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1. GENERAL

1.01 This section provides a description of traffic data collected in the No. 1 Electronic Switching System (ESS) and the methods used to store and printout the data.

1.02 When this section is reissued, the reason for reissue will be listed in this paragraph.

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 A description of data collection, storage and printing is provided in Parts 1 through 5.

1.05 Methods for obtaining printouts by scheduling or immediate requests are provided in Parts 6 through 8.

1.06 Detailed administrative procedures for network measurements are provided in Dial Facilities Management Practices (DFMPs), Division H, as follows:

- Section 6i(2)—Hourly Measurements
- Section 6i(3)—Weekly Measurements
- Section 6i(4)—Daily Measurements
- Section 6i(5)—Quarter-Hour Measurements

2. TRAFFIC DATA USES

2.01 Traffic data are used for a variety of purposes, some of these are:

- (a) Engineering and forecasting equipment and trunks.
- (b) Administering available equipment for maximum effectiveness.

(c) Providing basic indices reflecting the general level of service given to the customer.

(d) Guidance in instituting local network management actions during overload conditions.

(e) Serving as a basis for division of revenue studies.

3. TYPES OF DATA

3.01 The traffic data includes peg counts, overflows, and usage. The following paragraphs describe these counts.

PEG COUNT

3.02 Peg count is a cumulative count of the number of times a specific event occurs during a fixed time interval. Some examples are as follows:

- Number of times the system attempts to seize a customer digit receiver (CDR) in an hour.
- Number of times an attempt is made by an incoming call to seize a receiver in an hour.
- Number of times the system completes a cycle through all levels of the base level programs (E to E visitation rate) in a 15-minute period.

OVERFLOW

3.03 Overflow is a cumulative count of the number of times an attempt to cause a specific event failed during a fixed time interval because of the lack of specific facilities or inability to connect to available facilities.

3.04 A score of an overflow register does not always imply that a call has been lost, rather it sometimes indicates that a call has been delayed, that is, placed in a queue, where it will be held until the desired circuit becomes available.

- An example of an overflow score indicating a lost call would be an outgoing call requiring an outgoing trunk in a full direct trunk group, where all trunks are busy (call routed to overflow).

- A delayed call example is a customer request for dial tone and all CDRs are busy, the request is loaded in a queue, and will be held (first come, first served) until an idle circuit becomes available. Thus the call is not lost but rather delayed, and will be scored as a CDR overflow.
- At present, the overflow register is limited to 2047 counts.

Note: Be aware that this register may recycle to zero and then count again. This, of course, will give an inaccurate measurement.

USAGE

- 3.05** Usage is a count of the number of items found in a busy state during each periodic scan of a particular group of items. The busy conditions found during each such scan are totaled for a fixed period of time (ie, an hour) to obtain usage.
- 3.06** Usage measurements with scanning frequencies of 36 scans per hour (1 every 100 seconds) will result in hundred call seconds (CCS), and those with fast scan, that is 360 scans per hour (1 every 10 seconds) will result in CCS times ten. The latter should be divided by ten to obtain CCS.
- 3.07** There are two basic types of usage:
- **Traffic Usage:** A count of customer generated traffic usage.
 - **Maintenance Usage:** A count of maintenance busy (out of service) usage.
- 3.08** Usage measurements will **exclude** maintenance busy usage for groups assigned to fast scan (10-second scan). Since it is desirable to assign most service circuit trunk groups to fast scan, usage obtained on service circuit groups is generally traffic usage (maintenance excluded).
- 3.09** Usage measurements will **include** maintenance busy for groups assigned to regular scan (100-second scan). Since trunk groups are assigned to regular scan, usage obtained for trunk groups will include maintenance usage.

4. TELETYPEWRITER FACILITIES

- 4.01** The ESS measurement program is arranged to query certain holding registers at specified times, and convert the data to 100 words per minute teletypewriter (TTY) signals. The signals are sent to a 4-row TTY, automatic send-receive (ASR) which normally is remoted to network administrative quarters.
- 4.02** A second TTY has been provided with CTX-7 and later generic programs to relieve the load on the first network administration.
- 4.03** The network administration TTY is an important element in the day-to-day administration of the No. 1 ESS office. All management and clerical personnel associated with the No. 1 ESS office should be fully trained on the capabilities of the network administration TTY.
- 4.04** For detailed information on TTY capabilities and operation, refer to Dial Facilities Management Practices Division H, Section 6d(4), Teletypewriter.
- 4.05** The Engineering and Administration Data Acquisition System (EADAS) feature has been provided in CTX-8 and later generic programs. The use of EADAS will modify the daily routine of TTY operation.
- 4.06** For additional information on EADAS, refer to Dial Facilities Management Practices, Division H, Section 6J(3), Data Management, PATROL Batch Data Entry.

5. TRAFFIC REGISTER DESCRIPTIONS

- 5.01** Most switching systems utilize conventional electromechanical traffic registers which are photographed periodically or read manually to obtain the desired data. In contrast, the No. 1 ESS with its central processor can collect, store, summarize, and hold all data desired. When requested, this data can be transmitted to a remote centralized computer via a data link for further processing. Or, the data can be loaded into a TTY output buffer for printout at a convenient location.
- 5.02** The No. 1 ESS must have memory allocated for the task of collecting, storing, and summarizing traffic data. The fact that this data is generated in a real-time environment (customers

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using their telephones) demands that the memory be easily changeable. For this reason specific words are provided in call store memory called up-down counters, accumulators, holding registers, and totaling registers.

UP-DOWN COUNTERS

5.03 Up-down counters are provided for most groups of items for which usage is measured. Such items are trunks, service circuits, nonequipment registers, etc. Each time the item is busied, one is added to the up-down counter corresponding to its group. When the item is idled, one is subtracted. The contents of the up-down counter associated with any group of items should equal the number of busy items in the group.

5.04 It is important to realize that the up-down counter contents cannot be zeroed automatically by the system. If it were zeroed, it would no longer reflect the number of busies in the group, unless all items are idle by chance.

- Thus, an error in the up-down counter could go undetected for a long time.
- One method to detect high usage measurements is to request a printout during the night when usage is the lightest. Example: Sunday, 3 to 4 am.
- Items with suspected false usage should be referred to the maintenance force for investigation.

ACCUMULATORS

5.05 Accumulators are provided for all items for which peg, overflow, and usage counts are maintained. Each time a given event occurs the corresponding accumulator is incremented. For usage counts, each time the periodic scan occurs the contents of the associated up-down counter is added to the corresponding accumulator.

HOLDING REGISTERS

5.06 Holding registers are provided for all items whose counts are assigned to a collection schedule. A collection period may span a 15-minute period, an hour, or a day. At collection time the contents of specified accumulators are moved to corresponding holding registers. The accumulators

are then zeroed to be ready for a new collection period. The counts are subsequently printed out from the holding registers if requested on a printout schedule.

TOTALING REGISTERS

5.07 Totaling registers are provided for all items whose counts are measured on more than one schedule. Totaling registers receive intermediate totals for the longer measuring intervals. For example, four quarter-hour totals are added in hourly totaling registers.

SEQUENCE OF OPERATION

5.08 The following are typical descriptions of the sequence and use of the various counters in call store for peg count, overflow, and usage.

5.09 *Peg Count and Overflow Register Operation* (Fig. 1):

- (1) Increment the accumulator whenever a certain event occurs.
- (2) After a specified time, transfer the contents of the accumulator into an associated holding register.
- (3) Zero the accumulator.
- (4) If requested, print contents of holding register (must be before next unloading of accumulator or it will be rewritten with the new data).
- (5) Repeat (1) through (4).

5.10 *Totaling Register Operation* (Fig. 2):
Example: Consider a peg count measurement required on the quarter-hour and hourly schedules.

- (1) Increment the quarter-hour accumulator whenever a certain event occurs.
- (2) After a specified time, move the contents of the quarter-hour accumulator into the corresponding holding register. Add the contents of the same accumulator to the respective totaling registers.

- (3) Zero the quarter-hour accumulator.
- (4) After a specified time move the contents of the totaling register into the corresponding holding register.
- (5) Zero the totaling register
- (6) When requested, print the contents of each holding register. In the example, the quarter-hour will print four times during the hour and the hourly will print once.
- (7) Repeat (1) through (6).

5.11 Usage Register Operation—Trunks and Service Circuits (Fig. 3):

- (1) Increment or decrement the up-down counter corresponding to a specific group of items by one whenever one item of that group becomes busy or idle respectively. (Thus the up-down counter reflects the number of busies in a group at any given instant.)
- (2) At a specified frequency (once every 10 seconds for fast scan or once every 100 seconds for regular scan) read contents of up-down counter and add it to the contents in the usage accumulator.
- (3) After a specified time, transfer contents of usage accumulator into an associated holding register.
- (4) Zero the usage accumulator.
- (5) If requested, print contents of holding register. It must print before next unloading of usage accumulator or it will be rewritten with new data.
- (6) Repeat (1) through (5).

5.12 Usage Register Operation—Junctur Type (Fig. 4):

- (1) Accumulates the usage counts for certain items by adding the associated busy bits in

busy—idle words to an accumulator. It does this every 100 seconds for long holding time items such as junctors. It uses 10 seconds for short holding time items.

- (2) After a specified time, transfer contents of usage accumulator into an associated holding register.
- (3) Zero the usage accumulator.
- (4) If requested, print contents of holding register. It must print before next unloading of usage accumulator or it will be rewritten with new data.
- (5) Repeat (1) through (4).

5.13 Usage Register Operation—Weekly Measurements (Fig. 5):

- (1) Every 100 seconds, count the number of busy bits corresponding to the item to be measured as follows:

- **Selected Lines and Concentrator Usage:** Accumulate the usage of each line by counting each line's activity bit (line bit).
- **Line Concentrator Usage:** Accumulates the usage by counting the number of busy bits corresponding to the activity of that concentrator's A-links.
- **Trunk Link Network—Grid Usage:** Accumulate the usage by counting the number of busy bits corresponding to the activity of that trunk switch frame grid's A-links.
- **Service Link Network—Input Switch Usage:** Accumulates the usage by counting the number of busy bits corresponding to the activity of that input switch's S-links.

- (2) Add the count to the contents of the corresponding accumulator.

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- (3) When requested, print the contents of the accumulator.
- (4) The recycle routine will zero the accumulator.
- (5) Repeat (1) through (4).

6. TRAFFIC SCHEDULE TIMETABLE MATRIX

DESCRIPTION

6.01 Traffic measurements are recorded on seven different schedules:

- (1) Weekly (W)
- (2) Daily (D)
- (3) Hourly or continuous (C)
- (4) Hourly (H)
- (5) Fixed quarter-hour (TC15)
- (6) Selected quarter-hour (DA15)
- (7) Signal processor quarter-hour (SP15).

Note: SP15 removed with Generic Program CTX-7, Issue 8.

6.02 All of the traffic schedules can be requested on the traffic schedule timetable matrix except the quarter-hour schedules.

6.03 The ESS 1402 Form, Traffic Measurement Schedule, is used to record the current state of the traffic schedule timetable matrix. Refer to Fig. 6 for an example of typical entries on the ESS Form 1402.

TIMETABLE MATRIX ROUTINES

6.04 The traffic schedule timetable matrix stored in call store activates the collect routines, print routines, and activate routines.

A. Collect Routines

6.05 The collect routines tell the program at which times of the day to collect data. The collect routines cause all the traffic data associated

with a specific schedule to be transferred from the accumulators to the holding registers.

6.06 When this action takes place the accumulators are reset to zero and the previous data in the holding registers is replaced by the data from the accumulators. If the H or C collect routine is not performed for an interval of several hours, the accumulators will continue to collect and the data then transferred to the holding registers will reflect the entire period of time. For example if the H or C routine is set for 12 midnight and for 9:00 am, the data collected at 9:00 am will be the accumulation from 12 midnight to 9:00 am. The data will remain in the holding registers until the next collect occurs.

B. Print Routines

6.07 The print routines tell the program when to print the holding registers associated with the various registers on the network administration TTY channel.

6.08 If data is being collected hourly, the holding registers will retain the data for the one hour period. The data may be printed anytime during that hour. It can be scheduled to be printed out any quarter-hour during that hour. Routines 07, 08, 13, 14, 15, 16, 17, 19, 20, 21, and 22 cannot be scheduled to print out at the same quarter-hour (routines 19 through 22 are available with CTX-7 and later generics).

6.09 Most traffic data printouts are received on the network administration TTY only. The TC15 schedule is transmitted to both the network administration, master control center (MCC), and network management TTYs. The SP15 is transmitted to both the network administration and MCC TTYs. All maintenance measurements are received only on the MCC TTY.

C. Activate Routines

6.10 Certain traffic program routines are activated by the timetable matrix, such as the W schedule collection, start of the automatic line insulation testing, etc.

TRAFFIC MEASUREMENT PROGRAM

6.11 The traffic measurement program consists of several routines, which are periodically

executed according to a timetable matrix. This matrix consists of a block of 35 call store words which is provided in every office. The timetable routines are scheduled via a message from either the network administration or MCC TTY. This message will set memory bits in the timetable matrix which identifies the exact period or periods to be measured or printed out by quarter-hour, hour, and day.

6.12 Routines that may be scheduled are shown in Fig. 7 (CTX 6 and lower) or Fig. 8 (CTX 7 and higher).

A. Routines 00 Through 22

6.13 Routine 00: This routine is used to activate the automatic line insulation test. It is the responsibility of the maintenance department, but may be scheduled via the network administration TTY. In CTX-6 and earlier generic programs the automatic line insulation test was activated via routine 21.

6.14 Routine 01: This routine is used to deactivate the automatic trunk progression test program. It is the responsibility of the maintenance department but may be scheduled via the network administration TTY. In CTX-6 and earlier generic programs this test program was deactivated via routine 22.

6.15 Routine 02, 03, and 04, H Schedule Collect: H (1), H (2), and H (3) identifies three patterns of the H schedule. For example, collection periods:

9:00—10:00
10:00—11:00 Could be assigned to H (1)

11:30—12:30
15:30—16:30 Could be assigned to H (2)

12:45—13:45
13:45—14:45 Could be assigned to H (3)

H (1), H (2), and H (3) should never overlap.

- The H schedule has the flexibility of collecting data at these different quarter-hour periods of the day. These periods must not overlap. If the H (1) collect schedule is set for 11:15 to 12:15 you cannot set the H (2) or H (3) schedules for 11:30, 11:45, or 12:00.

6.16 Routine 05, Collect C: The C (continuous) schedule does not have the flexibility of the H schedule. It must be set for the same quarter-hour throughout the day.

6.17 Routine 06: This routine is reserved for future applications. Previous use of this routine was manufacture discontinued (MD) in CTX-3 and earlier generic programs.

6.18 Routine 07 and 08: Connected trunks per group. These routines tell the program to compute and print the total number of trunks connected (in memory) for each of the trunk group numbers (TGNs) assigned on the H or C schedule.

- The program looks at all trunk groups assigned with measurement code 00 on the ESS 1400 Forms and will print out in the sequence assigned to measurement code 00 and all other measurement codes will be ignored.
- The register numbers on the connected trunks per group printout will not be the same as on the H or C schedule.
- The connected trunks per group printout is in the same format as the H and C schedule printouts.
- The connected trunks per group will not include trunk groups assigned to fast scan (10-second scan).
- Routines 07 and 08 cannot be assigned on the same hours as the H or C schedules because both use the same accumulators and holding registers.

6.19 Routine 09, 10, and 11: These routines control the collecting of the weekly schedule. The purpose of the W schedule is to collect load balance and administrative data.

6.20 Routine 09, Recycle: Specifies when to zero all weekly usage accumulators in preparation for the next collection period of weekly data.

6.21 Routine 10, Start Collect: This routine tells the program at what time of day to begin accumulating the weekly data.

6.22 Routine 11, Stop Collect: This routine tells the program at what time of day to stop accumulating the weekly data.

6.23 Routine 12, Print D: This routine schedules the printing of the contents of the daily holding registers. The daily schedule is a set of fixed 24-hour counts. At 2:30 am each day, the data is transferred to holding registers and the accumulating registers are reset to zero. The holding registers store the information for the next printout. The items measured on schedule D include office counts, division of revenue counts, general purpose counts, and coin zone counts.

- The office counts (TC24A) are always printed when the daily schedule is requested.
- Division of revenue counts (TC24B) are included on the daily schedule, when activated.
- General purpose counts (TC24C) are included on the daily schedule, when activated.
- Coin zone counts (TC24Z) are included on the daily schedule, when activated (CTX-6 and later generic programs). They were previously included with the general purpose registers.

6.24 Routine 13, 14, and 15; Print H (1), H (2), and H (3): These routines tell the program when to print out the contents of the holding registers associated with the H schedule. It should be coordinated with the collect routine 02, 03, and 04. These routines must not be scheduled at the same quarter-hour as routines 07, 08, 16, 17, or 19 through 22.

6.25 Routine 16, Print C: This routine tells the program when to print out the contents of the holding registers associated with the C schedule. It should be coordinated with routine 05. This routine must not be scheduled at the same quarter-hour as routine 07, 08, 13, 14, 15, 17, or 19 through 22.

6.26 Routine 17, Print W: This routine tells the program when to print out the contents of the accumulators associated with the W schedule.

- Normally this print routine will be scheduled at the end of the week or study period. It is recommended that this routine be printed

daily as a protection against loss of data due to reinitialization. The printout of weekly counts after each day will consist of a cumulative total of all hours collected to and including the day on which the printout is requested, thus the weekly total will not be destroyed.

- This routine must not be scheduled at the same quarter-hour as routine 07, 08, 13, 14, 15, 16, or 19 through 22.
- If a print routine is scheduled and the associated holding registers contain all zeros (no data), the printout will only show the identity line and one row of registers, registers 0000 through 0009 as all zeros, if no recycle has taken place. The entire schedule will be printed out as zeros if recycle has taken place.

6.27 Routine 18: This routine is used to start the automatic trunk progression test program. It is the responsibility of the network maintenance department but may be scheduled via the network administration TTY.

6.28 Routine 19: The activation of this routine, in CTX-7 and later generic programs, will direct the H (1) schedule to be output on perforated tape on the network administration TTY. This routine must not be scheduled at the same quarter-hour as routines 07, 08, 13 through 17, or 20 through 22. Previous use of this routine, in CTX-3 and earlier generic programs, has been manufacture discontinued (MD) (see Note).

6.29 Routine 20: The activation of this routine, in CTX-7 and later generic programs, will direct the H (2) schedule to be output on perforated tape on the network administration TTY. This routine must not be scheduled at the same quarter as routines 07, 08, 13 through 17, 19, 21, or 22. Previous use of this routine, in CTX-3 and earlier generic programs, has been MD (see Note).

6.30 Routine 21: The activation of this routine, in CTX-7 and later generic programs, will direct the H (3) schedule to be output on perforated tape on the network administration TTY. This routine must not be scheduled at the same quarter-hour as routines 07, 08, 13 through 17, 19, 20, or 22. Previous use of this routine, was to start automatic line insulation test in CTX-6 and

earlier generic programs. Start automatic line insulation test has been moved to routine 00 in CTX-7 and later generic programs (see Note).

6.31 Routine 22: The activation of this routine, in CTX-7 and later generic programs, will direct the C schedule to be output on perforated tape on the network administration TTY. This routine must not be scheduled at the same quarter-hour as routines 07, 08, 13 through 17, or 19 through 21. Previous use of this routine was to deactivate the automatic trunk progression test program in CTX-6 and earlier generic programs. Automatic trunk testing has been moved to routine 01 in CTX-7 and later generic programs (see Note).

Note: Only the print or perforate routine may be specified for a specific quarter-hour. If both requests are scheduled, the perforate request will be executed and the print request will be ignored. The mode control switch on the network administration TTY should remain set at KT and the appropriate perforate routine set to properly execute print and perforate routines. If the perforate routine of the H or C schedule is interrupted by the TC15 message, the tape perforator device will be turned off until the printing of the quarter-hour message is completed, then the tape perforator is reengaged to complete the interrupted message.

B. Days, Hours, and Quarter-Hours

6.32 The traffic program consists of routines which are executed periodically according to a timetable matrix located in the call store. This timetable is established and updated by appropriate messages from either the MCC or network administration TTYs. These messages set the days of the week, the hours of the day, and the quarter-hour for each schedule routine.

6.33 The bits are represented in memory by zero when idle, and one when active. Active bits indicate a routine is scheduled to start or stop. The first seven bits (of the 35) or positions are used to specify the day of the week. Sunday is represented by the leftmost bit continuing through the week to Saturday which is represented by the rightmost bit. A one is typed in each bit position representing a day on which the job is to be performed. Zeros are typed in the other bit positions.

6.34 The next 24 positions are used to specify the hour of the day. Midnight is represented by the leftmost bit, and continuing to the last hour of the day (23:00) which is represented by the rightmost bit. A one is typed in each bit position representing an hour on which the job is to be performed. Zeros are typed in the other bit positions.

6.35 The last four positions are used to specify the quarter-hour. On the hour is represented by the leftmost bit, the next bit represents 15 minutes after the hour, the third bit representing 30 minutes after the hour, and the fourth bit, 45 minutes after the hour. A one is typed in the bit position representing the quarter-hour on which the job is to be performed. Zeros are typed in the other bit positions.

Example: Refer to Fig. 6, H(1) collect routine 02.

TC - TIME - 02,

SMTWTFS
0111110,00000000001100000000000,1000

Collect all items assigned to H schedule on Monday, Tuesday, Wednesday, Thursday, and Friday on the hour from 10:00 to 11:00 am. All 35 positions must always be entered on the TTY message.

7. REQUESTING PRINTOUTS

TIMETABLE MATRIX (TRAFFIC MAP)

7.01 A printout on the network administration TTY of the entire timetable matrix in binary form may be obtained by typing the following message at either the network administration or MCC TTYs:

TC-WORK-SET,03,13

The resulting printout will be headed:

TC16 TR MAP

7.02 The format will list the routines as 23 single column entries numbered 00 through 22, counting right to left. The first seven lines of the message represent the seven days of the week, commencing with Sunday, followed by 24 hourly representations (midnight to 11:00 pm), and four

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quarter-hourly periods. The matrix will show a one for items scheduled and a zero for nonscheduled routines.

7.03 A timetable printout is shown in Fig. 9.

IMMEDIATE D, H, C, OR W

7.04 An immediate printout of the contents of the D, H, or C holding registers or W accumulators is possible by typing the following message:

TC-WORK-SET,02,aa.

- where aa = 12 for schedule D
- = 15 for schedule H
- = 16 for schedule C
- = 17 for schedule W.

7.05 It is important when requesting immediate printouts that the typing does not overlap into a scheduled printout. This will cause the data to be mutilated.

8. LOST DATA DUE TO TRAFFIC MAP WIPEOUT

8.01 During an emergency action phase 4 or higher the traffic map will be deleted. As a result, some traffic data may be lost.

8.02 The traffic map should be reentered as soon as possible to prevent additional lost data.

8.03 It is recommended that a copy of the traffic map be kept at the network administration and maintenance locations. This will aid in a quick reentry of the map into memory via the TTY if required.

8.04 A method of phase 4 or higher awareness should be established such as:

- Monitoring PM01 printout daily for phase action
- Daily review of the traffic map
- Arrangement for notification by the maintenance force.

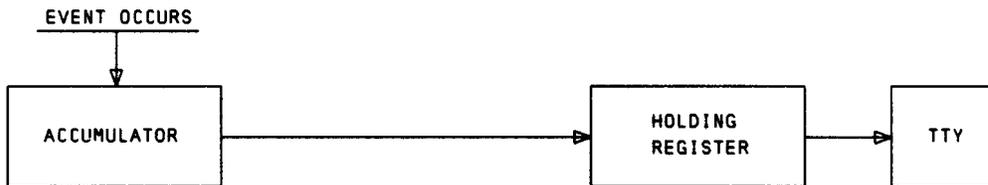


Fig. 1—Peg Count and Overflow Register Operation (5.09)

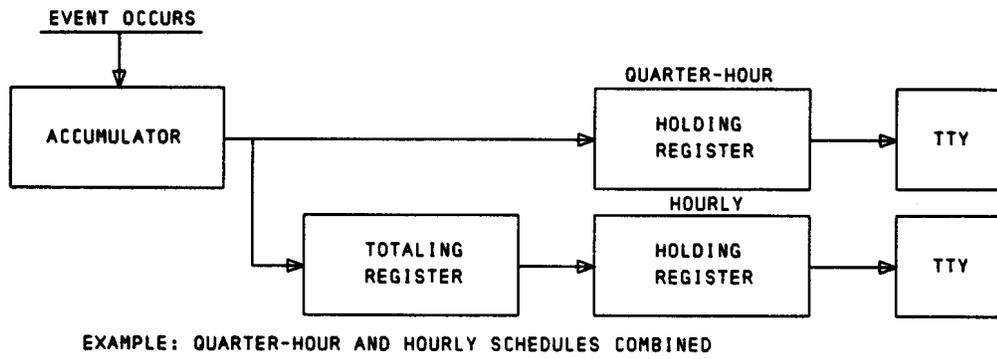


Fig. 2—Totaling Register Operation (5.10)

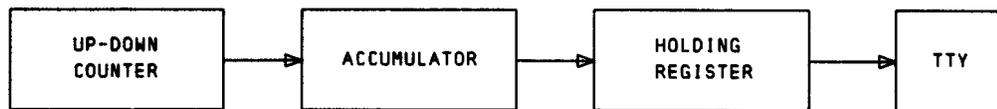


Fig. 3—Usage Registers Operation—Trunks and Service Circuit (5.11)

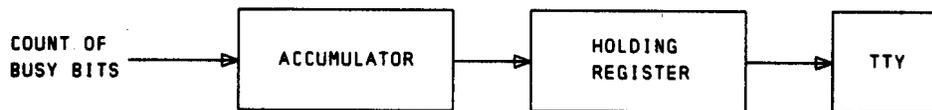


Fig. 4—Usage Register Operation—Juncture Type (5.12)



Fig. 5—Usage Register Operation—Weekly Measurements (5.13)

ROUTINE	SCHEDULE	TYPE OF ROUTINE
00	—	
01	—	
02	H (1)	Collect — Recycle Accumulator
03	H (2)	Collect — Recycle Accumulator
04	H (3)	Collect — Recycle Accumulator
05	C	Collect — Recycle Accumulator
06		Reserved
07	H	Print Connected Trunks/Group
08	C	Print Connected Trunks/Group
09	W	Recycle Weekly Usage Counter
10	W	Start Weekly Accumulations
11	W	End Weekly Accumulations
12	D	Daily Print
13	H (1)	Hourly H (1) Print
14	H (2)	Hourly H (2) Print
15	H (3)	Hourly H (3) Print
16	C	C Schedule Print
17	W	Weekly Print
18	—	Start—Automatic Trunk Progression Tests
19	—	
20	—	
21	—	Start — Automatic Line Insulation Test
22	—	Stop — Automatic Trunk Progression

Fig. 7—Traffic Measurement Program Routines (CTX-6 and Lower Generic Programs) (6.12)

ROUTINE	SCHEDULE	TYPE OF ROUTINE
00	—	Start — Automatic Line Insulation Test
01	—	Stop — Automatic Trunk Progression
02	H (1)	Collect — Recycle Accumulator
03	H (2)	Collect — Recycle Accumulator
04	H (3)	Collect — Recycle Accumulator
05	C	Collect — Recycle Accumulator
06		Reserved
07	H	Print Connected Trunks/Group
08	C	Print Connected Trunks/Group
09	W	Recycle Weekly Usage Counter
10	W	Start Weekly Accumulations
11	W	End Weekly Accumulations
12	D	Daily Print
13	H (1)	Hourly H (1) Print
14	H (2)	Hourly H (2) Print
15	H (3)	Hourly H (3) Print
16	C	C Schedule Print
17	W	Weekly Print
18	—	Start Automatic Trunk Progression Tests
19	H (1)	Hourly H (1) Tape Perforate
20	H (2)	Hourly H (2) Tape Perforate
21	H (3)	Hourly H (3) Tape Perforate
22	C	C Schedule Tape Perforate

Note: Routines 00, 01, 19 through 22 are effective with CTX-7 and later generic programs.

Fig. 8—Traffic Measurement Program Routines (CTX-7 and Higher Generic Programs) (6.12)

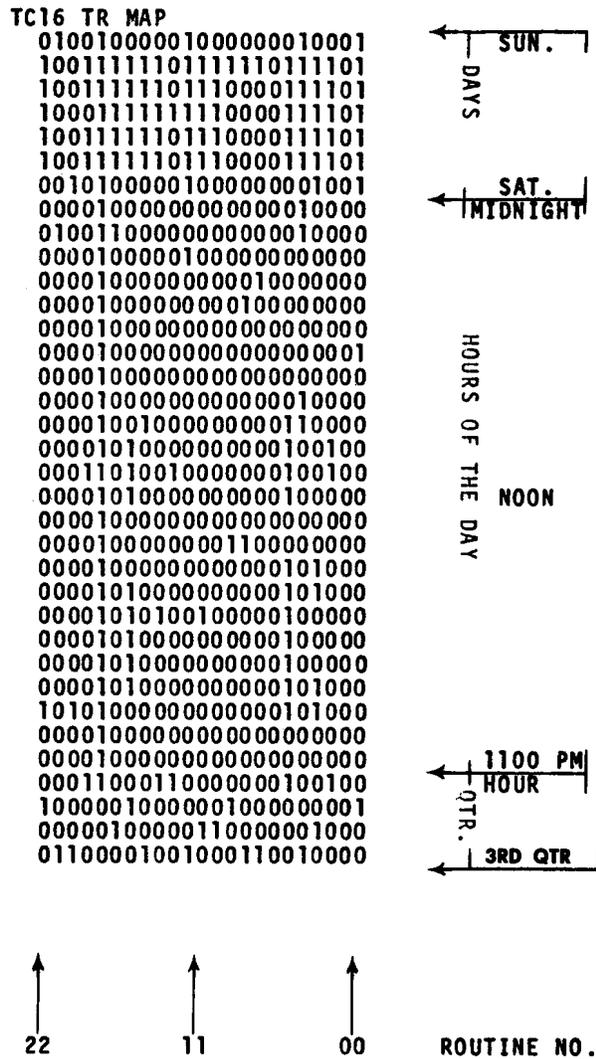


Fig. 9—TC16 Timetable Matrix Printout (Traffic Map) (7.03)