



Commander Call Control System

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Commander Call Control System

Overview

The Commander call control system is a centralized, total control solution for correctional facility managers built on Science Dynamics's (SciDyn) unique BubbleLINK software architecture. As an integrated control system, Commander puts extensive inmate telecommunications and processing tools at your fingertips with the AdminManager graphical user interface (GUI). Together, Commander and AdminManager make the details of correctional facility management easier.

The Commander call control system allows you to:

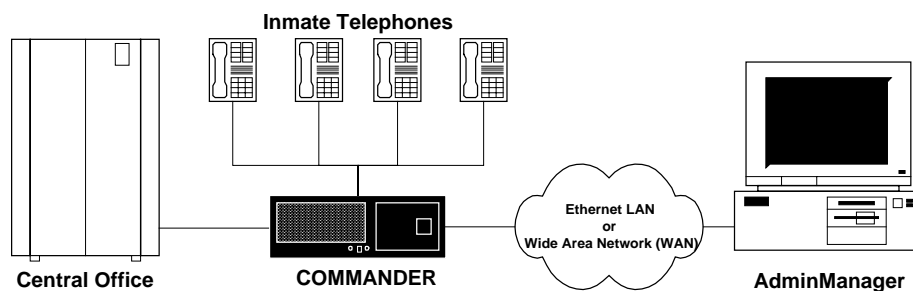
- Provides clear voice prompts in multiple languages
- Control phone service by time of day
- Set call length
- Allow calls based on caller (if PINs are used)
- Restrict and allow calls based on called number
- Restrict and allow calls based on phone used
- Restrict calls to specific numbers to specific days and times
- Provide Speed Dialing for 50 phone numbers
- Supply Call Detail Records on all calls
- Support multiple call processing sequences simultaneously
- Detect and disconnect potential 3-way calling
- Provide Automated Operator Service
- Record calls based on phone, phone number, and PIN *

** This feature requires additional software and hardware.*

Commander Description

The Commander is a computer-controlled electronic telephone administration and control system specifically designed for use in correctional facilities. The Commander equipment is installed between the prison phones and the Central Office (CO) in order to regulate service and curb fraud on inmate telephones. Commander checks each phone number dialed from system phones to see if the number is allowed before outdialing the call.

With Commander, prison administrators can control phone availability, call duration, and which phone numbers Commander allows for calling. Because all calls pass *through* Commander, prerecorded announcements, such as dialing instructions and time limits, can be played while a call is in session to both parties.



When an inmate places a call, Commander compares the called number to the databases of restricted and allowed numbers. Commander processes valid calls using the Automated Operator Service (AOS) or forwards the call to a telephone company operator or automated attendant.

Commander trunk circuitry only allows one-way, out-going telephone service. By not allowing in-coming telephone service, Commander increases the control you have over correctional facility phone lines.

AdminManager Description

The AdminManager is a Windows[®] NT program that lets you manage the Commander system databases and call detail records (CDRs) while Commander performs the actual call processing. Security features, such as passwords and command access levels, ensure that only authorized personnel gain access to the AdminManager.

The AdminManager is generally located at an administrative center and connects to the Commander system through an Ethernet Local Area Network (LAN) or a Wide Area Network (WAN). With this connection, the AdminManager provides real-time access to all Commander databases.

Features

Multilingual Instructional Voice Prompts

The commander provides multilingual support for up to nine (9) languages. The system will prompt the caller at the beginning of the call with a prompt in each language instructing how to select the desired language. Language selection based on the PIN dialed could optionally be configured.

Voice Messages

Commander supplies instructional voice messages at various points in the call process. Messages are recited in a high-speed, high-quality, digitized female voice. Announcements prompt callers to enter their PIN (if PINs are required), record their name for automated operator services (AOS), and to hang up if the call is disconnected due to fraud attempts or normal far-end disconnect. If a phone is out-of-service, Commander announces this fact as soon as the phone goes off-hook. Commander also warns callers of their call limit when a phone is scheduled for shutdown or when a call is approaching its duration limit. Specific messages depend on the speech set installed in your system.

To maximize response time, Commander has one voice prompt channel for each telephone.

Branding

The Commander system automatically provides double branding on all collect calls. Commander prompts the inmate with a message informing the carrier being used [i.e. *"Thank you for using ABC Communications."*] Commander also informs the called party only with a message indicating the carrier, the inmate name, the facility, and other information as necessary [i.e. *"This is ABC Communications with a collect call from inmate <recorded inmate name-insert> at the North State Correctional Facility. This call is subject to recording and monitoring except for privileged communications between attorney and client. Any attempt to use three way calling will disconnect the call."*] In addition, the system supports independent branding announcements for Local/IntraLata and InterLata carriers. This allows each carrier to insert the appropriate brand as necessary.

Phone Service Scheduling

Commander is equipped with phone circuit schedules that you can program for regular telephone service and routine system shutdown intervals, such as lockdown through morning. Any system telephone can be assigned to one of five circuit schedules or a 24-hour in service schedule. You can schedule each 24-hour schedule to place phones in or out of service in 15-minute increments. Each schedule provides independent control over weekday, weekend and holidays. Circuit schedules are programmed from the AdminManager.

Furthermore, Commander provides three ways to take phones out of service from the AdminManager workstation. You can shutdown an individual phone, defined groups of phones, or all system phones with a simple click of the mouse. You can resume service in the same rapid fashion.

To enable shutting down a group of phone locations and lines at once, you can configure groups. You can assign any number of phone circuits to a group and create as many groups as needed. When you force a group out-of-service, all phone circuits assigned to that group have service cut off.

Call Duration Limits

To enforce call length limits, Commander provides five programmable call duration classes for each call type (Local, InterLATA/Interstate, etc.). For each class and call type, you can program different call durations (1 to 99 minutes) for weekdays, weekends, and holidays. Call durations can be set in 1-minute increments.

From the PIN Information screen, you can assign a call duration class to each inmate personal identification number (PIN). You can also assign a class that forces the inmate to use the timing parameters assigned to the particular phone he or she is dialing from. For each PIN phone number and global allowed number, you can override the PIN's timing parameters by specifying the phone number as untimed. When a call is untimed, the call is only limited by the phone circuit going out-of-service. Specifying the phone number as timed enforces the PIN's timing parameters for calls to that number.

If the call is timed, Commander provides a voice announcement at the beginning of the call informing the inmate of the call duration. Commander determines the duration limit for each call by referencing the timing class duration and the remaining time the phone circuit is scheduled to be in service. If the PIN is allowed a 10-minute phone call but the phone is scheduled to go out of service in 5 minutes, Commander restricts the call to 5 minutes. Commander also announces that the call is about to end with voice prompts at 2 minutes (optional) and 1 minute before the caller reaches the duration limit. When Commander's internal call duration timer reaches zero, it automatically disconnects the call, announces that the call exceeded the permitted length, and flags the call detail record with a "Limited" termination disposition. The limited termination disposition indicates that the system terminated the call due to timing or circuit schedule restrictions.

Personal Identification Number (PIN) Technology

Use of Commander's personal identification number (PIN) technology, allows you to take fullest advantage of all of Commander's telephone control features. When you configure Commander to require PINs, a call cannot be processed unless the caller enters a valid PIN. Each call record contains PIN information, so by reviewing all calls made by a particular PIN, you can track the phone numbers an inmate calls, the frequency each number is called in a given time period, and the duration and disposition of each call. (i.e., calls under 60 seconds in which a three-way call was detected, calls blocked for extra digits, or calls blocked because the PIN is already in use.)

Centralized PIN Database

A Commander system can span multiple facilities using a single PIN database and an Ethernet LAN or WAN connection. This allows all sites to operate as one seamless system supporting both premise-based and centralized administration. When provided with sufficient LAN or WAN bandwidth, all system capabilities for call control and system administration are preserved.

The centralized administration of the PIN database is provided by the host processor in multi-site configurations.

PIN Phone Numbers

When you configure Commander to use PIN technology, you can assign each PIN up to 20 allowed numbers. The inmate is restricted to making calls only to the phone numbers in his or her PIN phone number list and any additional phone numbers added to the global allowed numbers list. You may not want to enter any global allowed numbers in your system to maintain maximum dialing security. Additionally, no other PIN may dial phone numbers of another PIN.

To help monitor PIN phone number requests, you can enter phone numbers that you do not want any inmate to call into the AdminManager entry restriction phone list. When you try to add a restricted phone number to a PIN's phone list, AdminManager alerts you that the number is restricted for entry and does not add the number to the PIN's phone list.

Disable PINs

From the AdminManager, you can disable a PIN as well as a specific PIN phone number for a specified period of time or indefinitely. This feature may be used to enforce punitive measures or to ensure that a PIN is not fraudulently used while an inmate is temporarily out of the correctional facility.

Globally Block and Allow Called Numbers

Commander allows you to input telephone numbers that all dialed numbers are checked against to verify if the calls to that number should be allowed or blocked. Global numbers are maintained through the AdminManager.

Allowed Numbers

Commander is typically configured to support 10,200 global allowed numbers so that you can enter 10,000 specific 10-digit numbers and 200 wildcard numbers.

Calls made to these numbers are allowed for any valid caller. Commander checks the global allowed numbers list when the dialed number is not in the PIN's phone list nor the global restricted numbers list. If the number is found in the global allowed number list, the call is allowed.

Restricted Numbers

Commander is typically configured to support 10,200 global restricted numbers so that you can enter 10,000 specific 10-digit numbers and 200 wildcard numbers.

When you enter a number in the global restricted numbers table, no inmate is allowed to call the number. You can globally block whole exchanges such as all 900-nxx-xxxx numbers by entering a wildcard entry of 900-???-????.

Limiting Calls by Location

Using line treatments and call treatments, you can specify that certain phone numbers can only be called from certain phone numbers. For instance, Commander can be configured so that only lawyer phone numbers can be called from phones in a law library, but any calls to non-lawyer phone numbers would be blocked. This level of control can be used with or without PINs.

Time of Day Restriction

The standard Commander configuration allows you to enter 10 phone numbers for which you can specify the time of day in 15-minute increments and the day(s) of the week that the numbers can be called. For example, you can specify that a phone number can only be called on Tuesdays from 9:00 a.m. to 11:45 a.m. and from 1:30 p.m. to 4:00 p.m.

Speed Dial Numbers

Commander allows you to have up to 50 two-digit speed dial codes (01 through 50) that translate into dialed phone numbers. The dialed phone numbers then pass through all dialed number tests. In other words, if an inmate is not allowed to dial a number normally, he or she is not allowed to dial the number with speed dial.

Call Detail Record Collection and Reporting

The commander system provides storage of call detail records (CDRs) based on the available capacity of the hard disk within the system, and a system parameter specifying the maximum number of CDRs. The system can easily store over one million records for very large facilities.

Enter a PIN, Number, or select a Circuit ID and click Add to search for the value. You can add up to 15 items to each list.

Choose a group from the group tree.

Search for all records that have fraud detection flags regardless of their terminate dispositions.

Choose to search only the most recent records or all available records.

Save and load search criteria.

Call Detail Record Search Window

Using the AdminManager workstation, you can run reports on all current and archived call detail records. By selecting specific call parameters, you can fine-tune your report to answer your specific questions. Using this report generator and the additional frequently dialed number report generator, you can create reports based on the following, though not limited to, parameters:

- Unauthorized number attempts — calls with a blocked disposition
- Excessively called numbers — calls that meet or exceed the frequently dialed number threshold
- Hot numbers — all calls to a specific number for all PINs, dates, times, etc.
- Activity by telephone — all calls made from a specific circuit
- Activity by inmate — all calls made by a specific PIN
- Activity by number called — all calls to a specific number for all PINs, dates, times, durations, etc.
- Activity by date — all calls in a specific date range
- Calls with 3-way calling detected — all calls flagged as potentially fraudulent events
- Calls terminated due to 3-way detection — all calls with a terminate disposition of "PFE Disconnect"
- Calls with extra digit dialing detected — all calls with DTMF detection flagged
- Calls terminated due to extra digit dialing — all calls with a terminate disposition of "DTMF Disconnect"
- Duration of call — all calls that meet the duration range
- Living unit from which call was placed — all calls placed from the Group (You can group lines by living unit)

- All calls that meet a specific terminate or blocked disposition
- Destination — all calls made for a specific area code and NXX

Management of Multiple Call Processes

Commander provides one line card circuit per inmate phone to insure quality telephone service when all phone lines are in use. Commander provides dial tone to the inmate phone at off-hook and validates that the dialed number is allowed before out-dialing through the Central Office trunk.

The commander can be configured to provide one Central Office (CO) trunk for each inmate telephone. The system also provides all resources such as dial tone generation, DTMF detection, and voice announcement channels on a one to one basis. This full availability of resources allows for 100% service even under extremely high traffic conditions.

Fraud Prevention

3-Way Call Detection

Commander's 3-Way Call Detection feature provides around-the-clock fraud surveillance on every call made on every inmate phone. Commander continuously scans active calls for potentially fraudulent events, such as the activation of three-way calling by the called party. This scanning activity is imperceptible to the caller and called party. When Commander detects a potentially fraudulent event (PFE), it reacts according to programmed parameters. You can program Commander to respond in the following ways:

- Disconnect the call and flag the call detail record as a PFE.
- Play a single or random warning announcement to both calling parties and flag the call detail record as a PFE.
- Just flag the call detail record as a PFE.
- Ignore the PFE for particular types of calls or calls to specific phone numbers. In this way, you can program the system to ignore PFEs detected during calls to attorneys while responding to PFEs during all other calls.

Identification and flagging of potentially fraudulent calls processed through Commander provides a comprehensive investigation tool for correction officials. You can search call records by numerous parameters such as call dispositions, individual called numbers, and inmate. You can use call detail records to determine who is attempting to place three-way calls and set call thresholds to block further attempts to call that number.

Anti- Switch Hook Dialing

Likewise, Commander constantly monitors the switch hook of all system telephones. If Commander detects on-hook by the inmate or the called party while a call is in progress, Commander terminates the call and instructs the inmate to hang up the phone. A fast busy is then generated until the phone is hung up. The Commander does not provide dial tone for a new call until the phone is on hook for the appropriate time interval.

Anti-Chain Dialing

Commander only allows a single phone number per phone call. Once Commander detects on-hook by the inmate or the called party, the call is terminated. Commander provides internal dial tone with the next off-hook.

Commander checks each dialed phone number against the PIN's phone number list, the global restricted list, and the global allowed list. If the number is restricted, Commander blocks the call. If the number is valid, Commander out-dials the number and begins to check the line for extra dialed digits by the caller or other potentially fraudulent events (PFE), such as the called party initiating a three-way call. Commander can be configured to disconnect calls as soon as it detects extra digits or a PFE. You can also specifically configure the number of digits that Commander detects before disconnecting.

Automated Operator Services

Commander supports Automated Operator Services (AOS) as a standard feature. When AOS is enabled, it completely automates collect call processing so that you can completely restrict inmates from contacting a live operator. The following features may be selected according to site requirements:

- Automated operator service for collect calls
- Announcement including caller's recorded name
- User selectable language prompts
- Automated Billed Number Screening (BNS)
- Complete call rating and costing system
- On-line rate quotes
- Automatic generation of billing data for Telco billing purposes

In a typical application, Commander with AOS qualifies the called number's credit eligibility using automated Billed Number Screening (BNS). Commander sends a BNS query regarding the called number to the appropriate Line Information Database (LIDB). Based on information about the number's phone equipment type (e.g., payphone) or other billing restrictions, Commander AOS determines if the called number is appropriate and creditworthy. During the lookup processing, Commander AOS records the caller's name and recites it to the called party on answer. Commander AOS only connects the call if it receives positive acceptance of the call, such as a digit dialed by the called party. Once the call completes, Commander AOS automatically generates a call detail record for the call that includes billing information.

If the called party does not answer after a preset programmable number of rings, Commander disconnects the call and announces to the inmate that the call was not answered and that he or she should try again later. The Commander also detects and disconnects calls to answering machines.

Commander determines whether to provide automated operator services on a per call basis according to call type. You can program the system to provide AOS for all call types (all calls), or only for certain call types. For example, you can program Commander to provide AOS for only Local and IntraLATA/Intrastate calls, while sending all other calls to the InterLATA service provider network. Commander only provides AOS for collect calls (dialed 0+ by the inmate).

Call Recording

The Commander system supports interfaces to several call recording systems. With additional SciDyn software and recording hardware, you can monitor all system calls and selectively record calls based on the caller, the phone the call originated from, and/or the dialed number. Alternately, you can record all system calls except those made by a specific caller, the phone the call originated from, and/or the dialed number, such as calls made to an inmate's attorney.

Commander Call Processing

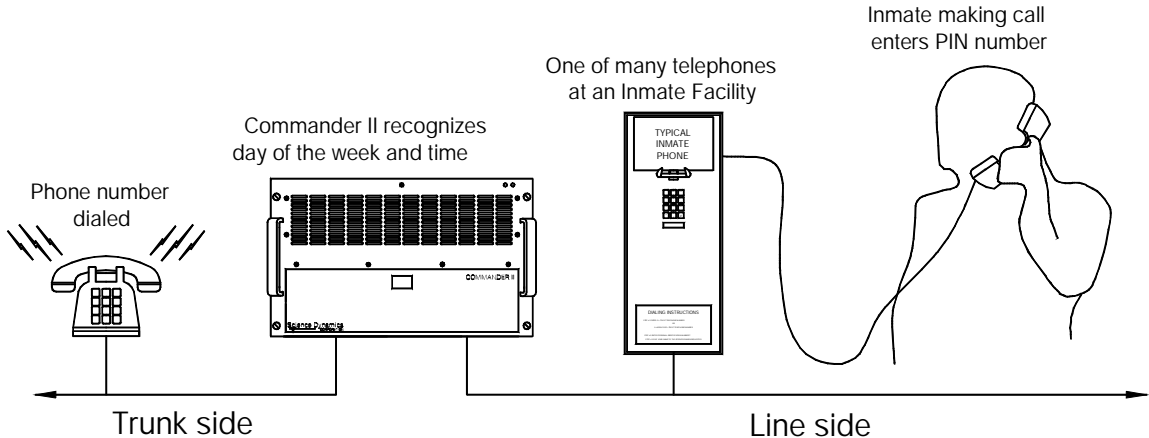
In the AdminManager, you set the call processing parameters that Commander uses to process all inmate calls. The logical process Commander uses to determine whether a call is permitted, the messages played during the call, the maximum length of a call, and other phone controls is somewhat complex. However, the information used by Commander to make all of these determinations is straightforward.

Information Known about Each Call

When an inmate places a call at an inmate telephone, Commander collects and uses specific information about that call. The information Commander collects about the call includes:

- The day of the week and time of day
- The phone being used by the inmate
- The person making the call (if PINs are required for that phone)
- The phone number dialed

Commander determines the day of the week and time of day using its internal clock, it knows which phone is being used because it detects which phone receiver was picked up (off-hook), and it knows the phone number and PIN digits dialed from that phone.



Commander compares this information (day and time, phone, PIN, and phone number dialed) against its databases to decide whether to allow the call and, if so, how to process the call. How Commander uses this information to process the call is briefly outlined below.

Day of Week and Time of Day

This is used to determine whether the phone is in service or out of service for that day of the week and time. Also, the maximum call length can be different for weekdays, weekends, and holidays.

Phone Used to Make Call

All inmate phone lines (circuits) are wired through Commander system. These phone lines do not all need to be set up identically. Depending on the phone used, it may be in service or out of service at the time of the call. Individual phones are set to allow only certain types of calls, such as 0+ collect calls, direct calls, or calls to specific phone numbers. Also, depending on the phone used, the inmate may be required to enter a PIN when placing a call.

PIN Entered

If a Personal Identification Number (PIN) is required on the phone line, only calls made using valid PINs are allowed. The system may be set so that inmates may place calls only to phone numbers specifically entered into their own phone lists. Also, you can regulate the use of phones based on phone usage (number of calls and time) using Lockout Registers on a PIN-by-PIN basis.

Phone Number Dialed

The phone number is used to determine whether the call is restricted or allowed and if the duration of the call will be limited to a specific length. Phone numbers can be allowed from some phones and not others. Also, you can specify how many calls are allowed to be placed to a phone number.

The above descriptions cover the major determinations made using the four pieces of information gathered at the time of the call. By using the various Commander settings, you can fine-tune the control you have over each call. For example, you can set individual phone numbers to be allowed only on certain days during specific times. Also, the Maximum Call Duration of a call depends on the phone number dialed, the PIN entered, the day of the week, and when the phone is going out of service.

While a Call Is In Progress

After Commander determines that the call is allowed, it sets the maximum length of the call and determines how to handle the call. Then Commander accesses an outside line and outdials the phone number. Before outdialing, the maximum call length can be announced to the inmate. When outdialing is complete, the inmate is connected to the outside line through Commander.

While a call is in progress, other messages can be played alerting both parties to the origin of the call and the amount of time remaining in the call. The line also can be monitored for extra digits being dialed (DTMF) and/or three-way calling (PFE), which could be an attempt at fraud.

If DTMF is detected, Commander either disconnects the call, or automatically dials interfering digits. You can set the DTMF and message parameters globally or by call treatment.

If a Potentially Fraudulent Event (PFE) is detected (such as the activation of a three-way call by the called party), Commander either disconnects and flags the call, announces a

warning and flags the call, or just flags the call. You can also configure specific call types or calls to specific numbers to ignore PFEs. This way the system can ignore PFEs detected during calls to attorneys while responding to PFEs during all other calls.

When the Call Is Complete

The call ends when one of three events occur: the inmate hangs up, the called party hangs up, or Commander disconnects the line. Commander will disconnect the line when the Maximum Call Duration is met, when the phone circuit is shutdown, or when DTMF or three-way calling is detected and Commander was set to disconnect.

When the call is complete, Commander generates a Call Detail Record (CDR) that contains information about the call and how the call was processed by Commander. Information such as the dialed number, the PIN, the phone line, the day and time of the call, the call duration, the dialing pattern, the databases the phone number was processed through, and the call's disposition are collected. The CDRs can be reviewed using the AdminManager.

Controlling Calls with Commander

Commander provides total control of the inmate phones. The most basic function of Commander is to place the phones in and out of service at specific times of the day. After establishing phone schedules, you can program how specific phones handle calls and who is allowed to call which phone numbers.

Commander uses three tables to determine whether to allow a call: Personal Identification Numbers (PINs) which identifies each inmate and any specific phone numbers that inmate is allowed to call, Restricted Numbers which is a specific list of numbers that Commander blocks, and Allowed Numbers which is a specific list of numbers that Commander allows. Using these tables, there are three ways to regulate calls. The options below are listed in order from least control to greatest control.

- PINs not required
- PINs required and check restricted numbers
- PINs required and do not check restricted numbers

The use of PINs is set for each phone line (circuit). In most cases, all phones are set the same way. The PINs With Restrict parameter is a global parameter that affects all calls made from system phones requiring PINs. These three options are described in more detail below.

PINs Not Required

Only the global restricted numbers list (a list of specific phone numbers that are not allowed for calling) is used to block phone numbers from being called. This setup offers the least amount of control because if a phone number is not specifically restricted, then it can be called by any inmate. If it is restricted, then the global allowed numbers list (a list of specific phone numbers that are allowed for calling) is checked to see if it is allowed anyway. Because PINs are not used, you cannot know who placed the call.

Note: A phone number does not need to be in an allowed table to be called. For example, a number may meet criteria in both the restricted and allowed number tables, such as to restrict all 800 numbers, but allow a few exceptions. These are explained in the AdminManager online help and user guide.

PINs Required and Check Restricted Numbers

This setup requires inmates to enter a valid PIN when making a call so Commander knows who made the call. PINs need to be used if you want to regulate phone use by each inmate. The number of calls, the total duration of calls, and the time between calls can be regulated by the system. If the called phone number is not in the PIN's Phone List, then the Global Restricted Numbers Table and Global Allowed Numbers Table are used to block or allow calls to certain phone numbers, as described above. Using PINs, calls placed can be traced to an individual inmate.

PINs Required and Do Not Check Restricted Numbers

This setup also requires inmates to enter a valid PIN when making a call. However, the Global Restricted Numbers Table is bypassed. If the dialed number is not in the caller's PIN Phone List or in the Global Allowed Numbers Table, then it will be blocked. This configuration offers the most control because inmates can only call predetermined phone numbers. Using PINs, calls placed can be traced to an individual inmate.

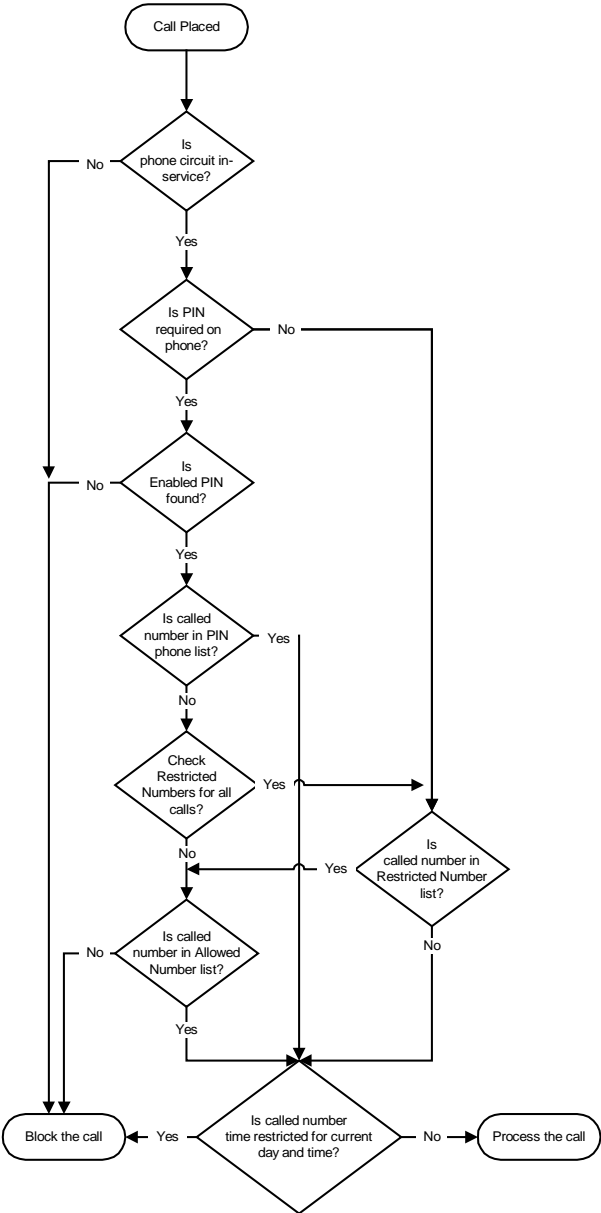
The relationship between the Global Restricted Numbers Table and the Global Allowed Numbers Tables, PINs, and each PIN's Phone List plays an important role in configuring your system. The flowchart on the following page is shown to illustrate these relationships.

A call can be blocked for reasons other than these. For instance, if a call is attempted on a phone that is out of service, the caller will receive a message stating that "This phone is not in service" as soon as the phone goes off hook. Also, the PIN or the PIN Phone Number may be set to be temporarily or indefinitely disabled.

PIN and Phone Number Call Blocking

This flowchart only covers the relationship among PINs, PIN Phone Numbers, Allowed Numbers, Restricted Numbers, and Time Restricted Numbers, which can restrict a phone number from being called during certain times of the day and days of the week.

PIN and PIN Phone Number Flowchart



Explanation

A phone number is dialed and PIN entered (if PINs are used on the line) from an inmate phone.

Commander determines if the call was made on a line (circuit) requiring PINs.

The PIN is checked against the PIN data-base. If it is not found (invalid), then the call is blocked.

The phone number is checked against the PIN's Phone List. If found, then the Restricted Numbers Table and Allowed Numbers Table are bypassed.

If the phone number is not in the PIN's Phone Number List, then Commander checks if "Check Restricted Numbers for All Calls" is set to Yes.

If applicable, the phone number is checked against the Restricted Numbers Table. If found, then the call is blocked.

If applicable, the phone number is checked against the Allowed Numbers Table.

The phone number is checked against the Time Restricted Numbers to determine if the call is restricted for that day of the week and time. If it is, then the call is blocked. If it isn't, then the call continues through the Commander call process.