FEATURE DOCUMENT
ATTENDANT CONFERENCE
(CENTREX)
NO. 2 ELECTRONIC SWITCHING SYSTEM

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FIGURES PAGE

FEATURE DEFINITION AND DESCRIPTION

1. DEFINITION

1.01 The Attendant Conference feature allows a centrex attendant to establish a common talking connection (conference connection) between the attendant and up to five other conferees. Once the connections are established between the desired conferees and the attendant, all parties may converse. The attendant may release from the conference at any time without disrupting the talking connection between the conferees. Depending on the switching system, limitations exist on the number of conference circuits that the attendant may access for setting up multiple attendant conferences.

1.02 In a No. 2 Electronic Switching System (ESS) the attendant conference feature is provided with centrex service. Conference calls can be initiated by the centrex attendant. The centrex customer group must be equipped with at least one centrex attendant console (either 1B- or 2B-type) and one or more 6-port conference circuits (SD-2H176-01) as required.

1.03 The attendant conference feature is provided on a per-centrex customer group basis in a No. 2 ESS. In order to provide this feature to a centrex customer group, the office must be equipped with the extended feature (EF-1) generic program. In addition to the EF-1 generic, an office data administration (ODA) run is required to define this feature in the translations area of the program store.

2. DESCRIPTION

A. Customer (User) Perspective

2.01 The following paragraphs outline the sequence of actions performed by the attendant in implementing a conference call and by a centrex station user in requesting an attendant conference.

(1) The station user (within the centrex system) dials a conference access code or dials "0" if conference code is not provided.

(2) The attendant is then alerted by an audible signal and an appropriate call indicator lamp (if provided) to denote the call as a conference call.

(3) The attendant answers the request and obtains a list of conferees and connects the first station user to the conference circuit by depressing an idle conference key (CONF 1 or CONF 2).

(4) The attendant proceeds to add the other four conferees to the conference as described below:

The attendant operates the start key, obtains dial tone, and dials the number of the next conferee. When the party answers, the attendant informs the party that a conference call is being set up. The attendant then reoperates the conference key and adds the second conferee to the conference.

(5) The attendant proceeds to add each conferee to the conference in the same manner.

(6) The attendant may release from the conference at any time by operating the position release (RLS) key on the attendant's console without disturbing the existing conference.

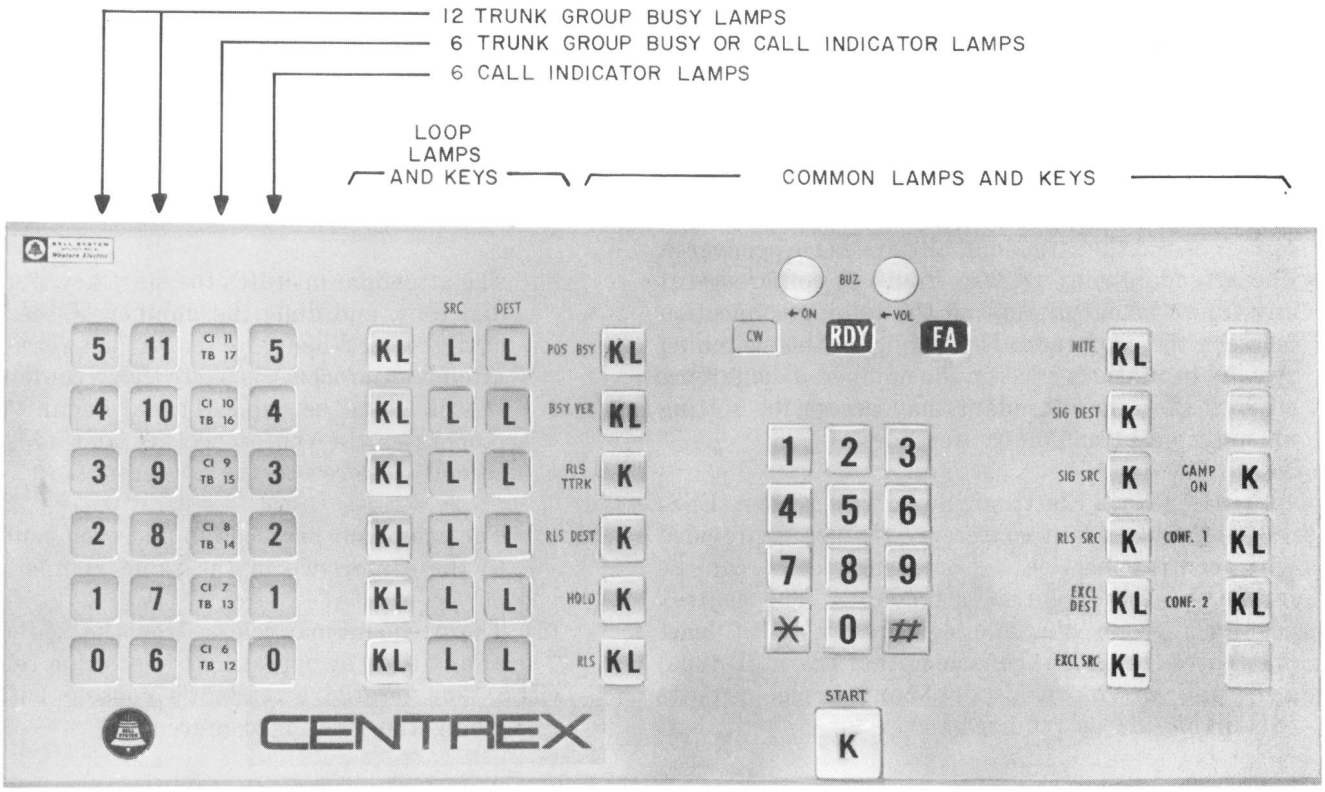
(7) Any conferee has the ability to recall the attendant to the conference when desired by flashing the switchhook. The attendant is alerted by an audible signal and a flashing source (SRC) lamp and CONF button (flashing at 120 ipm—interruptions per minute). The attendant operates the CONF key and is then connected to the conference.

(8) Conference release is accomplished when the next to last conferee disconnects from the conference and one conferee is still connected to the conference. This causes the conference circuit to automatically release.

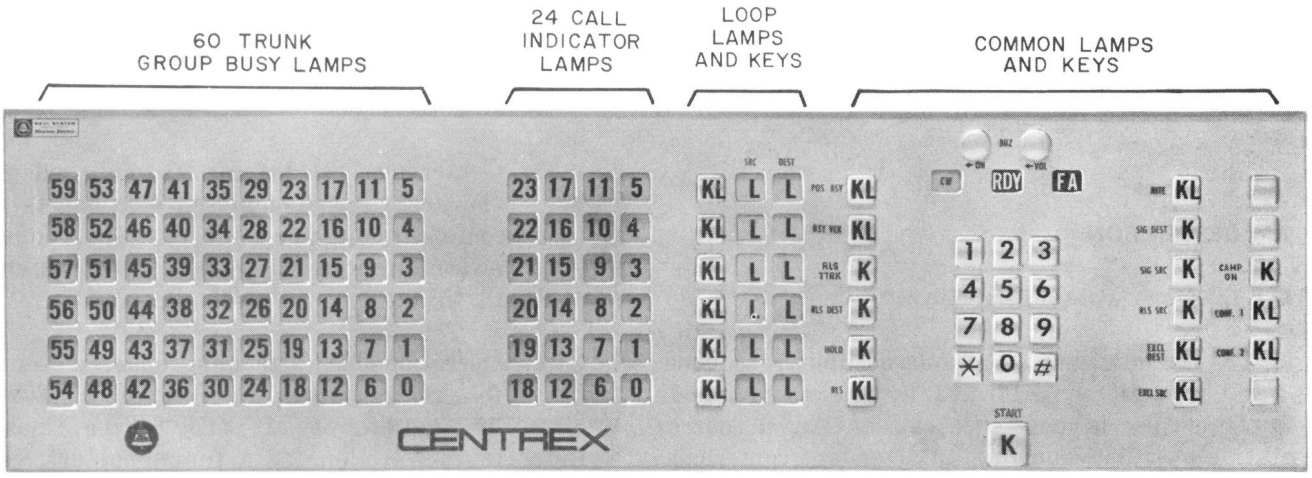
2.02 Operation of the attendant console is described in greater detail in Section 999-200-128-"How to Operate the 1- and 2-Type Console." Refer to this section for a functional description of each attendant position. Refer to Figure 1 for a pictorial of the 1B- and 2B-type attendant consoles.

B. System Implementation

2.03 Implementation of the attendant conference feature requires a 6-port conference circuit and an attendant console (1B- or 2B-type). The attendant consoles may be equipped with either



1B TYPE ATTENDANT CONSOLE



2B TYPE ATTENDANT CONSOLE

K–KEY
L–LAMP
KL–KEY AND LAMP COMBINATION

Fig. 1—1B- and 2B-Type Console Lamp and Key Arrangements

one or two operative conference keys, CONF 1 and CONF 2. These keys enable the attendant to initiate the attendant controlled conference and to add up to five additional parties to the conference per each conference key on an individual 6-port conference circuit.

2.04 After the attendant has established a stable connection for the source party, operation of an operative conference key causes the Attendant Monitor Program (PD-2H308) to set the source terminal memory record (TMR) transient with the attendant conference (ATCOF) progress mark in the transient call record (TCR). The ATCOF progress mark first selects a second TCR which remains associated with the conference throughout the duration of the conference.

2.05 The second TCR is known as the 6-port conference record (SPCR) which selects a 6-port conference circuit and the connecting paths from the first two appearances (ports) on the circuit, to the attendant source and the source party, respectively. Finally, the pseudo-scan point numbers (PSPNs) of the attendant source and 6-port conference circuit are placed into the SPCR along with the monitor progress mark which monitors the progress of the entire conference.

2.06 The attendant adds additional parties to the conference by establishing stable connections through the destination port of the conference circuit. Subsequent operation of the conference key causes the new party to be moved from the destination port of the attendant loop to an idle port of the conference circuit.

2.07 When a new party has been added to the conference and it becomes necessary to remove that party from the conference, reoperation of the conference key causes the TMR of the port involved to be set transient and a progress mark to be loaded in the TCR. This moves the party back to the destination of the attendant loop.

2.08 If at any time the disconnecting party is the attendant (port 0 of the conference), the conference is terminated. The attendant can disconnect the conference by depressing the RLS SRC key when associated with the conference.

2.09 Recall of the attendant to the conference can be accomplished by any conferee by flashing the switchhook. If the party that is flashing the attendant is a station or a tie trunk in the same centrex group as the controlling attendant, that attendant is recalled with an audible signal, flashing conference lamp, and flashing source lamp on the conference loop. A subsequent flash by any party on the conference loop in the same centrex group cancels the recall of the attendant.

3. FEATURE FLOW DIAGRAM

3.01 The feature flow diagram that outlines the functional description of the attendant conference feature is shown in Figure 2.

4. INTERACTIONS

4.01 An unanswered tie trunk cannot be added to the conference.

4.02 Paging, code calling, and recorded telephone dictation cannot be added to the conference.

4.03 The conferees can recall the attendant only by flashing the switchhook.

ATTRIBUTES

5. STATION/SYSTEM

5.01 Attendant conference feature is provided to a customer group on a per-centrex console basis. Each console is equipped with conference keys 1 and 2 which must be appropriately marked in the translations to be operational.

6. LIMITATIONS

6.01 Each attendant console is limited to two simultaneous conferences. Therefore, the total number of circuits required for each centrex group is limited by the number of attendant consoles in that group, plus spares if desired.

6.02 More than one toll connection is not recommended because of transmission difficulties not associated with the No. 2 ESS.

6.03 Two conference circuits cannot be bridged together (either by attendant or by special wiring) to establish conference capability of greater than six parties.

7. RESTRICTION CAPABILITY

7.01 The attendant conference feature is restricted by not making the conference keys operational. Use of other attendant features is not affected by restricting the attendant conference feature.

8. COST DATA

8.01 The costs attributable to the attendant conference feature include program store and call store words.

8.02 Each conference circuit requires 7 consecutive TMRs and each TMR uses 2 words of call store; hence, each circuit requires 14 words of call store for the associated TMRs. Also, each conference port requires four words of program store (translations) per conference circuit which yields 28 words. Each trunk group equipped with the conference circuit requires eight words of program store.

8.03 Each conference circuit requires six network terminals.

8.04 Since attendant conference is ODA assigned, the cost for an ODA run is also reflected in the total cost for providing this feature.

INCORPORATION INTO SYSTEM

9. PLANNING

9.01 The attendant conference feature is provided as part of the EF-1 generic program in No. 2 ESS offices.

9.02 In planning for this feature, completion of certain translation input forms is required to define each centrex group that has conferencing capability. Each centrex group has an associated group of 6-port conference circuits when this feature is provided.

9.03 An appropriate number of 6-port conference circuits (SD-2H176) must be planned to implement attendant conference. Refer to HARDWARE ENGINEERING for additional ordering details for this circuit.

9.04 Proper coordination between the responsible department of the telephone company and Western Electric Company must be made to perform the necessary ODA run to implement attendant conference.

10. HARDWARE ENGINEERING

10.01 A 6-port conference circuit SD-2H176-01 (J2H018) is used to provide attendant conference capability. The circuit trunk order code is 66200. Each circuit requires three 2-inch mounting plates and 12 peripheral decoder points. The procedures for engineering the SD-2H176 circuit are included in the Traffic Facilities Practices Division D, Section 12n.

11. SOFTWARE ENGINEERING

11.01 The procedures for the engineering of the software for the attendant conference feature are outlined in the Traffic Facilities Practices, Division D, Section 12f and 12n.

12. COMPATIBILITY

12.01 There are no compatibility or equipment interface problems associated with the attendant conference feature providing that at least one key is conference equipped on the attendant console.

13. OFFICE DATA

A. Translations

13.01 The translators affected by the addition of the attendant conference feature include the centrex number translator, scan point number translator, and the trunk group translator. Figure 3 depicts a typical translation layout of the attendant conference feature.

B. ODA Information

13.02 In order to activate attendant conference in a No. 2 ESS, an ODA run is necessary. This is accomplished by appropriately completing the various ESS input forms.

13.03 Each centrex customer group with conferencing capability has its own group of 6-port circuits. The members of this trunk group are the "phantom ports" of all the 6-ports assigned to that customer. Consequently, this group number appears in the miscellaneous translation for the phantom port. The group number assigned to ports

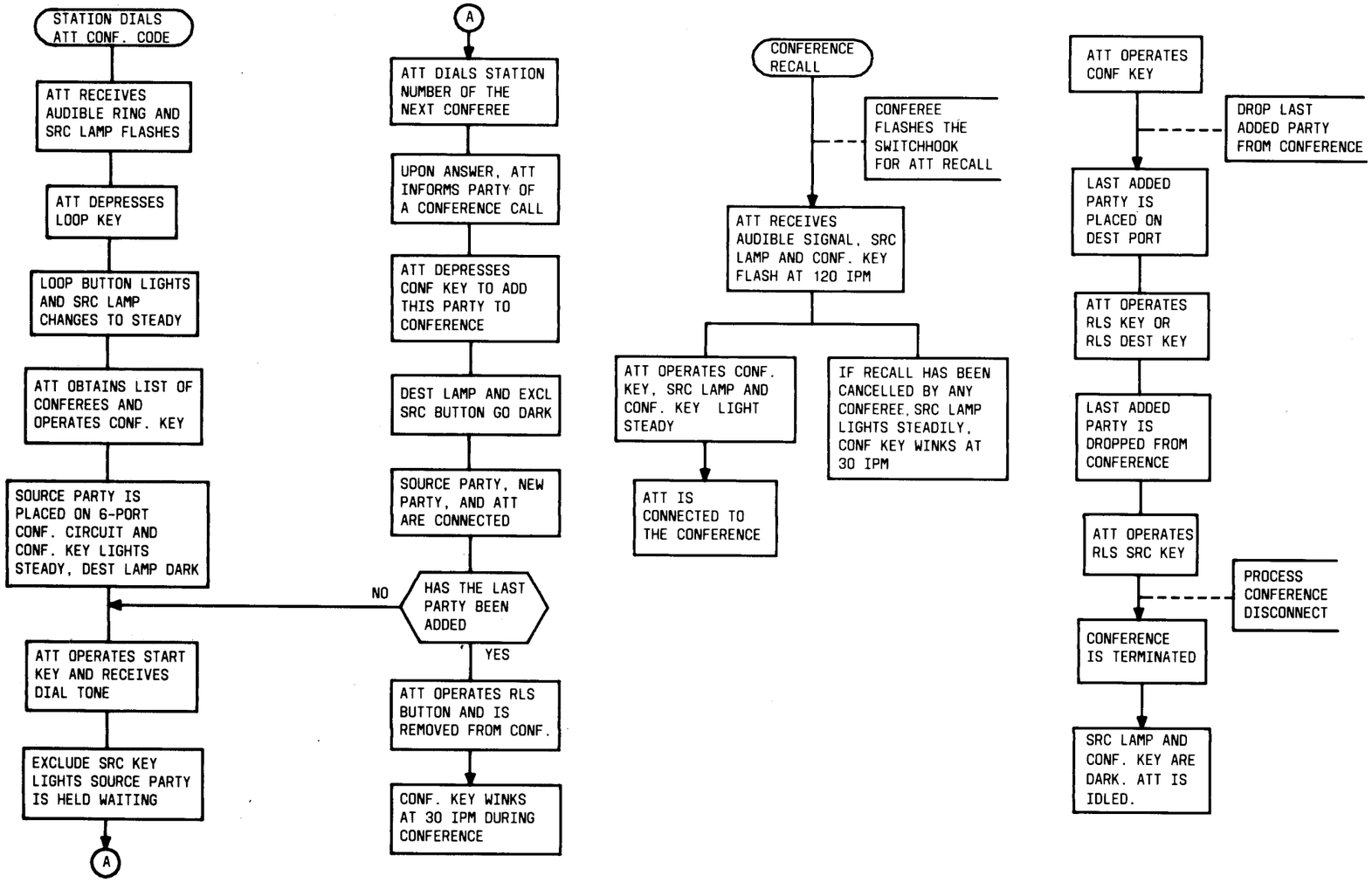
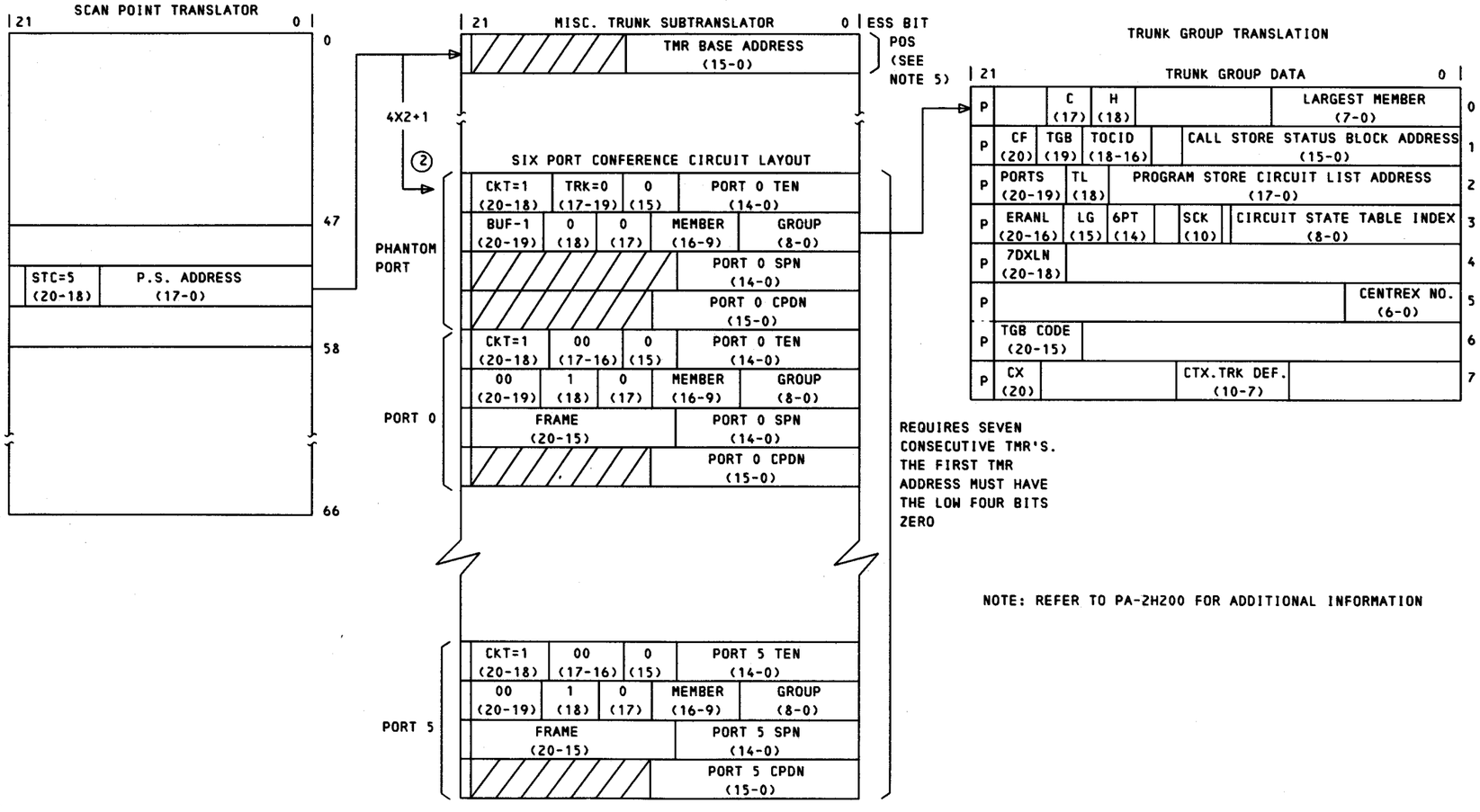


Fig. 2—Attendant Conference Feature Flow Diagram



NOTE: REFER TO PA-2H200 FOR ADDITIONAL INFORMATION

Fig. 3—Miscellaneous Translation Layout of 6-Port Conference Circuit

0-5 is either 64 or 65. These are holding groups for the noncontrolling ports of all multiport circuits.

13.04 Conventionally, port 0 of the multiport circuit is the controlling port (port that carries the busy idle status bits for the whole circuit). For the 6-port conference circuit, the phantom port is the controlling port. Bit 18 of the second word of trunk translation is 0 for the controlling and 1 for the noncontrolling ports. Refer to Figure 3 for the miscellaneous trunk translations of ports 0-5 of the 6-port conference circuit.

13.05 The following ESS input forms must be completed to define the 6-port conference for the centrex customers.

- ***ESS 2108—Attendant Console Table***: This form is completed to show which attendant console is to have "CONF 1" and/or "CONF 2" keys operational.

- ***ESS 2109-1—Centrex Group Table***: Form code 9A is used to identify the appropriate trunk group number of the 6-port conference circuit that is assigned to the centrex group. Form code 9A is also used to assign an incoming call identification (ICI) lamp to indicate which ICI lamp is associated with attendant conference.

- ***ESS 2109-2—Dialing Assignments***: Form code 9B of the Centrex Group Table is used to specify the attendant centrex access treatment (CAT) code and the appropriate Data Type and Sub Type for attendant conference. Data Type 12 and Sub Type 01 must be used when assigning attendant conference.

- ***ESS 2201—Trunk Assignment Table***: This table is used to define the controlling and noncontrolling ports of the 6-port conference circuits. Trunk groups 064 and 065 are holding groups for the noncontrolling ports of all multiport circuits. Trunk group 065 is used for EF-1 only and group 064 is used from all multiport circuits.

- ***ESS 2202-2—Trunk Group Table***: This table is used to define the trunk group associated with the controlling port of the 6-port conference circuit for a centrex customer group when assigning traffic schedule measurements.

- ***ESS 2202-3—Centrex Trunk Group and Simulated Facilities Group Table***: This table is used to define a trunk group busy (TGB) lamp for the 6-port conference group, if desired.

C. Recent Change (RC) Messages

13.06 The conference keys 1 or 2 are recent changeable once attendant conference has been defined by an ODA run. The following RC input message and associated keywords are used to make "CONF 1" and "CONF 2" keys operational.

- A RC:ATT/

  CNF ADD 1, or 2 (make conference key 1 and/or 2 operational)

  CNF DLT 1, or 2 (make conference key 1 and/or 2 nonoperational)

These messages are not effective until a recent change update is performed. Refer to IM-2H200 for further details on these messages.

14. GROWTH/RETROFIT PROCEDURES

14.01 Attendant conference is initially provided to a customer group by an ODA run. Conference keys 1 or 2 on the attendant console are made operational by recent change as described in OFFICE DATA.

15. TESTING

15.01 The attendant conference feature does not require any special testing in order to be incorporated into the No. 2 ESS. A test call from a centrex station to the attendant may be placed and a conference set up with five other parties to determine whether the conference circuit has been properly defined in the translations.

ADMINISTRATION

16. MEASUREMENTS

16.01 Traffic measurements for the attendant conference feature are outlined in the

Traffic and Plant Measurements, No. 2 Electronic Switching System-Section 232-120-301.

17. RECORD KEEPING

17.01 Output records of information provided in translations are provided with each ODA run. Generally, the output forms have the same number as the input ESS forms but are suffixed with an "R". For information regarding the output records, refer to the Translation Guide, TG-2H.

18. CHARGING

18.01 Charging for attendant conference is made per local tariff regulations. Toll calls that are added to an existing connection are charged to the attendant's billing number (listed directory number for the centrex group).

AVAILABILITY

19. NEW INSTALLATIONS

19.01 The attendant conference feature is made available to centrex customers with the EF-1 (extended feature) generic program as part of the centrex offering.

20 GROWTH/RETROFIT

20.01 Attendant conference may be implemented into any No. 2 ESS office having the EF-1 generic program. Refer to OFFICE DATA for the proper RC messages to make conference keys operational on the attendant console.

SUPPLEMENTARY INFORMATION

21. GLOSSARY

21.01 The following list defines acronyms and abbreviations used in this document.

- CAT—Centrex Access Treatment code—used to identify which of the customer's access digits the station can use.
- CONF 1 and 2 (Conference 1 and 2)—Buttons on the attendant console enable the attendant to set up conference calls
- DEST—Destination—lamp on attendant console shows the condition of called station
- EF-1—Extended feature generic program
- EXCL SRC—Exclude Source button on attendant console enables the attendant to talk with called party and to exclude calling party
- ICI—Incoming Call Indicator lamp on the attendant console identifies incoming calls to the attendant
- IPM—Interruptions Per Minute
- ODA—Office Data Administration System—Mechanism by which translation information may be assembled or changed for a No. 2 ESS. Information from the ESS input forms is inputted into the regional ODA computer, assembled, then sent to the No. 2 ESS.
- PSPN—Pseudo Scan Point Number
- RLS—Release button on the attendant console used to release the attendant from the connection
- RLS SRC—Release Source button on the attendant console enables the attendant to clear the equipment on the calling side of the connection
- SPCR—Six-Port Conference Record
- SRC—Source lamp on the attendant console shows condition of calling station or trunk
- START—Start button on the attendant console is used to obtain dial tone
- TCR—Transient Call Record—A software register in call store used to store information about calls that are transient
- TMR—Terminal Memory Record

22. REASONS FOR REISSUE

22.01 This is the initial issue of this section.

23. REFERENCES

23.01 The following are major references used as the supporting documentation for this document:

- SD and CD-2H176-01—6-Port Conference Circuit No. 2 ESS.
- PD and PF-2H308-01 Attendant Monitor Program
- PD and PF-2H311-01 Attendant Services Program
- IM and OM-2H200 Input/Output Message Manuals No. 2 ESS
- TG-2H, Translation Guide No. 2 ESS.
- TFP—Division D, Section 12—Traffic Facilities Practices No. 2 ESS.
- Section 232-120-301—Traffic and Plant Measurements No. 2 ESS.