

PABX

Telephone switch

Model:

■ **TC-208 SP**

Instruction Manual

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Chapter 1: Brief Introduction

1.1 Precautions

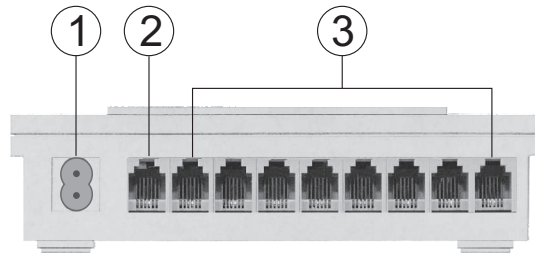
- 1.1.1 Keep the unit away from heating appliances and electrical noise generating devices such as motors and televisions, these noise sources can interfere with performance of machine.
- 1.1.2 Keep away from AC power source when install the telephone cables.
- 1.1.3 Avoid using the same power supply outlet for computers and other office equipments, otherwise, the system operation may be interrupted by the induction noise.
- 1.1.4 All connection (power, CO line, extension)should be good, otherwise, noise or discontinuity would happen.
- 1.1.5 After system is started, if it does not operate properly, please restart it, if it is still works improperly, please contact with your dealer.
- 1.1.6 This unit should be kept free of dust, moisture, high temperature and vibration, and should not be exposed to direct sunlight.
- 1.1.7 Never attempt to insert wires, pins, etc. Into the vents or other holes of this unit.
- 1.1.8 Do not use benzine, thinner, or the like, or any abrasive powder to clean the cabinet. Wipe it with a soft cloth.

1.2 Technical Index

No	Names	Specifications
1	<i>Capacity</i>	CO lines: 1 to 2 Extension: 1 to 8
2	<i>Ringing current</i>	Ac65v / 50Hz.
3	<i>Communicate Channel</i>	7 channels
4	<i>Transmission Attributes</i>	* Extension to extension \leq 1.5dB * Extension to trunk line \leq 2.0dB
5	<i>Feedback current</i>	DC32V/25mA
6	<i>Degree of unbalance about Earth</i>	* 300Hz --- 600Hz \geq 40dB * 600Hz --- 3400Hz \geq 46dB
7	<i>Dial mode</i>	DTMF
8	<i>Signal tone</i>	* 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 busytone: 450Hz, sine wave, 0.3s on / 0.3s off; * Internal error tone: 450Hz, sine wave, 0.3s on / 0.3s off; * Internal confirmation tone: 450Hz, sine wave, 1s on;
9	<i>Caller ID</i>	* Receive / Send: DTMF, FSK (Bell .202) ;
10	<i>Power supply</i>	AC220V \pm 10% /15W The actual voltage is according to label data which upon power socket.
11	<i>Power Failure Transferred</i>	When the power failure extension 801 and CO line 1 still can work normally.

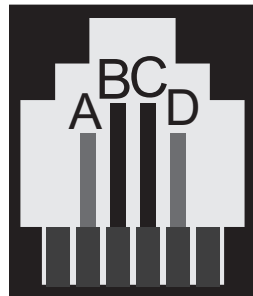
Chapter 1: Brief Introduction

1.3 Names



(Back View)

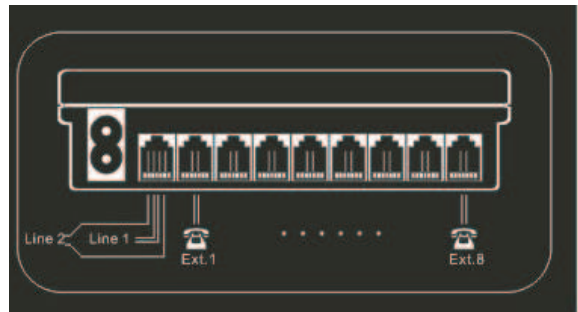
- ① Power supply socket
(The actual voltage is according to label data which upon power socket.)
- ② CO line ports (RJ 11) 01 and 02
(Refer following profile chart)
- ③ Extension ports from 01 to 08



(CO line jack RJ 11 profile chart)

RJ 11 Jack Explanation:

This PABX machine support 2 CO lines which share same jack (refer above②).
RJ 11 jack has four pins inside which can be divided into two groups as CO lines, (refer A, B, C, D in left picture), join pins B & C as CO line 1, join A & D as CO line 2.



Chapter 2: Programming and Operating

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 801 → Input ** 01 1234 # → Hear [System unlocked is successful, you can start operating] → Start programming.



1. **System programming can only be performed by extension 801.**

2. Required Telephone Set: DTMF dial mode.

3. Start with * key, and end with # key, no need to hangup 801 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 801 → Input 1234 → Input * 02 5678 #;



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

2.3 Internal Call

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

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

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

ABC = Extension number

Example 1: Extension 808 is at non-direct access mode, he calls extension 806.

Operating: Lifts 808 (hear internal dialing tone) → Input 806

Example 2: Extension 807 is at direct access mode, he calls extension 808.

Operating: Lifts 807 (hear external dialing tone) → Input * 808.



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.

Chapter 2: Programming and Operating

2.4 Outside (CO) Line Connection Assignment

Format 1: * 3 AB #

Format 2: * 3 # (Use for intercom only)

AB = CO line (1 or 2)

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

Example: Connect CO line 1 and CO line 2.

Input format * 3 12 # can enable CO line 1,2.



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.

2.5 Access Outside (CO) Line Instruction

Allows make external call by any one of following methods 2.5.1~2.5.3.

2.5.1 Access CO Line by Dial 0 or Tap Hookswitch

Example: Extension 808 is at non-direct access mode, he makes external call.

Operating: Lifts extension 808 → Press 0(or tap hookswitch) → Input number.



Related setting please refer 2.5.4.

2.5.2 Access CO Line Directly

Example: Extension 808 is at direct access mode, he makes external call.

Operating: Lifts extension 808 → Input number will enter free CO line.



Related setting please refer 2.5.4.

2.5.3 Access Preferred CO Line

Format 1: # M (At non-direct access CO line mode)

Format 2: * # M (At direct access CO line mode)

M= CO line (1 or 2)

Example: Extension 808 is at non-direct access mode, he wants to make external call via CO line 1.

Operating: Lifts extension 808 → Input #1 → Input phone number.

2.5.4 Direct / Non-Direct Access CO Line Assignment

Format 1: * 8 ABC N #

ABC = Extension number

N = 0 = Non-direct access CO line mode

N = 1 = Access CO line directly

Format 2: * 8 000 # (Disable access CO line directly for all extensions)

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 tap hookswitch to get external dial tone before input phone number when he needs to make external call.

Chapter 2: Programming and Operating

When N = 1, extension will enter free CO line as soon as off-hook and user can input phone number directly, but he must input * ABC when he needs to make internal call.



1. Suggest assign N = 1 (access CO line directly) for extensions which make external calls frequently.
2. When N = 1, extension can redial by REDIAL button.
3. Related operating please refer **2.5.1 / 2.5.2**.

2.6 Ringing Extensions of Certain CO Line (For Operator Attendant Service)

Format : * 1 M ABCD #

M = CO line (1 or 2)

ABCD = Extension port number (1 to 8)

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

Example: Assign extensions 802 will ring when has incoming call on CO line 1, extension 803 and 806 will ring when has incoming calls on CO line 2.

Operating: Input * 1 12 # → * 1 2 36 #



Ringing extensions are 801 to 804 at factory default setting.

2.7 Answer Incoming Call

2.7.1 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.

2.7.2 By Non-Ringing Extension (Call Pick Up)

Formate 1 : # 7 (At non-direct access CO line mode)

Formate 2 : * # 7 (At direct access CO line mode)

Description: User can answer the phone which ringing at other extension.

2.8 Answering Mode Assignment

2.8.1 Operator Answering Mode

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

Description: Operator lifts ringing extension can answer incoming call.

2.8.2 Auto-Attendant Answering Mode

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

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

M = CO line (1 or 2)

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.

Chapter 2: Programming and Operating



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 M #.

2.9 Attendant Extensions Assignment

Format 1: * 25 ABC # (Attendant1, default setting is extension 802)

Format 2: * 26 ABC # (Attendant2, default setting is extension 803)

ABC = Extension number

Description: Allows assign two attendant extensions for service at **auto-attendant mode**, when caller dial 0 call will go to attendant 1, and it will be auto-transferred to attendant 2 when attendant 1 is busy, however, system will search free extension from extension 802 to 808 for answering when both attendant extensions are busy.

2.10 Outgoing Message (OGM) For Auto-Attendant Service

2.10.1 OGM Recording

Format: * 22 #

Description: Allows record up to 15 seconds OGM for auto-attendant service.

Example: "This is A company, for the sales division, press 803; for the service division, press 806; for fax, press 808; to call operator, press 0".

2.10.2 Listen Recorded Message

Format: * 23 #

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



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.

2.11 Call Permission Management

2.11.1 Class Assignment for Certain Extension

Format 1: * 51 ABC M #

ABC = Extension number

M=0=Only call numbers with permitted front digits. (Refer 2.11.4)

M=1=No restriction.

M=2=International call is forbidden (default setting).

M=3=Long distance call is forbidden.

M=4=Not allowed call numbers with front digits in group A. (Refer 2.11.3)

M=5=Not allowed call numbers with front digits in group B. (Refer 2.11.3)

M=6=Only permit to make internal call.

Example 1: Assign extension 803 is not allowed make long distance call, extension 806 is not allowed call numbers with forbidden front digits in group A, extension 807 is only permitted to make internal call.

Operating: Input * 51 803 3 # → 806 4 # → 807 6 #

Chapter 2: Programming and Operating

2.11.2 Class Assignment for All Extensions

Format : * 51 M #

M is the same as 2.11.1

Example : Assign extension 804 and 805 are not allowed to make international call (M=2), others are not allowed to make long distance call (M=3).

Operating: Input * 51 3 # → 804 2 # → 805 2 #



We can use * 51 3 # do assignment for the most extensions first.

2.11.3 Forbidden Phone Number

Format 1: * 52 ABCD # (Group A)

Format 2: * 53 ABCD # (Group B)

Format 3: * 52 # (Cancel Group A)

Format 4: * 53 # (Cancel Group B)

ABCD = Front digits of forbidden phone number

Description: Phone numbers with these front digits are forbidden.

Example: Assign front digits 573/8 to group A.

Operating: Input * 52 573# → 8#

2.11.4 Permitted Phone Number

Format 1: * 54 ABCD #

ABCD = Front digits of permitted phone number

Format 2: * 54 # (Clear permitted front digits)

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

Example: Assign 0757 / 010 as permitted front digits, and extension 803 is only permitted to call numbers with front digits 0757 / 010.

Operating: Input * 54 0757 # → 010 # → *51 803 0#



Allows assign up to ten pieces front digits and maximum of four digits for each piece.

2.11.5 Extension is Permitted Use Certain CO Line Only

Format : * 42 M ABC #

M = CO line (1 or 2)

ABC = Extension number

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

Example: Input * 42 1 803 # can assign extension 803 is permitted use only CO line 1.



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.

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2.11.6 Exclusive CO Line of Superior Extension

Format : * 41 M ABC #

M = CO line (1 or 2)

ABC = Superior's extension number

Description: The superior has exclusive CO line which is forbid used by normal extension users, moreover, this superior can also use other CO lines. Each exclusive line can be shared by up to four superior extensions.

Example: Input * 41 1 808 # can assign CO line 1 as exclusive line for superior whose extension is 808.



1. The last setting will replace the previous one
2. Use format * 3 AB # can cancel settings 2.11.5 and 2.11.6.(refer 2.4)

2.11.7 Executive Busy Override (EBO)

Format : # 9 N

N = CO line (1 or 2)

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

Example: Extension 801 wants to interpose CO line 2 even it is busy.

Operating: Lifts 801 → Input # * 92 → Access line 2 after two seconds.



Only extension 801 is permitted use this function, we are irresponsible for any result from use this function.

2.11.8 External Call is Time-limited

Format 1: * 9 ABC MN # (Assignment for certain extension)

Format 2: * 9 ABC # (Cancel time limited for certain extension)

ABC = Extension number

MN = Limit time = 01 ~ 99 minutes

Description: The line will disconnected automatically when time is up.

Example: Assign time limit is 15 minutes for extension 805

Operating: Input * 9 805 15 #



Only effective for external call.

2.12 Call Transferring Management

2.12.1 Busy Transferred

Format 1: # 0 ABC (Assign busy transferred)

ABC = Entrusted extension number

Format 2: # 0 000 (Cancel busy transferred)

Description: Extension user can input # 0 ABC on his phone to assign calls are transferred to entrusted extension automatically when his phone is busy. Allows serial transferring up to five extensions, it is say, the entrusted extension can entrust other extension to answer incoming call when it is busy.



The new setting will replace the old one.

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2.12.2 Unconditional Transferred

Format: # * ABC

ABC = Entrusted extension number

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



1. The extension cannot be used until setting is cancelled, just need to lift that extension and then on-hook can cancel setting.
2. This function is ineffective for the attendant extensions at operator attendant service mode when there is call from outside.

2.12.3 Transfer Incoming Call by Man

Format: Tap hook-switch + ABC

ABC = Extension number

Description: Extension A wants to transfer an incoming call to extension B, he should tap hookswitch and input extension number of B, they can build internal communication as soon as B lifts handset. However, if B is busy A will get back to external caller, unless B has been assigned busy transfer function, so the call will be transferred to entrusted extension automatically.

External 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; if A is busy or no answer within 25 seconds the line will be disconnected.

Chapter 2: Programming and Operating

2.13 Party Conference (1 CO & 2 Extensions)

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

ABC = Extension number

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

2.14 Flash Time

Format: *** 81M #**

M = 1 = 750ms

M = 2 = 1000ms (default setting)

M = 3 = 1200ms

M = 4 = 1500ms

M = 5 = 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.

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.

2.15 External Call Waiting

Format: **Hookswitch + #99**

Description: When extension user is on the phone with external caller, when has Beep tone is heard may indicates has another call is incoming, if user want to answer this call he can tap hookswitch and then input #99 to place current call is on holding and answer new call, this user will get back to the first caller as soon as the second caller is on-hook.



Should apply this service from local telecommunication carrier first.

2.16 Verify Holding Music

Format : *** 24 #**

Description: User can verify holding music performance.



Verifying just for reference, real timber should be verified in practise.

Chapter 2: Programming and Operating

2.17 Extension Number Assignment

Format 1 : * 7 abc ABC #

abc = Current extension number

ABC = New extension number

Description: Allows change extension number for certain jack.

Example: Change current extension number 803 to 333, 804 to 128.

Operating: Input * 7 803 333# → 804 128#.



1. Same extension number is unallowable .
2. Extension number can be assigned from 100 ~ 999 freely.

2.18 Extension Number Confirmation

Format: # 81

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

2.19 Restore All Extension Numbers

Format : * 7 000 #

Description: Restore all extension numbers to factory setting 801 ~808.

2.20 Factory Settings (Default)

Format : * 6 000 #

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

1. Outside line connection assignment.
2. Extension number settings.

Some factory settings for your reference as following:

<i>No</i>	<i>Function</i>	<i>Default Setting</i>
1	Service mode	Operator attendant
2	Ringling extensions	801 / 802 / 803 / 804
3	Attendant extensions for auto-attendant	802 / 803
4	Access CO line mode	Dial 0 or tap hookswitch
5	Caller ID signal	Adapt with FSK, DTMF
6	Hookswitch flash time	1000ms (M=2)

