TELETYPEWRITER ARRANGEMENTS
COMMON CONTROL ADMINISTRATION
NETWORK OPERATIONS METHODS
NO. 3 ELECTRONIC SWITCHING SYSTEM

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1. GENERAL

1.01 This section describes the dedicated, autoconnect partially dedicated, and autoconnect nondedicated teletypewriter (TTY) arrangement in the No. 3 Electronic Switching System (ESS). Autoconnect equipment, Local Test Desk (LTD) autoconnect, and assignment requirements of the network administrator are also discussed.

1.02 This section is reissued to include the autoconnect partially dedicated TTY and the LTD autoconnect arrangements.

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

1.04 The autoconnect partially dedicated and autoconnect nondedicated arrangements allow users of the Network Administration, service order, and repair service TTYs to connect their TTYs to a No. 3 ESS through a dial-up connection. The dial-up connection eliminates the need for a dedicated TTY and outside plant for each ESS office. The dial-up procedure is initiated either by the TTY user or by the No. 3 ESS. The switching control center (SCC) may also make a connection to the ESS office using the autoconnect arrangement in the event of a failure in the private line to the SCC TTY.

1.05 The Network Adminstration, service order, and repair service TTYs each may be dedicated or autoconnect independent of the arrangement used for the other TTYs.

1.06 No. 3 ESS has the capability of providing three different configurations for TTY attachment. Each option may be recent changed

as conditions, requirements, and equipment available dictate. Recent change is the method used to enter translations and office options as needed by the user. The three different configurations available are dedicated and two distinctly different variations of the autoconnect option. Each option has advantages and disadvantages over the other options. The following paragraphs briefly describe these three options.

1.07 DEDICATED: The dedicated option requires the use of fully dedicated facilities. In this case, one TTY, one dedicated cable facility, and one dedicated controller and port for each dedicated facility other than the local maintenance TTY channel. With the dedicated option, all measurement schedules have the ability to be printed at a predetermined time by the Traffic Schedule Block. The maximum amount of equipment and costs are associated with the dedicated option. This arrangement is shown in Fig. 1.

1.08 AUTOCONNECT—PARTIALLY DEDICATED: The autoconnect partially dedicated option requires the use of a dedicated TTY controller and an autoconnect circuit to dial into the switching network. There are no restrictions on the number that the No. 3 ESS may dial to access the network. All measurement schedules are available to the network administrators with the partially dedicated autoconnect option.

1.09 With the dedicated option, the No. 3 ESS transfers the data to the TTY buffer and prints directly to the TTY. The autoconnect partially dedicated option requires the No. 3 ESS to dial a predetermined number, prior to the time of the scheduled printout. Upon completion of the call, the No. 3 ESS will transfer the data from the accumulating registers to the TTY buffer and then to the secured dialed connection.

1.10 With this option, as illustrated in Fig. 2, not as many physical facilities are needed as with the dedicated option. Figure 2 shows the Local Maintenance Channel with the dedicated channel, the Network Administration channel with the autoconnect partially dedicated channel, and the Repair Service Bureau and Service Order Bureau sharing a port with the autoconnect nondedicated option.

1.11 AUTOCONNECT—NONDEDICATED: The second autoconnect option is the nondedicated arrangement. For this arrangement all users, except the local maintenance channel, share a common source. This option reflects the minimal requirements for facilities. A common port on a TTY controller, the dialed switched path, and a TTY that is capable of being shared by several No. 3 ESS offices are the inherent features of the autoconnect nondedicated option. Each user is identified by a trigger number and return number. The trigger number is the telephone number that is dialed when a connection is initiated by a user between a TTY and the ESS. The return number is associated with the trigger number and is used by the No. 3 ESS to call the TTY.

1.12 When the autoconnect nondedicated option is specified in translations, there is a modification of the measurement schedules. The "C-"schedule is not available. All data that might be assigned to a "C-"schedule should be assigned to the "D-" or "H-"schedule. Figure 3 illustrates the utilization of the autoconnect nondedicated option. In Fig. 3, the network administrator, service order, and repair service bureau are nondedicated and use the same TTY controller and port.

1.13 For general information on TTY operation in the No. 3 ESS, see the following sections of the Bell System Practices.

SECTION	TITLE
233-110-115	Teletypewriter and Teletypewriter Controller—Description and Theory of Operation
233-152-120	Teletypewriter Software—Subsystem Description

2. OPERATION

2.01 Each TTY channel is assigned a ***message class.*** The message classes are as follows.

Message Class	TTY
0	Local Maintenance (located on the maintenance frame in the No. 3 ESS office)
1	Backup Maintenance
2	Service Order Bureau

3	Network Administration
4	Repair Service Bureau
5	Office Records
6,7	Automatic Message Accounting Recording Center (AMARC)

Note: The message class and the TTY controller and port are not necessarily the same.

2.02 The LTD is not associated with a TTY controller or an autoconnect line circuit. The message class parameter is replaced by a **NIGHT** keyword. The TTY controller keyword is replaced with a **TER** keyword and is the recognition of the member number of the assigned incoming local test desk trunk circuit. In addition, a code defined in translations specifies a function to be performed by the autoconnect programs. There is a maximum of two incoming LTD trunks permitted in a No. 3 ESS office. Figure 4 is an example of the LTD autoconnect nondedicated arrangement. Additional information on message class and function codes may be found in Section 233-190-033.

2.03 Different sets of input and output messages are available to each message class with the exception of classes 0 and 1, which have an identical set of messages. All available input and output messages for No. 3 ESS are listed in Input Message Manual, IM-3H300, and Output Message Manual, OM-3H300. Output messages intended for a specific TTY will cause the No. 3 ESS to dial a specific stored directory number, called the return number, associated with a message class, if ***AUTO*** is specified for autoconnect.

2.04 For each message class used with both autoconnect options, partially dedicated and nondedicated, the network administrator must assign a different ***trigger number.*** In addition to associating a return telephone number, the trigger number associates the message class and set of messages allowed to a specific user.

2.05 Following is the procedure the network administrator must use to make a connection between the Network Administration TTY and the ESS. Except for trigger number and message class assignments, the procedure is the same used to make a connection between other TTYs and the ESS. This procedure will be valid for both autoconnect options, partially dedicated and nondedicated.

2.06 The network administrator dials the appropriate trigger number from any telephone. Upon completion of the call to the ESS, the calling trunk or line is connected to high tone. After hearing high tone, the network administrator should remain off-hook for at least ten seconds. After ten seconds, the network administrator may hang up.

2.07 The ESS locates the message class and return number associated with the trigger number. The return number is the telephone number of the TTY to be called. The same return number may be assigned to two or more trigger numbers; however, different message classes must be used. A message class may be assigned to more than one trigger number; however, only one may specify one of the autoconnect modes.

2.08 The ESS calls the return number (telephone number of the Network Administration TTY). The ESS will wait 60 seconds for an answer by the TTY. If no answer is received within 60 seconds, the ESS abandons the call. Another call to the TTY is made by the ESS 30 seconds after abandonment. If the TTY again does not answer within 60 seconds, the ESS abandons and prints a message on the maintenance TTY indicating the failure.

2.09 If either attempt is successful and the Network Administration TTY answers, the ESS will sign on by printing a message that includes the TTY ID assigned to the ESS office. If no further output is printed, the network administrator may proceed to type input messages.

2.10 Upon completion of the TTY session, the network administrator goes on-hook to disconnect. The network administrator may also assign a ***time-out option*** for disconnection. The time-out option specifies a period of time, up to 205 seconds from the last input message, after which the ESS will disconnect. The network administrator may also specify that no time-out occur, in which case the ESS will remain connected indefinitely. A different time-out may be specified for each trigger number.

2.11 Caution should be exercised in the specifying of the time-out option. If a user has been

assigned "no time-out", and that user does not go on-hook, a conflict for any subsequent user could occur. It is recommended that the network administrator assign a time-out of 200 seconds to message class 3, Network Administration.

2.12 To each message class, the network administrator may assign ***automatic dial-up.*** Automatic dial-up allows the ESS to call a TTY without a trigger number being dialed when an output message applying to the TTY's message class is to be printed. Automatic dial-up should be specified for message class 3, Network Administration. Do not specify automatic dial-up for message class 0 or 1.

2.13 Automatic dial-up should be used with caution in a manner similar to the time-out option. Conflicts could occur with other users. If another TTY is using the autoconnect port and a message is "scheduled" to print to another user of the autoconnect port, the message will be delayed and probably routed to the maintenance TTY due to the busy condition. Automatic dial-up is required for printing data results as part of the "D"-schedule routine prints that may be scheduled during the late night hours (10 p.m.—6 a.m.). Automatic dial-up should also be specified for the Network Administration channel when the autoconnect partially dedicated option is desired, and also for Repair Service Bureau use with line state information.

2.14 When a message or a report is to be printed on the Network Administration TTY but the autoconnect port is in use by another TTY, the ESS will wait up to ten minutes for the autoconnect port to become clear. If, at the end of ten minutes, the port is still in use, the ESS will print the message or report on the maintenance TTY.

2.15 The time-out option does not apply to an automatic dial-up connection. During an automatic dial-up connection, the ESS will wait 15 seconds after printing the last output message before disconnecting.

3. EQUIPMENT

3.01 The interface device that acts as a buffer between the active No. 3 ESS central control and a TTY is the TTY controller (TTYC). Two TTYCs are contained in each of two ***TTYC units*** mounted on the maintenance frame (Fig. 5). A maximum of eight TTYCs (0-7) are allowed by the No. 3 ESS. The two TTYC units, beyond the two units mounted on the maintenance frame, would be mounted on a miscellaneous frame.

3.02 For a "basic" No. 3 ESS office, two TTYC units will be supplied with the maintenance frame equipped with two TTYCs (0-1) (Fig. 5). As recording capabilities are required for toll calls, message rate calling, etc, the No. 3 ESS is designed to send billing information into an AMARC. When AMARC capabilities are required, TTYC 2-3 are dedicated to this use (Fig. 6). If the AMARC system is not used, TTYC 2-3 may be defined and equipped for other uses. Any TTY requirements beyond the "typical" arrangement, as assigned in paragraph 3.04 or shown in Fig. 3, will require the use of an additional TTYC unit and the equipping of an additional TTYC to provide for a dedicated or autoconnect partially dedicated user.

3.03 In a typical autoconnect TTY arrangement without the use of AMARC, only the left TTYC in each TTYC unit is equipped. The equipped TTYCs in TTYC units 0 and 1 are also labeled 0 and 1 respectively. The right hand TTYCs in TTYC units 0 and 1 are labeled 2 and 3 respectively. Each TTYC has four ports.

3.04 In a typical autoconnect nondedicated arrangement, TTYCs and TTYC ports are assigned as follows.

TTYC UNIT	TTYC	PORT	TTY
0	0	0	Local Maintenance
0	0	1	Remote Maintenance
0	0	2	Monitor Port
0	0	3	Monitor Port
1	1	0	Local Maintenance Backup
1	1	1	Autoconnect, Remote Maintenance Backup
1	1	2	Monitor Port
1	1	3	Monitor Port

3.05 Before discussing the assignments in pargraph 3.04 further, it will be beneficial to look at the configuration of the TTYCs and the ***autoconnect circuits.***

3.06 The autoconnect units (FB 518) are located on the test frame. Each autoconnect unit contains two circuits. Each office is equipped with

a maximum of four circuits. Two of these circuits, designated autoconnect port 0 and autoconnect port 1, are each connected to a TTYC port. (This arrangement is shown in Fig. 3.) The remaining two circuits, if equipped, may be assigned as conditions exist. An example of the assignment of a third autoconnect circuit is shown in Fig. 2. For this TTY arrangement, an additional TTYC unit, a TTYC, and an autoconnect circuit are required to provide a network administrator with a partially dedicated autoconnect option.

3.07 One of the purposes of the autoconnect circuit is to switch the remote maintenance TTY private line into the autoconnect port in the event of a TTYC failure.

3.08 Autoconnect port 0 is assigned to TTYC 0, port 1. In the normal relay position, TTYC 0, port 1 is connected by a dedicated line to the remote maintenance TTY (Fig. 1). However, if a failure should occur in the dedicated line, a trigger number may be dialed that will cause the ESS, by use of the autoconnect feature, to establish a direct distance dialing (DDD) connection to another TTY. The connection will be through autoconnect port 0 to TTYC 0, port 1.

3.09 Autoconnect port 1 is assigned to TTYC 1, port 1. In the normal relay position, TTYC 1, port 1 is connected to a line on the ESS switching network. To this line, the ESS can connect TTYs as described in Part 2. However, if a failure occurs in TTYC 0, the ESS will automatically switch the private line to the remote maintenance TTY through port 1 of TTYC 1. The local maintenance TTY must be switched manually from TTYC 0, port 0 to TTYC 1, port 0. See Fig. 7. The network administrator should ensure that the maintenance and remote maintenance TTYs (port 0-1) are on different circuit packs and different PD points. This will ensure that a PD or autoconnect circuit pack may be replaced without losing the remote TTY.

3.10 While the private line is switched to TTYC 1, port 1, no other TTY can make an autoconnect connection. When a trigger number is dialed, the calling party will receive a busy signal. When a network administration report is to be printed, it will be printed on the maintenance TTY.

3.11 Returning to the assignments in paragraph 3.04, it should be noted that TTYC 1, port 0 and port 1 are used for maintenance only in the event of a failure in TTYC 0.

3.12 All four ports of a TTYC can only be used for one type of TTY channel. TTYC 0 is always maintenance (message classes 0 and 1). Ports 2 and 3 on TTYC 0 are optionally equipped. If they are equipped, TTYs connected to these ports can only monitor the flow of input and output messages over ports 0 and 1. To guarantee no input from TTY to port, the hardware (TTY receive lead to port in the cable) must be left open.

3.13 All four ports on TTYC 1 will be either the message class designated by a trigger number or, in the event of a failure in TTYC 0, will be maintenance. Ports 2 and 3 on TTYC 1 are optionally equipped. If they are equipped, TTYs connected to these ports can only monitor the flow of input and output messages over ports 0 and 1.

4. EFFECTS

AUTOCONNECT—NONDEDICATED PORT SHARING

4.01 The most significant effect of the nondedicated autoconnect TTY arrangement is that all assigned users of the autoconnect feature share the same port (TTYC 1, port 1). Only one user can be connected at any one time. All other users who dial a trigger number will receive a busy signal.

4.02 Autoconnect port sharing should not present user occupancy problems. Service order changes are not expected to be more than a few a day. Measurement schedules and office record updates are printed during late hours as scheduled by the Traffic Schedule Block. Repair Service Bureau would only use the channel when reported troubles need verification, testing a line, removing, or restoring a customer's line.

4.03 It was mentioned in paragraph 3.10 that a busy signal will also be received if the private line to the remote maintenance TTY has been switched through TTYC 1, port 1. ***It is important that the network administrator know when this has occurred.*** All network administration reports will be printed on the maintenance TTY as long as this condition exists.

TTYC 0 FAILURE

4.04 When TTYC 0 fails and the private line to the remote maintenance TTY is switched through autoconnect port 1, a message indicating the failure is printed on the remote maintenance TTY. ***Upon receipt of the message, the maintenance force should notify the affected nondedicated autoconnect users.***

4.05 The network administrator should maintain a telephone list of all autoconnect users. The network administrator may contact these users after experiencing repeated difficulty in making a TTY connection to the ESS. If no other user is connected to the ESS, the maintenance force should be contacted.

4.06 DEDICATED EFFECTS: A failure of TTYC 0 and the subsequent switch of the maintenance TTY to TTYC 1 will not significantly affect the measurements printouts received on a dedicated network administration channel, as shown in Fig. 1. With other dedicated channels, such as to AMARC, proper operation of the dedicated channels will continue after the TTYC 0 to TTYC 1 switch.

4.07 AUTOCONNECT—PARTIALLY DEDICATED EFFECTS: A TTYC 0 failure and switch to TTYC 1 as mentioned in paragraphs 3.07 and 4.06 will have little, if any, effect on the partially dedicated autoconnect option as shown in Fig. 2. The only basic difference between the fully dedicated and partially dedicated autoconnect option as to measurements is the initiation of the automatic dial-up switch connection to transmit the data to the user.

NETWORK ADMINISTRATION MEASUREMENTS

4.08 The contents of the measurement schedules, the time of printout, and the individual schedules will vary in the No. 3 ESS. These differences will be caused by the TTY option. Within the No. 3 ESS translations tables is an area called the Traffic Schedule Block. This recent changeable table specifies when the data collection is to begin. All data printout times, except one, are generically controlled. For example, the busy hour (H) schedule is instructed to start data collection at a specified time. The collection will stop, and the data will either be printed on-line or stored on tape one hour later under instructions from the generic program.

4.09 With the dedicated teletype option, all measurements schedules (C, H, W, D, and Q) are available to the network administrator. The collected data will be printed at the generically specified time, except the "C-"schedule whose print time must be entered into the Schedule Block.

4.10 The partially dedicated autoconnect option has the same measurement capabilities as the dedicated option. The designated return telephone number is dialed and upon proper answer response, the scheduled measurements are printed. If the call cannot be completed, the ESS tries to complete the connection again. If the retrial is unsuccessful, the data will be printed on the maintenance TTY. Unsuccessful call attempts can lead to questionable data. During the call attempt periods, the registers will continue to collect data, which could result in a longer measurement period than desired. As with the dedicated option, data skew is most predominant in these two options.

4.11 When the nondedicated autoconnect option is used, the C-schedule is not available. All measurements which ordinarily would be assigned to the C-schedule must be assigned to the H-, D-, or W-schedules.

4.12 With the nondedicated autoconnect TTY arrangement, the data is collected in the same manner as the other options. At the generically scheduled time, the data is transferred to a magnetic tape cartridge in the ESS. The No. 3 ESS will transmit the collected report(s) to the Network Administration TTY at the time scheduled for the D-schedule report printout.

4.13 The network administrator may elect to have Q-schedule reports automatically printed when the Network Administration TTY is dedicated or with the partially dedicated autoconnect arrangement. With the nondedicated autoconnect arrangement, Q-schedule data is available on a scheduled basis only as hourly accumulations on the H-schedule report. However, the Q-schedule report may be requested on a demand basis at any time with any one of the TTY arrangements.

4.14 A feature of the No. 3 ESS administration is the ability of the traffic report print capabilities. Whenever a traffic report is to be printed, but the ESS cannot establish a switched connection to the Network Administration TTY, the report(s) will be printed on the local and

remote maintenance TTYs. This feature is normal for the partially dedicated autoconnect and nondedicated autoconnect arrangements. The data will not be machine skewed with the nondedicated autoconnect option as the data is transferred to the TTY from storage on the magnetic tape. The network administrator should contact Network Maintenance in the event a scheduled report is not received.

4.15 Further information concerning the measurements and the measurements schedules may be found in Section 233-020-020, Measurements.

5. ASSIGNMENT REQUIREMENTS

5.01 The items in paragraphs 5.02 through 5.06 must be assigned to the nondedicated autoconnect and partially dedicated autoconnect ports by the network administrator. In a new office, prior to cutover, these items are specified on the office data assembler (ODA) translation form ESS 3500-3, General Information Table, and ESS 3107-2, Supplementary Information Table (See No. 3 ESS Translation Guide, TG-3). In a working office, these items may be specified by use of the ***RC:AC*** input message from the Maintenance TTY (for Generic 3 or earlier) or the ***RC:LINE*** input message from the Maintenance or Service Order TTYs (for Generic 4 or later) (See Input Manual IM-3H300).

5.02 ***Trigger Number:*** One distinct trigger number must be assigned for each message class to be given autoconnect capabilities for either autoconnect TTY arrangement. The telephone number used should be one which would not ordinarily be assigned for customer service (eg, NNX-9898,NNX-0010). For the sake of consistency, the same range of numbers should be used in each No. 3 ESS office.

5.03 ***Return Number:*** The return number is the telephone number of the TTY to be called when either the automatic dial-up option is specified and a measurement schedule is to be printed, or when a trigger number has been dialed. The return number may include an access digit and area code if the TTY is in a different number plan area and an access digit is required. The return number may be either a different one for each trigger number if separate TTYs are used for different functions, or the same one for each trigger number if the same TTY is used for all functions.

5.04 ***Message Class:*** The message class determines the set of input and output messages allowed when a particular trigger number is dialed. Message classes were specified in paragraph 2.01.

5.05 ***TTYC and Port:*** TTYC 0, port 1 must be assigned message class 1, remote maintenance. TTYC 1, port 1 may be assigned any message class to which autoconnect is desired.

5.06 ***Time-Out Option:*** The time-out option is discussed in paragraph 2.10. It is recommended that a time-out of 200 seconds be applied to message class 3, Network Administration. Other users may prefer a different interval.

5.07 The items in paragraphs 5.08 and 5.09 should also be assigned by the network administrator. For a new office, the ESS 3500-3 and ESS 3107-2 forms are again used to make the assignments. For a working office, the ***RC:TTY*** input message is used from the maintenance TTY. Both of these items require physical assignments as well as translation assignments.

5.08 ***Office Equipment:*** Any office equipment (OE) may be used. The OE will not have a directory number assignment and care must be exercised in preventing the assignment of this OE to a customer.

5.09 ***Distributor Points:*** Any of the fixed distribution points designated for use by the autoconnect option that are unassigned may be used.

5.10 The items in paragraph 5.11 must be assigned to any autoconnect port using the ESS 3100 form for a new office or using the ***RC:LINE*** input message for a working office. The RC:LINE input message may be entered from either the maintenance or service order TTYs.

5.11 ***Line Class Code:*** The recommended line class code for the autoconnect ports is ***ATC***. The originating and terminating major classes are both ***29***. The line class code, and originating and terminating major classes are initially assigned and established by using the ODA on translation form ESS 3306, Line Class Code Table, or by using

the input message ***RC:LCC*** from the maintenance TTY to establish a Line Code Index (LCI) for those offices that are in service.

6. ENGINEERING REQUIREMENTS

6.01 Engineering requirements for the TTY channels are based on the type of arrangements that are required. The following paragraphs briefly describe those requirements for the options available.

6.02 A maximum of four TTYC units are allowed in the No. 3 ESS. Each unit has the capability to contain two TTYCs, with up to eight (0-7) TTYCs per office. Two of the TTYC units are located on the maintenance frame, with the two additional units being located on a miscellaneous frame. Currently only 6 TTYCs are permitted. They are TTYC 0-4 and 6. TTYC 5 and 7 are reserved. When either autoconnect option is specified, additional equipment in the form of autoconnect circuits (FB 518) are required. A maximum of two FB 518 units are allowed per No. 3 ESS.

6.03 A combination of a dedicated TTY for the maintenance user and autoconnect for the other users, as shown in Fig. 3, is a typical TTY arrangement. ***With this arrangement, the addition of AMARC (Fig. 6) would complete the occupancy of the "basic" TTYC units in the maintenance frame.***

6.04 The addition of another TTY arrangement, such as a dedicated Network Administration TTY, would necessitate another TTYC unit equipped with an additional TTYC. Consideration should be given to accomodate the TTYC unit on a miscellaneous frame, and the possible addition of an autoconnect circuit if the partially dedicated autoconnect option is supplied. Options for TTY may be recent changed to fit the changing needs and demands of the users. The TTY controllers may be dedicated or nondedicated, except the AMARC TTYCs. When AMARC is defined in the office, TTYCs 2 and 3 are dedicated to its use.

7. NETWORK ADMINISTRATION TTY

7.01 The Network Administration TTY should be located in the Network Administration quarters. The TTY may be assigned to any normal switched voice-grade line.

7.02 When either the nondedicated or partially dedicated autoconnect arrangements are defined, the network administrator should assign call forwarding to the Network Administration TTY line when possible. Call forwarding will allow the transfer of connections from the ESS to another TTY. Transfer may be desired either when the usual TTY is out of order or when another group (such as Network Design) would like access to the ESS.

7.03 With the nondedicated autoconnect arrangement, the No. 3 ESS will call the Network Administration TTY at the completion of a D-schedule collection hour as defined in the Traffic Schedule Block. The No. 3 ESS will report H-schedule data, D-schedule data, and W-schedule data collected during the previous 24-hour period. The D-schedule should, therefore, be set to different intervals for different No. 3 ESS offices which report to the same Network Administration TTY in order that offices do not compete for a single TTY.

7.04 The No. 3 ESS will also update those office records that were changed by Service Order input or maintenance changes. These office records will be printed on the TTY after the scheduled reports are transmitted. This applies to Generic 4 and later.

7.05 Consideration should be given to the use of a 1200-baud TTY and autoconnet circuit. Greater TTY speed will help in allowing the closer spacing of reports.

7.06 When the number of offices makes the staggering of reports awkward, the network administrator may choose to use two or more TTYs. The TTYs should be placed in a series completion group with the lead number assigned as the return number from each ESS. This arrangement will allow two or more ESS offices to report at the same time and be switched to a free TTY.

7.07 Partially dedicated autoconnect arrangements will print D-schedule data followed by office record update after the D-schedule collection completion hour, similar to the nondedicated autoconnect option. However, the H-, C-, and W-schedule collected data will be printed at the end of their normally scheduled hour during the day. Only the W-schedule data is updated to the

tape storage. On Sunday, the total W-schedule data will be printed at the scheduled time for the D-schedule print.

7.08 The Network Administration TTY is a vital link to the No. 3 ESS. Only if the proper TTY arrangement is provided based on needs and conditions, and is properly administered, can this vital link operate correctly.

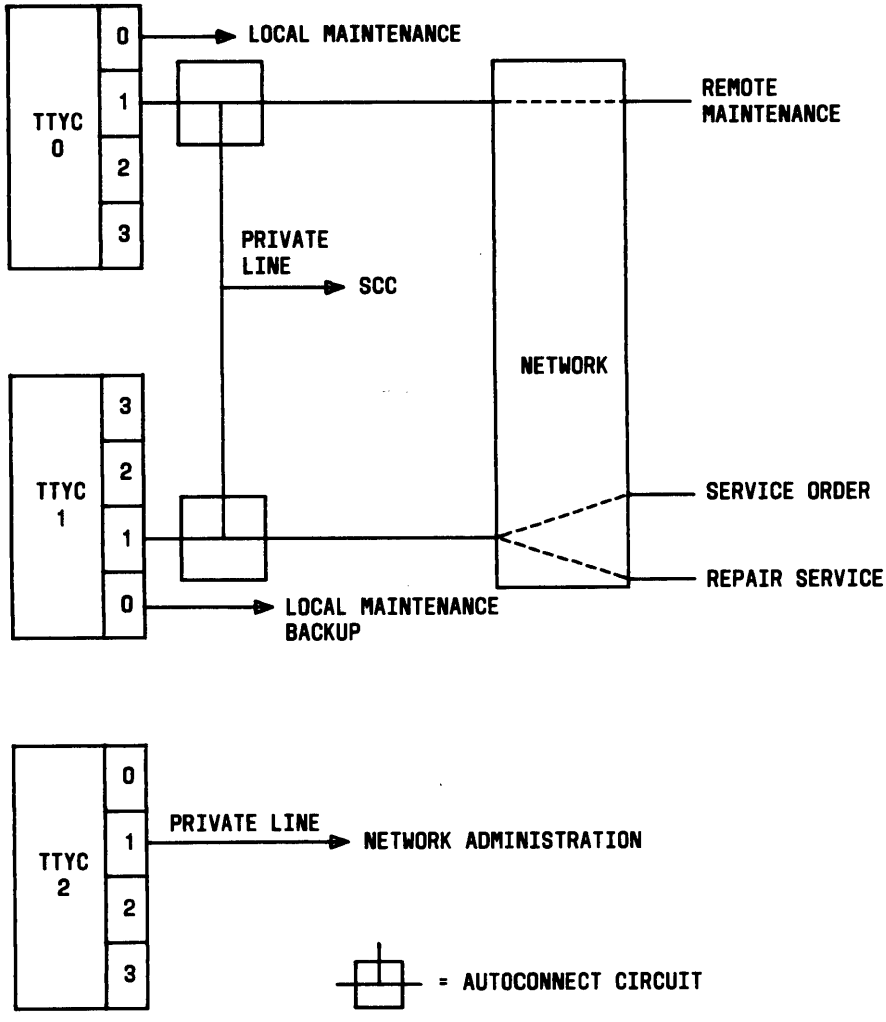


Fig. 1—Network Administration TTY, Dedicated (1.07, 3.08, 4.06)

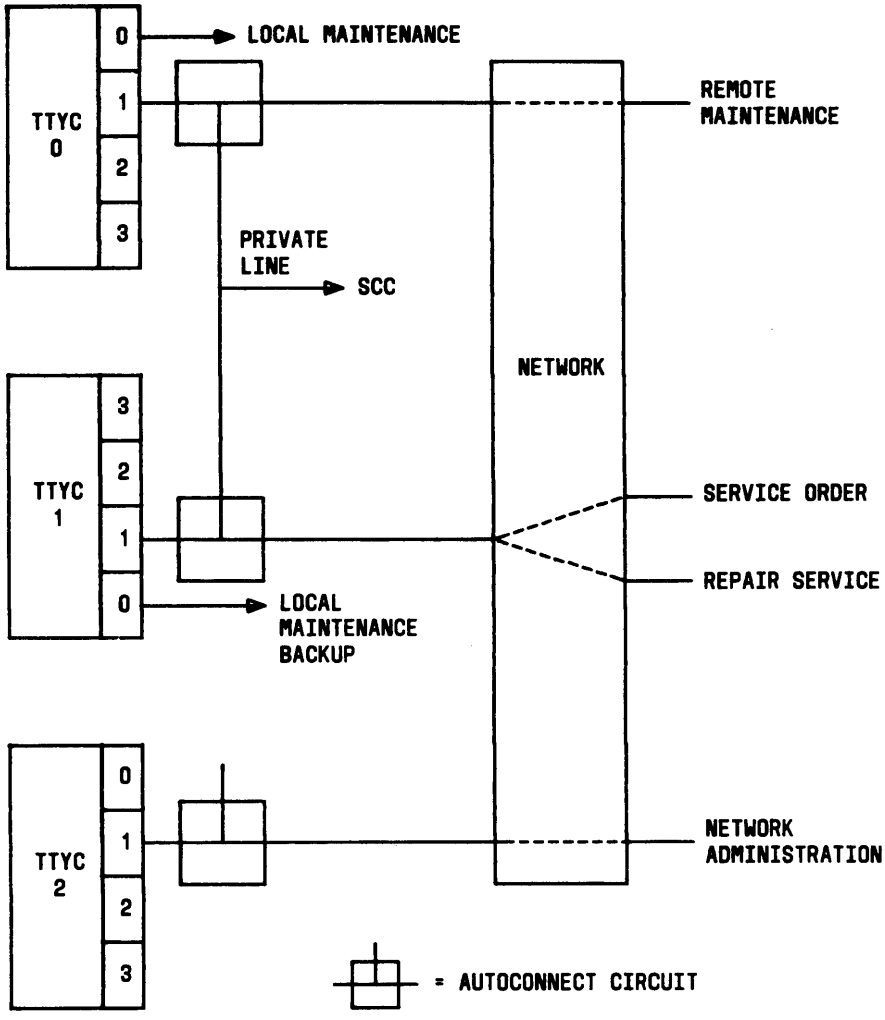


Fig. 2—Network Administration TTY, Partially Dedicated (1.10, 3.06, 4.07)

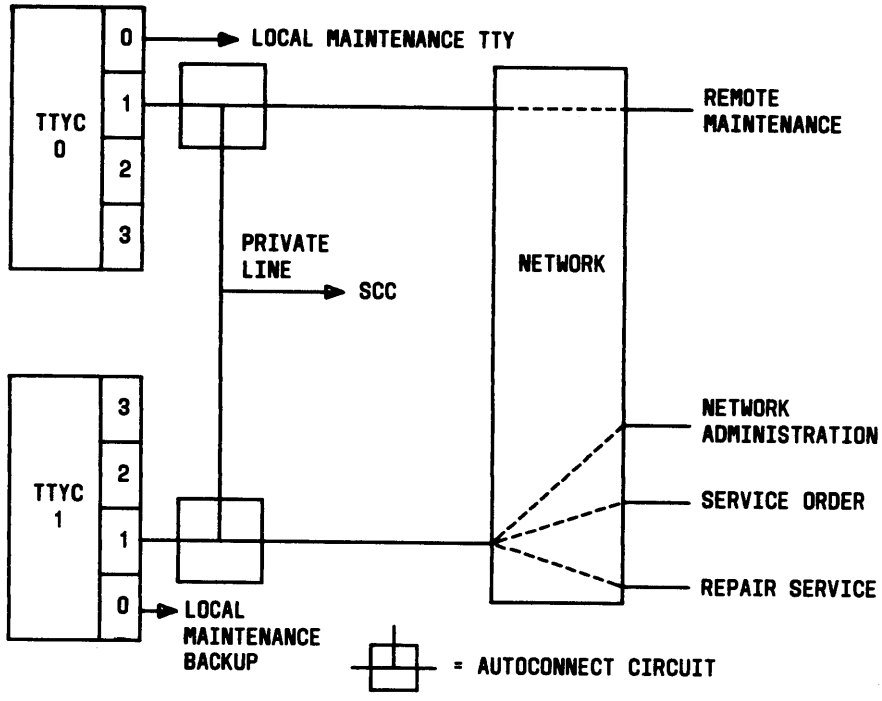


Fig. 3—Network Administration TTY, Nondedicated (1.12, 3.02, 3.06, 6.03)

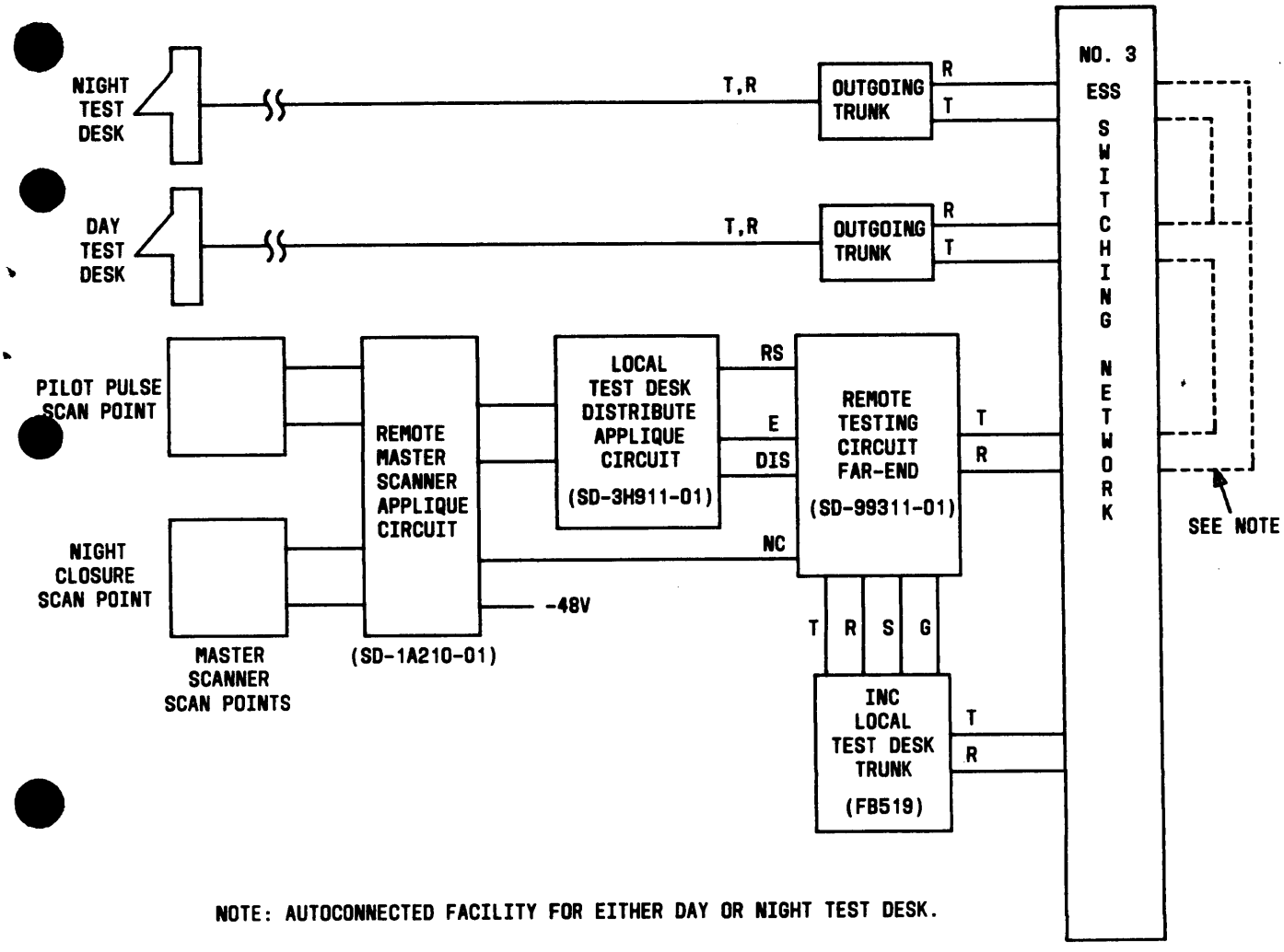


Fig. 4—Nondedicated Day/Night Local Test Desk (LTD) (2.02)

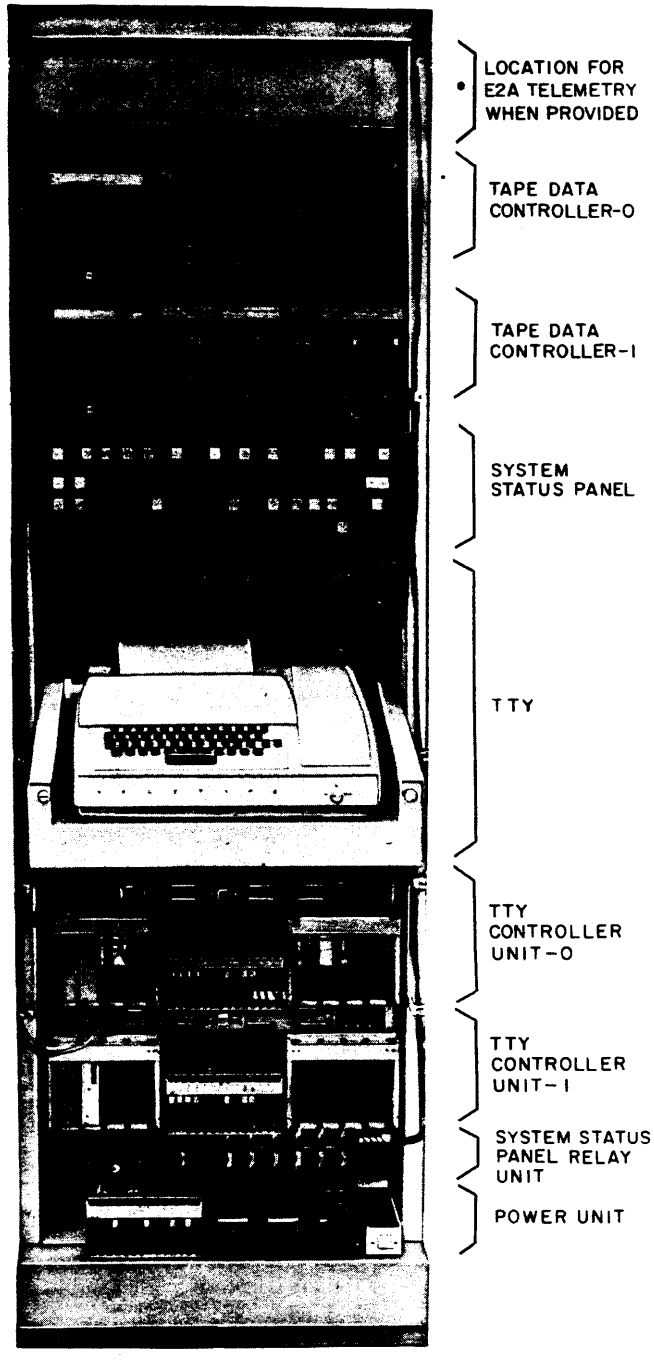
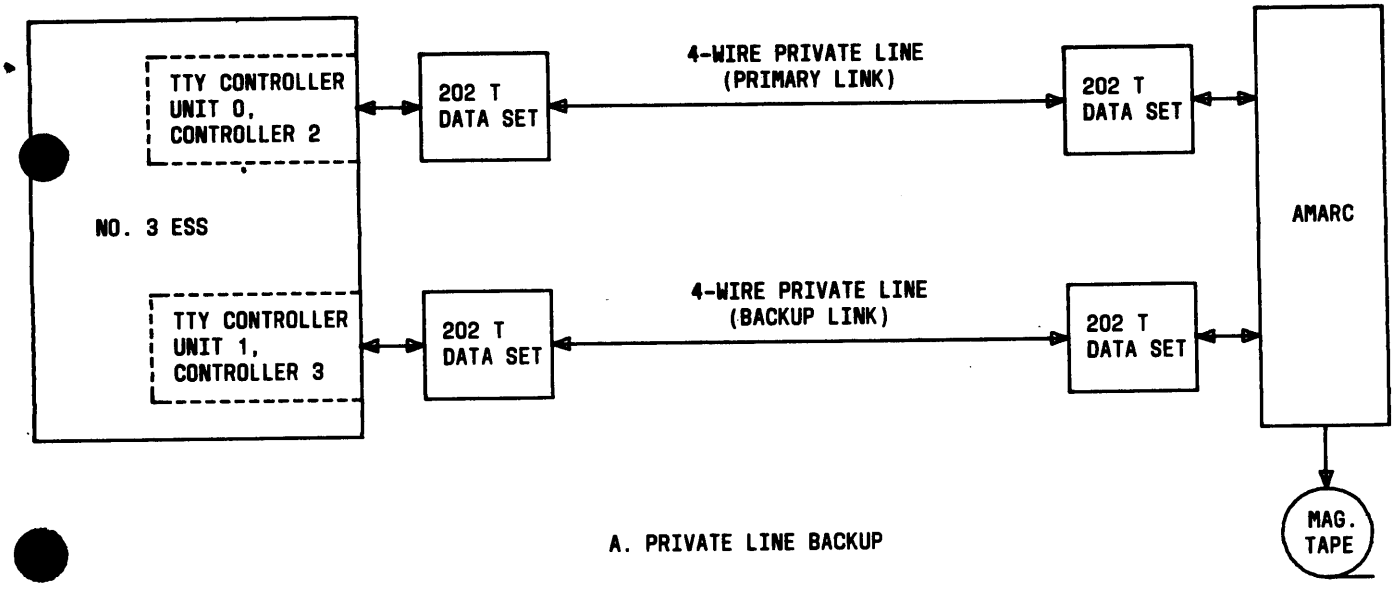
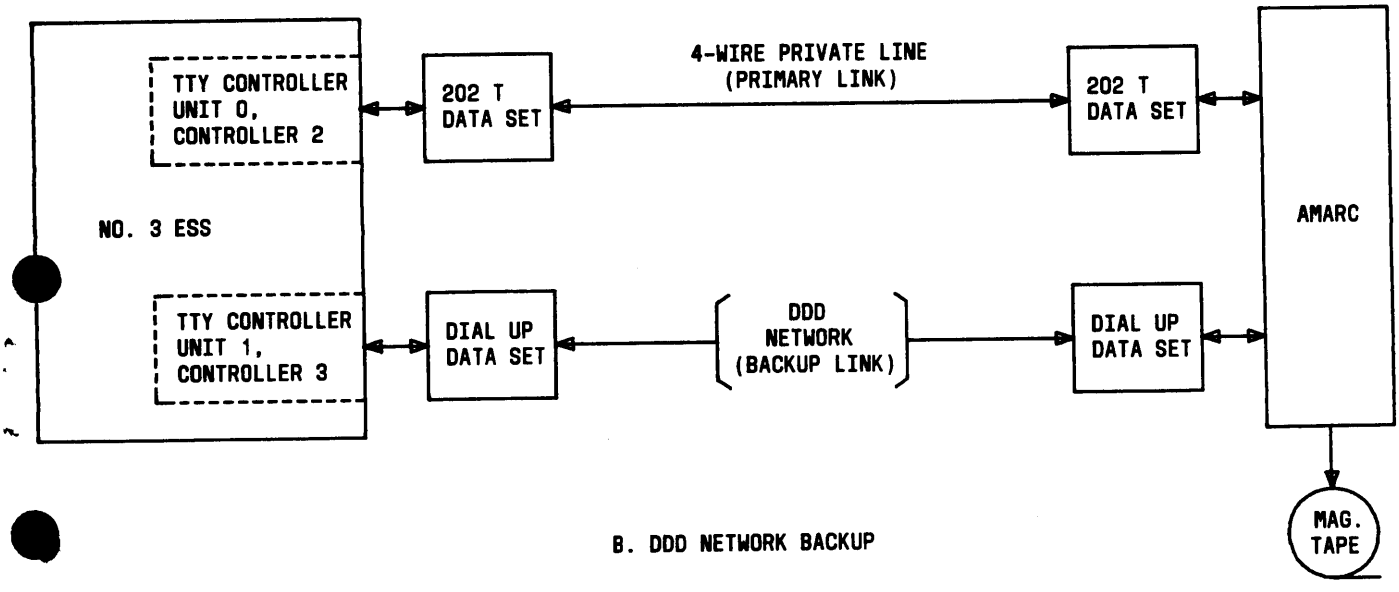


Fig. 5—No. 3 ESS Maintenance Frame (3.01, 3.02)

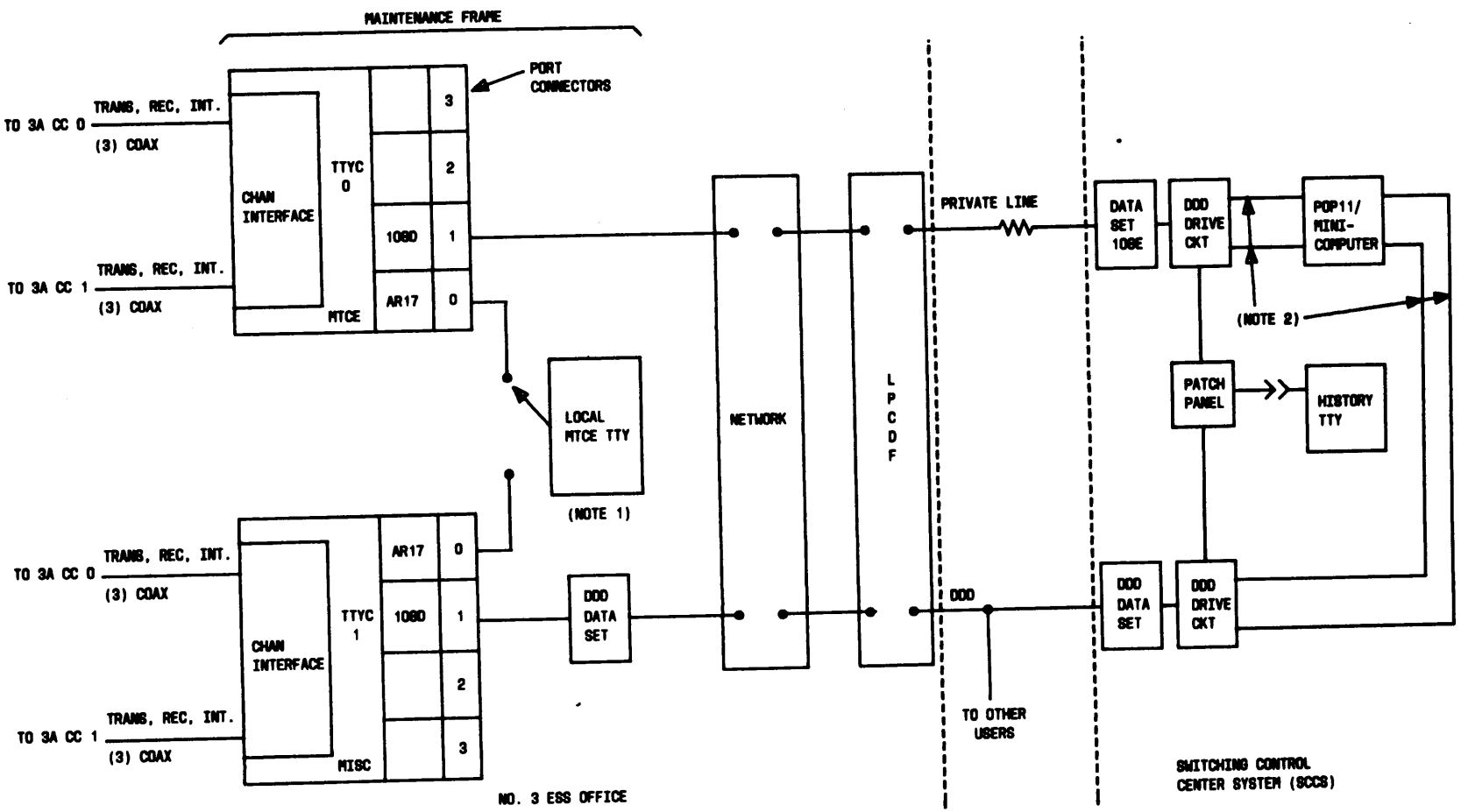


A. PRIVATE LINE BACKUP



B. DDD NETWORK BACKUP

Fig. 6—Block Diagram of Interconnections Between No. 3 ESS and AMARC (3.02, 6.03)



NOTES:
1. LOCAL TTY IS MANUALLY SWITCHED BETWEEN TTYC 0 AND TTYC 1
2. ADDITIONAL DATA SETS AND DRIVERS ARE REQUIRED IF DISTANCE TO COMPUTER EXCEEDS 50 FEET

LEGEND

CHAN - CHANNEL
CKT - CIRCUIT
DDD - DIRECT DISTANCE DIALING
INT - INTERRUPT
LPCDF - LOW PROFILE COMBINED DISTRIBUTING FRAME
MTCE - MAINTENANCE
PL - PRIVATE LINE
REC - RECEIVE
TRANS - TRANSMIT

Fig. 7—Block Diagram—No. 3 ESS to SCCS TTY Configuration—Example (3.09)