse
- ③ Connect PC record software
- ④ Broadcast signal output port
- ⑤ External music jack
- ⑥ Rj11 for connect with PC COM port
- ⑦ CO line card slot
- ⑧ Extension line card slot
- ⑨ Backup battery box
- ⑩ Backup battery (option)

1.3.3 TC-2000BC

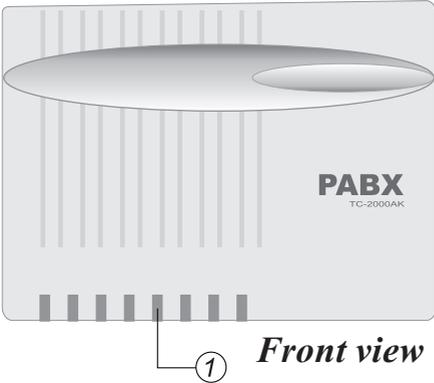


Model BC back view

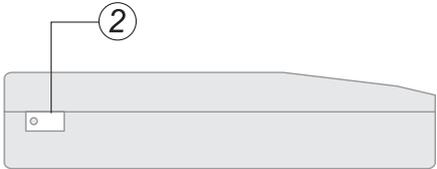
Part Names:

- ① Heat dissipation
- ② Power switch
- ③ Power socket
- ④ Connect point for backup battery
- ⑤ Tone card
- ⑥ CO line card slot
- ⑦ Extension card slot

1.3.4 TC-2000AK



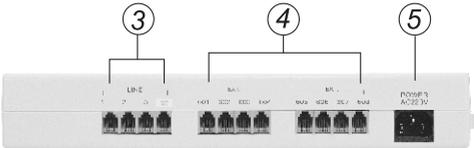
Front view



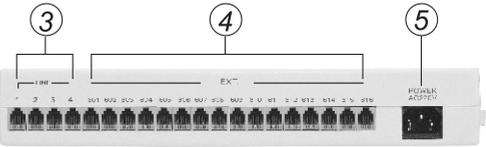
Left view

Part Names:

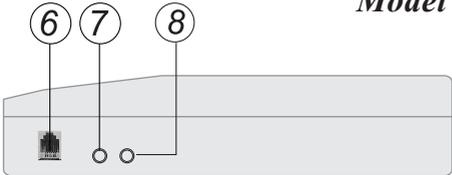
- ① LED
- ② Power switch
- ③ CO line ports
- ④ Extension ports
- ⑤ Power socket
- ⑥ Rj11, for connect with PC
- ⑦ Monitor voice record port
- ⑧ External music inputted port



Model 308AK back view



Model 416AK back view

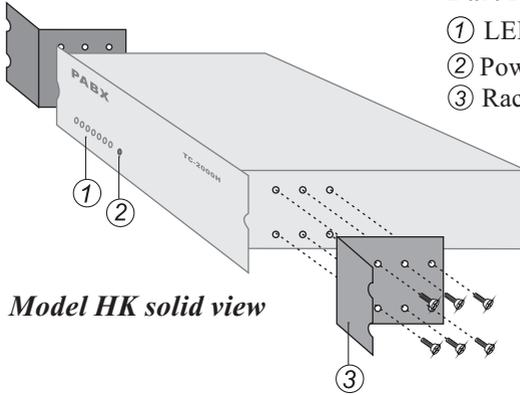


Right view

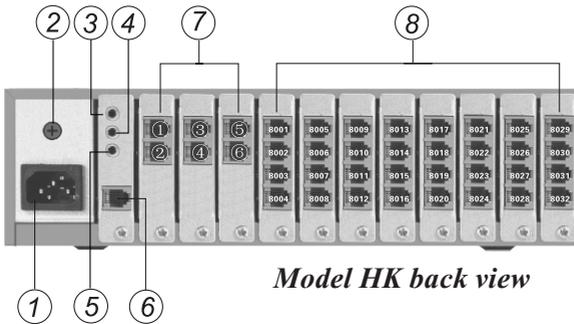
1.3.5 TC-2000HK

Part Names:

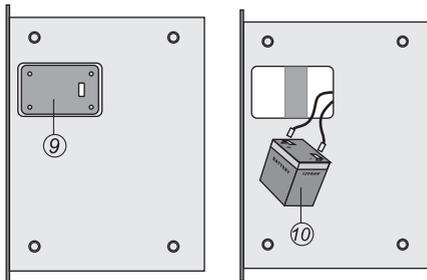
- ① LED
- ② Power switch
- ③ Rack mount panel (optional)



Model HK solid view



Model HK back view



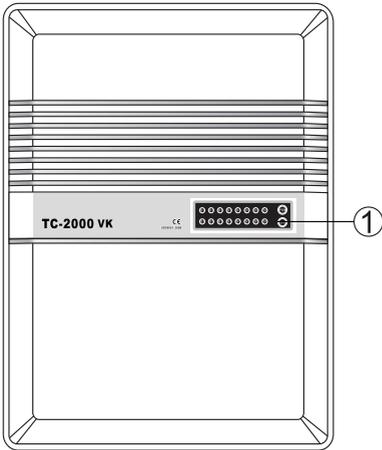
Model HK bottom view

Part Names:

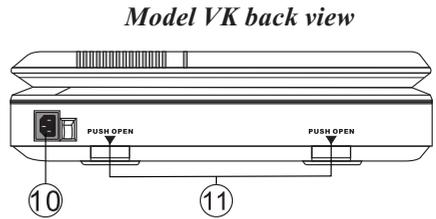
- ① Power socket
- ② Power fuse
- ③ PC voice record port
- ④ Broadcast signal output port
- ⑤ External music input port
- ⑥ Rj11, for connect computer
- ⑦ CO line card
- ⑧ Extension line card
- ⑨ Backup battery box
- ⑩ Backup battery (optional)

Chapter 1: Brief Introduction

1.3.6 TC-2000VK

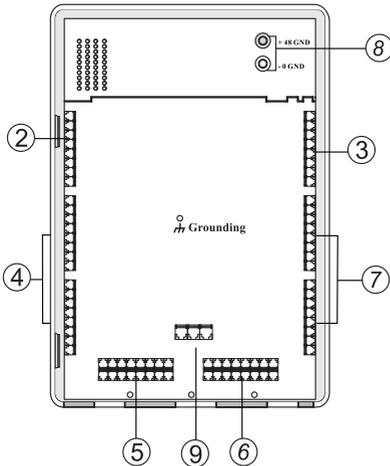


Model VK front view



Model VK back view

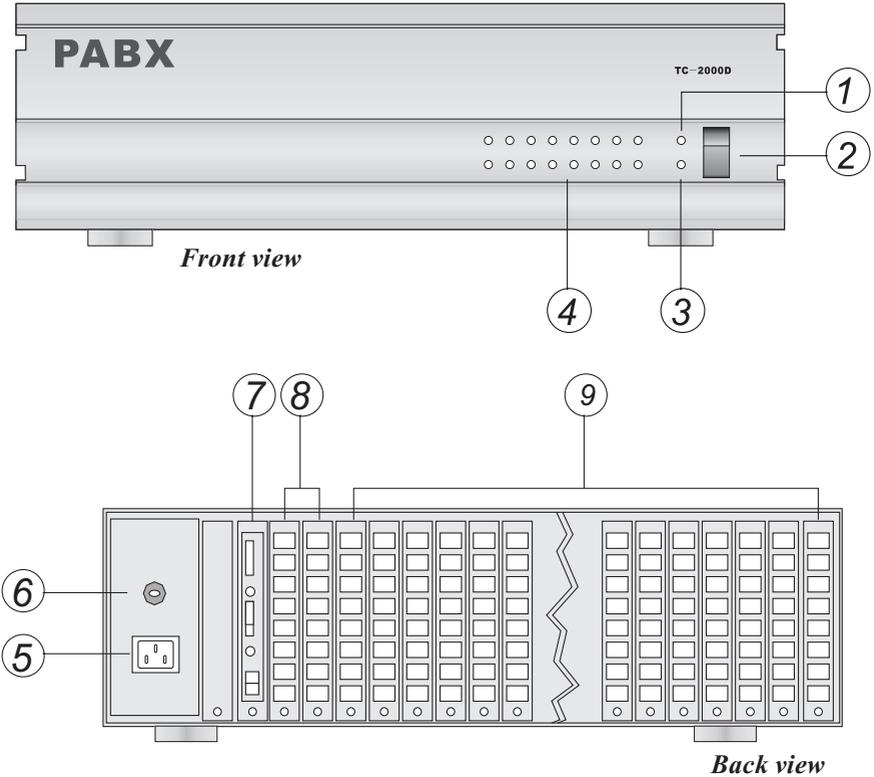
Model VK Internal View



Part Names:

- ① LED
- ② CO line jack
- ③ CO line jack
- ④ Extension jack
- ⑤ Extension jack
- ⑥ Extension jack
- ⑦ Extension jack
- ⑧ Battery interface
- ⑨ PC COM, Record, Broadcast
- ⑩ Power socket and switch
- ⑪ Cover opened button

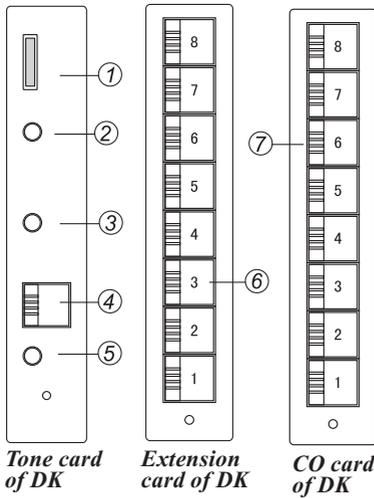
1.3.7 TC-2000DK



Part Names:

- ① Power LED
- ② Power Switch
- ③ CPU LED
- ④ CO lines LED
- ⑤ Power socket
- ⑥ Fuse (2A)
- ⑦ Tone card
- ⑧ CO line card
- ⑨ Extension line card
- ⑩ Power board
- ⑪ Battery box (optional)
- ⑫ Card slot

Chapter 1: Brief Introduction

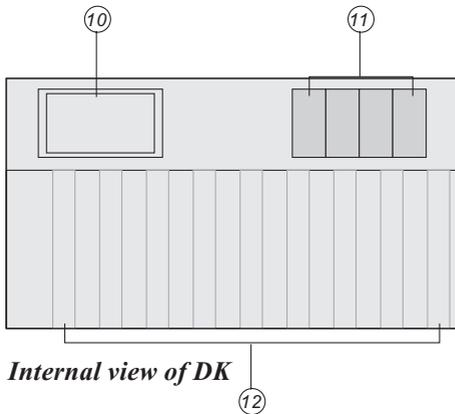
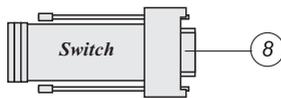


Part Names:

- ① Holding music volume
- ② External music input jack
- ③ Broadcast, tone output jack
- ④ Rj11 for connect PC, also for connect voice recorder
- ⑤ PC record software jack
- ⑥ Extension Card:
from the bottom up:
No.1 card: extension 01 to 08
No.2 card: extension 09 to 16
thus, by analogy.
- ⑦ CO line Card:
from the bottom up:
No.1 card: CO line 01 to 08
No.2 card: CO line 09 to 16
- ⑧ Switch
(exchange Rj11 to Db9, for PC)

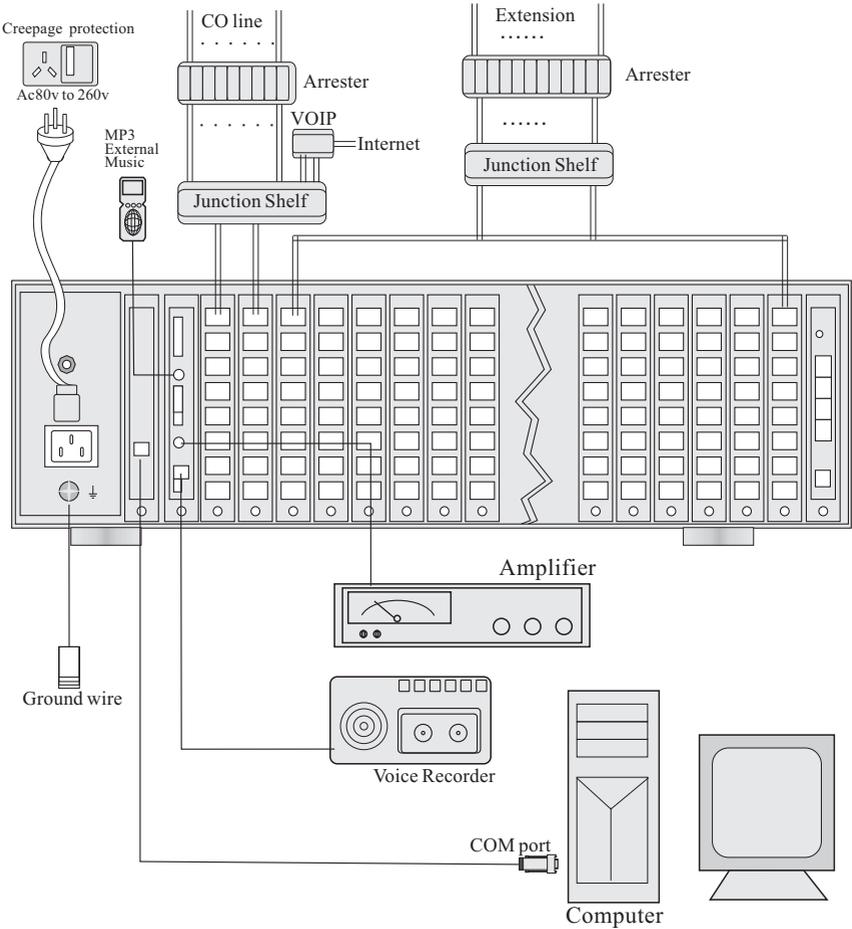


CPU and some IC are located in base (slot) board.



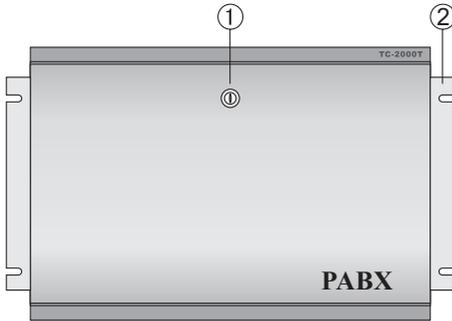
Chapter 1: Brief Introduction

1.3.8 Main Unit Installation & Connection (as example of DK)

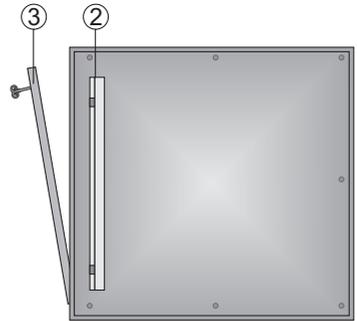


1. The connection way of other models are almost as same as DK, please refer above chart when connecting.
2. We recommend equip arrester for CO lines and Extensions.
3. Keep away from AC power source when install the telephone cables.
4. Avoid using the same power supply outlet for computers, telexs, and other office equipment. Otherwise, the system operation may be interrupted by the induction noise.
5. Unplug the system during install or remove the expansion boards, and the boards should be install or remove vertically to avoid short circuit.
6. After starting the system, if the system does not operate properly, restart the system. If the system still does not operate properly, please contact with our agent or dealer.

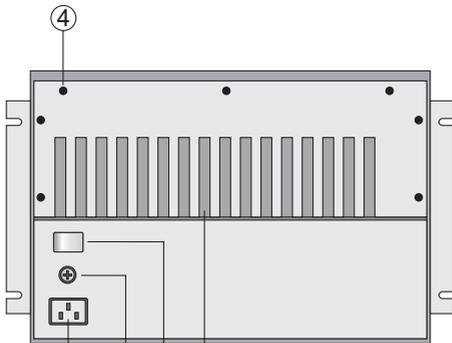
1.3.9 TC-2000T



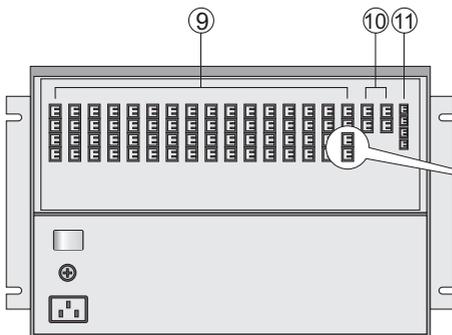
Front (outside view) of TC-2000T



Side view



Back (outside view) of TC-2000T

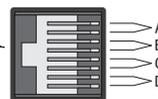


Back (inside view) of TC-2000T

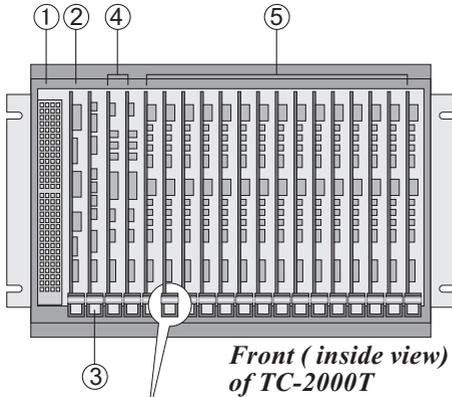
Part Names:

- ① Front panel lock
- ② Rack mounted panel
- ③ Front panel
- ④ Screw
- ⑤ Power socket
- ⑥ Fuse (2A)
- ⑦ Power switch
- ⑧ Line outlet
- ⑨ Extension line jacks
- ⑩ C.O line jacks
- ⑪ **Jacks from the top down:**
 - * External music source,
 - * PC voice record,
 - * Broadcast output,
 - * PC COM port

RJ 45 Jack Explanation:



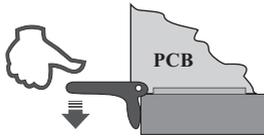
RJ45 jack has eight pins inside which can be divided into four groups from the top down (refer A, B, C, D in above picture), namely join two pins as one C.O or Extension line.



Draw PCB:



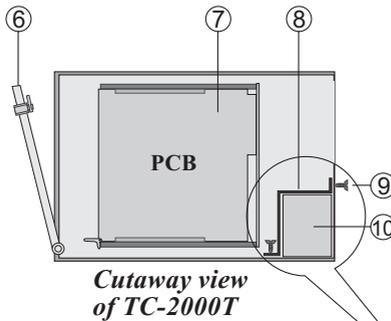
1. Unscrew



2. Press fastener

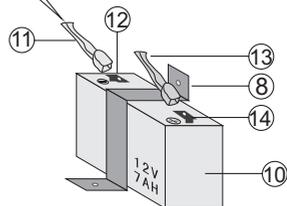
Part Names:

- ① Power switch board
(not available for version A machine)
- ② CPU board
- ③ Audio board
- ④ C.O line board
- ⑤ Extension board
- ⑥ Front panel
- ⑦ Internal PCB
- ⑧ Battery fastened belt
- ⑨ Screw for fix belt
- ⑩ Backup battery (12V/7AH)
- ⑪ Cathode wire (blue)
- ⑫ Cathode (-)
- ⑬ Anode wire (red)
- ⑭ Anode (+)



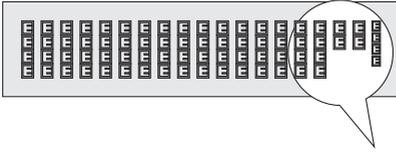
Battery Installation:

1. Unscrew;
 2. Unfasten belt;
 3. Place battery in right position;
 4. Fasten belt;
 5. Connect wire (cathode / anode) accord with its point.
- ⑪ is connected with ⑫
⑬ is connected with ⑭

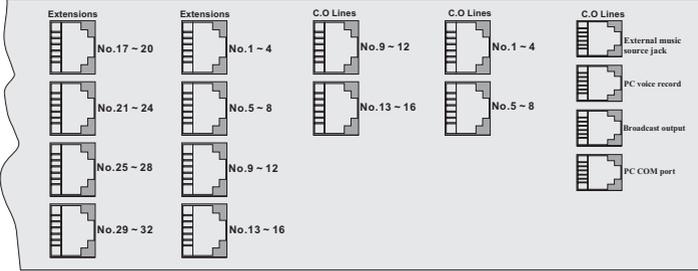




PCB Introduction of TC-2000T:



The order of C.O line or Extension jack is from the top down, from light to left, please refer following picture.

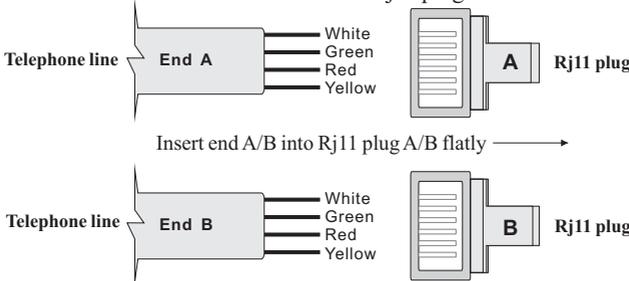


1.4 PC Connecting Line Explanation

One jack in the Audio board is for PC COM port connecting, we have supplied one switch and one 10 meters telephone line for PC COM port connection, in case need longer line, please make it by yourself.



Take one ordinary 4pin telephone line which should not over 100 meters, observe color order of cable and orientation of the Rj11 plug.



Making Steps:

1. Get rid of protect skin of both ends (refer end A/B) of telephone line to expose its 4 wires.
2. Unknit its wires, the color order is Yellow, Red, Green and White.
3. Take two Rj11 plugs, insert end A/B of telephone line into Rj11 plug A/B.
4. Make sure the telephone line has been inserted well, impact it by plier.

2.1 Unlock System Password

Format: * * 01 ABCD #

ABCD = System password (Default is 1234)

Description: Password is required for entering the system programming mode.

Example: Unlock system by password before system program:

Operating: Lifts extension 8001 → Input * * 01 1234 # → Hear [System unlocked is successful, you can start operating] → Start programming.



1. System programming can only be performed by extension 8001.
2. Required Telephone Set: DTMF dial mode.
3. Start with * key, and end with # key, no need to hangup 8001 while programming, otherwise you need to unlock system again by password to start next programming.
Allows use * key to re-program if any error occur during programming, need not hangup.
4. System will inform user setting is whether successful or failed.
5. **Herein after, all programming is after unlock system by password.**

2.2 Change System Password

Format : * 02 ABCD #

ABCD = System new password.

Example: Change password to 5678.

Operating: Lifts extension 8001 → Input 1234 → Input * 02 5678 #;



Suggest administrator change system password before using, please contact with service center of supplier in case forget password.

3.1 Internal Call

Allows an extension user to make a call to another extension.

Format 1: **ABCD** (When extension is at non-direct access CO line mode)

Format 2: ***ABCD** (When extension is at direct access CO line mode)

ABCD = Extension number

Example 1: Non-direct outgoing mode extension 8008 calls extension 8065.

Operating: Lifts 8008 (hear internal dialing tone) → Input 8065

Example 2: Direct outgoing mode extension 8011 calls extension 8083.

Operating: Lifts 8011 (hear external dialing tone) → Input * 8083



1. Ringback tone (1s:4s) is sent indicates call made successfully.
2. Internal call is free charge.
3. Internal dialing tone is more reedy than external dialing tone.

3.2 Internal Call Transfer (Between Extensions)

Format : **Tap hook-switch + ABCD**

ABCD = Extension number

Description: Allows an extension user transfer an internal call to another extension.

Example: Extension 8002 is making internal talk with extension 8036, 8002 wants to transfer call to 8015.

Operating: 8002 is talking with 8036 → 8002 taps hook-switch quickly
→ input 8015 → 8015 is ringing, 8036 is listening ring back tone
→ 8015 off hook can talk with 8002, meanwhile, 8036 is keep listening ring back tone → 8002 hung up, 8015 get through to 8036.



1. Tap hook-switch time should not over the assigned flash time, otherwise, the line will be disconnected.
2. After user A has inputted extension number of C while C is busy, A will hear busy tone before reconnect with B.
However, will have following cases when extension C is free:
 - a). C is ringing, A does not hang up, when C lifts handset can get through to A, whoever A or C hang up, the remain party will connect with B;
 - b). C is ringing, A does not hang up, when C lifts handset can get through to A, here if B hang up, A and C will hear busy tone;
 - c). C is ringing, A hung up, when C lifts handset can get through to B;
 - d). C is ringing, B hung up, A will hear busy tone, C will stop ringing.



When use keyphone allows press target extension's DSS button directly to transfer incoming call to that extension, for the extensions which hasn't DSS button user can press **Transfer** button first and then input target extension number.

3.3 Conference (Internal 3-party)

Format : **Tap hook-switch + * + ABCD**

ABCD = Extension number

Description: During an internal call any one of user can add one more extension to build internal 3-party conference by tap hook-switch and * ABCD (ABCD is additional extension number).



During an internal call between A and B, if A want to add extension C for internal conference, extension B should not on-hook while transferring otherwise internal call will failed.

3.4 Ringback Automatically When the Called Extension Becomes Free

Format: **Tap hook-switch + ## 00**

Description: Allows assign send callback ringing to notify an extension user automatically, when the ever called extension becomes available.

Example: You called extension 8008 while it is busy.

Operating: Lift your handset → input 8008 (hear busy tone) → tap hook-switch input ## 00 → hang up.

Your phone will ring once 8008 becomes free → lift your handset, 8008 will ring, then off hook → internal call is established

3.5 Call Operator

Format : **Dial 9 or 0**

Description: Any extension can call operator by 9 or 0.



1. Default setting is dial 9 for operator, user can change 9 to 0 (refer 3.6).
2. This system supports two operators (refer 7.1), when extension dial 9 (or 0), the call will go to No.1 operator when it is free, otherwise, call will be forwarded to No.2 operator automatically. When both of them are busy, the call will be failure.
3. The direct-outgoing mode extension must to dial * 9 (or * 0).

3.6 Access CO Line Code & Access Operator Code Assignment

Format: * 0408 MN #

M = Access CO Line Code
(Default is M = 0)

N = Access Operator Code

When M = N means disable code which used for access operator.

Description: System default setting is access CO line by 0 and 9 for operator, if input format * 0408 00# can disable 9 for operator, moreover, user can change it to access CO line by 9 and 0 for operator by format *04 08 9 0 #.

4.1 Outside (CO) Line Connection Assignment

Description: Assigns which CO line(s) is connected to the system or not.

4.1.1 CO Line Connection for No.1 CO Line Card

Format : * 31 ABCDEFGH #

ABCDEFGH = CO line jack need to be connected

Example: Connect CO lines with jack 1,2,3,4,5 of No.1 CO line card.

Input format * 31 12345 # can enable CO line 1,2,3,4,5.



1. This programming is effective for No.1 CO line card of models: TC-2000T / VK / DK / BC / VC / DC.
2. User can disable all CO lines of NO.1 card by format * 31 #.
3. Above settings are also used for models: TC-2000AK / HK / AC / HC / AKV / ACV.

4.1.2 CO Line Connection for No.2 CO Line Card

Format : * 32 ABCDEFGH #

ABCDEFGH = CO line jack need to be connected

Example: Connect CO lines with jack 1,2,3,4,5 of No.2 CO line card.

Input format * 32 12345 # can enable CO line 9,10, 11, 12, 13.



1. This programming is effective for No.2 CO line card of models: TC-2000T / VK / DK / BC / VC / DC.
2. CO line jack 1~8 of No.2 CO line card whose CO lines are 9~16;
3. When extension user make external call it will enter CO line according to priority. e.g. the first call will enter line1 priority, meanwhile, the second call will enter line 2 in case it is free. We had better connect CO lines used for receive incoming call frequently with after jacks because anterior lines are occupied by outgoing calls often.
4. Please input format * 32 # when the second CO line card hasn't installed or none of lines in card, and required to input * 3 # when both line cards haven't installed or none of lines in card which can also program PABX as intercom.

4.2 Access Outside (CO) Line Operating

Description: Extension user can make external call by any one of following methods from 4.2.1 to 4.2.5, related setting is from 4.3.1 to 4.3.4.

4.2.1 Access CO Line by Dial 0 or 9

Example: Non-direct outgoing mode extension 8008 makes external call.

Operating: Lifts extension 8008 → Press 0 → Input phone number.



1. Except model TC-2000BC, others are support **Redial** function no matter at direct-access or at press 0 (or 9) access mode.
2. Related setting please refer 4.3.2.

4.2.2 Access CO Line Directly

Example: Direct outgoing mode extension 8008 makes external call.

Operating: Lifts extension 8008 → Input phone number, then will enter CO line if has free line.



Related setting please refer 4.3.2.

4.2.3 Access Preferred CO Line

Format : # MN

MN = CO line port number = 01 ~16

Example: Extension 8008 wants to make external call via CO line 3.

Operating: Lifts extension 8008 → Input #03 → Input phone number.



1. When need to use * or # key to program functions supplied from telecom provider, please access certain CO line by #MN before programming to avoid conflict with format from PABX system.
2. User will hear busy tone when the selected CO line is busy.
3. Model: TC-2000AC/ HC / BC /AK / HK / AKV /ACV can select CO line by input # M, example, select CO 3 by input # 3 which is the same as press # 03.

4.2.4 Personal Speed Dialing

Format : ## MN

MN = Speed dialing number = 01 ~80

Description: Allows an extension user to store up to 80 speed dialing numbers (01 through 80) with a maximum of 24 digits per number.

e.g. 01 = 008675786692066, 02 = 008675786692033.

01, 02 are speed dialing number, dial # #01 can call related number.

Example: Extension 8008 wants to call phone number 008675786692066 whose speed dialing number is 12.

Operating: Lifts extension 8008 → Input # # 12



1. Model TC-2000BC doesn't support this function.
2. All extension can use this function after authorized extension assign speed dialing number for phone number.
3. This function would be abnormal in case parameter of local C.O line is not compatible with this system.
4. Related setting please refer 4.3.3.

4.2.5 Access CO Line by Outward Code (Least Cost Route)

Example: Non-direct outgoing mode extension 8008 make external call via VOIP line whose outward code is 3.

Operating: Lifts extension 8008 → Press 3 → Input phone number.



1. User must input * before outward code when his extension is at direct outgoing mode.
2. Related setting please refer 4.3.1.

4.3 Related Settings

4.3.1 Outward Code Assignment (Least Cost Route)

Format : * 97 1 A MN # (Assign Second outward code)

* 97 2 A MN # (Assign Third outward code)

A = Outward code = 1 ~8

MN = CO line jack number = 01~16

Description: Allows extension user make outside calls by input outward code to enter special CO line (least cost route) which suits for place whose CO lines are supplied by different telecom providers.

Example: Total have 12 CO lines, 7 ordinary lines whose CO line jack are 1 to 7, 5 VOIP lines whose CO line jack are 8 to 12, input format * 97 1 3 08 # means dial 3 will auto-search VOIP lines from CO line jack 8.



1. The extension number whose beginning number if same as outward code will be invalid.
2. System will enter free normal line priority when extension user dial 0 or 9 before input phone number, however, the call will be failure when all normal lines are busy, here user can try to use outward code to make external call via those special lines which within his group and system will auto-search free line from these special lines.
3. User can cancel assigned outward code by following format:
* 9 71 # (Cancel Second Outward Code)
* 97 2 # (Cancel Third Outward Code)
4. Related operating please refer 4.2.5.

4.3.2 Direct / Non-Direct Access CO Line Assignment

Format 1: * 82 ABCD N #

ABCD = Extension number

N = 0 = Non-direct access CO line mode

N = 1 = Access CO line directly

Format 2 : * 8 00 # (Assign non-direct access CO line mode for all extensions)

Format 3 : * 8 10 # (Assign all extensions access CO line directly)

Description: **When N = 0**, extension will be at intercom state as soon as off-hook, user can input extension number directly to make internal call, but he must dial 0 (or dial 9 or outward code) to get external dial tone before input phone number when he needs to make external call.

When N = 1, extension will enter free CO line as soon as off-hook and user can input phone number directly.

However, this extension will be at internal dialing mode when all CO lines are busy, user can input extension number directly if he want to make internal call at this time, otherwise, he must input * before extension number at normal condition.



1. Suggest assign N = 1 (access CO line directly) for extensions which make external calls frequently.
2. Related operating please refer 4.2.1 / 4.2.2.

4.3.3 Assign Speed Dialing Number for Phone Number

Format : # ** MN abcdefgh #

MN = Speed dialing number = 01 ~80

abcdefgh = Phone number (maximum of 24 digits)

Description: Allows authorized extension add or change speed dialing numbers which can be shared with all extension users.

Example: Extension 8003 wants to assign phone number 008675786692066 whose speed dialing number is 12.

Operating: Lifts extension 8003 → Input # * * 1 2 008675786692066 #



1. Model TC-2000BC doesn't support this function.

2. The last setting will replace previous assigned number.

3. User can cancel certain speed dialing number and its phone number by format # ** MN # .

4. Assign which extension is permitted assigning speed dialing number for phone number by following program:

Format : * 4 0 ABCD N #

ABCD = Extension number

N = 0 = Forbid

N = 1 = Permit

5. Related operating please refer 4.2.4.

4.3.4 IP Code of CO Line

Format 1: * 34 MN ABCDEF # (For certain CO line)

Format 2: * 35 ABCDEF # (For all CO lines)

MN = CO line jack number = 01 ~ 16

ABCDEF is IP code (Less 6 digits)

Description: Assigns IP code for CO line to meet place whose CO lines from different telecom providers which can increase efficiency and reduce cost. The assigned IP code will be automatic dialing when user input long distance phone number.

Example: Assign IP code is 17909 for CO line 1, and code 193 for CO line 2.

Operating: Input * 34 01 17909 # → * 34 02 193 # ;



Allows **cancel** IP code of CO line by following format:

* 34 MN # (For certain CO line)

* 35 # (For all CO lines)

5.1 Personal Account

5.1.1 Personal Account Assignment

Format 1: * 86 MN A # (For certain account)

Format 2: * 86 A # (For all accounts)

MN = account = 01~99 (total 99 accounts)

A = 0 = Disable account

A = 1 = Enable account

Description: Enable or disable make outgoing call by any extension after enter an assigned account to override restrictions but charge will be under individual account which meets demand of independent accounting.

5.1.2 Change Password of Certain Account

Format: # * # MN abcd * ABCD #

MN = account

abcd = original password

ABCD = new password

Description: User can change password by this program on any extension by himself, however, he has to ask administrator for help to restore password to default setting 1234 in case forget password.

Operating: Lifts extension 8001 → Input * 86 MN 0 # → Input * 86 MN 1 #

5.1.3 Make External Call by Personal Account

Format: # * # MN abcd #

MN = account

abcd = password of account (default is 1234)

Description: Allows use any extension to make outgoing call by this format.



Model TC-2000DK doesn't support above functions (5.1.1~5.1.3).

5.2 Executive Busy Override (EBO)

Format 1: * 4 9 ABCD N #

ABCD = Extension number

N = 0 = Forbid extension use EBO function

N = 1 = Permit extension use EBO function

Description: Assign which extension user is permitted use EBO function, the authorized user can interpose a busy line by following method.

Format 2: # * 0 MN

MN = CO line jack number = 01 ~16

Description: Authorized user (superior) can interpose a busy line.

Example: Extension 8003 wants to interpose line 4 even it is busy.

Operating: Lifts 8003 → Input # * 0 04 → Access line 4 after two seconds.



This superior can monitor line 4 and he can interpose if necessary, however, we are irresponsible for any result from use this function.

5.3 Monitoring and Recording Function

5.3.1 CO Line is Monitor Recorded (Permit / Forbid)

Format 1: * 46 MN A # (For certain CO line)

Format 2: * 46 A # (For all CO lines)

MN = CO line jack number = 01 ~ 16

A = 0 = Forbid

A = 1 = Permit

Description: Assign whether monitor record certain CO line.

Calls which through this permitted line will be recorded.

Example: Permit monitoring and Recording CO line 03 and 12.

Operating: Input * 46 03 1 # → 12 1 #

5.3.2 Extension is Monitor Recorded (Permit / Forbid)

Format 1: * 45 ABCD M # (For certain extension)

Format 2: * 45 A # (For all extensions)

ABCD = Extension number

M = 0 = Forbid

M = 1 = Permit

Description: Assign whether monitor record certain extension.

Calls which through this permitted extension will be recorded.

Example: Permit monitoring and Recording extension 8013 and 8126.

Operating: Input * 45 8013 1 # → 8126 1 # ;



1. Model TC-208AC / 308AC / 308ACV don't support above functions.
2. These functions are ineffective for internal call.
3. Only one CO line (or one extension) can be monitored and recorded at the same time.
4. Should use our **PC Voice Record Software** for recording.
5. We are irresponsible for any result from use this function.

5.4 Extension is Permitted Use Certain CO Line Only

Format : * 41 MN ABCD #

MN = CO line jack number = 01 ~ 16

ABCD = Extension number

Description: The assigned extension is permitted use only designated CO line to make external call.

Example: Input * 41 04 8013 # can assign extension 8013 is permitted use only CO line 4.



1. Any incoming call can be transferred to this assigned extension, and this extension user can pick up any incoming call.
2. This extension can have only one CO line to make external call.
3. The last setting will replace the previous one
4. Following are **cancelling formats:**

* 43 ABCD # (For certain extension)

* 43 # (For all extensions)

5.5 Exclusive CO Line of Superior Extension

Format : * 42 MN ABCD #

MN = CO line jack number = 01 ~ 16

ABCD = Superior's extension number

Description: The superior has exclusive CO line which is forbidden used by normal extension users, moreover, this superior can use other CO lines also.

Each exclusive line can be shared by up to four superior extensions.

Example: Input * 42 13 8008 # can assign CO line13 as exclusive line for superior whose extension is 8008.

Input * 44 13 # can cancel above setting.



Following are **cancelling formats**:

* 44 MN # (For certain CO line)

* 44 # (For all CO lines)

5.6 Extension and CO Line Groupings

5.6.1 Extension Groupings

Format 1: * 47 ABCD G # (Distribute certain extension to a Group)

Format 2: * 47 G # (Distribute all extensions to a Group)

ABCD = Extension number

G = Group number = 0~9

Example: Distribute extensions 8006/8007/8008 to group 1, 8009/8010 to group 2.

Operating: Input * 47 8006 1 # → 8007 1 # → 8008 1 # → 8009 2 # → 8010 2 #



1. Different groups can share same extension by * 47 ABCD G1 G2 #.
2. **Input format * 47 0 # can clear old settings.**
3. Allows continue inputting same parameters behind *47, but need to input * to start a new setting in case has wrong programming.
4. Members in different group can make internal call with each other, but they can only use CO line in their group. (refer 5.7)
5. Call can be transferred between different group, but **Call Pickup** code is different (refer 6.1.2).
6. Factory default setting, G = 0.

5.6.2 CO Line Groupings

Format 1: * 48 MN G # (Distribute certain CO line to a Group)

Format 2: * 48 G # (Distribute all CO lines to a Group)

MN = CO line jack number = 01 ~ 16

G = Group number = 0~9

Example: Distribute CO line 08/ 09/10/11 to group 2.

Operating: Input * 48 08 2 # → 09 2 # → 10 2 # → 11 2 #



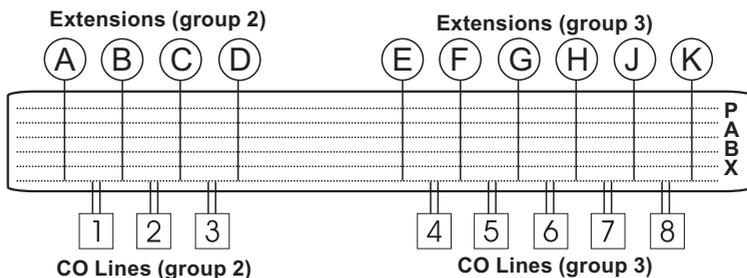
1. **Input format * 48 0 # can clear previous setting.**
2. Factory default setting, G = 0.

5.7 Application of Function 5.4 / 5.5 / 5.6.

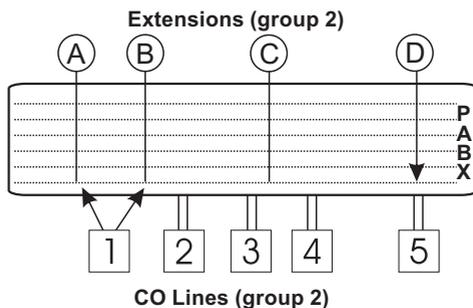
Example 1: Group 2 whose extensions are A/B/C/D and CO lines are 1/2/3 which mean extensions A/B/C/D are permitted use only lines 1/2/3 to make external call.

Group 3 whose extensions are E/F/G/H/I/J/K and CO lines are 4/5/6/7/8 which mean extensions E/F/G/H/I/J/K are permitted use only lines 4/5/6/7/8 to make external call.

Members in different group can make internal call with each other or transfer call .



Example 2: Group 2 whose extensions are A/B/C/D and CO lines are 1/2/3 /4/5. CO line 1 is exclusive line of extension A and B, extension D is permitted use only CO line 5 to make external call.



5.8 Front Digits of Phone Number Management

5.8.1 Forbidden Phone Number

Format : * 57 G ABCD #

G = Group = 1~ 6

ABCD = Front digits of forbidden phone number

Description: Phone numbers with these front digits are forbidden.

Example: Assign front digits 0/168 to group 1 (G=1), and 13/9 to group 2 (G=2).

Operating: Input * 57 1 0 # → 168 # → * 57 2 13 # → 9 #

5.8.2 Permitted Phone Number

Format : * 57 G ABCD #

G = Group = 7 ~ 9

ABCD = Front digits of permitted phone number

Description: Only permit dial phone numbers with these front digits.

Example: Assign front digits 0757 / 010 to group 7 (G =7), and 200 to group 8.

Operating: Input * 57 7 0757 # → 010 # → * 57 8 200 #;



Each group can have up to twenty pieces front digits and maximum of four digits for each piece.

5.8.3 Clear Group of Front Digits

Format : * 57 G #

G = Group = 1 ~ 9

5.9 Extension Class Assignment

5.9.1 Class Assignment for Certain Extension

Format 1: * 51 ABCD M # (First class)

Format 2: * 52 ABCD M # (Second class)

ABCD = Extension number

M=0=Permitted to make internal call only

M=1 ~ 6=Phone numbers with front digits in group 1 to 6 are forbidden.(5.8.1)

M=7 ~ 9=Permit to call phone numbers with front digits in group 7 to 9 only.(5.8.2)

M= 91=Call operator as soon as off-hook, no need any dialing.

M= 92=Permit to call phone numbers in memory only (refer 4.2.4 / 4.3.3)

Example 1: Assign M=2 for the **first class** of extension 8011, and M=3 for 8016, then extension 8011(or 8016) is not allowed to make calls whose front digits in group 2 (or 3) which has been assigned by above 5.8.1.

Operating: Input * 51 8011 2 # → 8016 3 #;

Example 2: Assign M=7 for the **second class** of extension 8035, and M=8 for 8118, then extension 8035 (or 8118) is permitted to make calls whose front digits in group 7 (or 8) only which has been assigned by above 5.8.2.

Operating: Input * 52 8035 7# → 8118 8 #;

5.9.2 Class Assignment for All Extensions

Format : * 54 M # (First class)

* 55 M # (Second class)

M is the same as 5.9.1.

Example 1: Assign M=3 for the first class of all extensions.

Operating: Input * 54 3 #

Example 2: Assign M=1 for extensions 8008 / 8012, M=7 for 8015 / 8016/ 8018, M=2 for others.

Operating: Input * 54 2 # → * 518008 1 # → * 518012 1 # → * 518015 7 #
→ 8016 7 # → 8018 7 #.



We can do assignment for the most extensions first, see *54 2# in above example 2.

5.9.3 Cancelling Class Assignment

Format 1: * 53 ABCD # (For certain extension)

Format 2: * 53 # (For all extensions)

ABCD = Extension number.

Example: Cancelling class assignment of extension 8015.

Operating: Input * 53 8015 #;

5.10 Application of Function 5.8 and 5.9.

Example: Assign front-digits 0 / 168/ 13 to group 2;

Assign front-digits 9500 / 193 to group 3;

Assign front-digits 0757 / 020/ 010 to group 7;

Assign front-digits 133 / 130 to group 8;

Various combination examples as follow:

- A. First class of extension A is M=2, second class is not set, which means user A is not allowed to make calls whose front digits are 0 / 168 / 13.
- B. First class of extension B is M=2, second class is M=3, which means user B is not allowed to make calls whose front digits are 0 / 168 / 13 / 9500 / 193.
- C. First class of extension C is M=7, second class is not set, which means user C is permitted make calls whose front digits are 0757 / 020/ 010 only.
- D. First class of extension D is M=7, second class is M=8, which means user D is permitted make calls whose front digits are 0757 / 020/ 010 / 133 / 130 only.



When first class of extension A is M=2, then its second class is not allowed use M=7, namely both classes either M=1~6 or M=7~9.

5.11 External Call is Time-limited

Format 1: * 91 ABCD MN # (For certain extension)

Format 2: * 93 MN # (For all extensions)

ABCD = Extension number

MN = Limit time = 01 ~ 60 minutes

Description: The line will be disconnected automatically when time is up which is only effective for external call.

Example: Assign time limit is 5 minutes for extension 8012, and 13 minutes for extension 8016.

Operating: Input * 91 8012 05 # → 8016 13 #



1. Input time by two digits, *example*, 1 minute is denoted as 01.
2. System will inform user by BEEP sounds at 15 seconds intervals in the last 60 seconds.
3. Following program for cancelling time limit.

Format 1: * 92 ABCD # (For certain extension)

Format 2: * 93 # (For all extensions)

6.1 Answer Incoming Call

6.1.1 By Ringing Extension

Description: Extension user can answer the phone by lifts ringing extension which pre-assigned for operator attendant mode purpose, however, none of extension will ring at auto-attendant mode until caller input extension number or dial related number to access operator.

6.1.2 By Non-Ringing Extension (Call Pick Up)

Format 1 : # 7 (Effective for extensions in the same group)

Format 2: # 9 (Effective for any extensions)

Description: User can answer the phone which ringing at other extension by # 7 if extensions are in the same group, however, user should use # 9 to answer the phone if extensions are in different group.

Example: Extension A and B are in different group ringing at the same time, extension C can answer the phone ringing at A by # 7 when C and A are in the same group; however, C will get the call ringing at B first when input # 9 if extension jack of B is in front of A, otherwise, C will get the call ringing at A first.



Model TC-2000AK / HK / DK / VK / AKV are support key telephone whose extension LED will be twinkling (0.8s:0.8s) when has incoming call, user also can press its DSS button to pick up this call.

6.2 Incoming Call Transferring

Format : Tap hook-switch + ABCD

ABCD = Extension number

Description: Extension A answered an incoming call and he is transferring it to extension B by tap hook-switch and input extension number of B, communication between A and B is established as soon as B lifts handset, however, A will get back to caller in case B is busy.

Caller is listening music while transferring, whoever A or B is hangup the remain party will get through caller.

Different conditions would happen when extension B is free:

Condition 1: A doesn't hangup, B answer the phone within 25 seconds can build internal call with A, whoever A or B is hangup the remain party will get through to caller.

Condition 2: A doesn't hangup, B doesn't answer the phone within 25 seconds, A will get back to caller.

Condition 3: A hangup, B answer the phone within 25 seconds can get through to caller.

Condition 4: A hangup, B will stop ringing if he doesn't answer the phone within 25 seconds, then A start ringing if it is free, otherwise, the operator extension will ring. Either A or operator answer the phone within 25 seconds can get through to caller, otherwise, line will be disconnected.



When use keyphone user can press target DSS button directly to transfer incoming call to that extension, for the extensions which hasn't DSS button user can press **Transfer** button first and then input extension number.

6.3 3-Party Conference (1 CO & 2 Extensions)

Format : **Tap hook-switch + * + ABCD**

ABCD = Extension number

Description: When an extension is on the phone with external party he can add one more extension on the same line by tap hook-switch then input * ABCD (ABCD is additional extension number).



When use keyphone user must press **Transfer** button first, then input * ABCD.

6.4 Flash Time

Format 1: *** 83 ABCD #**

ABCD = Flash time = 500ms to 2000ms

Description: Flash Time is duration between on-hook and re-off-hook, if user doesn't off-hook when flash time is up will be regarded as hangup; if user off-hook within flash time will be regarded user is ready to transfer call (**refer 6.2**).

Example: Flash Time is 1200ms, if user doesn't off-hook after 1200ms will be regarded as hangup; if user off-hook after 1200ms will be regarded ready to make call; if user off-hook within 1200ms will be regarded ready to transfer call.



760ms is popular flash time.

6.5 Call on Holding

Format: **Tap hookswitch + # # #**

Description: When extension is on the phone with external party he can put this call is on holding up to 4 minutes by tap hookswitch and input # # #, then he can do any other operating, when he input # # # again can retake holding call, also allows other extension user retake this call by # # #*.



This function is disable for TC-2000AK / HK / VK / DK / AKV models when they are using normal telephone, but user can realize this function by keyphone.

6.6 Busy Transferred

Format: # * 1 ABCD

ABCD = Entrusted extension number

Description: Extension user can input # * 1 ABCD on his phone to assign calls are transferred to entrusted extension automatically when his phone is busy.

Allows serial transferring up to ten extensions, it is say, the entrusted extension can entrust other extension to answer incoming call when it is busy, and so on.



1. The last setting will replace previous one.
2. User can also assign this function by keyphone that's more convenient.
3. Cancelling by # * 1 00.

6.7 Unconditional Transferred

Format: # * 2 ABCD

ABCD = Entrusted extension number

Description: Extension user can input # * 2 ABCD on his phone to assign calls are transferred to entrusted extension automatically at any time.



1. The last setting will replace previous one.
2. User can also assign this function by keyphone that's more convenient.
3. Cancelling by # * 2 00.

6.8 Call Transferred to Secretary

Format: # * 6 ABCD

ABCD = Secretary's extension number

Description: Superior can input # * 6 ABCD on his phone to assign calls are transferred to secretary automatically, but calls can be transferred to superior after filtrated by secretary.



1. The last setting will replace previous one.
2. Only allows secretary call superior directly.
3. Support up to eight extensions use this function at the same time.
4. Have following cancelling programs:

Format 1: # * 6 00

Description: Cancelling by input # * 600 on superior's extension.

Format 2: * 98 ABCD # (For certain extension)

Format 3: * 98 # (For all extensions)

Description: Allows batch program by extension 8001.

6.9 Do Not Disturb (DND)

Format: # * 71

Description: User can input # * 71 on his phone to assign his extension doesn't ring no matter any call is received and it will send busy tone to caller at that time, however, user can make calls as normal.



1. Input # * 70 on user's extension can cancel DND assignment.
2. User can also assign this function by keyphone that's more convenient.

6.10 Extension Ring by Turns

Format : * 13 MN ABCD #

MN = CO line = 01 ~ 16

ABCD = Extension number

Description: Allows assign up to eight extensions ring by turns when has incoming call is received on CO line, system will search free extension from next one automatically when the extension is busy, while caller has to wait in case all extensions are busy.

Please clear old setting by * 11 MN # before programming 6.10.

Example: Assign extensions 8002 / 8003 / 8004/ 8005 ring by turns when has incoming call is on CO line 03.

Operating: Input * 11 03 # → * 13 03 8002 # → * 13 03 8003 # → * 13 03 8004 #
→ * 13 03 8005 #

Note: for TC-2000T PABX, the ringing extension should be selected from 8001~8128 (port 001 to port 128)

6.11 Assign Fax Extension for Receive Fax Automatically

Format: * 27 ABCD #

ABCD = Extension number of fax machine

Description: Assign fax machine as one extension, fax from outside can be transferred to fax extension automatically in case has fax is access on CO line at auto-attendant mode



1. When fax extension is at **Auto-Receive** mode, external caller can send fax either press Start button on his fax machine or input fax extension number before press Start.
When fax machine is at **Manual-Receive** mode, external caller must to input fax extension number before press Start.
2. This function is only effective at auto-attendant mode.
3. **Input * 27 # can cancel receive fax automatically, then fax machine will be at manual-receive mode.**

6.12 External Caller Reaches Extension by One-Touch Dialing (at DISA mode)

6.12.1 One-Touch Dialing Assignment (Permitted / Forbidden)

Format 1: * 29 M #

M=0= One touch dialing is forbidden

M=1= Permit one touch dialing and extension ring by turns in a group.

M=2= Permit one touch dialing and all extensions in a group are ringing at the same time. (*Only model TC-2000T is support M=2*)

Description: External caller will hear outgoing message when system is at auto-attendant mode (DISA).

Example, a greet message is play: "This is A company, for the sales department press 1; service department press2; or input extension number directly".

When caller input 1 extensions of sales department will ring by turns, (or ringing at the same time when M=2 for model TC-2000T).



Required assign extension numbers for numeric button 1~9 by following program 6.12.2 before programming 6.12.1.

6.12.2 Assign Extension Numbers for a Numeric Button

Format : * 150 N ABCD #

N = Numeric button = 1 ~ 9

ABCD = Extension number

Description: Allows assign up to eight extension numbers for a numeric buttons, each button is regarded as an extension group, caller can reaches extension in each group by dial digits 1~9.

Example: Assign sales department extensions 8002 / 8003/8004 /8005 are belonged to button 1, when caller dial 1 will go to these extensions.

Operating: Input * 150 1 8002 # → * 150 1 8003 # → * 150 1 8004 #
→ * 150 1 8005 #



1. Extension number in each numeric button can be same.
2. When One-touch Dialing function is permitted, the assigned numeric button digit is not allowed use as beginning number of extension, otherwise, that extension number will be invalid.
3. **Suggest input * 140N # clear old setting before programming 6.12.2.**

7.1 Attendant Extensions Assignment

Format 1: * 25 ABCD # (Attendant1, default setting is extension 8002)

Format 2: * 26 ABCD # (Attendant2, default setting is extension 8003)

ABCD = Extension number

Description: Allows assign up to two extensions as attendant extensions for service at **auto-attendant mode**, when external caller dial 0, call will go to attendant 1, and it will be auto-transferred to attendant 2 when the 1 is busy, however, system will send suggestive message to caller when both are busy, if they have been assigned busy transferred function call will be transferred to entrusted extension automatically when they are busy.

No matter at auto-attendant or operator attendant mode, when extension caller dial 9, call will go to attendant 1, and it will be auto-transferred to attendant 2 when attendant1 is busy, however, system will send busy tone to caller when both are busy.

7.2 Ring Extensions Assignment For Operator Attendant Service

7.2.1 Ringing Extensions of Certain CO Line

Format : * 12 MN ABCD #

MN = CO line jack number = 01 ~ 16

ABCD = Ringing extension number

Description: Assign which extensions will ring when has incoming call via certain CO line.

Example: Assign extensions 8003 and 8013 will ring when has incoming call on CO line 2.

Operating: Input * 12 02 8003 # → * 12 02 8013 #



1. Allows assign up to eight extensions are ringing at the same time for each CO line, **please input * 11 MN # to clear current setting before programming 7.2.1.**
2. Ringing extension can be selected from jack NO.001 to 128 only.
3. Please refer two batch processing ways (7.2.3 / 7.2.4).

7.2.2 Clear Ringing Extensions of Certain CO Lines

Format : * 11 MN #

MN = CO line jack number = 01 ~ 16

Example: Clear ringing extensions of CO line 3 and 15.

Operating: Input * 11 03 # → * 11 15 #



1. Input number by two digits 01~16, example, CO 3 is denoted as 03.
2. Please don't forget assign ringing extensions by programming **7.2.1** after old setting was cleared, otherwise, none of extension ring when has incoming calls.

7.2.3 Assign Parameters of CO Line (MN) the Same as CO Line (AB)

Format : * 16 AB MN #

AB = CO line jack number = 01~16 (Parameter has been programmed)

MN = CO line jack number = 01~16

7.2.4 Assign Parameters of All CO Lines the Same as CO Line MN

Format : * 17 MN #

MN = CO line jack number = 01~16 (Parameter has been programmed)

7.3 Answering Mode Assignment

7.3.1 Operator Answering Mode

Format 1 : * 21 # (All CO lines at Operator Answering mode)

Format 2 : * 21 MN # (Certain CO lines at Operator Answering mode)

Description: Operator lifts ringing extension can answer incoming call.



When need to assign some CO lines at operator answering mode, we can assign all CO lines at auto-attendant mode first by * 20 #, then assign operator answering mode for certain CO lines by *21 MN #.

7.3.2 Auto-Attendant Answering Mode

Format 1 : * 20 # (All CO lines at Auto-attendant Answering mode)

Format 2 : * 20 MN # (Certain CO lines at Auto-attendant Answering mode)

Description: External caller will hear outgoing message (OGM) when he enter line which is at auto-attendant service mode, none of extension ring until he input extension number or call operator.



When need to assign some CO lines at auto-attendant answering mode, we can assign all CO lines at operator answering mode first by *21#, then assign auto-attendant mode for certain CO lines by * 20 MN #.

7.4 Outgoing Message (OGM) For Auto-Attendant Service

7.4.1 OGM Recording

Format : * 22 N #

N = 1 = OGM 1 = 30seconds

N = 2 = OGM 2 = 15 seconds

N = 3 = OGM 3 = 15 seconds

Description: Allows record up to three pieces OGM for auto-attendant service.

Following examples of OGM which is played in different conditions:

OGM 1: "This is A company, for the sales division, press 8003; for the service division, press 8006; for fax, press 8008; to call operator, press 0".

OGM 2: "Sorry the extension you dialed is busy, please dial another extension or dial 0 for operator (or dial 9 to leave a message)".

OGM 3: "Sorry the extension you dialed is not answering, please dial another extension, or dial 0 for the operator (or dial 9 to leave a message)".



1. Recording by high quality handset in quiet environment can get better timbre, A beep tone indicates user can start recording and the last recording will replace the old one.
2. Has pre-recorded message OGM 2 and OGM 3, user can override them if he wants to record by himself, however, original message cannot be restored as soon as it is overridden.
3. Model ACV and AKV are supportVoice Mail function which allows caller leave a message (refer 8.10).

7.4.2 Listen Recorded Message

Format : * 23 N #

N = 1 = Listen OGM 1

N = 2 = Listen OGM 2

N = 3 = Listen OGM 3

Description: Allows to play back recorded message to verify its performance.

7.5 Service Mode Changed Assignment

7.5.1 Time Service Mode Changed

Format : * 87 AB CD EF GH M # (Period 1)

* 88 AB CD EF GH M # (Period 2)

AB CD = Start time

EF GH = End time

M = 1 = Auto-attendant mode

M = 0 = Operator attendant mode

Example: Assign system is at operator service mode in 8:30am ~ 12:00am and 13:30pm ~ 17:30pm, other times at auto-attendant service mode.

Operating: Input *87 08 30 12 00 0 # → * 88 13 30 17 30 0 #



1. Input time by two digits, example 8:00 am is denoted as 08.
2. Here attendant extension is as same as pre-assigned (**refer 7.1**)
3. Please ensure system time is correct in order time service changing is works normal (refer 8.4).
4. System attendant mode will be restored to old setting by following cancelling program:
* **87 # (Cancel Period 1)**
* **88 # (Cancel Period 2)**

7.5.2 Day Service Mode Changed

Format : * **89 1 A M # (Day 1)**

* **89 2 A M # (Day 2)**

A = Day = Monday to Sunday = 1 to 7

M = 1 = Auto-attendant service

M = 0 = Operator service

Example: Assign system is at auto-attendant mode on Saturday and Sunday, other days at operator service mode.

Operating: Input * 89 1 6 1 # → * 89 2 7 1 #



1. Allows combine function of **7.5.1** and **7.5.2** in practice, *example:*
Saturday and Sunday: Auto-attendant service mode.
Monday to Friday: Operator service mode in 8:00am ~12:00am and 13:30pm ~17:30 pm, other times at auto-attendant service mode.
2. System service mode will be restored to old setting by following cancelling program:
* **89 1 # (Cancel Day 1)**
* **89 2 # (Cancel Day 2)**

7.5.3 Cancel All Settings of Service Mode Changed

Format : * **89 3 #**



This program will cancel programming of **7.5.1** and **7.5.2**, then system service mode will be restored to old setting.

7.6 Extension Number Management

7.6.1 Define Four Digits for All Extension Numbers

Format : * **7 2 00 #**

Description: When user needs to change all extension numbers to four digits, he can make two or three digits extension numbers invalid and only reserve four digits by this program, then assign new extension numbers to 4 digits by programming of four digits extension numbers by programming **7.6.5**.

7.6.2 Extension Number Length Assignment

Format 1 : * 72 A M #

A = Beginning number of extension number = 1 ~ 8

M = Extension length (digits) = 2,3,4

Description: Needed to define length of extension number before assign extension numbers.

Example: Assign two digits for extension number of beginning 3, and three digits for extension number of beginning 6.

Operating: Input * 72 3 2 # → * 72 6 3 #

Format 2 : * 74 A M # (Batch Change Extension Number and Its Length)

A = Beginning number of extension number = 1 ~ 8

M = Extension length (digits) = 2 / 3 / 4

Example: Change length to three digits for extension number of beginning 8, have following operatings for reference:

Operating A: Use format * 72 8 3 # to assign three digits for extension number of beginning 8 first, then use format * 7 ABC abcd # to change extension number one by one, this is the slowest operating way, we recommend use batch processing way to increase efficiency as following:

Operating B: Use format * 72 8 3# to assign three digits for extension number of beginning 8 first, then input format * 74 8 3 # can change extension number from 8001 to 801, 8002 to 8028099 to 899, 8100 to 100, 8101 to 101 automatically.



1. All extension numbers are four digits at factory setting.
2. Different extension numbers can have same length.
3. Use 9 as beginning number is unallowable as it used for call operator.

7.6.3 Restore All Extension Numbers

Format : * 7 000 #

Description: Restore all extension numbers to factory setting 8001 ~8240.

7.6.4 Clear All Extension Numbers

Format : * 71 00 #

7.6.5 Extension Number Assignment

Format 1 : * 7 ABC abcd #

ABC = Extension jack number = 001 ~ 240

abcd = Extension new number

Description: Allows change extension number for certain jack.

Example: Change extension number to 638 for jack 004 / to 33 for jack 015 / to 8168 for jack 109.

Operating: Input * 7 004 638 # → * 015 33 # → 109 8168 #

Format 2 : * 7 3 AB # (**Batch Change Beginning Number A Into B**)

A = Beginning number of extension number = 1 ~ 8

B = Beginning number of extension number = 1 ~ 8

Example: Change beginning number from 8 to 6 for all extension number, following operations for reference:

Operating A: Use format * 7 ABC abcd # to change number one by one, this is the slowest operating way, we recommend use batch processing way to increase efficiency as following:

Operating B: Use format * 73 8 6 # change beginning number 8 into 6 automatically.



1. Please clear all extension numbers by programming **7.6.4** first to avoid new extension number is conflict with the old one because same extension number is unallowable .
2. Extension number can be assigned from 10 ~ 8999 freely, but 0, 9 or outward code as beginning number are unallowable.
3. Needs to use extension jack number when change extension number, user can know extension jack number by programming **7.9**.

7.7 Extension Password Management

7.7.1 Extension Password Assignment

Format: # * 5 abcd ABCD

abcd = current password

ABCD = new password



Default password is 1234 suggest change password before using.

7.7.2 Restore Extension Password to Factory Setting

Format 1: * 94 ABCD # (**For certain extension**)

Format 2: * 94 # (**For all extensions**)

ABCD = Extension number

Example: Extension 8027 user is forget his password, but the password can be restored to 1234 with the help of administrator.

Operating: Input * 94 8027 #



Restore password with the help of administrator by extension 8001.

7.7.3 Lock Extension by Password

Format: # * 3 ABCD

ABCD = Extension password

Description: User can lock extension by input this format on his phone.

7.7.4 Unlock Extension Password

Format: # * 4 ABCD

ABCD = Extension password

Description: User can unlock extension by input this format on his phone.

7.8 Factory Settings (Default)

Format : * 6 000 #

Description: All data can be restored to factory setting except followings:

1. Outside line connection assignment (CO parameters).
2. Extension number parameters.
3. Call bill memory.

Some factory settings for your reference as following:

<i>No</i>	<i>Function</i>	<i>Default Setting</i>
<i>1</i>	Service mode	Operator attendant
<i>2</i>	Ringing extensions	8001 / 8002 / 8003 / 8004
<i>3</i>	Attendant extensions for auto-attendant	8002 / 8003
<i>4</i>	Access CO line mode	Dial 0 or select CO line
<i>5</i>	Caller ID signal	Adapt with FSK, DTMF
<i>6</i>	Hookswitch flash time	760ms

7.9 Report Extension number and its Port Number

Format: # * 9

Description: System will report extension number and its port number after user input this format on his extension.

8.1 Remote Programming

Format : **Tap hookswitch + # * # ***

Description: Allows an extension user to program a PABX system that is using in different place which can supply a convenient and high-efficiency service for PABX end user.

Example: When you encountered puzzle on system programming, you can solve it with the help of your dealer (*herein after named Service Center*)by their remote programming.

Operating:

1. Call to service center by your extension 8001.
2. Tap hook-switch as soon as call is get through to service center, they are listening music while you hear internal dial tone.
3. Input # * # * on your phone can restore talk with service center.
4. Technician who in service center can program your PABX by his phone according your necessary.
5. Please hangup your extension 8001 after complete setting.



1. You must to call service center by your extension 8001.
2. When your call is get through to service center, technician can start program for your machine need not input system password.
3. Also allows technician call you, just need to transfer his call to your extension 8001 can start remote programming.

8.2 Broadcasting

Format: **# *8**

Description: User can broadcast by input # *8 on his extension.



1. Except models TC-2000AC / AK / ACV /AKV, others are support broadcasting function.
2. Allows any extension to make broadcasting by this function.
3. Broadcasting output electricity level is 200mVrms/impedance:1K.
4. Required connect external amplifier with broadcast output jack.

8.3 Verify External Inputted Music

Format : *** 24 #**

Description: User can verify external inputted music performance.



1. Has a volume switch can adjust holding music, sometimes mute is caused by the volume is adjusted to minimum.
2. Verifying just for reference, real timber should be verified in practise.

8.4 Change System Time

Format 1: * 95 1 YY MM DD W # (Change Year,Date, Week)

Format 2: * 95 2 HH NN # (Change Hour, Minute)

YY = Year MM = Month

DD = Date W = Week = Monday ~ Sunday = 1 ~ 7

HH = Hour NN = Minute

Description: In order call bill memory of system can store bills normally even computer is closed, please adjust system time properly.

Example: Assign system time is at 15:20pm on Aug 13, 2006 (Sunday).

Operating: Input * 95 1 06 08 13 7 # → * 95 2 15 20 #



1. Denotes date and time by two digits, *example:* June is denoted as 06.
2. Use 24 hours to denote time, *example:* 4:00pm is denoted as 16.
3. Monday to Saturday is denoted as 1 ~ 6, Sunday is denoted as 7.
4. When power failure over 24 hours, time may becomes inaccurate, suggest re-set system time when power is restored.

8.5 Charge Mode for Billing

Format 1: * 85 0 MN # (Delay Detection Charge Mode)

Format 2: * 85 1 # (Polarity Reverse Detection Charge Mode)

MN = Delay duration = 10 seconds to 60 seconds

Description: **Delay Detection Charge Mode:** System will start charge when the time is up even called party is not answer.

Polarity Reverse Detection Charge Mode: System will not charge until called party is answer.



Normally, user needs to apply Polarity Reverse Detection signal from telecom provider first, details please inquire your local provider.

8.6 Billing Memory Cleared

Format 1: * 96 00 #

Description: Allows store up to about 2,500 pieces bills when computer is closed the recorded bill will be transferred to computer automatically as soon as PC Billing Software is running.

Suggest upload bills to computer regularly to avoid memory is full.

Use this program to clear useless bills cause by debugging, bills can not be restored once it is cleared.

8.7 Pulse and Tone Mode Setting

Format : * 28 M #

M = 0 = Tone mode (factory setting)

M = 1 = Pulse mode

Description: User should assign pulse mode for CO line when local signal is pulse.

8.8 Telephone Type Assignment

Format 1 : ###N (Program by user's extension)

N = 0 = Normal telephone

N = 1 = Key telephone

Format 2 : * 84 ABCD N # (Program by extension 8001)

N = 0 = Normal telephone

N = 1 = Key telephone

Format 3 : * 84 # (Assign only use normal phone, program by extension 8001)

Description: **Model TC-2000AK / HK / VK / DK / AKV** whose all extensions are support key telephone which allowed plug and play, however, system cannot detect whether keyphone is changed into normal phone until user input related programming or by following batch changing ways.

Examples: Extension 8008 user can input ###0 on his extension when he wants to change keyphone into normal phone, input ##1 when he wants to change normal phone into keyphone.

Also allows use batch changing way when need to change all phones: example, change all keyphones into normal phones, require disconnect all keyphones first, then install normal phones, and then restart PABX power can make all normal phones workable.

When need to change all normal phones into keyphones, please disconnect all normal phones first, then install keyphones, and then put the adapter of keyphone into the power socket can make all keyphones workable.

8.9 Door Bell and Gate Lock Function

8.9.1 Ringing Extension for Door Bell

Format 1: * 12 04 ABCD #

ABCD = Ringing extension number

Description: Assign which extension is ringing when has door bell call.

Format 2: * 11 04 #

Description: Clear ringing extension for door bell.

Description: **Model TC-308AK** is support door bell and gate lock function which allows extension user answer door bell call by extension, also allows unlock by phone, moreover, any extension user can call door bell.

Example: Assign extension 8007 will ring when a visitor press door bell button.

Operating: Input * 11 04 # clear old settings first → input * 12 04 8007 #

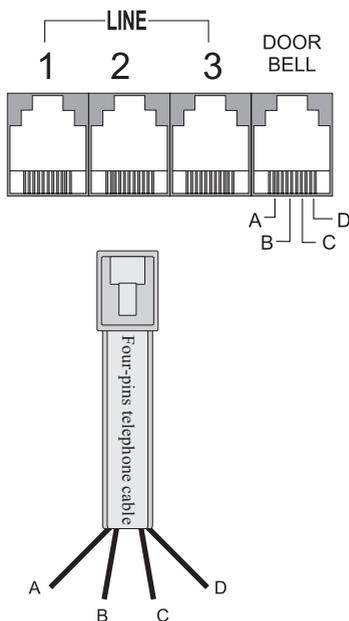
8.9.2 Unlock

Format: Tap hookswitch + # 4

Description: Extension user can unlock by tap hookswitch then input # 4.



1. This function is only available for model TC-308AK.
2. Doorbell must be connected before start PABX power.
3. There has a Door Bell port for connect with door bell and Lock, we supply 4-pins cable, please refer following:



4-pins cable must be connected with Door Bell port, the two sides pins (A & D) is power supply for door opener; the middle two pines (B & C) for door bell.

8.10 Voice Mail Function

Description: Even while you are away from the office, our voice mail function will make sure you never miss a message, you can enter into your mailbox and manage messages by make a call remotely.

Our products provides password-protected mailboxes which has maximum of 4 hours capacity, when caller reaches mailbox, they can hear a prompted voice and then allows leave message.



Only following models are support voice mail function.

TC-308ACV (3 CO lines + 8 Extensions, only support normal phone)

TC-416ACV (4 CO lines + 16 Extensions, only support normal phone)

TC-416AKV (4 CO lines + 16 Extensions, support keyphone or normal phone)

8.10.1 External Caller Leave Message

A) At Operator Attendant Mode

Example 1: When has external call is transferred to an extension user by operator, and operator is keeping off-hook while call is being transferred, if the called extension no answer after 25 seconds, operator will get back to external caller, if caller ask leave message, operator can tap hook-switch and input # **88**, caller will be prompted and he can leave message directly .

Example 2: When has external call is transferred to an extension user by operator, and operator is on-hook while call is being transferred, if the called extension no answer after 25 seconds, operator's extension will ring again, she can get back to external caller by lifts handset, if caller ask leave message, operator can tap hook-switch and input #**88**, caller will be prompted and he can input targeted extension number to leave message.

B) At Auto-Attendant Mode

Example 1: To enable mailbox function, the second outgoing message (OGM) must be recorded as, "Sorry, the called subscriber is busy now, please dial 0 or other extension, dial 9 for leave message", and the third OGM must be "Sorry, the called subscriber is no answer, please dial 0 or other extension, dial 9 for leave message".

Example 2: When has external call is received but called extension is busy or no answer, allows external caller dial 9 to enter voice mailbox to leave message according prompted voice.

8.10.2 Listen New Message

Description: System will send reminding voice to inform extension user has a new message in his mailbox while this user lifts handset, and he can get message according prompted voice at the moment.

8.10.3 Call Transferred to Voice Mailbox

A) Busy Transferred to Voice Mailbox

Format 1: # * 1 # 88 (Assign Busy Transferred to voice mail box)

Format 2: # * 1 00 (Cancel Setting)

B) Unconditional Transferred to Voice Mailbox

Format 1: # * 2 # 88 (Assign Unconditional Transferred to voice mailbox)

Format 2: # * 2 00 (Cancel Setting)

Description: Allows assign incoming call is auto-transferred to voice mailbox when the called extension is busy, also allows assign all calls are transferred to voice mailbox at any time.

8.10.4 Manage Voice Mail Box

A) Management by Extension

Description: Extension user lifts handset, input #88 can start manage voice mailbox according prompting.

B) Management by Outside Line

Description: Allows **user** manage mailbox by outside line even when he is at outside, in following instructions we named this user is **Outside Subscriber**.

At Operator Attendant Mode: Operator answer incoming call from outside subscriber, operator taps hook-switch and input #88 system will send message 'Please input extension number' (here operator can on-hook), and subscriber is required input # 88 # at this time, then another message 'Please input wanted extension number' informs him should input extension number which is for enter management state.

At Auto Attendant Mode: Outside subscriber will hear first message as soon as call is get through, dial 9 system will send message 'Please input extension number' and subscriber is required input # 88 # at this time, then another message 'Please input wanted extension number' informs him should input extension number which is for enter management state.

8.10.5 Examples of Prompted Messages

1. Please leave your message after the tone , after every 60 seconds you will hear another tone, press # to continue leaving a message.
2. Please dial the extension number followed by #.
3. Please dial the Extension number followed by # to manage your mailbox.
4. Please enter the 4 digit Password.
5. You have entered an incorrect password, to try again please press #.
6. You have new messages , to play new messages press #.
7. Please enter the extension number followed by #, to manage this mailbox enter # again.
8. To listen to new messages press 1 ,to listen to saved messages press 2,to skip to the next message press #, to repeat last message press *. To erase the current message press 0, to erase all messages press 99, to change the 4 digit password press 3. Administrator press 9.
9. To listen to messages press 2 ,to skip to the next message press #, to repeat the last message press *, to erase message press 0, to erase all messages press 99, to change the 4 digit password press 3. Administrator press 9 .
10. To change the 4 digit password press 3 , Administrator press 9.
11. There are no new messages please press * to return.
12. There are no messages please press * to return.
13. Your instructions are successful press * to return.
14. Please enter the new 4 digit password.
15. Please enter the new 4 digit password again.
16. Your password has been changed successfully.
17. The password is different to the first entry , press * to enter again.
18. To change the password for the Administrator press 1, to restore the original password press 2, to erase the mailbox messages of an extension press 3, to erase mailbox messages of all extensions press 404, to reset the voicemail system press 505.
19. The Extension 4 digit password has been reset to 1234, please advise the extension user to program a new 4 digit password.
20. Sorry you have entered incorrectly, please press * to enter again.
21. The password is incorrect please enter the Administrator password.
22. Sorry the Voicemail box is full and you are unable to leave a message at the moment.
23. The Voicemail box is full please erase unwanted messages by pressing #
24. Sorry the extension you dialled cannot be connected at the moment please dial 9 to leave a message.



Above prompted message has been pre-record in system, if ask different language message, please contact with your dealer or supplier for further information.

This blank page is just for take notes.

