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DATA-PHONE[®]

Multiple Data Set Station

103E Type Transmitter-Receiver

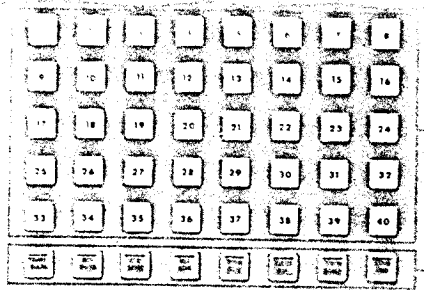
The Multiple Data Set 103E-Type Data Station can provide up to 40 low-speed, transmitting-receiving data sets in each cabinet. Each 103E Data Station is equipped with an 804J Data Auxiliary Set (DAS) having either a rotary or a TOUCH-TONE[®] dial. Multiples of these stations may be arranged to make up a single installation.

The 103E-Type Data Set accepts data from the terminal equipment and converts the data into voice-frequency tones to be transmitted over the switched telephone network. Voice-frequency tones received from the switched network are converted into signals and delivered to the terminal equipment.

The data sets are arranged for automatic answering; and, if desired, 801-Type automatic calling units may be provided also for originating calls.

General

Normal operation of the 103E Data Station does not require an attendant; but when an attendant does control the station operation, the following instructions are to be used as a guide.



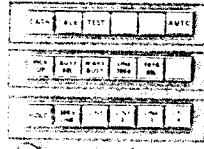
SELECT
FIELD

MONITOR
LAMPS

CONTROL
FIELD

ACTION
FIELD

ATTENDANT
LINE FIELD



8001 Data Auxiliary Set

Controls

Data Auxiliary Set 804J has the following controls and lamps:

SELECT FIELD

This field consists of 40 nonlocking buttons with lamps. Each button and lamp is associated with a particular data set. Each button is used in conjunction with a button in the Action Field to control one or more of the data sets. The condition of each button (flutter, wink, flash, steady) indicates the status of the data set.

MONITOR LAMPS

These lamps indicate the condition of eight leads between the data sets and the terminal equipment. When control and monitoring of a data set are desired, depress the PICK UP button in the Action Field until the lamp lights. Then depress the desired data set button until the PICK UP lamp goes dark and the lamp in the data set button flutters. In this condition the monitor lamps show the status of the leads between the terminal equipment and the data set. Complete control of the selected data set is now possible by using the buttons in the Control Field.

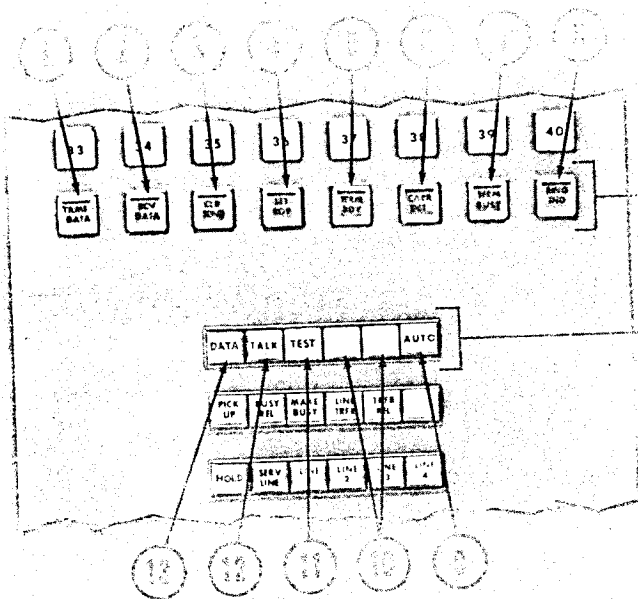
The condition of the lamps may be useful to the Data Test Center when testing the data station. When requested, you will be expected to relay the condition of these lamps to the Data Test Center.

MONITOR LAMPS (Continued)

- | | |
|---|--|
| 1. TRMT DATA
(Transmitted
Data) | This lamp is used to indicate the condition of the "transmitted data lead." |
| 2. REC DATA
(Received Data) | This lamp is used to indicate the condition of the "received data lead." |
| 3. CLR SEND
(Clear to Send) | This lamp is used to indicate the condition of the "clear to send lead." |
| 4. SETRDY
(Data Set Ready) | This lamp is used to indicate the condition of the "data set ready lead." |
| 5. TERM RDY
(Data Terminal
Ready) | This lamp is used to indicate the condition of the "data terminal ready lead." |
| 6. CARR DET
(Data Carrier
Detector) | This lamp is used to indicate the condition of the "data carrier detector lead." |
| 7. TERM BUSY
(Terminal Busy) | This lamp is used to indicate the condition of the "terminal made busy lead." |
| 8. RING IND
(Ring Indicator) | This lamp is used to indicate the condition of the "ring indicator lead." |

CONTROL FIELD

- | | |
|-----------|---|
| 9. AUTO | When this nonlocking button is depressed, the lamp lights and the selected data set is conditioned for automatic answering. |
| 10. Spare | |



11. TEST

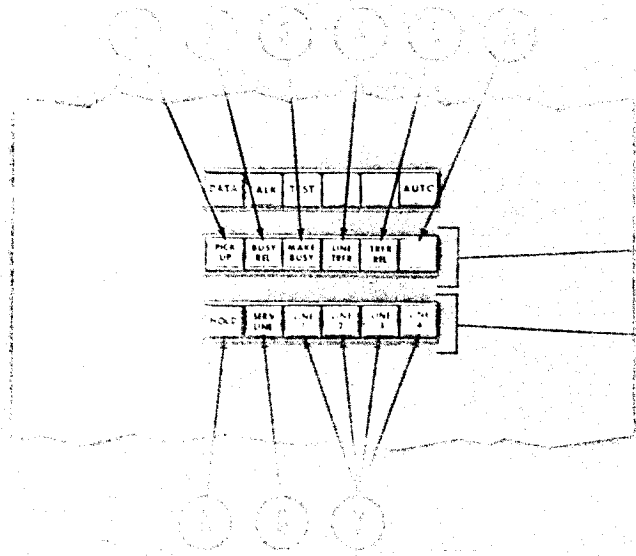
When this nonlocking button is depressed, the lamp lights and the selected data set can be tested by a remote Data Test Center.

12. TALK

When this locking button is depressed, the selected data set is placed in the talk mode for voice communication. (Depressing this button releases SERV LINE button.)

13. DATA

When this nonlocking button is depressed, the lamp lights and the selected data set is placed in the data mode.



ACTION FIELD

1. PICK UP

When this nonlocking button is depressed, the lamp lights, making it possible to select one of the data sets by depressing a button in the Select Field.

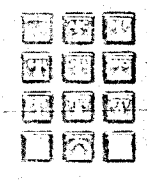
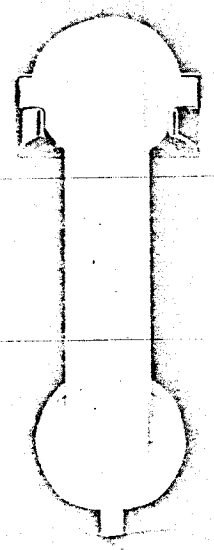
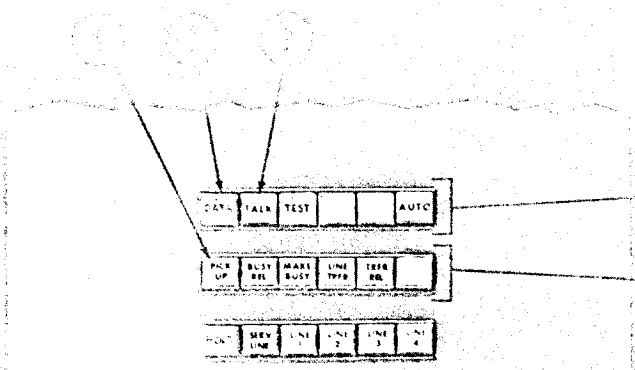
2. BUSY REL

When this nonlocking button is depressed, the lamp lights, and it is possible to restore any or all of the data sets which previously have been taken out of service.

- 3. MAKE BUSY** When this nonlocking button is depressed, the lamp lights, and it is possible to take any or all of the data sets out of service by making the data set line appear busy.
- 4. LINE TRFR** When this nonlocking button is depressed, the lamp lights, and it is possible to transfer the selected data set to the service line.
- 5. TRFR REL** When this nonlocking button is depressed, it is possible to restore the selected data set (which previously has been connected to the service line) to its normal data set line.
- 6. Spare**

ATTENDANT LINE FIELD

- 7. LINE 1 through LINE 4** When these locking buttons are depressed, the lamps light; and the telephone may be connected to the key telephone equipment.
- 8. SERV LINE** When this locking button is depressed, the lamp lights; and the telephone is connected to the service line for voice communication, provided a data set is not connected to the service line in the data mode. (Depressing this button releases TALK button.)
- 9. HOLD** When this nonlocking button is depressed, it is possible to place a selected attendant line (LINE 1-4) on hold. The HOLD lamp may be used as an indicator.



Sending Data Attended Receiving Station

SELECTING A DATA SET

Note: Do not lift the handset.

To select a specific data set, depress PICK UP button (1) in the Action Field. PICK UP button lights. Depress the number button in the Select Field to select the desired data set. Depressing the number button causes the lamp in the button to flutter and the PICK UP lamp to go dark.

Note: If there should be a need to release the selected data set at this time, depress the PICK UP button again. The PICK UP lamp lights; and the Select Field number lamp, associated with the data set, goes dark. The data set is restored to a normal unattended condition.

The PICK UP lamp remains lighted until another data set is selected.

ORIGINATING A CALL

At this time you may originate a call on the selected data set. Make sure the DATA lamp (2) is dark.

To originate a call to an attended receiving station, lift the handset and depress the TALK button (3) in the Control Field. When dial tone is heard, you may dial the call in the usual way.

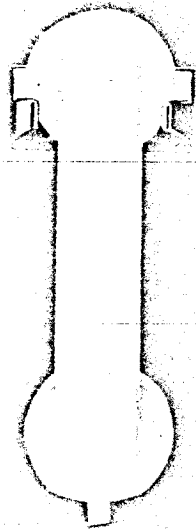
- If *DATA-PHONE* service calls are not dialed directly, obtain connection to the called station in accordance with your local arrangements. If a call is handled by an operator, tell her that it is a *DATA-PHONE* service call and ask her not to disturb the connection.

DATA TALK TEST [] [] AUTO

PICK UP BUSY RECALL BUSY LINE TRIP TRIP RECALL

CALL SERV LINE LINE 2 LINE 3 LINE 4

CONTROL
FIELD



- If poor transmission is encountered while talking (noise, clicks, etc.), it is best to obtain a better connection before attempting to transmit data.
- When a busy or other delay report is received, hang up (or cancel the call if placed with an operator) and originate a new call at a later time.

After reaching the desired station, discuss with the attendant the length of the data transmission, whether conversation may be required at end of transmission, and the signal for returning to talk mode. Confirm whether the receiving station is prepared to receive data.

When transmission can be started and receiving attendant reports "Ready-start," ask the receiving attendant to depress her DATA button. Depress your DATA button (1) in the Control Field. Depressing the DATA button causes the DATA lamp to light and the TALK button (2) to release. The sending station is now in data mode and transmission can begin. Replace the handset on the switchhook.

TERMINATING A CALL

If conversation is necessary at end of data transmission, lift the handset and depress the TALK button in the Control Field. The DATA lamp goes dark and the sending station is now in talk mode. At the end of conversation replace the handset on the switchhook.

If no conversation is necessary at end of data transmission, an end-of-transmission code normally will be transmitted from the terminal equipment at the sending station. The code will cause the terminal equipment to release the call and extinguish the DATA lamp.

If the data set does not disconnect immediately, wait a few seconds and the DATA lamp will go dark indicating that the call has been released.

Sending Data Unattended Receiving Station

SELECTING A DATA SET

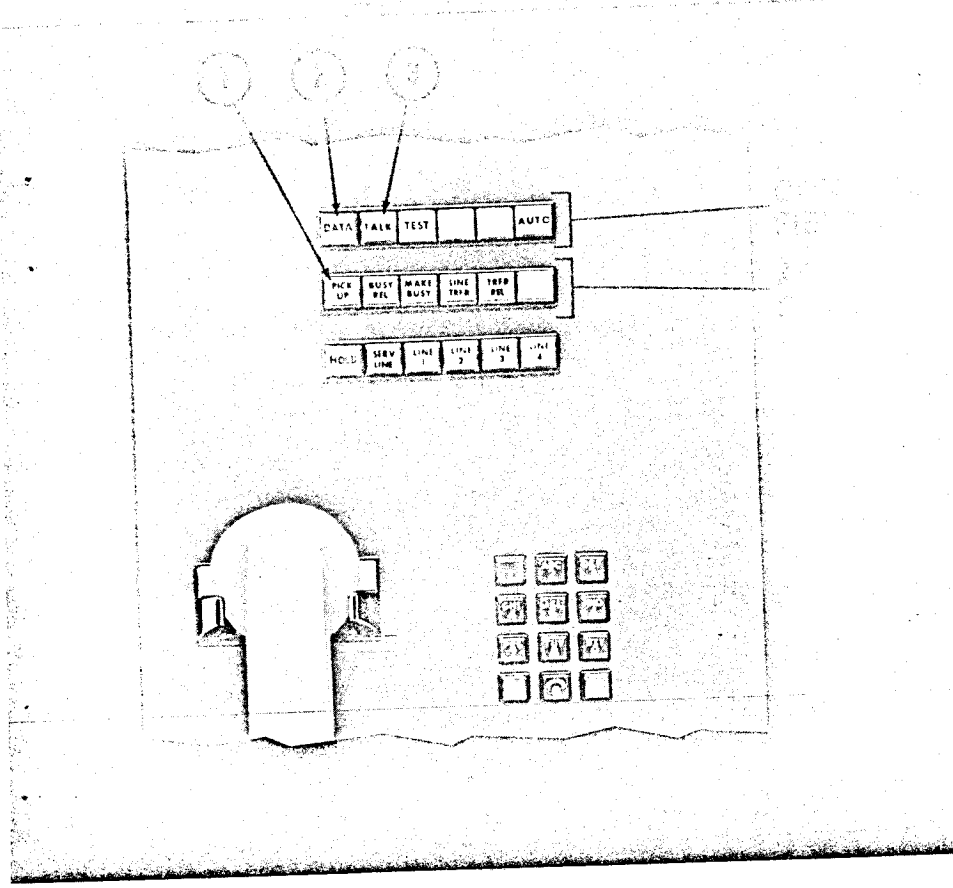
Note: Do not lift the handset.

To select a specific data set, depress PICK UP button (1) in the Action Field. PICK UP button lights. Depress the number button in the Select Field to select the desired data set. Depressing the number button causes the lamp in the number button to flutter and the PICK UP lamp to go dark.

Note: If there should be a need to release the selected data set at this time, depress the PICK UP button again. The PICK UP lamp lights; and the Select Field number lamp, associated with the data set, goes dark. The data set is restored to a normal, unattended condition. The PICK UP lamp remains lighted until another data set is selected.

ORIGINATING A CALL

At this time you may originate a call on the selected data set to an unattended receiving station by lifting the handset and depressing the TALK button (3) in the Control Field. When dial tone is heard, you may dial the call in the usual way. If the unattended receiving station is prepared to receive data, the station will answer automatically. A brief ringing will be heard followed by a tone. When tone is heard, depress the DATA button (2). Both stations are now in the data mode and transmission can begin. Replace the handset on the switchhook.



TERMINATING A CALL

At the end of data transmission, an end-of-transmission code normally will be transmitted from the terminal equipment at the sending station. The code will cause the terminal equipment to release the call and extinguish the DATA lamp.

If the terminal equipment does not send an end-of-transmission code, wait a few seconds and the DATA lamp will go dark indicating that the call has been released.

Receiving Data—Attended Service

ANSWERING A CALL

To answer an incoming call, depress the TALK button (2) in the Control Field, lift the handset, and answer in the usual way.

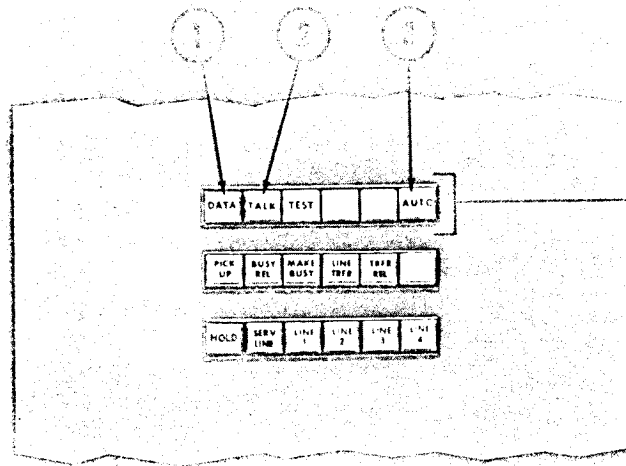
Depress the DATA button (1) when sending attendant requests it.

Replace the handset on the switchhook.

TERMINATING A CALL

If no conversation is necessary at end of data transmission, an end-of-transmission code normally will be transmitted from the terminal equipment at the sending station. The code will cause the terminal equipment at the receiving station to release the call and extinguish the DATA lamp.

If the data set does not disconnect immediately, wait a few seconds and the data lamp will go dark indicating that the call has been released.



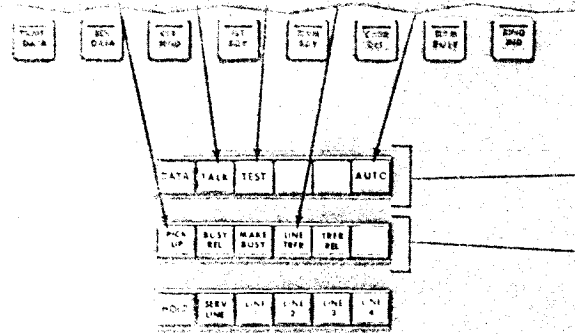
Receiving Data Unattended Service

For Automatic answering, the AUTO button (3) in the Control Field must be depressed until the lamp lights. When ringing occurs, the set answers and goes into the data mode automatically.

TERMINATING A CALL

At the end of data transmission an end-of-transmission code is transmitted from the terminal equipment at the sending station.

The code will cause the terminal equipment at the receiving station to release the call and extinguish the DATA lamp.



Testing

SELECTING A DATA SET

Note: Do not lift the handset. Make sure **AUTO lamp (5)** is dark.

To select a specific data set, depress **PICK UP button (1)** in the Action Field. The **PICK UP lamp** lights. Depress the number button in the Select Field to select the desired data set. Depressing the number button causes the lamp in the button to flutter and the **PICK UP lamp** to go dark.

Note: If there should be a need to release the selected data set at this time, depress the PICK UP button again. The PICK UP lamp lights; and the Select Field number lamp, associated with the data set, goes dark. The data set is restored to a normal, unattended condition. The PICK UP lamp remains lighted until another data set is selected.

TRANSFERRING TO SERVICE LINE

To transfer the selected data set to the service line, depress the LINE TRFR button (4) in the Action Field. The LINE TRFR lamp lights, and the data set is now connected to the service line.

CALLING THE DATA TEST CENTER

Note: Make sure the selected data set has been transferred to the service line prior to calling the Test Center.

To call the Data Test Center, lift the handset and depress the TALK button (2) in the Control Field. When dial tone is heard, you may dial the call in the usual way. When the Data Test Center answers, give the service line telephone number and request a test of the selected data set. The Test Center will request that the TEST button (3) be held depressed at the beginning of the second ring until the TEST lamp lights. Replace the handset on the switchhook. When the Test Center calls back, do not lift handset. At the beginning of the second ring hold TEST button depressed until it lights. When the TEST lamp lights, release the button. The data set is now in the test mode. After testing the data set, the Test Center will release the set from the test mode and the TEST lamp will go dark. The Test Center will call and evaluate the data set.

The Service Line

ORIGINATING A CALL

To originate a telephone call on the service line, depress the SERV LINE button (3) in the Attendant Line Field. The TALK button will release, if operated; and the SERV LINE lamp lights. Lift the handset. When dial tone is heard, you may dial the call in the usual way.

ANSWERING A CALL

To answer an incoming call on the service line when the ringer sounds, depress the SERV LINE button (3) and lift the handset. Answer in the usual way.

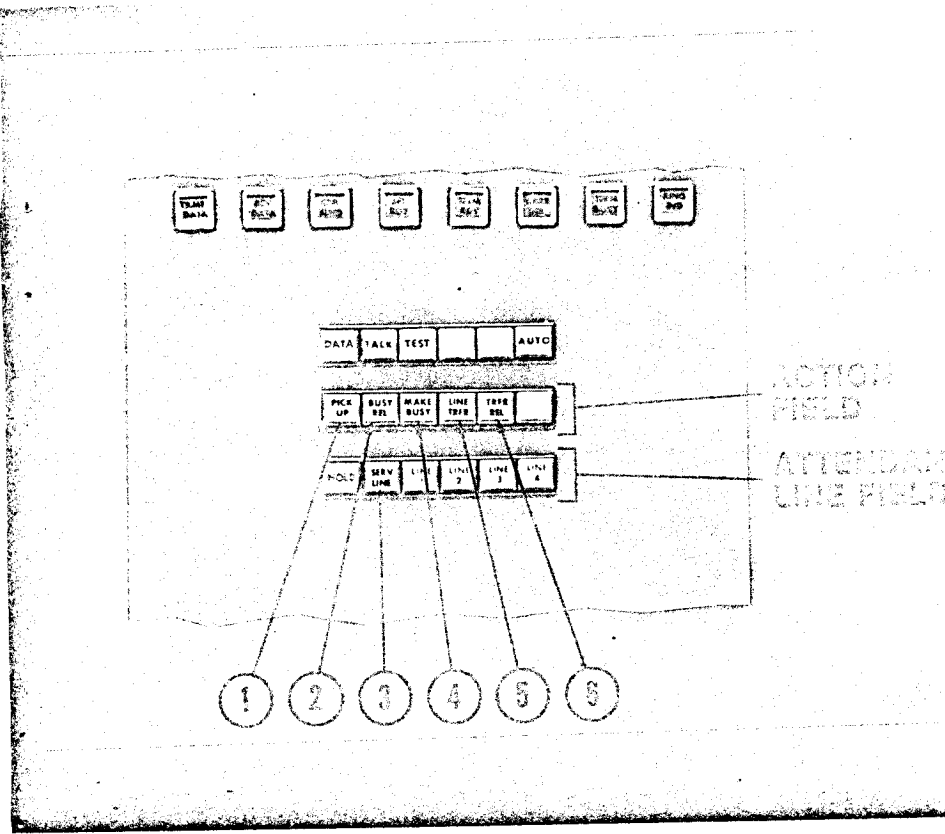
RELEASING THE DATA SET

If a selected data set has been transferred to the service line, it may be released by depressing the TRFR REL button (6) in the Action Field. The LINE TRFR lamp (5) goes dark, and the data set is now released from the service line.

Make Busy

To take a data set out of service by making its associated telephone line appear busy, depress the MAKE BUSY button (4) in the Action Field. The MAKE BUSY lamp lights; and the PICK UP lamp (1) goes dark, if lighted. Depress the number button in the Select Field associated with the desired data set. The number button lamp will wink.

Note: As long as the MAKE BUSY lamp remains lighted, any number of data sets can be made busy by depressing the desired number button in the Select Field. It is not necessary to depress the MAKE BUSY button again.



Busy Release

To release a data set from the made busy condition, depress the BUSY REL button (2). The BUSY REL lamp lights and the MAKE BUSY lamp goes dark. Depress the number button in the Select Field associated with the desired data set. The winking number button lamp will go dark.

Note: As long as the BUSY REL lamp remains lighted, any number of data sets can be released from the made busy condition by depressing the desired number button in the Select Field. It is not necessary to depress the BUSY REL button again.

Lamp Indications

- | | |
|-------------------|--|
| Flutter | When a data set is selected, the lamp under the button will flutter (10 pulses per second). The data set may be placed in one of the modes of the Control Field. |
| Wink | If a data set is made busy, the lamp under the data set number will wink ($2\frac{1}{2}$ pulses per second). |
| Flash | When ringing is present on the data set telephone line, the lamp under the selected data set number will flash (1 pulse per second). |
| Steady On | When the data set is in the data mode, the lamp under the data set number will light. |
| Steady Off | This indicates the data set is not selected, is not in use but is in the Automatic Answer Mode. |

Reporting Trouble

Telephone line trouble is reported in the regular way. *DATA-PHONE* service trouble is reported in the same manner, except that it is specifically described in the report as "*DATA-PHONE* service trouble."

Whenever difficulty is encountered in sending or receiving data after making several attempts using different circuits, determine whether the terminal equipment that is being used is working properly. If it is, and the trouble appears to be with any of the Telephone Company equipment, the trouble is reported as indicated above by the attendant whose station appears to be in trouble.

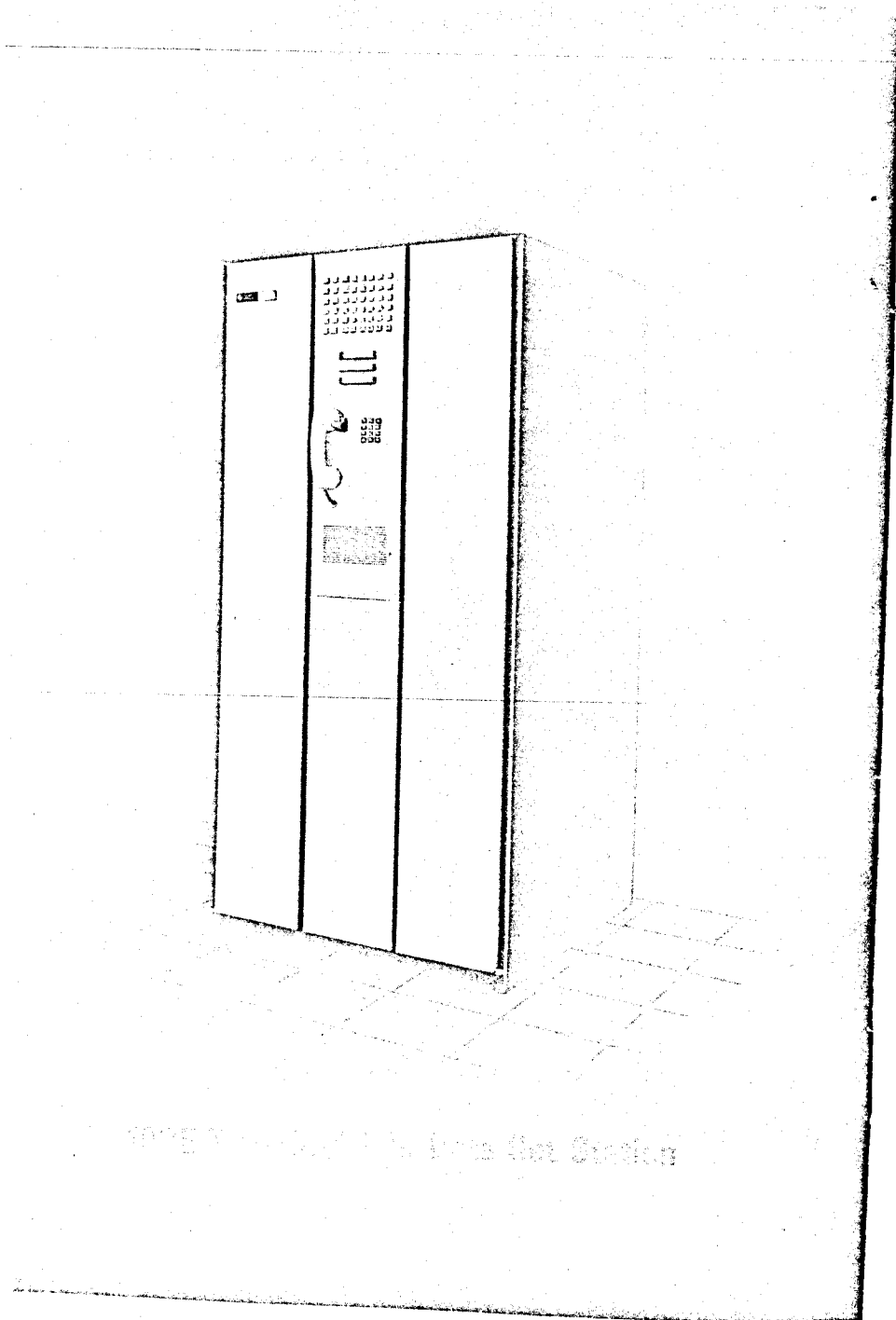


Figure 1. A three-door cabinet.