SID

(Event System Monitor)

Description

The SID system monitor, is designed as the central controller for the Ikon AVS fault detecting system. The system is intended to monitor life safety critical public address systems.

SID, is the heart and soul of the fault detecting network. All units on the network report their status back to SID. The LCD display is updated, to show the most recent fault on the system. Ensuring, any fault on the system can be identified quickly. Once repaired the fault will automatically be cleared.

Contents

SID Introduction

Overview

Due to the systems flexibility and fault tolerance it may be used to monitor and report the operational status of:-

- Individual speaker stacks during live audio.
- Signal level audio distribution systems.
- Any system that provides digital status or voltage outputs.

SID can monitor up to 250 outlying fault detection devices, these can be any combination of the following Ikon AVS units:-

- SCM Single channel speaker line monitor
- ECM Eight channel speaker line monitor.
- DRS Digital interface, monitors the state of 24 digital inputs.

All communications between the fault detectors and SID use a proprietary fault tolerant dual fibre network. Both fibre loops are continuously monitored to ensure their integrity and if a fibre fault is detected, SID will log the faults identifying where in the network the failure has occurred. Due to the networks inherent fault tolerance, partial systems can be operated during installation.

To maintain fault monitoring even if a SID fails, the system can use two SID's. One SID is designated as a primary unit; this will normally interrogate the fibre network. The other unit, the secondary, passively monitors the communications to ascertain the fault status of the fault detectors. If the primary unit fails, the secondary unit will detect this and take over interrogation of the network. Once the primary unit is restored, it will take control of the network automatically and the secondary unit will return to passive monitoring.

LED's and a display are used to confirm the systems operation as well as providing a local indication of fault occurrence, printer fault or network problems. The 4 line, 20 character LCD display is used to display the event number, a time and date stamp as well as a short textual description of the fault and originating unit.

Functionality

Front Panel Indicators and Controls

LED's and displays are used to confirm the systems operation.

Network

- LED display, shows the number of units on the network. Continually clocks round as SID interrogates the network.
- LED's show the network status.

    Active…when illuminated SID is the active fibre master.

    Passive…when illuminated SID is passively monitoring the network.

    TX…flashes when SID is transmitting on the network.

    RX…Flashes when SID receives data on the network.

Events

- LED's indicate an event on the system.
    Pri or Sec fail… when illuminated indicates a fault on the fibre network.

    Nett event…can be configured to illuminate, on detection of any event or only when faults occur.

    Printer fault…illuminates to indicate that the printer requires attention.

LCD and Keypad Operation

LCD shows the current fault or event on the system.
  1st line… displays a 4-digit event number.
  2nd line…displays the time (24Hr clock) and date
  3rd line…displays the name of the originating unit.
  4th line…displays the description of the fault

Up key…allows the user to scroll through the events.
Down key… allows the user to scroll through the events.
Ack key…this clears the event LED on the front panel.

RS 232 See Appendix 1

Program the unit via the RS232 port using the software utility.

Rear Panel Connectors

Power Supply

A 230V 50Hz mains supply socket. The mains fuse (T500mA 20mm) is mounted within this socket. The fuse carrier also contains a spare fuse.
 A 24V DC battery backup input is also provided. The software utility allows status monitoring of both power supplies.

Event relay See Appendix 1

This can be programmed to activate on the occurrence and clearing of a fault or on the occurrence of a fault only. Press ACK to clear the relay.

Fibre Connectors See Appendix 2

Twin (primary & secondary) ST fibre connectors for incoming and outgoing fibre connections to other hardware in the system. The software utility allows either single or dual fibre operation with states of system verified and reported.
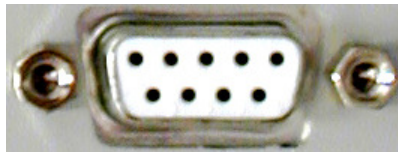
Printer Port See Appendix 3

Parallel printer port, will communicate with any printer that can accept direct ASCII code. All recorded events can be printed by manual selection from the LCD menu.

Appendix 1

RS232 Connecting Details

This is located on the front panel and provides a bi-directional RS232 port used to communicate with an IBM compatible PC.
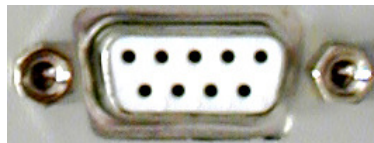
Pin 1 No connection
Pin 2 Serial data receive (RX)
Pin 3 Serial data transmit (TX)
Pin 4 No connection
Pin 5 Ground
Pin 6 No connection
Pin 7 No connection
Pin 8 No connection
Pin 9 No connection

Use a straight 1 to 1 lead for programming via a PC or laptop.

Event Relay

The event relay is activated on detection of any fault. It could be used to enable a sounder or light indicator on detection of a fault, to alert an engineer of a fault on the system.

Pin 1 Relay Wiper
Pin 2 NC when not in fault
Pin 3 NO when not in fault
Pin 4-9 No connection
The contacts are rated @ 30V 1A

Appendix 2

Optical Fibre Connectors

These are ST bayonet connectors operating at a wavelength of 820nm. The fibre length between units should not exceed 2km (with 2 couplers in line, i.e. for patch panels). To achieve the required fault tolerance twin fibres loops are used, these should be routed in physically divergent routes and opposite directions, as shown below.
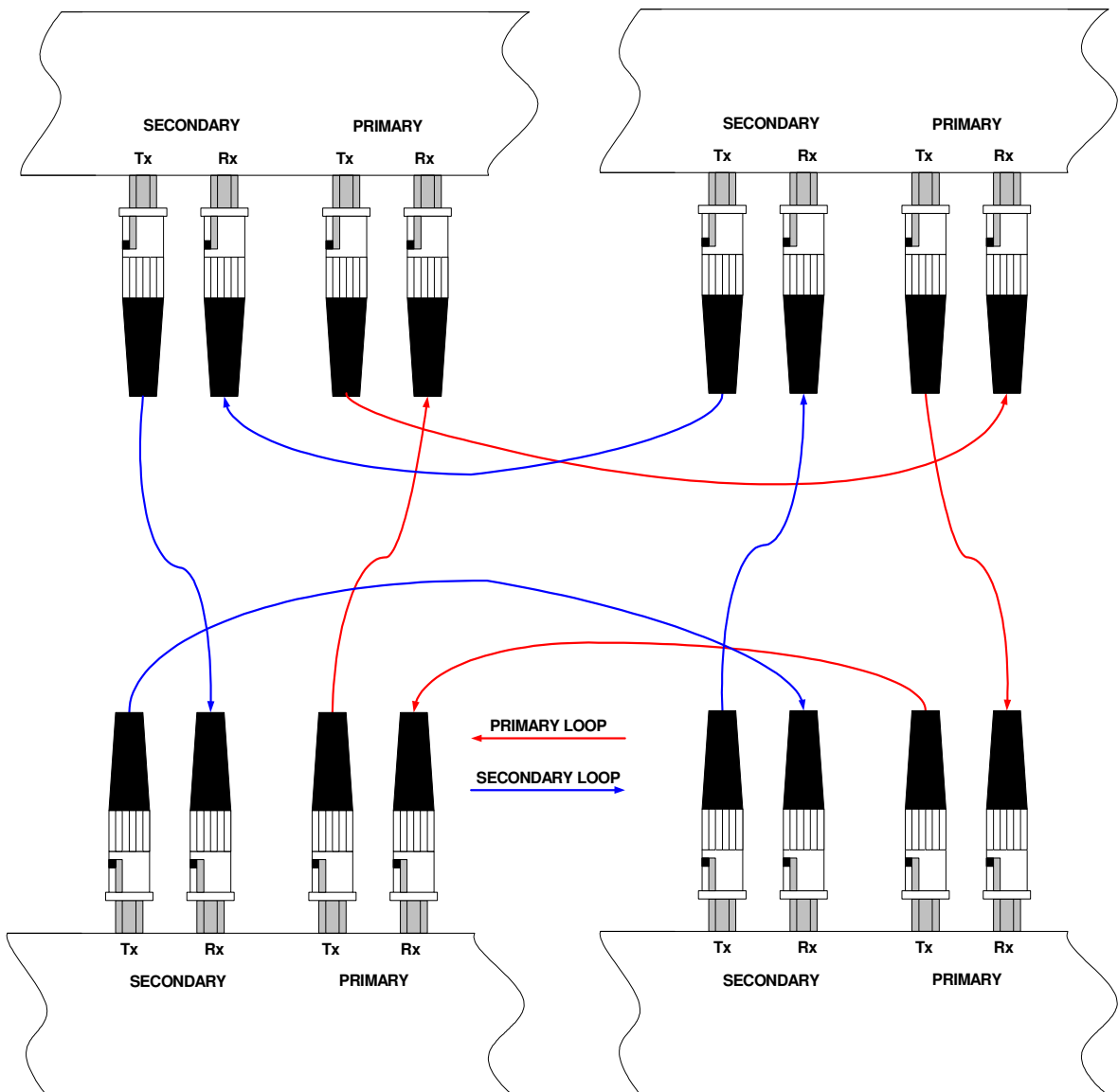
Appendix 3

Printer Connector

The female 25 way Dee type connector is used to communicate with an external printer.
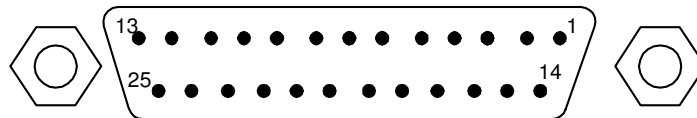
1	Strobe		14	Auto
2	Data 0		15	Error
3	Data 1		16	Initialise
4	Data 2		17	Select
5	Data 3		18	Gnd.
6	Data 4		19	Gnd.
7	Data 5		20	Gnd.
8	Data 6		21	Gnd.
9	Data 7		22	Gnd.
10	Acknowledge		23	Gnd.
11	Busy		24	Gnd.
12	Paper out		25	Gnd.
13	Select			

Manufacturers Information

The iKON AVS ECM is manufactured in England by Nebula Audio Ltd. Units may be branded IKON AVS or M+D Design.

For service or warranty advice please initially contact your supplier. Alternatively contact the manufactures at:-

Nebula Audio Ltd
     40 Saint Dunstans Close
     Worcester
     WR5 2AJ

Telephone: (44) 01299 250991

Fax: (44) 01299 250983

Website   www.ikonavs.com

Technical support e-mail:-   support@ikonavs.com

Electromagnetic Compatibility
This equipment has been designed, manufactured and tested to conform to the European EMC directives EN55103-1 & EN55103-2 for classifications E2 and E4.

Limitations as to use: *1.*   The specified equipment is to be mounted into an earthed, steel equipment rack and not mounted adjacent to RF transmitting or receiving equipment.