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ALPHATRON Marine

AlphaConnect Classic

Operation Manual

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I Preface

The Alphatron AlphaConnect is a telephone exchanger to be used on-board ships. It is designed to give seamen easy and reliable on-board communication between all essential places on-board a ship, as well as giving the possibility of making telephone calls to and from the ship, via satellite communication terminals.

The Alphatron AlphaConnect is a high quality, easy to install system.

- Thoroughly read this manual before operation of the equipment.
- We recommend keeping this manual nearby the equipment to ensure ready access to it.

I.1 Revision History

Date	Revision No.	Description	Author	Reviewer
27-07-2017	V1.0	First release	J. Kreeft	W. van Rooij R. Schneider Y. Troost

I.2 Glossary

The glossary contains a list of abbreviations and definitions.

I.2.1 Abbreviations

Abbreviations as used in this manual are explained in the table below.

AC	Alternating Current
DC	Direct Current
CDM	Call Data Management
DTMF	Dual-tone multi-frequency signalling
ECR	Engine Control Room
FSK	Frequency Shift Keying
GPS	Global Positioning System
GSM	Global System for Mobile communications
IMO	International Maritime Organization
LCD	Liquid Cristal Display
PA	Public Address
PBX	Private Branch eXchange
PIN	Personal Identification Number
PSTN	Public Switched Telephone Network
PTT	Push-To-Talk
RX	Receiver
TX	Transmitter
VHF	Very High Frequency

I.2.2 Definitions

The meaning of standard definitions as used in this manual are explained in the table below.

AlphaConnect	Alphatron brand name for the telephone exchanger system.
Dial	Call (a telephone number) by turning a dial or using a keypad
Dual-tone multi-frequency signaling	An in-band telecommunication signaling system using the voice-frequency band over telephone lines between telephone equipment and other communications devices and switching centers
Duplex	A duplex communication system is a point-to-point system composed of two connected parties or devices that can communicate with one another in both directions.
FleetBroadBand	A maritime global satellite internet, telephony, SMS texting and ISDN network for ocean-going ships using portable domed terminal antennas.
PA system	An electronic sound amplification and distribution system with a microphone, amplifier, and loudspeakers, used to allow a person to speak to a large public.
TalkBack	A system of two-way communication by loudspeaker (also named semi duplex-conference).

II Warnings and Cautions

The signal words WARNING and CAUTION used in this manual indicate the degree of hazard that may be encountered by the user. These words are defined as:

- WARNING!
- A WARNING indicates potential risk of injury or death to users of the product.

- CAUTION!
- A CAUTION indicates potential risk of damage to equipment.

To safely install and operate this system, so as not to adversely affect the warranty, the following WARNINGS and CAUTIONS must be adhered to.

- WARNING!
- To prevent fire or shock hazard, do not expose this product to rain or any type of moisture.

- CAUTION!
- Do not disassemble or modify the equipment. Failure to observe this instruction may cause equipment failure.

- WARNING!
- Do not place a vessel containing liquid on the equipment. It may cause failure to the equipment if knocked over.

- CAUTION!
- Any modification to this equipment without prior written permission from ALPHATRON MARINE will void the warranty.

- CAUTION!
- Installation of this product shall only be done by a certified installation company approved by either ALPHATRON MARINE or by an official ALPHATRON MARINE distributor. Acting otherwise will void the warranty.

- CAUTION!
- This product contains no operator serviceable parts. Service and repair shall only be carried out by personnel trained and certified by ALPHATRON MARINE.

- CAUTION!
- Do not allow the instrument to fall or immerse into water. The equipment can be damaged.

- CAUTION!
- When unplugging the instrument, be sure to remove the cord terminal correctly. If the cord is pulled, the cord may get damaged.

- CAUTION!
- If the instruments are not stored as described, it will void the warranty.

- CAUTION!
- When cleaning the surface, do not use any organic solvent such as thinner or benzine. Otherwise, the paint and markings on the surface may get damaged. For cleaning the surface, remove the dust and debris and wipe with a clean dry cloth.

- CAUTION!
- Non-compliance with the installation, operation and maintenance requirements may void the warranty. Contact the Alphatron dealer regarding the terms of the warranty.

- CAUTION!
- Do not use this unit near water-for example near a bathtub, washbowl, sink, etc. Damp places should also be avoided.

- CAUTION!
- The Alphatron AlphaConnect control unit should not be placed in rooms where the temperature is less than 5°C or greater than 55°C.

- CAUTION!
- Do not place heavy objects on top of the Alphatron AlphaConnect control unit.

- CAUTION!
- If there is any trouble, disconnect the unit from the telephone line and connect a known working phone. If the known working phone operates properly, do not reconnect the defective unit until the problem has been resolved. If the known working phone does not operate, contact the Alphatron dealer.

- CAUTION!
- Non-compliance with the installation, operation and maintenance requirements may void the warranty. Contact the Alphatron dealer regarding the terms of the warranty.

- CAUTION!
- If there is any trouble, disconnect the unit from the telephone line and connect a known working phone. If the known working phone operates properly, do not reconnect the defective unit until the problem has been resolved. If the known working phone does not operate, contact the Alphatron dealer.

III About the Manual

III.1 Intended Readers

This manual is an operation manual for the Alphatron AlphaConnect system. The manual is intended for end users.

Refer to the Alphatron AlphaConnect system Installation Manual for system installation and configuration.

III.2 Manual Overview

This manual has the following chapters:

- **Introduction** contains an overview of the system, its operational features and basic system description.
- **Basic operation and functions** contains a description of all basic call functionalities; It describes how to make calls, transfer calls, make paging calls, make priority calls, make alarm distribution calls, and make TalkBack calls.
- **Operation of telephones** contains descriptions of how to use each specific telephone model and its features.
- **Operation of communication stations** contains descriptions of how to use each specific communication station model and its features.

1 Introduction

1.1 Product Description

The purpose of the Alphatron AlphaConnect maritime communication system is to give the seamen easy and reliable on-board communication between all essential places on-board a ship, as well as giving the possibility of making telephone calls to and from the ship, via satellite communication terminals.

The system:

- Enables internal calling between locations on-board
- Covering all normal telephone functions with telephone systems such as; calls, call transfer, priority, and wake-up calls
- Calls via Satcom, GSM
- The system covers needs such as bells, rotary lights, headsets in technical spaces

The system has a type approval certificate by DNV and complies with the IEC60945 standard for maritime electronic communication equipment, which will ensure years of problem free-operation.

1.2 Operational Features

This section gives an overview of some operational features.

1.2.1 On-board Communication

On-board conversations bridge, ECR, cabins, offices, work shop, deck etc. All locations, no matter if it is dry, wet, noisy, or dirty, can be covered by either a Plain Old analogue Telephone Service (POTS) or one of our communication stations with handset, headset, or loudhailer.

1.2.2 Distribute Sitcom

Calls from the ship to shore can be conducted from all places on-board. The seaman can have his privacy by calling the family from his cabin for example. Calls from shore to ship can be distributed to all locations on-board, typically to bridge, captain's cabin or to ship office. It is not needed to be on the bridge to answer an incoming satellite call.

1.2.3 TalkBack

Communication stations AlphaConnect P211, AlphaConnect P411 and AlphaConnect P421 can be used to implement the classical TalkBack functions. A call from bridge to mooring stations for example, can be set up from bridge, without hands-on on deck. Groups of stations can be addressed simultaneously when performing a TalkBack (command group conference) call.

1.2.4 PA Functions

The AlphaConnect communication system can distribute public address (acoustic paging) to all stations with loudspeakers. The system gives possibility of defining groups with priority levels. The system can be set up to send a gong signal preceding the spoken message. PA calls are initiated from telephones and communication stations, and does not require special control stations with goose neck microphones. It is also possible to connect the AlphaConnect to an external PA system, such as the Alphatron Marine AlphaAnnounce and, by use of pre-defined telephones and communication stations, initiate PA calls.

1.2.5 Time distribution and wake-up

Using telephones with display gives the possibility for displaying the ships clock on the telephones. The time displayed can be set manually by a simple telephone call. Based on the system time, wake-up calls can be ordered from any telephone connected to the system.

1.2.6 Call data management (CDM)

A ship owner that wants to register calls made via the satellite equipment connected can make use of our CDM system. The crew are given accounts and PIN codes which are used to open the access to the satellite lines. When conversations are conducted, call data records are stored on the system disk. Based on these stored data, the responsible officer can print invoices covering the telephone calls made.

Note the Call Data Management system is optional.

1.3 System Description

This section introduces the Alphatron AlphaConnect system, the telephones and communication stations.

1.3.1 System Overview

The Alphatron AlphaConnect system is always configured for a specific vessel. *Figure 1: Schematic system overview* on page 14 shows a schematic system overview of a typical AlphaConnect system, its components and communication between the components.

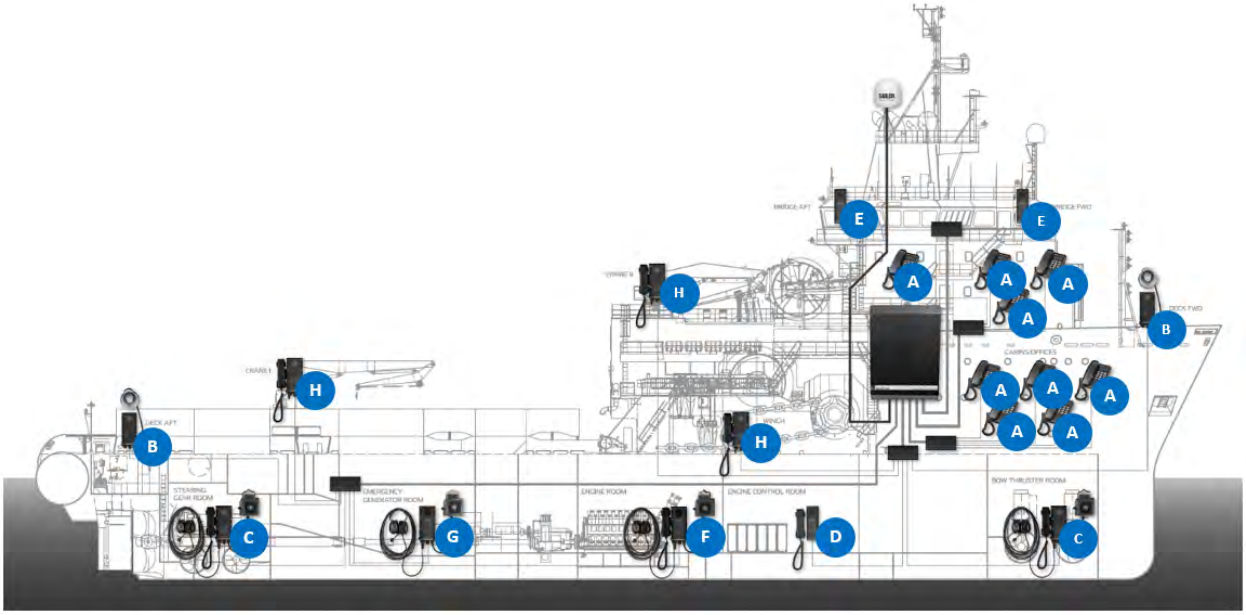

Figure 1: Schematic system overview

A	AlphaPhone 100AS (Cabins/offices)
B	AlphaConnect P211 + loudhailer (Deck FWD)
C	AlphaConnect P220 + handset + headset + loudhailer (Bow thruster room / Steering gear room)
D	AlphaConnect P411 + handset (Engine control room)
E	AlphaConnect P411 (Bridge FWD / Bridge AFT)
F	AlphaConnect P421 + handset + headset + loudhailer (Engine room)
G	AlphaConnect P421 + headset + loudhailer (Emergency generator room)
H	AlphaConnect P220 + handset (Crane 1 / Crane 2 / Winch)

This document describes each telephone and communication station available.

1.3.2 Telephones

The AlphaConnect system is using analogue telephones for locations like cabins and offices.

The following telephones are available:

- AlphaPhone 100AS telephone
- AlphaPhone 500 telephone
- EBT430 telephone
- dA24 telephone

Figure 2: AlphaPhone 100AS, AlphaPhone 500, EBT430 and dA24 telephone(from left to right)

1.3.2.1 AlphaPhone 100AS telephone

The AlphaPhone 100AS telephone is an analogue telephone with display, suitable for desks and consoles.

Figure 3: AlphaPhone 100AS telephone

For more information on operating the AlphaPhone 100AS telephone, see section *Operation of AlphaPhone 100AS telephone* on page 35.

For its features and specifications, see section *Appendix A5: Features and specifications of AlphaPhone 100AS telephone* on page 66.

1.3.2.2 AlphaPhone 500 telephone

The AlphaPhone 500 telephone is an analogue telephone, suitable for cabins.

Figure 4: AlphaPhone 500 telephone

For more information on operating the AlphaPhone 500 telephone, see section *Operation of AlphaPhone 500 telephone* on page 40.

For its features and specifications, see section *Appendix A6: Features and specifications of AlphaPhone 500 telephone* on page 67.

1.3.2.3 EBT430 telephone

The EBT430 telephone is an analogue, flush mounted telephone with integrated horn and keypad.

The EBT430 telephone is typically used for consoles (with space constraints).

Figure 5: EBT430 telephone

For more information on operating the EBT430 telephone, see section *Operation of EBT430 telephone* on page 41.

For its features and specifications, see section *Appendix A7: Features and specifications of EBT430 telephone* on page 68.

1.3.2.4 dA24 telephone

The dA24 telephone is an analogue telephone. It is lightweight and designed and certified for explosion endangered areas.

The dA24 telephone is typically used in garage spaces, on helicopter platforms, and loading areas on tankers.

Figure 6: dA24 telephone

For more information on operating the dA24 telephone, see section *Operation of dA24 telephone* on page 44.

For its features and specifications, see section *Appendix A8: Features and specifications of dA24 telephone* on page 69.

1.3.3 Communication Stations

Communication stations are advanced telephones mounted at each location that needs communication. Typically, for locations such as the bridge, the engine control room and the steering gear room, a simple telephone is just not enough.

The following communication stations are available:

- AlphaConnect P211
- AlphaConnect P220
- AlphaConnect P411
- AlphaConnect P421

The AlphaConnect P211 communication station is mainly used as intercom, which can dial 3 pre-set numbers only. It has no speaker, and is typically used in combination with a loudhailer.

The AlphaConnect P220 communication station is a full-duplex station, without hands-free functionality, therefore a handset is required.

The AlphaConnect P411 and AlphaConnect P421 are advanced communication stations with many configuration options accessible through an easy to use menu system. The AlphaConnect P411 and AlphaConnect P421 can also act as the master for a TalkBack call.

Figure 7: AlphaConnect communication stations

For more features of the communication stations, see *Figure 8: Features of the communication stations* on page 20.

The following table shows the features for each communication station.

	P211	P220	P411	P421
Handset connection	x	v	v	v
Headset connection	v	v	v	v
Call relay	v	v	v	v
External speaker	v	x	v	v
External microphone	x	x	v	v
Display	x	x	v	v
Hands-free operation	x	x	v	v
Keys	3	15	21	21
Speed dial	x	x	v	v
IP class	65	65	22	65
Mounting style	Wall	Wall	Flush	Wall

Figure 8: Features of the communication stations

The following accessories are available for the communication stations (see also on page):

- Headset (ER) for AlphaConnect P211/P220/P411/P421
- Watertight handset for AlphaConnect P211/P220/P411/P421
- Flush mount handset for AlphaConnect P411

For more information on accessories, see section *Accessories for communication stations* on page 24.

1.3.3.1 AlphaConnect P211 communication station

The AlphaConnect P211 communication station is a simple water tight TalkBack communication station.

The AlphaConnect P211 communication station is typically used (in exposed environments) in engine room spaces. It has 3 programmable push buttons for call numbers, typically bridge or ECR.

Figure 9: AlphaConnect P211 communication station

For more information on operating the AlphaConnect P211 communication station, see section *Operation of AlphaConnect P211 communication station* on page 47.

For its features and specifications, see section *Appendix A1: Features and specifications of AlphaConnect P211 communication station* on page 62.

1.3.3.2 AlphaConnect P220 communication station

The AlphaConnect P220 communication station is water tight and salt mist resistant heavy-duty industrial with call relay build in. It is always mounted with a handset or a headset or both.

The AlphaConnect P220 communication station is typically used (in exposed environments) in engine spaces and on deck.

The picture below shows a AlphaConnect P220 communication station without handset or headset. For pictures with handset and headset, see section *Operation of AlphaConnect P220 communication station* on page 49.

Figure 10: AlphaConnect P220 communication station

For more information on operating the AlphaConnect P220 communication station, see section *Operation of AlphaConnect P220 communication station* on page 49.

For its features and specifications, see section *Appendix A2: Features and specifications of AlphaConnect P220 communication station* on page 63.

1.3.3.3 AlphaConnect P411 communication station

The AlphaConnect P411 communication station is a full featured flush mount station with back-light display. It can be used as a standalone hands-free only communication station, but it can also be used with a handset, a headset or with both.

The AlphaConnect P411 communication station is typically used (in protected environments) on bridge and ECR (Engine Control Room), where a nice screw-less design is required and red back-light with automatic ambient light controlled dimming function is necessary.

Figure 11: AlphaConnect P411 communication station

For more information on operating the AlphaConnect P411 communication station, see section *Operation of AlphaConnect P411 communication station* on page 52.

For its features and specifications, see section *Appendix A3: Features and specifications of AlphaConnect P411 communication station* on page 64.

1.3.3.4 AlphaConnect P421 communication station

The AlphaConnect P421 communication station is a full featured, water tight station with back-light display. It is designed for hands free operation on deck or in damp areas. The speaker, the keyboard and the hands-free microphone is all designed to withstand moisture and salt mist. The AlphaConnect P421 can be equipped with handset, headset and external speaker or horn, and a call relay is built in for activation horns and rotating beacons in noisy areas.

The AlphaConnect P421 communication station is typically used in engine spaces and on deck.

Figure 12: AlphaConnect P421 communication station

For more information on operating the AlphaConnect P421 communication station, see section *Operation of AlphaConnect P421 communication station* on page 61.

For its features and specifications, see section *Appendix A4: Features and specifications of AlphaConnect P421 communication station* on page 65.

1.3.4 Accessories for communication stations

The following accessories are available for the communication stations:

- Headset (ER) for AlphaConnect P211/P220/P411/P421
- Watertight handset for AlphaConnect P211/P220/P411/P421
- Flush mount handset for P411

1.3.4.1 Headset (ER) for AlphaConnect P211/P220/P411/P421

All communication stations can connect a headset with a PTT button.

The headset cable (10 or 20-meter cable) can be taken directly into the stations via one of the PG glands or the optional water tight headset connector set can be used.

The water tight headset connector set, which can be ordered separately, makes it possible to disconnect the headset and stowed when not in use or easy to replace when worn out.

- CAUTION!
- The connector is NOT water tight when left open, so it is important to mount the cover properly when the headset is removed, to leave it tight and closed for moisture. Failure to do so can reduce lifetime.

Figure 13: Headset (ER) for AlphaConnect P211/220/P411/P421

Note that headset (ER) for AlphaConnect P211/P220/P411/P421 may not be installed, depending on the system configuration (see an example of a configuration in *System Overview* on page 14).

For more information on operating the headset (ER) for AlphaConnect P211/P220/P411/P421, see section *Operation of communication stations* on page 47.

1.3.4.2 Watertight handset for AlphaConnect P211/P220/P411/P421

The range of communication stations can be extended with our water resistant and salt mist tolerant handset. The handset is an option and can be ordered separately.

The handset has a build in magnetic reed hook switch and is placed in a cradle fixing the handset even on ships in rough seas.

Figure 14: Watertight handset for AlphaConnect P211/P220/P411/P421

Note that the watertight handset for AlphaConnect P211/P220/P411/P421 may not be installed, depending on the system configuration (see an example of a configuration in *System Overview* on page 14).

For more information on operating the watertight handset for AlphaConnect P211/P220/P411/P421, see section *Operation of communication stations* on page 47.

1.3.4.3 Flush mount handset Alphaconnect P411

In consoles on the bridge, the communication station can be extended with a flush mount handset. The handset is an option and can be ordered separately.

The handset has a build in magnetic reed hook switch and is placed in a cradle fixing the handset even on ships in rough seas.

Figure 15: Flush mount handset for AlphaConnect P411

Note that the flush mount handset for AlphaConnect P411 may not be installed, depending on the system configuration (see an example of a configuration in section ‘System overview’ on page 19).

For more information on operating the flush mount handset for AlphaConnect P411, see section ‘Operation of AlphaConnect P411 communication station’ on page 62.

2 Basic operations and functions

This section describes basic call functionalities; It describes how to use the telephones and communication stations connected to the AlphaConnect communication system to make calls, transfer calls, make paging calls, make priority calls, make alarm distribution calls, and make TalkBack calls. For specific use of a telephone or communication station model, refer to the correct sub-section of chapter *Operating of telephones* on page 35.

An AlphaConnect system with communication stations like AlphaConnect P411 and AlphaConnect P421 has the below functional features.

- Internal calls, maximum 15 simultaneous
- Hands free speaking with "Direct-in" intercom style
- Communication in noisy environment
- Display telephones with caller number and caller name
- Priority call
- Call transfer
- Wake-up
- Set date and time from telephone
- Call pickup
- Paging calls to telephones having speaker
- Answer back on PA calls
- TalkBack system with one master and up to 10 substations (AlphaConnect P411 + N x AlphaConnect P211)
- Do not disturb
- Day mode and night mode for incoming calls
- Voice activated hook off when ringing

Note System call numbers are programmable. When system call numbers mentioned within this manual, their default values are used. For an overview of system call numbers, see *Appendix C: System call numbers* on page 71.

2.1 Making, holding, and transferring normal calls

Make your telephone call as with any other telephone system. Lift the handset of a telephone and dial the number you want to call. Terminate the call by hanging up again.

The AlphaConnect system generates 3 types of tone signals heard when making calls.

Tone signal	Description
1sec tone with 5 s pause	Ringing to B extension
intermittent tone	Busy or error or wrong number dialed
3 short tones	Transfer caused by Do-Not-Disturb

To transfer a call, press the REDIAL button, and the ongoing conversation will be set on hold. The dial tone will be heard and the third party can be dialed.

2.2 Transferring normal calls

Call transfers allow you to relocate an existing call to another extension. A call transfer is either with or without presentation.

If a transfer is with presentation, the desired party is notified about the transfer. This is done by first putting the caller on hold. The extension number to which he/she will be transferred to is dialed; the desired party is then notified about the impending transfer and the call is then transferred, should the caller choose to accept it.

Otherwise, during a blind transfer (without presentation), the call is transferred without any notifications to the desired party.

Pressing the REDIAL button again will cancel the transfer operation.

This is the case for local calls as well as for calls received via an analogue trunk line from satellite equipment or with shore lines connected.

2.3 Receiving calls

When receiving a call, different ringing signal types will give the called party some information about the origin of the call. The following ringing signals are implemented:

Ringing signal	Description
2 short rings and 5sec pause	Local call
1sec ring and 5sec pause	Incoming call from a trunk line
3 short rings and 5sec pause	TalkBack call

2.4 Priority calls

The priority call function is used when a user wants to interrupt an ongoing call (for an important message).

Priority calls are made by first dialing the priority system call number, which by default is set to * (asterisk). When the priority system call number is dialed, a new dial tone will be heard. Proceed by dialing the number of the extension you wish to interrupt (e.g. 20).

The priority call facility will place the other party involved in the interrupted call on hold. When the priority caller hangs up, the interrupted conversation will be re-established.

2.5 Outgoing cals (via external long-distance telephony device)

Outgoing calls (e.g. via satellite or shore lines) are made by first dialing the call of trunk line connected to the communication equipment to be used. The trunk line is the direct link to an external long-distance telephony device. This can be an Iridium satellite terminal, a fleet broadband satellite terminal, or a VoIP box making IP calls possible.

Trunk lines have a default system call number 00.

If the trunk is free, then the connection to the external communication equipment is established.

The dialing instructions applicable to the external communications equipment must then be used. For example, some of them instruct dialing to be terminated by the # key. Or the call can only be established by dialing some kind of payment service first. These details must be known by the user of a trunk line.

2.6 Outgoing calls via the CDM system

When outgoing calls are logged and controlled by the CDM system, such a call is dialed in the following way:

Dial the number of the Call Data Management (CDM) system, which by default is #10. A new dial tone will be heard. Dial your personal account number (default: 2 digits) followed by your personal PIN code (default: 4 digits).

If this is the very first call using the system, the 4 digits that are entered will be stored by the system as your personal PIN code. These digits are not accessible, and the only way to change the PIN code is for the system administrator to reset the PIN code.

The account number and PIN code will be checked against the user database. If the account and PIN code are valid, the call is automatically transferred to a trunk line. If the trunk is not busy, the connection to the external communication equipment is established. The dial tone of the external equipment will be heard and the dialing instructions applicable to that equipment must be used.

When your call is terminated, a call data record will be logged in the call database.

Note this requires CDM to be installed on the system.

2.7 Direct-in call

The ‘Direct-in’ feature can be used with AlphaConnect P211, AlphaConnect P421 and AlphaConnect P411 only. It is made by dialing the priority call number * twice followed by the call number.

Example: **20

Such a call will make the called station hook off without any hands on by the receiver. The AlphaConnect P411 and AlphaConnect P421 enters hands-free mode and conversations or listening is effective. Direct-in to the AlphaConnect P211 communication station is to be considered a single station PA call, as it is only possible to speak from the caller to the AlphaConnect P211.

2.8 Ringing groups

The ringing group is used when more than one telephone must be ringing when dialing only one telephone number. This can be used, as an example, for incoming calls, where up to 10 extensions shall be able to answer the call. Note that the ‘Direct-in’ feature to a ringing group is also possible.

Example 1: The work shop communication station of the electrician has call number 11, the engine work shop communication station has call number 12, and the engine control room communication station has call number 12. These communication stations can be grouped as “engine room” and called simultaneously by dialing call number 10.

Example 2: If a bridge has 3 telephones, these can be included in a ringing group (e.g. system call number 9). When number 9 is called, all 3 telephones on the bridge will ring. The first one picked up will answer the call, which in turn stops the ringing on the 2 other phones.

If one of the bridge telephones is busy, and a call to the group comes in, it will be heard on the bridge that a second call is coming in. In this situation, it is possible to hang up on the busy phone, which shortly after will start ringing in parallel with the other telephones of the group. The call can be answered just by lifting it up again.

Refer to the AlphaConnect Installation Manual for setup of ringing groups.

2.9 Call pickup

The call pickup function is used to answer a call to an extension by another extension.

The use of the call pickup function is numerous. For example, incoming calls are routed to the bridge and to a call number activating a radio pager. When an incoming call is received the bridge telephone will ring, and the radio pager will alarm the captain, who is sitting in his day-room. The captain uses the call pickup function to pick up the incoming call.

The default system call number of the call pickup is #05.

Calls incoming from satellite services can be picked up, as well as local on-board calls.

Refer to the AlphaConnect Installation Manual for setup of call pickup.

2.10 Paging calls

When PA speakers are used with the AlphaConnect system, public address calls can be made. Paging calls can be received by the communication stations with speaker (AlphaConnect P211, AlphaConnect P411 and AlphaConnect P421 communication stations).

Paging calls can be made from any extension or station given the privilege to do so.

The default system call number for the paging call is #08.

When the paging system call number is dialed, a period of 2 seconds is used to let the system open the PA speakers. Then the ‘Gong’ or ‘Ding dong’ signal is send (4 different types available). The gong has a duration of 2 seconds, where after the PA system is open for sending the voice message. The gong can be heard in the handset of the telephone as an acknowledgement.

Best sound quality and volume is obtained when you loudly speak directly into the microphone of the handset of the telephone used for making the call.

Priority override of paging and alarm calls is possible. The priority scheme is selected when commissioning the system (the * (asterisk) priority call is NOT used here).

Refer to the AlphaConnect Installation Manual for setup of paging calls.

2.11 Alarm call

When PA speakers are used with the AlphaConnect system, alarm distribution calls can be made. Alarm calls can be received by the communication stations with speakers only (AlphaConnect P211, AlphaConnect P421 and AlphaConnect P411 communication stations).

The AlphaConnect system has the capability of distributing 7 different alarm tones.

The default system call number of an alarm call is #09.

When an extension has initiated an alarm call, the alarm tone will be heard in the handset as an acknowledgement of the fact that the alarm generator is really operating.

During an alarm distribution, the REDIAL button can be used to toggle the call between an alarm call and a paging call. Dial the alarm system call number of the desired alarm type. When the alarm is sounding, press the REDIAL button. This will stop the alarm generator and switch on the microphone of the handset of the telephone used to initiate the call. Speak loudly and directly into the microphone to send your voice message. Use the REDIAL button to return the call into an alarm tone distribution call.

Alarm calls can be made from any extension or station given the privilege to do so.

Hook on the telephone to terminate the alarm call.

Refer to the AlphaConnect Installation Manual for setup of alarm calls.

2.12 Semi-duplex conference (TalkBack call)

A TalkBack call is primarily used from a bridge telephone (master station/controller) and several communication stations (slave stations/command group units) to form a command group.

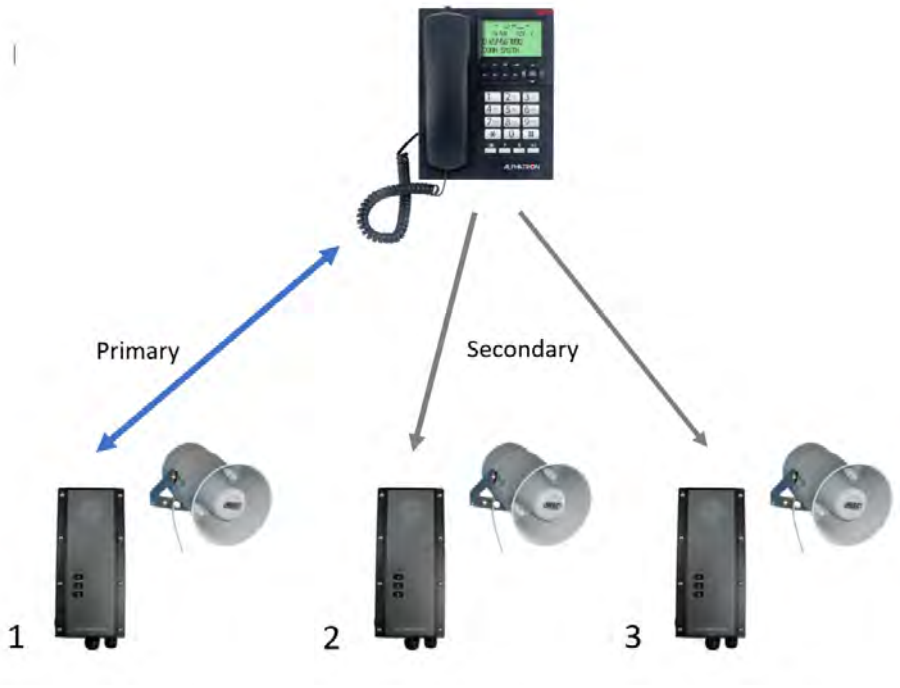

Figure 16: Semi-duplex conference

Example: As shown in *Figure 16: Semi-duplex conference* on page 31, the bridge telephone is the master. The primary line is between the bridge telephone and communication station 1. The secondary lines are for the listeners only (communication station 2 and 3).

2.13 Setting up a command group

The default system call number for the conference is #07.

This will make all the AlphaConnect P211 communication stations ring, or if ‘Direct-in’ is selected, it will make the communication station participate in the conference. When ringing, the call is answered at the P211 communication station by pressing the PTT button. The P211 communication stations answering can be connected as speakers or listeners as set up when configuring the command group.

If the call is made from a AlphaConnect P411 communication station to one or more AlphaConnect P211 communication stations, the speech direction of the call can be controlled only by the microphone key of the AlphaConnect P411 communication station initiating the call.

The command call can be set up as a fixed group or as a dynamic group.

- A fixed group has the AlphaConnect P211 communication stations participating pre-programmed in a list. Refer to the AlphaConnect Installation Manual for setup of command group.
- A dynamic group gives the user the possibility of choosing the participants when making the call.

In both cases the initiator is the master, and the AlphaConnect P211 communication stations are all slaves. The master will be in conversation with the primary slave, (which is the one that latest have pushed a PTT button or which is chosen by the master to be the primary slave (by the master’s press of one of the number keys representing the station)). The master of the command TalkBack call will control the speech direction by pressing or releasing the microphone key, or a slave will push the PTT button and thereby force itself to be the primary slave part speaking. All AlphaConnect P211 communication stations being the secondary slaves will just listen to the conversation, and can hear both the master and the primary slave.

2.14 Switching the speaker part

When the conference is set up, the slaves can gain the right to speak by pressing the PTT button. The bridge telephone uses the REDIAL button as PTT. Pressing the PTT button of any substation will turn the speech direction to be from the station to all other. Releasing the PTT button of a substation will result in no one speaking until one of the others presses their PTT button. Pressing the PTT button of the bridge telephone toggles the speaking part to be either the bridge telephone or the primary slave.

2.15 Controlling the conference from the initiating telephone

The conference can be entirely controlled by the bridge telephone. The slaves have numbers as they are dialed or entered in the list of conference members.

When the bridge telephone presses the DTMF key corresponding to the substation number, the speech direction will be forced to be from the selected slave. The selected slave will then be the primary slave of the conference. The speech direction can be swapped between the primary slave and the secondary slaves by pressing the REDIAL button (as PTT) of the bridge telephone.

2.16 Music when free

If an audio in channel is configured, the AlphaConnect P411 and AlphaConnect P421 communication stations can call the ‘music when free’ system call number #061, which makes the station open the speaker and listen to the music input channel. If a call comes in or the keyboard is activated for a call, the music is stopped. When the conversation is ended, the music channel is opened again until the system call number #060 is used to cancel the ‘music when free’ option.

2.17 Do not disturb

Dial the ‘Do not disturb’ system call number to make the telephone enter do-not-disturb mode. In this mode calls are denied, and the caller will hear the 3 short tones, indicating that the person called like to be left without telephone calls. The do-not-disturb mode has a timeout of 8 hours, after which normal mode is re-entered. In do-not-disturb, calls can be transferred to another extension, either fixed or predetermined. It is also possible to enter do-not-disturb mode with the exception that certain extensions can still call in.

The default system call number for ‘do not disturb’ is #02.

Refer to the AlphaConnect Installation Manual for setup of ‘Do not disturb’.

2.18 Day-mode and night-mode

This system call number gives the user a possibility of manually selecting day or night mode for all trunk lines. This is used for incoming calls routing. When a call to a day mode selection is made, all trunk lines will choose the day-mode routing list, until a call to the nigh-mode selection is performed, hereafter all trunk lines will use the night-mode routing list.

If a telephone with display is used, a return acknowledge ringing will be made, so the user can see which mode is selected.

System call numbers are available for 3 purposes:

- Switch to day-mode
- Switch to night-mode
- Check mode

Refer to the AlphaConnect (Classic) Installation Manual for setup of ‘Day-mode and night-mode’ (and system call number definition).

2.19 Wake-up call

2.19.1 Ordering a wake-up call

The AlphaConnect includes a wake-up call system, where all extensions can order and receive wake-up calls. One-time and daily wake-up calls can be ordered.

The table below shows the default system call numbers of the wake-up call system and the corresponding effects.

System call number	Effect
#111 + 4 digits (HHMM) (00 – 24) (wake-up time)	Order a single wake-up call
#112 + 4 digits (HHMM) (00 – 24) (wake-up time)	Order a repeated wake-up call (every day, until canceled by a new wake-up call order)
#110	Cancel an ordered wake-up call

A correctly ordered wake-up call will result in the user hearing the dial tone. Any keying errors will result in no wake-up call programming (invalid time for example) and the busy tone will be heard.

If repeated wake-up calls have been ordered, the wake-up is re-ordered +24 hours. If a single wake-up call has been ordered, the wake-up call is just canceled.

2.19.2 Receiving a wake-up call

When the time-of-day equals wake-up time, a call from the system to the extension will be made. The display (if any) will show “Wake-up call”. If the wake-up is acknowledged by is lifting the handset during the wake-up call, the call will be terminated. If a wake-up call is not acknowledged in this way, it will be repeated after 5 minutes. This will be done 2 times, after which the wake-up call is terminated.

2.20 Setting system time

The real-time clock of the AlphaConnect system can be adjusted via a call to the ‘set-date-time system’ system call number. Access to this call is typically restricted to bridge telephones only.

If the time is validated and programmed, a dial tone will be heard. If the time is not validated and thereby not updated, a busy tone will be heard.

System call number	Effect
#120 + 8 digits (YYYYMMDD)	Adjust date of AlphaConnect system
#121 + 4 digits (HHMM) (00 – 24)	Adjust time of AlphaConnect system

The AlphaConnect system has an NMEA receiving function capable of receiving the date and time from a master clock system. When this function is enabled, the dialed setting of the date and time will be overridden always.

3 Operating of telephones

3.1 Operation of AlphaPhone 100AS telephone

3.1.1 Visualization

1.	HANDSET
2.	HANDSET MICROPHONE
3.	COIL CORD
4.	HOOK SWITCH
5.	HANDSET GUIDE
6.	LCD
7.	RINGER LED
8.	MEMORY (M..)
9.	DELETE
10.	MUTE
11.	VOL (Volume)
12.	UP
13.	OK
14.	PHONE BOOK
15.	DOWN
16.	C (Cancel)
17.	M4
18.	M3
19.	M2
20.	M1
21.	IN USE / NEW CALL LED
22.	REDIAL
23.	PAUSE
24.	FLASH
25.	HANDSFREE / SPEAKER KEY
26.	SPEAKER MIC.
27.	LINE JACK
28.	HANDSET JACK
29.	RINGER VOLUME SWITCH

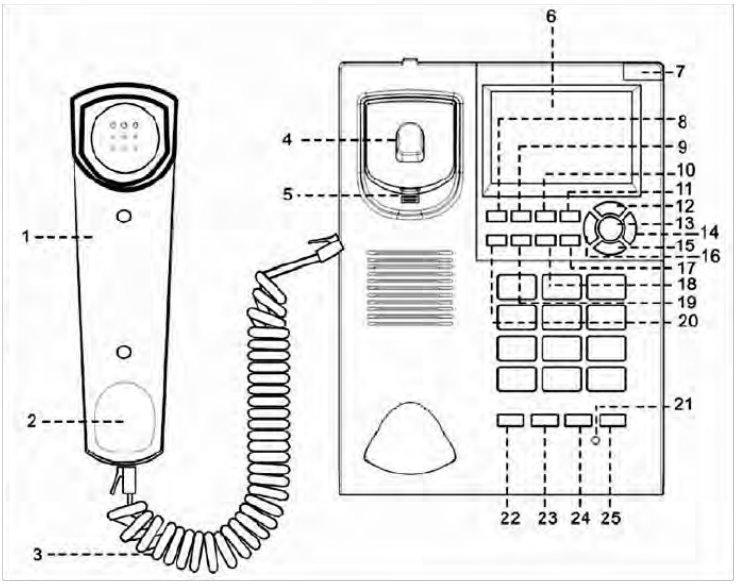

Figure 17: AlphaPhone 100AS details

3.1.2 Phone settings

For adjusting the phone perform the following actions:

- At the on-hook or off-hook state, press OK key to start the setting mode.
- The LCD will display: VIEWMENU ↓↑. Use the UP or DOWN key to select among different items.

- When you want to choose one item, press OK key again to go to the setting.
- After you have finished with this item, press OK key again to confirm and/or to move to another item.
- To change items, always use UP or DOWN keys.
- If you want to quit the setting mode at any time, press C key.

The settings of different items are shown in detail as follows:

3.1.2.1 Change Language

To change the language setting perform the following actions:

- When the LCD displays SELECT LANGUAGE, press OK key once.

  LCD will show Dutch (default setting).
- Use UP or DOWN key to select among the languages for English / Dutch / French / German.

3.1.2.2 Change Date/Time

To change the date and/or time, perform the following actions:

- When the LCD displays: DATE/TIME, press OK key once.

  The year digits will flash.
- Use UP or DOWN key to change the year (Step is 1), then press OK key to confirm, and move to the setting of the hour.
- Repeat this operation to set the minute, day, and month by turn.
- The LCD will automatically display the corresponding day of the week.

If a FSK format caller ID signal is received, the current month, date and time display will be updated (while the year remains unchanged).

3.1.2.3 Change LCD Contrast

To change the display contrast, perform the following actions:

- When the LCD displays: CONTRAST ADJUST, press OK key.
- Use UP or DOWN key to select among 5 different contrast levels the one that you prefer.

Note The default setting is 3.

3.1.2.4 Set Flash

To adjust the flash setting, perform the following actions:

- When the LCD displays SET FLASH, press OK key.
- Use UP or DOWN key to select the flash time: 100ms, 120ms, 300ms, 600ms.
- Press OK key to confirm, or C key to exit.

3.1.2.5 Input phone Book Record

To insert a new number in the phone, perform the following actions:

- When the LCD displays: PHONEBOOK INPUT, press OK key once.
- Input the telephone number.
- Press OK key again to confirm the number.
- Input the name.

  Note Use C key to correct.
- When finished, press OK key again to confirm.
- To exit the operation, press C key.

3.1.2.6 Edit Phone Book record

To edit a phone number, perform the following actions:

- When the LCD displays: PHONEBOOK EDIT, press OK key once.
- Input the first character of name.
- Pressing OK key, will show the corresponding telephone number.
- If no character input, press UP or DOWN key to select the record that you want to edit.
- The cursor will be flashing on the last digit of the number by pressing OK key.
- Press C key to backspace the number and press OK key to confirm.
- The cursor will be flashing on the first digit of the name.
- Press C key to backspace, press OK key to confirm.
- To exit the operation, press C key.

3.1.2.7 Activate Baby-call

To activate the baby-call, perform the following actions:

- When the LCD displays BABYCALL, press OK key once.

  The LCD will display BABYCALL OFF (default).
- Use UP or DOWN key to turn it on.
- Press OK key to confirm.
- After inputting the BABYCALL number, press OK key to confirm.

Once BABYCALL is turning on, the LCD will display BABYCALL ON in idle display.

3.1.3 Operation at on-hook state

3.1.3.1 Receiving incoming FSK & DTMF caller ID

When receiving a phone call, the LCD will display the phone number together with the information of name, date, time, and the number if user had applied for the Caller ID service.

- A new number will carry a “NEW” icon,
- A repeated number will carry a “REP” icon.
- A message waiting will carry a # icon.
- A private call (when the caller prefers his/her number to be hidden) will display “PRIVATE CALL “.
- A call out of service will display “OUT OF AREA”.
- An incorrect incoming signal will display “NOT AVAILABLE”.

When the receiving phone call is a FSK format caller ID signal, the current month, date, and time display will be updated (while the year remains unchanged).

If there is no information from exchange, the name shown on the LCD will be the same as in the phone book.

3.1.3.2 Checking incoming caller ID

User can use UP or DOWN key to view the information of the incoming calls including phone number, date, and time.

3.1.3.3 Re-dialing an incoming caller ID

For a local call, just press the SPEAKER key when the caller’s number is on display.

3.1.3.4 Checking outgoing calls

User can use REDIAL key to view the outgoing numbers and duration of each call. To re-dial, press SPEAKER key or pick-up HANDSET directly.

3.1.3.5 Checking phone book

For checking the phone book perform the following actions:

- Press PHONE BOOK key and input the first character of name.
- By pressing PHONE BOOK key again, you can view the corresponding telephone numbers.
- When no character input, you can use PHONE BOOK key to view in sequence.
- To re-dial, press SPEAKER key directly.

3.1.3.6 Pre-dialing

Enter a phone number and press SPEAKER key to dial out.

3.1.3.7 Baby-call dialing

Press any key except the OK key to dial out the pre-set number when BABY CALL function has been turned on.

3.1.3.8 C key

The use of the C key is different in the modes of the phone.

1. In the setting mode:
   - Correct any input mistakes
   - Quit the setting
2. In the pre-dialing mode:
   - Correct any input mistakes

3.1.3.9 Delete key

The DELETE key can be used in different circumstances. Use the key accordingly:

- When scrolling outgoing calls, use DELETE key to delete a phone number.
- When scrolling incoming calls, use DELETE key to delete a phone number.

Note Press and hold DELETE key for 4 seconds to delete all incoming call records.

- When scrolling phone book, press DELETE key to delete a phone book record.

Note Press and hold DELETE key for 4 seconds to delete all phone book records.

3.1.3.10 Phone number store

There are more possibilities to store a phone number in the AlphaPhone 100 AS. To store a phone number, perform one of the following actions:

1. One-touch memory
   - On-hook + pre-dialling number + OK + Mx (x = 1 ~ 4)
   - On-hook + incoming call + OK + Mx (x = 1 ~ 4)
   - Dial out:
     - Off-hook + Mx (x = 1 ~ 4)
     - Press Mx (x = 1 ~ 4) first and then off-hook
2. Two-touch memory
   - On-hook + pre-dialing number + OK + N (N =1 ~ 9, 0, *, #)
   - On-hook + incoming call + OK + N (N = 1 ~ 9, 0, *, #)
   - Dial out: on-hook + M.. + N (N = 1 ~ 9, 0, *, #)
3. Phone Book memory
   - Incoming call + OK + PHONE BOOK + edit of phone book + OK

3.1.3.11 Ringer volume control

Ringer volume can be adjusted to 3 different levels of OFF / L / H by the slide switch (29) at the bottom.

3.1.3.12 Ring Indicator (Ringer LED)

The ring indicator will be blinking when there is an incoming call.

3.1.4 Operation at the off-hook state

3.1.4.1 Checking incoming and outgoing calls

Use the UP or DOWN key to view the information of the incoming calls including phone number, date, and time. Press REDIAL key to check outgoing call record with call duration.

3.1.4.2 Dialing for display mode

During the number shown on LCD such as incoming call, outgoing call, and phone book memory, press SPEAKER key, or pick up handset to dialing out the number.

3.1.4.3 Dialing Two-touch memory

Pick up the handset or press SPEAKER key and press M.. key and N (N=1 ~ 9, 0, * or #).

3.1.4.4 Call Time

The display shows the duration of a call-in progress since a number has been dialed out. Manual control is not available.

3.1.4.5 Pause key

Press PAUSE key to insert a delay time of 3.6 seconds in a dialing sequence.

3.1.4.6 Mute key

When during phone conversation, you do not want the person on the line to hear your voice, press MUTE key to cut off the microphone, MUTE ON will be prompted.

To resume conversation, press MUTE key again, MUTE OFF will be prompted.

3.1.4.7 FLASH key

During off-hook state, press FLASH key for recall that is used for some PSTN network and PBX services.

3.1.4.8 REDIAL key

When the phone is off-hook, press REDIAL key to dial out the phone number which was dialed out by user at the latest time.

3.1.4.9 In use / New call LED

The status of the phone is shown by the In use LED (21).

- The LED is turned on during the phone is off-hook.
- The LED will be blinking while there is a miss call.
- The LED will be turned off after viewing all missed calls in incoming call log.

3.1.5 Two-way speaker phone operation

3.1.5.1 Speaker mode

To make a call, press SPEAKER key to activate the speaker phone. Press SPEAKER key again to deactivate the speaker phone when the call is over.

3.1.5.2 Speaker volume control

To change the speaker volume, press VOL key to adjust the volume levels during off-hook state.

3.2 Operation of AlphaPhone 500 telephone

3.2.1 Visualization

Figure 18: AlphaPhone 500

3.2.2 Receiving a call

Whenever the phone rings, pick up the handset and use it as a standard telephone.

3.2.3 Making a call

Pick up the handset and dial the number you want to call.

3.2.4 Redialing last number

Pick up the handset, wait for a dial tone and press the “REDIAL” button.

To get a new dial tone, press the HOOK SWITCH or hang up the phone for 2 seconds. Then press REDIAL.

3.2.5 Flash button

The REDIAL button is used to send timed hook flash on the telephone line for accessing services such as call waiting and call forwarding. (Call waiting is telephone company service). FLASH may also be used to obtain a new dial tone. Be careful not to reset FLASH during normal conversation as this cause your party to be cut off.

3.2.6 Adjusting LED brightness

Press and turn the “LED ADJ” key to adjust the brightness of back light keypad.

3.2.7 Headset Connection

To activate the headset connected to the telephone by a plug, simply press “HS”.

When HS function is active, the HS LED on the telephone will be on.

3.2.8 Ringer HI / LOW Switch

When you don’t want to be disturbed on incoming calls, slide the ringer switch to “LOW” position. It is still possible to hear the ringer, but ringing sound will decrease. Switch to normal ringing sound by sliding the switch to “HI” position.

3.3 Operation of EBT430 telephone

3.3.1 Visualization

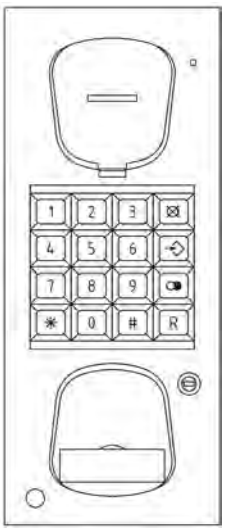

Figure 19: EBT430 buttons

3.3.2 Last number redial

The EBT430 telephone comes with the optional function to memorize the number of the partner you called at last. When the line is busy or the person you called does not answer the phone, you ring off for the time being. If you wish to call the same person again, you pick up the receiver, wait for the dial tone and press the last number redial. Now your phone will dial automatically the number you have dialed at last.

3.3.3 Memory

The EBT430 comes with 10 telephone number memories with 21 digits each.

For memorizing a number perform the following steps:

1. Pick up the receiver
2. Press the mute key
3. Press the key →◇
4. Choose a memory location (0-9)
5. Enter the phone number you would like to save
6. Press the mute key
7. For closing the procedure put down the receiver

Note A memory location already reserved can be overwritten by proceeding as mentioned above.

If you want to recall the memory, please proceed as follows:

1. Pick up the receiver
2. Press the key →◇
3. Press the key of the memory location (0-9)
4. Your telephone dials the saved number and you may hold your conversation as usual.

Often it is necessary to pause between the dialing of the digits. Only after this pause the dial tone is being signaled. You equal this when you press the key during the memorizing process. When the pause is made during the dialing of the first five digits, it takes 2 seconds. By pressing the key repeatedly, you may lengthen this pause accordingly.

If the pause is made after the fifth digit, the dialing stops during the memory recall and is only continued when pressing the key . This is a very useful function for some services. The number of the service is dialed and when the dial-up is completed, the identification code may be entered.

3.3.4 Mute key

It is possibility to activate muting with the mute key. Your dialog partner can't hear you anymore. By pressing the mute key once more you are back to normal.

3.3.5 Inquiry key

According to the adjustment, either a flash function or an earth function is activated by pressing the 'R' key. As a rule, this function is only required for private branch exchange switchboards for putting through incoming calls or for making an inquiry.

Note The pressing of the inquiry key will not be taken over in the last number memory and in the storage.

3.3.6 Temporary change-over of the dialing procedure

When the dialing procedure IWV is pre-set, it is sometimes necessary to change over to MFV temporarily. This is required for example if you to listen to your mailbox.

Please press the '*' key if you need to change over the dialing procedure during a telephone conversation. Now all the following digits will be dialed with the dialing procedure MFV. After ringing off the dialing procedure will be changed to IWV again automatically.

3.3.7 Programming of the ring-tone

The ring-tone is composed of 3 frequencies which generate the melody. It can be adjusted to several volumes and tone cycles.

Ring-tone adjustment procedure:

1. Pick up the receiver
2. Press the mute key
3. Press the '#' key
4. Enter now the desired adjustment of the ringing tone according to the following schedule:

Digit	Repetition frequency	Volume
1	slow (1 ringing, 50 ms pause)	-16 dB
2	slow (1 ringing, 50 ms pause)	-7 dB
3	slow (1 ringing, 50 ms pause)	0 dB (max.)
4	normal (4 ringings)	-16 dB
5	normal (4 ringings)	-7 dB
6	normal (4 ringings) **(basic setting)**	0 dB (max.)
7	quick (10 ringings)	-16 dB
8	quick (10 ringings)	-7 dB
9	quick (10 ringings)	0 dB (max.)
0	none (deactivates automatically when picking up the telephone receiver the next time)	OUT

Figure 20: EBT430 programming ring-tone

5. Press the mute key
6. Put down the receiver

3.3.8 The dial barring lock

Note Not integrated in all types of built-in telephones.

The dial barring lock locks the keypad and thus bars unauthorized persons from making outgoing calls.

The blocking (pos. 0) resp. unblocking (pos. 1) of the keypad is only active when the operation has been made with the receiver replaced or when the hook switch has been activated after-wards. Of course, you can continue to answer incoming calls.

3.3.9 The optical signaling

Your built-in telephone is equipped with an optical signaling. The green LED on top right gives visual signals according to the rhythm of the tone. That is how the tones of several telephones which are installed side by side can be distinguished.

3.4 Operation of dA24 telephone

3.4.1 Visualization

Figure 21: dA24 buttons

Note the description below is for the default key assignment.

3.4.2 Programming

The dA24 telephone can be programmed in the programming mode. To go into the programming mode, push-and-hold buttons 1 and 9 and then lift the handset (high acknowledgements 1 time).

Enter the PIN (high acknowledgements 2 time). You are now in the programming mode.

Now can as desired programming, up to the telephone handset be made. A successful programming is signaled with a high tone, a false programming with a deep tone.

3.4.2.1 Telephone adjustment

Function	Code	Settings	Default setting
Reset	00	255	
Flash Pulse-Time	01	001 - 060 (x 10ms)	008
Line Ground Pulse Time	02	010 - 255 (x 10ms)	080
Headset	08	000 (= without headset) or 001 (= with headset)	000
Automatic Dial by off-hook	11	000 (= off) or 001 (= dial 1st speed dialing no.)	000
DTMF and Pulse	12	000 (= pulse) or 001 (= DTMF)	001
Line Ground/Flash	13	000 (= line ground pulse) or 001 (= flash pulse)	001
Tone Ring Loudness	31	001 - 007 (1 = low, 7 = loud)	005
Tone Ring Melody	32	001 - 005	001
Exchange Code Number (only by Memory Call)	36	000 – 009 or 00* or 00# or 00R (Key for Exchange)	
Exchange Code Number Break	37	000 - 060 (x 100ms)	018

It is recommended to change the standard PIN (0000).

PIN (Personal Indication Number)	79	4-digit, 0 … 9, #	0000

3.4.2.2 Key assignment

Keys can be programmed for different functions.

Function	Code	Key No.	Default setting
Memory Dialing	21	013 (Key 'A'), 014 (Key 'B'), 015 (Key 'C'), 016 (Key 'R'), 017 (Key 'Left') (additional key option), 018 (Key 'Right') (additional key option)	015
Mute	22	013 – 018	013
Receiver Amplification 4x + 3dB	23	013 – 018	014
Switch over Headset	24	013 – 018	-
Line Ground/Flash	25	013 – 018	016
Speed Dialing No. 1-4	71-74	013 – 018	-
Short Dialing	30	013 – 018	-
Erase of the Key Occupation	28	013 – 018	-
Reset (to default settings)	29	255	-

3.4.2.3 Speed-dialing-numbers and short-dialing-numbers

4x speed-dialing-numbers and 10x short-dialing-numbers can be programmed.

To program speed-dialing-numbers and short-dialing-numbers, the telephone must be in the programming mode.

To program a speed-dialing-number or short-dialing-numbers;

1. Enter the code (successful programming is signaled with a high tone, a false programming with a low tone)
2. Enter the desired number
3. Press the 'A' key (successful programming is signaled with a high tone, a false programming with a low tone)

The speed dialing numbers can only be overwritten, and cannot be deleted. The short dialing numbers can be overwritten and deleted.

Function	Code	Key No.	Default setting
Speed Dialing 1–4	61-64	max. 22 e.g.: 112	-
Short Dialing 0–9	50-59		-
Short Dialing Erase 0–9	60		-

4 Operation of communication stations

4.1 Operation of AlphaConnect P211 communication station

4.1.1 Controls and visualization

Figure 22: AlphaConnect P211 plus headset and loudhailer

4.1.2 Making calls

Press one of the buttons of the AlphaConnect P211 or the PTT button of the headset. This will cause the AlphaConnect P211 to call the programmed telephone number (typically the bridge or ECR). The calling tone will be heard. When the call is answered, the answer will be heard in the loudhailer and headset. If the call is not answered, press the button again, and the call will be terminated.

4.1.3 Receiving calls

When anyone calls the AlphaConnect P211, the loudhailer will sound the ringing tone, the rotating light beacon relay will be activated (if applicable), and the bell relay will be activated (if applicable) according to the type of ringing signal received. The ringing tone will be heard in the headset too.

Calls are answered by pressing either the PTT button of the headset, speaking into the headset microphone, or by pressing one of the 3 keys, speaking into the horn speaker, which is used both as speaker and as the microphone.

4.1.4 Receiving paging calls

The loudhailer and the headset will be activated when a public-address call is received. The rotating light beacon relay is activated (if applicable) during the paging call. No user action is needed.

4.1.5 Conducting calls

The AlphaConnect P211 will select the microphone active based on the last push button pressed. If one of the 3 buttons on the keyboard is pressed, then the loudhailer is activated and acts as a microphone. When the PTT button of the headset is pressed, then the headset microphone is activated.

When conducting a call, it is always necessary to press a key while speaking, and release it while listening.

4.1.6 Terminating calls

The AlphaConnect P211 will terminate the call automatically when the far end terminates.

4.1.7 TalkBack calls

A TalkBack call is typically initiated from the bridge telephone. Initially the speaking part is the bridge telephone. All AlphaConnect P211 communication stations are listening to the current speaker. If any of the participants has something to report back, the participant can press one of the PTT buttons at their station. This will turn their station into the speaking part of the conference. All other stations will listen to the speaking part. The bridge telephone can regain the right to speak by pressing the PTT of the phone.

4.2 Operation of AlphaConnect P220 communication station

4.2.1 Controls and visualization

Figure 23: AlphaConnect P220 details

Item	Description
Call Sound Speaker	The speaker will sound whenever the telephone is ringing. Many installations have external horn/flash for boosting call indication.
Call indicator	A red indicator flashing when a call comes in.
Call activity indicator	A green indicator showing that the telephone is active. Flashing when the conversation is in push-to-talk mode.
Numerical keys	Used for dialing
Push-to-talk key	When pressed for more than 0.5 seconds, the microphone of the handset turns into push-to-talk mode. In this mode, the microphone of the handset is only turned on when the push-to-talk key is pressed, and it is muted when the key is released. This is useful in noisy environment. Return to full duplex mode can be done by pressing the push-to-talk key shortly (less than 0.2 sec).
Transfer key	Used for transferring a call to a 3rd party
Headset key	Key for starting and terminating a call using the headset only

Figure 24: AlphaConnect P220 plus handset and headset

Note the picture above is for information only (to show the reader a setup with both a handset and a headset).

4.2.2 Making calls

4.2.2.1 Using handset

Perform the following steps to make call using the handset:

1. Lift handset from its cradle and await the continuous dial tone to sound
2. Dial the number
3. Await the answering
4. Conduct the conversation
5. Terminate call by replacing handset

4.2.2.2 Using headset

Perform the following steps to make call using the headset:

1. Press the headset key and await the continuous dial tone to sound
2. Dial the number
3. Await answering
4. Conduct the conversation
5. Terminate call by pressing the headset key or by pressing the push-to-talk button of the headset 3 times fast.

When pressed for more than 0.5 seconds, the microphone of the handset turns into push-to-talk mode. In this mode, the microphone of the handset is only turned on when the push-to-talk key is pressed, and it is muted when the key is released. This is useful in noisy environment. Return to full duplex mode can be done by pressing the push-to-talk key shortly (less than 0.2 sec).

4.2.3 Receiving calls

When anyone calls the AlphaConnect P220 station, its speaker will sound the ringing tone, the red indicator will flash and the relay will be activated so a horn will sound (if applicable) or a rotating light beacon will flash (if applicable).

4.2.3.1 Using handset

Perform the following steps to answer a call with a handset:

1. When a call comes in, lift handset from its cradle
2. Conduct the conversation
3. Terminate call by replacing handset

4.2.3.2 Using headset

Perform the following steps to answer a call with a headset:

1. Press the headset key or the push-to-talk button of the headset
2. Conduct the conversation
3. Terminate call by pressing the headset key or by pressing the push-to-talk button of the headset 3 times fast

The AlphaConnect P220 station has the possibility of programming timed call terminations. This is used to make sure that a call is terminated when a user has forgotten to terminate the call after using the headset. Refer to the AlphaConnect Installation Manual for setup of timed call terminations.

4.2.4 Push-to-talk

When operating in a noisy environment, it can be convenient to mute own microphone when not speaking. This leads to better sound quality as noise picked up by own microphone is not mixed into earpiece of handset or ear-cups of headset. Push-to-talk mode for handset is controlled by the push-to-talk key of the keyboard whereas push-to-talk mode for headset is controlled by the push-to-talk button of the headset. For both buttons, press the button when speaking, and release it when not speaking. Returning to full duplex with the microphone steady on is done by giving the push-to-talk key a short push. Push-to-talk mode is indicated by the green indicator flashing, and full duplex is indicated by the green call activity indicator steady on.

4.2.5 Switching from handset to headset

After starting a call using the handset, it is possible to turn the call into a headset call by pressing the headset button and returning the handset into headset its cradle.

4.2.6 Switching from headset to handset

After starting a call using the headset, it is possible to turn the call into a handset call simply by lifting the handset from its cradle.

4.2.7 Transfer a call

If a call should be transferred to a third party, then press the R button and wait for the dial tone. Key the third part to call. Hang on the handset or headset, or wait for the third party to answer.

4.3 Operation of AlphaConnect P411 communication station

Note that the operation, controls, and visualization for the AlphaConnect P412 and the AlphaConnect P411 is the same.

4.3.1 Controls and visualization

Figure 25: AlphaConnect P411 details

Item	Description
Speaker	The speaker is used for hands-free conversation, but also used for creating the ringing sound, and it is used for receiving PA announcements.
Display	Used for displaying incoming call, menu items and conversation mode.
Menu key	Used for choosing one of the 6 short numbers. When pressed for 5 seconds the menu system is entered. Used also for “accept” when adjusting parameters using the menu system.
Light sensor	Sensing the ambient light. Used for auto dimming the display and keyboard back-light.
Numerical keys	Used for dialing
Transfer key	Used for transferring a call to a 3rd party
Push-to-talk key	Used for initiating a push-to-talk call and for accepting an incoming call in push-to-talk-mode. When pressed in hands-free, the call turns from hands-free into push-to-talk. When pressed shortly a push-to-talk call can be transferred into hands-free. This key is used as speech direction control button when a TalkBack call is made to one or more AlphaConnect P211 TalkBack stations.
Function keys	Used for speed dial when set up as so. When pressed for more than one second, the F1 key will initiate a headset call.
Up /Down keys	Pressing these keys will adjust back-light when station is idle. When pressing these keys in conversation, the volume will be adjusted. When the menu system is invoked, these keys are used for adjusting parameter values.
Call indicator	Flashing quickly when a call comes in. Flashing slowly indicating a missed call. This indication has a 5-minute timeout. Use the up/down keys to scroll through the list of missed calls.
Microphone	Used for hands-free conversation, and for push-to-talk conversation.
Hands-free key	Used for initiating a hands-free call and for accepting an incoming call in hands-free. Always used for terminating calls and closing the menu system

4.3.2 Making calls

The AlphaConnect P411 can be in conversation in the following modes:

- Hands free mode
- PTT mode (push to talk - simplex)
- Handset mode
- Headset mode

The hands-free key initiates a hands-free call. The push-to-talk key initiates a PTT call. A handset call is started when the handset is lifted. A headset call is started either when pressing the PTT button of the headset or by pressing the F1 key for 2 seconds (in which case must not be programmed as speed dial)

4.3.2.1 Hands-free

Perform the following steps to make a hands-free call with the standalone hands-free only communication station:

1. Dial number using the numeric keys
2. Press the hands-free key
3. Await dialing and the answering
4. Conduct the conversation

Terminate by pressing the hands-free key

4.3.2.2 Push-to-talk

Perform the following steps to make a push-to-talk call with the standalone hands-free only communication station:

1. Dial number using the numeric keys
2. Press the push-to-talk key
3. Await dialing and the answering
4. Conduct the conversation using the push-to-talk key whenever speaking
5. Terminate by pressing the hands-free key

4.3.2.3 Using handset

Perform the following steps to make call using the handset:

1. Lift handset from its cradle and await the continuous dial tone to sound
2. Dial the number
3. Await the answering
4. Conduct the conversation
5. Terminate call by replacing handset

4.3.2.4 Using headset

Perform the following steps to make call using the headset:

1. Press F1 for more than 1 second and await the continuous dial tone to sound
2. Dial the number
3. Await answering
4. Conduct the conversation
5. Terminate call by pressing the hands-free key

4.3.2.5 Speed dial

For quick and fast dialing, the F1-F3 works as speed dial keys – if programmed as such. Pressing one of them and the phone will call one of the 3 pre-programmed numbers.

4.3.2.6 Memory dial

Press M and then F1-F3 and the display will show name and number of the selected memory location. Press F1-F3 for selecting memory location or use '▼' or '▲' to scroll through M1 to M6 or 'M' to jump from M1-M3 to M4-M6.

4.3.2.7 Last number redial

To re-dial last number, press 'R' and lift the handset or press speaker.

4.3.2.8 Call list and redial

There are two call lists in the memory. One for outgoing calls, one for incoming calls. Each list has 10 entries indexed from 1 to 10 where 1 is the latest. When entering the list, latest call is shown. Use '▼' or '▲' to scroll through the list. The list will roll from 10 to 1 or from 1 to 10.

Calls marked with '!' in incoming call list, are missed calls.

If the phone is indicating a lost call when idle, '▼' or '▲' works as short cut to incoming call log.

4.3.3 Receiving calls

An incoming call is accepted by pressing the speaker button – entering hands free, by pressing the PTT button – entering PTT mode conversation, by lifting the handset – entering a normal handset conversation, or by pressing the F1 or PTT of the headset.

4.3.3.1 Hands-free

Perform the following steps to answer a call, in hands-free mode with the standalone hands-free only communication station:

1. Press the hands-free key
2. Conduct the conversation in hands-free
3. Terminate by pressing the hands-free key

4.3.3.2 Push-to-talk

Perform the following steps to answer a call, in push-to-talk mode with the standalone hands-free only communication station:

1. Press the push-to-talk key
2. Conduct the conversation using the push-to-talk key whenever speaking
3. Terminate by pressing the hands-free key

4.3.3.3 Using handset

Perform the following steps to answer a call with a handset:

1. When a call comes in, lift handset from its cradle
2. Conduct the conversation
3. Terminate call by replacing handset

4.3.3.4 Using headset

Perform the following steps to answer a call with a headset:

1. Press the push-to-talk button of the headset or

   Press F1 for more than 1 second
2. Conduct the conversation
3. Terminate call by pressing the hands-free key

4.3.3.5 Direct-in

If the station received a direct in call, it automatically turns into hands free and the conversation can begin without any hands on.

4.3.3.6 Terminating a call

All calls are terminated either by hanging up the handset, pressing the speaker button or automatically by the Alphatron exchange system.

4.3.3.7 Push-to-talk

When operating in a noisy environment, it can be convenient to control own microphone, so noise and disturbing sounds will not affect the hands-free switching. When a call is started in hands-free, it can be turned into push-to-talk by pressing the push-to-talk key, and hands-free can be regained by giving the push-to-talk key a short push. The display will show the mode currently in use.

4.3.3.8 Switching from handset to hands-free

A conversation can be transferred between the conversation handset modes, using either hands-free, push-to-talk, or handset. The principle is that the last active device is the one being used. For switching from headset or handset to hands-free it is necessary to pass via push-to-talk mode by first pressing the push-to-talk key and after that entering hands-free by giving the push-to-talk key a short push. This is because when in conversation, pressing the hands-free key means terminating the call.

4.3.3.9 Headset push-to-talk

When a headset is connected having a push-to-talk button, a call can be received and accepted by pressing the push-to-talk button of the headset. A short activation of the headset push-to-talk will turn the headset conversation into full duplex.

4.3.3.10 PA call and PA volume

The stations can receive PA calls. The volume for priority PA is fixed, whereas the volume of non-priority PA calls can be adjusted during the PA call or by using the configuration menu.

4.3.4 Push-to-talk

When operating in a noisy environment, it can be convenient to control own microphone, so noise and disturbing sounds will not affect the hands-free switching. When a call is started in hands-free, it can be turned into push-to-talk by pressing the push-to-talk key, and hands-free can be regained by giving the push-to-talk key a short push. The display will show the mode currently in use.

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4.3.6 Headset push-to-talk

When a headset is connected having a push-to-talk button, a call can be received and accepted by pressing the push-to-talk button of the headset. A short activation of the headset push-to-talk will turn the headset conversation into full duplex.

4.3.7 PA call and PA volume

The stations can receive PA calls. The volume for priority PA is fixed, whereas the volume of non-priority PA calls can be adjusted during the PA call or by using the configuration menu.

4.3.8 The menu system

The AlphaConnect P411 (and AlphaConnect P412) has a comprehensive menu system which is described in this section. The menu is typically used for system setup.

4.3.8.1 Navigating in the Menu

To enter the menu system, press and keep ‘M’ pressed for approx. 2 sec. Use key up and down for navigating, and select a menu using the M key. To exit the menu system, wait 10 seconds, or press the speaker key.

4.3.8.2 The Menu - overview

Below an overview of the menus available:

- ENTRY
- Speaker volume
- Back-light
- Ringer volume
- P.A. volume
- Bell signal
- Calls out
- Calls in
- SET_UP_MENU
    - Auto answer
    - Auto busy
    - Direct in
    - Hands free
    - External speaker
    - Date & Time
    - Speed dial
    - Memory 1-6
    - SPECIAL_SETUP
        - Dial signal
        - Loop dial type
        - Remote PTT
        - Remote Hook switch
        - Lcl Ext Mic
        - Headset microphone type
        - Headset VOX
        - Local microphone gain
        - Handset microphone gain
        - Headset microphone gain
        - External microphone gain
        - Relay mode
        - Relay hold off
        - Contrast (display)

The following sub-sections describe the use of each of the set-up items.

4.3.8.3 Speaker Volume

Used to pre-set the speaker volume.

4.3.8.4 Back-light

Adjust level of back-light.

4.3.8.5 Ringer Volume

Set the level of the ringing sound.

4.3.8.6 P.A. Volume

Set the volume of a non priority PA call.

Note the volume of a priority PA call is fixed and cannot be changed.

4.3.8.7 Bell Signal

Choose the type of ringing signal sounding when and incoming call is active.

A sample is played when the type is altered.

4.3.8.8 Calls Out

This is the outgoing call list. If list entry is empty, time will show '- - -'

Picking from the list for making a call can be made by selecting an index and initiate a call.

4.3.8.9 Call In

Same as ‘Calls out’ but shows received call.

4.3.8.10 Auto Answer

Set the number of ringing signals received before the station automatically hooks off and enters hands free conversation.

Use the auto busy function to make it detect busy tone and hang on again.

This feature is used to simulate direct-in when the stations are used with a non Alphatron exchange, which is not capable of communicating the direct-in to the stations.

4.3.8.11 Auto Busy

When this feature is enabled, the station will try to detect a busy tone on the line. If a busy tone is detected, then an automatic hook on will be performed.

This feature is to be used with the auto answer when making a simulation of direct-in on a non Alphatron exchange, which is not capable of communicating the direct-in to the stations.

4.3.8.12 Direct In

This set up parameter can be used to enable and disable the direct-in calls to a station.

4.3.8.13 Hands Free

Set the stability margin used when the station is in hands free.

The range is 10dB to 40dB.

With a station only using build in hands free microphone and build in hands free speaker, this parameter seldom need adjustments. But if an external speaker is installed and used in hands free, this parameter must always be tuned.

A low value gives the maximum hands-free comfort, but also the highest risk of howling and feedback. Setting a high value reduces the risk of feedback, but also reduces the comfort of using hands free, as the switching between speech directions is heavier and more accentuated.

The right setting is the lowest value giving stability and no feedback under all circumstances.

Using an external speaker located well in distance of the hands-free microphone gives the optimal change of being able to use a low stability margin, and thereby the highest quality of hands free conversations.

4.3.8.14 External Speaker

Enable the external speaker to be on by default. When starting conversations and when ringing.

4.3.8.15 Date & Time

Adjust the date and time. To be used if the exchange to which the station is connected is not capable of sending data and time using FSK.

Data format MUST be text string like : YY/MM/DD HH:MM.

Note Settings will be overwritten by any FSK data issued from the telephone exchange and is not preserved when power is off.

4.3.8.16 Speed Dial

This menu is used to program the F1, F2, and F3 speed dial buttons.

4.3.8.17 Memory Dial

The menu to use when programming the 6 memory dial locations.

Use the 'F1'-'F3' to select M1-M3 / M4-M6 or use '▲' or '▼' to change to M4-M6 / M1-M3.

4.3.8.18 Dial Signal

Choose loop disconnect dial (pulse dial) or DTMF signaling for dialing numbers to the line.

4.3.8.19 Loop Dial Type

Choose international or Swedish coding of digits for loop dialing numbers to the line.

4.3.8.20 Remote PTT

When this function is enabled, the headset PTT input can be used as a PTT button for using the external speaker as microphone. Just like for the AlphaConnect P211 communication station

4.3.8.21 Remote Hook Switch

When this function is enabled, the handset hook switch input can be used as a PTT button for using the external speaker as microphone. Just like for the AlphaConnect P211 communication station.

4.3.8.22 Local External Microphone

Enabling this parameter will change the function of the headset PTT and the headset microphone inputs.

The function is meant to be used on a bridge where the AlphaConnect P411 station cannot be located at the position where from communication is needed. On that location, a goose neck microphone can be installed – connected to the headset microphone input - and a push button or foot switch installed -connected to the headset PTT input.

The push button or foot switch is used for accepting incoming calls, just as if pressing the PTT button on the AlphaConnect P411 itself. If hands free communication is wanted, a short push will turn the AlphaConnect P411 into hands free.

Obviously calls cannot be made from this position, as this requires dialing at least some digits.

4.3.8.23 Headset microphone type

Select if the headset microphone is an electrets or dynamic type.

4.3.8.24 Headset VOX

This parameter, when set to enable, activates the headset VOX function. This is a voice controlled PTT function on the headset.

Using the PTT function reduces noise from the station, and reduces the noise heard in own headset ear cups, as the microphone of the headset is first turned on when speech is detected.

4.3.8.25 Local microphone gain

Enter this menu to adjust the gain of the hands-free microphone.

This is used for adapting to different ambient noise levels, where the gain can be reduced for noisy environments, and the amplification can be increased where silence is present.

Be aware that increasing the gain automatically adds to the necessary hands-free stability margin, so choosing a high gain adds to the feeling of the hands-free speech direction switching, whereas reducing gain increases the hands-free comfort.

Adjusting the gain is assisted by a level meter displayed when the menu is chosen.

A good practice is to speak to the microphone, and increase the gain until the P (peaking) is seen, after which the gain is reduced two steps.

4.3.8.26 Handset microphone gain

A menu used for adjusting the gain of the handset microphone.

Tip

- TIP!
- Lift the handset and wait 20 seconds for timeout, then enter the menu while having the handset in your hand.

4.3.8.27 Headset microphone gain

A menu used for adjusting the gain of the headset microphone.

Note Headsets are used in noisy areas, and when noise reaches 120 dB, this parameter need to be adjusted to its minimum in order to keep the input stages operating in their linear range.

4.3.8.28 External microphone gain

This menu is used for adjusting the gain of the input amplifier when the local speaker is used as microphone.

4.3.8.29 Relay mode

This menu item is controlling the behavior of the relay:

Name	Relay activated on
Ring	Ringing
PA	PA call received
Ring + PA	Ringing or PA call received
Invert	Active always
Inv. Ring	Not activated when ringing
Inv. PA	Not activated when PA call is received
Inv Ring + PA	Not activated when ringing or PA call is received
Call	Activated when the telephone is active in a call (Used for PA speaker mute)

4.3.8.30 Relay hold off

Enable this function if the relay shall have a hang over time keeping it activated between ringing signals.

4.3.8.31 Contrast

Adjusting the contrast of the display.

4.4 Operation of AlphaConnect P421 communication station

Operation, controls, and visualization is the same as for the AlphaConnect P411 communication station. See *Operation of AlphaConnect P411 communication station* on page 52.

5 Appendices

5.1 Appendix A: Features and specifications of telephones and communication stations

5.1.1 Appendix A1: Features and specifications of AlphaConnect P211 communication station

- Box version
- IP65 enclosure
- EN60945 compliant
- 3 call buttons (plus headset PTT)
- 15W speaker driver (need power supply)
- Speaker used as microphone in TalkBack
- Connection for headset and external speaker
- Built-in relay contact for driving flash/ horn
- 4 wires needed (1 pair speech, 1 pair power supply)
- Receives PA calls
- Receives Alarm calls
- Receives talk-back calls as slave station
- -25 to 70 degrees Celsius operation

5.1.2 Appendix A2: Features and specifications of AlphaConnect P220 communication station

- Box version
- Watertight (IP65)
- EN60945 compliant
- Type approved
- Need handset, headset to talk or listen
- Full duplex and PTT mode
- Connection for handset and headset
- Built-in relay contact for driving flash/ horn
- 2 wires needed

5.1.3 Appendix A3: Features and specifications of AlphaConnect P411 communication station

- Flush mount version
- Type approved
- Built-in relay contact for driving flash/ horn
- Display with auto dimmed red back-light
- 4 wires needed (1 pair speech, 1 pair power supply)
- Full duplex, hands-free and PTT
- Connects handset
- Connects headset (8 ohms 1W)
- Connects 10W external speaker
- Connects external microphone and foot-switch
- Volume adjustment
- 3 speed dial buttons
- Busy tone disconnects
- 4 ringing sounds
- 18-32V DC power 250mW standby max. 15W operating
- 25 to 70 °C operation
- Line voltage 20-50V DC ringing 40-90Vrms @20-50Hz
- Line impedance 600ohm
- DTMF & LD dialing
- Relay contacts 24V DC 1A.
- Hands free speaker output 85dB 1m
- Hands free microphone max 110dB
- Headset speaker out 1W 8ohm
- External speaker out 12W > 8ohm
- EN60945 compliant

5.1.4 Appendix A4: Features and specifications of AlphaConnect P421 communication station

- Box version
- Type approved
- Built-in relay contact for driving flash/ horn
- Display with auto dimmed red back-light
- 4 wires needed (1 pair speech, 1 pair power supply)
- Full duplex, hands-free and PTT
- Connects handset
- Connects headset (8 ohms 1W)
- Connects 10W external speaker
- Connects external microphone and foot-switch
- Volume adjustment
- 3 speed dial buttons
- Busy tone disconnects
- 4 ringing sounds
- 18-32V DC power 250mW standby max. 15W operating
- 25 to 70 °C operation
- IP22 and IP65 enclosure
- Line voltage 20-50V DC ringing 40-90Vrms @20-50Hz
- Line impedance 600ohm
- DTMF & LD dialing
- Relay contacts 24V DC 1A.
- Hands free speaker output 85dB 1m
- Hands free microphone max 110dB
- Headset speaker out 1W 8ohm
- External speaker out 12W > 8ohm
- EN60945 compliant

5.1.5 Appendix A5: Features and specifications of AlphaPhone 100AS telephone

- Caller ID display for FSK / DTMF incoming calls
- Menu Language: English / Dutch / French / German.
- Incoming call log: 100 fixed records (consists of 16 characters and 32 digits)
- Phone book: 100 records (consists of 16 characters and 32 digits)
- 16 outgoing call records
- Two-way speaker phone
- Tone dialing only
- 12 two-touch memories
- 4 one-touch memories
- LCD contrast adjustment
- Pre-dialling
- Real time clock
- Redial / Flash / Pause functions
- Microphone mute with on-screen indication
- Digital speaker volume control
- Switchable ringer volume control High / Low / Off levels
- Ringer indicator
- BABY CALL with a maximum length of 16 digits (with on-screen indication)
- In-use / new call indicator
- Telephone line power operation

5.1.6 Appendix A6: Features and specifications of AlphaPhone 500 telephone

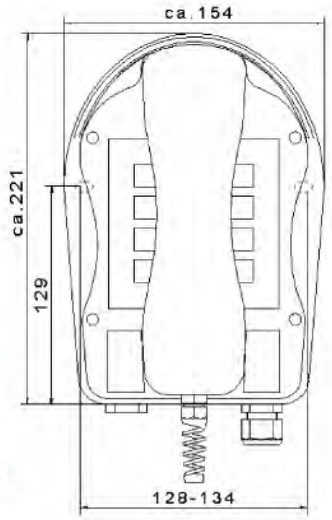
- Last number redial
- Vertical/horizontal mounting
- Equipped with magnet in the handset instead of a hook
- Adjustable back-light
- Not watertight (IP22)
- Adjustable volume (6 levels)
- Connection for handset, headset
- 2 wires needed

5.1.7 Appendix A7: Features and specifications of EBT430 telephone

- Last number redial
- Mute key
- Flush mounting
- Acoustic signaling switchable (volume and sound characteristics)
- Optical signaling
- Memory for 10 abbreviated dialing
- Handset support in plastic cavity
- Mute key
- Dialing procedure (IWV/MFV) to be adjusted temporarily or permanently
- Alarm key switchable (ground/flash)
- Dial barring lock
- Crosswise mounting possible (keypad can be rotated 90°)
- Vertical mounting possible –
- Connecting cable 3m, phone jack plug

5.1.8 Appendix A8: Features and specifications of dA24 telephone

Type:	dA24
Storage Temperature:	-40°C.....70°C
Relative Humidity:	max. 95 %
Case Protection:	IP 66
License:	TÜV 03 ATEX 2287
Operating Temperature / Explosion Enclosure:	Ex II 2 GD
-25°C ≤ Ta ≤ 40°C :	EEx m ib e [ib] IIC T6
-25°C ≤ Ta ≤ 60°C :	EEx m ib e [ib] IIC T4
-25°C ≤ Ta ≤ 60°C :	Ex tD [ibD] ibD A21 IP66 T85°C



Those max. surface temperature of the T85°C was determined without dust edition (procedure A of the EN 61241-14)
By connection of the separate certificated headset, Nemko 02 ATEX 059 X, is the maximum ambient temperature 40°C by the temperature class T4 and restricted for Ex II 2 G.

Electrical Specifications:

Supply Voltage	=	$20V_{DC} – 60V_{DC}$
Supply Current	=	$15mA_{DC} – 60mA_{DC}$
Ringing Voltage	=	$24V_{AC} – 90V_{AC}$ (20-60Hz)
		$30V_{AC} – 90V_{AC}$ (16-60Hz)

The set fuse has a disconnecting power of 35A.
Maximum permissible short-circuit current of the telephone line $I_k = 35A$

Dialing mode selection:	DTMF or Pulse Dialing
Connection:	analog 2-wire at La and Lb , second ringer at Lb and W2 earth at E
CE-Conformity:	EN 50081, 50082, 60950, 50014, 50019, 50020, 50028 Line Approach according CTR21+
Loudness Level:	60dB(A) - 90dB(A) in 1m distance
Functions:	Per push buttons 4-6 functions, memory dialing, mute, line ground or flash, receiver amplification 4x + 3dB, headset, 4 speed dialing numbers, short dialing
Connection Terminals:	Clamping Range 0,5 – 2,5 mm²
Cable Glands:	accordance instruction 94/9/EG (ATEX) 1x M16x1,5, Ø 5 – 8mm / 1x M16x1,5 dummy plugs 1x M12x1,5, Handset / 1x M12x1,5 dummy plugs
Handset Cord:	only allowed with Vershoven spare parts
Material:	PA 12 (Vestamid®) Surface Resistance $<10^9$ Ohm
Dimensions / Weight:	Height/Width/Depth = 221 / 154 / 105 / nearly 2 kg

Figure 26: dA24 technical specifications

Source: Instructions for use Ex Telephone Type dA24

5.2 Appendix B: Noise level information

The following table shows typical noise levels to be encountered on ships. This table can be used as an aid only to choose among the list of telephones and communication stations.

Location	Noise level (dB)
Accommodation	< 60
Bridge	50-60
Engine control room	65-75
Engine spaces	80-100
Steering gear room	100-120
Close to engine or generators	100-130

The following table shows communication station capabilities for operation in certain noise. This table can be used as an aid only to choose among the list of communication stations.

Communication station	Noise level (dB) capability for operation
AlphaConnect P211	Push to talk operation up to 100 dB
	Headset operation up to 120 dB
AlphaConnect P220	Handset operation up to 85 dB
	Headset operation up to 100 dB
AlphaConnect P411	Hands free with build in speaker and microphone up to 75 dB
	Hands free with external speaker up to 85 dB
	Push to talk conversations with external speaker up to 100 dB
	Operation with headset in up to 120 dB
AlphaConnect P421	Hands free with build in speaker and microphone up to 75 dB
	Hands free with external speaker up to 85 dB
	Push to talk conversations with external speaker up to 100 dB
	Handset conversations up to 85 dB
	Operation with headset in up to 120 dB

5.3 Appendix C: System call numbers

The table below shows the default numbers of facilities and extensions.

System call number	Default	Comment
Priority call	*	
Trunk lines	00	
Audio in/out	01	
Extensions	10, 11, 12..	
CDM system access to outgoing call	#10	
Order a single wake-up call	#110	
Order a repeated wake-up call (every day, until by a new wake-up call order)	#111	
Cancel an ordered wake-up call	#112	
Set date	#120	
Set time	#121	
Call pick-up	#06	
Conference (TalkBack)	#07	
Paging call	#08	
Alarm call	#09	

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Document name : AlphaConnect Classic
Document nr. : 1019-03
Version : V1.0

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