

## A Modern Solution to Site Page/ Party Communications Using Mentor Digital



Page party has become a generic term for a combined voice broadcast and two way speech communication system. Paging or public address is effected by loudspeakers fitted to provide acoustic coverage over the site. Party or telephone style communications is incorporated by provision of telephone handsets fitted at strategic locations.

The operating philosophy is :

- a) Page over the public address loudspeakers to solicit answer back
- b) Subsequent two way communications via the party element of the system.

The system therefore provides public address and telephony in one dedicated communications package. This architecture was introduced over 50 years ago and was born in the days when selective telephony was impractical for non public network systems and the concept of secure supervised fail safe voice / alarm loudspeaker broadcast systems for safety of life had yet to be established. Today the limitations of "Page Party" compared to a modern voice communications & broadcast package are as follows:

- 1) The paging system cannot be monitored properly, i.e. a life dependant evacuation system needs all critical paths to be automatically supervised this includes all hardware and field cable that might prevent the distribution and broadcast of a vital warning message or alarm signal.
- 2) To achieve highest integrity, redundancy of hardware and associated power supplies is specified. Page party architecture does not lend it self to duplication of critical components.
- 3) Party telephone communications is non selective [or at best is limited to five non private communications channels only].
- 4) Party channel selection is manual and relies on the user to scan the party channels to locate the required speech path!
- 5) Page party channels are distributed at base band audio and hence utilise a cable pair per speech path. For example a five party channel and single page channel system would require a minimum of 6 twisted pairs in the field cable. Cable pairs must be balanced and so set up is required to achieve lowest cross talk between the channels.
- 6) The paging system does not have an integrated fail safe priority system thereby ensuring that alarm / routine broadcasts can be safely over ridden by higher priority calls

- 7) The page party system cannot seamlessly integrate into other plant telecommunication systems ... e.g. the site PABX.

Today highly secure technology is readily available from Spector Lumenex that eliminate the limitations of the old Page Party type solutions whilst also providing major cost savings in both field cable / installation and equipment hardware.

Mentor Digital is a modern configurable voice communication system which enables multiple non blocking simultaneous page / party intercommunications. Connection between Mentor Digital stations and host is by a non critical low cost single twisted pair cable. There are NO line balance assemblies to instal or maintain and a digital communication protocol eliminates cross talk and other possible spurious noise induction.

Switching and supervision is sited in the host equipment which avoids location in the field stations. This ensures that possible cable or station damage can never impact on the operational integrity of the rest of the communications system. The Mentor Digital allows selective paging to individual, grouped or all public address zones as required. Party communication is private and it is possible to configure multiple "group" communications if specified. The Mentor Digital can be interfaced directly with the site automatic telephone exchange enabling a Mentor Digital outstation to initiate and receive telephone communications. The Mentor Digital system can also connect directly to an ACE16 or 100 public address and alarm broadcast package where greater paging coverage and alarm / message distribution is specified.

### Key Features

- ◆ Standard 2 wire telephone circuit connectivity - low cost installation & system expansion
- ◆ ISDN digital protocol - high quality noise free communications
- ◆ Radial wired system topology - easy to fault find, greater system integrity
- ◆ Multi party line speech paths - greater flexibility
- ◆ Multi zone paging capability - greater flexibility, efficient system usage
- ◆ Secure party line communication - conversations are private
- ◆ No line balance networks - easy to expand the system, minimal set-up

Morley Avenue  
Mapperley  
Nottingham  
NG3 5FW  
England

Tel: +44 (0) 115 955 11 99  
Fax: +44 (0) 115 955 19 19  
E-mail: [spectorlumenex.uk@tycoint.com](mailto:spectorlumenex.uk@tycoint.com)  
http: [www.spector-lumenex.co.uk](http://www.spector-lumenex.co.uk)



**tyco**  
Engineering  
Services

Spector  
Lumenex

