

R A D I O N I C S

READYKEY® K6100 Readykey for Windows™

DDE Output Datasheet

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Introduction

This datasheet describes a method by which other, non-Readykey applications, may receive details of all or selected transactions (events) on a Readykey for Windows system.

The third-party application may then process these transactions, to provide, for example, a link to a CCTV camera control program or time and attendance package.

The link uses the Microsoft Windows DDE (Dynamic Data Exchange) facility.

It is assumed that readers of this datasheet are familiar with the concepts of DDE; the implementation of DDE links between Windows-based applications; and with Readykey for Windows, particularly the concept of 'Transaction Routing' - further information on this is included in the On-line Help, with the exception of further explanations involving the DDE itself. For more information on the operations of DDE, consult the manuals provided by Microsoft Corporation for the particular operating system you are using.

Technical Information

The Readykey for Windows DDE link uses standard Windows DDEML functionality.

Any workstation (PC) running Readykey for Windows can be configured to act as a DDE server, to any application that requests DDE messages.

Transaction Routing

The **Trans Routing** part of the **Admin** application includes a check box that, for each transaction, determines whether that transaction generates a DDE output string or not.

	Display	Printer	Alarm	Requires Acc	Auto Acc	Serial Interface	DDE Output
Access Authorized	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alarm Acknowledged	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alarm Activated	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alarm Cleared	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alarm Disarmed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alarm Full Armed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alarm Perimeter Armed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anti-Tamper Alarm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auto Relay Reset	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auto Relay Set	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

It is important to remember that different Transaction Routing 'frames' are set up for each workstation on the Readykey for Windows system, and also for different divisions. Therefore it is possible to restrict DDE messages to transactions from certain divisions only, or have multiple third-party applications processing DDE messages for different transactions on different workstations.

Alarm

DDE messages will only be available on workstations where the Readykey for Windows Alarm application is running.

Implementation

Readykey for Windows will act as a DDE server to any application that requests data.

The DDEML strings to be used are taken from the ALARM.INI file, located in the Readykey for Windows 'BIN' directory on the workstation, normally \RKEYWIN\BIN.

The relevant section in the ALARM.INI file is [DDENames]:

DDEML String	ALARM.INI Name	Default Data
Service Name	DDEServiceName	PACEVENTS
Topic Name	DDETopicName	PACALARMS
Item Name	DDEItemName	PACXACT

The default entries in the ALARM.INI file are therefore as follows:

```
[DDE Names]
DDEServiceName=PACEVENTS
DDETopicName=PACALARMS
DDEItemName=PACXACT
```

Data Format

The format of the data is as follows. Note that all fields are surrounded by quotes:

```
"<Event Type Number>",
"<Event Description>",
"<Time of Transaction>",
"<Date of Transaction>",
"<Division>",
"<Where>",
"<Who>"
```

For example:

```
"24","Editor Off","14:06","05/04/95","HEAD OFFICE
DIVISION","DEFAULT WORKSTATION","DEFAULT OPERATOR"

"18","Override Alarm","14:29","05/04/95","HEAD OFFICE
DIVISION","SITE ONE, CONTROLLER ONE",""

"11","No Access - Time","14:29","05/04/95",
"HEAD OFFICE DIVISION","SITE ONE, CONTROLLER ONE, DOOR ONE",
"FLOWERS_A "

"09"," No Access - Level","14:29","05/04/95",
"HEAD OFFICE DIVISION","SITE ONE, CONTROLLER ONE, DOOR TWO",
"FLOWERS_A "
```

Note: If there is more than one language installed on the system, then the "<Event Description>" field will be output in the current default language in use by the system.

Definitions

The following table lists some important definitions, that may be useful to those implementing a DDE application.

Transaction:	A 17 byte structure which represents an event and is stored in a file as a permanent record of the event.
Alarm:	A transaction that has been routed in Admin: Transaction Routing as an alarm. In Readykey for Windows there are 2 distinct types of alarm - 'real alarms' and 'logical alarms'.
Real Alarm:	A 'real alarm' is a transaction that represents a physical (hardware) alarm that later requires to be cleared.
Logical Alarm:	A 'logical alarm' is any transaction event (with the exception of Alarm Acknowledges, described later) that does not relate to a hardware state but is routed as an alarm in Admin: Transaction Routing .
Alarm Clear:	This is a transaction created by the hardware that occurs when the physical alarm state is cleared.
Accepting an Alarm:	This is a user action that removes an alarm from the current queue. If the alarm is real an Alarm Acknowledge transaction is created by Readykey for Windows. There is no record of accepting a logical alarm.
Alarm Acknowledge:	This is a transaction that is created when a real alarm is accepted. Various transaction types are Alarm Acknowledge (e.g. Zone Tamper Accept; Override Alarm Accept and Alarm Acknowledge).

Event Types / Descriptions

The following are hardware ('real') alarms - the acknowledge and clear conditions for each are also shown:

Real Alarm Event	Acknowledgment	Alarm cleared condition
Anti-Tamper Alarm	Alarm Acknowledged	Alarm Cleared
Unauthorized Access	Alarm Acknowledged	Alarm Cleared
Door Left Open	Alarm Acknowledged	Door Closed
Emergency Override On	Alarm Acknowledged	Emergency Override Off
PIN Reader Duress	Duress Alarm Accepted	
Override Alarm	Override Alarm Accepted	Override Alarm Reset
Alarm Zone Active	Alarm Acknowledged	Zone Restored & Disarmed Zone Restored & Rearmed
Zone Tamper Alarm	Zone Tamper Accepted	Zone Tamper Cleared
Zone Trouble Alarm	Zone Trouble Accepted	Zone Trouble Cleared

Event Type Names / Numbers

The following list includes the Event Names and corresponding Numbers for all transaction types currently supported by Readykey for Windows:

Event Name	Number	Event Name	Number
Access Authorized	2	Comms. Error type 2	74
Alarm Acknowledged	35	Comms. Error type 3	75
Alarm Activated	26	Comms. Restored	76
Alarm Cleared	17	Comms. Session Start	65
Alarm Disarmed	91	Comms. Session Timeout	69
Alarm Full Armed	90	Bad Cable	77
Alarm Perimeter Armed	89	Comms Violation	78
Anti-Tamper Alarm	16	D/C Not Responding	71
Auto Relay Reset	56	CNC Dial back failure	87
Auto Relay Set	57	Dial Back Fail	79
Automatic Engage	29	Door Closed	15
Automatic Isolate	28	Door Left Open	14
Automatic Lock	22	Duress Acknowledged	40
Automatic Unlock	23	Editor Off	24
Comms. Session Aborted	70	Editor Off (Panel)	46
Comms. Session End	66	Editor On	25
Comms. Error type 1	73	Editor On (Panel)	47
Emergency Override Off	5	No Exit - Passback	44
Emergency Override On	4	Login Incorrect	84
Entry Authorized	1	Override Alarm Accepted	36
Exit Authorized	0	Override Alarm	18
Exit Out of Hours	45	Override Alarm Reset	19
Free Exit	3	PIN Reader Duress	39
Incorrect PIN Number	53	Power Off	48
Line Unobtainable	68	Power On	49
Local Alarm Accept	30	Redialing...	67
Local Duress Accepted	41	Remote Release	43
Manual Engage	34	Repeated Key Use	38
Manual Isolate	33	Request for Entry	7
Manual Lock	20	Request to Exit	6
Manual Relay Reset	54	RTE Button Held Down	37
Manual Relay Set	55	System Recovery	51

Event Type Names / Numbers (continued)

Event Name	Number	Event Name	Number
Manual Unlock	21	System Reset	50
Modem Not Connected	72	Unauthorized Access	8
No Access - Alarm Armed	88	Zone Restored/Disarmed	60
No Access - Date	31	Zone Restored & Rearmed	27
No Access - Holiday	13	Zone Tamper Accepted	61
No Access - Level	9	Zone Tamper Alarm	58
No Access - Locked Out	10	Zone Tamper Cleared	63
No Access - Time	11	Zone Trouble Accepted	62
No Access - Unknown ID	32	Zone Trouble Alarm	59
No Entry - Passback	12	Zone Trouble Cleared	64