

## UNIVERSAL TYPE NETWORK - GENERAL DESCRIPTION

### DESCRIPTION

The UNIVERSAL network comprises up to 100 stations operating without any central switching system and simply connected in parallel via a speech circuit on one telephone-type pair by means of a central junction-box ref : BDV 376 E1P12CF.

Within each station there are electronic and analogue circuits providing the connections :

- the analogue part comprises the high impedance interfaces so as not to affect the line impedance ( 600 ohms ) even in the event of a large number of stations in the network and a loudspeaker amplifier of up to 15 W (according to the option or type of unit).
- the microprocessor-based electronic part for the control of the connections and displays.

#### **The stations are equipped with:**

- A weatherproof loudspeaker
- A weatherproof and vandal-resistant Electret type microphone
- An LCD display, two lines of 16 characters or an on-line LED, depending on the model.
- A dialling keyboard with function keys for keypad versions or a call button for substations.
- A circuit board
- A terminal block

### NETWORK CAPABILITIES

These networks provide the following functions :

- Point to point connection between two stations.
- General call from a station with keypad to all other stations.
- Group call (restricted to program5).
- Conference between several stations (without automatic selection).
- Storage in memory of calls with display when busy (stations with display).
- Master stations in parallel in series.
- Programming or modification of settings is possible either locally by using a keypad or remotely from one of stations in the network :
  - Station number
  - Type of program
  - Ringing Volume
  - Automatic answer after a number of rings, etc...
  - Loudspeaker volume (when equipped with a numerical potentiometer).

## **TYPES OF PROGRAM**

### **TO BE PROGRAMMED BY USER**

1. **PG1** Intercom network – connections possible between all stations in the network (stations with keypad).
2. **PG2** Controlled intercom network – connections possible between all stations in the network with talk/listen control of station called residing with the caller.
3. **PG3** Star network with a master station and up to 100 selective substations (hands-free)  
General call only. For group calls see PG5.
4. **PG4** Public address one-way from a station with keypad.
5. **PG5** Mesh network comprising one or stations with keypad (in full intercom) and substation with direct call to a pre-programmed master. Group calls available and general call (by pushing twice on AG key).

### **INTERCOM NETWORK FUNCTIONS (TYPE PG1 AND PG2)**

- Comprises up to 100 stations with keypad, connected in bus or star configuration, must be 2 wires.
- To establish a connection, the number of the station to be called is keyed on the keypad, a ringing tone is heard until the called party responds.  
At the called party's end the ringing tone sounds until the line is picked up automatically, if so programmed, or manually by pressing the TALK key or keying the number on the keypad.
- Ability to respond automatically immediately or after a programmable number of rings.
- During a conversation between two stations the network is busy (indicated on displays) and the only possible break-in is General call.
- Each station is equipped with a display which makes communication very user-friendly and one-touch function keys which simplify system usage. There are dedicated buttons, General Call with pre-announcement tone, Conference between 2 or x stations, Talk-listen, Cancel and program which help avoid confusion.
- Type PG2 network is identical to type PG1 except that talk/listen at the called station is under the control of the calling station.

### **STAR NETWORK FUNCTIONS ( TYPE PG3 )**

- Comprises a master station with keypad and display and up to 100 single-button substations connected in abus or star configuration, 2 wires or 4 wires.
- To set-up a master-substation connection the number of the station to be called is keyed on the keypad, a ringing tone is heard until the called party responds. At the called party's end the ringing-tone sounds until the line is picked up automatically, if so programmed, or manually by pressing the button.
- Ability to respond automatically or after a programmable number of rings.
- Ability to test all substations and report the results of the test to an computer (optional)
- To set-up a substation to master connection, just press the button of the substation.
- During a conversation between two stations the network is busy (visible busy signal on all substations) but the substations can call the master station, such calls will be indicared at the master by a brief tone and the display of the display of the number of the calling station which will be stored in memory.  
On the network becoming free, the number of the first station to have called will be displayed and the master station can access it directly by pressing TALK or alternatively key another number for a priority call.
- When you connect two F1 master stations, both are ringing when called and the connection is done to the first answering.

### **DIVERT / TRANSFER FUNCTION**

- When two master stations F1 and F2 are connected and the transfer function is actived, incoming calls may be transfered from F1 to F2 station.  
F1 is ringing when its display shows : ---- and F2 is not ringing and displays 0 – 0.  
Calling will be transfered by dialling 0 or 00 (10 or 100 units network) F1 then display [ - ] and F2 displays ---.  
F1 return to normal state by dialling 0 or 00 again. Automatic transfert after « n » rings may be programmed.

### **PUBLIC ADDRESS MODE FUNCTIONS ( TYPE PG4 )**

- This program facilitates broadcasting of messages within a defined area.
- The call button and the microphone are disabled but the substation may simply be called like any other station.

### **MESH NETWORK FUNCTIONS ( TYPE PG5 )**

- Up to 8 master stations and 99 substations
- This program is a mixed of program 2 for master stations and program 3 for substations.
- Master stations may call themselves with the push to talk on the calling party.
- Substations only call the master station programmed in their M1 memory and the master station called drive the talking / listening mode.
- During a conversation the general call button is available for all master stations.
- Calling of a substation to any master station is always available.
- Only one master station may answer to a substation at the same time.
- Master stations are called F1 to F8 (by programming).
- Just dial the number of the substation to call it and to call another master station press first general call /B followed by the 1 to 8 number or the wished master station.
- To make a general call press 2 times the general call /B button.
- To make a group call press the number of the group (1 to 8) followed by general call /B button.
- Availability to do a group call is depending of M9 contents of the master station. Its own group is always available.
- To allow all group calls to a master station, program inside M9 : 12345678 or suppress any number not allowed. Likewise a substation is by factory preset no answering to any group call. The group call to be answered to has to be programmed into its M9 memory.  
(ex : 12 to answer to group 1 and 2).