METASYS®

Access Control System Objects

* Indicates those sections where changes have occurred since the last printing.

Code No. LIT-636077

* Indicates those sections where changes have occurred since the last printing.

Introduction

Before You Begin

This document describes Access Control System objects configured online using an Operator Workstation. Before you begin defining these objects online, you should have a general understanding of the IAC-600 system's capabilities and theory of operation.

Note: This document does not apply to Data Definition Language (DDL) programming. DDL users should refer to the *DDL Programmer's Manual (FAN 630).*

IMPORTANT:	Use the Operator Workstation for adding, modifying, and viewing the IAC-600 data base. Do not use a local I/O for these functions because lost data can result.

Introduction

Metasys® Access Control Management consists of three object types: Access Controller (AC), Card Reader (CR), and Binary Input (BI).

- The Access Controller object defines the hardware interface between the NCM and D600 Access Controller. The NCM supports up to two D600s (Metasys Release 6.0 software and later). There is only one Access Controller object defined per D600 Controller.
- A Card Reader object is a software object that provides the door control function for a card reader terminal. A Card Reader object represents an STI (Smart Terminal Interface) and its corresponding card reader.
- A Binary Input object is a software object that tracks the status of a binary alarm point in the IAC-600 system.

Together, the Access Controller, Card Reader, and Binary Input objects integrate access control management functions with the Metasys Facility Management System (FMS).

Quick Start

This section tells you how to quickly define Access Control System objects from your Operator Workstation. For additional information about defining or modifying Access Control System objects, configuring the D600 Controller, viewing device summaries, adding cards, or defining time zones, see the *Data Base Generation* section.

1. Defining an Access Controller Object

An Access Controller object must be created before a Card Reader object, and a Card Reader object must exist before its associated binary alarm points can be mapped to Binary Input objects.

To define an Access Controller object:

Note: Only two Access Controller objects can be defined per NCM.

1. Go to the System Summary in which you want to add the object.
2. Select Item from the Menu bar. Then, select New from the Item menu. A dialog box for selecting object types appears. Hardware System, Hardware Object, and Copy (System/Object) fields are not used for this object type.
3. Select N2 device. Click OK. A dialog box for Adding the N2 device appears.
4. Select D600. Click OK. The Access Controller object Definition window appears. See Figure 1.

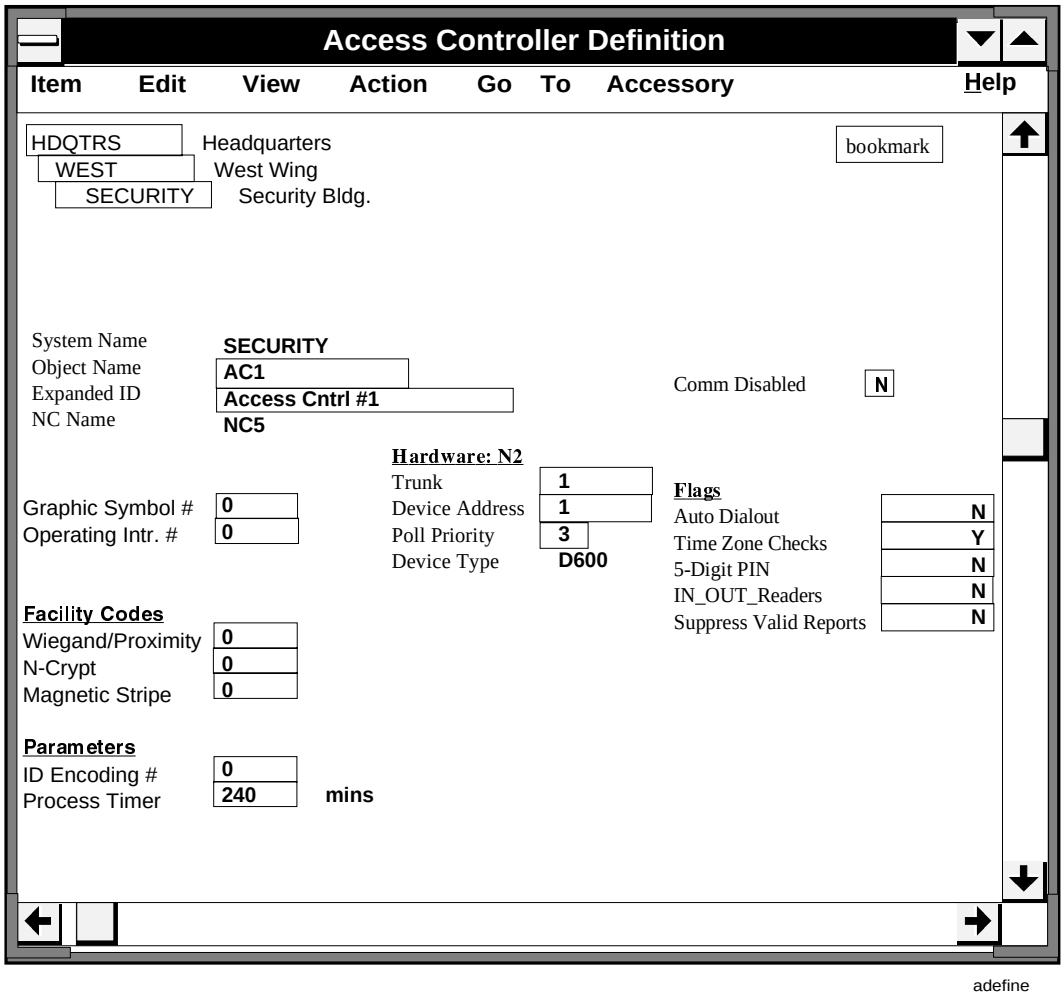


Figure 1: Access Controller Object Definition Window

Note that some of the fields in the window are blank and some are already filled in. You must fill in the blank attribute fields (e.g., Object Name). The attribute fields that are already filled in contain default values, which you may either accept or change.

The following table explains the attributes without default settings. The *Access Controller Object Attribute Table* in the *Reference Tables* section describes all Access Controller object attributes. The *Operator Workstation User's Manual (FAN 634)* explains the general procedures for entering and changing data in detail.

Table 1: Access Controller Attributes Without Default Settings

Attribute	Description	Entry Values
Object Name	Identifies the object (i.e., Cntrller). The object name cannot be duplicated in the system.	1 to 8 alphanumeric characters
Expanded ID (optional)	Further identifies the object (i.e., FMS Access Cntrl Center).	1 to 24 alphanumeric characters

5. To save the new Access Controller object, select Item from the Menu bar. Then, select Save. A dialog box appears to indicate the item has been saved. The Access Controller object is added to the NCM data base.

Modifying and Monitoring the Access Controller Object

Once the Access Controller object is defined, you can modify or monitor its attribute values online using the Access Controller object Focus window. You'll find more information in the *Operator Workstation User's Manual (FAN 634).*

2. Defining a Card Reader Object

To define a Card Reader object:

1. Go to the System Summary in which you want to add the object.
2. Select Item from the Menu bar. Then, select New from the Item menu. A dialog box for selecting object types appears.
3. Select Card Reader. In the Hardware System and Hardware Object fields, type the system on the network and Access Controller (AC) object this Card Reader object will be mapped to. (The AC object must already be defined.) Click OK. The Card Reader object Definition window (Figure 2) appears.

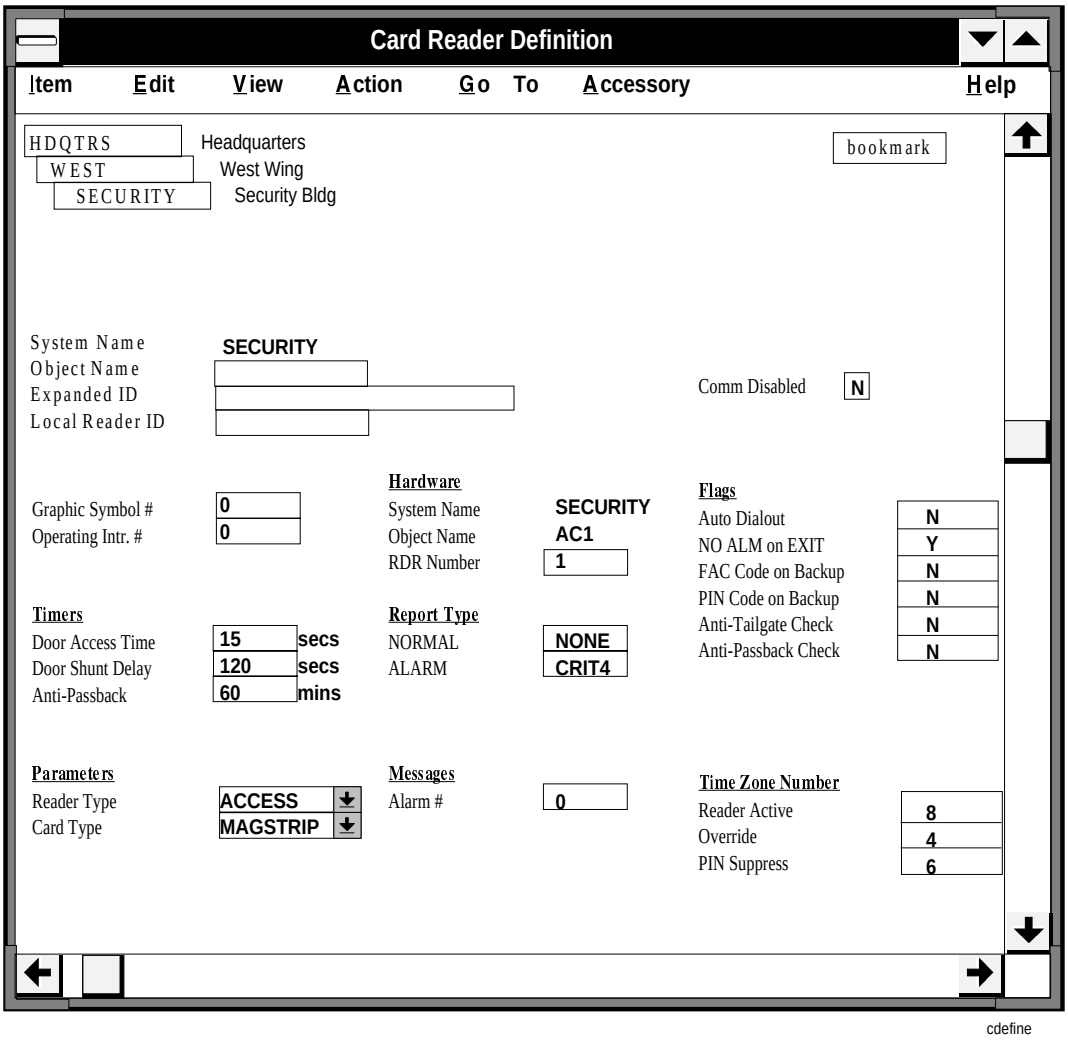


Figure 2: Card Reader Object Definition Window

Note that some of the fields in the window are blank and some are already filled in. You must fill in the blank attribute fields (e.g., Object Name). The attribute fields that are already filled in contain default values, which you may either accept or change.

Note: The attribute Local Reader ID is optional. You do not have to fill in a value for this field.

The following table explains the attributes without default settings. *Table 9: Card Reader Object Attribute Table* in the *Reference Tables* section describes all Card Reader object attributes. The *Operator Workstation User's Manual (FAN 634)* explains the general procedures for entering and changing data in detail.

Table 2: Card Reader Attributes without Default Settings

Attribute	Description	Entry Values
Object Name	Identifies the object (i.e., Reader4). The object name cannot be duplicated in the system.	1 to 8 alphanumeric characters
Expanded ID (optional)	Further identifies the object (i.e., Basement).	1 to 24 alphanumeric characters
Local Reader ID (optional)	Further identifies the location of the reader.	1 to 16 alphanumeric characters

4. To save the new Card Reader object, select Item from the Menu bar. Then, select Save. The Card Reader object is added to the NCM data base.

Note: Up to 16 Card Reader objects can be defined per D600 Controller.

Modifying and Monitoring the Card Reader Object

Once the Card Reader object is defined, you can modify or monitor its attribute values online using the Card Reader object Focus window. You'll find more information in the *Operator Workstation User's Manual (FAN 634).*

If you need information on the overall process of defining Access Control System objects online, see the *Data Base Generation* section of this document. If you need information about the functions and purposes of the Access Control System objects, read the next section, *Engineering Overview*, which explains how these components work together.

3. Defining a Binary Input Object

To define a Binary Input object:

1. Go to the System Summary in which you want to add the object.
2. Select Item from the Menu bar. Then, select New from the Item menu. A dialog box for selecting object types appears.
3. Select Binary Input. In the Hardware System and Hardware Object fields, type both the system on the network and Access Controller object this Binary Input object will be mapped to. Click OK. The Binary Input object Definition window (Figure 3) appears.

   Note that some of the fields in the window are blank and some are already filled in. You must fill in the blank attribute fields (e.g., Object Name). The attribute fields that are already filled in contain default values, which you may either accept or change.

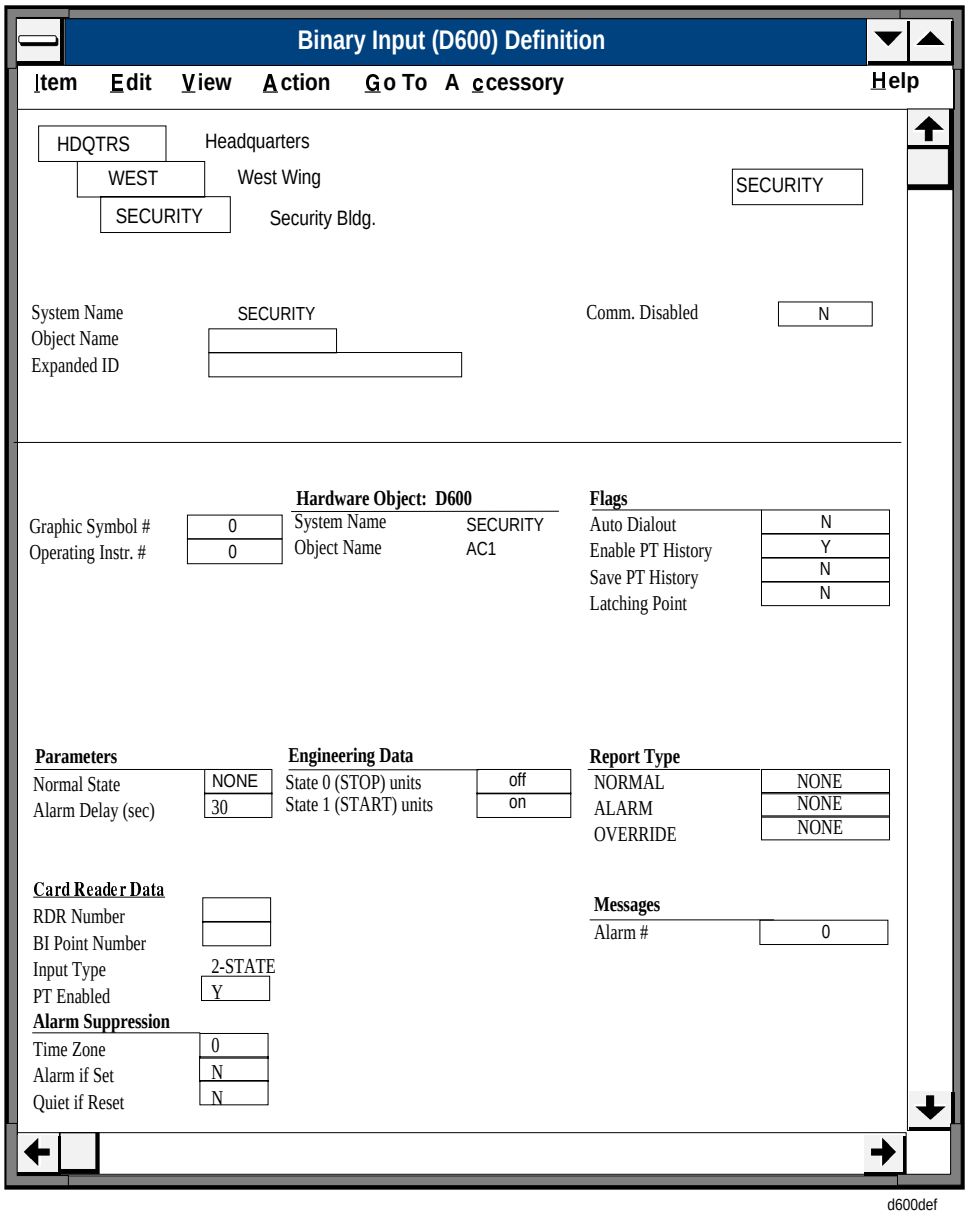


Figure 3: Binary Input Object Definition Window

The following table explains those attributes that map the BI objects to the IAC-600 system. The other attributes, illustrated in the Definition window, are also applicable to defining binary alarm point, but are covered in separate documentation. See the *Binary Input (BI) Object Technical Bulletin* in this manual for a complete description. The *Operator Workstation User's Manual (FAN 634)* explains the general procedures for entering and changing data in detail.

Table 3: Attributes That Map BI Objects to IAC-600

Attribute	Description	Entry Values
Reader Number	Identifies the STI/card reader that this Binary Input object is mapped to.	Integer 1 to 16
BI Point Number	Identifies the binary alarm point (in an STI) this Binary Input object is mapped to.	Integer 1 to 8 Input 1 should be assigned to the door monitor alarm, and Input 2 to the STI enclosure tamper.
PT Enabled	Determines whether the point is enabled or disabled.	0 = disabled 1 = enabled
Time Zone	Determines which time zone schedule is linked to this binary alarm point.	Integer 1 to 8
Alarm if Set	Determines whether any alarms linked to this binary alarm point are enabled or disabled.	0 = not set on alarm 1 = set on alarm
Quiet if Reset	Determines whether to automatically reset the binary alarm point after an alarm has been acknowledged at an Operator Workstation.	0 = not reset if acknowledged 1 = reset if acknowledged

4. To save the new BI object, select Item from the Menu bar. Then, select Save. The BI object is added to the NCM data base.

Modifying and Monitoring the Binary Input Object

Once the Binary Input object is defined, you can modify or monitor its attribute values online using the Binary Input object Focus window. You'll find more information in the *Operator Workstation User's Manual (FAN 634).*

If you need information on the overall process of defining Access Control System objects online, see the *Data Base Generation* section of this document. If you need information about the functions and purposes of the Access Control System objects, read the next section, *Engineering Overview*, which explains how these components work together.

Engineering Overview

Access Controller (AC), Card Reader (CR), and Binary Input (BI) objects have separate responsibilities. Together, they exchange information in order to maintain a complex access control management system integrated with Metasys. See Figure 4.

Overview of Operation

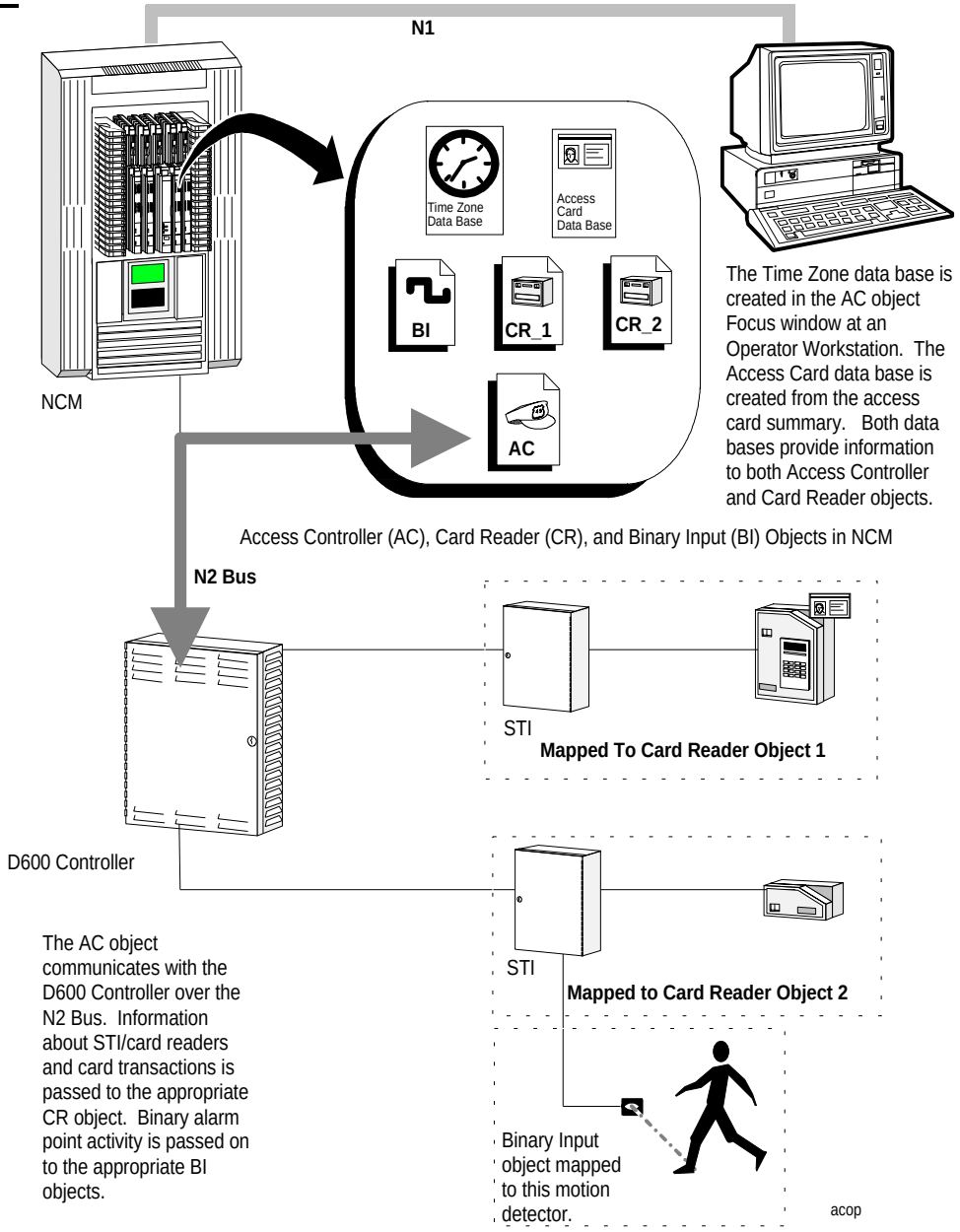


Figure 4: Operation of the Access Controller, Card Reader, and Binary Input Objects

Access Controller Object

An Access Controller object defines the D600 Controller in the NCM. It is the hardware object or communication link between the D600 Controller and the NCM to which the controller is connected. The Access Controller object resides in the NCM and polls the D600 Controller via the N2 Bus. It uses this information to monitor the controller's overall status, report changes-of-state, enter access cards into the system, and trigger control processes. The Access Controller object also processes all upload/downloads to the D600 Controller and routes messages intended for other objects. Only two D600 Controllers can be connected to an NCM.

Card Reader Object

A Card Reader object is a software object that tracks the status of one STI and its associated card reader. You can define up to 16 Card Reader objects per D600. Although each Card Reader object receives information about its STI/card reader from the Access Controller object, the Card Reader object is responsible for monitoring the STI/card reader, reporting changes-of-state, and reporting card transactions. Most of the automatic interaction between the IAC-600 system and other parts of Metasys is handled through Card Reader objects.

Access Card In Out State

There are three possible states in the In Out State field:

In: The card was last used to enter a building or area. The card can only be used to leave the building or area, which changes the state to Out.

Out: The card was last used to leave a building or area. The card can only be used to enter the building or area, which changes the state to In.

N/A: The card can be used to either enter or leave a building or area. This is the state that the card is saved to any time the Modify Card dialog box is opened and saved (by clicking OK). The next time the card is used at an In or Out reader, its state (In or Out) is recorded in the In Out State field.

If you are using In and Out Card Readers, and an access card holder does not use an access card to enter or leave an area, the holder is prevented from using the card to enter or leave the next time it is necessary.

To remedy this, change the *In Out State* to *N/A*. N/A is the default for the In Out State field, and it is the only status you can define using the OWS.

To change the In Out State to N/A:

1. Open the Modify Card dialog box.
2. Click OK. (There is no need to change any of the fields in the dialog box.)

A message box appears telling you that the data has been saved, and the card is automatically saved with the In Out State field set to N/A. The next time the card is used at an In or Out reader, its state (In or Out) is recorded in the In Out State field.

Note: Downloading the D600 Access Controller saves all access cards for the controller to the N/A state. Each card remains in that state until it is used again to either enter or leave a building/area.

Binary Input Object

A Binary Input object is a software object that tracks the status of one binary alarm point linked to a Smart Terminal Interface (STI). You can define up to eight binary alarm points per STI in the system. Similar to the Card Reader object, the BI object receives information about its associated alarm point from the Access Controller object. Based on the status of the binary alarm point, the BI object can report changes-of-state and trigger control processes within Metasys. You must use BI objects to monitor door switches; do not map door switches to CS objects.

Note: Input point number 1 at the STI should be connected to the door monitor alarm. Input point number 2 at the STI is factory connected to the STI enclosure tamper. We recommend that you use these two inputs for their intended purposes.

NCM Capabilities

The NCM contains the Access Controller, Card Reader, and Binary Input objects. For connecting the N2 Bus to the NCM and NCM device limitations, see the *Network Control Module 200 Technical Bulletin* in the *Metasys Network Technical Manual (FAN 636).*

IMPORTANT:	It is recommended that you use the same archive PC for all Access NCs. Otherwise, the Access Card data bases could become unsynchronized.

NCM Capabilities

The following list provides the NCM capabilities. The NCM supports:

- 2 D600 Controllers per NCM
- 16 Card Reader objects per D600 Controller
- 8 Binary Input objects per STI installed in the system
- software point types and associated objects including the BI
- software features including:
  - Upload/Download
  - Dial-up I/O
  - GPL Processing
  - Calendar/Holiday/Date/Time
  - Password
  - Point History
  - Report Router
  - Scheduling
  - Totalization
  - Trend
- miscellaneous hardware and software:
  - NC direct PC connection
  - NT connection
  - NCM printer port
  - Dialup Port
  - N1 LAN
  - N2 Communications Bus
  - NCSETUP and Diagnostic Tool
- N2 devices
  - Expansion Modules
  - Air Handling Unit (AHU) Controller, Variable Air Volume (VAV) Controller, Unitary (UNT) Controller, Variable Air Volume Modular Assembly (VMA) Controller
  - LCP, DR9100, DC9100, DX9100, XT9100, and XTM Controllers (NCM200 only)

Operation of an Access Controller Object

Figure 5 illustrates the functions performed by the Access Controller object: Hardware Interface, Change of State (COS) Reporting, Control Process Triggering, Time Zone Creation, Access Card Maintenance, and Global Door Access Control.

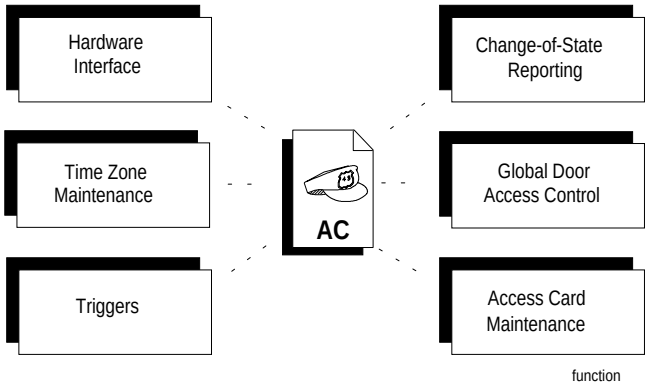


Figure 5: Access Controller Object Functional Model

Hardware Interface

The D600 Controller is physically connected to the NCM via the N2 Bus. From a software standpoint, you'll need to define one Access Controller object to map to each D600 Controller. This allows the AC object to poll the D600 and communicate D600 actions and changes-of-state to Metasys. The Access Controller object must reside in the same NCM that is connected to the D600.

Hardware Settings

AC object hardware settings for the hardware interface include:

- NC Trunk Number
- Device Address
- Poll Priority

For a description of these attributes, see *Access Controller Object Attribute Table* in the *Reference Tables* section of this document.

Unreliable and Offline States

The Access Controller object may become unreliable due to an offline condition (communication break). When this happens, the following attributes become unreliable:

- Report Alarm
- Access
- UPS Battery Backup Low
- AC Tampered
- Local Operator Change
- N2 Download Active
- UPS AC Power Fail

Note: If any of these attributes become unreliable and are associated with a control process (trigger), the control process results could be affected. For example, the unreliability can be passed onto Card Reader objects.

How Do I Find Out If An Access Controller Object Is Unreliable?

You can determine if an Access Controller object is unreliable by looking at the Focus window or System Summary displaying the object. In the Focus window, the Object Offline attribute will display a "Y" in its text box, and other offline attributes will show "?." In the System Summary, the Value text associated with the object will read "offline."

It is important to note that if a D600 is offline, by convention the STIs and card readers are also offline. However, if a D600 is online, the individual STI/card readers may or may not be online. In the latter case, check the individual Card Reader objects for unreliability.

Change-of-State Reporting

The D600 Controller continuously monitors and analyzes changes-of-state within its system and communicates those changes via the Access Controller (AC) object during polling. In turn, the object can send a COS report to Operator Workstations and printers for viewing.

The AC object can support multiple changes-of-state simultaneously and independently. For example, the D600 can be experiencing an alarm at the same time as normal operations are taking place. The Access Controller object will categorize and process the multiple changes-of-state in order of priority (i.e., alarm, normal).

COS Settings

The following AC object attributes initiate a COS report. These attributes are mapped to internal points and parameters in the D600 and their changes-of-state are recorded in the Access Controller Report file.

- Suppress Valid Reports
- Report Alarm
- Global Access
- UPS Battery Backup Low
- AC Tampered
- Local Operator Change
- UPS AC Power Fail
- N2 Download Active

When the preceding parameters initiate a COS, these messages are recorded in a Change-of-State report:

- Access Controller Has Restarted
- Invalid System Facility Code
- Access Controller Alarm Has Been Acknowledged
- Access Controller Has Been Tampered With
- Access Controller Tamper Has Been Cleared
- Local Operator Has Changed The Data Base
- All Doors Are Restored To Normal Operation
- All Doors Are Emergency Unlocked
- Field Hardware AC Power (Normal/Alarm)
- Field Hardware UPS Battery (Normal/Alarm)
- Field Hardware Data Base Download Required (Normal/Alarm)

Report Types

The Access Controller Report provides two report types:

- *Normal Report Type* is generated in the Access Controller Report when the D600 detects a COS to normal within the system (e.g., All Doors Are Restored To Normal Operation).
- *Alarm Report Type* is generated in the Access Controller Report when the D600 detects a COS to alarm within the system (e.g., Access Controller Has Been Tampered With).

These report types are internally specified by the AC object and do not appear on the Focus window. Their messages are displayed in dialog boxes (pop-up windows) at Operator Workstations and are automatically sent to the Access Controller Report file to be viewed and printed.

Triggers

Certain AC object attributes can trigger control processes. This means that when the value of a "triggering" attribute changes, this change can cause a GPL control process to run within Metasys.

Triggerable Settings

The following Access Controller object attribute fields are triggerable:

- Object Offline
- 64 Control Interlock Group Attributes. (See *Card Access-Lighting/HVAC Interlocks* next.)

Card Access-Lighting/HVAC Interlocks

Another form of control process triggering is the card access-lighting/HVAC interlocks. These are internal triggering attributes which are not displayed in the AC Focus window. If an access card successfully gains entry to a building, an assigned group of lights and HVAC hardware can go on for a specified period of time to support the card holder's work area. The process will be initiated regardless of where the card was read and is not limited to one D600. Up to 64 of these groups can be defined for an AC object.

Lock/Unlock Triggers

Lock/Unlock triggers are used to enable/disable triggering processes. For example, if there is construction going on in the building, and it is setting off unwanted alarms, you may want to lock the triggers function to disable all binary alarm points. When you want to resume normal security, unlock the triggers function. You will find this function under the Action-Communications menu in the AC object Focus window. Refer to *Data Base Generation* section for the procedure used to lock/unlock this flag.

Note: If you command the Triggers Locked flag to Y, all triggering processes associated with this object will be disabled.

Access Card Data Base Maintenance

You can enter, modify, delete, and view access cards (badges) from the Access Cards summary, which is accessed from the Network Map. Access cards can be numbered from 1 to 65535. Access cards are resident in the NCM data base. Each access card is downloaded to the D600, where it is used to decide locally whether to admit the card holder at a given door. The Metasys-integrated D600 with expanded memory (MX-1) can handle up to 16,000 card records. Without expanded memory, it can maintain up to 4400 cards. Your system's card capacity cannot exceed 16,000 card records. See *Connecting the IAC-600 System to Metasys Network Technical Bulletin* in the *Metasys Network Technical Manual (FAN 636).*

Access card types that may be defined include: magnetic stripe, barium ferrite, Wiegand, and proximity (uses the Wiegand card type). Figure 6 shows the Access Cards summary. You can view, modify, and delete cards from this summary.

You must have a password level of one to add, modify, delete, display, or print all access cards in the system. If you have a password level of three or two, then your password must allow you access to the Access Controller hardware object for which the access card is to be (or has been) defined to add, modify, display, print, or delete an access card.

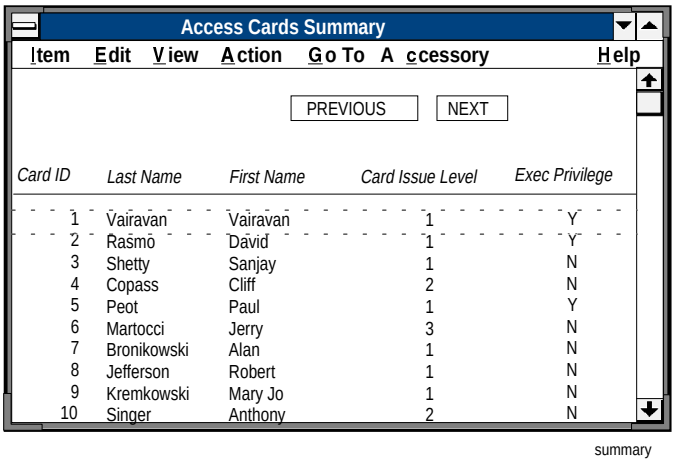


Figure 6: Access Controller Object Access Cards--Summary Screen

Figure 7 shows an Card Summary--Add Card dialog box. You can add access cards from this menu. The new values will reside in the D600 data base.

Note: You may add or modify card data if one or more D600s are offline. If you add a card while one or more D600s are offline, any additions you make to offline D600s will not be saved. If you modify card data while one or more D600s are offline, global data may become unsynchronized and any changes to offline D600s will not be saved. You may not delete a card if there are any D600s offline.

Access Card Parameters

There are two levels in which you can maintain an access card data base:

- limited access to the card data base through any Operator Workstation. See Figure 7.
- complete access to detailed card holder information through one archive Operator Workstation with the runtime version of Superbase 4™, which is included with your Metasys software. See Figure 8.

With Superbase 4, you can add personal information to an archive card data base such as driver's license number, photo, home phone, and address. Superbase 4 can only be run on an archive Operator Workstation, and its data base does not operate online with Metasys. Therefore, do not use Superbase 4 to add card records to your online card data base.

Its purpose is to maintain more information on card holders (i.e., personnel files) and generate card transaction summaries, reports, and queries. See your *Operator Workstation User's Manual (FAN 634)* for more information on generating summaries, reports, and queries.

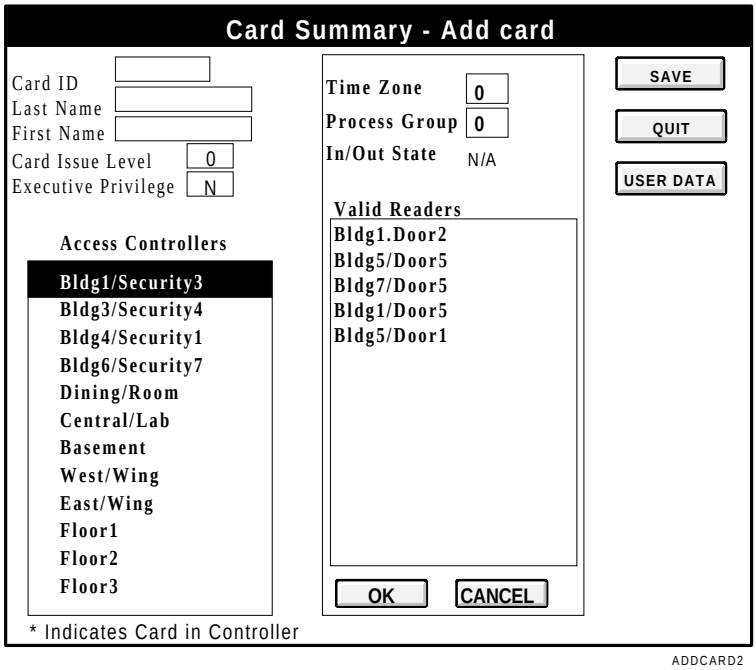


Figure 7: Adding Access Cards at an Operator Workstation

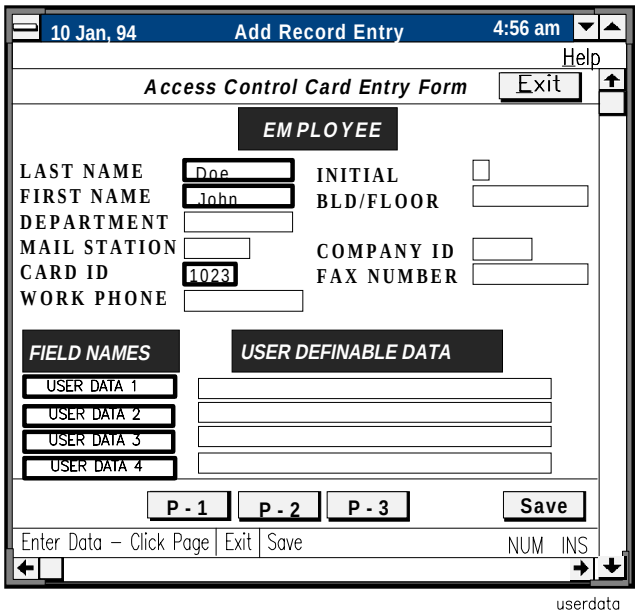


Figure 8: Adding Additional Information to a Card Record Using Superbase 4 at the Archive Operator Workstation

You invoke Superbase 4 by pressing the User Data button as illustrated in Figure 7. See *Using Superbase 4* in the *Learning the Basics* section of your *Operator Workstation User's Manual (FAN 634)* for information on operating Superbase 4.

Scheduling Time Zones

Time zones are data base records maintained by the Access Controller object. Time zones are not used at the NCM, but are a central part of the decision making process at the D600. There can be up to eight time zones defined for an Access Controller object. A time zone is a schedule you create to control the times for each of these operations when:

- a card is active/inactive. You define this type of time zone for the Time Zone attribute in the Card Summary--Add Card dialog box of the Access Controller object. See Figure 7.
- a card reader is active/inactive. You define this type of time zone for the Reader Active Time Zone attribute of the Card Reader object. See Figure 2.
- a card reader's normal access control schedule is overridden to allow free access. You define this type of time zone for the Override Time Zone attribute of the Card Reader object. See Figure 2.
- the PIN code requirement is enabled/disabled. You define this type of time zone for the PIN Suppress Time Zone attribute of the Card Reader object. See Figure 2.

- a binary alarm point is suppressed. You define this type of time zone for the Alarm Suppression Time Zone attribute of the Binary Input (D600) object. See Figure 3.

Note: Defining an alarm suppression time zone for a BI point associated with a card reader is not recommended because it will cause the point to stop tracking the state of the field hardware when that time zone is active at the D600. In addition, when the time zone expires, the state of the BI point will become unreliable. We recommend that you enter zero (0) as the alarm suppression time zone, which disables alarm suppression for that BI point (in other words, enables alarm reporting). Use Metasys to schedule report and/or trigger lock commands to suppress alarms as needed.

Each time zone has up to eight different day-schedules, one for each day of the week and one for holidays. Each day-schedule can have up to 16 times defined. Each time defined will either enable or disable the operation being controlled.

Figure 9 illustrates a time zone schedule for card readers. The example shows time zone number 5. This means a Card Reader object, scheduled for time zone number 5, will have the following schedule. The reader is enabled to read cards starting at 6:00 a.m. Monday and disabled at 5:00 p.m. Monday. Then, it is enabled again from 6:00 p.m. to 10:00 p.m. Monday and disabled after 10:00 p.m. You can develop other schedules for the rest of the days of the week as well as a holiday schedule. It is important to note that for any given day (i.e., Monday), you cannot have two disable times or enable times scheduled back-to-back.

There are certain types of time zones you may want to construct, such as one for free access through a door (Override Time Zone), and one for suppressing PIN codes (PIN Suppress Time Zone). You may also want to design more than one time zone for times a reader can be active.

Notes: D600 time zone schedules use the same holiday dates as defined globally for the rest of Metasys. For more information about the Metasys calendar schedule, see the *Operator Workstation User's Manual (Fan 634).*

The D600 Controller must be online with Metasys in order to add time zones using online generation.

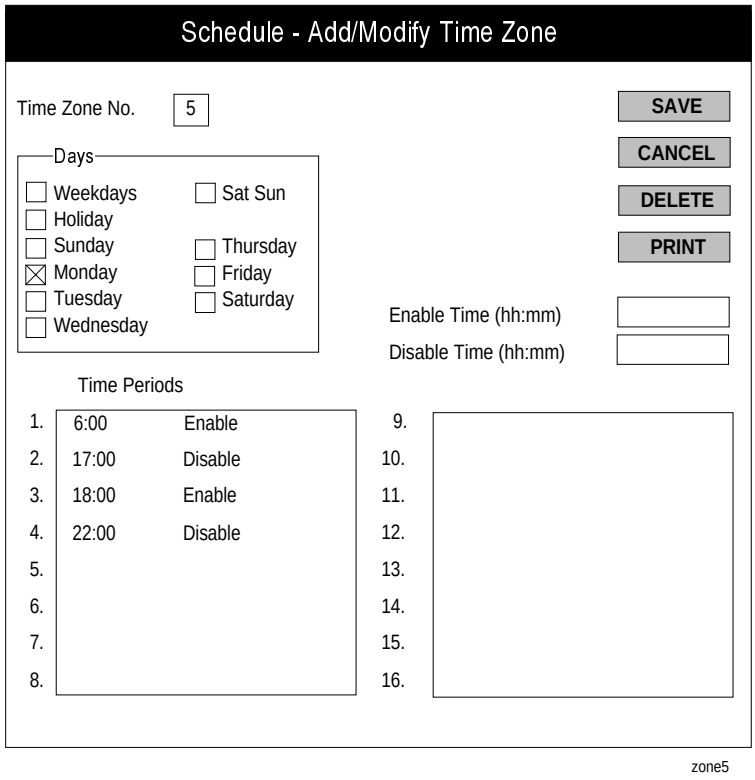


Figure 9: Schedule-Add/Modify Time Zone Dialog Box

Global Door Access Control

Another function of the AC object is to control the locking and unlocking of all the doors simultaneously via an NT or Operator Workstation. Under the AC object Focus window Action-Operation menu, you can globally allow resetting of all IAC-600 alarms, emergency opening of all doors, and returning all doors to normal operation. See Figure 10. Refer to the *Data Base Generation* section for more information on this function.

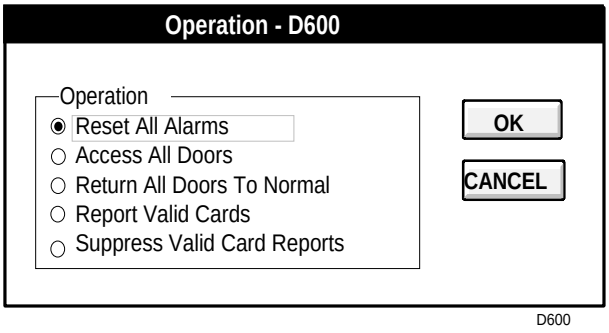


Figure 10: Access Controller Action-Operation-D600 Dialog Box

Operation of a Card Reader Object

Figure 11 illustrates the functions of a Card Reader (CR) object: STI/Card Reader Mapping, Change-of-State Reporting, Triggers, and Local Door Access Control.

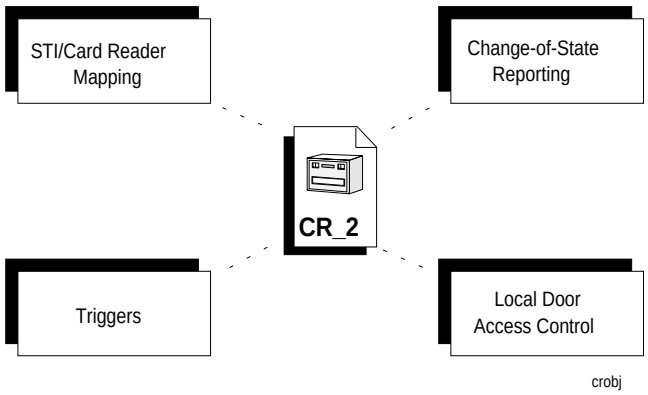


Figure 11: General Operation of a Card Reader Object

STI/Card Reader Mapping

The CR object represents a card reader and its associated Smart Terminal Interface (STI). Card readers communicate the card numbers to the D600 through the STI. The D600 checks the card information against the parameters defined in the data base to grant or deny access. If access is granted, the STI unlocks the door to admit the card holders.

Although a CR object does not physically communicate with the card reader, it is responsible for monitoring the STI/card reader's status and facilitating the interaction between that STI/card reader and the rest of Metasys. All communication between the CR object and its designated STI/card reader is channeled through the Access Controller object. All data displayed or printed about a Card Reader object comes from the NCM, not directly from the D600 Controller. Up to 16 CR objects can be defined per D600 (one per STI/card reader).

Note: A Dual Smart Terminal Interface (DST) provides two STIs in one enclosure. A separate CR object must be mapped to each STI.

Hardware Settings

Hardware settings for the hardware interface with the Access Controller object include:

- Hardware System Name
- Hardware Object Name
- Hardware Reader Number

Unreliable or Offline States

A Card Reader object may become "unreliable" due to an offline condition (communication break). The Access attribute in the Focus window becomes unreliable due to an offline condition. In addition, the Value attribute in the Object Summary screen displays an asterisk (*) in an offline situation.

How Do I Find Out If A Card Reader Object Is Unreliable?

You can determine if a Card Reader object is unreliable by looking at the Focus window or System Summary displaying the object. In the Focus window, the Object Offline attribute will display a "Y" in its text box. In the System Summary, the Value text associated with the object will read "offline."

Change-of-State Reporting

The parameters you set up in object Definition windows and data bases dictate whether a change-of-state (COS) occurs. A COS is issued when:

- either an attribute associated with the CR object changes value (e.g., secure to access mode)
- or an action taken at the STI/card reader (e.g., invalid card) does not match the information in the NCM data bases

Card Reader Object COS Messages

COS messages are recorded in reports. There are two reports generated from the CR object: Card Reader and Card Transaction. Both these reports can be sent to one or more devices, including Operator Workstations and report printers.

The Card Reader Report tracks changes-of-state related to the STI/card reader hardware (e.g., door-open). The CR object compares the action taken at the STI/card reader with specified parameters set up in the CR object, AC object, card access, and time zone data bases.

These are the Card Reader COS messages recorded in a Change-of-State report:

- Card Proximity Battery Is Too Low
- Operator Has Admitted Someone At This Reader
- Card Has The Wrong Facility Code For This Reader
- Card Reader Is Inactive At This Time
- Door Is Open
- Door Has Been Opened Under Duress
- Entry Denied-Multiple PIN Code Errors
- Door Has Been Forced Open
- Card Has Parity Error
- Door Is In Secure Mode
- Door Is In Access Mode

Access Card messages are generated when a card transaction takes place at a card reader.

These are the Access Card COS messages recorded in an Operator Transaction Report Summary:

- Access Granted
- Access Granted--Executive Privilege
- Card Number Is Invalid
- Card Is In Anti-Passback Delay
- Card Is Invalid At This Reader
- Card Required Valid In/Out Sequence
- Pin Code Is Invalid
- Invalid Issue Level

Note: A detailed explanation of COS reporting is contained in the *Report Router/Alarm Management Technical Bulletin*, later in this manual.

COS Report Settings

The Card Reader object provides two report type attribute fields in the Definition window:

- *Normal Report Type* can generate a report when the STI/card reader associated with this object changes to a normal condition.
- *Alarm Report Type* can generate a report when the STI/card reader associated with this object changes to an alarm condition.

You can specify different settings for these report types (i.e., Critical 1-4, Follow-up, Status, and None [default]). Your settings determine the priority and destination of a COS report. Higher priority reports are displayed at Operator Workstations before lower priority reports. CRIT1 reports override all other reports in terms of priority. All Crit (critical) reports are displayed in dialog boxes (pop-up windows) at Operator Workstations. If you specify None, the COS will not generate a report. All COS reports, except None, may be sent to files or printers at the Operator Workstation. These files may be viewed and printed.

For more information, see the *Card Reader Object Attribute Table* in the *Reference Tables* section.

Triggers

Certain field attributes in the Focus window can trigger a control process. This means that when the value of a triggering attribute changes, it can cause a control process to run. For example, if someone is holding the door open longer than the allowed door shunt time, a special horn can sound to alert security personnel.

Triggerable Settings

The following Card Reader object attribute fields are triggerable:

- Object Offline
- Reader State (Access/Secure)

Lock Unlock Triggers

The Triggers Locked flag indicates whether the triggering processes associated with an STI/card reader is enabled or disabled. For example, if a door is ajar, Metasys could trigger alarms to alert building security that there may be unauthorized persons on the premises. However, if the door is ajar because authorized workers are moving material through it, you may want to disable the process by commanding the Triggers Locked flag to Y (Yes).

Note: If the Triggers Locked flag is set to Y (Yes), all triggering processes will be disabled for this object.

Local Door Access Control

You can manually control the mode of access of a single door from the CR Focus window or standard System Summary. There are three types of local door access control for each STI/card reader: Open Door, Secure Door, and Access Door. See Figure 12.

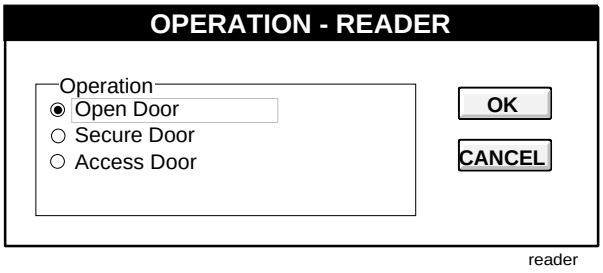


Figure 12: Controlling the Mode of Access of a Single Door from the Action--Operation Menu

Open Door Operation

The open door command allows you to open the door and give temporary access to a person even though the person does not have a valid card. This command expires when the alarm shunt time of the door expires, usually within a minute.

Secured Operation

A secure door command *locks* the door at your command. Card holders must use their cards to gain entry. This command stays in effect until another operator command or the next local time zone change.

Access Operation

An access door command *unlocks* a specified door at your command. The card reader access light is green, indicating no card is necessary to enter the door. This command remains in effect until another operator command or until the next local time zone change.

See the *Data Base Generation* section for more information.

Operation of a Binary Input Object

The Binary Input object has many functions and applications. Only those functions relevant to IAC-600 system applications are discussed here. For more detail on the Binary Input object, refer to the *Binary Input (BI) Object Technical Bulletin* in this manual.

Figure 13 illustrates the functions of a Binary Input object when defined for the IAC-600 system: STI Binary Alarm Input Mapping, Change-of-State Reporting, Triggers, Override Command, Current Value, Point History, Alarm Analysis, Alarm Delay, Adjusting Sensor Parameters, and Latching.

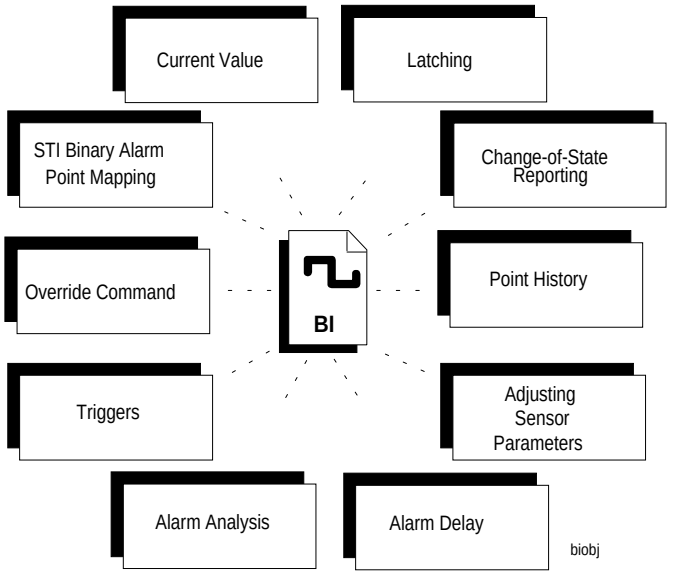


Figure 13: General Operation of a Binary Input Object Defined for the IAC-600 System

STI Binary Alarm Input Mapping

The Binary Input object is the software representation of a binary alarm point in an STI. Each STI can have up to six binary input alarms to monitor the door and other security locations. Two of the binary inputs are assigned to the door-open detector and STI's tamper detector. Subsequently, for each STI installed in an IAC-600 system, up to eight BI objects can be defined. These normally closed BI objects are functionally like other BI objects in Metasys. Trend, Totalization, and Point History options are supported.

Although a BI object does not physically communicate with the binary alarm point, it is responsible for monitoring its status and facilitating the interaction between that binary alarm input and the rest of the Metasys FMS. All communication between the BI object and its designated binary alarm input is channeled through the Access Controller object to the NCM. In turn, the NCM determines any access action or changes-of-state for that binary alarm point and sends the data to the respective BI object. All data displayed or printed about a Binary Input object comes from the NCM, not directly from the D600 Controller.

Access Control Settings

The settings for the STI Binary Alarm Point interface with the Binary Input object include:

- Reader Number
- BI Point Number
- Input Type
- PT enabled
- Time Zone Alarm Suppression
- Alarm if Set
- Quiet if Reset

Note: For details on the Binary Input object functions, refer to the *Binary Input (BI) Object Technical Bulletin* in this manual.

Data Base Generation

Overview

This section instructs you how to define Access Controller and Card Reader objects and bring them online with the D600 Controller using a Metasys Operator Workstation. In addition, you will find information on monitoring and modifying objects from the Focus window, adding and viewing access cards, and creating time zones. Figure 14 shows the definition process. The individual steps are explained after the flowchart.

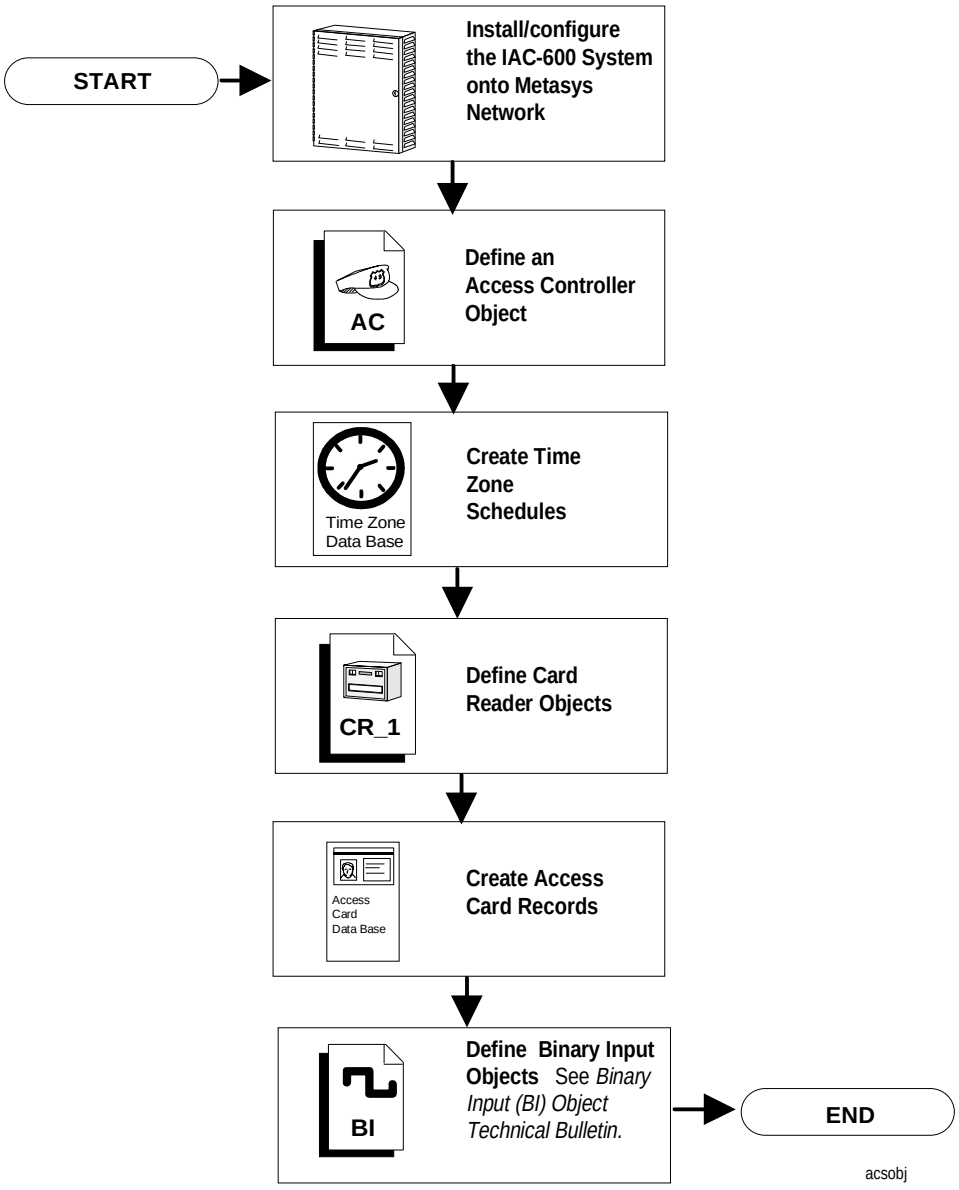
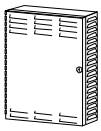


Figure 14: Defining Access Control System Objects

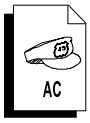
Configuring the D600 Controller



You use Metasys to define Access Control System objects, command the D600 Controller, and maintain access card records and time zone schedules. However, defining an Access Control System object is part of a larger process, which includes:

- installing IAC-600 system hardware--enclosures, printed circuit boards, power supplies, STIs, card readers, and auxiliary equipment. See Cardkey D600 Installation Instructions.
- connecting the N2 Bus between the D600 Controller and NCM. To connect the N2, see the *Application Specific Controllers* section, *Connecting the IAC-600 System to the Metasys Network Technical Bulletin* in the *Metasys Network Technical Manual (FAN 636).*
- configuring the D600 Controller for use with Metasys. See the *Application Specific Controllers* section, *Connecting the IAC-600 System to the Metasys Network Technical Bulletin* in the *Metasys Network Technical Manual (FAN 636).*

Defining an Access Controller Object



The following section explains the steps involved in defining an Access Controller object. In addition, you'll find information on modifying and initiating commands from the AC object Focus window. Also, see your *Operator Workstation User's Manual (FAN 634)* for information on general procedures.

Note: You must use a level three password to display Access Control object Focus windows.

Selecting the Access Controller Object from the Definition Dialog Box

Complete this procedure:

1. Go to the System Summary in which you want to add the object.
2. Select Item from the Menu bar. Then, select New from the Item menu. A dialog box for selecting object types appears. See Figure 15.
3. Select N2 device. Click OK. A dialog box for Adding the N2 device appears.

   Note: Hardware System, Hardware Object, and Copy (System/Object) fields are not used for this object type.
4. Select D600. Click OK. The Access Controller object Definition window appears. See Figure 16.

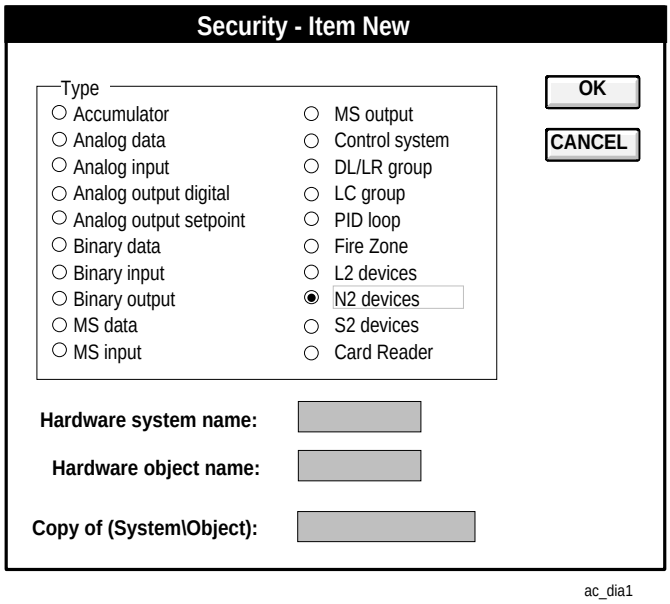


Figure 15: Security - Item New Dialog Box

Entering Data in the Access Controller Object Definition Window

Figure 16 illustrates the Access Controller object Definition window. You will configure the Access Controller object by entering values in the text boxes next to the field attributes.

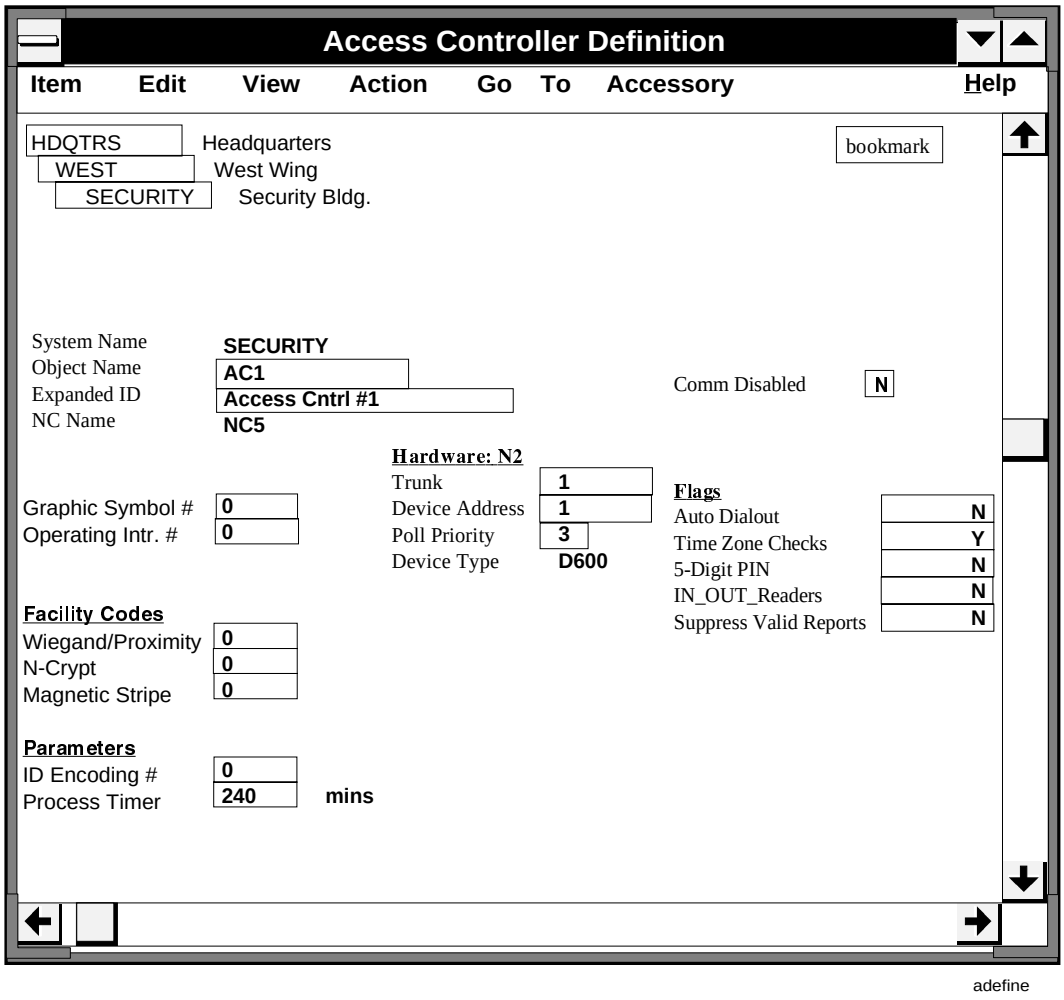


Figure 16: Access Controller Definition Window

Fill in the blank attribute fields (e.g., Object Name). Some of the attribute fields that are already filled in contain default values, which you may either accept or change. Note that NC Name and System Name are fields that you cannot change. Use Table 4 to help you fill in the definable attributes.

Definable Access Controller Object Attributes

Table 4: Definable AC Object Attributes

Attribute	Description	Entry Values
Object Name	Identifies the object (i.e., Cntrllr). The object name cannot be duplicated in the system.	1 to 8 alphanumeric characters
Expanded ID (optional)	Further identifies the object (i.e., Access Cntrl Center).	1 to 24 alphanumeric characters
Graphic Symbol #	Displays the reference number of a graphic symbol used to represent the object in Operator Workstation Graphics.	Integer 0 to 32767
Operator Instr. #	Displays the reference number of a message used when help is requested at the Operator Workstation.	Integer 0 to 32767
Comm Disabled	Specifies whether or not communication is disabled between the object and the D600 Controller.	N = enabled Y = disabled
NC Trunk Number	Denotes the N2 trunk number that connects the D600 Controller to the NCM.	Integer 1 to 2
Device Address	Denotes the D600 address on the N2 network.	Integer 0 to 255
Poll Priority	Represent the priority at which the D600 Controller is polled by the NCM.	Integers 0 to 3 Zero is the highest priority.
Wiegand/Proximity	Represents the facility code that is imprinted on Wiegand or proximity type access cards. The facility code is a master code identifying each customer's facility.	1-99999 (Must match the facility code encoded on the customer's access cards.)
N-Crypt	Represents the facility code encoded on Wiegand N-Crypt (encryption encoding algorithm) type access cards. The facility code is a master code identifying each customer's facility.	1-99999 (Must match the facility code encoded on the customer's access cards.)
Continued on next page . . .		

Attribute (Cont.)	Description	Entry Values
Magnetic Stripe	Represents the facility code imprinted on magnetic stripe type access cards. The facility code is a master code identifying each customer's facility.	1-99999 (Must match the facility code encoded on the customer's access cards.)
Auto Dialout	Specifies whether or not critical reports (Crit 1-4) force a dial up to a remote Operator Workstation.	N = no Y = yes (recommended if a remote terminal is present)
Time Zone Checks	Specifies whether to use time zone schedules for cards, card readers, and binary alarm points.	N = no Y = yes
5-Digit PIN	Specifies whether to enable 5-digit PIN codes when using access cards to enter the facility. Card Readers that do not contain PIN code entry pads will automatically be ignored.	N = no Y = yes
IN_OUT_Readers	Specifies whether any card reader should be designated as IN or OUT readers for such functions as IN-X-IT. For example, a card with OUT status will be changed to IN status after it is used in an IN reader. A card with IN status will change to OUT status after used in an OUT reader.	N = no Y = yes
Suppress Valid Reports	Determines whether valid card transactions are reported at Metasys I/O devices.	N = no Y = yes
ID Encoding # *	Represents a mathematical algorithm used to verify Wiegand N-Crypt access card PINs.	Integer 0 to 7
Process Timer	Defines a period of time in minutes for which a GPL interlock process (e.g., lights turned on) is activated.	Integer 0 to 480
* The integer value selected will determine the PIN number for each valid card holder. Contact Cardkey Systems at 805-522-5555 for a PIN Code Reference Manual.		

The *Access Controller Object Attribute Table* in the *Reference Tables* section gives further detail on Access Controller object attributes.

Saving the New Access Controller Object

To save the new Access Controller object, select Item from the Menu bar. Then, select Save. The Access Controller object is added to the NCM data base.

Monitoring and Modifying an Access Controller Object

Once you have defined an Access Controller object, you can modify and monitor its attributes online in the object Focus window. See Figure 17.

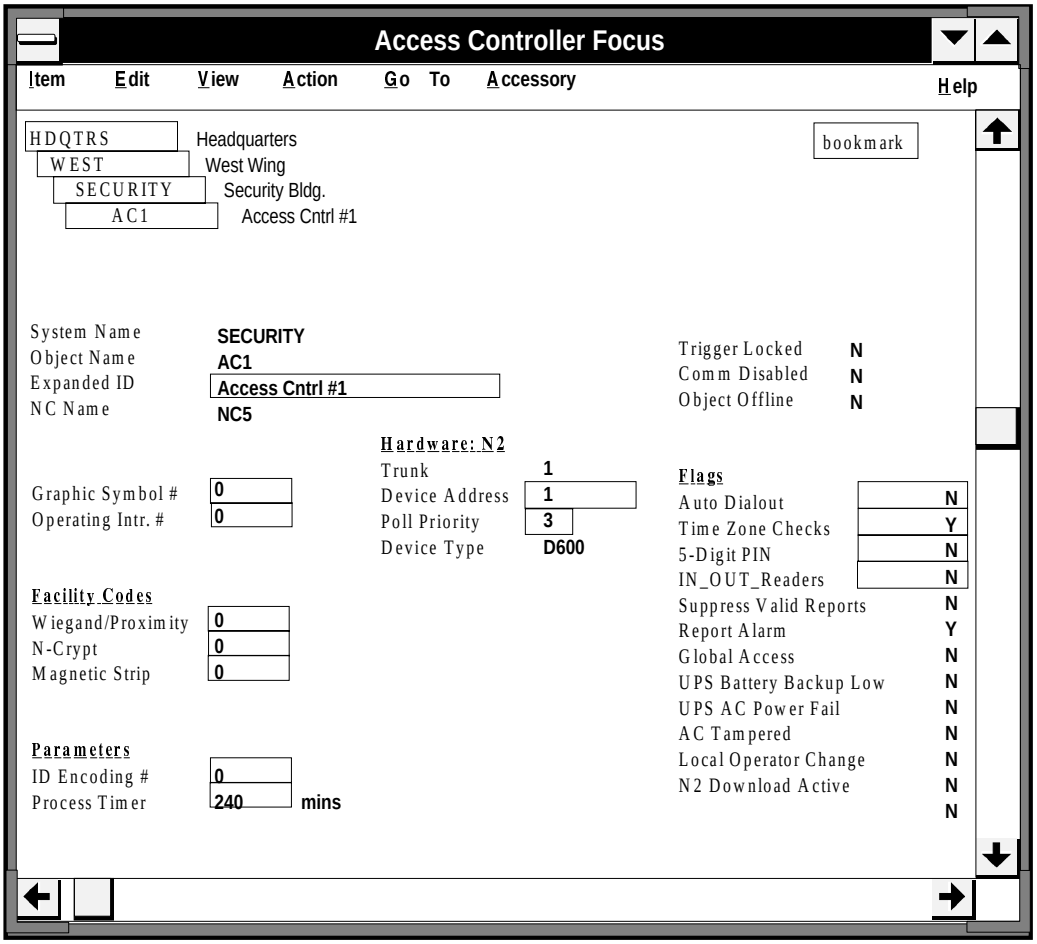


Figure 17: Access Controller Object Focus Window

Monitoring an Access Controller Object

You can monitor the attribute fields of an Access Controller object from its Focus window. Some of the attributes are automatically refreshed in realtime, and other attributes must be updated by reselecting the object.

Attribute fields automatically updated in the Focus window are:

- Report Alarm
- Global Access
- UPS Battery Backup Low
- UPS AC Power Fail
- AC Tampered
- Local Operator Change
- N2 Download Active

Note: UPS Battery Backup Low is only an early warning of battery failure when running on UPS power. It is invalid when using AC power.

Modifying an Access Controller Object

Attributes that you can modify from the Focus window include:

- Expanded ID
- Graphic Symbol #
- Operating Instr. #
- Wiegand/Proximity Facility Code
- N-Crypt Facility Code
- Magnetic Stripe Facility Code
- ID Encoding #
- Process Timer
- NC Trunk Number
- Device Address
- Poll Priority
- Device Type
- Auto Dialout
- Time Zone Checks
- 5-Digit PIN
- IN_OUT_Readers

Communications Commands from the AC Object Focus Window Action Menu

You can modify certain Focus window attribute fields from the Action menu. See Figure 18.

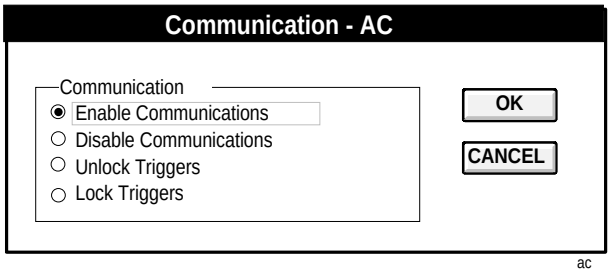


Figure 18: Action Menu Communication Dialog Box

To modify communication commands, follow this procedure:

1. Click the Action option in the Menu bar. Select the Communication option. The Communication dialog box appears.
2. Select the desired values by clicking on the round radio buttons. To save, click OK. The values for these attributes will change when the Focus window is reselected.

See *Command Table* in the *Reference Tables* section of this document for more information.

Door Control Commands from the AC Object Focus Window Action Menu

You can modify certain door control functions from the Operation option of the Action menu. See Figure 19.

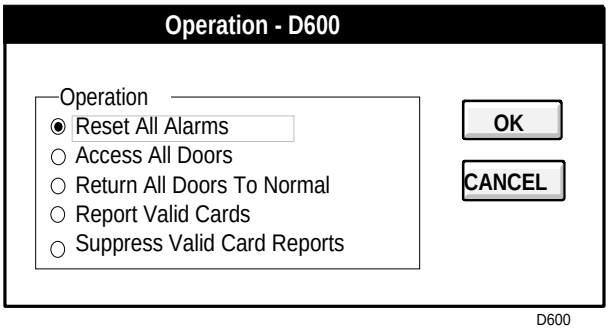


Figure 19: Action Menu Operation Dialog Box

To modify door operation commands, follow this procedure:

1. Click the Action option in the Menu bar. Select the Operation option. The Operation dialog box appears.
2. Select the desired values by clicking on the radio buttons. To save, click OK. The values for these attributes will change when the Focus window is reselected. It is important to note that these commands globally apply to all the doors controlled by the IAC-600 system. For example, if you want to unlock one door, command that door from its corresponding Card Reader object.

See *Command Table* in the *Reference Tables* section of this document for more information.

Creating Time Zones

Time zones are time tables used to enable/disable access cards, PIN codes, card readers, and binary alarm points. You can schedule up to eight different time zones per Access Controller object. The figure below shows one time zone's schedule. Each time zone can have eight different days, each day with 16 different time periods scheduled. Each time period represents the time, for example, a card reader is enabled or disabled. See *Scheduling Time Zones* in the *Engineering Overview* section earlier in this document for more information on time zone functions.

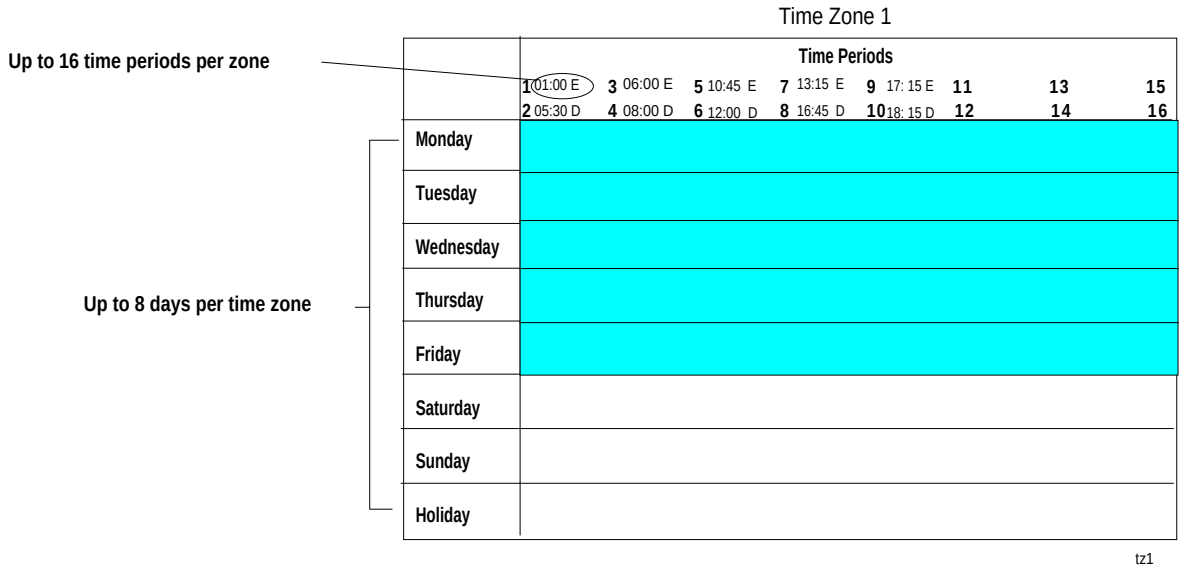


Figure 20: Example--Building a Time Zone Schedule

Adding a Time Zone

Follow this procedure:

1. Select the Schedule option in the GoTo menu of the AC object Focus window. A dialog box appears asking if you want to copy and existing schedule.

   If you would like to copy a schedule from another AC object, click Yes.

   If you want to create a new schedule, click No. The scheduling window for the AC object appears.

2. Select the Action menu, Add Access Time Zone option. The Time Zone--Add dialog box appears. See Figure 21.

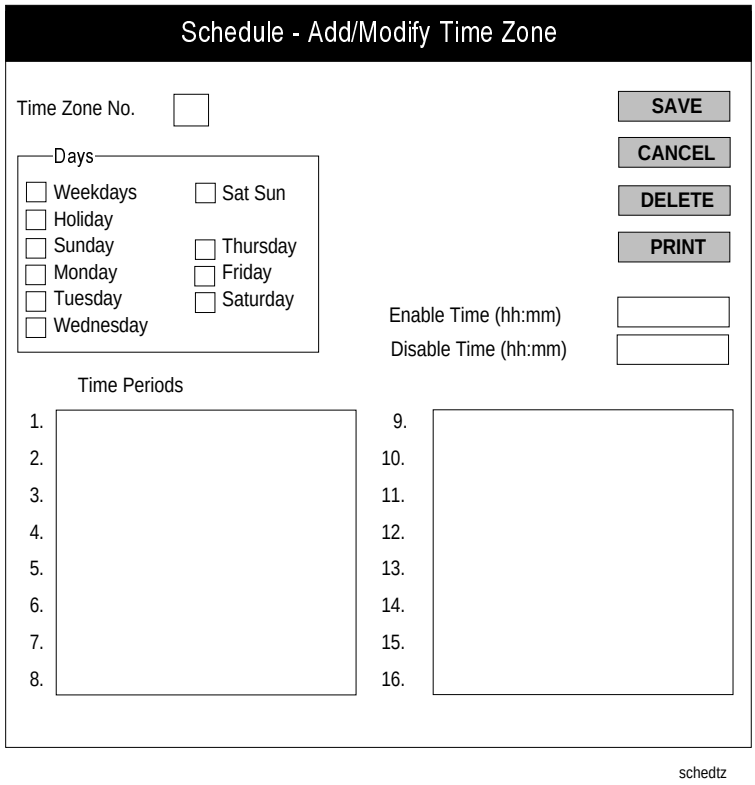


Figure 21: Schedule - Add/Modify Time Zone Dialog Box

3. Enter the Time Zone No. (from 1 to 8). The time zone data cannot be entered until this number is specified.

4. Select the day to add to the time zone schedule. Selecting Weekdays allows you to add the same schedule for all weekdays. Selecting Sat Sun allows you to add the same schedule for Saturdays and Sundays. You can have as many as eight different days scheduled for this time zone.

   Note: You can enter three different holiday schedules for each of the time zones. The dates defined as holidays, are selected in the Metasys Schedule Calendar and apply globally to the entire Metasys FMS. These dates are downloaded to the D600 to apply to the time zone schedules. See your *Operator Workstation User's Manual (FAN 634),* for more information.

5. Click your cursor on a time period to highlight it (numbers 1 to 16).

6. Enter a time in the Enable or Disable Time (hh:mm) box for the highlighted time period. The time you enter appears in the time period list. A maximum of 16 times (one for each period) can be entered for each day in the time zone schedule.

   Note: Enter times in sequence, with Time 1 being the earliest assigned time and Time 16 being the latest. A blank entry indicates that there is no time period defined for the schedule.

7. Select either an Enable Time or Disable Time for each time period. You cannot schedule two sequential enable times or disable times in the same day.

   Note: The scheduled time period can be erased by highlighting it, then pressing the Delete key.

8. Save the schedule by pressing the Save button. The Scheduling window appears.

   Note: If you press Cancel, the Add/Modify Time Zone dialog box is erased and the Scheduling window appears. The Print button prints the schedule at a designated printer.

Modifying, Printing, and Deleting a Time Zone

Modifying a Time Zone

Follow this procedure for modifying a time zone:

1. Select Schedule from the GoTo menu. The Scheduling window appears.
2. Select Modify Access Time Zone from the Action menu to display the Time Zone Modify window.
3. Enter the Time Zone No. to be modified.
4. Select the day to be modified. The currently defined time periods for that day are displayed in the dialog box. (Only one day can be modified at a time.)
5. Click on the time period to be modified.

Note: To delete the time period from the schedule, press Delete.

6. Enter the modified time in the Enable or Disable Time (hh:mm) box. The new time is echoed in the time period list box.
7. Press Save to save the modifications.

Note: Cancel erases the modifications that were not previously saved.

Printing a Time Zone

Follow this procedure to print a time zone:

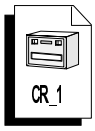
1. Select Schedule from the GoTo menu. The Scheduling window appears.
2. Select Add/Modify Access Time Zone from the Action menu to display the Time Zone Modify window.
3. Enter the Time Zone Number to be printed.
4. Click on Print. (If you make modifications to the time zone, be sure to save them to the NCM data base before you print. Otherwise, the modifications will not be included in the print out.)

Deleting a Time Zone

You cannot delete an entire time zone at one time. You must delete each time period for the schedule individually. Follow this procedure:

1. Select Schedule from the GoTo menu. The Scheduling window appears.
2. Select Modify Access Time Zone from the Action menu to display the Time Zone Modify window.
3. Enter the Time Zone No.
4. Select the day that contains the time period to be deleted.
5. Click on the time period to be deleted. Follow this procedure for every time period to be deleted.
6. Press Save to send the data to the NCM data base.

Defining a Card Reader Object



The following section describes the procedure used to define a Card Reader object. You use the Card Reader object Definition window to configure a new card reader online, which automatically downloads to the controller. You can then monitor or modify Card Reader object attributes from the object's focus window. This section also provides information on commanding the Card Reader object from its focus window. Use your *Operator Workstation User's Manual (FAN 634)* for information on general procedures.

Selecting the Card Reader Object from the Definition Dialog Box

Use the following procedure:

1. Go to the System Summary in which you want to add the Card Reader object.
2. Select Item from the Menu bar. Then, select New from the Item menu. A dialog box for selecting types of object appears. See Figure 22.
3. Select Card Reader. In the Hardware System box, type the name of the system to which this object belongs. In the Hardware Object field, type the Access Controller object name this Card Reader object will be mapped to. Click OK. See Figure 23.

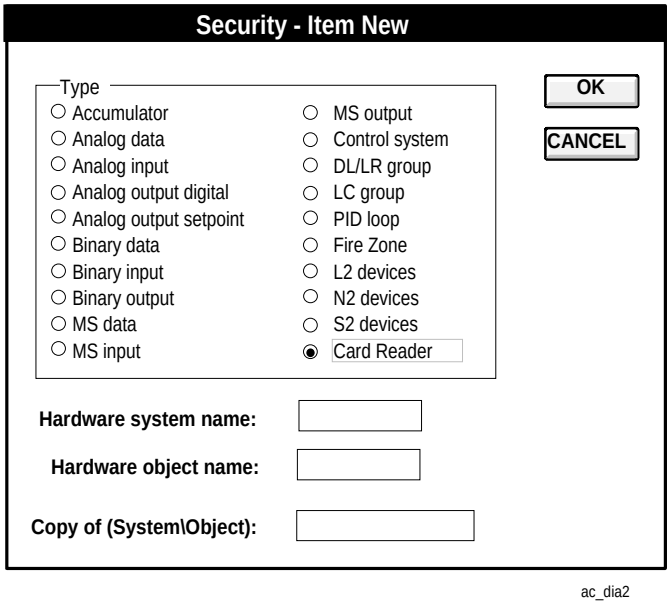


Figure 22: Security - Item New Dialog Box

Entering Data in the Card Reader Object Definition Window

The figure below illustrates the Card Reader object Definition window. You will configure a Card Reader object by entering values in the text boxes next to the field attributes.

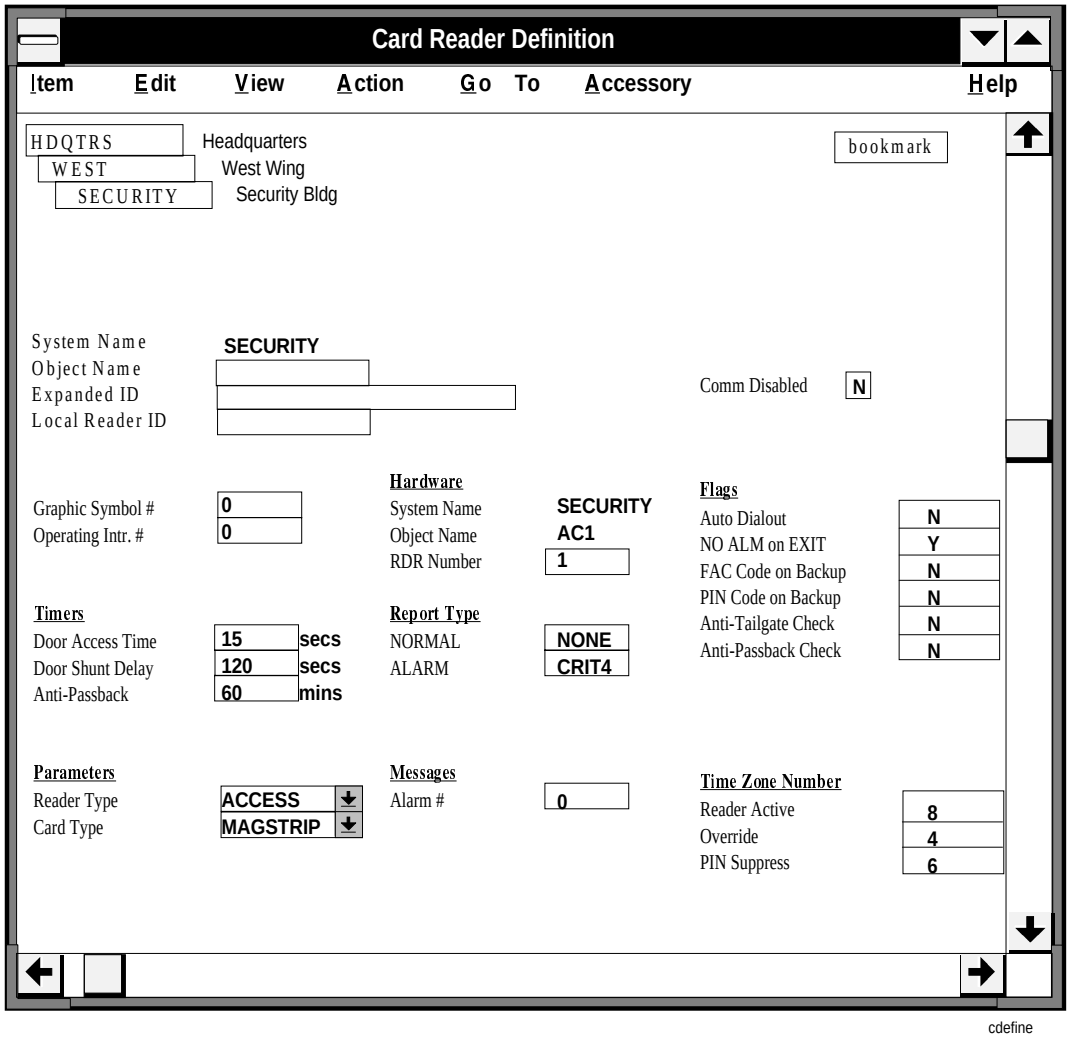


Figure 23: Card Reader Object Definition Window

From Figure 23, you can see that some of the fields in the window are blank and some are already filled in. Fill in the blank attribute fields (e.g., Object Name). Some of the attribute fields that are already filled in contain default values, which you may either accept or change. Note that System Name, Hardware System Name, and Hardware Object Name values cannot be changed. Use Table 5 to help you fill in the definable attributes in the Card Reader object Definition window.

Definable Card Reader Object Attributes

Also, see Card Reader Object Attribute Table *in the* Reference Tables *section*.

Table 5: Definable Card Reader Object Attributes

Attribute	Description	Entry Values
Object Name	Identifies the object (e.g., Reader14). The object name cannot be duplicated in the system.	1 to 8 alphanumeric characters
Expanded ID (optional)	Further identifies the object (e.g., LOBBY).	1 to 24 alphanumeric characters
Local Reader ID (optional)	Identifies the card reader address at the D600 Controller.	1 to 16 alphanumeric characters
Graphic Symbol #	Displays the reference number of a graphic symbol used to represent the object in Operator Workstation graphics.	Integer 0 to 32767
Operator Instr. #	Displays the reference number of a message used when help is requested at the Operator Workstation.	Integer 0 to 32767
Reader No.	Identifies the address at which the STI/card reader resides in the D600.	Integer 1 to 16
Comm Disabled	Specifies whether or not communications are disabled with the D600.	N = enabled Y = disabled
Auto Dialout	Specifies whether or not critical reports (Crit 1-4) force a dial up to a remote Operator Workstation.	N = no reports Y = yes
NO ALM on EXIT	Specifies whether to disable the exit request input on the STI. When enabled, mechanical means must be used to gain auxiliary access through a controlled door. When disabled, an auxiliary access switch connected to the STI may be used to open the door.	N = enabled Y = disabled
FAC Code on Backup	Specifies whether the STI/card reader should grant access by facility code if communication is lost with the D600 data base.	N = no access Y = grant access
PIN Code on Backup	Specifies whether the STI/card reader should grant access by PIN code if communication is lost with the D600 data base.	N = no access Y = grant access
Anti-Tailgate Check	Specifies whether to lock the door immediately after it is shut, or to allow the door to be reopened any time before the shunt time expires.	N = wait to lock until after shunt time expires Y = lock immediately
Anti-Passback Check	Specifies whether to report access cards that have violated the anti-passback time set for the card reader.	N = no Y = yes
Continued on next page . . .		

Attribute (Cont.)	Description	Entry Values
Reader Type	Specifies the card reader's type of operation: disabled reader, ACCESS reader (exempt from IN/OUT status), IN type card reader, or OUT type card reader.	Type one of the following: DISABLED ACCESS IN READ OUT READ
Door Access Timer	Specifies how long a door is unlocked after a card is passed through the card reader.	0 to 25 (seconds)
Override Local Schedule	Specifies whether an operator has overridden the Reader Active Time Zone to allow free access.	Y = override N = normal operation
Card Type	Specifies the type of card technology being used at the reader: no card, Wiegand/proximity, Wiegand N-Crypt, magnetic stripe, barium ferrite (no parity check), or barium ferrite (parity check). Note: Proximity technology uses the WIEGAND definition.	Type one of the following in the text box: NO CARD WIEGAND (Includes proximity) N-CRYPT MAGSTRIPE B/F NPAR B/F PAR
Door Shunt Delay Timer	Specifies the time a door can remain open after a card is passed through the card reader. This attribute is tied to the Anti-Tailgate Check attribute.	0 to 255 (seconds)
Anti-Passback Timer	Specifies the amount of time that must pass before a card holder may reenter a facility.	0 to 60 (minutes)
Report Type Normal	Specifies the type of COS report that is generated when the STI/card reader status changes to normal.	none = no report crit 1 crit 2 crit 3 crit 4 followup status
Report Type Alarm	Specifies the type of COS report that is generated when the STI/card reader status changes to alarm.	none = no report crit 1 crit 2 crit 3 crit 4 followup status
Continued on next page . . .		

Attribute (Cont.)	Description	Entry Values
Alarm Message #	Displays the reference number of an alarm user message sent to Operator Workstations and report printers when the panel detects an alarm condition.	Integers 0 to 225 Zero means no message.
Reader Active Time Zone	Specifies the time zone number that this reader is linked to during normal operation. The time zone designates the times the reader is enabled to read cards and disabled.	Integer 1 to 8
Override Time Zone	Specifies the time zone number this reader is linked to when the normal schedule (Reader Active Time Zone) is manually overridden to allow free access (Override Time Zone). This free access time zone allows the door to be continuously unlocked.	Integer 1 to 8
PIN Suppress Time Zone	Specifies the time zone number this reader is linked to when card holders are not required to enter their PIN codes at keyboard readers.	Integer 1 to 8

Saving the New Card Reader Object

To save the new Card Reader object, select Item from the Menu bar. Then, select Save. The Card Reader object is added to the NCM data base.

Monitoring and Modifying a Card Reader Object

Once you have defined a Card Reader object, you can modify and monitor its attributes online in the object Focus window.

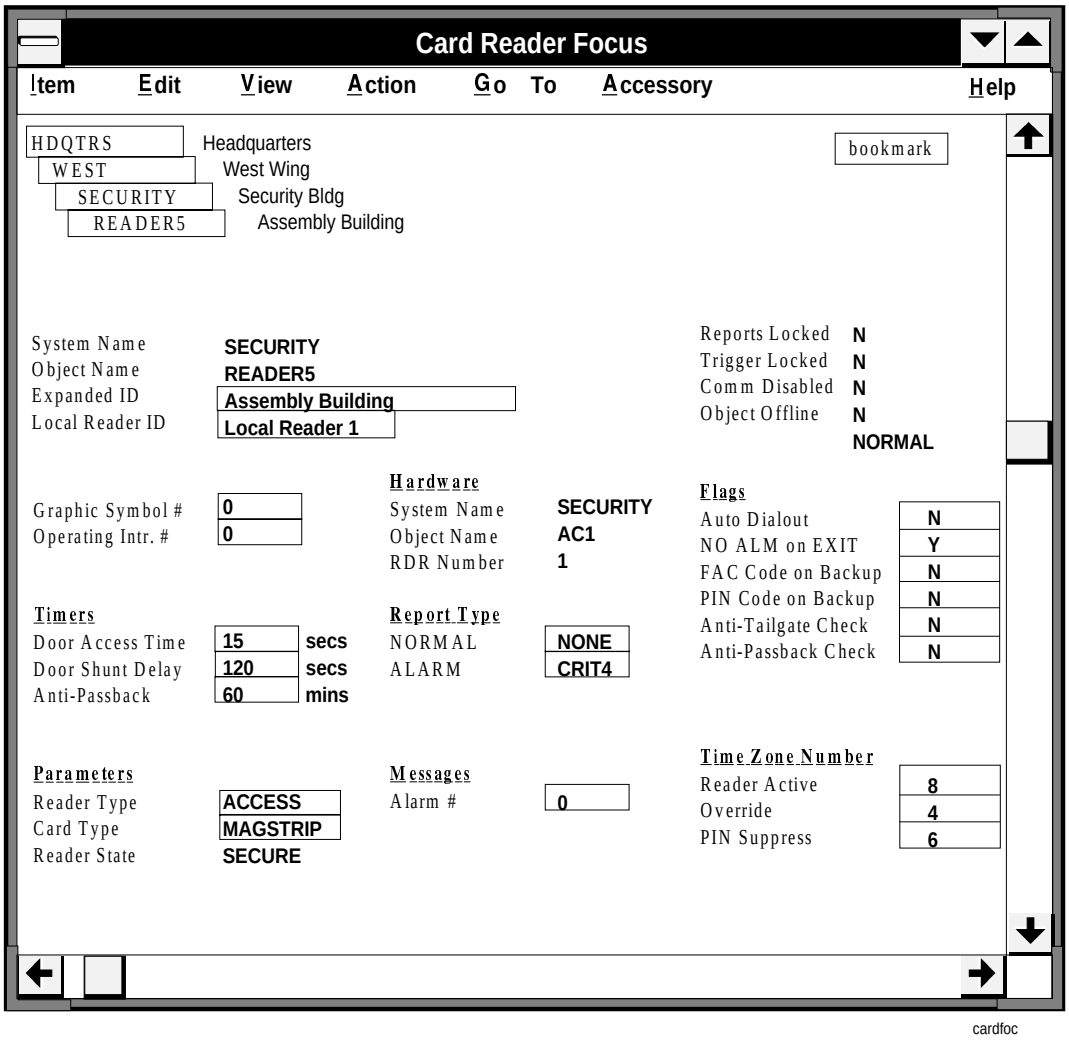


Figure 24: Card Reader Object Focus Window

Monitoring a Card Reader Object

You can monitor the attribute fields of a Card Reader object from its Focus window. The attributes, Object Offline and Reader State (Access/Secure), are automatically refreshed in realtime.

Modifying a Card Reader Object

Most of the attributes of a Card Reader object can be modified in the Focus window. They include:

- Expanded ID
- Local Reader ID
- Graphic Symbol #
- Operating Instr. #
- Door Access Time
- Door Shunt Delay Time
- Anti-Passback Time
- Reader Type
- Card Type
- Reader State
- NC Trunk Number
- Device Address
- Poll Priority
- Device Type
- Auto Dialout
- Time Zone Checks
- 5-Digit PIN
- IN_OUT_Readers

Communications Commands from the CR Object Focus Window Action Menu

You can modify certain Focus window attribute fields from the Action menu. See Figure 25.

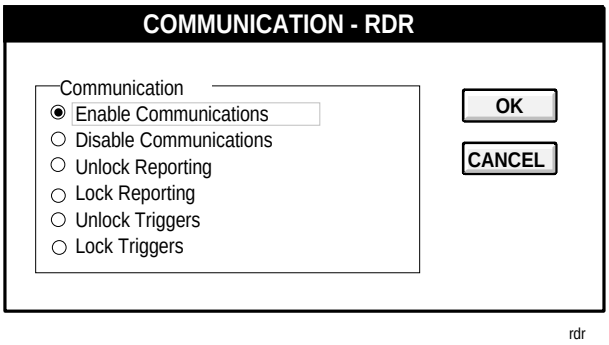


Figure 25: Communication - RDR Dialog Box

Follow this procedure:

1. Click the Action option in the Menu bar. Select Communication option. The Communication dialog box appears.
2. Select the desired values by clicking on the round radio buttons. To save, click OK. The values for these attributes will change when the Focus window is reselected.

See *Command Table* in the *Reference Tables* section of this document for more information.

Door Control Commands from the CR Object Focus Window Action Menu

You can modify certain door control functions from the Action menu. See Figure 26.

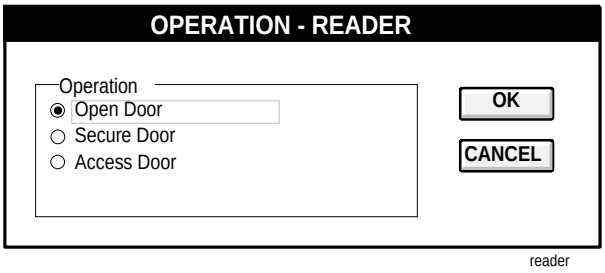


Figure 26: Operation - Reader Dialog Box

Follow this procedure:

1. Click the Action option in the Menu bar. Select Operation option. The Operation dialog box appears.
2. Select the desired values by clicking on the round radio buttons. To save, click OK. The values for these attributes will change when the Focus window is reselected.

See *Command Table* in the *Reference Tables* section of this document for more information.

Adding Access Cards to the Data Base

After you have defined the AC object, Time Zones, and CR objects, you can, at any time, enter access card data. There are two levels of adding and viewing card data:

- *standard* access from any Operator Workstation.
- *expanded* access to the card data base through an NC archive Operator Workstation. Expanded access also requires Superbase 4 (runtime version), which is a realtime data base manager included with Metasys. Note that you must add the card using the standard method before adding expanded data base information.

In addition, you can view, modify, or delete card data.

Adding Card Data

Use the following procedure to enter both standard card data or expanded card data using Superbase 4:

1. Go to the Network Map and click Summary. The following menu appears:

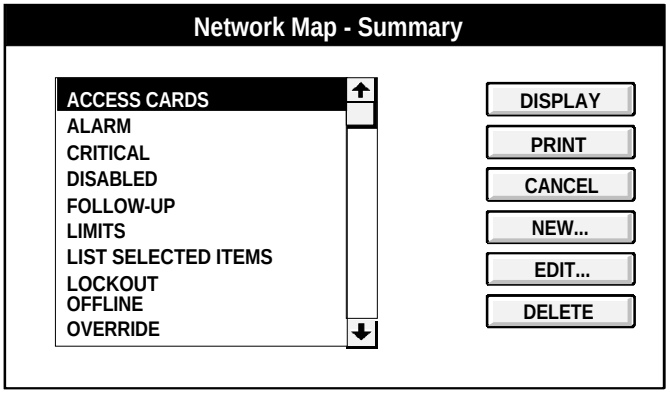


Figure 27: Network Map--Summary Dialog Box

2. Select Access Cards in the Network Map--Summary list box. Click the words "Access Cards" to highlight them.
3. Click Display. The Access Cards summary appears.

Note: If **any** NC is offline on the network, the system displays a warning message indicating that card data in the summary may be incomplete.

The Access Cards summary is displayed either by card number or by last name, depending on the filter you have selected in the Filter dialog box. (The filter's default setting displays the first 30 cards by number).

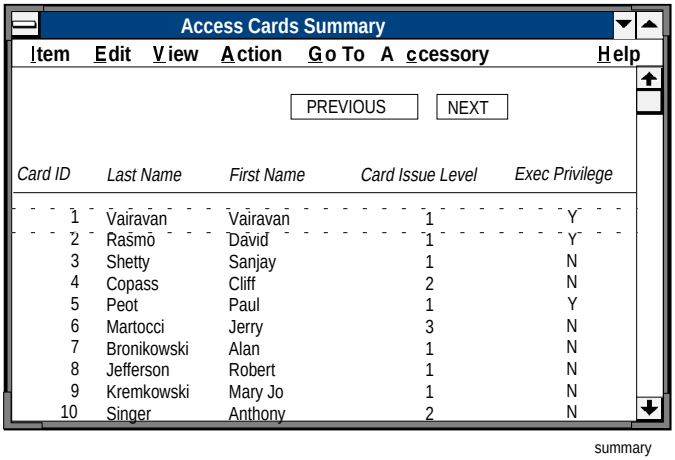


Figure 28: Access Cards Summary Dialog Box

4. Click the Add Card in the Action menu. The Card Summary--Add Card dialog box appears, listing the names of all the Access Controllers defined on the Metasys data base. See Figure 29.

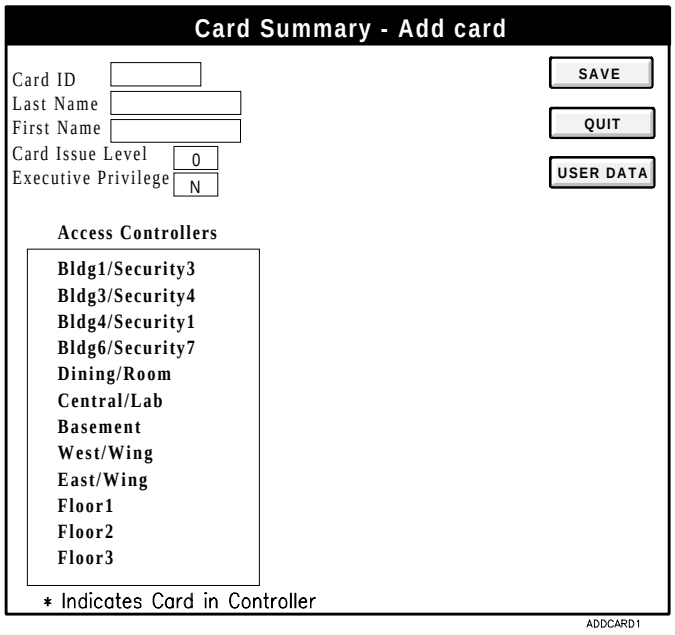


Figure 29: Add Card Data Dialog Box

5. Fill in the Card ID, Last Name, First Name, Card Issue Level, and Executive Privilege fields. These fields are described in Table 6.
6. Double-click the Access Controller that you want to validate for the card you are defining. The selected controller appears highlighted and the Card Reader list box appears listing all of the defined Card Readers for that controller as well as the definition fields specific to the Card Readers. See Figure 30.

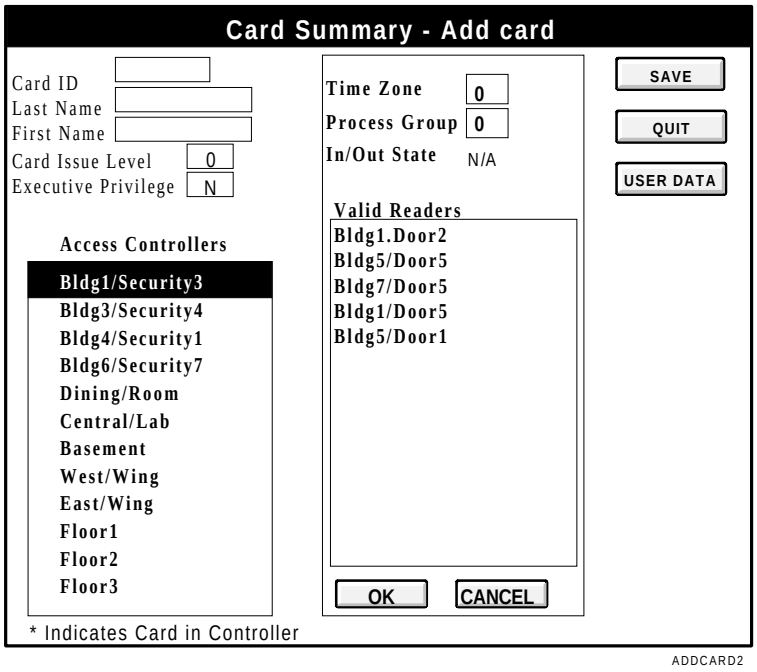


Figure 30: Add Card Dialog Box After Double Clicking Access Controller

Note: You can only add cards after the Access NC, Access Controller, and Card Reader objects are selected for the D600 system.

7. Click your cursor on each reader this card will be authorized to use to access the building. The authorized readers are highlighted. (You can deactivate highlighted readers by clicking the cursor again.) Fill in the Time Zone and Process Group fields. See Table 6 for a description of these fields.

Table 6: Access Card Definition Fields

Attribute	Description	Entry Values
Card ID	Describes the unique identification number encoded on the card. This number is supplied with the cards.	1 to 65535
Card Holder's Last Name	Self explanatory	10 characters (optional)
Card Holder's First Name	Self explanatory	8 characters (optional)
Card Issue Level	Specifies the number of times a particular card has been issued. The first time a card holder receives a card, the issue level is zero (0). This allows the card to be replaced, should it be lost, damaged, or stolen, without redefining a new card number. Only one issue level of a card can be active at a time. A card can have up to eight issue levels before a new card must be defined.	0-7
Process Group Number	Specifies the JC-BASIC/GPL process interlock group in which the card is linked. See your *GPL Programmer's* Manual631000toc@softlit.mvb *(FAN 631)* or *JC-BASIC Programmer's* Manual632000toc@softlit.mvb *(FAN 632)* for more information.	Integer 0 to 64 (optional) Zero means that the card is not linked to a process group.
Executive Privilege	Specifies whether the card holder possesses executive privilege. Executive privilege allows a card unlimited access to all operational doors (using that card technology) controlled by the IAC-600 system. This function is usually enabled for top management or security personnel.	Y = yes N = no
Time Zone Used	Identifies the times of the week a card holder may access authorized doors.	Enter the Time Zone No. this card is linked to: Integer 1 to 8.

8. Click OK to confirm the selection in the Card Reader list box. The Card Reader list box disappears from the Add Card dialog box.

   To add another controller for this card, double-click the controller and repeat Steps 6 through 8.

9. At this point you can save the new card by pressing Save, or if you are at the archive OWS, add additional card data using Superbase 4 via the User Data button.

10. Pressing Save sends the card data to the selected D600s. The Add Card window displays again, allowing you to add more cards.

    Selecting Quit on the Add Card window erases the card data and returns you back to the Access Card Summary.

User Data Button/ Superbase 4

Superbase 4 is a data base management tool that can process large amounts of data. Its primary purpose is to do queries, sort data, and generate reports on card transactions. In addition, you can use it to maintain detailed employee records. This user data is stored at the PC and not the NCM; therefore, you can only access it through the *archive* Operator Workstation. To execute the Superbase 4 program, press the User Data button in the Add Access Card dialog box. The screen in Figure 31 will appear.

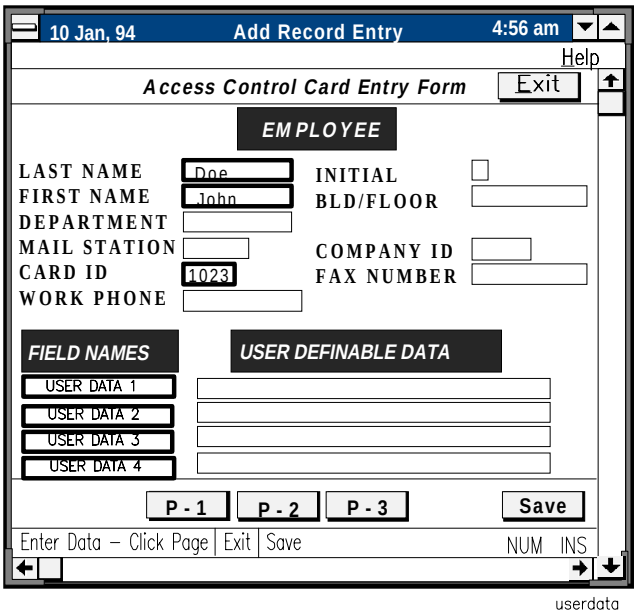


Figure 31: Add Record Entry Screen

Table 7 describes the fields you define when you define access card information in Superbase 4.

Some of the information that you defined in Metasys, such as the Card ID, Last Name, and First Name, are copied to the Superbase 4 record. These fields (outlined in red) must be modified in Metasys.

Once the Superbase 4 information has been entered and saved, you must use the appropriate Superbase 4 Modify screen to change the information. The Modify screens are shown in the *Using Superbase 4* section of the *Operator Workstation User's Manual (FAN 634).*

Table 7: User Data Fields In Superbase 4

Page Number	Field Name	Description
Page 1	**Employee Information** (To modify, go to Employee menu.)	
	Department	The card holder's work department
	Mail Station	The department/card holder's mail station
	Work Phone	The card holder's work phone number
	Initial	The card holder's middle initial
	Bld/Floor	The building and floor of the card holder's work area
	Company ID	The card holder's company ID number
	Fax Number	The card holder's facsimile number
	User Definable Data Information (To modify, go to Employee menu.)	
	User Data 1 User Data 2 User Data 3 User Data 4	Information entered in these fields is decided by the user. Each field holds up to 24 alphanumeric characters. Replace the field titles (e.g., User Data 1) with your own titles by clicking on Exit to go the Main menu for the Card Data and clicking Mod User.
Page 2	**Vehicle 1 and Vehicle 2 Information** (To modify, go to Vehicle menu.)	
	License	The license number of the card holder's vehicles
	Year	The year of the card holder's vehicles
	Make	The make of the card holder's primary and secondary vehicles (e.g., Ford, Chevrolet, Toyota)
	Model	The model of the card holder's vehicles (e.g., Taurus, Corsica, Corolla)
	Color	The color of the card holder's vehicles
	Parking Lot	The parking lot(s) the car is allowed to park in
	Badge Information (To modify, go to Badge menu.)	
	Pin	The Personal Identification Number of the card holder
	Badge Type	The type of card the card holder is issued (i.e., permanent, temporary, visitor)
	Badge Media	The composition of the card the card holder is using (i.e., WIEGAND, N-CRYPT, MAGSTRIP, B/F NPAR, B/F PAR)
	Issue Date	The date the card was issued to the card holder
	Expire Date	The date the card expires
Continued on next page . . .		

Page Number (Cont.)	Field Name	Description
Page 3	**Personal Information** (To modify, go to Personal menu.)	
	Address	The street address of the card holder's residence
	City	The city of the card holder's residence
	State	The state of the card holder's residence
	Zip Code	The zip code of the card holder's residence
	Home Phone	The home area code and telephone number of the card holder
	Social Security	The card holder's social security number
	Emergency - Filename	The file name of the file that is displayed in Superbase 4 when you display the Personal menu. This file can be created only if you have the full Superbase 4 package; however, you can copy the example file that comes with Metasys and save it under another name to create Emergency files for all of your card holders. The Emergency file can be used to record emergency information, such as the name and contact information for the person to be notified in case of emergency.
	Positive ID Information (To modify, go to Identity menu.)	
	Photo - Filename	The file name containing the photo of the card holder that is shown when you display the Identity menu. This photo must be electronically scanned into your computer data base and saved under the correct path and file name specified in this field in order to appear in the Identity menu.
	Signature - Filename	The file name containing the signature of the card holder that is shown when you display the Identity menu. This signature must be electronically scanned into your computer data base and saved under the correct path and file name specified in this field in order to appear in the Identity menu.

Viewing, Modifying, and Deleting Access Cards

You can view, modify, or delete existing cards from the Access Card Summary.

Viewing an Access Card

You can search and view selected access cards by either a starting card number or last name. Follow this procedure:

1. From the Access Cards Summary, choose Filter from the View menu. The Access Cards Filter is displayed. See Figure 32.

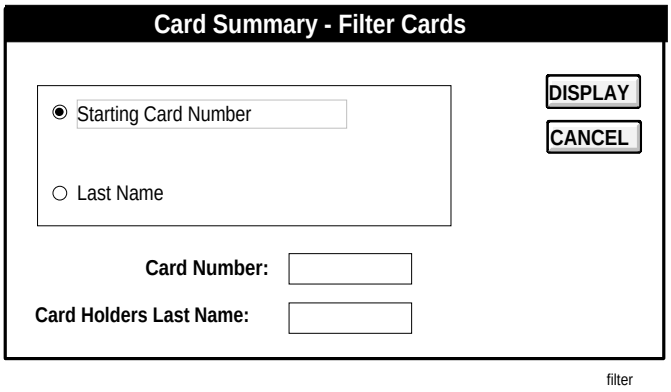


Figure 32: Access Card Filter Dialog Box

2. Select either the Starting Card Number or Last Name button.
3. If you selected the Starting Card Number, enter the desired card number in the box provided. If you selected Last Name, enter the desired name (or first letter of the name) in the appropriate box provided. You may also do a wild card search (i.e., *,?).
4. Press Display to show the Access Card Summary or Print to print the desired card information. Cancel returns you to the Focus window.

Modifying an Access Card

Follow this procedure:

1. Follow the procedure above described in *Viewing an Access Card.*
2. Highlight the card you want to modify by clicking on it in the summary.
3. Select the Modify Card Data option from the Action menu.
4. Modify the desired parameters on the Modify Card Data dialog box. An asterisk (*) appears to the left of valid controllers containing the card in the their data base when you open this dialog box. See Table 6 in the *Adding Access Cards to the Data Base* section.

   Note: It is possible that an asterisk (*) could appear to the left of valid controllers, but when double-clicked, no card readers are selected in the Card Reader list box. This would happen if someone added a card with an empty reader list using DDL. Clicking on OK without selecting any readers will delete the card from the D600.

   If you are modifying Card Reader data, double-click the appropriate Access Controller and modify the information that appears in the Card Reader list box to the right of the Access Controller list box.

   To deselect a Card Reader, click the highlighted Card Reader you wish to deselect. The Card Reader will no longer appear highlighted.

To save the new Card Reader information, be sure to click OK in the Card Reader list box.

To deselect an Access Controller, double-click the Access Controller in the Access Controller list box. The Card Reader list box appears. Deselect all highlighted readers and click OK. The asterisk in front of that Access Controller disappears, indicating that it has been deselected.

Note: Metasys will not allow you to save modified card data if you deselect all Access Controllers. At least one access Controller must be selected to save modifications.

If you want to delete an access card from the system, use the procedure found in *Deleting an Access Card* below.

5. Click Save to enter the data. Click Quit to revert to the previous version. The Access Card Summary screen is shown.

Note: If you modify the card on the archive PC, then you can also modify the user data in Superbase 4. See *Using Superbase 4* in your *Operator Workstation User's Manual (FAN 634)* for more information.

Deleting an Access Card

1. Follow the procedure above described in *Viewing an Access Card.*
2. With your cursor, highlight the card you want to delete.
3. Select the Delete Card option from the Action menu.
4. Select OK on the Delete Card dialog box (Figure 33). The Access Card Summary screen is then shown.

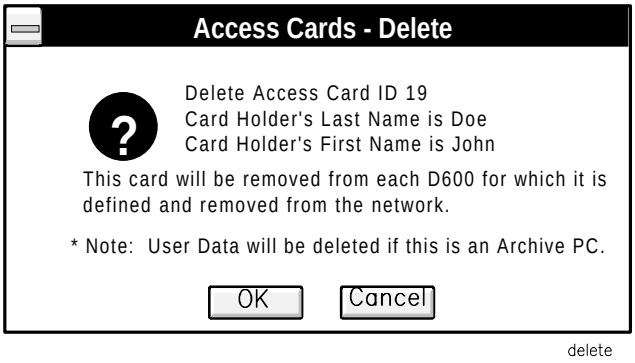
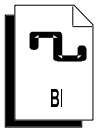


Figure 33: Delete Card Dialog Box

Note: If you delete the card on the archive PC, then the user data in the Superbase 4 program is also automatically deleted.

Defining a Binary Input Object



Because the Binary Input object is a general object type with many applications, it is explained in separate documentation. See the *Binary Input (BI) Object Technical Bulletin* in the *Metasys Network Technical Manual (FAN 636)* for information on defining the BI object.

Maintaining Your D600 Data Base

Suggestions to keep your D600 and Metasys data bases synchronized:

- Only use Metasys operator devices to make D600 data base changes.

  Do not use a TP-3 or other local operator device at the D600 to create or revise the D600 data base (e.g., add or delete access cards). Metasys does not recognize data base changes made locally at the D600, nor can the D600 upload those changes to the NCM. In addition, any future NCM downloads to the D600 will erase those local changes.

- Keep your NCM archive data base up-to-date in case you would ever need to use it to download to the D600 Controller data base.

  Because you will be frequently updating your access cards records the D600 data base is one of the most dynamic data bases on the Metasys Network. For this reason, be sure that you keep your NCM archive (master copy) data base up-to-date. If the NCM loses its operational data base, it would obtain a copy from its archive. If the NCM archive possesses many old card records, those cards would be used to restore the NCM's operational data base. At this point, your D600 data base, (which is up-to-date) does not match your NCM data base, and the D600 provides no upload capabilities to the NCM. Reconciling the NCM data base could be a tedious process.

- If you use DDL to create or revise your Metasys data base, perform a download from the NCM to the D600 Controller. DDL programming does not automatically download to an N2 device.

  To perform a D600 download follow this procedure:

  1. Go to the Access Controller object Focus window.
  2. Select the Action--Download Controller option on the Menu bar.
  3. A dialog box appears. Click OK to proceed with download.

Reference Tables

Description of Terms

See Binary Input (BI) Object Technical Bulletin*--for BI Object Attribute Table.*

This section contains three tables that will help you define, modify, and command Access Control System objects. The *Access Controller Object Attribute Table* lists the attributes common to the Access Controller object. The *Card Reader Object Attribute Table* contains all Card Reader object attributes. The *Access Control System Objects Commands* table lists the user commands available from the OWS and NT. The terms described below may be helpful in using the tables.

Definable	You can set a value for the attribute, using Data Definition Language, Graphic Programming Language, or the Object Definition window.
Writable	You can modify the attribute using the Object Focus window.
Object Default	A time saving function used in JC-BASIC programming. Allows you to omit the attribute name when writing the logic. When omitted, the attribute name is assumed by the program.
Array	The attribute is part of an array.
JC-B Writable	A JC-BASIC process or GPL template can write to the attribute.
Triggerable	The attribute can trigger (cause) a control process.
Range Check	The software verifies that JC-BASIC has correctly written to (modified) the attribute.
CMD	Value is changed by using a command from the Action Menu.
PMI	The attribute appears in the Object Focus window.
66	Default.
[ ]	The value in brackets is the default value and remains in effect until you change it.
String	ASCII alphanumeric characters, such as System\Object name
Boolean	0 or 1, with 0 and 1 representing logical states, such as True and False.
Integer	Whole numbers from -32767 to +32767, such as 22.
Floating Point	Values that contain decimal places, such as 67.5.

The code/default column shows numbers and ASCII text. The numbers are used when defining the object in DDL, and the ASCII text is used in Definition and Focus windows.

For example, for ALR_RPT (Alarm Report Type):

0 = none

1 = crit1

2 = crit2

where:

0 is used in DDL

none is used in Definition window

Table 8: Access Controller Object Attribute Table

AC Attribute		Description	Type/ Range	Code/ [Default Value]	Usage
Software Name	**PMI Label**				
AC_FAIL	AC Power Fail	The AC Power Fail flag indicates when the D600 Controller switches to battery power due to AC power loss.	Boolean/ 0 or 1	[0 = n = normal] 1 = y = failed	
AC_TAMP	AC Tamper	This Access Controller Tamper specifies "Y" when someone is tampering with the IAC-600 system.	Boolean/ 0 or 1	[0 = n = normal] 1 = y = tamper	
BAT_LOW	UPS Battery Backup Low	The UPS Battery Low flag specifies whether the D600 Controller's battery charge is low. This flag does not indicate that the battery has been fully recharged; it only indicates normal battery voltage has returned.	Boolean/ 0 or 1	[0 = n = normal] 1 = y = low	
CARD_CAP	Card Capacity	This internal attribute specifies the maximum number of cards that the D600 system can maintain. You specify this value at the time you connect the N2 Bus. See *Connecting the IAC-600 System to the Metasys Network Technical Bulletin* in *Metasys Network Technical Manual(FAN 636).*	integer		Definable
DEV_ADDR	Device Address	This field specifies the D600 address on the N2 Bus.	integer	0 to 255	Definable
DIAL_UP	Auto Dial-out	Auto Dial-out specifies whether or not critical reports (Crit1-4) force a dial up to a remote Operator Workstation.	Boolean/ 0 or 1	0 = no [1 = yes]	JC-B Writable, Definable, Writable
DL_IN_PR	N2 Download Active	Download In Progress determines whether or not a download to the D600 Controller has begun.	Boolean/ 0 or 1	[0 = n = complete] 1 = y = not complete	
ENCODE	Encoding Number	This field represents a mathematical algorithm used to verify Wiegand N-Crypt access card PINs (Personal Identification Numbers).	integer	1 to 7	Writable, Range Check, Definable
G00 to G64	Interlock Group 0 to Interlock 64	These are 65 separate internal attributes numbered 0 to 64. Interlock Groups 1 to 64 represent GPL interlocks in which the AC object triggers other Metasys process to run (e.g., turn lights on). Interlock Group 0 denotes no interlock process is tied to the AC object.	Array	0 to 64	Writable, Triggerable, Array, GPL Menu
GLO_ACC	Global Access	Global Emergency Access is an AC object command that can be accessed via an OWS or NT. When enabled, this attribute opens all doors on the IAC-600 system.	Boolean/ 0 or 1	[0 = normal operation] 1 = globally open doors	CMD
GRAPHIC	Graphic Symbol #	Graphic Symbol Number is a reference number that identifies the symbol used to represent the object in Operator Workstation graphics. A value of zero means no graphic will be displayed.	integer/ 0 to 32767	[0 = none]	JC-B Writable, Definable, Writable, Range Check
ILK_TIME	Process Timer #	Process Timer Number represents the amount of time a GPL interlock process is active. The timer is restored to its maximum time every time the process is reactivated, even if the process in the middle of its cycle.	integer	0 to 480 (minutes)	JC-B Writable, Writable, Range Check, Definable

Continued on next page . . .

AC Attribute (Cont.)					
Software Name	**PMI Label**	**Description**	**Type/ Range**	**Code/ [Default Value]**	**Usage**
INXIT	IN_OUT_ Readers	This attribute specifies whether an individual reader should be designed as either an IN reader or OUT reader for such functions as IN-X-IT. For example, a card with OUT status will be changed to IN status after it is used at an IN reader. A card with IN status will change to OUT status after used in an OUT reader. A card holder cannot use the card at two IN or two OUT readers consecutively.	integer 0 to 2	0 = IN status 1 = OUT status [2 = N/A]	Definable, Writable
INSTRUCT	Operator Instr. #	Operator Instruction Number is a reference number that identifies the text displayed when Help is requested at the Operator Workstation. A value of zero means no message will be displayed.	integer/ 0 to 32767	[0 = none]	JC-B Writable, Definable, Writable, Range Check
MAG	Magnetic Stripe Facility Code	This number represents the valid facility code at the facility's magnetic stripe card readers.	long	1-99999	Writable, Range Check, Definable
NAME	Expanded ID	Expanded ID further identifies the object (i.e., FMS Security Center).	string/ 24 char. max.		Definable, Writable
NC_Name	NC Name	NC Name defines the name of the Metasys Network Controller where the Access Controller object resides (i.e., Eastwing).	string/ 8 char. max.		
NCRYPT	N-Crypt Facility Code	This number represents the valid facility code at the facility's Wiegand N-Crypt type card readers.	long	1-99999	Writable, Range Check, Definable
NOREPVCD	Suppress Valid Reports	This flag determines whether to report valid card transactions at selected Metasys I/O devices.	Boolean/ 0 or 1	0 = n = report valid cards 1 = y = don't report valid cards	CMD
OBJECT	Object Name	Hardware Object Name identifies the object (i.e., AC1). The object name cannot be duplicated in the system.	string/ 8 char. max.		Definable
OFFLINE	Object Offline	The Object Offline flag is set to "Y" if the D600 Controller is offline.	Boolean/ 0 or 1	0 = n = online 1 = y = offline	Triggerable, Object Default
OP_CHANG	Local Operator Change	This flag defines whether a operator has made a change at a D600 I/O device (e.g., PC-8300).	Boolean/ 0 or 1	[0 = n = normal] 1 = y = operator change made	
PIN_5	5-Digit PIN Code	This flag specifies whether card holders have to enter a 5-digit Personal Identification Number (PIN) on a card reader key pad. Those readers without keypads are automatically exempt.	Boolean/ 0 or 1	[0 = n = no PIN required] 1 = y = PIN required	Writable, Definable
POLL_PRI	Poll Priority	Poll Priority represents the priority at which the D600 controller is polled by the NCM. A poll every second is ideal. We suggest you select a value of 0 or 1 because of the equipment's life safety functions.	integer/ 0 to 3	0 is highest priority	Writable, Range Check, Definable
PREFIX	*	Off Normal Indicator indicates if the D600 has reported an abnormal condition to the Access Controller object. This attribute can be found in Operator Workstation Summaries.	Boolean/ 0 or 1	[0 = no PMI] 1 = * = off normal	

Continued on next page . . .

AC Attribute (Cont.)		Description	Type/ Range	Code/ [Default Value]	Usage
Software Name	**PMI Label**				
REP_ALM	Report Alarm	Report Alarm shows whether the alarm reporting feature has been enabled at the IAC-600 system.	Boolean/ 0 or 1	[0 = n = normal] 1 = y = alarm	Definable, Writable
REPORT	Reports Locked	Reports Locked specifies whether or not the object sends COS reports to operator devices.	Boolean/ 0 or 1	[0 = n = unlocked] 1 = y = locked	CMD
SCAN	Comm Disabled	Communications Disabled specifies whether or not communication is disabled between the object and the D600 Controller.	Boolean/ 0 or 1	[0 = n = enabled] 1 = y = disabled	Definable, CMD
SYSTEM	System Name	Hardware System Name specifies an existing system name in the network such as SECURITY SYSTEM.	string/ 8 char. max.		Definable
TRIGGER	Trigger Locked	Trigger Locked prevents the object from triggering any control processes. This applies to all triggerable attributes of the object.	Boolean/ 0 or 1	[0 = n = unlocked] 1 = y = locked	Definable, CMD
TRUNK	NC Trunk Number	Trunk Number denotes the N2 trunk number that connects the D600 to the NCM. Be sure that the value you enter is associated with the N2 line.	integer/ 1 or 2	[1] 2	Definable
TZ_CHEK	Time Zone Checks	Time Zone Checks specifies whether to enable time zone schedules for cards, card readers, and binary alarm points.	Boolean/ 0 or 1	0 = n = disable time zones [1 = y = enable time zones]	Writable, Definable
WIEG	Wiegand/ Proximity Facility Code	This number represents the valid facility code at the facility's Wiegand or Proximity type card readers.	long	1-99999	Writable, Range Check, Definable

Table 9: Card Reader Object Attribute Table

CR Attribute		Description	Type/ Range	Code/ [Default Value]	Usage
Software Name	**PMI Label**				
ACC_INT	Door Access Timer	Door Access Timer specifies how long a door remains unlocked after a card has passed through the card reader.	integer	0 to 25 (seconds)	JC-B Writable, Writable, Range Check, Definable
ACC_SEC	Reader State	Reader State specifies the mode of access in which the reader is operating. At your OWS, if you find that this attribute is toggling between Access and Secure modes (every few seconds), then a problems exists in which the Door Access Timer attribute is set to a time less than it takes the D600 to poll the reader. This is causing the door locking mechanism to lock when the door access time expires and unlock when the D600 resignals the reader to maintain Access mode. To solve this problem, increase the Door Access Timer field to a value higher than the D600 polling rate. In addition, readers that are operating offline delay the D600 polling rate. Disable offline readers to quicken the D600 polling response time.	Boolean/ 0 or 1	0 = Access [1 = Secure]	Writable, Range Check Definable, CMD, Triggerable
AL_SHUNT	Door Shunt Delay Timer	Door Shunt Delay Timer specifies how long a door can remain open after a card has passed through the card reader. This attribute is tied to the Anti-Tailgate Check attribute.	integer	0 to 225 (seconds)	JC-B Writable Writable, Range Check Definable
ALR_MSG	Alarm #	Alarm Message Number displays the reference number of a user message sent to Operator Workstations and report printers when the STI/card reader detects an alarm condition.	integer	0 to 255	JC-B Writable Definable, Writable, Range Check
ALR_RPT	Report Type Alarm	Report Type Alarm specifies the type of COS report that is generated when the STI/card reader status changes to alarm.	integer/ 0 to 6	0 = no report [1 = crit1] 2 = crit2 3 = crit3 4 = crit4 5 = follow-up 6 = status	JC-B Writable, Definable, Writable, Range Check
ANTI_TAI	Anti-Tailgate Check	Anti-Tailgate Check determines whether to lock the door immediately after it is shut, or to allow the door to be reopened at any time before the shunt time expires.	Boolean/ 0 or 1	0 = no: wait to lock until after shunt time expires [1 = yes: lock immediately]	JC-B Writable, Writable, Definable
ANTI_PAS	Anti-Passback Check	Anti-Passback Check specifies whether to report access cards that have violated the anti-passback time set for the card reader.	Boolean/ 0 or 1	0 = no [1 = yes]	JC-B Writable, Writable, Definable
AUX_ACC	No ALM on Exit	This attribute specifies whether to disable the door-open alarm when the door is being used to exit a facility. For instance, a card holder may need to badge in to enter the facility, but need not badge out to open the door from inside.	Boolean/ 0 or 1	0 = enable door-open alarm [1 = disable door-open alarm]	JC-B Writable, Writable, Definable

Continued on next page . . .

CR Attribute (Cont.)		Description	Type/ Range	Code/ [Default Value]	Usage
Software Name	**PMI Label**				
CARDTYP	Card Type	Card Type specifies the type of card technology being used at the reader. Note: Proximity technology uses the Wiegand card value.	integer	0 = no card 1 = Wiegand 2 = N-Crypt 3 = B/F NPAR (Barium Ferrite - no parity check) 4 = MAGSTRIPE 5 = B/F PAR (Barium Ferrite - parity check)	JC-B Writable, Writable, Definable
DIAL_UP	Auto Dialout	Flag indicating whether or not (y or n) critical reports (Crit1 - Crit4) force a dialup to a remote Operator Workstation.	Boolean/ 0 or 1	[0 = no] 1 = yes	JC-B Writable, Definable, Writable
FAC_BAK	Facility Code on Backup	Facility Code on Backup specifies whether the STI/card reader should grant access based on facility code if communication is lost with the D600 data base.	Boolean/ 0 or 1	0 = no [1 = yes]	JC-B Writable, Writable, Definable,
GLO ACC	Global Access	Global Emergency Access is an AC object command that can be accessed via an OWS or NT. When enabled, this attribute opens all doors on the IAC-600 system.	Boolean/ 0 or 1	[0 = normal operation] 1 = globally open doors	Triggerable, CMP
GRAPHIC	Graphic Symbol #	Graphic Symbol Number is a reference number that identifies the particular symbol used to represent the object in Operator Workstation graphics. A value of zero means no graphic will be displayed.	integer/ 0 to 32767	[0 = none]	JC-B Writable, Definable, Writable, Range Check
HW_OBJCT	Hardware Object Name	Hardware Object Name identifies the Access Controller object this Card Reader object is mapped to.	string/ 8 char. max.		Definable
HW_SYSTM	Hardware System Name	Hardware System Name identifies the system name this Card Reader object is mapped to.	string/ 8 char. max.		Definable
INSTRUCT	Operator Instr. #	Operator Instruction Number is a reference number that identifies the text displayed when Help is requested at the Operator Workstation. A value of zero means no message will be displayed.	integer/ 0 to 32767	[0 = none]	JC-B Writable, Definable, Writable, Range Check
LOCAL_ID.	Local Reader ID	Local Reader ID describes the reader name in relationship to the D600 (e.g., local reader 1).	string	1 to 15 characters	Definable
NAME	Expanded ID	Expanded ID further identifies the object (i.e., FMS Security Center).	string/ 24 char. max.		Definable, Writable
NOR_RPT	Report Type Normal	Report Type Normal specifies the type of COS report that is generated when the STI/card reader status changes to normal.	integer/ 0 to 6	0 = no report 1 = crit1 2 = crit2 3 = crit3 [4 = crit4] 5 = follow-up 6 = status	JC-B Writable, Definable, Writable, Range Check

Continued on next page . . .

CR Attribute (Cont.)		Description	Type/ Range	Code/ [Default Value]	Usage
Software Name	**PMI Label**				
OBJECT	Object Name	Software Object Name identifies the object (e.g., Reader14). The object name cannot be duplicated in the system.	string/ 8 char. max.		Definable
OFFLINE	Object Offline	The Object Offline flag is set to "Y" if the STI/card reader is offline.	Boolean/ 0 or 1	[0 = n = online] 1 = y = offline	Triggerable
OVER_SCH	Override Local Schedule	Override Local Schedule means that the operator overrides the current time zone schedule to allow free access.	Boolean/ 0 or 1	[0 = n = normal] 1 = y = override	Definable
OVER_TZ	Override Time Zone	Time Zone Override specifies the alternative time zone number this reader is linked to when the normal schedule is overridden to allow free access. This free access time zone is set up to allow the door to always be unlocked and the card reader's green indicator lamp lit.	integer	1 to 8 (corresponds with the existing time zone scheduled for free access)	JC-B Writable, Writable, Range Check, Definable
PASS_INT	Anti-Passback Time	Anti-Passback Time specifies the amount of time that must pass before a card holder may reenter a facility.	integer	1 to 60 minutes	JC-B Writable, Writable, Range Check, Definable
PIN_BAK	PIN Code on Backup	This attribute specifies whether the STI/card reader should grant access by PIN code if communication is lost with the D600 data base.	Boolean/ 0 or 1	[0 = n = no PIN backup] 1 = y = PIN backup	JC-B Writable, Definable
PIN_TZ	PIN Suppress Time Zone	Specifies the time zone number this reader is linked to when the PIN code function is suppressed.	integer	1 to 8	JC-B Writable, Writable, Range Check, Definable
PREFIX	*****	Off Normal Indicator indicates if the STI/card reader has reported an abnormal condition.	Boolean/ 0 or 1	[0 = no PMI] 1 = * = off normal	
RDR_TYP	Reader Type	Reader Type specifies the card reader's type of operation: disabled, access type, IN type, OUT type. The ALR_READ option is not supported.	integer	1 = DISABLED 2 = ACCESS 3 = IN READ 4 = OUT READ	JC-B Writable, Writable, Range Check, Definable
RDR_TZ	Reader Active Time Zone	Time Zone Reader Active specifies the time zone number that this reader is linked to during normal operation.	integer	1 to 8	JC-B Writable, Writable, Range Check, Definable
REPORT	Reports Locked	Reports Locked specifies whether or not the object sends COS reports to operator devices.	Boolean/ 0 or 1	[0 = n = unlocked] 1 = y = locked	CMD
SCAN	Comm Disabled	Communications Disabled specifies whether or not communications are disabled between the object and STI/card reader.	Boolean/ 0 or 1	[0 = n = enabled] 1 = y = disabled	Definable, CMD

Continued on next page . . .

CR Attribute (Cont.)					
Software Name	**PMI Label**	**Description**	**Type/ Range**	**Code/ [Default Value]**	**Usage**
STATDISP	Prefix	The status of the object as displayed in summaries.	integer/ 0 to 15	[0=normal, blank] 2=RPT, report locked 3=TRG, trigger locked 5=LW, Low Warning 6=HW, High Warning 7=LA, Low Alarm 8=HA, High Alarm 10=SWO, Software Override 12=DIS, communication disabled 14=UNR, unreliable 15=OFF, offline 16=DCT, disconnect	
STI_NO	Reader Number	This attribute displays the address at which the STI/card reader resides in the D600.	integer/ 1 to 16		Definable
SYSTEM	System Name	Software System Name specifies an existing system in the network.	string/ 8 char. max.		Definable
TRIGGER	Trigger Locked	Trigger Locked prevents the object from triggering any control processes. This applies to all triggerable attributes of the object.	Boolean/ 0 or 1	[0 = n = unlocked] 1 = y = locked	CMD
VALUE	Reader State	Reader State specifies the mode of access in which the reader is operating. At your OWS, if you find that this attribute is toggling between Access and Secure modes (every few seconds), then a problem exists in which the Door Access Timer attribute is set to a time less than it takes the D600 to poll the reader. This causes the door locking mechanism to lock when the door access time expires and unlock when the D600 resignals the reader to maintain Access mode. To solve this problem, increase the Door Access Timer field to a value higher than the D600 polling rate. In addition, readers that are operating offline delay the D600 polling rate. Disable offline readers to quicken the D600 polling response time.	Boolean/ 0 or 1	0 = Access [1 = Secure]	Object Default

Command Table

If an object is offline or its communications are disabled, commands to the AC or CR object are not executed, but are stored. The commands are issued when the object comes back online or communications are enabled.

Table 10: Access Control System Objects Commands

PMI Label	OWS Menu Option	Description	Commanded From	Operator Device Used
Access All Doors	Action Menu-Operation	This command unlocks all access controlled doors. It remains in effect until another operator command returns doors to normal control.	Access Controller Object	Operator Workstation Network Terminal
Access Door	Action Menu-Operation	This command unlocks a specific door. It remains in effect until another operator command or until the next time zone change.	Card Reader Object	Operator Workstation Network Terminal
Communications Disabled	Action Menu-Communication	Stops the object from triggering control processes, sending COS reports, and accepting commands (except Communications Enabled).	Access Controller Object Card Reader Object	Operator Workstation Network Terminal
Communications Enabled	Action Menu-Communication	Allows the object to trigger control processes, send COS reports, and accept commands.	Access Controller Object Card Reader Object	Operator Workstation Network Terminal
Lock Reports	Action Menu-Communication	Stops the object from sending COS reports to operator devices.	Card Reader Object	Operator Workstation Network Terminal
Lock Triggers	Action Menu-Communication	Prevents the object's triggerable attributes from triggering control processes.	Access Controller Object Card Reader Object	Operator Workstation Network Terminal
Open Door	Action Menu-Operation	Temporarily opens a given door to allow access to a person who does not have an access card. This command expires when the alarm shunt time of the door expires, usually within a minute.	Card Reader Object	Operator Workstation Network Terminal
Report Valid Cards	Action Menu-Operation	Reports to designated Metasys I/O devices all valid card transactions performed at readers.	Access Controller Object	Operator Workstation Network Terminal
Reset All Alarms	Action Menu-Operation	Resets all alarm relays connected to the IAC-600 System.	Access Controller Object	Operator Workstation Network Terminal
Return All Doors to Normal	Action Menu-Operation	Returns all doors to the control of the time zone that is currently enabled. Used to return doors to normal operation that were previously commanded by the Access All Doors command.	Access Controller Object	Operator Workstation Network Terminal
Secure Door	Action Menu-Operation	Locks a designated door. Card holders must use their access cards to gain entry. Command remains in effect until another operator command or the next time zone change.	Card Reader Object	Operator Workstation Network Terminal
Suppress Valid Card Reports	Action Menu-Operation	Prevents valid card transactions from being reported to Metasys I/O devices.	Access Controller Object	Operator Workstation Network Terminal
Unlock Reports	Action Menu-Communications	Allows the object to send COS reports to operator devices.	Card Reader Object	Operator Workstation Network Terminal
Unlock Triggers	Action Menu-Communications	Allows the object's triggerable attributes to trigger control processes.	Access Controller Object Card Reader Object	Operator Workstation Network Terminal

Notes

JOHNSON CONTROLS

Controls Group
507 E. Michigan Street
P.O. Box 423
Milwaukee, WI 53201

FAN 636
Metasys Network Technical Manual
Release 9.0
Printed in U.S.A.