

CONTROL PAGES—DISPLAY SYSTEM
ENGINEERING AND ADMINISTRATIVE DATA ACQUISITION
SYSTEM/NETWORK MANAGEMENT (EADAS/NM)
OPERATIONS SUPPORT SYSTEMS

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1. GENERAL

1.01 This section describes the control page (CN) package of Cathode-Ray Tube (CRT) displays associated with Generic 1NM6, Engineering and Administrative Data Acquisition System/Network Management (EADAS/NM).

1.02 This section is reissued to include new CN pages CN03, CN05, CN06, CN07, and CN15 and to describe changes made in CRT pages CN01, CN11, CN13, and CN32. Revision arrows have been used to denote the more significant changes.

1.03 The title for each figure includes a number(s) in parentheses which identifies the paragraph(s) in which the figure is referenced.

1.04 Control pages CN21, CN23, CN24, and CN25 are all parts of the EADAS/NM reroute package and are described in detail in Section 190-540-437. Consequently, only a brief description of these pages is included in this section.

1.05 The CN pages display the current status of specific controls at the EADAS/NM cluster office(s). The information displayed can be related to a code, to an office, or to the area subtending an office. The control pages also provide a method to implement or remove network controls at the offices within the EADAS/NM cluster area from one location—the EADAS/NM Center. Additionally, the reroute control pages, CN21 and CN23, enable the network manager to make assignments to the Reroute Active Monitor (RAM) file and to the monitor printer.

2. PAGE FORMAT

2.01 The format of the control pages is similar to that of display pages in the other CRT packages, ie, it is segmented into three general areas—Identification and Selection, Data and Transfer, and Miscellaneous.

2.02 Each CN page has its own set of inputs required to attain the control information dis-

play. These are specified in the description of the page.

2.03 The data displayed is the status of the available controls at the FROM office specified, or to the TO office specified.

2.04 Transfer capabilities are available but not to or from all pages. These capabilities are also specified in the description of the individual page. Miscellaneous information and features are consistent with those of the other display packages for time, date, and progressing to another display page in the system (directory or page). However, the following items are unique to control pages:

- **EXECUTE ()**—This window is designated to activate or deactivate the requested controls which are currently in a pending state.
- **CLEAR ()**—This window is designated to delete all pending control designates from the page currently displayed. Since all pending control designates are removed from the display, any valid control requests must be respecified.
- **BY []**—This window is used to input the identification of the network manager who activates or deactivates the control. This input becomes a part of the control log associated with this control.

3. PAGE FEATURES

3.01 The following features are *not* available on CN pages:

- **Time Intervals:** Only the current status of a control is required by the network manager during a network congestion problem. Therefore, a time interval is not provided on CN pages. Exceptions to this are the CN21, CN23, and CN25 pages which display data for monitored trunk groups and do list a time period.
- **Thresholds:** The threshold of concern with CN pages is the status of available controls at or to a unit. (A unit may be a code, an office, or a trunk group.) Since the CN pages provide this on/off information for the specified controls, no other threshold selection is required nor provided. Exceptions to this are

the CN21 and CN23 pages which provide a window for assigning the monitor trunk group's percentage of overflow (% OFL) threshold value.

3.02 The following features apply to all CN pages:

(a) **Names:** The office or trunk group Common Language Location Identification (CLLI) is a required item for acquiring a display of control information on CN pages. There are three exceptions:

- (1) **CN22 Regional Center TORC:** Requires no input if the regional center is in the cluster
- (2) **CN01 Code Control:** Requires identification of the code to be treated
- (3) **CN24 Control Plans:** Requires a reroute plan label rather than a CLLI code
- (4) **CN05 and CN07 display office CLLIs** automatically and the network manager selects the desired office by designating the associated parentheses.♦

(b) **Control Parameters**—Control parameters include type of control, percentage of traffic to be controlled, type of traffic to be controlled, and announcement disposition for controlled calls. Where control parameters are listed on a page, one of each category must be designated.

3.03 The operation of any control page requires the following procedures:

- (a) The unit (code, office, and trunk group) to be controlled must be identified. In most cases, this is done by designating (+) the desired unit in the appropriate input window.
- (b) One of each of the required control parameters must be designated. If more than one of a particular type control parameter is designated, the control request will result in an error, ie, designating both 50 and 75 as the percentage of traffic to be controlled. After the network manager sends the page, the system will check the requests and respond with a display of controls pending (flagged with a *p*) for those that are valid. If the system is unable to process the request, or finds

that a condition already exists on this request, it responds with a symbol which may help the manager define the situation encountered. A list of system responses is included in Fig. 1.

(c) If the manager is satisfied that the items flagged with **p** are proper control activities, the pending items can then be activated (or deactivated) by designation of the EXECUTE window (even though some items are flagged with some other symbol) and send the page. For No. 4 Electronic Translation System (ETS) and No. 4 ESS* switch offices, the control activities will be entered in control queue and the CRT page is released for other uses. However, for other type offices, the CRT page is held in the "processing" mode until the control is implemented. During this "processing" period, the CRT is locked into the specified function and cannot be interrupted. After the control activities flagged with a **p** have been activated and verified by the system, a new display of the page is presented. On the new display, controls in effect (active) are flagged with an **s**. Controls not in effect are flagged with a " " (blank), or with some other response character, as shown in Fig. 1. Those No. 4 ETS and No. 4 ESS switch items on control queue will display a **q**.

(d) If a control fails that has been entered on the EADAS/NM control queue, the system will respond with a **CTL FAIL** in the output window at the top of the page presently displayed on the CRT which sent the original control request. The network manager can scroll the page upward to get details on the control that failed. This control failed message will appear even if the network manager has transferred to another type of page, such as trunk group page or exception page.

3.04 All the parameters of control must be identical for operation of a control page, eg, if the desired control is **CANF, 50%, DAR, NCA** for a series of trunk groups, but on another series **EAI** is the desired announcement group, two separate operations of the control page are required.

3.05 When a parameter of control at a No. 4A ETS office is to be altered, the existing control must be removed, the new parameter set, and then activated. For example, changing the percentage of control from 50 percent to 25 percent requires the

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removal of the 50 percent control and then the activation of a 25 percent control.

3.06 At electromechanical offices such as No. 1 crossbar and No. 5 crossbar, controls may be additive, eg, route transfer keys may be established in a manner which will permit varying degrees of control. Two 25 percent control keys operated together to get 50 percent control would be one example.

3.07 No. 1/1A ESS switch offices are capable of control replacement which eliminates the necessity of removing an existing trunk group control before implementing the new control. If there is an existing reroute on a trunk group in a No. 1/1A ESS switch office and the network manager wants to replace it with a CANCEL FROM control, it is only necessary to activate the CANCEL FROM control. The No. 1/1A ESS switch processor will automatically remove the reroute before implementing the CANCEL FROM control.

3.08 No. 4 ESS switch offices are capable of control replacement for controls of the same type. That is, a 50 percent reroute can be replaced with a 75 percent reroute without first removing the 50 percent reroute. However, trying to implement a CANCEL TO control on a trunk group already having a reroute control will result in having both controls active at the same time. It is possible to have CANCEL TO, SKIP, CANCEL FROM, and REROUTE controls all on the same trunk group at the same time in a No. 4 ESS switch location.

3.09 Although control replacement is available as described in paragraphs 3.07 and 3.08 for Nos. 4 ESS and 1/1A ESS switches, page CN11 (Multiple Trunk Group Control) does not allow the replacement. In those cases where page CN11 shows an existing control, the network manager must use page CN13 to make the desired control changes.

4. CN00 (CONTROL PAGE DIRECTORY)—PAGE DESCRIPTIONS

4.01 Page CN00 (see Fig. 2) provides a listing of the names and page numbers of control page displays available in the system. Designation of any listed page will result in that page being displayed.

4.02 Another directory page or any other page can be selected with the appropriate input to the

DIRECTORY or PAGE window at the bottom of the page.

4.03 Input of *EXIT* in the page window, or designation of the EXIT window returns the CRT to command level function.

5. CN01 (CODE CONTROL)—PAGE DESCRIPTION

5.01 Page CN01 provides for domestic and international code blocks, call gapping, manual hard to reach (HTR) list administration and the ability to inhibit codes from being declared HTR by the No. 4 ESS switch automatic system.

5.02 The page allows 3- and 6-digit domestic code blocks for No. 4A ETS switching systems (non-CCIS), 3- to 10-digit code blocks for No. 1/1A ESS switch offices and 3-, 6-, 7-, and 10-digit code blocks or call gapping for No. 4A CCIS (4A CC) and No. 4 ESS switch offices by selecting the CB (code block) or GAP (call gap) (see note) designate. Access codes of 0, 1, and X (X meaning no access code dialed) are allowed for No. 1/1A ESS switches. Code blocks on one, two, or all three of the access codes are allowed for No. 1/1A ESS switches. If the code blocks for different access codes have the same percentage and disposition, they will appear on one line when the CRT displays code blocks active. Otherwise, separate line entries will be made for each access code. If no access code is entered, X will be the default for No. 1/1A ESS switches. A 3-digit Numbering Plan Area (NPA) is required for all domestic code blocks except for 800 Service codes for No. 4A ETS with an NXX of type 08B where *B* is the band number.

Note: For No. 4A and No. 4E offices, a 7-digit code block or call gap consists of the NXX and LINE number in the home NPA. However, page CN01 will not accept NXX and LINE entries without an NPA entry in the domestic mode. Therefore, to implement a 7-digit code block or call gap in the home NPA, 10 digits must be specified (NPA, NXX, and LINE) and the EADAS/NM system generically knows to delete the NPA by conforming it with the NPA region in data base.

5.03 A 10-digit code block having a line number of 0000 (eg, 312-443-0000) will be interpreted by No. 4 ESS switch as a code block on the entire NPA-NXX (eg, 312-443). Likewise, a 7-digit code block on a 0000 line will be applied to the entire NXX. The rea-

son for this anomaly is that No. 4 ESS switches cannot distinguish between "No-line-number-specified" and a 0000 line number.

5.04 Page CN01 has two primary modes of operation. These are "domestic" and "international" with "domestic" being the default. In each of these modes, the page is capable of performing a number of different control actions on HTR code assignments or removals. The two modes and the options available for each mode are explained in the following paragraphs. The initial display of CN01 will always show the defaults of domestic (DOM) and CB. Figure 3 gives an example of a CN01 initial display.

DOMESTIC MODE

5.05 In the "domestic" mode, the page is capable of activating and removing code blocks and call gaps on domestic codes. It is also capable of adding codes to or removing codes from the HTR control list for No. 4A CC and No. 4 ESS switch. Additionally, page CN01 is capable of adding codes to or removing codes from the No. 4 ESS switch HTR source list (generic 4E7 and later). The page can also inhibit the automatic HTR declaration for codes on the No. 4 ESS switch HTR control and source lists.

Note: The control list for No. 4 ESS switch and No. 4A CC offices continues to provide a list of problem codes that is scanned during application of selective Network Management controls. However, the codes on the control list for No. 4 ESS switches equipped with generic 4E7 or later are no longer determined internally by the office owning the control list. Instead, the control list contains codes remoted from another No. 4 ESS switch office's (equipped with 4E7) source list or codes manually designated HTR or manually inhibited from HTR status. A No. 4 ESS switch office with generic 4E7 or later will have a control list and a source list. A No. 4A CC and No. 4 ESS switch (generic 4E6 and earlier) will have only a control list.

5.06 First-stage pulsing of international codes (3- and 6-digit) of the type 011, 160, and 18X may also be code blocked and call gapped using the domestic portion of this page. This type of code block or call gap can be entered by placing the 011, 160, or 18X in the NPA window and placing the PCC (pseudo country code) in the NXX window. All offices capable of

code blocking of international calls on a first-stage outpulsing basis will be displayed when the DOM window is designated.

5.07 The page CN01 background differs, depending upon the type control or HTR action being performed. Paragraphs 5.08 through 5.32 describe each type control operation.

A. CB—Code Block Control—Domestic

5.08 The background in Fig. 3 includes some windows not labeled. These windows are not used when implementing or removing code blocks in the domestic mode. In Fig. 3, the *s* in the DOM and CB windows indicates that the page is prepared for a domestic code block. From this point the network manager must specify the code to be blocked in windows NPA, NXX, and LINE. Table A indicates the code block capabilities for each type switching office. The *a* window (access code) should also be considered before sending the page. This window applies only to No. 1/1A ESS switch offices and will accept the following inputs. These are "X", "0" (zero), or "1" for no access code, access code "0" (zero), or access code 1, respectively. *X* is the default for the *A* window. If access code "0" (zero) or 1 is entered in the *A* window, no machines other than No. 1/1A ESS switch offices will be shown as being capable of implementing a code block on the specified code.

5.09 Once a code has been entered and a decision has been made on window "A", the network manager resends the page. The system responds with a list of machines capable of implementing a code block on the specified code. The information displayed will include: type office (TYPE column); office CLLI (OFFICE column); an *s* in the parentheses to the right of the office CLLI if a code block is already in effect on the specified code; the percent of an active code block (% CB column); the type announcement used on the active code block (ANN column); and, for No. 1/1A ESS switch offices, an "X", "0" (zero), or "1" (X01 column) indicating the access code specified for the active code block.

5.10 The network managers must then specify a percentage in the % CB window and indicate the type announcement desired. If the network manager is uncertain of the percentage of code blocks allowed by each type of switching system, this information is shown in segment two of the CRT display by inputting a 1 in the "TABLE" window. Al-

lowed percentages are: 50, 75, 87, and 100 for No. 1/1A ESS switches and No. 4 ESS switches; 25, 50, 75, and 100 for No. 4A ETS (non-CCIS); and 12, 25, 37, 50, 62, 75, 87, and 100 for No. 4A CC. If the network manager does not specify an announcement type, the system will default to No Circuit Announcement (NCA). However, if an emergency announcement is desired, an input can be made in the "EA" window. The "EA" window requires a numerical input. Any number 1 through 6 can be input. Since No. 1/1A ESS switches and No. 4A systems have only two emergency announcements, the input of 3, 4, 5, or 6 in the "EA" window will cause the page to show only No. 4 ESS switch systems as capable of implementing the specified code block.

Note: If the network manager attempts to activate a code block using a percentage or announcement not available to a displayed switching office, the page will display an *x* in the parentheses to the right of the office CLLI and will not activate the code block for that office.

5.11 Page CN01 provides the ability to activate one code block at one percentage using one announcement disposition, and specifying one access code. However, this code block can be implemented in a maximum of 182 offices without respecifying control parameters. This maximum consists of seven parts of 26 offices each. The maximum number of offices in which the control can be implemented simultaneously is 26 (one part) by designating the CB CTRL:ON and ALL OFCS windows. To implement the control in additional offices, the page must be scrolled to another part.

Note: No. 1/1A ESS switch offices and No. 4 ESS switch offices are capable of control replacement, ie, if a control already exists on the specified code, the new control will replace the old code block with the new percentage and/or announcement. It should be noted, however, that, if the new control for a No. 1/1A ESS switch is on a different access code (X, 0, 1), the new control will result in two separate code blocks on the same code with each having different access codes. For No. 4A ETS (CCIS and non-CCIS), control replacement is not available. Therefore, if a code block already exists on the code the network manager wishes to block, the existing control will have to be removed before the new code block can be implemented in these offices.

5.12 Code blocks can be implemented on an individual basis by designating the CB CTRL:ON

window and the parentheses to the right of the office(s) CLLI and sending the page. In each case of multiple code blocks or individual code blocks, the system will display a *p* in the parentheses associated with each office where it will implement the control. After receiving the *p* the network manager must designate the "EXECUTE" window if the control is to be activated, or the "CLEAR" window if the control is not to be activated.

5.13 For the No. 4 ETS (CCIS and non-CCIS) and No. 4 ESS switch offices, all control requests that are in the pending state (*p* in the parentheses to the right of the office CLLI) are entered in the control queue for processing by the queue processor when the "EXECUTE" window is designated. When requests have been successfully entered in the queue, the response character, *q*, is displayed in the parentheses associated with the office CLLI and the terminal is released for other displays.

5.14 Control removal is done the same way that control activation is done except that the CB CTRL:OFF is used instead of the CB CTRL:ON window.

B. GAP—Call Gap Control—Domestic

5.15 Figure 4 is a display of page CN01 prepared for a domestic call gap. As with Fig. 3, some of the windows are not labeled. These windows are not used when implementing or removing call gap controls.

5.16 The call gap control is available through EADAS/NM only in No. 4A CC and No. 4 ESS switch (generic = >4E7) offices. Call gaps are implemented by specifying an index rather than a percentage as is done with code blocks. Each index is generically arranged to allow one call to be output by the controlled machine for the controlled code at the end of each predetermined interval. Tables B and C list the indexes available and the number of calls which each interval allows for a 5-minute period and for a 1-hour period. These tables are statistical estimates based upon high volumes of traffic. If calling is intermittent or not heavy, the amount of calls allowed might be less than stated. Example: Using No. 4 ESS switch call gap Index 8 establishes a gap interval of 10 seconds and allows a maximum of 360 calls to be forwarded by the controlled office for the controlled code (see Table B). The No. 4 ESS switch begins the interval after the control is implemented

and once the interval expires it will not start another interval until one call has been forwarded. If no calls are waiting to be forwarded after the interval has expired, the gap lasts until a call is offered to the controlled code. After one call is forwarded, a new interval is started. No calls are forwarded during the interval generically associated with the specified gap index. Calls not forwarded are sent to the announcement specified when the control was taken.

5.17 For No. 4A CC offices equipped with generic 4XC2 Issue 5 or later, the page changes a gap index input of two or three to equal Index 4 on Table B. It also changes a gap index input of 14 or 15 to equal Index 13 on Table B. This is done because the 4XC2 generic Issue 5, or later, cannot provide very low or very high intervals.

5.18 If the network manager wishes to know what each index means in terms of gap interval and maximum number of calls allowed, the TABLE window can be used to obtain a display or segment 2 of the CRT display. An input of 2 in the TABLE window will cause the page to display Table B. An input of 3 will cause the page to display Table C. Table B is used for the No. 4 ESS switch (4E7) and No. 4A CC with generic 4XC2 Issue 5 or later. Table C is used for No. 4A CC with 4XC2 generic prior to Issue 5.

5.19 Domestic gap control implementation begins by specifying a particular code in the NPA, NXX, and LINE windows and sending the page. Since No. 1/1A ESS switch offices cannot use call gap controls, window A is not used. The specified code must be 3, 6, or 10 digits (see note in paragraph 5.02). The page will respond by displaying all offices capable of implementing the control. This display will include:

- Type office (TYPE column)
- Office CLLI (OFFICE column)
- An *s* in the parentheses to the right of the office CLLI if a gap control is already in effect on the specified code
- The maximum number of calls allowed by the active call gap in a 5-minute period (GAP column), and
- The type announcement (ANN column) the blocked calls are given.

5.20 The network manager then inputs a gap index in the GAP bracket window, a designate (+) in

the GAP CTRL:ON window, and designates (+) the individual offices to be controlled or designates the ALL OFCS window if all displayed offices are to be controlled. If no announcement type is designated, NCA will be the default type. An entry must be made in the EA window if the network manager does not wish to use NCA. At this point the network manager sends the page and the page responds with the following information: (1) A *p* in the parentheses associated with each office CLLI which can implement the control ("X" appears if an office cannot implement the control); (2) the maximum number of calls which will be allowed in a 5-minute period by the pending gap control (GAP column); and (3) the announcement type to be given to blocked calls (ANN column). A designate must be entered in the EXECUTE window to activate the control. Call gap removal is accomplished in the same manner as call gap activation except that the GAP CTRL:OFF window is designated. The page will not allow a gap index greater than 15 to be input into the GAP bracket window.

5.21 The control replacement restrictions and code activation or removal limits discussed in paragraph 5.11 and the note accompanying paragraph 5.11 also apply to call gaps.

5.22 Table B shows Index "0" (zero) to be the off index for No. 4 ESS switch. If the network manager tries to implement Index "0" in a No. 4 ESS switch for a code on which a call gap is not active, the system will not accept the control. However, if a call gap is active on the specified code, the system will accept level "0" and give a *p* in the parentheses associated with the No. 4 ESS switch office. When the EXECUTE window is designated the active call gap will be removed. While this method will work, it is recommended that the GAP CTRL:OFF window be used for removal of gap controls. Gap Index "0" is not available in No. 4A CC offices equipped with generic 4XC2, Issue 5, or later. However, Index "0" is a valid index for No. 4A CC offices equipped with 4XC2 generics prior to Issue 5.

5.23 Queueing for call gap activation and removal is done as described for code blocks in paragraph 5.13.

5.24 A special note concerning MAS with cut through. The No. 4 ESS switch has the capability to cut through a small percentage of calls to a specific 10-digit code in NPA NXX-LINE format

when that office is a MAS/node office. A call-gap request will retrieve the status of the code in the data base and check if cut through is active. If it is active, the service order gap interval will be displayed, or if a NM gap interval is shown will display the NM gap interval. The network manager will, therefore, have the ability to change the NM gap interval to adjust for traffic patterns to a particular code. The NM gap interval supersedes the SO gap interval. The SO gap interval cannot be altered from EADAS/NM. All DIS codes are either 10-digit 900-NXX-LINE or 7-digit 976-LINE codes.

C. HTR—Manual Assignment—Domestic

3.25 As with call gapping, only No. 4A CC and No. 4 ESS switch offices can activate HTR code assignments. No. 4A CC offices and No. 4 ESS switch (equipped with generic prior to 4E7) have only a HTR control list. No. 4 ESS switch offices equipped with generic 4E7 or later also have a HTR source list. See Note, paragraph 5.05.

5.26 For clarification, it should be noted that declaring a code HTR does not, in itself, cause any calls to be affected. When a call request is received, the switching machine checks the HTR control list to see if the code is declared HTR (either manually or automatically). Afterwards, the processor determines the proper routing for that code and attempts to place the call on the correct trunk group. However, before the call is actually placed on the trunk group, the processor checks to see if there is a SKIP, CANT (cancel to), FCNT (finalized cancel to), or IRR (immediate reroute) control in effect on the trunk group with a traffic classification including HTR traffic. If the answer is yes and this call falls within the percentage to be diverted or canceled, the call will be affected. If the answer is no, the call will be placed on the trunk group. In case all trunks are busy when the processor places the call on the trunk group, the processor will check to see if there is a CANF (cancel from), FCNT (finalized cancel to), or RR (regular reroute) control in effect on the trunk with a traffic classification including HTR traffic. If the answer is yes and this call falls within the percentage to be rerouted or canceled, the call will be affected. If the answer is no, the processor will advance the call to the next in-chain route and the checks described for the previous trunk group will be made for the new trunk group.

5.27 The manual assignment of codes to the control list and source lists is done in the same man-

ner. The only difference is that assignments to the control list must be preceded by entering a designate (+) in the CLM (control list manual assignment) window (see Fig. 5). Assignments to the source list must be preceded with a designate in the SLM (source list manual assignment) window (see Fig. 6).

5.28 A code must then be entered in the NPA, NXX, and LINE windows and the page sent. Since No. 1/1A ESS switch offices cannot implement HTR assignments, window **A** is not used. The specified code must be 3, 6, or 10 digits (see Note in paragraph 5.02 for discussion of 7D domestic code entries). The page will respond with a display of all offices capable of entering the code on the HTR control list (source list if SLM was designated). This display will include: (1) type office (TYPE column), (2) office CLLI (OFFICE column), (3) *s* in the parentheses to the right of the office CLLI for each office where the specified code is already manually designated as HTR on the control list (source list if SLM was designated), and (4) the CL column (SL if SLM was designated). The current control status of the specified code at each displayed office is shown in the CL (or SL) column. This data is shown as an *m* if the code is already manually declared HTR; an "I" if the code has been manually inhibited from automatic HTR operation; and *a* if the code is automatically declared HTR. The *a* is reliable information only for No. 4 ESS switch offices equipped with generic 4E7, or later, and is good only for the control list. An *a*; might appear for other offices on the control list or source list but will not necessarily be indicating current status. Combinations which are allowed are: *m* and *a*, and *i* and *a*; *m* and *i* is not allowed because a code cannot be manually designated as HTR and manually inhibited at the same time on the same list (control or source). If the network manager needs to know the automatic status of codes on the control and source list, page MA23 will provide the necessary data. The ANN column is not used for HTR code administration.

5.29 Page CN01 (Fig. 5 and 6) can also be used to remove codes from the HTR control list (or source list) which were manually assigned. It is not possible to remove automatically assigned codes from the HTR control list (or source list) using CN01.

D. HTR Inhibit—Domestic

5.30 A code can be manually inhibited from being affected by HTR control action on the HTR control list and/or the HTR source list. If the code is

inhibited on the control list, this will prevent that particular office from treating the code as an HTR no matter what is the automatic status of the code on the control list. If the code is inhibited on the source list, this will prevent the code from being transmitted to distant No. 4 ESS switch offices as an HTR code. A code cannot be inhibited and manually assigned as HTR simultaneously on the same control list or source list. However, if the network manager chooses to do so, a code can be inhibited on one list and manually declared HTR on the other list.

5.31 The limits and implementation actions described for HTR manual assignments in paragraphs 5.25, 5.27, 5.28, and 5.29 are also applicable for HTR inhibit assignments. The differences are that to inhibit a code on the control list, the CLI (control list inhibit) window must be designated (see Fig. 7). And, to inhibit a code on the source list, the SLI (source list inhibit) window must be used (see Fig. 8).

5.32 Codes that have been inhibited from HTR control action can have the inhibit removed by specifying one code at a time in the NPA, NXX, and LINE windows and designating the INH CTRL:OFF window and ALL OFCS window or individual office parentheses.

INTERNATIONAL MODE

5.33 International code control is available only in No. 4 ESS switch gateway offices. Only second-stage international outpulsing is controlled by the international mode of CN01. First stage international code control is done from the domestic mode as described in paragraph 5.06.

5.34 Page CN01 in the international mode allows the network manager to implement call gaps, code blocks, and HTR assignments and inhibits on international second-stage outpulsing. Each type of control action is discussed separately in paragraphs 5.36 through 5.52.

5.35 These domains are used for international second-stage code blocks and call gaps. These are ORIG (originating), TRAN (transit to customer), and TROP (transit to operator). Codes may be blocked on one, two, or all three domains. Codes may be call gapped on all three domains, but each domain takes a separate control.

A. CB—Code Block Control—International

5.36 Figure 9 depicts page CN01 in the international code block mode. From this point, the

network manager inputs 1, 2, or 3 digits in the CC (country code or pseudo country code) window and 0, 1, 2, 3, or 4 digits in the NN (national number) window and sends the page. See Table D for a listing of acceptable digit inputs.

5.37 The page responds with a listing of gateway offices capable of implementing a code block on the specified code. Data displayed will include: (1) each office type (TYPE column), (2) the office CLLI (OFFICE column), (3) *s* in the parentheses for each office which already has a code block in effect on the specified code, (4) the percentage of the existing code block (% CB column), (5) the announcement used (ANN column), and (6) the domain(s) used for the existing code block (DMN column). In the DMN column, *o* is used for originating, *t* is used for transit to customer, and *p* is used for transit to operator.

5.38 To implement a code block: a percentage must be entered in the % CB window; 1, 2, or 3 of the domains must be designated; the CB CTRL:ON window must be designated; and the ALL OFFICES or individual offices parentheses where control is desired must be designated. The announcement type will default to INC if an EA announcement is not specified. If an EA announcement is desired, a number 1 through 6 can be entered in the appropriate EA window. For the ORIG domain, the appropriate EA window is ORIG EA. For the TRAN and TROP domains, the TRAN EA window is used. Normal execution procedures apply after receiving the *p* in the individual office window(s).

5.39 It is not possible to have more than one code block in effect on a particular code. Any activation of a code block on a code which is already blocked will result in the new code block replacing the existing code block.

5.40 To change an existing code block (ie, add or remove a domain, different percentage, different announcement, etc), the network manager should add the new code block specifying the desired parameters and the new code block will replace the existing code block. It is not possible to remove part of an existing code block. Example: If an existing code block is blocking the code in all three domains and the network manager wishes to block only ORIG and TROP domains, specifying the TRAN domain and CB CTRL: OFF will result in complete code block removal, not just the TRAN domain removal.

5.41 It is not necessary to specify domain, percentage, or announcement when removing a code

block. Designating the CB CTRL:OFF window and the ALL OFCS or the individual office parentheses will remove the control.

B. GAP—Call GAP Control—International

5.42 Figure 10 depicts page CN01 in the international call gap mode. From this point, the network manager inputs 1, 2, or 3 digits in the CC window and 0, 1, 2, 3, or 4 digits in the NN (national number) window and sends the page. See Table D for a listing of acceptable digit inputs.

5.43 The page responds with a listing of gateway offices capable of implementing a call gap on the specified code. The data displayed will include the type office (TYPE column) and the office CLLI (OFFICE column). Additionally, an *s* will be shown in the parentheses to the right of the office CLLI for each office already having a call gap in effect on the specified code. For each *s* the page will show:

- The maximum number of calls the gap control allows in a 5-minute period (GAP column)
- The type announcement used (ANN column)
- The domain used for the call gap.

5.44 As mentioned in paragraph 5.35 a call gap can be established on all three domains. However, three separate gap controls are required on the same code in order to gap all three domains. Since each domain is call gapped separately, it is possible to have gaps on different domains using different percentages and different announcements for the same code. If all control parameters are the same, (ie, same gap rate [index] in the GAP column and same announcement but different domains), the data will all be shown on one line. In this case, if three controls are in effect and the only difference is in the domain, the domain column will show "OTP." If the parameters are different, a separate line will be shown for each control.

5.45 Once the code is input and the page responds, the network manager must input a gap index, designate one domain, designate the GAP CTRL:ON window, and designate either the ALL OFCS or the individual office parentheses for which control is desired. Table B gives all pertinent information related to each gap index. If the network manager

needs to see Table B, an input of 2 in the TABLE window will cause it to be displayed in segment two. An input of 3 will display Table C. Paragraph 5.16 describes how the call gap program works.

5.46 When the network manager sends the information input in paragraph 5.45, the page responds with a **p** in the parentheses associated with each office to be controlled and displays the gap rate (maximum calls allowed by the gap in a 5-minute period), the announcement type, and the domain specified. The EXECUTE window must then be designated in order to activate the control.

5.47 To remove an international call gap, a designate (+) is placed in the GAP CTRL:OFF window and in the domain window for which control is to be removed. Then the ALL OFCS or individual office parentheses must be designated and the page sent. The page responds with **p** and the EXECUTE window removes the control.

C. HTR—Manual Assignment—International

5.48 International HTR assignments and inhibits are made only to the control list. No assignments can be made to the source list for international codes. Allowable digits for international HTR assignment and inhibit are 1, 2, or 3 digits in the CC window and 0, 1, 2, or 3 digits in the NN window. A 4-digit entry in the NN window is not allowed. Domain and announcement parameters are not used in international HTR assignment and inhibit controls.

5.49 Figure 11 shows CN01 in the international HTR assignment mode. At this point, a code must be entered and the page sent for the system to display the gateway offices capable of implementing the HTR assignment to the control list for the specified code. The page responds with a listing which includes: type office, office CLLI, an **s** in the parentheses if the control is already on the control list on a manual HTR basis, and a listing of the status of the code as described in paragraph 5.28. Paragraph 5.26 explains the HTR assignment and how it affects traffic. The ANN data column is not used with HTR assignments.

5.50 To implement the HTR assignment, the network manager must designate the HTR CTRL:ON window and either the ALL OFCS window or individual office parentheses. This is followed by designating the EXECUTE window after the **p** appears.

5.51 To remove an HTR code assignment, designate the HTR CTRL:OFF window and either the ALL OFCS or the individual office parentheses.

D. HTR Inhibit—International

5.52 Paragraphs 5.48 through 5.51 are applicable for HTR inhibit control action, except that Fig. 12 displays the inhibit mode and the INH CTRL:ON and OFF windows are used.

CONSIDERATIONS

5.53 Transfer is not available from CN01.

5.54 Beginning with EADAS/NM generic 1NM6, page CN01 allows flexible scrolling. This is accomplished by overwriting the first PART OF window with the desired part and resending the page. The system will respond with the desired part. Normal one-part-at-a-time scrolling is still available using the FWRD or BKWD window.

5.55 A maximum of 64 call gaps can be active at one time in No. 4A CC offices. The maximum for No. 4 ESS switch offices is 127. This maximum for No. 4 ESS switch is shared by network management call gaps and Service Order (SO) gaps. See DIS-CT mode, page CN03, for discussion of 50 gaps.

5.56 A maximum of 128 code blocks is allowed to be active at one time in No. 4A CC and No. 4 ESS switch offices. However, this maximum of 128 for No. 4A CC is shared by HTR assignments, ie, if 60 HTR assignments have been made, the maximum for code blocks is 68. The converse is true for HTR in a No. 4A CC.

5.57 The maximum number of HTR assignments that can be on any one HTR list for a No. 4 ESS switch is 512. This includes all automatic, manual, and inhibit assignments for that list. Control list and source list are separate and each have a maximum of 512. Once the maximum is reached, no further assignments (auto., man., or inhibit) can be made.

5.58 The maximum number of code blocks which can be active at one time in a No. 1/1A ESS switch is 63.

5.59 For Nos. 4 ETS, 4A CC, and 4 ESS switch offices, all control requests that are in the pend-

ing state (*p* shown in W47 and W53) are entered in the control queue for processing by the queue processor when the execute window W57 is designated. No changes may be made to control requests that are in the pending state. If a change is made (eg, additional offices designated), the page will be cleared and the control requests must be reentered. If changes need to be made prior to executing the pending controls, the clear window W59 may be designated which will clear all pending controls. The user may now reenter a revised set of control requests. When requests have been successfully entered in the queue, the response character *q* is displayed and the terminal is freed for other displays.

5.60 The following is a list of error messages unique to CN01 which may be displayed in addition to the standard error messages described in Section 190-540-418.

- **CAN'T MAKE CHANGE WHILE IN PENDING MODE:** No changes are allowed while page is in pending mode (eg, adding additional offices, changing percentage/gap index, announcement type, or code digits).
- **GAP VALUE OR % MISSING OR OUT OF RANGE:** No percentage specified or is out of range, gap index >15. See Table B or C.
- **ANNOUNCEMENT MISSING OR OUT OF RANGE:** No announcement specified, or invalid announcement type.
- **DESIGNATE THE EXECUTE OR CLEAR WINDOW:** Controls in the pending state, but the execute or clear window was not designated.
- **000 IS NOT A VALID COUNTRY CODE:** 000 is an invalid country code which is blocked from being sent to the No. 4 ESS switch.
- **DESIGNATE WHICH OFFICE TO APPLY CTL:** The ON window was designated but the office or the "ALL OFCS" window is not designated.
- **BAD CODE IN (A, NPA, NXX/CC, LINE/NN) window:** Invalid access code, no NPA, or noncontiguous code specified.
- **DOMAIN (ORIG, TRAN, TROP) NOT DESIGNATED:** International domain not specified.

Note: One or more of the domains must be designated each time a code block request is placed in pending. A single domain type must be specified when call gaps are placed in pending; however, the domain will not change until one of the other domains is designated. A domain type must be specified when turning off an international call gap.

- **INT'L HTR LIMITED TO 0 THROUGH 3 DIGITS IN NN FIELD:** A 4-digit line number specified as HTR. No. 4 ESS switch can only handle 0 through 3 digit line numbers as HTR.

5.61 In addition to the standard and unique error messages which appear on segment two of the CRT page, page CN01 has four advisory messages which appear in the message portion of the page display. The message portion of the page is located in the upper right part of the page underneath CC/NXX and NN/LINE windows. The messages which might appear are:

- "Code block on another part" message
- "Call gap on another part" message (No. 4A CC and No. 4 ESS switch)
- "Man. htr list on another part" message (No. 4A CC and No. 4 ESS switch only)
- "Inh. auto htr on another part" message (No. 4 ESS switch).

6. CN03 (CALL GAPPING CONTROL)—PAGE DESCRIPTION

6.01 The CALL GAPPING CONTROL, page CN03, gives the network manager the ability to implement call gapping controls in No. 4 ESS switch systems equipped with generic 4E7, or later, and in No. 4A CC system equipped with generic 4XC2, Issue 4, and later. A description of how the call gap control works is contained in paragraph 5.16.

6.02 The page provides the network manager with current data on active domestic and international call gaps for the specified office. This data is available on a 5- or 15-minute basis and is in accordance with the data category designated (+) by the network manager.

6.03 Page CN03 is divided into four functional areas as shown in Fig. 13. Area 1 is used to se-

lect the office for which data and control action is desired, the time interval for the data, the type data to be displayed, and whether the data is for domestic or international codes. Area 2 is used to specify control action, control parameters (gap, announcement, domain), and to specify a specific code for control action. Area 3 displays data on active call gaps of the type specified in area 1 and allows the selection of one or more active call gaps for change or removal control action. Area 4 provides execute, scrolling, and table selection functions and gives summarized call attempt and customer announcement information.

6.04 Defaults for the page are 5-minute time interval, DOM mode, and NON-DIS codes. For control action, the type announcement will default to NCA if an entry is not made in the EA window.

6.05 Changes can be made on displayed codes for No. 4 ESS switch offices by specifying the new gap index, announcement, and/or domain. The No. 4 ESS switch will replace the existing control with the new control. However, the No. 4A CC does not have control replacement capability. In a No. 4A CC, the existing control must be removed before the new control can be implemented.

6.06 The various control and data options for each mode of operation for page CN03 are discussed in the following paragraphs.

DOMESTIC MODE

6.07 In the domestic mode, one of four possible data categories can be specified. These are:

- NON-DIS (non Dial-It service)
- DIS-ACT (Dial-It service active call gaps)
- DIS-CT (Dial-It service cut-through active), and
- TELEVOTE.

6.08 A domestic gap control can be implemented at any time on a specific code, regardless of which data mode is currently displayed if the page is in the domestic mode. This is done by specifying an NPA (always required), an NXX (optional), and a line number (no less than four digits). The line number is optional and cannot be specified without an NPA and NXX entry. In addition to specifying a code, the

CTRL:ON window must be designated and a GAP index specified. If a value is not entered in the EA window, the type announcement defaults to NCA. Acceptable entries in the EA window one and two for No. 4A CC offices and one through six for No. 4 ESS switch offices. Acceptable GAP entries are 0 through 15. Tables B and C show details of each gap index. If the network manager desires, an input of two in the TABLE window will cause the CRT page to display Table B in segment 2, and an input of three will cause the page to display Table C. For Table B the system will change a gap input of two or three to four when the specified office is a No. 4A CC equipped with generic 4XC2, Issue 5, or later. It will also change a gap input of 14 or 15 to 13 for this type office.

6.09 Page CN03 considers all codes beginning with NPA 900 to be DIS or TELEVOTE codes. All other codes are NON-DIS codes. No. 4 ESS switch offices which are DIS modes can display data in all four data categories mentioned in paragraph 6.07 for domestic codes. Offices, which are not DIS modes, cannot display data for DIS-CT and TELEVOTE categories.

A. NON-DIS (Domestic)

6.10 Figure 13 shows page CN03 in the domestic NON-DIS mode. This figure does not display any active call gaps. However, it does show the various data columns available in area 3 of the page. Area 3 of the page is divided into two identical sections, each of which can display data for a maximum of 12 call gaps. This results in a maximum of 24 gaps displayed for each part of the page. The first call gap implemented will be the first gap on which data is displayed. The last gap implemented will be the last gap displayed on the last part of the page.

6.11 The information displayed includes the following columns:

- DIALED CODE: This shows the code on which the call gap is active.
- NM GAP RATE: This shows the maximum number of calls the active gap allows to pass through the gap control in a 5-minute period. Does not change when 15-minute data is requested.
- ANN: This column indicates the type announcement to be received by calls blocked.
- ATT: Total attempts on the gapped code during the specified data interval (5 or 15 minutes).

- **THRU:** This column contains the number of calls allowed to be forwarded through the gap control.

6.12 In area 4 of Fig. 13, the page gives the total number of attempts on all active NON-DIS call gapped codes. This area also gives the total number of calls forwarded through all NON-DIS call gapped controls.

6.13 A new call gap control can be implemented as described in paragraph 6.08. If the new gap control is a NON-DIS control, it will not be shown on the initial part of the display after activation unless the total number of codes already call gapped is less than 24. It will be shown on the last part of the NON-DIS display.

6.14 Existing NON-DIS call gaps can be changed by: (1) specifying the new control parameters (gap and/or announcement), (2) designating the CTRL:ON window, and (3) designating either the ALL CODES window or the parentheses associated with the individual codes to be changed in area 3. The restrictions described for control replacement in paragraph 6.05 apply when changing existing call gaps. A maximum of 24 call gaps can be changed at one time.

6.15 To remove existing call gaps, the CTRL:OFF window must be designated and either the ALL CODES window or the individual parentheses associated with each call gap designated. A maximum of 24 call gaps can be removed at one time.

B. DIS-ACT (Domestic)

6.16 This mode of page CN03 displays all active network management call gaps on codes in the 900 NPA. This includes gaps activated to override the service order gap for codes in the DIS-CT (cut-through) category.

6.17 The background for the DIS-ACT mode (Dial-It Service-Active) is the same as that shown in Fig. 13, except that the DIS-ACT window is designated. The data displayed in areas 3 and 4 of the page is the same as that described in paragraphs 6.11 and 6.12 for the NON-DIS mode, except that this data relates to call gaps on 900 NPA codes. Gap controls in the DIS-ACT mode are changed or removed as described in paragraphs 6.13 through 6.15 for NON-DIS codes.

C. DIS-CT (Domestic)

6.18 The DIS-CT (Dial-It service cut-through) mode displays data for codes on which a service order (SO) gap is active on a cut-through basis. Dial-It service codes with no active cut through will not be displayed on this page.

6.19 In order to fully understand the functions of page CN03 in this mode, a brief description of Dial-It service with cut through is provided. This service is provided for individual customers who want to provide line answers (the cut-through codes) to some callers and customer-tailored announcements to callers who are not cut through to the line answer number. The quantity of callers connected to the cut-through number is controlled by the SO gap index which establishes a gap rate. This SO gap works as described for call gaps in paragraph 5.16. The difference is that calls forwarded through the gap go to the cut-through number and calls not forwarded go to the customer-tailored announcement (not EA or NCA). The SO gaps are entered into the software of the No. 4 ESS switch on a recent change basis and cannot be changed by network management. Each recent change specifying an SO gap contains a start and stop time during which the SO gap will be active. No data is shown on page CN03 for SO gaps until the SO gap is active. As mentioned previously, all Dial-It service codes begin with the NPA 900. The cut-through feature is available only at Dial-It service mode offices.

6.20 As with other data modes, a call gap on any domestic code (DIS or NON-DIS) can be implemented by inputting the code to be gapped in the code windows in area 2 of the page and specifying the gap index, announcement, and control ON window. Figure 14 shows page CN03 in the DIS-CT mode.

6.21 Area 3 of the page displays the "900" codes on which a SO gap is currently active. The data available for each code is as follows:

- (a) DIALED CODE:** This is the 900 NPA code on which the SO gap is now active.
- (b) SO GAP RATE:** The service order gap rate based upon the maximum number of calls to be cut through in a 5-minute period to the cut-through number. This number is not changed by the page when 15-minute data is requested.
- (c) ANN:** This data column is used only when the SO gap has been overridden by a network man-

agement call gap. The information shown is the announcement type specified in the override call gap control. See paragraph 6.21 for a discussion of how an override gap control works. If no override gap control is in effect, this column is blank.

(d) **ATT:** The data shown in this column is the total number of attempts on the dialed code during the time the service order gap is active (5 or 15 data).

(e) **THRU:** This column shows the total number of calls allowed to be cut through the SO gap during the specified data interval. Each THRU call went to the cut-through code.

(f) **CUT-THRU CODE:** This is the number to which the cut-through calls are sent. It is different from the dialed code and, in most cases, is a line answer number provided by the customer to handle callers cut through the SO gap. In some cases it can be another announcement different from the customer-tailored announcement received by those callers not cut through the SO gap.

(g) **OVRD RATE:** This column displays the gap rate of the override gap control. If no override gap control is in effect, this column is blank. As with SO gap rate, this data shows the maximum number of calls to be cut through the gap in a 5-minute period. This figure does not change when 15-minute data is requested. The rate shown in this column replaces the rate shown as the SO GAP rate.

6.22 An override call gap control is implemented in the same way as a normal call gap. Code digits, a gap index, and an announcement are specified and the control is implemented. In fact, an override call gap control is a normal call gap control until the SO gap for the same code becomes active. The override gap does not change the SO gap rate displayed in area 3 of the page. However, the mode office where the override control is in effect uses the gap rate specified in the override control when the SO gap control becomes active. If the override control is removed, the SO gap reverts to that specified by the SO. With an override gap control, the announcement is ignored and calls blocked by the gap (calls not cut through) are sent to the customer-tailored announcement as described in paragraph 6.19. When the SO gap is not active, the override gap control works as described in paragraph 5.16 for a normal gap control.

In this case, calls not cut through the gap are sent to the announcement (EA or NCA) specified in the gap control. Any override gap shown in the DIS-CT mode will also be shown in the DIS-ACT mode of page CN03.

6.23 As stated earlier, the SO GAP rate cannot be changed. This is indicated by an **x** in the parentheses associated with the DIALED CODE. However, up to 12 override call gaps can be implemented at one time, by specifying control parameters in area 2 of the page and designating the CTRL:ON window and either the ALL CODES window or the individual parentheses for each code in the right portion of area 3. This parentheses is provided for activating overrides on the SO gap code and not on the CUT-THRU code.

6.24 Override call gaps can be removed in the same way they are activated using area 2 or a combination of areas 2 and 3, except that the CTRL:OFF window is used.

6.25 Area 4 of page CN03 in the DIS-CT mode provides execute, clear, scrolling, and table selection features. Additionally, area 4 total CALL ATT and THRU information for all SO gap codes and a count of calls not cut through which received the customer-tailored announcement (ANNOUNC ATT). This count is not related to any announcement which may have been specified in an override gap control. Any calls which were not cut through the SO gap and were not able to receive the customer-tailored announcement are shown as overflow calls (OFL) in area 4.

6.26 If it is necessary to change one or more existing override gap controls, the new control parameters are specified in area 2 and the CTRL:ON window, and either the ALL CODES window or individual parentheses designated as described in paragraph 6.23.

D. TELEVOTE—Domestic

6.27 TELEVOTE is another form of Dial-It service where a start time and stop time are specified on a service order for a particular customer. However, no SO gap is established for a TELEVOTE code. Page CN03 in the TELEVOTE mode will display TELEVOTE codes which are active when the data is requested. TELEVOTE codes are all "900" NPA codes.

6.28 Figure 15 shows page CN03 in the TELEVOTE mode. TELEVOTE codes can only be displayed

for DIS mode offices. For each TELEVOTE code displayed, the page shows the DIALED CODE and the number of attempts (ATT column). Data for a maximum of 24 codes can be shown in area 3 of the page. The parentheses in area 3 are not used in the TELEVOTE mode.

6.29 Any domestic code (DIS or non-DIS) can be call gapped in this mode by using the appropriate windows in area 2 of the page. This must be done one code at a time in the TELEVOTE mode. This includes TELEVOTE codes displayed in area 3 of the page. Removals can also be done using area 2 of the page.

6.30 Page CN03 determines which "900" NPA codes are active TELEVOTE codes by using data from block 19 which is received from the No. 4 ESS switch mode office.

6.31 Normally, the TELEVOTE codes are not gapped. This results in the TEL ATT (TELEVOTE attempts) and ANNOUNC ATT (customer-tailored announcement attempts) figures in area 4 being equal. However, it is possible to call gap one or more TELEVOTE codes. This will result in the two figures in area 4 being different. The OFL window contains a count of all TELEVOTE calls which were unable to reach the customer-tailored announcement and place a note. The figures in area 4 represent total counts of all active TELEVOTE codes.

6.32 Area 4 of the page also provides execute, clear, scrolling, and table selection capabilities.

INTERNATIONAL MODE

6.33 International call gaps can be implemented only at No. 4 ESS switch gateway offices equipped with generic 4E7 or later. Figure 16 shows page CN03 in the international mode. Area 1 of the page is used to specify the desired gateway office and select 5- or 15-minute data. NON-DIS is the only category available for the international mode.

6.34 Once area 1 inputs are completed and the page is sent, the data for all active international call gaps is provided in area 3 of the page. At this point, if the network manager needs to implement a call gap on a code not already gapped, the following actions must be taken:

- (a) The desired code must be entered in the CC and NN windows. A 1, 2, or 3 digit is acceptable

in the CC window and 0, 1, 2, 3, or 4 is acceptable in the NN window. At least 1 digit is always required in the CC window.

- (b) A gap index must be specified in the GAP window. Acceptable gap index numbers are from 0 (zero) through 15.

- (c) One of the three available domains must be designated. These are ORIG for originating, TRAN for transit to customer, and TROP for transit to operator. Only one of these domains can be used in each call gap control.

- (d) If an EA (emergency announcement) is needed, an entry (1 through 6) must be made in the EA window. If this is not done, the page will default to International No Circuit (INC).

- (e) The CTRL:ON window must be designated and the page sent. This will result in a **p** display in the CTRL:ON window. The network manager then has to designate the EXECUTE window to activate the call gap.

6.35 If the network manager desires to call gap all three domains of a particular international code, three separate controls must be implemented. Each of these controls will be displayed on a different line in area 3 of the page. The order of display for active call gaps on international codes is that the control put in first will be displayed first. The controls activated from this page will not appear on part 1 of the page if 24 call gaps are already in effect on international codes.

6.36 If the network manager wishes to change one or more of the call gaps displayed in area 3 of the page, the CTRL:ON, GAP, and/or EA window must be input and the ALL CODES or individual parentheses in area 3 designated. When making a change in a call gap, a domain should not be designated in area 2. If the domain is to be changed, the call gap already in effect should be removed and the new gap activated as described in paragraph 6.31.

6.37 When removing existing call gaps, no windows other than CTRL:OFF and ALL CODES or the individual parentheses should be specified.

6.38 The data displayed in area 3 of the page is as follows:

- (a) For the call gapped code (DIALED CODE column), three items are shown. These are DMN,

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CC, and NNG. In the DMN column, "org" is shown for the originating domain, "trn" is shown for the transit-to-customer domain, and "trp" is shown for the transit-to-operator domain.

(b) In the NM GAP RATE column, the maximum number of calls allowed to be forwarded in a 5-minute period by the existing control is displayed. This figure does not change when 15-minute data is requested.

(c) The ANN column shows the type announcement (EA or NCA) specified for the control.

(d) The ATT column shows the total number of attempts on the controlled code in the specified data interval.

(e) The THRU column shows the number of calls forwarded through the gap control during the specified data interval. Calls not forwarded are sent to the announcement specified in the ANN column.

6.39 The data shown in area 4 of the page is a total of all attempts (CALL ATT window) and all forwarded calls (THRU window) for all active international call gaps during the specified data interval.

CONSIDERATIONS—CN03

6.40 Transfer is not available from CN03.

6.41 CN03 allows scrolling as described in paragraph 5.54.

6.42 A maximum of 127 call gaps can be active at one time in a No. 4 ESS switch. This maximum includes both network management call gaps and SO gaps.

6.43 The following is a list of error messages unique to CN03 which may be displayed in addition to the standard error messages described in Section 190-540-418:

- Office type or generic not appropriate.
- Office not CONTROLLABLE.
- Office not ON-LINE.
- Office not ACTIVE.
- Office not a NODE office.
- Got failure in setting up control request.
- Cannot control TELEVOTE codes.
- Please enter office CLLI.
- GAP VALUE missing or out of range.
- ANNOUNCEMENT missing or out of range.
- Designate the EXECUTE or CLEAR window.
- Office not a GATEWAY office.
- Designate which codes to apply ctl.
- Bad code in (A, NPA, NXX/CC, LINE/NN window).
- Domain (ORIG, TRAN, or TROP not designated).
- Cannot implement CG control w/ CSDC Domain.

6.44 The A window shown in areas 2 and 3 of the page in the domestic mode is not used.

7. CN05—DOMESTIC HTR AND 6-DIGIT RESOLUTION

7.01 Page CN05 gives the network manager the ability to display and change HTR threshold values and to assign and/or change NPAs which are assigned for 6-digit resolution. This page is used only for No. 4 ESS switch offices equipped with generic 4E7 or later. Figure 17 is an example of page CN05 display.

7.02 This page is divided into four functional areas. Area 1 (Fig. 17) displays the No. 4 ESS switch offices, equipped with generic 4E7, which are in the data base of the local cluster. Up to a maximum of 12 offices can be displayed. In area 1, the office CLLI for each No. 4 ESS switch is displayed and the warning window (W) will contain an asterisk (*) if the listed office is uncontrollable. A parentheses follows each CLLI and is used to select a particular office for control action and display in areas 2 and 3 of the page. No data is shown in areas 2 and 3 until a particular office has been selected (designated) and the page resent. Should an office be designated which is not controllable, the WARNING EXPAND window in

area 4 will display one, two, or all three of the following messages:

- OFF-LINE
- NOT CONTROLLABLE
- PASSIVE.

An "X" will appear in the parentheses of a designated uncontrollable office. The display of No. 4 ESS switch offices in area 1 is automatic with the initial display of CN05. If the network manager designates more than one office in area 1, an error "incomplete or misleading input" will result.

7.03 Area 2 of page CN05 (Fig. 17) is used to display and change the following items:

- Attempt threshold for NPA, HNXX, and FNXX
- Delta attempt threshold for NPA, HNXX, and FNXX
- Failure threshold type 0 for NPA, HNXX, and FNXX
- Failure threshold type 1 for NPA, HNXX, and FNXX
- Failure threshold type 2 for NPA, HNXX, and FNXX
- Delta failure threshold for NPA, HNXX, and FNXX.

7.04 Area 3 of page CN05 is used to display and change the NPAs assigned to 6-digit resolution and to turn the NPA HTR option on or off. A detailed discussion of areas 2 and 3 is contained in the following paragraphs.

DOMESTIC HTR THRESHOLD ASSIGNMENTS

7.05 The domestic HTR threshold assignments and changes are made in area 2 of page CN05. The default (DFLT) values for each controllable item are shown at the top of the NOW column. Existing threshold values for each item are shown in the NOW columns beneath the default value. This information is shown after a particular office is designated and the page is sent. A separate threshold value is assigned for each item to be associated with: NPA (home and foreign NPAs); HNXX (home NPA

NXXs); and FNXX (foreign NPA NXXs). The allowable inputs are also displayed by each input window in area 2. The following paragraphs describe the meaning of each assignable item.

7.06 The ATTEMPT THRESH determines the minimum number of attempts that must be made to a certain NPA or NXX before an HTR calculation will be made. If the number of calls to a code is less than the specified ATTEMPT THRESH and the code is not already on the HTR source list, no calculation will be made. If the number of attempts equals or exceeds the specified ATTEMPT THRESH, a calculation will be made and the code will be put on the HTR source list if the resulting failure percentage is equal to or greater than that specified in the associated FT (failure threshold). As indicated in the ASGN column, the allowable ATTEMPT THRESH input is any whole number from 1 through 9999. To change an ATTEMPT THRESH, the network manager enters the desired new threshold number in the proper ASGN window (NPA, HNXX, or FNXX—any combination or all three) and sends the page. The page will respond with a *p* in the designated office window in area 1. The EXECUTE window is then designated and the page sent again. The *p* will be replaced with a *q* indicating the requested changes have been formatted by the EADAS/NM processor and are on the way to the designated No. 4 ESS switch office. If for some reason the changes cannot be implemented, the page displays "CTL FAIL" at the top of the page. The pending (*p*) step can be bypassed if the EXECUTE window is designated in the same operation as the ASGN inputs and both are sent together.

7.07 The DELTA AT (Delta attempts threshold) is used to compensate for peakedness in network calling and works as follows. DELTA AT does not apply until a code has automatically been declared HTR based upon the ATTEMPT THRESH and the applicable FT (failure threshold). Once a code is automatically declared HTR and placed on the HTR source list, it will not be taken off the list until it falls below the attempt and/or failure values derived from using DELTA AT and DELTA FT. The default value for DELTA AT is 0.1 or 10 percent of the specified ATTEMPT THRESH. Example: If ATTEMPT THRESH is 100 and DELTA AT is 0.1, HTR calculations will continue on the code until the number of attempts falls below 10 or the failure percentage falls below the failure threshold. If the DELTA AT value is set to 1.0, no peakedness allowance exists and the HTR calculations will cease when the number of at-

tempts falls below the ATTEMPT THRESH value. The DELTA AT value can be set to any multiple of 0.1 up to 1.0. For a setting of 1.0, a designate (+) is input in the 1.0() window. Other settings require an input in the 0.[] window.

7.08 A particular code could be assigned to one of three possible FT TYPEs (failure threshold type). These are 0, 1, or 2. The values for each FT TYPE can differ as specified by the network manager. See Part 8 of this section for a discussion of failure-type assignments and limitations. Each FT TYPE has a default value of 67 (percent failure) if not set otherwise. Values can be set for any whole percentage from 1 through 100. As with ATTEMPT THRESH, the FT TYPE value represents the minimum value at which a code will be declared HTR and placed on the HTR source list. As stated in paragraph 7.06, no calculation is made until the attempts threshold is equalled or exceeded. Once this point is reached, a calculation is performed to determine the percent of failure. If the percent of failure equals or exceeds the FT TYPE value, the code is declared automatically HTR and is placed on the HTR source list.

7.09 The DELTA FT (Delta failure threshold) is used to compensate for peakedness in network calling and works as follows. DELTA FT does not apply until a code has automatically been declared HTR, based upon the applicable FT (failure threshold). DELTA FT works with the FT TYPEs in the same manner that DELTA AT works with ATTEMPT THRESH (see paragraph 7.07). The default value for DELTA FT is 0.9 or 90 percent of the specified FT. Allowable inputs are the same as those described for DELTA AT in paragraph 7.07. An input of 1.0 [designating the 1.0 () window] removes any allowance for peakedness.

6-DIGIT RESOLUTION ASSIGNMENTS

7.10 Assignments for 6-digit resolution are performed using area 3 of page CN05 (see Fig. 17). As stated previously, no action can be taken in the area until a particular No. 4 ESS switch office has been selected in area 1 and the page sent. After this, the page displays the FNPAs which are currently assigned to 6-digit resolution. A maximum of six FNPAs can be assigned. Current assignments are displayed in the FNPA column with an *s* in the applicable "YES" or "NO" window associated with the NPA HTR option.

7.11 At this point, new FNPAs can be assigned for 6-digit resolution by inputting the desired

NPA(s) in the ASGN window. If an FNPA is already assigned for that window in the FNPA column, the system will replace it with the new assignment. If no window was designated under the NPA OPTN, the system will default to the NO option. If the network manager wishes to remove an FNPA from 6-digit resolution and not replace it with another FNPA, the RMV window can be designated with no entry in the ASGN window. If the manager needs to change the NPA OPTN, the desired option can be designated with no entry in the ASGN or RMV windows.

7.12 Area 3 of page CN05 also displays the HNPA (home NPA) for the selected No. 4 ESS switch office and allows the manager to assign or remove the NPA HTR option for the home NPA.

7.13 The NPA HTR OPTION (for home and foreign NPAs) works as follows. If the option is set to NO, the system monitors FNPAs (if assigned to 6-digit resolution) on a 6-digit basis (FNPA-FNXX) and will place 6-digit codes on the HTR source list automatically. For the home NPA, the system monitors home NXXs and will place home NXXs on the HTR source list automatically. The system also monitors each FNPA and the HNPA on a 3-digit basis and, if the NPA as a whole meets the ATTEMPT THRESH and FT criteria, the system will place the 3-digit NPA on the HTR source list. This could result in numerous 6-digit HTR declarations and the 3-digit declaration of the same NPA. Since the NPA is the first set of digits processed by the No. 4 ESS switch office, an HTR declaration on an NPA basis overrides the 6-digit declaration and makes it unnecessary. However, with the NO window selected each 6-digit HTR declaration occupies one of the possible 512 slots in the HTR source list even though the NPA may be HTR on a 3-digit basis. If the NPA HTR option is set to YES, the system continues to monitor the selected FNPAs and the home NPA on a 6-digit basis. However, if the NPA as a whole becomes HTR on a 3-digit basis, the 6-digit declarations are removed from the HTR source list. These relocated slots can then be used for other HTR declarations. Figure 18 shows CN05 after an office has been selected.

7.14 Area 4 of page CN05 provides EXECUTE, CLEAR, and TRANSFER TO capabilities.

CONSIDERATIONS—CN05

7.15 Transfer is available from CN05 to CN06 and to CN07.

7.16 The standard error and warning message described in Section 190-540-418 applies to page CN05.

7.17 The pending mode can be bypassed when using page CN05 by designating the EXECUTE window at the same time as the new assignments are made.

7.18 Any number of operations in areas 2 and 3 can be performed at one time. If the manager thinks of some additional item(s) to change before designating the EXECUTE window, these items can be entered and the page sent to include all items in the EXECUTE function.

8. CN06—HTR THRESH-TYPE ASSIGN

8.01 Page CN06 gives the network manager the ability to change the failure-type assignment for codes in No. 4 ESS switch offices equipped with generic 4E7 or later.

8.02 The page has two operational modes. One is for making domestic code changes and assignments and the other is for international codes. Figure 19 shows page CN06 in the domestic mode. In order to display current assignments and make changes, an acceptable type No. 4 ESS switch office equipped with generic 4E7 or later must be input. Any No. 4 ESS switch office equipped with generic 4E7 or later is acceptable for the domestic mode. However, for the international mode, only No. 4 ESS switch gateway offices are acceptable. Each mode of operation is discussed in the following paragraphs.

DOMESTIC FAILURE-THRESHOLD TYPE ASSIGNMENTS

8.03 In the domestic mode, page CN06 has the following defaults:

- If no code option is selected, the page will use the NPA window.
- If no failure type is specified, the page will use the "TYPES 1-2" window.

8.04 Three failure types exist for domestic codes. These are 0 (zero), 1, and 2. Any code not assigned to type one or two in the No. 4 ESS switch office is on type 0 (zero). Page CN06 does not display any codes assigned to failure type 0. However, page CN05 (see Part 7 of this section) does allow the man-

ager to adjust threshold values for failure type 0 on domestic codes.

8.05 There are four code options available for defining the display and type changes desired by the network manager. These are: NPA, HNPA-NXX, FNPA-NXX, and FNPA. Each option is described in the following paragraphs. See Fig. 19 for domestic mode of page CN06.

A. NPA Option

8.06 This option can be selected by designating the NPA window or by default if no code option window is designated. The NPA code option causes the page to display all 3-digit NPAs assigned by EADAS/NM to types 1 and/or 2. To display only type 1, a 1 must be entered in the TYPE window. To display only type 2, a 2 is entered. If types 1 and 2 are to be displayed, the "TYPES 1-2" window must be designated or left to default when no entry is made in either TYPE window.

8.07 The information displayed in area 2 of page CN06 for the NPA code option includes up to sixty-four 3-digit NPA codes. Each code will be identified in the NPA column and the current failure-type assignment (1 or 2) will be displayed in the NOW column. No information will be shown in the NXX column. A maximum of four columns of current assignments (16 codes each) will be displayed. The fifth column is used for new assignments (NEW ASSIGNMENTS column). The order of display will begin with all type 1 assignments followed by all type 2 assignments. Within each failure type listing, the NPAs are listed in ascending order beginning with the lowest numbered NPA.

8.08 To make a change on a currently assigned code, the desired failure type (1 or 2) is entered in the associated ASN window. Any number desired can be changed in the same control operation. After all desired code changes have been entered, the page is sent and the system responds with a **p** (pending) immediately to the left of the associated ASN window. The EXECUTE window must then be designated and the page sent again. The page will replace the **p** with a **q** and will replace the existing failure type with the new type after the control is in effect. The new type will not be shown until the page is sent after the No. 4 ESS switch actually implements the changes. To remove a displayed code from failure type 1 or 2, a zero (0) must be entered in the associ-

ated ASN window and executed as described previously. This will cause the code to disappear from the display after the change is implemented by the No. 4 ESS switch.

8.09 New 3-digit NPA assignments are made in the NEW ASSIGNMENTS portion of area 2. A maximum of 15 new assignments can be made at one time. A maximum of 64 changes can be made at one time by this page. These changes can include any combination of new assignments and changing existing assignments, provided the total number does not exceed 64. If the specified number of changes and new assignments exceeds 64, the page will implement the first 64 and discard the remainder. A total of sixty-four 3-digit code assignments to failure type(s) 1 and/or 2 can exist at any one time in the EADAS/NM system. The total of 64 can all be for the type 1 or all for type 2 or the total can be split between the two types. The page will not implement new assignments which would cause the total number of 3-digit assignments to exceed 64. Example: If 60 codes are already assigned to type(s) 1 and/or 2 and the network manager inputs 15 new assignments in the NEW ASSIGNMENTS windows, the page will implement the first 4 and discard the last 11 assignments. A new 3-digit NPA assignment is made by entering the NPA number in the NPA input window and the desired failure type in the ASN window in the NEW ASSIGNMENTS portion of the page. Any entry made in the NXX window will be ignored by the page. It should be noted that the limitation of 64 active failure-type assignments for 3-digit NPAs is an EADAS/NM page limitation and does not exist in the No. 4 ESS switch office.

B. HNPA-NXX Option

8.10 This option causes the page to display all home NPA-NXX codes assigned to failure type 1 and/or 2. The information displayed in area 2 includes: the home NPA in the NPA column, the NXX in the NXX column, and the current failure-type assignment in the NOW column. The order of display is in ascending order by type and in ascending order by NXX within each type. Changes in display type(s) and current failure-type assignments are made as described for the NPA option in paragraphs 8.06 through 8.08. The 64-code limitation (separate from NPA) also applies.

8.11 New HNPA-NXX assignments are made by entering the desired NXX in the NXX input

window and the desired failure type in the ASN window in the NEW ASSIGNMENTS portion of area 2. Any entry in the NPA input window will be ignored by the page. The limitations discussed for NPA in paragraph 8.09 also apply to HNPA-NXX assignments. However, a separate maximum of 64 can be implemented for HNPA-NXX.

C. FNPA-NXX Option

8.12 This code option (foreign NPA-NXX) causes the page to display all FNPA-NXX codes assigned to type 1 and/or 2. However, page CN06 has a 4-part maximum which allows a maximum of 256 codes to be displayed. If the maximum of six FNPAs is assigned to 6-digit resolution and 64 codes are assigned to failure type 1 and/or 2 for each FNPA, a total of 384 code assignments could exist for this option. In this case, 128 codes would not be seen if the "TYPE 1-2" window is used. One possible way to accommodate this problem is to specify a specific failure type to be displayed in the TYPE window. However, if an unbalanced assignment condition exists, the 256 code maximum could also be exceeded when displaying only one failure type. If this occurs, individual FNPAs can be displayed by inputting the desired FNPA into the FNPA window. The order of display for the FNPA-NXX option is in ascending order by failure type. Within each failure type the FNPAs are displayed in ascending order, and within each NPA the NXXs are displayed in ascending order.

8.13 The information displayed in area 2 includes the FNPA number in the NPA column, the FNXX number in the NXX column, and the current failure-type assignment in the NOW column. Changes in display of failure type(s) and current failure-type assignments are made as described for the NPA option in paragraphs 8.06 through 8.08. The 64-code limitation also applies, except that a separate maximum of 64 assignments is available for each FNPA.

8.14 New FNPA-NXX assignments are made by entering the desired FNPA in the NPA input window, the desired FNXX in the NXX window, and the desired failure type in the ASN window in the NEW ASSIGNMENTS portion of area 2. New assignments can only be made to FNPAs which are currently assigned to 6-digit resolution. If an existing 6-digit resolution assignment is removed, all FNPA-NXX failure-type assignments for that FNPA are

lost. As with other code options, up to 15 new assignments can be made at one time. These assignments can be for one or more of the possible FNPAs currently on 6-digit resolution. Any new assignment which would cause the total number of assignments for a particular FNPA to exceed 64 will not be implemented.

D. FNPA Option

8.15 This option requires the input of a specific FNPA in the FNPA window in area 1. In response, the page displays all codes assigned to failure type(s) 1 and/or 2 for the specified FNPA on 6-digit resolution. The input of an FNPA window which is not on 6-digit resolution will result in an error message. The information displayed in area 2 for this code option includes: the FNPA number in the NPA column, the FNXX number in the NXX column, and the current failure-type assignment in the NOW column. Changes in current failure-type assignment and in the failure type(s) displayed are made as described in paragraphs 8.06 through 8.08 for the NPA option.

8.16 New assignments for the FNPA code option are made by entering the desired FNXX into the NXX window and entering the desired failure-type assignment into the ASN window in the NEW ASSIGNMENTS portion of area 2. Any entry into the NPA window will be ignored. A 64-assignment limitation applies for each FNPA. Any attempted assignments which would cause the total number of assignments for the specified FNPA to exceed 64 will be ignored.

INTERNATIONAL FAILURE-THRESHOLD TYPE ASSIGNMENTS

8.17 International country codes (CCs) can be assigned to one of seven failure threshold types using page CN06. A maximum of 200 CCs can be assigned by the EADAS/NM system. This is an EADAS/NM limitation only. This limitation does not exist in the No. 4 ESS switch office. As with domestic codes, any CC not assigned to a failure threshold type other than 0 (zero) remains assigned to type 0. Type 0 is not displayed on page CN06. This mode is used only by No. 4 ESS switch gateway offices equipped with generic 4E7 or later.

8.18 Figure 20 shows page CN06 in the international mode. The defaults are CC and "TYPES

1-7." If a specific failure type is desired to be displayed, an entry (1 through 7) must be made in the TYPE window. Otherwise, all seven failure threshold-type assignments will be displayed. The order of display is in ascending order by failure type and in ascending order by CC number within each failure type.

8.19 The information displayed in area 2 of page CN06 includes the CC number in the CC column and the current failure-type assignment in the NOW column. Changes and/or removal of existing failure-type assignments are performed as described for the NPA code option in paragraph 8.08.

8.20 New assignments are made by entering the desired CC number into the CC input window and entering the desired failure-type assignment into the ASN window in the NEW ASSIGNMENTS portion of area 2. This page does not allow assignment of NNs to failure types and NNs are not displayed. Up to 15 new assignments can be made at one time and all will be implemented if the implementation will not result in more than 200 assignments to failure types 1 through 7. A maximum of 64 assignment actions can be done at one time. This includes changes to existing assignments and new assignments.

8.20 Input windows not labelled in the international mode are not used. (See Fig. 20.)

CONSIDERATIONS

8.21 If an office CLLI is entered in the OFFICE window for an office which is off-line, assignment data will be shown but no assignment changes can be made. Also, once the office is restored, the network manager must go to a new CN06 page in order for the page to recognize the office is now on-line. Office status is not updated after the initial page display, regardless of the number of times the page is resent.

8.22 In addition to the standard error and warning messages described in Section 190-540-418, there are several error messages which apply only to page CN06. These are as follows:

- **"Office Not Active, On-Line, and Controllable":** The user has attempted to make a failure-threshold type assignment to a code in an office which is not active, on-line, and controllable.

- **"Type Out of Range"**: The user has entered an illegal type in the "TYPE" window.
- **"Illegal-Type Assignment"**: The user has entered a type in one of the "ASN" windows which is illegal.
- **"Capacity Exceeded for International Types"**: The current-type assignments requested by the user would cause more than 200 country codes to be assigned to types 1 through 7.
- **"Capacity Exceeded for Domestic Types"**: The current-type assignments requested by the user would cause more than 64 NPAs or NPA-NXXs to be assigned to type 1 or 2. (See paragraph 8.24.)
- **"Psuedo Codes Not Allowed for HTR"**: The user entered a number in the CC window beginning with 0 (zero) or 1.
- **"Pending Controls Have Not Been Cleared"**: The user has attempted to change offices or change the mode of the page without first clearing any pending controls.
- **"Office Not 4E7 or Greater"**: The user has entered an office which is not of generic 4E7 or greater.
- **"NPA Has Not Been Assigned"**: The user has entered an NPA under new assignments which has not been assigned to 6-digit resolution.
- **"Office Is Not a Gateway Office"**: The user has requested the international mode for a nongateway office.

8.23 In the domestic mode, it is possible in area 3 to inhibit the assignment of codes to types 1 and 2 by designating the "INHIBIT ALL TYPE 1/2" window. This action does not place the affected codes on the HTR source list as inhibit entries. This action causes the involved codes to revert to failure-threshold type 0 assignments and be subject to type 0 threshold values. The current assignments to type 1 or 2 are not lost but are retained for use when the inhibit is restored by designating the "RESTORE ALL TYPE 1/2" window. Failure-threshold type assignments can be made while the inhibit is in effect

but the new assignments are also subject to the inhibit. The inhibit feature is not available for international failure-threshold types.

8.24 A maximum of 512 domestic failure-type assignments can be made through page CN06. This maximum is derived by adding the various 64-code limitations which apply to different code options. These are as follows:

HNPA (home NPA)	- 64	maximum
NPA (3-digit NPAs)	- 64	maximum
FNPA (individual FNPA assigned to 6-0 resolution)	(- 64)	maximum each
FNPA - NXX (same as FNPA for up to 6 FNPAs)	<u>384</u>	(6 X 64) maximum
Total	<u>512</u>	

- 8.25** Scrolling for page CN06 must be done one part at a time using the FRWD or BKWD window.
- 8.26** Transfer is available from CN06 to pages CN05 and CN07.
- 8.27** No transfer or OFFICE change can be made on CN06 with assignment items pending. The pending items must be executed or cleared before any further action can be taken.
- 8.28** The pending mode cannot be bypassed with page CN06.

9. CN07—INTERNATIONAL HTR THRESHOLDS

9.01 Page CN07 is used to display and change the following items for each of the seven assignable failure types for international codes:

- Attempt Threshold
- Delta Attempt Threshold
- Failure Threshold
- Delta Failure Threshold.

9.02 The assignable failure types are 1 through 7. Type 0 (zero) also exists for those international CC codes not assigned to types 1 through 7.

Type 0 is not displayed on CN07 and is not accessible for threshold changes. The generically set threshold assignments for type 0 are as follows:

- Attempt Threshold = 100
- Delta Attempt Threshold = 1.0
- Failure Threshold Percentage = 80
- Delta Failure Threshold = 1.0.

9.03 The default values for failure types 1 through 7 are the same as those listed in paragraph 9.02 for type 0. Each failure type 1 through 7 can be assigned different threshold values. The threshold settings for international codes work as described in paragraphs 7.06 through 7.09 for domestic codes. The exception is that any international code declared HTR is placed on the international HTR control list. There is no HTR source list for international codes. Any or all values for all failure types can be changed in the same page operation. Allowable input values for each threshold category are shown at the top of each column of input windows in area 2 of CN07.

9.04 When page CN07 is initially displayed, all No. 4 ESS switch gateway offices equipped with generic 4E7 or later are displayed in area 1. Those offices off-line, passive, or coded in data base as not controllable will be marked with an asterisk (*) as shown in Fig. 21. If one of these offices is designated, the page will show one, two, or all three of the following messages in the WARNING EXPAND portion of area 1:

- OFF-LINE
- NOT CONTROLLABLE
- PASSIVE.

9.05 To make threshold value changes, the new value is entered in the input windows associated with the failure type to be changed and with the threshold type to be changed. When making DELTA AT and DELTA FT changes, it is not necessary to make entries prior to the decimal point and after the decimal. Example: To input 0.5, the manager only needs to enter a 5 after the decimal. And to enter 1.0, the manager only needs to enter a 1 before the decimal.

9.06 The pending mode can be bypassed when using CN07 by designating the EXECUTE window

at the same time the new threshold assignments are made.

9.07 The standard error and warning messages described in Section 190-540-418 apply to page CN07.

9.08 Transfer is available from CN07 to CN05 and CN06.†

10. CN11—MULTIPLE TRUNK GROUP CONTROL

10.01 Page CN11 (see Fig. 22) displays the status of trunk group controls to an office from a maximum of 128 switching systems within the EADAS/NM area. It also allows the simultaneous activation or removal of up to 32 controls on trunk groups to an office in a single operational cycle. This page has a maximum of four parts and each part can display a maximum of 32 trunk groups.

10.02 Required inputs for this page are the TO office CLLI and the designation of one of each of the control parameters listed by windows 4 (type), 5 (tfc), and 6 (ANN). See Fig. 23 and Table E for a description of page CN11 windows. An **announcement type (W6) is not permitted when the SKIP control is designated.**

10.03 After the SEND key is operated, the system repaints the page and inputs the full CLLI of the TO office, its class, and office type. In the data segment, a list of those offices where the control parameters can be matched exactly (ie, where the control is available) is displayed along with the percentage of overflow experienced on the trunk group during the data interval displayed in the lower right portion of the page. (Non-PBC offices must have the exact control parameters specified in their control file in the data base to be included in the list displayed by the page.) Exceptions are as follows:

- (a) If NCA announcement is specified, the list also includes those offices where announcement routing is not specified in the data base.
- (b) If EADAS/NM is excluded from access to the control keys in non-ETS offices, the controls will not be listed.

10.04 The list can be limited to certain groupings of offices by inputting a "restriction" on the controlling offices. (This may help to contain the list

within the display capacity of one part of the display page, so that "all offices" may be viewed and controlled at one time.)

10.05 Four groupings of restrictions are available:

- (a) **CLASS:** The list can be restricted to a particular class (rank) of the controlling office (as defined in the data base). This restriction will also apply to the following other restrictions. More than one class may be designated per operation.
- (b) **SUBTENDING:** If this category is designated, the list displayed includes only those offices which are in the "area" of the TO office. This list may also be restricted by class (CL).
- (c) **HTR CONTROL:** Hard-to-reach control associated with No. 4 ESS switch and No. 4A CCIS.
- (d) **AREA:** Requires input of the CLLI of the apex machine for a particular area that will control traffic to the TO office. The list displayed will include only the offices within the specified area (and the apex machine) which satisfy the designated control parameters, plus CLASS and HTR CTRL if they are specified.

10.06 Only the trunk groups displayed on a single page may be controlled. To control the trunk group on the other page, the network manager must scroll forward (or backward) and implement the controls from that particular part of page CN11.

10.07 If any control other than the selected control is active on a trunk group displayed on this page, a *c* will be displayed in window 8 or 11. If the desired control is already in effect on a displayed trunk group, an *s* will appear in window 8 or 11.

10.08 ♦No. 1/1A ESS switch offices are capable of control replacement. If a control already exists on a displayed trunk group at a No. 1/1A ESS switch office, this page allows the control message to be sent and the No. 1/1A ESS switch office will replace the existing control with the new control.

10.09 The No. 4A CC can have multiple controls active on a single trunk group. Page CN11 allows the network manager to add a control to the trunk group if the active control is an STR or TMB control. However, if the active control is other than

STR or TMB and is of a different type or percentage than the desired control, it must be removed before the desired control can be implemented.

10.10 The No. 4 ESS switch office can have multiple controls active on a single trunk group. Page CN11 allows the network manager to add a control to the trunk group regardless of what type control(s) is/are in effect on the trunk group currently. If the existing control(s) is of a different type, the new control will be added an *s* displayed in window 8 or 11. If the existing control(s) is of the same type but a different percentage, the No. 4 ESS switch replaces the existing control with the new control. With multiple controls active on a displayed No. 4 ESS switch trunk group, the page will display an *s* if one of the controls matches the specified control. Once the specified control is removed, a *c* will be shown.♦

10.11 Individual trunk groups can be selected for control action by designating the particular groups in W8 and/or W11. Any number of groups can be designated.

10.12 There are two control capabilities for No. 1/1A ESS switch systems which cannot be utilized from page CN11:

- (a) The No. 1/1A ESS switch allows different percentages to be applied to DIR (direct) and ALT (alternate routed) traffic. This page allows only one percentage to be selected. If the network manager chooses to control DIR traffic, the ALT traffic remains uncontrolled. The DIR traffic window applies to No. 1/1A ESS switch only and will result in a trunk group list which excludes all other types of switching systems. The No. 1/1A ESS switch CANF control is for DAR traffic only.

- (b) The No. 1/1A ESS switch does not allow 25 percent control for CANT, SKIP, or CANF. Also, the No. 1/1A ESS switch allows a 0 percent control for DIR traffic on the CANT and SKIP controls. This percentage is not available from page CN11.

10.13 The activation and removal of controls with this page are consistent with standard control operations described in Part 2 of this section.

10.14 There are no transfer capabilities from this page.

11. CN13—SINGLE TRUNK GROUP CONTROL

11.01 Page CN13 provides for the execution of CANT, CANF, FCNT, SKIP, TMB, CRO, TR, TSAR, and STR controls on a selected trunk group between two offices. Page CN13 also provides the network manager with the ability to set the cancel/skip option and to assign response categories for STR and SDOC/GSC. This page also allows the network manager to inhibit STR, RDOC, and AOCR and to change study classes in the No. 4 ESS switch.

11.02 The page is designed to be machine specific and different displays are provided for each type of switching system. Figures 24 through 27 show the display for the most common types of FROM offices. These are: No. 4 ESS switch E/W generic 4E6; No. 4 ESS switch E/W generic 4E7; No. 1/1A ESS switches; and No. 4A CC, respectively. The type of controls available will not be displayed until the FROM and TO offices (windows 1 and 4) are entered and the page is sent. This page can also take controls in XBT and No. 5 crossbar offices. Figure 28 and Table F explain each input and output window for page CN13.

11.03 Since, in a No. 1/1A ESS switch, control replacement is available, the manager should be aware that any control already active on the displayed trunk group will be replaced by the control requested on this page. This could result in the undesired removal of a reroute control if the network manager is not aware that the reroute is in effect. For this reason, the manager may want to pay particular attention to the lower right side of the page where existing controls are flagged.

11.04 Trunk reservation (TR) for No. 1/1A ESS switch has two entries, L1 and L2. L1 is Protection Reservation of Equipment (PRE) and applies to alternate routed traffic. If the PRE threshold is crossed, all traffic alternate routed to the trunk group is routed to NCA. The threshold values for PRE and Directional Reservation Equipment (DRE) must be less than or equal to the number of equipped trunks in the trunk group. If no entry is made in L2, the page defaults to 0 (zero).

11.05 The No. 1/1A ESS switch office TR control is designed to trigger when the number of trunks left is less than the number of trunks reserved. No. 4A CCIS and No. 4 ESS switch trigger on equal to or less than; therefore, to be consistent, one

is automatically added to the L1 and L2 values before they are sent to the No. 1/1A ESS switch offices.

11.06 The CANF control for No. 1/1A ESS switch offices is DAR traffic only.

11.07 The No. 1/1A ESS switch is the only office where the network manager can select different percentages of alternate and direct traffic. The percentages available are arranged to allow the network manager to remove the control on direct traffic, without affecting the control on the alternate traffic. Therefore, turning off (setting to 0) the direct traffic will not remove the control if some percentage of alternate traffic is affected by the control. An input value of 0 (zero) will not be displayed.

11.08 The No. 4A CC offices have some controls that are generic and trunk group sensitive. The Cancel Reroute Overflow (CRO) control is only available in 4XC2 (PG-68101) and later. The Trunk Make Busy (TMB) and Selective Trunk Reservation (STR) controls are only available for Common Channel Interoffice Signaling (CCIS) trunk groups. The CRO control cannot coexist on a trunk group with another control, except on a CCIS trunk group with Selective Dynamic Overload Control (SDOC) and Group Signaling Congestion (GSC), and on non-CCIS trunk groups with PP-95-99. The TMB and STR controls are mutually exclusive but can coexist on a trunk group with all other controls except CRO.

11.09 The TMB control is applied in percentages. It defines the percentage of trunks to be made busy in a CCIS trunk group. This percentage can be any whole number from 1 through 100.

11.10 The STR is used to set or release threshold values indicating the minimum number of idle trunks for a trunk group at which point the prespecified STR network controls are activated. The threshold reservation levels (L1, L2) represent the number of trunks which should be idle when the control activates. The value is between 0 and 15 with L1 always equal to or larger than L2. L1 is the minimum of idle (1- and 2-way) trunks for a trunk group. L2 is the minimum number of idle (2-way only) trunks for a trunk group. These numbers cannot exceed the actual number of trunks in the trunk group to be controlled.

11.11 The STR has a CANCEL/SKIP option and a response category associated with the con-

trol. The CANCEL/SKIP option is controlled through W43 (SKIP) and W44 (CANCEL). ♦The response category is controlled through W46. For No. 4A CC offices, only one control message is available for SK/CA option. It applies to STR, SDOC, and GSC. Therefore, the bottom or top portion of W43 or W44 has the same effect.

11.12 The STR and SDOC/GSC SK/CA options and response category can be controlled for any No. 4 ESS switch equipped with generic 4E6, Issue 10 or later, and the proper information will be shown. However, if the No. 4 ESS switch is audited, the control log will be cleared and the page will no longer show the controls in effect, even though the controls are still active. The category can be displayed but not changed for No. 4A CC offices.

11.13 The inhibit/restore works as follows: When STR is inhibited, the control is still shown as active but no selective trunk reservation will take place. The STR can be inhibited regardless of the on/off status of STR. Inhibiting Receive Dynamic Overload Control (RDOC) prevents any response to a CCIS SDOC or GSC signal. Inhibiting Automatic Out-of-Chain Routing (AOCR) prevents automatic out-of-chain routing from taking place. The No. 4A CC only has the capability to inhibit RDOC. Paragraph 11.12 also applies to the inhibit/restore function for No. 4 ESS switch offices. A No. 4 ESS switch can inhibit trunk groups equipped with electromechanical (non-CCIS) Dynamic Overload Control (DOC).

11.14 The ASSIGN STUDY GROUP function is available for No. 4 ESS switch offices equipped with generic 4E7 or later. A new assignment cannot be made because the EADAS/NM system must have reference data for the group before it can be controlled. The system does not get reference data until the group has been assigned to a study group. Therefore, the initial study group assignment must be done outside the EADAS/NM system. After the initial assignment, the network manager can change to different study groups or remove the study group assignment. However, if the study group assignment is removed (W54), no further reference data is sent to the EADAS/NM system for the displayed trunk group and no 5-minute data is available. Controls are also no longer possible until the group is again assigned to a study group through a method outside the EADAS/NM system. An exception to this is when a control exists at the time of the study group

removal. In this case, 5-minute data and control capabilities still exist until the control is removed.♦

11.15 The No. 4 ESS switch office can have multiple controls on a single trunk group and can do control replacement. This page will allow all possible controls for a No. 4 ESS switch office to be implemented or removed simultaneously with different percentages and different HTR or H+U designates (+).

11.16 The HTR is available for No. 4A CC and No. 4 ESS switch offices and, when designated, the CANCEL and or SKIP controls are made conditional on traffic that is hard to reach.

11.17 The disposition of calls will default to NCA unless the some allowable EA (emergency announcement) value is in the EA window ♦(W33).♦

11.18 ♦Table G lists the types of controls available for each type of switching system.♦

11.19 Transfer from this page is available to CN23, TG31, or TG51.

12. ♦CN15—AREA AUTOMATIC CONTROLS

12.01 Page CN15 allows the network manager to execute TR, DOC, and AOCC controls on up to 16 trunk groups at one time in the specified FROM office. These 16 trunk groups may be to a specified apex area, if TO AREA is designated and a TO AREA office specified, or to the entire cluster universe if only the TO AREA window is designated. If a TO AREA office is input and the TO AREA window is not designated, only the trunk group(s) between the FROM office and the specified TO AREA office will be displayed.

12.02 This page can be used for No. 1/1A ESS FROM switch offices, No. 4A CC offices, and No. 4 ESS switch offices. However, not all features of this page are available to each of these type offices. The No. 1/1A ESS switches can only use the TRUNK RESERVATION (L1, L2, and OFF windows) portion of the page. Figure 29 shows CN15 for a No. 4 ESS switch office equipped with generic 4E6, Issue 10 or later. No. 4 ESS switch offices with generics prior to 4E6, Issue 10, cannot use this page. The No. 4 ESS switch can use all control windows as indicated by the labeled input columns in Fig. 28. Figure 30 shows CN15 for a No. 4A CC office. The input columns not

labeled cannot be used by the No. 4A CC. This indicates that the No. 4A CC cannot use the AOCR input columns, the TRUNK RESERVATION (STR) IH and RS windows, and the DYNAM OVLD CTRL (OFF) window. Two other input columns which cannot be fully used by the No. 4A CC are the CAT (response category) windows for TRUNK RESERVATION and DYNAM OVLD CTRL. These windows will display the current response categories for the No. 4A CC but no input is accepted in these windows for No. 4A CC.

12.03 The trunk groups to be displayed by this page can be limited to final groups only if the FNL window is designated without designating the HU window. The display can be restricted to high-usage groups only if the HU window is designated without designating the FNL window. If neither window is designated, the page defaults to both windows and shows all trunk groups of both types subject to the range and area apex and rank limitations.

12.04 The range windows can be used to limit the display to trunk groups of a specified size (number of trunks). The first RANGE window (W5, Fig. 31) specifies the minimum number of trunks required in a trunk group before it can be displayed. If this window is left blank, the page defaults to a value of 1. The second RANGE window (W6, Fig. 31) specifies the maximum number of trunks that can be contained in a trunk group to be displayed. If this window is left blank, the page will consider any trunk group with a number of trunks equal to or greater than the value of window 5.

12.05 The RANK window (W10) is used only if window 9 (see Fig. 31) is designated. The default is to rank 3 if the TO AREA office is (W9) is rank 1 or 2. Otherwise, the default is 5. This causes the display to be limited to trunk groups from the FROM office to distant offices of equal or higher rank than that shown in W10. For clarification, rank 1 is higher than rank 2, etc. All input and output windows for page CN15 are described in Fig. 31 and Table H.

12.06 The No. 1/1A ESS switch and No. 4 ESS switch offices consider all trunk groups for display. The No. 4A CC displays only CCIS trunk groups on page CN15.

12.07 To implement a control using page CN15, individual offices can be controlled by making appropriate entries in one or more of the input windows W14 through W31 and sending the page. A

p will appear in the input window used (or W17 or W24) after which the network manager must execute the control (W33). If a particular control is to be applied to all displayed trunk groups, the ASSIGN ALL window can be designated (+) and the control parameters input for the first displayed group. The page will then apply the control specified for the first group to all displayed groups. A description of each type of control input is contained in the following paragraphs.

TRUNK RESERVATION

12.08 For the No. 1/1A ESS switch office, only the L1, L2, and OFF windows can be used in this section of the page. The input limitations and defaults are as described in paragraphs 11.04 and 11.05 for page CN13. One exception is that the maximum number that can be entered on this page in L1 or L2 is 99. Larger numbers will have to be input using CN13.

12.09 The No. 4 ESS switch office equipped with generic 4E6, Issue 10 or later, can use all input column in this section of the page. Limitation regarding lack of display and input restrictions are as described in paragraphs 11.10, 11.12, and 11.13 for page CN13. This portion controls STR for the No. 4 ESS switch. An inhibit (IH) can be done even when STR is turned off.

12.10 The STR controls for the No. 4A CC are implemented using this portion of page CN15. The No. 4A CC can accept inputs in the L1, L2, OFF, SK, and CA windows. The CAT (response category) is displayed but cannot be changed using CN15. The limitations or input are as described in paragraphs 11.10 and 11.11 for page CN13. Any change made in window 19 or 20 will be duplicated in windows 26 and 27.

DYNAM OVLD CTRL

12.11 This portion of the page cannot be used by a No. 1/1A ESS switch office.

12.12 All input windows in this section of the page can be used by a No. 4 ESS switch equipped with generic 4E6, Issue 10 or later. However, information regarding the response category, SK, CA, IH, and RS are displayed only as described in paragraphs 11.12 and 11.13 for CN13. It should be noted that use of the OFF window in this section will cause the loss

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of current CAT, SK, and CA assignment and cause the No. 4 ESS switch to use default values. These are category A and CANCEL. As with STR, RDOC can be inhibited regardless of the on/off conditions of the trunk group for RDOC.

12.13 The No. 4A CC can use all input windows in this section except CAT and OFF. The CAT is displayed but cannot be changed. The SK/CA option has to be the same as that for STR. If it is changed in this portion of the page, it will also be changed in the STR portion of the page.

AOCR

12.14 This feature of the page can only be used by a No. 4 ESS switch office equipped with generic 4E6, Issue 10 or later. The IH prevents automatic out-of-chain routing. Restore (RS) allows automatic out-of-chain routing.

CONSIDERATIONS

12.15 Transfer is available from this page to pages CN13 and TG51.

12.16 One-part-at-a-time scrolling can be done on this by designating the FRWD or BKWD window.

12.17 A maximum of eight parts and 127 trunk groups can be displayed by this page. If list overflow occurs, using the area apex, range, and FNL/HU windows can reduce the list size enough to display all groups.

12.18 Only 16 trunk groups can be controlled at one time and only those that are currently displayed. If other groups must be controlled, the network manager can scroll until the desired groups are displayed and then implement controls.

12.19 The standard error and warning messages described in Section 190-540-418 apply to page CN15.◀

13. CN21—REROUTE CONTROL

13.01 Page CN21 (see Fig. 32) is used to implement or remove preprogrammed reroute controls. Once the FROM and TO offices are input, it provides a listing of trunk groups between the two offices and automatically expands the data on the first trunk

group shown in the trunk group list. It displays all available preprogrammed controls and gives the on/off status and a description of each reroute. It also gives the ability to assign the AV and VB trunk groups to the monitor printer for surveillance through the Reroute Assign Monitor (RAM) file. This page is a part of the EADAS/NM reroute package and is discussed in detail in Section 190-540-437.

14. CN22—TORC AND REROUTE ASSIST

14.01 Page CN22 (see Fig. 33) is used to display and implement TORCs (Traffic Overload Reroute Controls) on interregional final trunk groups from an EADAS/NM cluster. The page is restricted to TORCs at No. 4 ETS (No. 4 ETS non-CCIS) and No. 4A CC (No. 4A ETS with CCIS) offices internal to the home cluster. The data base must contain TORC information as shown in PA-3B021-03, Section 12, Table 16.

14.02 For non-CCIS No. 4 ETS offices, via offices for TORCs are restricted to 10 or 11 of the distant regional centers and up to two preselected sectional offices, with a total of 12 permissible via offices. With the CCIS generic, provision has been made in the ETS to expand the list of permissible via offices up to 128 routes. Correspondingly, the TORC page (CN22) now accommodates via offices for offices which have this capability. The ability to display and implement CANCEL FROM or CANCEL REROUTE OVERFLOW controls where possible on the A office to via (V) and V to B office legs of TORCs via offices has also been added to the page. Another feature of page CN22 is the ability to "change" a TORC currently in effect by simply specifying the new parameters and via desired; the page will generate the correct TORC "off" followed by TORC "on" messages required by the ETS.

14.03 After page CN22 has been requested, it does not require information input by the user to have data displayed:

- (a) If TORC reference data for a No. 4A ETS regional center is not established within the EADAS/NM data base, the message **TORC DATA UNAVAILABLE** will be displayed in the data segment and no further control action can be achieved with this page.
- (b) If TORC reference data for the No. 4A ETS regional center is established in the EADAS/NM data base, the background format is

initially displayed. The system processes the request and repaints the page, inputting the regional center CLLI in the FROM OFFICE, and abbreviated names for all other regions in the TO OFFICE and VIA OFFICE columns in the data segment.

14.04 To activate a TORC, the percentage, type of traffic, ON, TO OFFICE, and VIA OFFICE should be designated. Standard procedures should be followed for control activation.

14.05 When the regional center has an active TORC, page CN22 displays the TO OFFICE, VIA OFFICE, and the percentage and type of traffic.

14.06 To deactivate a TORC, the particular TO OFFICE and OFF are designated followed by standard controlling procedures.

14.07 Only one TORC can be activated or deactivated per operational sequence.

14.08 Transfer from this page is not available.

15. CN23—FLEXIBLE RR CONTROL AND MONITOR ASSIGNMENT

15.01 Page CN23 (see Fig. 34) is used to implement and remove flexible reroute controls and/or assignments to the RAM file. This is a part of the EADAS/NM reroute package and is discussed in detail in Section 190-540-437.

16. CN24—CONTROL PLANS

16.01 Page CN24 (see Fig. 35) gives the network manager the ability to implement or remove a group of controls by specifying a plan and designating parts of the resulting display or having the system implement the entire plan. A total of 66 controls may be included in a single plan with a maximum of 100 plans as the limitation for data base input. The total number of controls for all plan labels in the data base cannot exceed 600. This page is a part of the EADAS/NM reroute package and is discussed in detail in Section 190-540-437. The data base file for page CN24 can also contain automatic assignments to the RAM file. These assignments will not be noted on the CRT page CN24.

17. CN25—MONITOR RR ANALYSIS

17.01 Page CN25 (see Fig. 36) is used to monitor all reroutes entered into the RAM file by pages

CN21, CN23, and CN24 (indirectly through the data base). This includes reroutes activated by network managers within the cluster and reroutes activated outside the cluster (if entered through page CN23). No controls can be taken from this page. This page is a part of the EADAS/NM reroute package and is discussed in detail in Section 190-540-437.

18. CN31—DOC TRANSMISSION CONTROL

18.01 Page CN31 (see Fig. 37) displays the status of various DOC features at an office and enables changing their status.

18.02 The required input for this page is the office CLLI.

18.03 After the SEND key is operated, the system repaints the page and displays an *s* for the present status (MANUAL—ON or OFF or AUTOMATIC) of the features of DOC. An asterisk in the LOCAL column adjacent to any item denotes that this feature is under local control and excludes EADAS/NM control.

18.04 The present status of any of these items may be changed by designating the appropriate window and following the standard procedures for control activation.

18.05 One or more of these items may be changed in a single operation. If desired, one or more items may be turned off at the same time one or more items are being turned on.

18.06 In the lower portion of the data segment of this page, an asterisk to the right of any item signifies the active status of the individual control component.

18.07 Following are brief descriptions of each item:

- (a) **4XB SQ ON:** Sender queue on.
- (b) The number series is associated with groups of route transfer keys—10 keys per group (maximum 80 keys).
- (c) **SST ON:** Short sender timing on.
- (d) **EXEC:** One or more DOC associated route transfer keys manually operated to the EXECUTE position.
- (e) **EXCL:** One or more DOC associated route transfer keys manually operated to the EXCLUDE position.

- (f) **RTF**: Route transfer relay failure.
- (g) **CFSF**: Cancel follow with second trial failure. One or more markers not switched to cancel FST-ATB operation.
- (h) **CSSF**: Failure to cancel short sender timing.
- (i) **LOCK**: DOC manually controlled in LOCAL (XBT).
- (j) **FRC**: False route cancel (XBT-DOC).
- (k) **FRK**: False route acknowledgment (XBT-DOC).
- (l) **CARF**: Cancel alternate route failure (XBT-DOC—no discrete returned).
- (m) **CDRF**: Cancel direct route failure (XBT-DOC—no discrete returned).

18.08 Transfer from this page is not available.

19. CN32—GENERAL CONTROL

19.01 Page CN32 (see Fig. 38) provides the user with an overview of the status of a variety of controls. This page also gives the user the ability to implement or remove each control displayed. These controls are: DRE step setting by route (steps 0-5, where 0 = off); No. 4A ETS, No. 4A CC, or No. 1/1A ESS switch preprogram control by preprogram number; No. 5 crossbar DOC transfer; No. 4A ETS, No. 4A CC, No. 4 ESS switch, and No. 1/1A ESS switch manual control turnoff (master clear); and miscellaneous key controls for offices other than No. 4 ETS, No. 4A CC, No. 4 ESS or No. 1/1A ESS switches.

19.02 The initial display for an office lists each DRE control route, its current step setting and number of affected DRE units; the names of any miscellaneous key controls and their current status; and the local EADAS/NM status of the 5XB DOC transfer key (if applicable). For a No. 4A ETS, No. 4A CC, or No. 1/1A ESS switch, a preprogram number may be entered and a description of that control and its status will then be displayed. Preprogram controls, which are multiple controls, will be flagged as such and only the first control will be described. On No. 1/1A ESS switch spray reroute, the first via will be displayed. An asterisk to the right of AUTO denotes that the PP is active and is associated with DOC.

19.03 Any (or all) of the controls displayed may then be requested to be taken, or removed, by entering a step value for a DRE route, or by designating the appropriate on or off (or local or EADAS) window. Any combination of controls may be requested, and more than one pass may be made to enter requests as long as no new request in any way alters a request entered on a previous pass (ie, only request additions, not changes, are permitted on subsequent passes). Once all desired controls have been flagged as pending (for DRE, the *p* is displayed adjacent to the SET window), the controls may be executed by designating **EXECUTE at the bottom of the page**.

19.04 Following successful execution of the requested controls, the new control status replaces the old: *p* is changed to *s*; the old *s* is removed, and old DRE step values are replaced by the new values while the step request windows are cleared. For any control failures, the associated pending flag is simply replaced by the returned error flag.

19.05 A final note should be made about DRE for a No. 5 crossbar office. DRE must be enabled in a No. 5 crossbar office before any step setting may be taken. If a non-zero DRE step setting is requested on page CN32 and DRE is not currently enabled, a DRE enable command will automatically be sent immediately prior to the step command. Likewise, when a request is made to set DRE to step zero (0) (off) on all DRE units, a final command is sent (after the step commands) to remove the DRE enable. Currently, this command is sent without waiting to check the success of the step removal commands.

19.06 With No. 4 ESS and No. 1/1A ESS switch offices, the network manager can select specific categories of controls to remove. The categories displayed for No. 1/1A ESS switch are: CB for code blocks; FX for flexible trunk group controls (CANT, CANF, SKIP); and PP for preprogrammed controls. Designating one of these categories in window 16 (see Fig. 39 and Table I) will remove all existing controls of that type. Any number of the indicated types of controls can be designated and removed. Designating the CTRL OFF:ALL window will cause all displayed types of controls to be removed.

19.07 The No. 4 ESS switch is capable of selecting either domestic (W7) or international (W8) controls for removal. The page defaults to W7 if W7 or W8 is not designated. To remove individual types

of controls, window 16 and/or 17 must be designated. The individual types of controls which can be removed are as follows:

- CB (W16) — Code Blocks
- RR (W16) — Reroutes
- SK (W16) — Skips
- CT (W16) — Cancel To
- CF (W17) — Cancel From
- TSAR (W17) — Trunk Subgroup Access Restriction
- CG (W17) — Call Gaps.

19.08 If window 8 (INTL) is designated, the system searches the trunk group reference file for international trunk groups and removes the type controls indicated in paragraph 19.07. This also includes code blocks and call gaps (if designated) which are not trunk group controls.

Note: When CG (call gap) is designated for removal, the system removes both domestic and international call gaps. This is done regardless of whether the page is in the domestic mode (W7) or the international mode (W8).

19.09 With the No. 4 ESS switch, designating the CTRL OFF:ALL window (W4) removes all types of controls listed in paragraph 19.07. This includes both domestic and international trunk groups. Windows 7 and 8 are not used when W4 is used.

19.10 The CTRL OFF:ALL window (W4) is available for No. 4A ETS offices also. However, use of this feature may remove some controls which the network manager does not want to remove. For No. 4 ESS and No. 1/1A ESS switches, W4 causes the removal of all type controls displayed in windows 44 and 45. For the No. 4A ETS, no control types are shown in windows 44 and 45 because the No. 4A ETS does not have the ability to remove all controls on an individual-type basis. However, the No. 4A ETS can

remove **all** existing controls of all types at one time. Following is a list of the types of controls removed in a No. 4A ETS when the CTRL OFF:ALL window (W4) is designated:

- CF — Cancel From
- CT — Cancel To
- SK — Skip
- CS — Cancel/Skip
- FCNT — Finalized Cancel To
- TMB — Trunk Make Busy
- STR — Sel. Trunk Reservation
- PP — Preprogrammed Controls
- STR — SKIP Option*
- SDOC/GSC — SKIP Option*
- CB — Code Block
- CG — Call Gap
- RR — Regular Reroute
- IR — Immediate Reroute
- RRS — Regular Spray Reroute
- IRRS — Immediate Spray Reroute
- INH — Inhibit RDOC.

* All STR and SDOC/GSC cancel/skip options will revert to the default which is cancel.

19.11 The standard error and warning messages described in Section 190-540-418 apply to page CN32.

19.12 Transfer is not available from CN32.♦

TABLE A

CN01—TRUTH TABLE (DOMESTIC)

Truth table for No. 1/1A ESS, 4 ETS, and No. 4 ESS switching systems when taking DOMESTIC code controls.

NPA is always input except for codes 011, 160, and 18X when in domestic mode.

-1 = blank field

ACDOM = area code domain

NADOM = nonarea code domain

NODOM = no domain (No. 1/1A ESS switches only)

X = numeric 0-9

F = no input by user (blank)

ETS	ESS	NO. 4 ESS	CB 0-2	NPA	NXX	LINE	SPECIAL NOTES ERROR	DOMAIN
'	'	'	3	xxx	-1	-1		acdom/nodom
'	'	'	3	011	-1	-1	1st stage Int. pulsing	nadom/nodom
'	'	'	3	160	-1	-1	Int. pulsing	nadom/nodom
'	'	'	3	18X	-1	-1	Int. pulsing	nadom/nodom
		'	4	xxx	xff	-1		nodom
		'	5	xxx	xxf	-1		nodom
'	'	'	6	xxx	xxx	-1		acdom/nodom
'	'	'	6	011	xxx	-1	1st stage Int. pulsing	nadom/nodom
'	'	'	6	160	xxx	-1	Int. pulsing	nadom/nodom
		'	7	xxx	xxx	xfff		nodom
		'	8	xxx	xxx	xfff		nodom
		'	9	xxx	xxx	xxx		nodom
'	'	'	10	xxx	xxx	xxxx		acdom/nodom
			-	-1	-1	-1	legit	
			-	-1	-1	xxxx	error	
			-	xxx	-1	xxxx	error	
				-1	xxx	xxxx	error	
				-1	xxx	-1	error	

♦TABLE B♦

NO. 4 ESS SWITCH (GENERIC = >4E7) AND NO. 4A CC
(4×C2 ISSUE = >5) GAP TABLE

GAP INDEX	1E	4E	4A	CALL/5 MINS	CALLS/HR	INTERVAL
0		X		—	—	Off
1		X	X	output=input	output=input	0
2		X		3,000	36,000	0.10
3		X		1,200	14,400	0.25
4		X	X	600	7,200	0.50
5		X	X	300	3,600	1.0
6		X	X	150	1,800	2
7		X	X	60	720	5
8		X	X	30	360	10
9		X	X	20	240	15
10		X	X	10	120	30
11		X	X	5	60	60
12		X	X	2	30	120
13		X	X	1	12	300
14		X		0	6	600
15		X		none	none	stop

♦TABLE C♦

NO. 4A CC (4×C2 ISSUE = 3 OR 4) GAP TABLE

INDEX	4A (ISS)	CALL/5 MINS	CALLS/HR	INTERVAL (SEC)
0	X	output=input	output=input	0
1	X	600	7200	0.5
2	X	300	3600	1.0
3	X	150	1800	2.0
4	X	100	1200	3.0
5	X	75	900	4.0
6	X	50	600	6.0
7	X	30	360	10.0
8	X	20	240	15.0
9	X	12.5	150	24.0
10	X	8.3	996	36.0
11	X	5	60	60.0
12	X	3.33	40	90.0
13	X	2.08	25	144.0
14	X	1.25	15	240.0
15	X	.83	9.96	360.0

TABLE D

CN01—TRUTH TABLE (INTERNATIONAL)

Truth table for No. 4 ESS switching systems when taking 2nd stage INTERNATIONAL code controls.

-1 = blank field in the NN field

ORIG = TS1 = originating codes blocked

TRAN = TS2 = transit to customer codes blocked

TROP = TS3 = transit to operator codes blocked

X = numeric 0-9

F = no input by user (blank)

CB	CC/PC	NN	OUTPUTSING TYPE	OFFICE TYPE	DOMAIN
1	xff	-1	2nd stage	No. 4 ESS	orig. tran. trop
2	xxf	-1	2nd stage	No. 4 ESS	orig. tran. trop
3	xff	xxff	2nd stage	No. 4 ESS	orig. tran. trop
3	xxf	xfff	2nd stage	No. 4 ESS	orig. tran. trop
3	xxx	-1	2nd stage	No. 4 ESS	orig. tran. trop
4	xxx	xfff	2nd stage	No. 4 ESS	orig. tran. trop
5	xxx	xxff	2nd stage	No. 4 ESS	orig. tran. trop
6	xxf	xxxx	2nd stage	No. 4 ESS	
7	xxx	xxxx	2nd stage	No. 4 ESS	orig. tran. trop

FLAG	EXPLANATION
a or c	Some control already in effect for that trunk group.
b	Code is already blocked (code blocks only).
d	<u>No. 1 ESS Switch only</u> - attempt to remove a control not in effect. <u>No. 4 ETS - CH2ETS</u> command is presently active on ETS channel selected.
e	Failure to execute preprogram control (No. 1 ESS switch only)
f	Control failed to acknowledge within time limit. For E2A and TDC controls, this limit is two 20-second discrete scans. If the response discrete is not found within the time limit, a "0" is sent to the control address for that control (to turn the control back off) and two more discrete polls are checked before returning the "f" response. A response other than "f" will be given only if both control attempts sent the same state (0) and the correct discrete was received on the second try after failure on the first try. No attempt is made to remove an ETS control which has failed to respond within the time limit.
i	No. 4 ETS - Invalid TGI used in command (check TGI in data base). No. 1 ESS switch - Interprets control request as illegal code block or flexible control.
j	Selected ETS channel is off-line.
l	Control in local mode and cannot be taken by EADAS/NM.
m	Control in effect is part of an ETS preprogram 90-99, or part of a No. 1 ESS switch preprogrammed spray reroute and in either case, another part of the preprogram has been marked pending.
n	Control in effect is an ETS preprogram 90-99 and is available for removal from this page only if specifically designated.
o	Too many controls of this type are already in effect.
p	Control request pending.
q	No. 4 ETS control request has been entered in the control queue.
r	Active remote control in effect.
s	Control currently in effect.
t	Telemetry failure occurred on sending control or telemetry off-line.
v	Office requesting control is not No. 4 ESS switch or ETS type.
w	- No. 1 ESS switch temporarily unable to process request. Try control again in 1 minute. - Failure to open or failure to write control queue.
x	Control invalid (if accompanied by error 05, check for data base error).
z	Control request with bad channel number.
" "	Control currently not in effect.
?	Control executing process unable to notify the CRT page of control responses--control state unknown; major system problem which will be accompanied by a message on the console TTY of the form <u>CRT xxx CTRL PIPE FAIL</u> , where xxx = E2A, TDC, or ETS depending on the type of controls being sent.

Fig. 1—Control Status Symbols and Response Characters (3.03)

CN00 CONTROL PAGE DIRECTORY

EXIT FROM CRT SUBSYSTEM()

- CN01 () CODE CONTROL
- CN03 () CALL GAPPING CONTROL
- CN05 () DOM HTR THRESH & 6-DIGIT RESOLUTION
- CN06 () HTR THRESHOLD TYPE ASSIGNMENT
- CN07 () INTERNATIONAL HTR THRESHOLDS
- ()
- CN11 () MULTIPLE TRUNK GROUP CONTROL
- CN13 () SINGLE TRUNK GROUP CONTROL
- CN15 () AREA AUTOMATIC CONTROLS
- ()
- CN21 () PP REROUTE CONTROL
- CN22 () TORC & REROUTE ASSIST
- CN23 () FLEXIBLE RR CONTROL & MONITOR ASSIGNMENT
- CN24 () CONTROL PLANS
- CN25 () MONITOR RR ANALYSIS
- CN31 () DOC TRANSMISSION CONTROL
- CN32 () GENERAL CONTROL

IN-INPUT	TG-TRUNK GROUP	MA-MACHINE	EX-EXCEPTION	AN-ANALYSIS
Feb 10 83 09:06:36 NWT	PRINT()	CLR-FAIL()	DIRECTORY[]	PAGE[]

Fig. 2—CN00—Control Page Directory (4.01)


```

CNØ1 CODE CONTROL          A[ ] NPA[ ] NXX[ ] LINE[ ]
CB( ) GAP( ) CLM( ) CLI(s) SLM( ) SLI( ) INTL( ) DOM(s)
-----
[ ] ( ) ( ) ( ) [ ] ( ) |
INH CTRL: ON( ) OFF( ) ALL OFCS( ) [ ] ( ) |
-----
TYPE      OFFICE          ANN  CL | TYPE      OFFICE          ANN  CL
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
-----
EXECUTE( ) BY[ ] CLEAR( ) PART [1] OF 1 FRWD( ) BKWD( ) TABLE[ ]
Oct 8 82 06:00:22 NWT PRINT( ) CLR-FAIL( ) DIRECTORY[ ] PAGE[ ]

```

Fig. 7—CNØ1—HTR Inhibit—Control List (5.31)

```

CNØ1 CODE CONTROL          A[ ] NPA[ ] NXX[ ] LINE[ ]
CB( ) GAP( ) CLM( ) CLI( ) SLM( ) SLI(s) INTL( ) DOM(s)
-----
[ ] ( ) ( ) ( ) [ ] ( ) |
INH CTRL: ON( ) OFF( ) ALL OFCS( ) [ ] ( ) |
-----
TYPE      OFFICE          ANN  SL | TYPE      OFFICE          ANN  SL
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
-----
EXECUTE( ) BY[ ] CLEAR( ) PART [1] OF 1 FRWD( ) BKWD( ) TABLE[ ]
Oct 8 82 06:03:02 NWT PRINT( ) CLR-FAIL( ) DIRECTORY[ ] PAGE[ ]

```

Fig. 8—CNØ1—HTR Inhibit—Source List (5.31)

```

CN01 CODE CONTROL          [ ] [ ] CC[ ] NN[ ]
CB(s) GAP( ) CLM( ) CLI( ) SLM(x) SLI(x) INTL(s) DOM( )
-----
%CB[ ] ORIG( ) TRAN( ) TROP( ) DISP: ORIG EA[ ] INC( ) |
CB CTRL: ON( ) OFF( ) ALL OFCS( ) TRAN EA[ ] INC( ) |
-----
TYPE      OFFICE          %CB ANN DMN | TYPE      OFFICE          %CB ANN DMN
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
-----
EXECUTE( ) BY[ ] CLEAR( ) PART [1] OF 1 FRWD( ) BKWD( ) TABLE[ ]
Oct 7 82 12:48:28 NWT PRINT( ) CLR-FAIL( ) DIRECTORY[ ] PAGE[ ]
    
```

Fig. 9—CN01—International Code Block (5.36)

```

CN01 CODE CONTROL          [ ] [ ] CC[ ] NN[ ]
CB( ) GAP(s) CLM( ) CLI( ) SLM(x) SLI(x) INTL(s) DOM( )
-----
GAP[ ] ORIG( ) TRAN( ) TROP( ) EA[ ] INC( ) |
GAP CTRL: ON( ) OFF( ) ALL OFCS( ) [ ] ( ) |
-----
TYPE      OFFICE          GAP ANN | TYPE      OFFICE          GAP ANN
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
      ( )
-----
EXECUTE( ) BY[ ] CLEAR( ) PART [1] OF 1 FRWD( ) BKWD( ) TABLE[ ]
Oct 7 82 12:47:43 NWT PRINT( ) CLR-FAIL( ) DIRECTORY[ ] PAGE[ ]
    
```

Fig. 10—CN01—International Call Gap (5.42)

```

CN01 CODE CONTROL
CB( ) GAP( ) CLM(s) CLI( ) SLM(x) SLI(x) [ ] [ ] CC[ ] NN[ ]
INTL(s) DOM( )
-----
[ ] ( ) ( ) ( ) [ ] ( ) |
HTR CTRL: ON( ) OFF( ) ALL OFCS( ) [ ] ( ) |
-----
TYPE OFFICE ANN CL TYPE OFFICE ANN CL
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
-----
EXECUTE( ) BY[ ] CLEAR( ) PART [1] OF 1 FRWD( ) BKWD( ) TABLE[ ]
Oct 8 82 06:04:12 NWT PRINT( ) CLR-FAIL( ) DIRECTORY[ ] PAGE[ ]
    
```

Fig. 11—CN01—HTR Assignment—International (5.49)

```

CN01 CODE CONTROL
CB( ) GAP( ) CLM( ) CLI(s) SLM(x) SLI(x) [ ] [ ] CC[ ] NN[ ]
INTL(s) DOM( )
-----
[ ] ( ) ( ) ( ) [ ] ( ) |
INH CTRL: ON( ) OFF( ) ALL OFCS( ) [ ] ( ) |
-----
TYPE OFFICE ANN CL TYPE OFFICE ANN CL
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
      ( ) ( )
-----
EXECUTE( ) BY[ ] CLEAR( ) PART [1] OF 1 FRWD( ) BKWD( ) TABLE[ ]
Oct 8 82 06:05:15 NWT PRINT( ) CLR-FAIL( ) DIRECTORY[ ] PAGE[ ]
    
```

Fig. 12—CN01—HTR Inhibit—International (5.52)

1) CN03 CALL GAPPING CONTROL OFFICE[CLEV OH 02 03Z] 4ESS CL4
 NON-DIS(s) DIS-ACT() DIS-CT() TELEVOTE() INTL() DOM(s) TIME: 5(s) 15()

2) CTRL: ON() GAP[] EA[] NCA() A[] NPA[] NXX[] LINE[]
 OFF() ALL CODES()

DIALED CODE				NM GAP				DIALED CODE				NM GAP			
A	NPA	NXX	LINE	RATE	ANN	ATT	THRU	A	NPA	NXX	LINE	RATE	ANN	ATT	THRU
()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()

3)

4) DATA FOR 07:20-07:25 : CALL ATT THRU
 EXECUTE() PY[] CLEAR() PART 0 OF 0 FRWD() BKWD() TABLE()
 Oct 8 82 07:29:14 NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]

Fig. 13—CN03—Domestic Call Gapping (Non-DIS) (6.03, 6.10, 6.12)

1) CN03 CALL GAPPING CONTROL OFFICE[TOLD OH 21 01T] 4ETS CL3
 NON-DIS() DIS-ACT() DIS-CT(s) TELEVOTE() INTL() DOM(s) TIME: 5(s) 15()

2) CTRL: ON() GAP[] EA[] NCA() A[] NPA[] NXX[] LINE[]
 OFF() ALL CODES()

DIALED CODE				SO GAP				CUT-THRU CODE				OVRD	
A	NPA	NXX	LINE	RATE	ANN	ATT	THRU	A	NPA	NXX	LINE	RATE	RATE
()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()
()	()	()	()	()	()	()	()	()	()	()	()	()	()

3)

4) DATA FOR 07:25-07:30 : CALL ATT THRU ANNOUNC ATT OFL
 EXECUTE() BY[] CLEAR() PART 0 OF 0 FRWD() BKWD() TABLE()
 Oct 8 82 07:36:32 NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]

Fig. 14—CN03—Domestic Call Gapping (DIS-CT) (6.20)

1) CN03 CALL GAPPING CONTROL OFFICE[TOLD OH 21 01T] 4ETS CL3
 NON-DIS() DIS-ACT() DIS-CT() TELEVOTE(s) INTL() DOM(s) TIME: 5(s) 15()

2) CTRL: ON() GAP[] EA[] NCA() A[] NPA[] NXX[] LINE[]
 OFF() ALL CODES()

DIALED CODE				ATT	DIALED CODE			
A	NPA	NXX	LINE		A	NPA	NXX	LINE
()	()	()	()		()	()	()	
()	()	()	()		()	()	()	
()	()	()	()		()	()	()	
()	()	()	()		()	()	()	
()	()	()	()		()	()	()	
()	()	()	()		()	()	()	
()	()	()	()		()	()	()	

3) DATA FOR 07:25-07:30 : TEL ATT ANNOUNC ATT OFL
 EXECUTE() BY[] CLEAR() PART 0 OF 0 FRWD() BKWD() TABLE()
 Oct 8 82 07:37:32 NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]

Fig. 15—CN03—TELEVOTE Data (6.28)

1) CN03 CALL GAPPING CONTROL OFFICE[CLEV OH 02 03Z] 4ESS CL4
 NON-DIS(s) DIS-ACT() DIS-CT() TELEVOTE() INTL(s) DOM() TIME: 5(s) 15()

2) CTRL: ON() GAP[] EA[] INC() [] [] CC [] NN []
 OFF() ALL CODES() ORIG() TRAN() TROP()

DIALED CODE				NM GAP			ATT	THRU	DIALED CODE				NM GAP		
DMN	CC	NN		RATE	ANN				DMN	CC	NN		RATE	ANN	
()	()	()	()	()	()	()		()	()	()	()	()	()		
()	()	()	()	()	()	()		()	()	()	()	()	()		
()	()	()	()	()	()	()		()	()	()	()	()	()		
()	()	()	()	()	()	()		()	()	()	()	()	()		
()	()	()	()	()	()	()		()	()	()	()	()	()		
()	()	()	()	()	()	()		()	()	()	()	()	()		
()	()	()	()	()	()	()		()	()	()	()	()	()		

3) DATA FOR 07:30-07:35 : CALL ATT THRU
 EXECUTE() BY[] CLEAR() PART 0 OF 0 FRWD() BKWD() TABLE()
 Oct 8 82 07:39:40 NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]

Fig. 16—CN03—International Mode (6.33)

CN05 DOM HTR THRESH & 6-DIGIT RESOLUTION

OFFICES W W W WARNING EXPAND

1) () () ()
 () () ()
 CLEV OH 02 03Z *() () ()

CATG	ATTEMPT THRESH		DELTA AT		FT TYPE 0		FT TYPE 1		FT TYPE 2		DELTA FT	
	NOW	ASGN	NOW	ASGN	NOW	ASGN	NOW	ASGN	NOW	ASGN	NOW	ASGN
2) DFLT	100	1-9999	0.1		67	1-100	67	1-100	67	1-100	0.9	
NPA	[]	[]		0.[]	[]	[]	[]	[]	[]	[]		0.[]
HNXX	[]	[]		1.0()	[]	[]	[]	[]	[]	[]		1.0()
FNXX	[]	[]		[]	[]	[]	[]	[]	[]	[]		[]

6-DIGIT RESOLUTION		FNPA	ASGN	RMV	NPA	OPTN	FNPA	ASGN	RMV	NPA	OPTN
					YES	NO				YES	NO
3) NPA HTR OPTION			[]	()	()	()		[]	()	()	()
HNPA YES NO			[]	()	()	()		[]	()	()	()
() ()			[]	()	()	()		[]	()	()	()

4) EXECUTE() BY[] CLEAR() TRANSFER TO: CN06() CN07()
 Oct 8 82 07:41:34 NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]

Fig. 17—CN05—Domestic HTR Thresh and 6-Digit Resolution (7.01 Through

CN05 DOM HTR THRESH & 6-DIGIT RESOLUTION

OFFICES W W W WARNING EXPAND

CLMB OH 11 03T (s) () ()
 () () ()
 () () ()
 () () ()

CATG	ATTEMPT THRESH		DELTA AT		FT TYPE 0		FT TYPE 1		FT TYPE 2		DELTA FT	
	NOW	ASGN	NOW	ASGN	NOW	ASGN	NOW	ASGN	NOW	ASGN	NOW	ASGN
DFLT	100	1-9999	0.1		67	1-100	67	1-100	67	1-100	0.9	
NPA	150	[]	0.2	0.[]	75	[]	80	[]	85	[]	0.9	0.[]
HNXX	100	[]		1.0()	67	[]	67	[]	67	[]		1.0()
FNXX	100	[]		[]	67	[]	67	[]	67	[]		[]

6-DIGIT RESOLUTION		FNPA	ASGN	RMV	NPA	OPTN	FNPA	ASGN	RMV	NPA	OPTN
					YES	NO				YES	NO
NPA HTR OPTION			312	[]	()	(s) ()		301	[]	()	() (s)
HNPA YES NO			[]	()	()	()		[]	()	()	()
614 () (s)			201	[]	()	() (s)		[]	()	()	()

EXECUTE() BY[rd] CLEAR() TRANSFER TO: CN06() CN07()
 Oct 6 82 15:06:28 NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]

Fig. 18—CN05—Example (7.13)

CN07 INTERNATIONAL
HTR THRESHOLDS

1) OFFICES W W W WARNING EXPAND
 () () ()
 () () ()
 () () ()
 CLEV OH 02 032 *() () ()

2) TYPE DFLT ATTEMPT THRESH DELTA AT FAIL THRESH DELTA FT
 NOW ASGN NOW ASGN NOW ASGN NOW ASGN
 100 1-9999 1.0 0.1-1.0 80 1-100 1.0 0.1-1.0
 1 [] [] [] [] [] [] [] []
 2 [] [] [] [] [] [] [] []
 3 [] [] [] [] [] [] [] []
 4 [] [] [] [] [] [] [] []
 5 [] [] [] [] [] [] [] []
 6 [] [] [] [] [] [] [] []
 7 [] [] [] [] [] [] [] []

3) EXECUTE() BY[] CLEAR() TRANSFER TO: CN05() CN06()
 Oct 8 82 07:48:55 NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]

Fig. 21—CN07—International HTR Thresholds (9.04)

CN11 MULTIPLE TRK GRP CONTROL TO OFFICE [] CL

CONTROL SELECTION	TRUNK GROUP	%OFL	TRUNK GROUP	%OFL
TYPE TFC ANN				
CANP() ALT() EA1()		()		()
CANT() DAR() EA2()		()		()
SKIP() DIR() NCA()		()		()
PERCENTAGE		()		()
25() 50() 75() 100()		()		()
HTR() CTRL ON() OFF()		()		()
APPLY TO ALL TRK GRPS ()		()		()
CTRL OFC LIST RESTRICTIONS		()		()
OFFICE CLASS		()		()
1() 2() 3() 4() 5()		()		()
SUBTENDING()		()		()
AREA[]		()		()

EXECUTE() BY [] CLEAR() PART OF FRWD() BIRD() DATA FOR
 NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]

Fig. 22—CN11—Multiple Trunk Group Controls (10.01)

TABLE E

CN11—INPUT AND OUTPUT WINDOWS

INPUT WINDOWS	
1. Enter "TO" office CLLI. 4. Enter "+" to select control type. 5. Enter "+" to select traffic type. 6. Enter "+" to select announcement. NCA is the default. 8, 11. Enter "+" to select office for control application. 13-16. Enter "+" to select control percentage. 17. Enter "+" to select HTR. 18. Enter "+" to put control on. 19. Enter "+" to take control off. 20. Enter "+" to apply control to all trunk groups displayed.	21-25. Enter "+" to restrict offices in W7 and W10 to classes specified. 26. Enter "+" to limit list W6 and W9 to offices subtending office in W1. 27. Enter CLLI of apex office of area to be searched for candidate trunk groups. 28. Enter "+" to execute all pending controls. 29. Enter user's initials (optional). 30. Enter "+" to clear all ending controls. 33, 34. Enter "+" to scroll forward to next part or backward to previous part.
OUTPUT WINDOWS	
1. "TO" office CLLI completed. 2. "TO" office type. 3. "TO" office class. 7, 10. Trunk groups to the office in W1.	9, 12. Percentage overflow from trunk group. 31. Part number of current display. 32. Total number of parts in list. 35, 36. Data time.

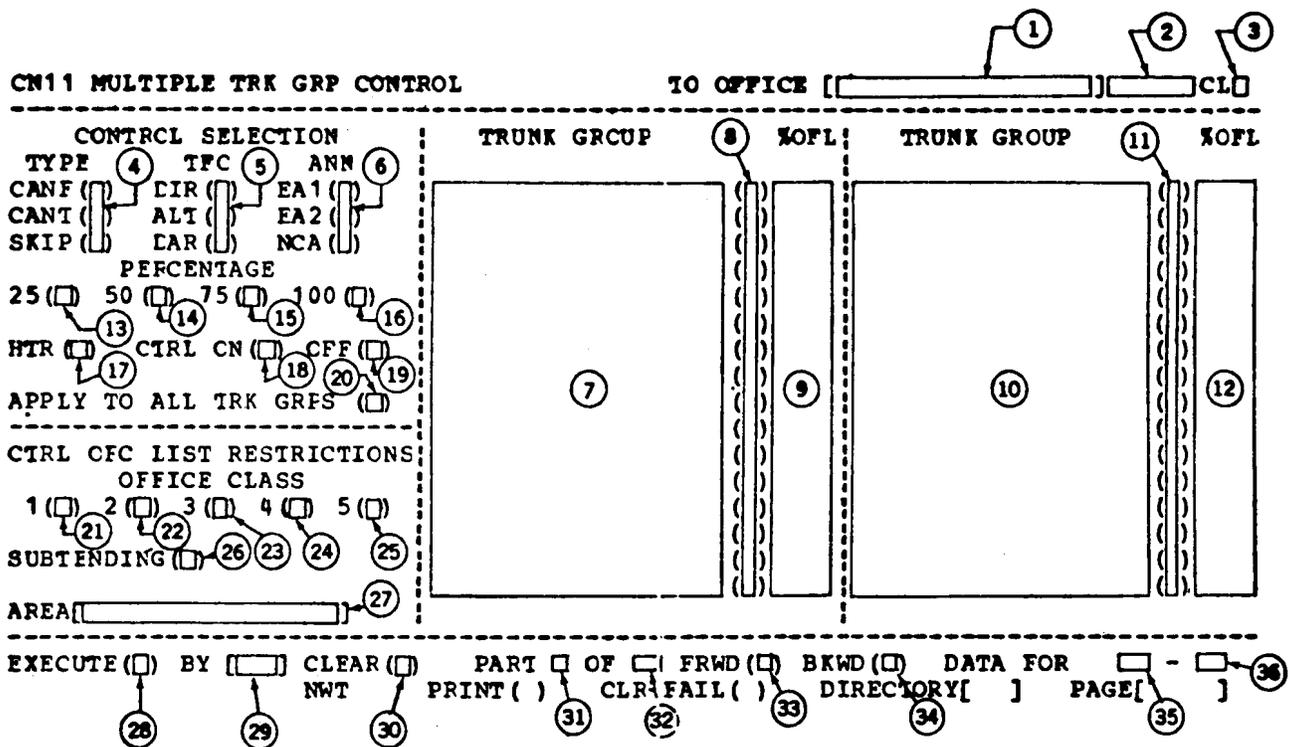


Fig. 23—CN11—Input and Output Windows (10.02)

```

CN13 SINGLE TRUNK GRP CONTROL warning 2          FROM [CNCN OH WS 14T ] 4ESS
OTHER-END( )                                     TO [CLMB OH 11 03T ] 4ESS
-----
%ALT %DAR OFF HTR H U      TYPE
CANF [ ] [ ] ( ) ( ) ( )
CANT [ ] [ ] ( ) ( ) ( )      ALLOWED PERCENTAGES:
SKIP [ ] [ ] ( ) ( ) ( )      25 50 75 87 100
                                     OFF
[ ] %TKS ( ) ( ) ( )          EA'S AVAIL(1-6)
ON( ) OFF( )                  EA[ ] NCA( )
-----
L1 >= L2/L1=0      OFF      OPT SK CA RESP CAT
[ ] [ ] [ ] ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )
RANGE(0- TKS)      ( ) SDOC/GSC ( ) ( ) (A-F)[ ]
-----
INHIBIT/RESTORE | 1-5 OFF
INH RES          | [ ] ( )
( ) ( )         |-----
( ) ( )         |
( ) ( )         |
-----
EXECUTE( ) BY[ ] CLEAR( ) TRANSFER TO      CN23( )      TG31( )      TG51( )
Oct 8 82 07:55:59 NWT      PRINT( ) CLR-FAIL( ) DIRECTORY[ ] PAGE[ ]

```

Fig. 24—CN13—Single Trunk Group Control—No. 4 ESS Switch (GEN 4E6) (11.02)

```

CN13 SINGLE TRUNK GRP CONTROL warning 1          FROM [CLEV OH 02 03Z ] 4ESS
OTHER-END( )                                     TO [CLMB OH 11 03T ] 4ESS
-----
%ALT %DAR OFF HTR H U      TYPE
CANF [ ] [ ] ( ) ( ) ( )
CANT [ ] [ ] ( ) ( ) ( )      ALLOWED PERCENTAGES:
SKIP [ ] [ ] ( ) ( ) ( )      25 50 75 87 100
                                     TSAR 75 80 85 90 95 100%
                                     OFF SK CA
TSAR [ ] %TKS ( ) ( ) ( )          EA'S AVAIL(1-6)
ON( ) OFF( )                  EA[ ] NCA( )
-----
L1 >= L2/L1=0      OFF      OPT SK CA RESP CAT
STR [ ] [ ] [ ] STR(s)          STR ( ) ( ) (A-E)[ ]
RANGE(0- 15 TKS)  SDOC(s) SDOC/GSC ( ) ( ) (A-F)[ ]
-----
INHIBIT/RESTORE | 1-5 OFF
INH RES          | ASSIGN STUDY GROUP [ ] (s)
STR ( ) ( )     |-----
RDOC ( ) ( )    |
AOCR ( ) (s)   |
-----
EXECUTE( ) BY[ ] CLEAR( ) TRANSFER TO      CN23( )      TG31( )      TG51( )
Oct 8 82 07:54:34 NWT      PRINT( ) CLR-FAIL( ) DIRECTORY[ ] PAGE[ ]

```

Fig. 25—CN13—Single Trunk Group Control—No. 4 ESS Switch (GEN 4E7) (11.02)

```

CN13 SINGLE TRUNK GRP CONTROL warning 2          FROM [CNCN OH WS CG0 ] 1ESS
OTHER-END( )                                     TO [CNCN OH WS 14T ] 4ESS
-----
%ALT %DIR OFF H U TYPE
CANF [ ] [ ] ( ) ( ) ( )
CANT [ ] [ ] ( ) ( ) ( )      ALLOWED PERCENTAGES:
SKIP [ ] [ ] ( ) ( ) ( )      ALT 50 75 100
                                DIR 0 50 75 100
                                OFF
                                [ ] %TKS ( ) ( ) ( )      EA'S AVAIL( )
                                ON( ) OFF( )              EA[ ] NCA( )
-----
L1 >= L2/L1=0 OFF OPT SK CA RESP CAT
TR [ ] [ ] TR(s) STR ( ) ( ) (A- ) [ ]
RANGE(0- 57 TKS) ( ) SDOC/GSC ( ) ( ) (A-F) [ ]
-----
INHIBIT/RESTORE | 1-5 OFF
INH RES | [ ] ( )
( ) ( ) |
( ) ( ) |
( ) ( ) |
-----
LOCAL AUTO PP
DOC TF CANF
CANT
FX OR PP FCNT
RRF SKIP
TORC RR
-----
EXECUTE( ) BY[ ] CLEAR( ) TRANSFER TO CN23( ) TG31( ) TG51( )
Oct 8 82 07:57:51 NWT PRINT( ) CLR-FAIL( ) DIRECTORY[ ] PAGE[ ]
    
```

Fig. 26—CN13—Single Trunk Group Control—No. 1/1A ESS Switch (11.02)

```

CN13 SINGLE TRUNK GRP CONTROL warning 2          FROM [TOLD OH 21 01T ] 4ACC
OTHER-END( )                                     TO [CLEV OH 02 03T ] 4ESS
-----
%ALT %DAR OFF HTR H U TYPE
CANF [ ] [ ] ( ) ( ) ( )
CANT [ ] [ ] ( ) ( ) ( )      ALLOWED PERCENTAGES:
FCNT [ ] [ ] ( ) ( ) ( )      12 25 37 50 62 75 87 100
SKIP [ ] [ ] ( ) ( ) ( )      TMB 1-100% in step of 1%
                                OFF
                                TMB [ ] %TKS ( ) ( ) ( )      EA'S AVAIL(1-2)
                                CROF ON( ) OFF(s)              EA[ ] NCA( )
-----
L1 >= L2/L1=0 OFF OPT SK CA RESP CAT
STR [ ] [ ] (s) STR (s)( ) (A-D) [C]
RANGE(0- 15 TKS) ( ) SDOC/GSC (s)( ) (A-F) [F]
-----
INHIBIT/RESTORE | 1-5 OFF
INH RES | [ ] ( )
( ) ( ) |
RDOC ( ) (s) |
( ) ( ) |
-----
LOCAL AUTO PP
DOC TF CANF
CANT
FX OR PP FCNT
RRF SKIP
TORC RR
-----
EXECUTE( ) BY[ ] CLEAR( ) TRANSFER TO CN23( ) TG31( ) TG51( )
Oct 8 82 07:52:38 NWT PRINT( ) CLR-FAIL( ) DIRECTORY[ ] PAGE[ ]
    
```

Fig. 27—CN13—Single Trunk Group Control—No. 4A CC (11.02)

TABLE F

CN13—INPUT AND OUTPUT WINDOWS

INPUT WINDOWS	
<ol style="list-style-type: none"> 1. Enter "FROM" office CLLI. 3. When designated, transposes the contents of W1 and W2 with W4 and W5. Swaps "FROM" and "TO" offices. 4. Enter "TO" office CLLI. 12. Enter % of ALT. routed traffic to be controlled. 14. Enter % of DIR. routed traffic to be controlled for a No. 1/1A ESS switches office. Enter % of DAR for other types of offices. 15. Designated (+) to turn off the active CTRL. 16. Designated (+) to select HRT (only) option. Used for No. 4 ESS switch and No. 4A CC switch offices only. 17. Designate (+) to select HTR and unpecific traffic. This is default when W16 or W17 is not designated. 20. Designate (+) to select trunk group for control. 25. Enter % of trunks to be made busy. The % available is displayed in the allowed % window (W21). 27. Designate (+) to turn off TMB (No. 4A CC only). 28. Designate (+) for TSAR skip option (No. 4 ESS switch only). 29. Designate (+) for TSAR cancel option (No. 4 ESS switch). Cancel is default if skip is not specified. 31. Designate (+) to select CRO control. 32. Designate (+) to remove CRO control. 33. Enter desired EA announcement. 1-2 available for No. 4A CC, 1-6 for No. 4 ESS switch. NCA is default if an EA is not specified. 35. Designate (+) to select NCA announcement. 37. Enter No. of trunks to be reserved RL1. 39. Enter No. of trunks to be reserved RL2. 	<ol style="list-style-type: none"> 42. Designate (+) to remove STR/TR. This applies to all offices (No. 4A CC, No. 1/1A ESS switch, and No. 4 ESS). The second part of this window only applies to No. 4 ESS switch SDOC. 43. Designate (+) to select the skip option for STR or SDOC/GSC. The No. 4A CC has one option that applies to all three controls (STR, SDOC, and GSC). For No. 4 ESS switch the STR option is separate from SDOC/GSC. 44. Designate (+) to select cancel option. Application is as described for skip in W43. This is default if W43 is not designated. 46. Enter the desired STR and/or SDOC/GSC response category. (No. 4 ESS switch only) Defaults to "A". 52. Enter study group assignment change. 1-5 is allowed. (No. 4 ESS switch E/W generic 4E7 only.) 54. Designate (+) to remove the selected trunk group from the study group. 56. Designated (+) to inhibit STR and/or SDOC and/or AOCR. The No. 4A CC can only inhibit SDOC. No. 4 ESS switch, E/W generics prior to 4E7 cannot use this feature through EADAS/NM. 57. Designate to restore STR, RDOC, or AOCR inhibit. 59. Designate (+) to execute control(s). 60. Enter network manager's initials (Optional). 61. Designate (+) to clear pending controls. 62. Designate (+) to transfer to CN23. 63. Designate (+) to transfer to TG31. 64. Designate (+) to transfer to TG51.
OUTPUT WINDOWS	
<ol style="list-style-type: none"> 1. "FROM" office CLLI completed. 2. Machine type for "FROM" office. 4. "TO" office CLLI completed. 5. Machine type for "TO" office. 6. "I" for No. 1/1A ESS switches. "A" for other machines. 7. "HTR" for No. 4 ESS switch and No. 4A CC. Blank for other machines. 8. Control category. "FX" for flexible. "PP" for preprogrammed control. 9. PP number. 10. Control type. 11. Displays the name of the available control(s). 13. Displays status of selected control. "P" — Pending; "S" — Active; "X", "F", "T", etc. — Control failures. "Q" — on Q. 18. Displays asterisk (*) if CCIS trunk group. 19. Displays list of candidate trunk groups. 21. Displays allowed control % for the selected trunk group. 22, 23. Displays the skip/cancel label for TSAR. 24. Displays the name of the available control(s). 26. Displays status of TMB or TSAR. "P" — pending; "X", "F", "T", etc. For control failures; "Q" — on queue. 30. Displays the range of EAs available. 1-2 for No. 4A. 1-6 for No. 4E. 	<ol style="list-style-type: none"> 34. Displays status of control. "P" — Pending; "X", "F", "T", etc. for control failures; "Q" — on queue. 36. Displays STR or TR. 38-40. Displays status of TR or STR. "P" — pending; "X", "F", "T", etc. For control failures; "Q" — on queue. 41. TR/STR and SDOC OFF labels. 43. Displays "S" if skip option is in effect. 44. Displays "S" if cancel option is in effect. 45. Displays "D" for No. 4A CC or "E" for No. 4 ESS switch. 46. Displays response category in effect. 47. Displays status of W46. "P", "Q", "X", "F", "T", etc. 48. Displays high end of allowable range of inputs for TR or STR. 49. Displays * to indicate DOC is in local or transfer mode. 50. Displays * to indicate type of AUTO PP control in effect. 51. Displays "study group assign" label. For No. 4 ESS switch E/W 4E7. 53. Displays status of W52. "S", "P", "Q", "X", "F", "T", etc. 55. Displays STR, RDOC, and AOCR inhibit/restore labels. 58. Displays * to indicate a reroute or TORC in effect.

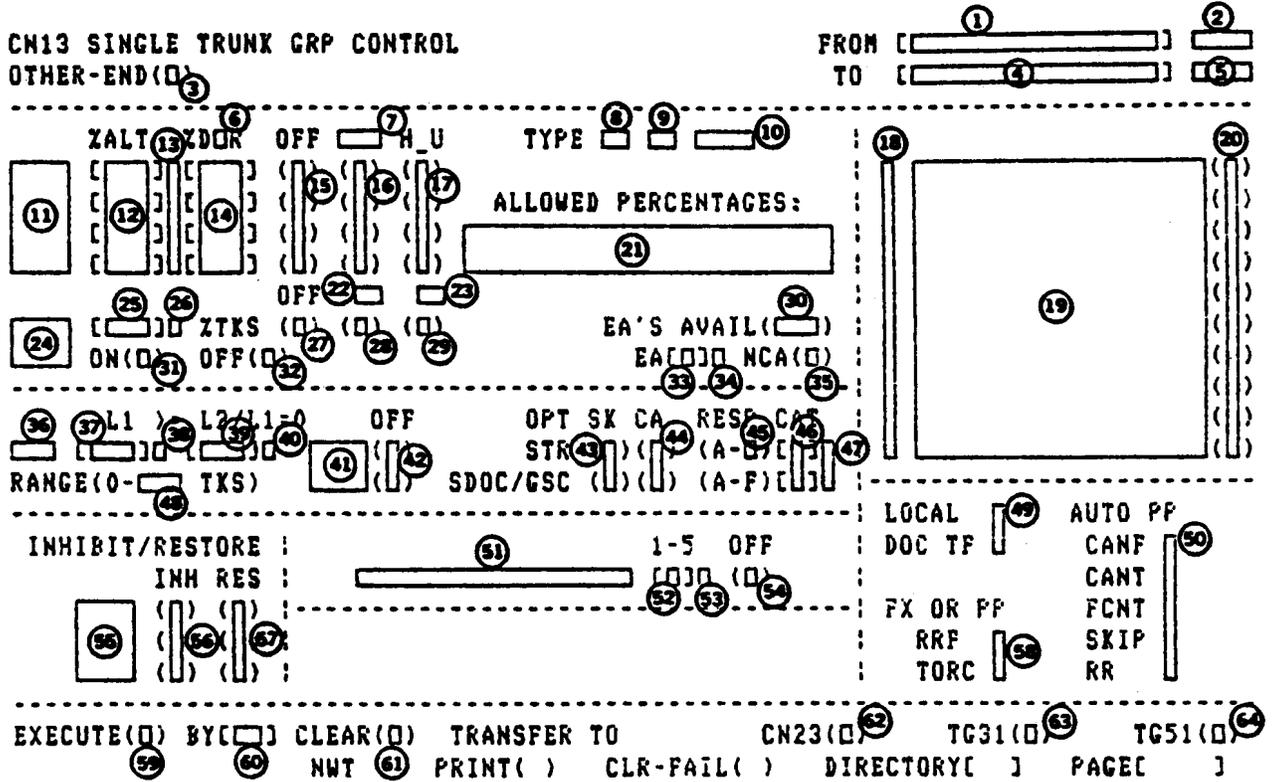


Fig. 28—CN13—Input and Output Windows (11.02)

CN15 AREA AUTOMATIC CONTROLS warning 1 FROM [CLEV OH 02 03Z] 4ESS
 FNI(s) HU(s) RANGE[]-[] ASSGN ALL() TO AREA(s) [] RANK[4]

TO TRUNK GROUPS	TRUNK RESERVATION					DYNAM OVLD CTRL					AOCR						
	L1	>L2	CAT	OFF	SK	CA	IH	RS	CAT	OFF	SK	CA	IH	RS	IH	RS	
AHVL NC OH 03T	HC	()	[]	[]	[]	(s)	()	()	()	()	[]	(s)	()	()	()	()	(s)
AKRN OH 25 01T	HB	()	[]	[]	[]	(s)	()	()	()	()	[]	()	()	()	()	()	(s)
AKRN OH 25 02T	FC	()	[]	[]	[]	(s)	()	()	()	()	[]	(s)	()	()	()	()	(s)
ALBQ NM MA 02T	HC	()	[]	[]	[]	(s)	()	()	()	()	[]	(s)	()	()	()	()	(s)
ALBY CA MA 02T	HC	()	[]	[]	[]	(s)	()	()	()	()	[]	(s)	()	()	()	()	(s)
ALBY NY SS 05T	HC	()	[]	[]	[]	(s)	()	()	()	()	[]	(s)	()	()	()	()	(s)
ALNA PA AL 81T	HB	()	[]	[]	[]	(s)	()	()	()	()	[]	()	()	()	()	()	(s)
AMRL TX DR 01T	HB	()	[]	[]	[]	(s)	()	()	()	()	[]	()	()	()	()	()	(s)
ANGER AK ZA 02T	H2	()	[]	[]	[]	(s)	()	()	()	()	[]	()	()	()	()	()	(s)
ANHM CA 02 11T	HC	()	[]	[]	[]	(s)	()	()	()	()	[]	(s)	()	()	()	()	(s)
ANHM CA 02 11T	H3	()	[]	[]	[]	(s)	()	()	()	()	[]	(s)	()	()	()	()	(s)
APPL WI 01 01T	HB	()	[]	[]	[]	(s)	()	()	()	()	[]	()	()	()	()	()	(s)
ARTN VA CK 04T	HC	()	[]	[]	[]	(s)	()	()	()	()	[]	(s)	()	()	()	()	(s)
ASHT OH XA 01T	FB	()	[]	[]	[]	(s)	()	()	()	()	[]	()	()	()	()	()	(s)
ASHT OH XA 01T	OP	()	[]	[]	[]	(s)	()	()	()	()	[]	()	()	()	()	()	(s)
ASLD OH XA 50T	HB	()	[]	[]	[]	(s)	()	()	()	()	[]	()	()	()	()	()	(s)

EXECUTE() BY[] CLEAR() PART 1 OF 8 FRWD() BKWD() TRANSF TO CN13() TG51()
 Oct 8 82 08:10:27 NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]

Fig. 29—CN15—Display Example—No. 4 ESS Switch (12.02)

CN15 AREA AUTOMATIC CONTROLS warning 1 FROM [DYTN OH 15 01T] 4ACC
 FNI(s) HU(s) RANGE[]-[] ASSGN ALL() TO AREA(s) [PITB PA DG 43T] RANK[4]

TO TRUNK GROUPS	TRUNK RESERVATION					DYNAM OVLD CTRL					AOCR							
	L1	>L2	CAT	OFF	SK	CA	IH	RS	CAT	OFF	SK	CA	IH	RS	IH	RS		
AKRN OH 25 02T	HC	()	[]	[]	[C]	(s)	()	(s)	()	()	[D]	()	()	(s)	()	(s)	()	()
CHTN WV LE 25T	HC	()	[]	[]	[C]	(s)	(s)	()	()	()	[D]	()	(s)	()	()	(s)	()	()
CLBG WV MA 24T	HC	()	[]	[]	[]	(s)	(s)	()	()	()	[]	()	(s)	()	()	(s)	()	()
CLEV OH 02 03T	HC	()	[]	[]	[C]	(s)	()	(s)	()	()	[D]	()	()	(s)	()	(s)	()	()
CLMB OH 11 03T	HC	()	[]	[]	[C]	(s)	()	(s)	()	()	[D]	()	()	(s)	()	(s)	()	()
CNCN OH WS 14T	FC	()	[]	[]	[C]	(s)	()	(s)	()	()	[D]	()	()	(s)	()	(s)	()	()
CNCN OH WS 14T	ZR	()	[]	[]	[]	(s)	()	(s)	()	()	[]	()	()	(s)	()	(s)	()	()
DTRT MI BH 50T	HC	()	[]	[]	[C]	(s)	()	(s)	()	()	[D]	()	()	(s)	()	(s)	()	()
LNNG MI MN 40T	HC	()	[]	[]	[C]	(s)	(s)	()	()	()	[D]	()	(s)	()	()	(s)	()	()
PLMO MI FA 40T	HC	()	[]	[]	[C]	(s)	(s)	()	()	()	[D]	()	(s)	()	()	(s)	()	()
PNTC MI MN 40T	HC	()	[]	[]	[C]	(s)	(s)	()	()	()	[D]	()	(s)	()	()	(s)	()	()
PNVL KY MA 02T	HC	()	[]	[]	[C]	(s)	()	(s)	()	()	[D]	()	()	(s)	()	(s)	()	()
PITB PA DG 43T	HC	()	[]	[]	[C]	(s)	()	(s)	()	()	[D]	()	()	(s)	()	(s)	()	()
SGNW MI FA 40T	HC	()	[]	[]	[C]	(s)	(s)	()	()	()	[D]	()	(s)	()	()	(s)	()	()
TOLD OH 21 01T	HC	()	[]	[]	[C]	(s)	()	(s)	()	()	[D]	()	()	(s)	()	(s)	()	()
WNCH KY MA 01T	HC	()	[]	[]	[C]	(s)	()	(s)	()	()	[D]	()	()	(s)	()	(s)	()	()

EXECUTE() BY[] CLEAR() PART 1 OF 2 FRWD() BKWD() TRANSF TO CN13() TG51()
 Oct 8 82 08:02:54 NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]

Fig. 30—CN15—Display Example—No. 4A CC (12.02)

TABLE G

CN13—CONTROL-TYPE CAPABILITIES BY OFFICE TYPE

CONTROL TYPE	OFFICE TYPE WHERE CAPABILITY EXISTS
CANF	No. 4 ESS, No. 1/1A ESS, No. 4A CC, No. 4A ETS, XBT, No. 5XB
CANT	No. 4 ESS, No. 1/1A ESS, No. 4A CC, No. 4A ETS, XBT, No. 5XB
FCNT	No. 4A CC
SKIP	No. 4 ESS, No. 1/1A ESS, No. 4A CC, No. 4A ETS
TMB	No. 4A CC
TSAR	No. 4 ESS generic 4E7 or later
CRO (CROF)	No. 4A CC generic 4XC2 or later
TR	No. 1/1A ESS
STR	No. 4 ESS, No. 4A CC
STR SK/CA	No. 4 ESS, No. 4A CC
SDOC/GSC SK/CA	No. 4 ESS, No. 4A CC
STR RESP. CATG.	No. 4 ESS, No. 4A CC
SCOC/GSC RESP. CATG.	No. 4 ESS, No. 4A CC
Inhibit STR	No. 4 ESS generic 4E7 or later
Inhibit RDOC (CCIS)	No. 4A CC
Inhibit AOCR	No. 4 ESS generic 4E7 or later
Change Study Class ASGTS	No. 4 ESS generic 4E7 or later

TABLE H

CN15—INPUT AND OUTPUT WINDOWS

INPUT WINDOWS	
<p>1. Input "FROM" office CLLI. 3. Enter "+" to restrict this display to only final trunk groups. 4. Enter "+" to restrict the display to only hi-usage trunk groups. 5. Enter minimum size of trunk groups to be displayed. The default, if nothing is entered, is 1. 6. Enter maximum size of trunk groups to be displayed. The default, if nothing is entered, is all trunk groups larger than W(5). 7. Enter "+" to apply control parameters; enter for the first trunk group of the part, to all trunk groups on on the part that do not have parameters already assigned. (That is if you are activating a control all trunk groups that show the control as off or do not have a different parameter assigned will get assigned the parameter assigned to the first trunk group.) For the No. 4 ESS switch inhibits and restores can be changed without effecting the other parameters. Also if the first trunk group control is active, it will be replaced and all inactive controls assigned the parameters. 8. Select area: if designated, trunk groups from the "FROM" office (W1), to the area under the office in window (W9) are considered; otherwise, only the trunk groups from the "FROM" office (W1) to the "TO" office (W9) are considered. An input "+" is replaced by "s" on output. 9. Input "TO" office or area apex. If blank all trunk groups. 10. Input office rank (if area option selected): If entered, limits area to office of that rank or higher. (Defaults to Rank 3 if offices in 9 is Rank 1 or 2, else Rank 5). 13. Trunk group select: Select designated trunk group for transfer. Used with W40 or W41.</p>	<p>14, 15. Input and Display for TR levels (defaults to 0 if not entered). 16. Input and Display for category for No. 4 ESS switch (defaults to "A"), and displays the category for ETS. 18. Removes the TR control (off) for designated/all offices. 19, 20. Applies the skip or cancel option (defaults to cancel). For No. 4A CC offices, these windows are directly tied to W26 and W27. 21, 22. Used to inhibit or restore TR in the No. 4 ESS switch (defaults to restore). 23. Assigns the DOC category in the No. 4 ESS switch (defaults to "A"). 25. Removes the DOC control in the No. 4 ESS switch. Causes loss of assigned response category and CA/SK option on CCIS groups. Will default to CAT "A" and cancel option. For electro-mechanical DOC groups, inhibits response. 26, 27. Applies the DOC skip or cancel option in the No. 4 ESS switch (defaults to cancel). For No. 4A CC, these windows are directly tied to W19 and W20. 28, 29. Used to inhibit or restore DOC in the No. 4 ESS switch (defaults to restore). Works for CCIS or other groups. 30, 31. Used to inhibit or restore AOCR in the No. 4 ESS switch (defaults to restore). 33. Designate (+) to execute controls. 34. Enter initials of network manager. 35. Designates (+) to clear pending control action. 38. If designated, scroll trunk group and associated data windows (W12-W32) forward. 39. If designated, scroll trunk group and associated data window (W12-W32) backward. 40. If designated, transfer to CN13. Used with W13. 41. If designated, transfer to TG51. Used with W13.</p>
OUTPUT WINDOWS	
<p>2. Displays type office for "FROM" office. 11. Displays labels for each available input column for "FROM" office. 12. Display list of trunk groups from the "FROM" office to the "TO" office or area. 17. Displays the status of the TR control. 24. Displays the status of the DOC control. 36. Display part number of multipart list. 37. Displays total number of parts in a multipart list. 32. Displays a 2-character abbreviation for controls in effect for trunk groups in W12. The abbreviations used are as follows: AO — AOCR in effect (No. 4 ESS switch only) CF — Cancel from CR — Cancel RR overflow No. 4A CC only)</p>	<p>CS — Cancel/Skip (No. 4A CC only) CT — Cancel to DO — DOC activated FC — Finalized CAN to (No. 4A CC only) IR — Immediate reroute MB — TMB (No. 4A CC) or TSAR (No. 4 ESS switch) active MU — Multiple CTRLs active RR — Regular reroute SK — Skip control TR — STR (No. 4A CC and No. 4 ESS switch) TR active (No. 1/LA ESS switches)</p>

CN24 CONTROL PLANS
RR REF []

PLAN LABEL []
PLAN DISPLAYED:

PP	ON	OFF	TYPE	%	RREF	EXP	FROM "A"	TO "B"	VIA "V"
()	()	()			[]	()			
()	()	()			[]	()			
()	()	()			[]	()			
()	()	()			[]	()			
()	()	()			[]	()			
()	()	()			[]	()			
()	()	()			[]	()			
()	()	()			[]	()			
()	()	()			[]	()			
()	()	()			[]	()			

EXPAND	GRP	EQIC	PC	OFL	%OFL	OCCH	%OCC	CCIS	CTRL	DIR	ALT	RR	SFX	EXP	%	DOC
-	AB															A
	AV															V
	VB															B

PART OF FRWD() BKWD() COMPLETE PLAN ON() OFF()
EXECUTE() BY[] CLEAR()
NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]

Fig. 35—CN24—Control Plans (16.01)

CN25 MONITOR RR ANALYSIS
TIME - MON TG FROM[]

OFFICE [] [] CL
] TO[] [] ROFL[]

OFFICE "A"	OFFICE "B"	OFFICE "V"	AV	VB	AB	EXP	RR	ON
			OFL	OFL	OFL	TYP	%	RREF
						()		
						()		
						()		
						()		
						()		
						()		
						()		
						()		

EXPANSION	GRP	EQ2WO	PC	OFL	%OFL	ACH	OCCH	ICCH	%OCC	CCIS	CTRL	DIR	ALT	RRF	RRT	OFFICE
																DOC %DLY
																A
																V
																B

MON TG (MON DELETE())

PART OF FRWD() BKWD() EXECUTE() BY[] CLEAR() CN21() CN23()
NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]

Fig. 36—CN25—Monitor RR Analysis (17.01)

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CN31 DOC TRANSMISSION CONTROL				OFFICE []	CL
	MANUAL				
	ON OFF	AUTO	LOCAL		
SQ A LOW	() ()	()			
SQ A HIGH	() ()	()			
SQ B LOW	() ()	()			
SQ B HIGH	() ()	()			
CSQT A	() ()				
CSQT B	() ()				
CSST A	() ()	()			
4CT CSST B	() ()	()			
4XB CFST	() ()	()			
4XB DQ	() ()	()			
4XB SQ ON	SST	EXEC	LOCK		
0 4	ON	EXCL	FRC		
1 5		RTP	FRK		
2 6		CFSP	CARF		
3 7		CSSF	CDRF		
EXECUTE() BY [] CLEAR()					
NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]					

Fig. 37—CN31—DOC Transmission Control (18.01)

CN32 GENERAL CONTROL				OFFICE []	CL	
DRE	ROUTE	STEP SET DREF	PREPROGRAM	DOC TRANSFER	CTRL OFF:ALL()	CONTROLS IN LOCAL MODE: DRE KEYS
A		[]	ON() OFF()	LOCAL()	() () () ()	
B		[]	PPEXC()	EADAS()	() () () ()	
C		[]	AUTO		() () () ()	
D		[]			() () () ()	
UNITS: A= B= C= D=						
MISCELLANEOUS KEY CONTROLS			ON OFF	MISCELLANEOUS KEY CONTROLS		
			() ()			
			() ()			
			() ()			
			() ()			
			() ()			
			() ()			
			() ()			
			() ()			
EXECUTE() BY [] CLEAR()						
Oct 8 82 08:29:11 NWT PRINT() CLR-FAIL() DIRECTORY[] PAGE[]						

Fig. 38—CN32—General Control (19.01)

TABLE I

CN32—INPUT AND OUTPUT WINDOWS

INPUT WINDOWS	
<ul style="list-style-type: none"> 1. Office CLLI (enough characters so as not to be ambiguous). 4. Designate to request master clear of all No. 4A ETS, No. 4 ESS switch, or No. 1/1A ESS switches manual controls. For No. 4A ETS and No. 4 ESS switch, an input (+) will be replaced by "P" or "X". For No. 1/1A ESS switches, the window will be cleared and a "P" or "X" will be returned in the per control type in window 16. 5. No. 4A ETS or No. 1/1A ESS switches preprogrammed CTRL No. 7-8. No. 4 ESS switch only. Designate dom (W7) for domestic controls and intl. (W8) for international control selection for removal of all individual control types. Defaults to dom (W7) if W7 or W8 not specified. 11. DRE step setting value requested = 0-5, with 0=off. Value will replace current step (W10) and be cleared from this window following successful execution of the control. 14. Designate to turn displayed preprogram control on No. 1/1A ESS switches and No. 4A ETS. 15. Designate to turn displayed preprogram off or to remove manual exclude from DOC activation. 16, 17. Designate the type(s) of manual controls to be cleared from the No. 4 ESS or No. 1/1A ESS switches specified in W1. 	<ul style="list-style-type: none"> 18. No. 1/1A ESS switches only. Designate to request that preprogram specified in W5 to be excluded from DOC activation. 19. Designate "LOCAL" or "EADAS" to request No. 5 crossbar DOC transfer to local or to EADAS/NM control. An input "+" will be replaced by "p" (for pending) on output or by the error flag "x". The "p" will be replaced by "s" following successful execution of the control (and the "s" for the old control state will be cleared). 34, 35. Designate on (W34, W37) or off (W35, W38) to request that the associated miscellaneous key control be turned on or off. An input "+" will be replaced by "p" or "x" (also "1" for controls in local mode) as described in W19, W20. 39. Designate for control execution, only after a valid request is marked pending. An input "+" will be cleared on output. 40. User's initials to be entered in the control log for this control (optional). 41. Designate to clear pending or erroneous control requests. An input "+" is cleared on output.
OUTPUT WINDOWS	
<ul style="list-style-type: none"> 1. Office CLLI completed. 2. Displays office type for W1. 3. Displays class of office for W1. 6. "MULT" if No. 4A ETS PP in W5 is multiple control. "NONE" if the PP is not defined. Otherwise W6 is blank. 9. List of DRE route names. 10. Current step setting 0-5. 12. "P" for pending DRE requests. "X" or "L" for request errors. 13. "*" if the assoc. DRE failure discrete is active. 14, 15. Displays "S" for the current ON/OFF state of the displayed No. 4A ETS or No. 1/1A ESS switches PP control. 18. "S" if No. 1/1A ESS switches PP is manually excluded from DOC control. 19. Displays "S" for the current state (Local or EADAS/NM) of the No. 5 crossbar DOC transfer control. 20. "*" for "DRE" if DRE is in local control; and/or for "keys" if route transfer keys are under local control ("SUPT" discrete for XBT, ETDC LC/NL key for No. 1 and No. 5 crossbar). 21. Displays "*" if No. 4A ETS or No. 1/1A ESS switches PP control in W5 has been activated by DOC. 22. Type of control for the PP control entered in W5 ("CANF" for cancel from "CANT" for cancel to, "skip" "RR" for regular reroute, "RRSP" for regular spray reroute, "FCNT" for finalized cancel to, "IRR" for immediate reroute, and "IRSP" for immediate spray reroute. 23. Percent traffic controlled for the PP in W5 or percent alternate followed by "a" if CTRL has different percentages for direct and alternate. 	<ul style="list-style-type: none"> 24. ANNC. type (EA1, EA2, or NCA) for No. 4A ETS PP or No. 1/1A ESS switches PP if percent ALT. and DIR. are equal. For No. 1/1A ESS switches, if percentages differ, displays percent DIR. followed by "d". 25. Displays number of DRE units associated with DRE route A. 26. Number of DRE units Assoc. with DRE route B. 27. Number of DRE units Assoc. with DRE route C. 28. Number of DRE units Assoc. with DRE route D. 29. Type of traffic controlled ("ALT", "DAR", "DIR") For PP in W5. Blank if different percentages for alternate and direct routed traffic for a No. 1/1A ESS switches office. 30. Controlled trunk group (CLLI) for PP in W5. 31. Displays "via" if PP is a RR or IRR. 32. Displays name of via trunk group for PP reroute or immediate reroute. 33-36. List of names of miscellaneous key controls. 34, 35. Displays "S" for current ON or OFF state of associated miscellaneous key control. 37, 38. Displays "DOM" for No. 4 ESS switch if W7 has been designated. Blank otherwise. 43. Displays "INTL" for No. 4 ESS switch if W8 has been designated. Blank otherwise. 44. Displays type of controls that can be cleared by designating in W16 for No. 4 ESS switch and No. 1/1A ESS switches. 45. Displays type of controls that can be cleared by designating W17 for No. 4 ESS switch.

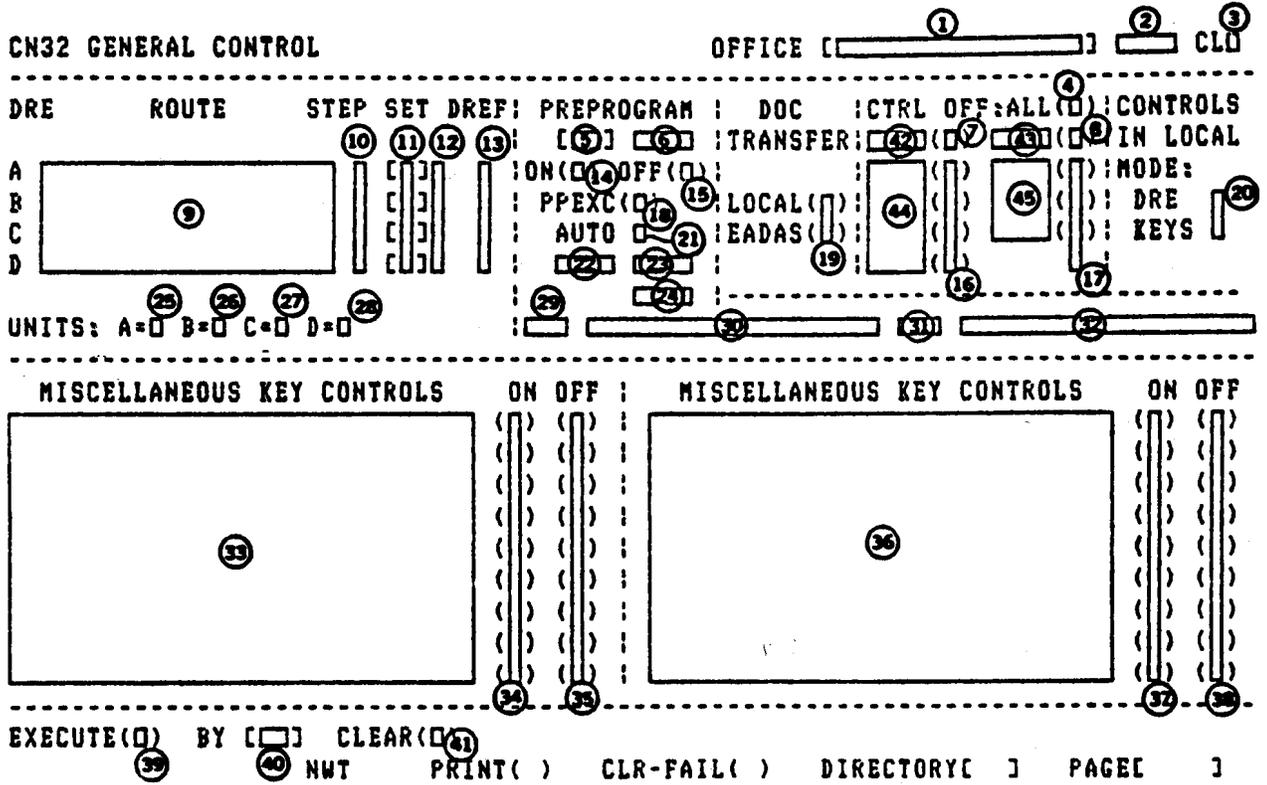


Fig. 39—CN32—Input and Output Windows (19.06)