*alarmtrak* 🔋

Concentrator, type LDC

General

The concentrator is an intelligent communications interface that collects, formats and distributes data to and from its peripheral units.

*i*nformation

The following peripherals are available:

1 An internal Blick transceiver/control unit, type LCU.

This provides radio communications to pocket transceivers.

2 An internal GPS card that extracts positional information from satellite signals.

3 A radio modem that for two way data messaging.

This is controlled via one of the LDC's RS232 ports.

4 A Blick message display unit, type LMU or personal computer with touch screen.

Either unit will handle two way data messages. Control is via one of the LDC's RS232 ports.

5 6 clean contact switch inputs (normally open) can be set to send different status messages.

6 A future option will provide 6 open collector outputs that can be used to initiate events triggered from a host system.
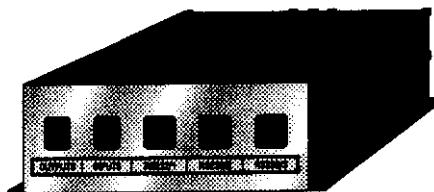
Incoming messages

There are 4 types of incoming messages that can be received via a radio modem from the host.

1 Messages to be displayed on the message display unit or PC.

Maximum 220 characters.

2 Messages to be routed to a pocket transceiver.
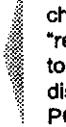
Maximum 80 characters. If more than 80 characters are received then a standard "return to vehicle" (RTV) message is sent to the pager. These messages are also displayed on the message display unit or PC.

3 Programming information to allow the concentrator variables to be set up.

4 A request for an AVL report.

AVL - automatic vehicle location

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Outgoing messages

There are 3 types of outgoing messages.

1   A message originating from the message
    display unit or PC.

2   A status message from:
    a   The message display unit or PC.
    b   A Pocket transceiver (lone worker).
    c   Remote contacts.

3   AVL message derived from information
    from the GPS card.

Automatic vehicle location (AVL) updates

Positional information derived from the GPS card can
be reported to the host using any of the following
algorithms:

1   No reports at all

2   Reports 5 seconds after a message is sent

3   Report at a predetermined time interval
    between 20 seconds and 84 minutes.

4   Reports after a message is sent and at a
    predetermined time interval between 20
    seconds and 84 minutes.

5   Report only on a request from the host.

If any of the algorithms 2 to 5 are selected then ring
fencing can be applied.

Information

Ring fencing

If the vehicle remains stationary then no
AVL reports are sent. If the vehicle
travels for a preset distance between 10
m and 2.55 km faster than 4 miles per
hour (6.4 kph) the unit will report.

Radio modem

The data concentrator supports several types of
network, each having its own version of embedded
software resident in an EPROM.

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Technical data for data concentrator, type LDC

General

Dimensions	180 mm x 135 mm x 42 mm (including connectors)
Weight	780 g
Operating temperature range	-10 °C to +55 °C
IP rating	20
Humidity	85% RH non-condensing
Aerial connector for GPS option	OSX sub-miniature snap-on jack
Aerial connector for Blick lone worker option	Reverse TNC
Connector for RS232 serial ports	8 way FCC68 (RJ45)
Connector for inputs and outputs	6 way FCC68 (RJ12)
EMC	Generic, EN 50081-1 and EN 50082-1

Electrical data

6 Remote contact inputs	Clean contact (voltage free)
6 Alarm outputs	Open collector (maximum voltage 50 V d.c. maximum curent per output, 350 mA)
Power requirements	
Operating voltage	11.0 V d.c. to 13.8 V d.c.
Current	< 300 mA
Power connector	4 way FCC68

Operation is subject to the following conditions:

1	This device may not cause interference.

2	This device must accept any interference, including interference that may cause undesired operation of the device.

TECHNICAL DATA

General

Dimensions	180 mm x 135 mm x 42 mm (including connectors)
Weight	780 g
Operating temperature range	-10 °C to +55 °C
IP rating	20
Humidity	85% RH non-condensing
Aerial connector for GPS option	OSX sub-miniature snap-on jack
Aerial connector for Blick lone worker option	BNC
Connector for RS232 serial ports	8 way FCC68
Connector for inputs and outputs	6 way FCC68

Electrical data

Radio protocols supported:	MAP27, RAM, Securicor Datatrak
Remote inputs x 6	Clean contact (voltage free)
Alarm outputs x 6	Open collector
	(maximum voltage 50 V d.c. maximum curent per output, 350 mA)

Receiver section

Type	Direct conversion
Frequency bands	140 - 180 MHz or 430 - 470 MHz
Channel spacing	25 kHz
Sensitivity	Better than 0.25 μV/m
Data rate	333 baud
Data format Blick (shortened preamble)	

Transmitter section

Frequency range	140 - 180 MHz or 430 - 470 MHz (not UK)
Channel spacing	25 kHz
Modulation	FSK
Transmitter ERP	< 10 mW
Data rate	333 baud
Data format Blick	
EMC	

Power requirements

Operating voltage	11.0 V d.c. to 13.8 V d.c.
Current	< 300 mA

EMC	Generic, EN 50081-1 and EN 50082-1

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