ALPHATECH TECHNOLOGIES s.r.o.
Jeremenkova 88, Praha 4, Czech Republic
www.alphatechtechnologies.cz

ODYSEUS

Private Branch Exchange System

**User manual**

CONTENTS

1. INTRODUCTION

ODYSEUS is exchange designed for connection 1 external line and 4 extension (internal lines) with possibility of automatic **FAX/MODEM** switch and **CLIP** function.

The exchange is in plastic box with external mains adapter. The interface of external line as same as extension is by US connectors RJ 11.

Brief list of features

- One external line.
- Four extensions with pulse or tone dial (might be combinated variously).
- While is failured of power supply the function of first extension is conserved.
- Its possible to make one external and one internal connection
- Internal connection is of course free charge.
- The possibility of monitoring internal as same as external calls is impossible.
- The different type of ringing for internal, external and even door intercom calling.
- Ringing from external line is possible to delayed variously
- Adjustable lenght of FLASH (100 - 600 ms)
- Transfering of call with waiting for connection
- Transfering of call with time supervision.
- Back inquiry-it is possible to make consultation to other extension during connection.
- The possibility of direct access to external line.
- Prohibited numbers – restriction of extension to call unrequested
- numbers
- Adjustable FAX and MODEM switch - pasive and active
- Possibility to set features for each extension individually.
- Reservation of set features in EEPROM memory.
- The exchange transmit CLIP to extension (number of calli
- The speed of modem transmission is unrestricted by exchange.
- In standard protection against overvoltage in telecommunication network.

2. SCHEMATICS OF PBX CONNECTION

External line
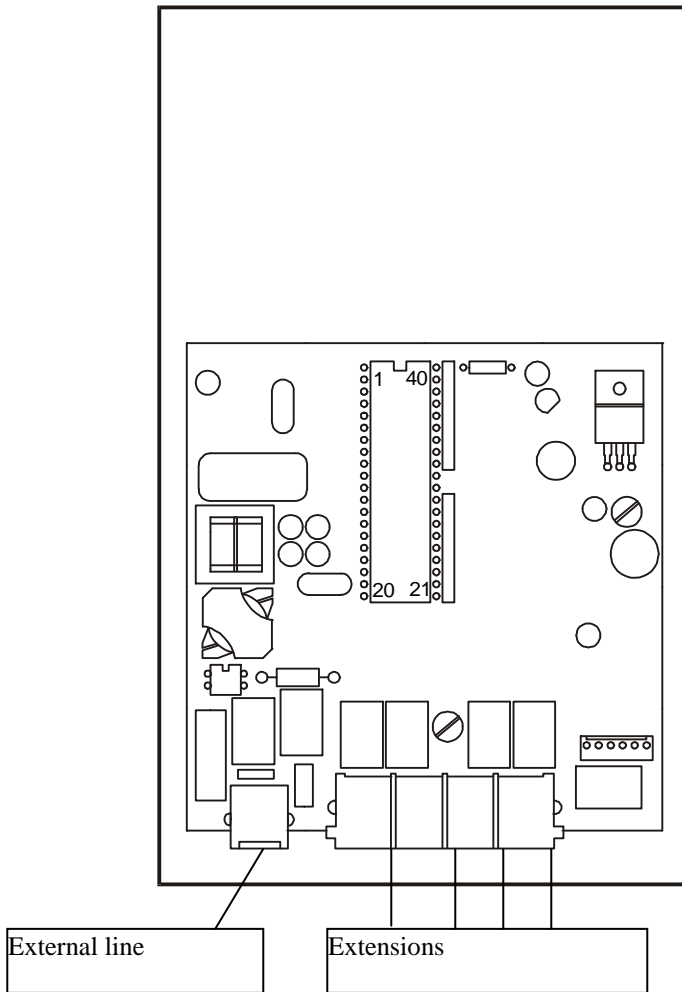
Extensions

3. SIGNALLING

The exchange provides sound signalling by different tones and rings to make easier of subscribers calling.

● **Tones on extension**

▮▮▮▮▮▮▮▮▮▮▮▮	**Dial tone** - long tone The exchange is ready to receive dialling.
▬■■■■■■▬	**Busy tone** - short tone repeatedly Called extension is busy or feature is refused.
▬■■———■■▬	**Ringing extension´s tone** – 2 long tones and space repeatedly Called extension is ringing .
▬█———█▬	**Ringing trunk´s tone** – long tones and space repeatedly Calling from public line.
▬█■█———	**Ringing door intercom´s tone** - long, short, long tone repeatedly Ringing, notice from door intercom.

● Ringing on extension

	Internal ringing - 2 rings and space repeatedly Ringing from another extension.
	Ringing public tone - long ring and space repeatedly Ringing from public line.
	Ringing from door intercom - long, short, long ring Ringing after door intercom button pressing.

● Tones on 1 extension during programming [* 99]

	Password inquiry Short tone in period 2s repeatedly. The exchange expect right password.
	Password confirmed Short tone in period 1s repeatedly The exchange is ready for programming.
	Reply for programmed sequention 3 short tones The exchange expect confirming by **#** (10s !)
	Confirming after # inserting 1 short tone Continue in programming or hang up.
	Invalid sequention Long tone Programmed sequention was not accept.

4. FEATURES

● **Reception of call - phone is ringing**

| ⌂ | Pick up / pick up incoming public or internal call

The kind of incoming call is differentiated from type of ringing (internal, public or door intercom).

Note:

In configuration you might be set which extensions will be ringing.

● **Calling of internal subscriber** a
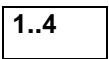
| **1..4** | Pick up and dial number of extension „**1**„ to „**4**„

When dial is finishing you are hearing ringing tone (called extension is free), or busy tone (called extension is busy).

Note:

When you set **direct access** to public line then you have after picking up public dial tone immediately (eventually busy tone). In this case you have to dial * before number of extension eventually „**111**„ – you are hearing internal dial tone – then dial „**1**„ to „**4**„.

Warning:

When you hesitate to dial longer than 10s you will get busy tone

● **Calling over public line**

0

Pick up and dial „**0**„

When you pick up you are hearing internal exchange tone.
After finishing of dial you might:

   a) Hear dial tone of public exchange – you continue in dial of number.
   b) Hear busy tone – you have not corresponding rights or public line
   is busy by another subscriber.

Note:

      When public line is busy you can make reservation by Flash.
      Releasing of public line is announced by short ring of extension.

● **Return to PBX**

*** 111

You have public dial tone and you want dial an extension –
dial ***(DTMF) eventually „**111**„ (pulse) or and extension „**1**„
to „**4.**

After dialling * eventually „**111**„ you will receive internal dial tone and
you might call an extensions even use the features.

Note:

      This feature has to be used in case of direct access to public line
      while you want extension calling as same as use features of
      exchange dialling to internal dial tone.

● **General calling**

6 | Pick up and dial „**6**„

All free extensions will be ringed. You will be connected to first picked up extension „*Call everyone.*„

Note:

    The extensions where is FAX, Modem or door intercom programmed wont be ringed.

● **Monitoring of the room**

9 | Pick up and dial „**9**„ and let phone HOOK OFF.

After dialling „**9**„ is feature activated. When you now calling to this extension you wont get busy tone but you can listen sound around the phone.

Note:

    When extension with activated feature hang up then you will get busy tone.

● **Transferring of calls with waiting for connection**

F 1..4
1 1..4

Dial in public call „Flash„ eventually „**1**„ and number of „**1..4**„.

After called person pick up inform him about a call and hang up. When you hang up the call will be transfered. The calling person has ringing tone on public line while is transfering.

Note:

> When called person is busy as same as not pick up you can return back by dial „Flash„ resp. „1„ on your extension. Attempt of call transfer can be repeated.

Warning:

> When you transfer outgoing call on public line with pulse dial you must not dial „1„ earlier than 10s after dialled last number

● **Transfer to extension with time supervision**

F 1..4 ☎
1 1..4 ☎

You are speaking over public line
Dial „**Flash**„ event. „**1**„, extensions number „**1..4**„ and hang up

After number of extension dialling and hanging up the PBX coming to new mode:

- a) When ringed extension not pick up a call till 30s, the call returns and ringing on primary extension (time of ringing is adjustable since 10 to 90s in general features*7, page 16).
- When the call wont be pick up on primary extension till 40sNedojde-li k vyzvednutí na této pobočce do 40s, je státní hovor přerušen.
- b) When called extension is busy you can return to primary call by dial „**Flash**„, eventually. „**1**„ on your extension.

Warning:

> When you transfer outgoing call on public line with pulse dial you must not dial „1„ earlier than 10s after dialled last number .

● **Unlimited calling by password**

| #Password | Pick up and dial „**#** PASSWORD„ (DTMF)

This feature enables unlimited calling. After dialling **#**, password and „0„ you are hearing public dial tone. You can continue in dialling of number. Dial is unlimited.

Note:

4 digits password for unlimited calling is setting in feature

* 5abcd (page 14). It is not default. In another feature *** 6n** is possible to forbid calling of 10 five digits numbers (page 15).

5. PROGRAMMING OF PBX

● **Entry to programming mode**

Generally

It is programming from 1 extension by tone dial (DTMF) only.

It is protected by password, default is „0000„. It is possible changing of password.

The order of programming sequention is various. It is obligatory to start by password only.

After each programming sequention you are warning by 3 short beeps which must be confirmed till 10s by (#). Answer is confirming tone.

The programming might be interrupted by hanging up a phone from you are programming. All right programmed and confirmed sequention will be stored.

| * | 9 | 9 | Entry to programming

Tone   of   password   request:

▬ ▬▬▬▬▬ ▬ ▬▬▬▬▬ ▬

| Password | Insert 4 digits password (default 0000)
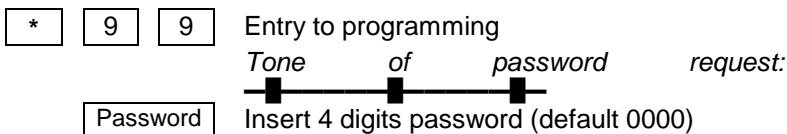
When password is correct the tone is coming quicker.

▬▬▬▬▬▬▬

Programm various sequention ….

Answer to programming sequention:

▬▬▬▬▬

Confirm by # (till 10 s !)
PBX send confirmation:

▬█▬

You can continue in programming:

▬▬▬▬▬▬▬

● **Example of programming**

In the case is progress of programming following features:
1. inserting of password
2. default status
3. connection of door intercom on 3 extension

| * | 9 | 9 |

Entry to programming
Tone   of   password   request:

� ━■━━━■━━━■━

| Pasword |

Insert 4 digits password {default 0000}
When password is correct the tone is coming quicker.:

━━■━■━■━■━

| * | 0 | 0 |

Default
Answer to programming sequention :

━━■━■━■━━

Confirm by # (till 10 s !)
PBX send confirmation:

━━━■━━━

You can continue in programming:

━■━■━■━■━

| * | 3 | 1 |

Door intercom is on 3 extension
Answer to programming sequention:

━━■━■━■━━

Confirm by # (till 10 s !)
PBX send confirmation:

━━━■━━━

You can continue in programming:

━■━■━■━■━

| 3 | 2 | 5 |

Ringing on 2 extension is delayed about 5

Answer to programming sequention:

━━■━■━■━━

Confirm by # (till 10 s !)
PBX send confirmation:

━━━■━━━

The programming is finish by hanging up

6. PARAMETRES

● **General parametres**

* 00

Default

PBX is set to default.

* 2x

FAX or MODEM on extension 2

x = 0 FAX or MODEM isnt connected
x = 1 FAX or MODEM is connected

Note:

FAX or MODEM might be connected on 2 extension only.

* 3x

The door intercom on 3 extension

x = 0 Door intercom isnt connected
x = 1 Door intercom is connected

Warning:

The door intercom might be connected on 3 extension only. When is door intercom activated ($x = 1$) the parametr of extension has been changing:
 - on door intercom extension not ringing public line
 - on door intercom extension is impossible to transfer
 - other extensions are ringing by special tone of door intercom calling (— ● —)

Note:

When door intercom isnt activated ($x = 0$) is possible to connect on extension ordinary phone.

* 4x Setting the lenght of FLASH

x = 1...6

1...100ms
2....200ms
.
.
6.....600ms

* 5 abcd Password for unlimited calling

a,b,c,d = 0 to 9

Note:

In configuration of PBX you can prohibite by parametr *** 6n** calling to 10 five-digits numbers (page 15). By password for unlimited calling you can cancel this restriction.This password is not in default.

* 6n abcde | Forbiden numbers

n = **0 to 9** order of forbiden number in the table
a,b,c,d,e = **0 to 9**, it is possible create 1 to 5 digits forbiden number

Note:

By forbiden numbers you can restrict the calling to unrequested numbers. Forbiden numbers are common for all extensions. Shorter forbiden number is more universal. You can ignorate this numbers by password for unlimited calling (page14). The forbiden numbers are not in default.

Example 1:

n=1, a=0, it means:
second forbiden number is „0„, so all extensions have forbiden long distance as same as mobile calling (0601, 2, 3, 4…).

Example 2:

n=5, a=1, b=4, c=1, d=1, e=7 it means:
sixth forbiden number is „14117„, so all extensions have forbiden calling to inform service „Recepice for house and garden„.

Table of forbiden numbers (according example)

n	a	b	c	d	e
0					
1	0				
2					
3					
4					
5	1	4	1	1	7
6					
7					
8					
9					

| *** 7x** | Max. ringing duration after transfering of calls |

x = 1 to 9 => 10 to 90s

Note:

> When you will use transfer of calls with time supervision then this parametr set the lenght of ringing in range 10 to 90s. Default is 30s.

| *** 8x** | Number of ringing for automatic picking up |

x = 2 to 8

Note:

> Automatic picking up is used for transfering on FAX or MODEM automatically. Default is 2 rings (less is not permitted).

| *** 9 abcd** | Programming of new password |

a,b,c,d = 0 to 9

Note:

> Default is 0000.

● **Line parametres**

1px   Direct access on public line

p = number of extension **1 to 4**
x = **0** direct access off
x = **1** direct access on

Note:

> After picking up extension you have public dial tone directly. This parametr is suitable for subscribers mostly calling out of PBX- the „0„ cant be dial.

2px   Ringing of extension from public line

p = number of extension **1 to 4**
x = **0** ringing off
x = **1** ringing on

Note:

> Default is ringing 1 extension only.

3px   Delay of ringing from public line

p = number of extension **1 to 4**
x = **0 to 9** rings

Note:

> Delay „0„ means it is public line ringing is copy on extension. When delay is 3 it means, that first 3 rings are ignored and then following copy of ringing.

7.   LIST OF FEATURES

● **Features in dial tone**

Dial	Feature	Page
0	Connection over public line	7
1..4	Calling of internal subscriber 1 to 4	6
6	General calling	8
9	Monitoring of the room	8
* 99	Entry to programming	11
#	Unlimited calling	10

● **Features in calling**

Dial	Feature	Page
Flash 1(pulse)	transfering, back inquiry	9
Flash 8	Flash 100 ms to public line (during external call only)	

● **Features in direct access on public line**

Dial	Feature	Page
* * * 111 [pulse]	Return to internal dial tone	7

8. LIST OF PROGRAMMING SEQUENTION

It is programming from 1 extension. Entry to programming ***99.**

● **General parametres**

		range	default	page
* 00	Default			13
* 2x	FAX or MODEM on 2 extension	0 ÷ 1	0	13
* 3x	Door intercom on 3 extension	0 ÷ 1	0	13
* 4x	Setting the lenght of Flash	1÷ 6	1	14
* 5abcd	Password for unlimited calling	0 ÷ 9	off	14
*6nabcde	Forbiden numbers	0 ÷ 9	off	15
* 7x	Max. duration of ringing after transfering	1 ÷ 9	3	16
* 8x	Number of ringing for automatic picking up	2 ÷ 8	2	16
* 9abcd	New password programming	0 ÷ 9	0000	16

● **Line parametres**

		range	default	page
1px	direct access	0 ÷ 1	1÷4 off	17
2px	ringing of extension from public line	0 ÷ 1	1÷4 ringing	17
3px	delay of ringing from public line	0 ÷ 9	0	17

9. TECHNICAL PARAMETRES

PBX

Type	ODYSEUS
Working position	various
Dimensions	110x170x50 mm
Weight	280 g

Feeder (adapter)

Feeding voltage	230 V~ (+15%, -10%)
Power	max. 10 VA
Weight	390 g
Protection	thermal,short circuit

Public line

Number	1
Impedance and dial	according device at extension

Extension

Number	4
Impedance	$600 \ \Omega \pm 20\%$
Dial	pulse, tone (DTMF)
Evaluation Flash	$30 \div 180$ ms
Resistance of subscribers conduction	max. $500 \ \Omega$
Attenuation extension - extension	typ. 4 dB

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ALPHATECH TECHNOLOGIES s.r.o.
Jeremenkova 88
140 00 Praha 4
Czech Republic
VAT: CZ27577350

Company is registered in the Commercial Register
administered by the Municipal
Court in Prague, Section C, Record 116886

Banking details:
Komerční banka, account No. 43-7671450207/0100
IBAN: CZ0801000000437671450207
SWIFT: KOMBCZPPXXX