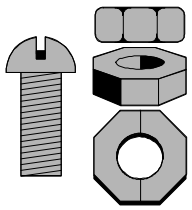

TECHNICAL NOTE

ENGTN2

ADPLEX Dialer Format 4

Implementation of ADEMCO Contact ID DTMF Transmission Standard

Applies to xD13VxxE communicator firmware

The reader should have a basic familiarity with ADPLEX 2000 programming, specifically programming of dialing strategy, with literal file structure, the ESCO protocol (defined in M200), and with ADEMCO's Contact ID format - transmission timing is not detailed here. Should the reader have difficulty with the following material they should contact our Engineering Services Dept. at (770) 426-9787.

Contact ID Message Content

<ACCT><MT><QXYZ><GG><CCC><S>

where	ACCT	=	4 Digit Subscriber ID	
	MT	=	2 Digit Hex Message Type	(fixed at 18 for Contact ID)
	Q	=	Event Qualifier	1 = New Event or Opening 3 = New Restore or Closing 6 = Previously reported off-normal event
	XYZ	=	3 Digit Hex Event Code	
	GG	=	2 Digit Hex Group #	
	CCC	=	3 Digit Hex Sensor or User #	
	S	=	1 Digit Hex Checksum	

ADEMCO has pre-defined those event codes between 100 & 700 as follows:

100 - 199	Alarms
200 - 299	Supervisory
300 - 399	Troubles
400 - 499	Open/Close/Remote Access
500 - 599	Bypasses/Disables
600 - 699	Test/Miscellaneous

Programming an ADPLEX for Contact ID

The changes required are minimal - set the **Dialer Format** to 4 and program all other parameters as before (refer to relevant Installation Manual). The **Transmit Speed**, usually set to either 10, 20 or 40 pps for 3/1, 3/1 extended and 4/2 formats, is ignored when transmitting Contact ID since DTMF tones (fixed at 50ms burst), rather than 1800 or 1900Hz pulses, are used.

Mapping of System Log Events to Contact ID Messages

A cursory glance at the Contact ID message format outlined above shows that the section

<QXYZ><GG><CCC>

is all that changes from one transmission to the next. The following, and only the following, log events manipulate the Contact ID message as follows:

Zone Trouble (Tamper or Discon)

Q	**1**
XYZ	**380** (defined as Sensor Trouble in Contact ID Spec.)
GG	**00**
CCC	zone #

Zone Alarm (closing of N.O. zone or opening of N.C. zone)

Q	**1**
XYZ	from zone type lookup table in RAM 26 possible zone types x 2 bytes = 52 byte table
GG	**00**
CCC	zone #

Zone Restoral (opening of N.O. zone type or closing of N.C. zone type)

Q	**3**
XYZ	from zone type lookup table
GG	**00**
CCC	zone #

Status Alert

Q	**1**
XYZ	from literal lookup table in RAM (literals 101-200 x 2 bytes = 200 byte table)
GG	**00**
CCC	**000**

Status Clear

Q	**3**
XYZ	from literal lookup table
GG	**00**
CCC	**000**

User Selected

Q	from lookup table in RAM literals 101-116 x 2 bytes = 32 byte table, first byte is Event Qualifier and should be either 1 or 3 to indicate an Opening or Closing
XYZ	**402** (defined as Group Open/Close in Contact ID Spec.)
GG	from lookup table second byte is Group # (i.e. system partition)
CCC	user#

Zone Bypass

Q	**1**
XYZ	**570** (defined as Sensor Bypass in Contact ID Spec.)
GG	**00**
CCC	zone #

All other system events will generate zeros for the Contact ID messages and hence no off-premise transmission will occur since a digital communicator set for dialer format 4 is programmed to ignore anyQuick-Poll responses (see next section) with an Event Qualifier of 0.

The following points should be noted in relation to the Contact ID implementation:

- The reporting control table, programmed thru *PANELMANAGER*, which decides whether a system log event is transmitted to the primary or secondary phone number or to both, applies to the Contact ID format as it does to all other dialer formats i.e. if a log event is not set up for either primary or secondary it will not be transmitted.
- As can be seen from the log translation defined above there is a 284-byte Contact ID RAM table to allow some customisation of the Contact ID codes. This table may be manipulated via ESCO (see next section) and, as with 3/1 and 4/2 dialer formats, is defaulted to specific values on a system Cold Start - the defaults for specific Personality Packages are outlinedin separate Technical Notes.

ESCO Modifications

Readers familiar with the Europlex Standard Communication Option (ESCO) will know that the digital communicator, or any device connected to the motherboard's serial port, can poll the main microprocessor for alarm information using the Universal Quick-Poll Command which has the format

<ADDR><0><CS>

Since the digital communicator uses a fixed address of 1 a communicator poll takes the form

<1><0><1>

Prior to the introduction of ADEMCO Contact ID the response to such a poll was either

<1><0><1> *ACK no data*

or

<1><5><0><LOC.><3/1><4/2><0><CS> *ACK with data*

where LOC. = 1 for Primary / 0 for Secondary

We will ignore the other two existing possible 8-byte responses (Force Call & Cellular Control); the reader is directed to the M200 manual for a complete description of the Quick-Poll command.

With the addition of the Contact ID format the *ACK with data* response has been extended to 12 bytes, defined as

<ADDR><9><0><LOC.><3/1><4/2><EVENT QUALIFIER><EVENT CODE HI BYTE><EVENT CODE LO BYTE><GROUP #><SENSOR or USER #><CS>

where the 4 bytes preceding the Checksum contain the Contact ID information to be transmitted. Only the lower nibbles of the Event Qualifier and Event Code Hi Byte are used by the digital communicator.

The **Write RAM Table**(6AH) and **Read RAM Table**(6BH) ESCO commands (refer to M200 manual) have been modified to allow access to the 284 byte Contact ID table:

Offset 1094	Zone Change Event Code (26 possible types x 2 bytes)
Offset 1146	Status Alert/Clear Event Code (lits 101-200 x 2 bytes)
Offset 1346	User Selected Event Qualifier/Group # (lits 101-116 x 2 bytes