

Installation Instructions for the Communication Equipment for NetWork Rail Lifts

Introduction

The requirement for the communication equipment, which is to be installed, should not only provide the usual voice link between the lift car and Helpers, who can assist the distressed Passenger, but the equipment must take into account the disabled members of our community.

If the Windcrest system is installed, the usual Autodialler voice link will be provided, as will the interface for an Inductive amplifier, Visual indication of the alarm status, speech annunciation within the lift car as well as the landing together with Intercoms from the top of lift car, the car, the lift pit and each of the landings.

The equipment is mains powered and battery backed. Further, if a Telephone Line is not installed, a cellular solution can be provided.

Components in the System

The following equipment is available for a complete installation. Please note not all the equipment will be provided unless ordered.

Autodialler Unit	1 off	per lift
Lift car (with Inductive Loop) Speaker box assembly	1 off	per lift
Top of car Speaker box assembly	1 off	per lift
Pit Speaker box assembly	1 off	per lift
Landing Intercom Main Unit	1 off	per lift.
Landing Speaker box assembly	1 off	per landing
Speech synthesisor	1 off	per lift car
Speech synthesisor	1 off	per landing

Autodialler Unit

The Autodialler, which is to be installed, is not a standard autodialler. The unit is a more complex and sophisticated unit. It has the ability to announce the location of the lift car. It also has more advanced features specifically designed of the Rail Track specification.

Lift car (with Inductive Loop) Speaker box assembly

The speaker box assembly has been designed to provide the two-way hands-free communications and an inductive loop. The speaker box assembly is longer than the usual Windcrest speaker box assembly. (If problems are encountered in the installation due to space restrictions, call Windcrest for an alternative size speaker box assembly).

The assembly is terminated with two cables. One with the usual BT Type cable with a BT Plug, and the other (inductive loop) with a White cable with a Red blue and Black wires .

Top of car & Pit Speaker box assembly

The Top of car and the pit boxes are surface mount assemblies. The terminations of the speaker box assemblies are as follows: -

Blue Cable	Pink wire	Push Button
	Gray wire	Push Button
	Blue wire	Audio Voice communication
	Yellow wire	Audio Voice communication

Landing Intercom Main Unit

This unit is the main connection box for the Autodialler, and all the speaker boxes around the lift installation. It has a large PCB onto which various terminals exist, a speaker box, and push buttons mounted on the lid, a power supply with back up batteries mounted in the base of the unit.

Landing Speaker box assembly

The landing speakers are supplied without face plates and include a push button and led. These speakers are to be fitted into your metal work.

Lift car Speech synthesisor- maybe supplied by others.

The speech synthesisor provides the announcements of the floors, door operation and direction; again special messages are also provided.

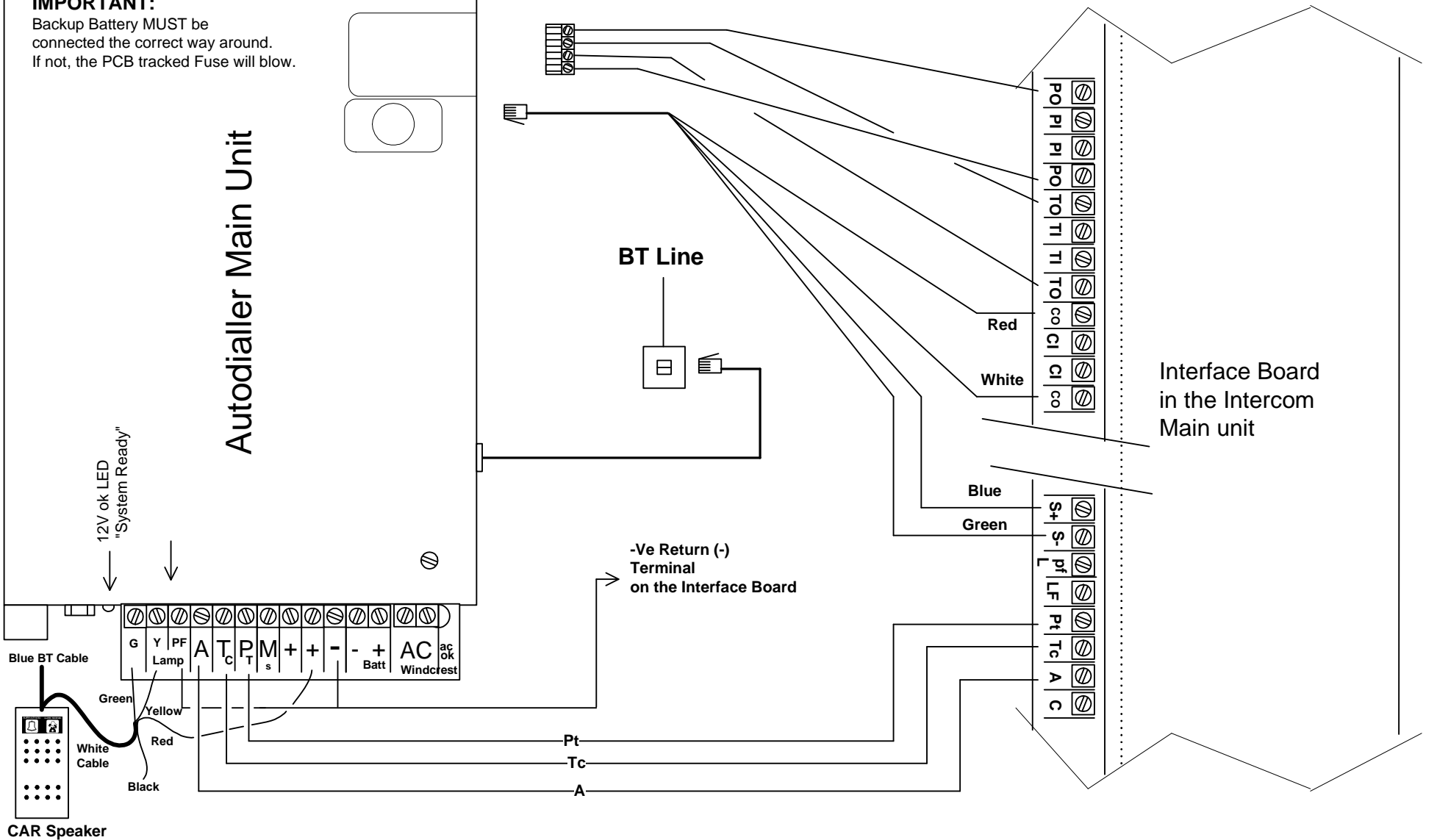
Landing Speech synthesisor- maybe supplied by others.

The speech synthesisor provides "Lift call accepted" under normal conditions, and "Lift out of service" when the lift is out of order. This announcement is made when the landing Push button is pressed. Please note, a signal will be required, which is a positive feed (via Voltage free contacts from the lift controller) and the triggering of the speech prompt is from the Push Button on the landings. ie -Ve return for the speech synthesis unit.

IMPORTANT:

Backup Battery MUST be connected the correct way around.
If not, the PCB tracked Fuse will blow.

Autodialler Main Unit

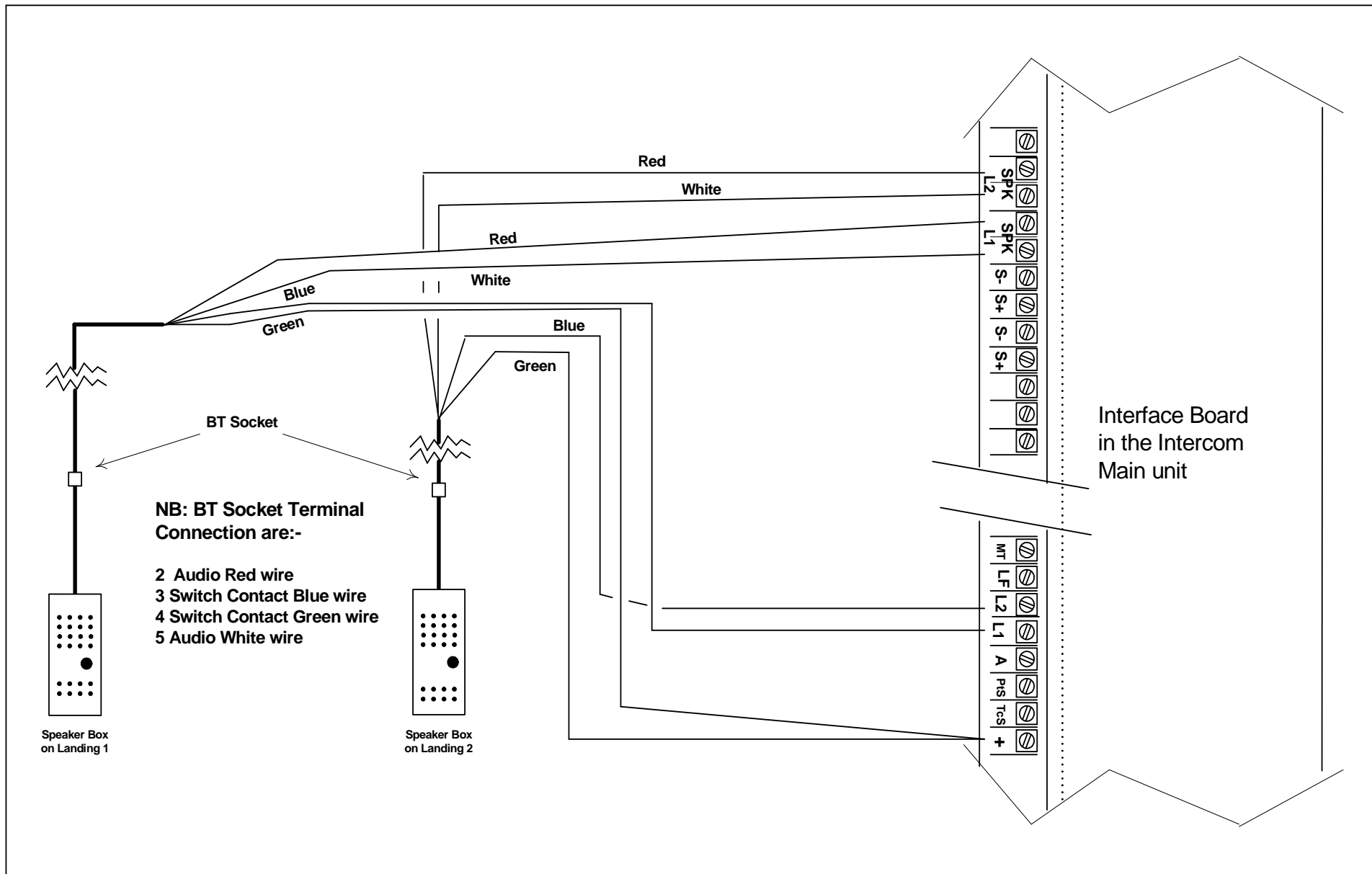


Wiring of the Autodialler & Interface Unit

Drawing: ad&hw_1 20/04/04

Windcrest

Tel: 0208 795 0333
Fax: 0208 795 0444

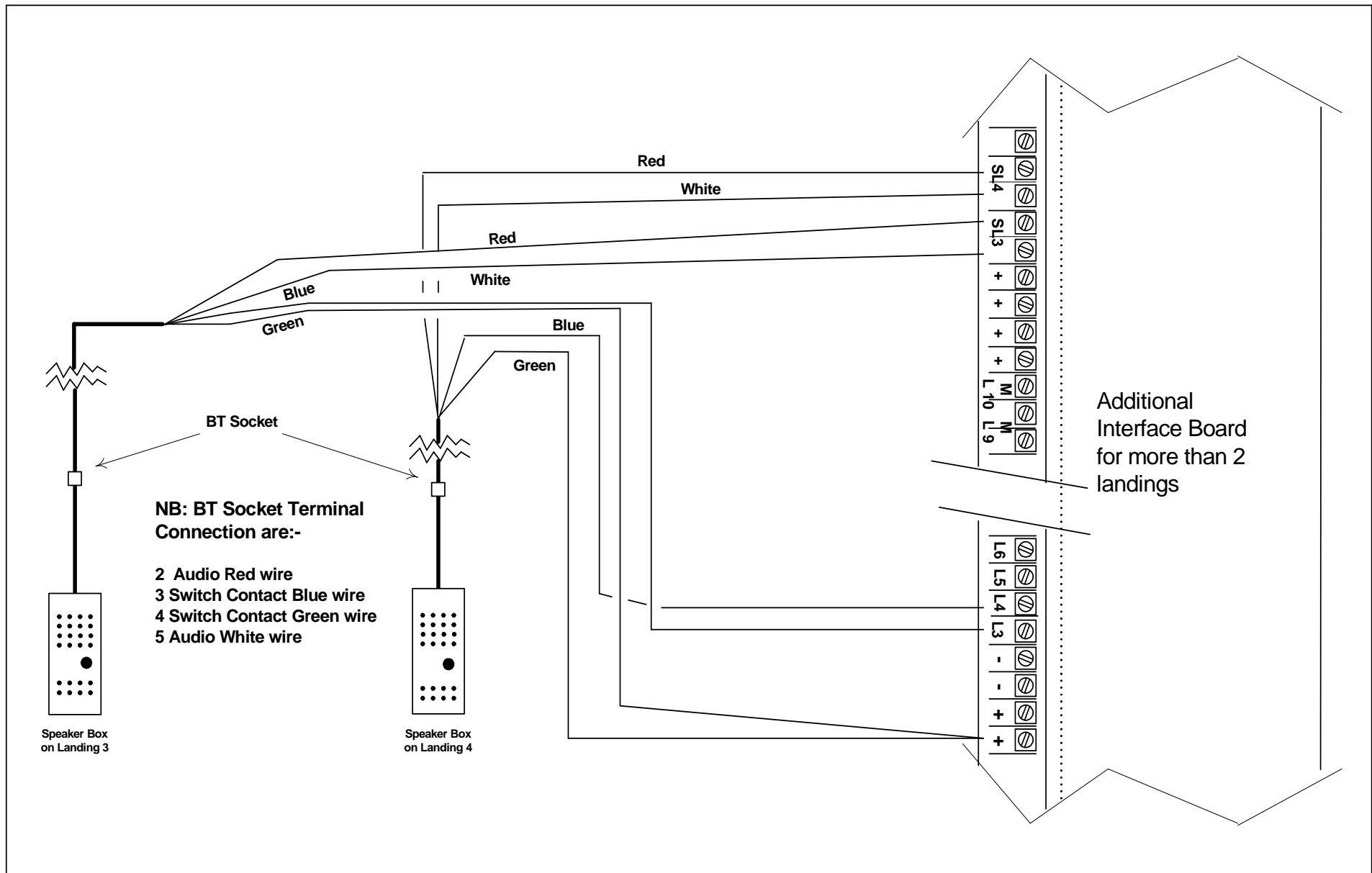


Landing Speaker Box Connection

Drawing: ad&hw_1 20/04/04

Windcrest

Tel: 0208 795 0333
Fax: 0208 795 0444



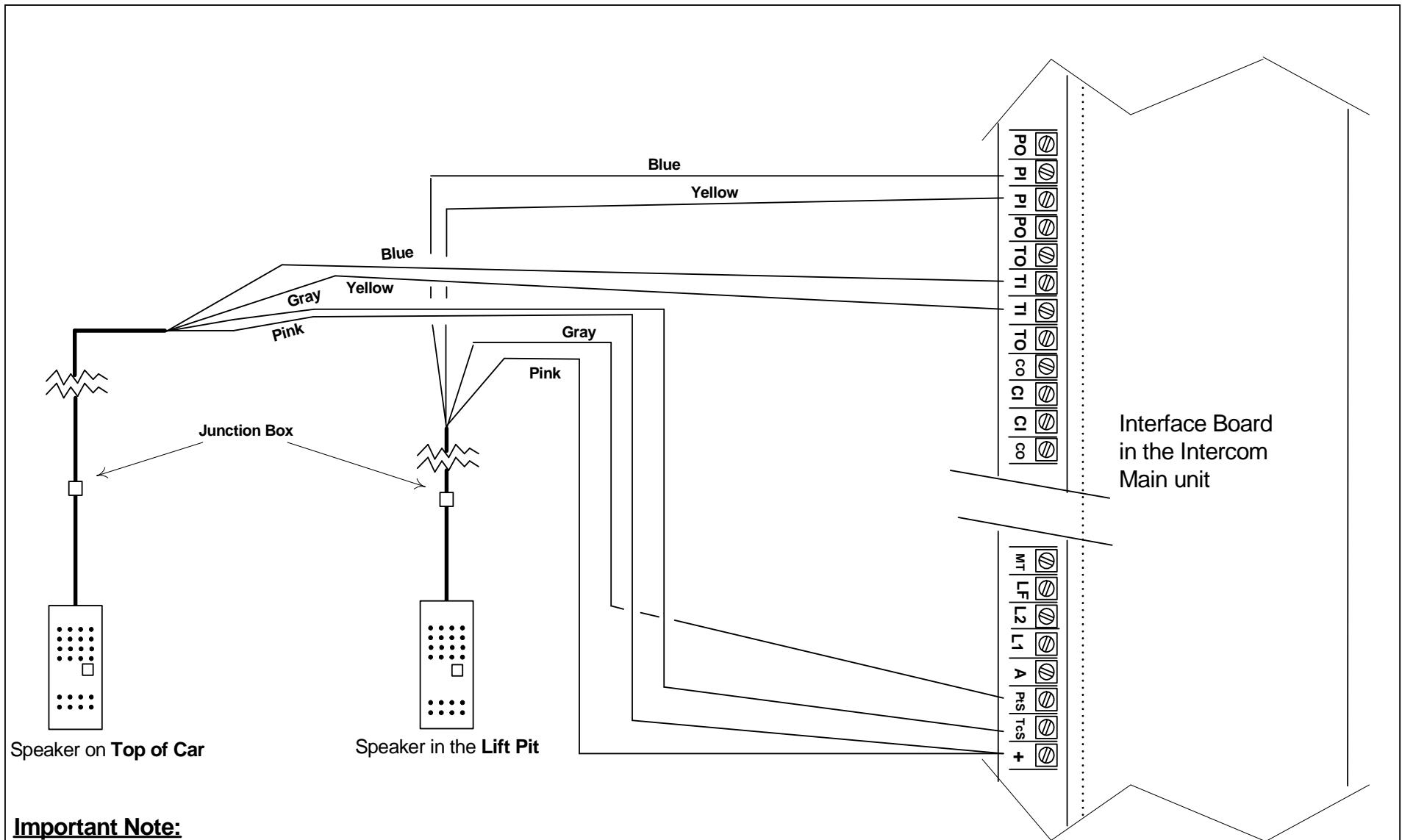
Additional Landing Speaker Box Connection

Drawing: ad&hw_2 20/04/04

Windcrest

Tel: 0208 795 0333

Fax: 0208 795 0444



Important Note:

For installation with 2 button Pit & Top of Car speaker please refer to page 8

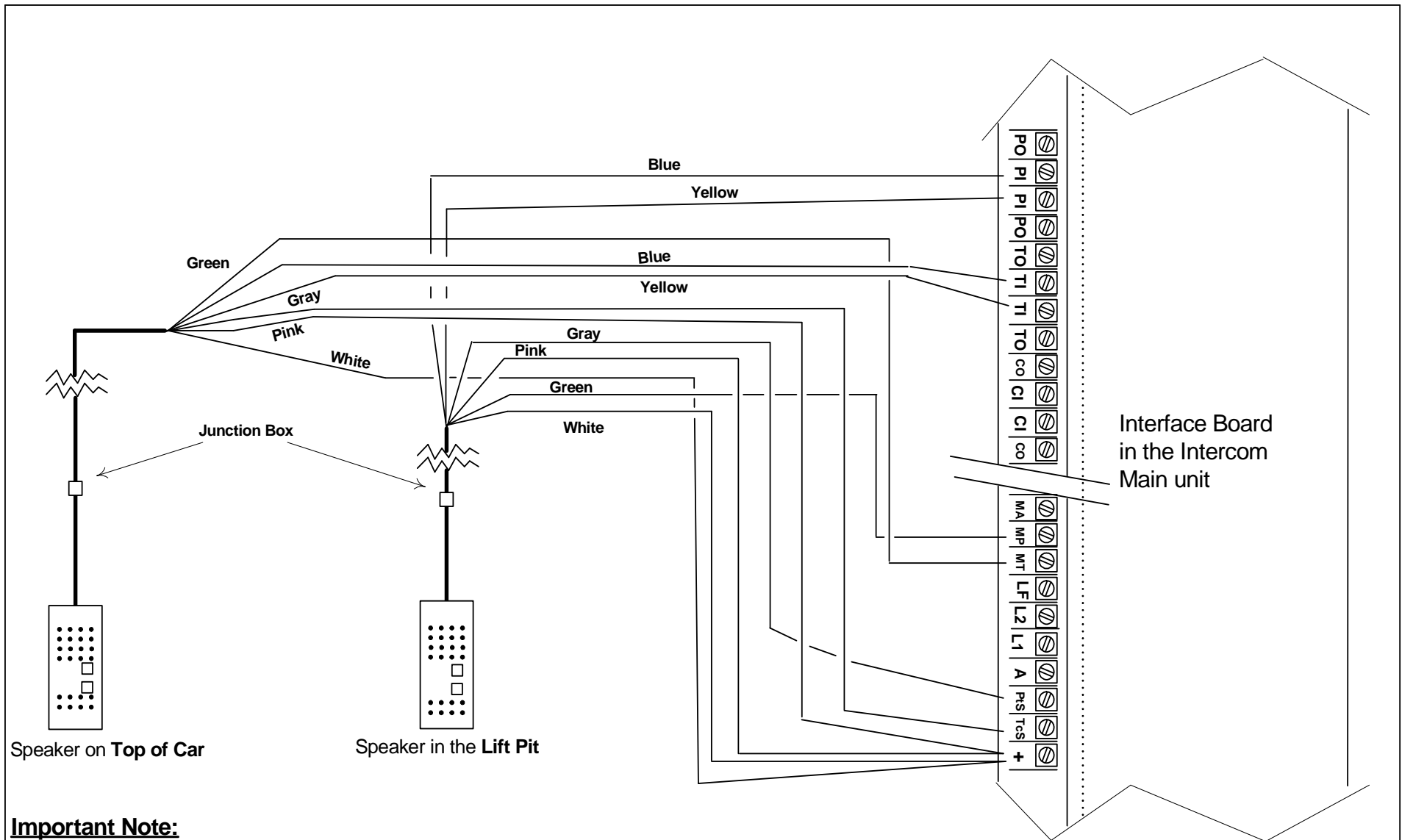
1 Button Top of Car & Pit Speaker Box Connection

Drawing: ad&hw_1 20/04/04

Windcrest

Tel: 0208 795 0333

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Important Note:
 For installation with 1 button Pit & Top of Car speaker please refer to page 7

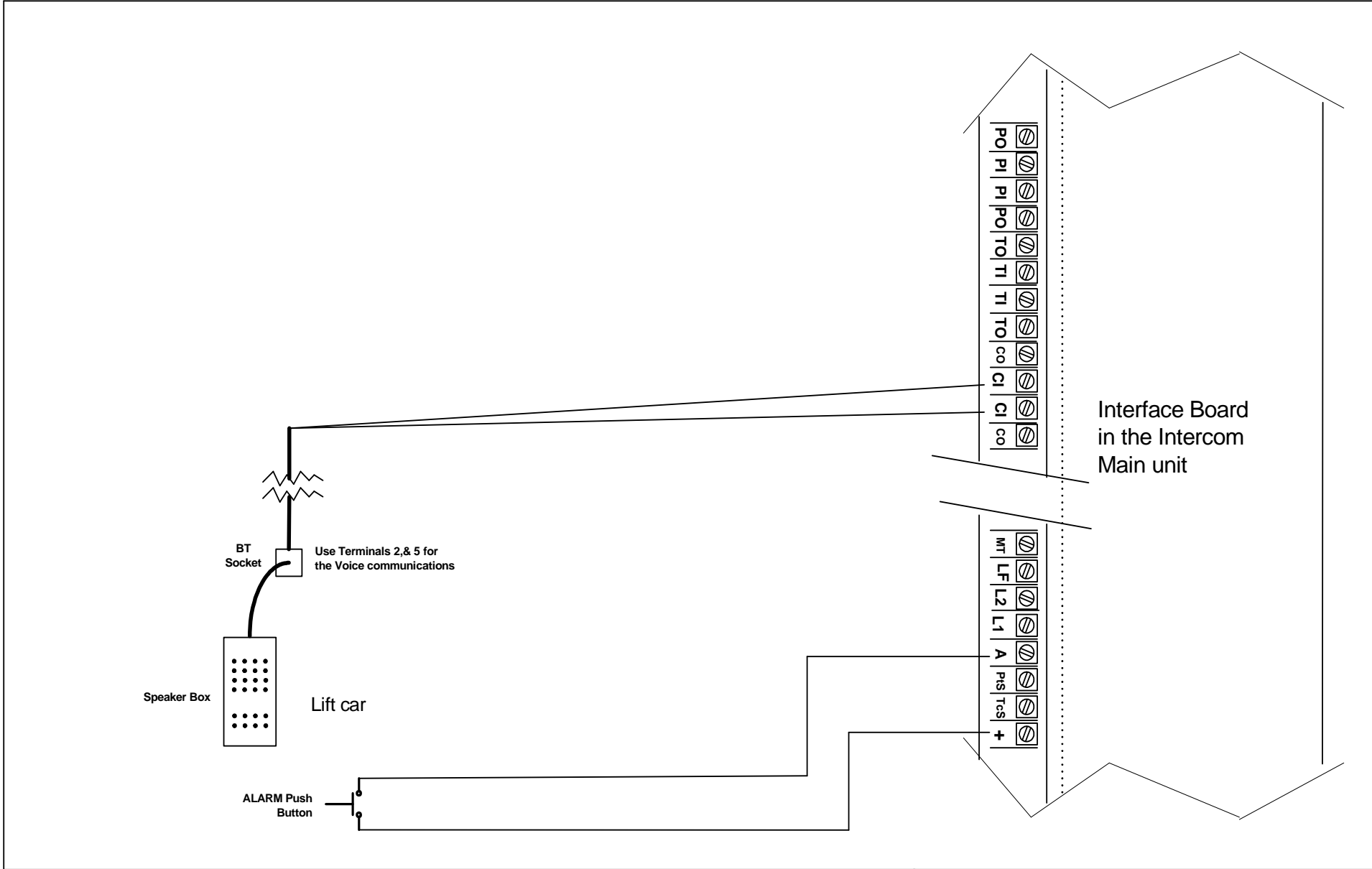
2 Button Top of Car & Pit Speaker Box Connection

Drawing: ad&hw_1 08/01/07

Windcrest

Tel: 0208 795 0333

Fax: 0208 795 0444

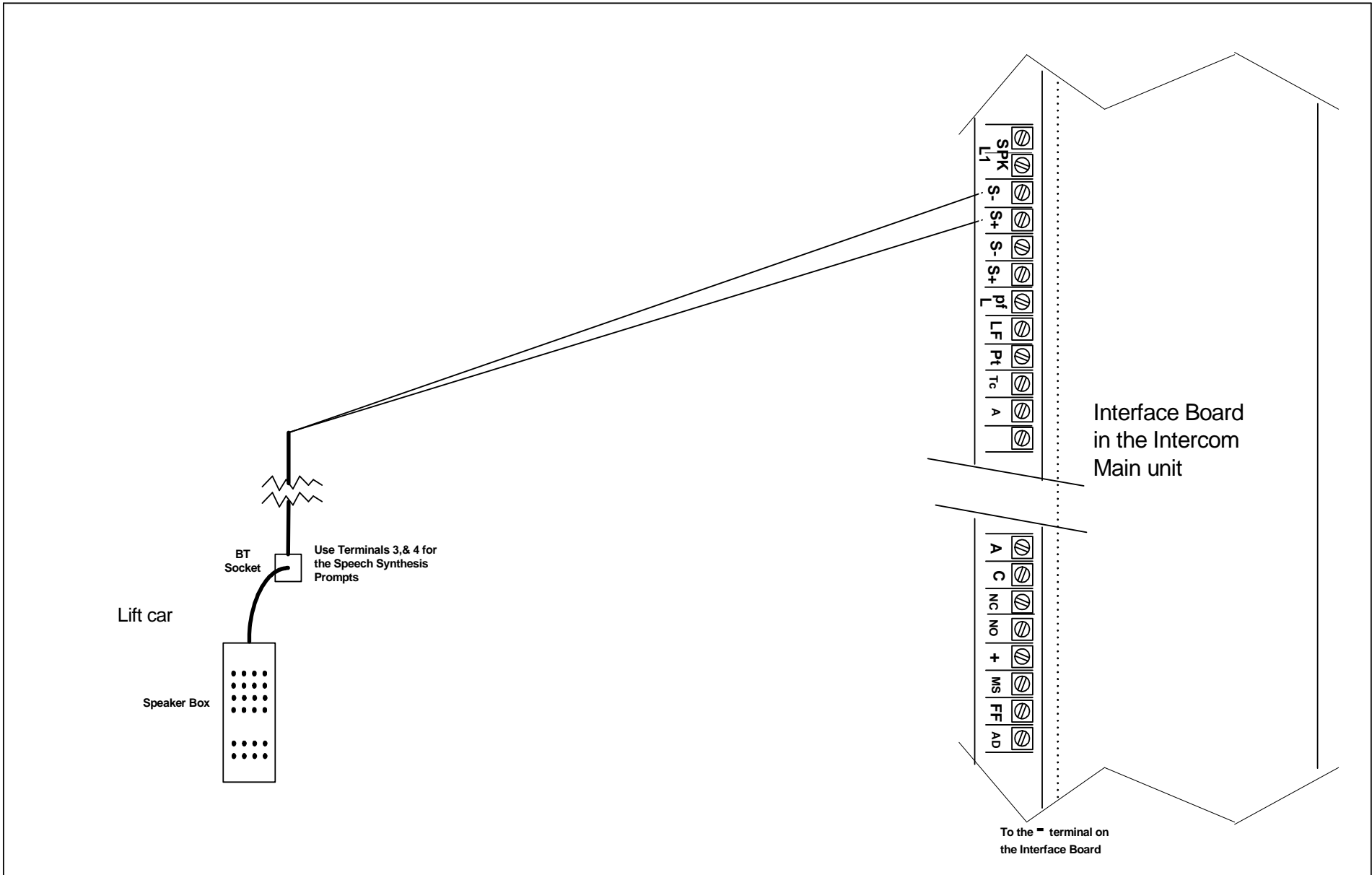


Car Speaker Box Audio Connection Only

Drawing: ad&hw_1 20/04/04

Windcrest

Tel: 0208 795 0333
Fax: 0208 795 0444



Car Speaker -Speech Synthesis Connections.

Drawing: ad&hw_1 20/01/05

Windcrest

Tel: 0208 795 0333
Fax: 0208 795 0444

AD1000EN01R Autodialler System

BS EN81-28 & BS EN81-70 may require equipment and facilities in addition to the standard equipment listed above. Example: Inductive Loop Amplifiers, Speech Synthesis units etc. In addition, the rescue service operator i.e. recipient of the Emergency calls from autodialler should have a telephone system which can generate DTMF tones in accordance to British Standards.

The Phone line (**Analogue on 2 wires**) goes to the Main unit and it is thereafter switched to any specific Speaker box assembly. Speech synthesis prompts are provided to assist and reassure the passenger; hence all wires have to be connected.

Main voltage (230V ac) is used and all normal safety considerations must be given in accordance with **current IEEE regulation**. The product complies with EMC regulations and BT Approvals. (Use Screened & Twisted Cable for all installations. However, acceptable results have been obtained using standard cable.)

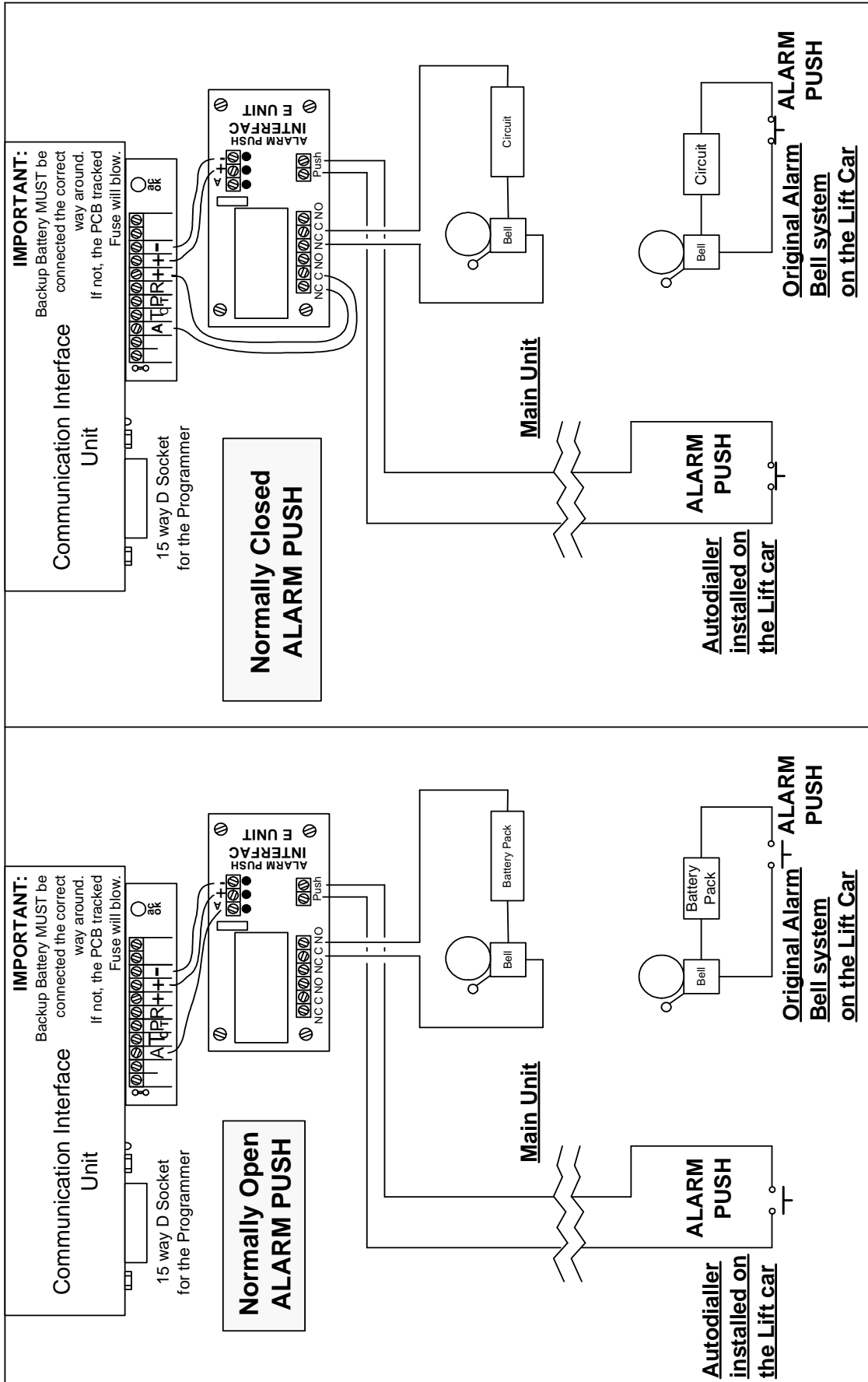
These instructions are “Fast Track” information for “Qualified Lift Engineers” and further information can be obtained from our offices on request.

WARNING

If SP Bit 2 is set to a 1 [YES], the Automated test facility will be enabled i.e. a call to the 5th telephone number will be made after 70 hours, and if not responded to, a call will be made Every 15 minutes for up to 6 times, and then again after 70 hours. During these attempts the programmer will display ‘C/S Busy’ to indicate that Central Station is not answering a call.

Pictogram Connection

1. Connect the “RED” wire from speaker box to the “+” terminal on the autodialler unit.
2. Connect the “BLACK” wire from speaker box to the “Y” terminal on the autodialler unit.
3. Connect the “BLUE” wire from speaker box to the “G” terminal on the autodialler unit.
4. Connect a loop/link between “PF” and “-“ terminals on the autodialler unit.



Drawing: NIF 10en NEWNV & NO 6/10/04
Windcrest
 Tel: 0208 795 0333
 Fax: 0208 795 0444

Wiring of the NIF10 in N/O or N/C Alarm Push

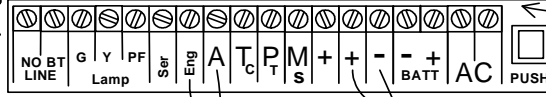
Communication Interface Unit

IMPORTANT:
Backup Battery MUST be connected the correct way around. If not, the PCB tracked Fuse will blow.

Green LED for Low voltage AC from transformer

15 way D Socket for the Programmer

12V ok LED "System Ready"

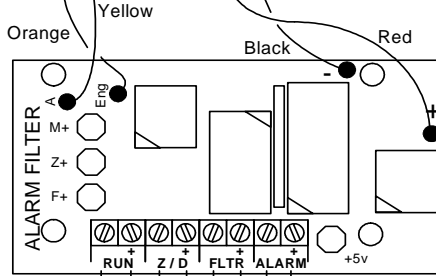


Operation (EN81-28)

No Alarm allowed when:-

- Doors Open & Lift Not Running.
- Doors Closed & Lift Running.

Alarm can be activated, under any condition, when Engineer switched OFF the Filter.

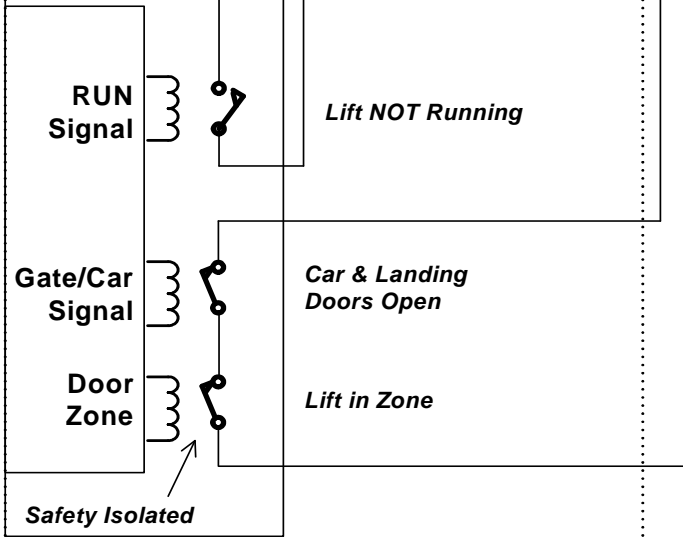


ALARM Filter installed in the Main Unit

Special arrangements have been made for the Alarm to operate in a fault condition.

Lift Controller

ALL Connections made to the Lift Controller MUST be in accordance to EN81



Safety Isolated

Motor or Pump Room

Inside the Lift Car

ALARM PUSH

Lift "On Inspection" switch Contacts:
Closed Filter - ON
Open Filter - OFF
or "ALARM Filter" NO/OFF Switch

ALARM Filter for AD1000xx

Drawing No: ALARM Filter Issue 3 Date:10/02/04

LiftBits for EN81-28 and EN81-70

Windcrest (UK) Ltd

Tel: 0208 795 0333
Fax: 0208 795 0444

Programming Modes

(Plug-in the programmer, power down the unit totally, power up again & press ENTER on programmer to enter programming mode.)

Basic Programming (Non EN81-28) on a *Direct BT Line*

Key in 1st Telephone Number then press [Enter]
Key in [NO] to "SP Bit 1"
Key in [NO] to "CB / Hot Line"

Key in 2nd Telephone Number then press [Enter]
Key in [NO] to "SP Bit 2"
Key in [NO] to "CB / Hot Line"

Key in 3rd Telephone Number then press [Enter]
Key in [NO] to "SP Bit 3"
Key in [NO] to "CB / Hot Line"

Key in 4th Telephone Number then press [Enter]
Key in [NO] to "SP Bit 4"
Key in [NO] to "CB / Hot Line"

Key in 5th Telephone Number then press [Enter]
Key in [NO] to "SP Bit 5"
Key in [NO] to "CB / Hot Line"

Key in [ENTER] for "Windcrest ID" Number

Key in [1][2][3][4] for "Contract Number" as Default then [ENTER]

Key in [1] for "Lift No"

Key in [1][2][3][4] for "RPA No" as Default then [ENTER]

Key in [2] for "Call duration" ie 2 minutes

Key in [NO] for "Pulse Dialling?" to select Tone Dialling

Key in [NO] for "Instant Trigger?" for 3 sec. trigger delay

Key in [NO] for "Voice ID?" ie no voice Identification set

Key in [NO] for "Auto Jump?"

Key in [YES] for "Have you Finished?" to exit programming mode

Basic Programming (Non EN81-28) on an *Internal Extension*

To access the outside line, key in a [9] before the telephone number(s) required. All other programming options are as above except Key in [YES] to "SP Bit 5".

Usual Programming (Non EN81-28)

Key in 1st Telephone Number then press [Enter] *{Possibly need to add [9] in front}*

Key in [NO] to “SP Bit 1”

Key in [NO] to “CB / Hot Line”

Key in 2nd Telephone Number then press [Enter]

Key in [NO] to “SP Bit 2”

Key in [NO] to “CB / Hot Line”

Key in 3rd Telephone Number then press [Enter]

Key in [NO] to “SP Bit 3”

Key in [NO] to “CB / Hot Line”

Key in 4th Telephone Number then press [Enter]

Key in [NO] to “SP Bit 4”

Key in [NO] to “CB / Hot Line”

Key in 5th Telephone Number then press [Enter]

Key in [NO] to “SP Bit 5” *{[YES] for Internal Extension}*

Key in [NO] to “CB / Hot Line”

Key in [ENTER] for “Windcrest ID” Number

Key in [1][2][3][4] for “Contract Number” as Default then [ENTER]

Key in [1] for “Lift No”

Key in [1][2][3][4] for “RPA No” as Default then [ENTER]

Key in [2] for “Call duration” ie 2 minutes

Key in [NO] for “Pulse Dialling?” to select Tone Dialling

Key in [NO] for “Instant Trigger?” for 3 sec. trigger delay

* Key in [YES] for “Voice ID?” ie Voice Identification set

Key in [NO] for “Auto Jump?”

Key in [YES] for “Have you Finished?” to exit programming mode

* Identification of lift can be by a Numerical ID code, keyed in for the “Contract Number” and “Lift No” at the time of programming; or by recording a Voice Message. For recording a Voice Message please refer to section on “**Voice Recording of the Lift Location on Site**”

Programming for EN81-28

Key in 1st Telephone Number then press [Enter] *{Possibly need to add [9] in front}*

Key in [NO] to “SP Bit 1”

Key in [NO] to “CB / Hot Line”

Key in 2nd Telephone Number then press [Enter]

Key in [YES] to “SP Bit 2” for Automates testing every 3 days

Key in [NO] to “CB / Hot Line”

Key in 3rd Telephone Number then press [Enter]

Key in [YES] to “SP Bit 3” for Pictogram and Battery Detection

Key in [NO] to “CB / Hot Line”

Key in 4th Telephone Number then press [Enter]

Key in [NO] to “SP Bit 4” for Computer Auto Test

Key in [NO] to “CB / Hot Line”

* Key in 5th Telephone Number of Central Station then press [Enter]

Key in [NO] to “SP Bit 5”

Key in [NO] to “CB / Hot Line”

Key in [ENTER] for “Windcrest ID” Number

Key in [1][2][3][4] for “Contract Number” as Default then [ENTER]

Key in [1] for “Lift No”

Key in [1][2][3][4] for “RPA No” as Default then [ENTER]

Key in [2] for “Call duration” ie 2 minutes

Key in [NO] for “Pulse Dialling?” to select Tone Dialling

Key in [NO] for “Instant Trigger?” for 3 sec. trigger delay

Key in [YES] for “Voice ID?” ie Voice Identification set

Key in [YES] for “Auto Jump?”

Key in [YES] for “Have you Finished?” to exit programming mode

- * This telephone number is for Central Computer Station with LiftAlert 2006 software. The software should be installed and ready to accept calls from autodiallers to log events. A manned station (no PC/Software required) is possible by setting up SP BIT 4 to a [YES].

Remote Programming of the AD1000EN-R range of Autodiallers

The autodialler has the facility to auto-answer an incoming call, after 6-15 seconds.

Once the call has been answered, the programming mode can be instigated by a series of simple commands via a simple Touch-Tone Telephone or a Mobile Phone.

The programming is by means of using the (DTMF) Touch-Tones from the calling telephone or a management computer based system into the Lift car.

To enter into the Remote Programming Mode, a Remote Programming Access (RPA) Number, must be entered in the following format “*v..vv#” within a time period of 30 seconds. (v is any digit 0 to 9). The Default is 1234. If the RAP is incorrect the system will go in the normal auto-answer. If the RAP number is correct, the system will output two short Beep tones and wait for additional command tones for a period of 30 seconds before exiting and going in the normal auto-answer mode, i.e. line being connected to the speaker box, after the emission of a short tone.

Exiting from the programming mode is by either a command code sequence, or no activity for 30seconds whilst in the programming mode. (Note, when entering the remote programming mode, the call duration time period is suspended; and re-established when existing from the programming mode).

The following can be implemented once in the programming mode.

*00#	Terminate Programming Mode
vv	Announce the Programmed number e.g. if *15* is entered; the system will produce “Beep 15 Beep 5627899 Beep” if the Phone number of the 5th number was 5627899.

Sequence of Events

1. Call the Lift using a simple phone. The call may be answered by a person in the Lift car or will be Auto-answered and you will be connected to the Speaker in the Lift car.
2. Inform the person in the Lift car that you are about to update the Emergency Telephone.
3. Key in the Remote Programming Access Number, Default being 1234 So key on your telephone *1234# The unit will respond by two beeps.
4. Change the first number *11#v..v#. where v is any digit from 0 to 9.
5. Change the 2nd Number *12#v..v#
6. Change the 3rd Number *13#v..v# and so on till the 5th phone number

If a second # is added at the end of a programming string, e.g.

*14#02087950333## the remote unit will confirm your entered number by announcing “Beep 14 Beep 02087950333 Beep” over the telephone line so a desk top telephone is advantageous.

7. If all the numbers entered are correct, and you enter *00# the remote programming mode will end.

Voice Recording of the Lift Location on Site

It is recommended that the car speaker be installed after all recording has been made, as the speaker can be used to confirm the quality of the recording.

Introduction

This set of instructions are provided so that the Engineers can record his voice on the solid state device within the Windcrest unit to inform the recipient of the call as to the location of the lift.

Equipment/Information required

1. Windcrest Hand Held Programmer
2. Lift number and Address of location
3. The Car Speaker box plugged into the side of the Windcrest Unit. (For EN4 applications, remove the existing plug from the socket on the side of the Windcrest unit and plug in the car speaker box for the duration of the recording).

Procedure

Connect the speaker box for the lift car directly into the Windcrest Autodialler. le into the BT Type socket on the side of the inner box. Do not connect the flying lead of the Windcrest unit into the Telephone line.

Disconnect the Mains Power by pulling out the fuse, and disconnect one of the Battery leads; so the equipment has no power at all.

Plug in the Programmer and then Power up the unit by the Mains fuse.

Press button [3] on the programmer i.e. to enter the Test mode the display will show "SELECT TEST".

2. Press button [5] on the programmer to display "RECORD NEW ?" press [0] The display will show "PLAYING MESSAGES" whilst the unit plays the current contents of the chip. As the message is played and as it comes to the end the display shows "REC/PLAY....3s.." then "REC/PLAY....2s.." then "REC/PLAY....1s.." then when it ends "REC/PLAY....END.."
3. Press button [5] again, to display "RECORD NEW ?"
4. Identify the small push button in the unit and PRESS & HOLD it DOWN. As you do so the LED3 will illuminate.

5. Now with the other hand, press the [1] button of the Programmer to commence voice recording. Recording is fixed at a period of approx. 10 seconds. (Microphone is near the illuminated LED3).
6. After the recording has been completed, release the small push button, which you have held down.
(Example of recording **“Alarm has been activated from lift 2 at St Peters Street, London NW2, please press Star after the tone”**.)
7. Press [5] again. The display will show “RECORD NEW?”. To hear your recording, press [0]. The recording will be played. If acceptable, press [CANCEL] button.
8. If the recording was not acceptable – repeat steps 4 & 5 as above.
9. Press [5] again. The display will show “RECORD NEW?”. To hear your recording, press [0]. The recording will be played. If acceptable, press [CANCEL] button.
10. Pressing of the [CANCEL] button concludes the recording mode.
11. Re- Connect the battery back up.

The fact that the recording has been carried out, it could be advantageous to select “VOICE IDENTIFY?” during the normal programming so that the lift’s identification is automatically announced during the call from the lift.

Special Bits Settings: “SP Bit ?”

“SP Bit1?”

Set [N0] as Default. If [YES] Call will clear on any tone detected on the phone line.

“SP Bit 2?” for EN81-28 implementation select [YES]

Set [N0] as Default. If [YES] Automatic Test Calls will be made every 3 days to the 5th Telephone Number, which should be the Windcrest Central Station. For autodiallers with software version v15 or above, this bit if set to a [NO] will automatically switch from Yellow Pictogram to Green Pictogram once a call is connected.

“SP Bit 3?” (Set YES for EN81-28 *).

Set [N0] as Default. If [YES] a Low battery voltage detection will result in a call being made to the rescue service. The flashing of the Yellow Pictogram will also indicate the Alarm state. {Alarm state/flashing of Yellow Pictogram can be cleared by calling the unit & transmitting/pressing DTMF tone “7”}.

“SP Bit 4?” Set [N0] for Computer based Auto testing. Set [YES] for Non Computer based auto testing. An acknowledgement of DTMF “*” and then a “0” will be required for this test.

“SP Bit 5?”

Set [N0] as Default. If [YES] all incoming DTMF tones are NOT detected.

Set SP Bit 2 to [NO] & SP Bit 4 to [YES] to increase delay between ID/Location announcements to 30 seconds.

ALARM Filtering

An ALARM Filter is required if the equipment is to comply with the requirements of BS EN81-28. The Input signals required are:

- Zone Signal (ie Signal when the Lift is in Door zone).
- Door Open Limit (ie Signal High when the lift doors are fully open).
- Engineer Signal (ie a lift in Test Mode signal or an Eng.ON Site).
- Gate Lock (ie Signal when the landing door is open)

CB/Hot Line Mode

This is a special mode. When Alarm is activated the unit first speaks the *user recorded message* and goes online. After successful conversation the user needs to press the alarm button to disconnect the call. For this it is recommended to record a message eg *“Lift Alarm has been activated from lift 2 at St Peters Street, London NW2, please press the Alarm button when finished.”*

Testing of the Installation

Each speaker box needs to be tested by activating the associated alarm push button.

The system will trigger provided the lift is in a fault condition or has been switched for Engineer on site/Lift Switched for Test.

Once triggered, the Yellow Pictogram will illuminate, and the unit will call for assistance. A speech prompt will assist in the operation of the equipment. After the rescue service responds and acknowledges the call, by pressing a star (*) on his telephone, the Green Pictogram will illuminate. (However, for autodiallers with software version v15 or above, if SP BIT 2 is to [NO] the autodialler will automatically switch from Yellow Pictogram to Green Pictogram once a call is connected). If an announcement is in progress the helper should wait until the announcement is over before pressing a button on the telephone (e.g. [*]).

The call can be terminated by pressing a zero (0) on the telephone by the rescue service operator. However, the autodialler will terminate the call automatically after the programmed call duration period if a zero (0) was not received. (The call may be extended by the pressing of Alarm Push when requested to do so by voice message prior to call termination).

On completion of the call, the system will indicate an alarm state, has been activated by the flashing of the Yellow Pictogram.

The rescue service needs to be informed of the test call and request then to call you back after terminating this call. At which point the alarm state can be reset by the rescue service whereupon the Yellow Pictogram will stop flashing.

The Windcrest system has an ability to carry out an automated test every 3 days. This must be implemented if the product is to comply with BS EN81-28 and BS EN81-70. Further it is important that a manual test be carried out as defined above on a regular basis.

Maintenance & Warranty

The Windcrest system has been manufactured under BSI Quality system and requires very little maintenance. However, the Windcrest system will need the main battery test/change every three years. The internal Battery Backed RAM should be tested every 8 to 10 years by confirming the data is retained after a power down of the main backup battery for 5 minutes. At the time of battery test, the DTMF tones should also be tested/calibrated.

Special Information to be kept with the equipment for the Owner/Managing Agent for the BS EN81-28 Implementation.

1. The lift's communication system must be connected to a rescue service and be kept working to provide a 2-way voice link.
2. The rescue service must be informed of the installation of the Autodialler (The ID of the unit together with the telephone number of the phone line on which the unit is connected must be noted. Further, if more than a single unit is placed on the phone line, a note of the lift number must also be provided).
3. The communication system must be regularly tested, manually and automatically, to ensure the system is working. If it fails to work, the lift must be placed out of service.
4. Information in the Operating, Maintenance and Testing of the Autodialler must be kept. (A copy of the installation manual will contain all the necessary information).
5. Information on programming, with a Hand-held programmer, or with a simple Touch Tone telephone, is included in the installation manual.

Answering an incoming call

From a Trapped Passenger or Non computer based Auto-Test

Answer the phone as usual.

The phone will be connected to the lift, at which point you will hear a speech prompt which will identify the lift's location, provided the system has been set appropriately.

Press the star (*) button on the telephone to acknowledge the call, (for EN81-28 the Green pictogram will activate in the lift car) and conduct the conversation with the trapped passenger.

Once the conversation has finished, terminate the call with a zero (0) and thereafter placing the handset down.

Vandal/nuisance calls

If a Vandal has made a call from a lift location, it is possible to disable the ALARM button for 30 minutes by pressing a nine (9) during the call.

From an Engineer after releasing passenger(s)

Answer the phone as usual.

The phone will be connected to the lift, at which point you will hear a speech prompt which will identify the lift's location, provided the system has been set appropriately.

Press the star (*) button on the telephone to acknowledge the call, and conduct the conversation with the Lift Engineer.

Once the conversation has finished, Cancel the Alarm State by pressing a "7" (i.e. Flashing of the Pictogram) and then terminate the call with a zero (0) and thereafter placing the handset down.

Calling a Lift

NB: It may not be possible to call a lift if connected to an extension of a PABX

Call the Lift's phone number as usual.

When the call is answered, a tone and a speech prompt "Answering an incoming call" will confirm connection to the lift car.

Once the conversation has finished, terminate the call with a zero (0) and thereafter placing the handset down.

(The call may be extended by the pressing of Alarm Push when requested to do so by voice message prior to call termination). Under normal circumstances, the lift, which has made an outgoing call, will be the lift, which will answer the call first. However, if an incorrect lift has responded, simply terminate the call and ring in again. To inform the rescue service that passengers have been released a separate switch (key switch) can be installed in the lift car which when operated will call the rescue service in a different way to that of a normal call when the alarm push is pressed.

Note: Autodiallers with ID x x x x 02 77 will need LiftAlert 2000 version 2.0 software for central monitoring station.

Special Information for the Rescue service in relation to the Installation of an Autodialler on a lift to comply with BS EN81-28:2003

A Windcrest system has been installed at the following location, the telephone system must be capable of providing DTMF tones. However, if this is not possible, Windcrest may be in a position to provide special equipment. The information below will provide the ability to:-

- Establish at all times a 2-way communication with the trapped passenger and to allow updating as to the status of the rescue.
- Ability to locate the lift and method to gain access to the trapped passenger.
- The notification of the back-up power supply reaching a level so that only 1 hour of operation is possible.

Contract Number

--

Address of the Lifts location

--

Special procedures to gain access to lift i.e. Key-holders, hazards, etc..

--

Lift number

Windcrest ID Number

--	--

Lift's Telephone Number

Number of Windcrest units on the phone line

--	--

Filtering Installed

Automatic Test set up

Manual test

	For 3 days	
--	------------	--