CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE

5.1.1 GENERAL PROVISIONS

A. GENERAL

Terminal equipment, communications systems and premises wire, herein after referred to as customer-premises facilities may be connected at the RDP at the customer's premises to channel services furnished by the Company where such connections are made subject to Part 68 of the FCC Rules and Regulations in accordance with the provisions of this Product Guide. The term "telecommunications services" as used herein denotes Exchange Access Services, and Channel Services.

B. RESPONSIBILITY OF THE CUSTOMER

1. The customer shall be responsible for the installation, operation and maintenance of any customer-premises facilities on the customer's side of the RDP. No combinations of customer-premises facilities shall require change in or alteration of the equipment or services of the Company, cause electrical hazards to Company personnel, damage to Company equipment, malfunction of Company billing equipment, or degradation of service. Upon notice from the Company that customer-premises facilities are causing such hazard, damage, malfunction or degradation of service, the customer shall make such changes as shall be necessary to remove or prevent such hazard, damage, malfunction or degradation of service.

2. The customer who provides the Premises Wiring of Communications Systems subject to Part 68 of the Federal Communications Commission's rules and regulations pursuant to section 68.215 of Chapter 1 of Title 47 of that Code of Federal Regulations shall be responsible for the payment for activities performed by Company employees at the customer's premises pursuant to subsections (f), (g) and/or (h) of said section 68.215, when the premises wiring in question has failed acceptance tests monitored by, or participated in by, the Company pursuant to section 68.215, and/or has been revealed to be not in conformance with the information provided in the related affidavit which was provided pursuant to subsection (e) of section 68.215, and/or has resulted in a harm to the network.

3. Where the Company provides channel service for use with customer-premises facilities it shall be the responsibility of the customer to ensure the continuing compatibility of such facilities with the channel services furnished by the Company.

4. The customer shall be responsible for all additional wiring required beyond the RDP.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)
5.1.1 GENERAL PROVISIONS (Cont'd)

C. RESPONSIBILITY OF THE COMPANY

1. Channel services furnished by the Company are not represented as adapted to the use of customer-premises facilities. Where such terminal equipment or communications systems are used with channel services, the responsibility of the Company shall be limited to the furnishing of service components suitable for channel services and to the design, maintenance and operation of service components in a manner proper for such services. Subject to this responsibility, the Company shall not be responsible for (a) the through transmission of signals generated by the customer-premises facilities or for the quality of, or defects in, such transmission, or (b) the reception of signals by customer-premises facilities or (c) address signaling where such signaling is performed by customer-provided signaling equipment.

2. The Company will, make available technical standards and installation guidelines for customer installation of premises wire at service centers or other designed locations.

3. The Company may make changes in its telecommunications services, service components, operations or procedures, where such action is not inconsistent with Part 68 of the Federal Communications Commission's Rules and Regulations. If such changes can be reasonably expected to render any customer-premises facilities incompatible with telecommunications services, or require modification or alteration of such customer-premises facilities or otherwise materially affect its use or performance, the customer will be given adequate notice, in writing, to allow the customer an opportunity to maintain uninterrupted service.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)
5.1.1 GENERAL PROVISIONS (Cont'd)

D. RECORDING OF TWO-WAY TELEPHONE CONVERSATIONS

1. Channel Service Which Does Not Connect To the Telecommunications Network

Customer-premises recording equipment may be connected to Channel Services which do not connect to the Telecommunications Network if the customer-premises recording equipment complies with the minimum protection criteria set forth for the connection of customer-provided voice terminal equipment in 5.1.4,F. following.

2. Channel Service Which Connect To The Telecommunications Network

Channel services are not represented as adapted to the recording of two-way telephone conversations. When customer-premises voice recording equipment is used with a channel facility which is connected to telecommunications services, the provisions relating to Recording of Two-Way Telephone Conversations as set forth in 5.1.1,D. are applicable to such channel service.

E. VIOLATION OF TERMS OF SERVICE

When any customer-premises facilities is used with channel services in violation of any of the provisions in this 5.1, the Company will take such immediate action as necessary for the protection of the telecommunications network and Company employees, and will promptly notify the customer of the violation. The customer shall discontinue such use of the facilities, correct the violation and shall confirm in writing to the Company within 10 days, following the receipt of written notice from the Company, that such use has ceased or that the violation has been corrected. Failure of the customer to discontinue such use or to correct the violation and to give the required written confirmation to the Company within the time stated above shall result in suspension of the customer's service until such time as the customer complies with the provisions of this Product Guide.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)
5.1.1 GENERAL PROVISIONS (Cont'd)

F. DEFINITIONS

Customer-Provided Test Equipment

The term "Customer-provided Test Equipment" as used in this 5.1 denotes test equipment located at the premises of the customer that is used by the customer for the detection and/or isolation of a communications service fault.

Grandfathered Communications Systems

The term "Grandfathered Communications Systems" as used in this 5.1 denotes customer-premises facilities (and protective circuitry, if any) connected at the customer's premises, in accordance with any telephone company's Product Guide/tariffs and that are considered to be grandfathered under Part 68 of the Federal Communications Commission's Rules and Regulations because (a) such systems were connected to the telecommunications network or to the channel services specified in 5.1.2,A,6. following prior to January 1, 1980, and are of a type of system which was directly connected (i.e., without Company-provided connecting arrangements) to the telecommunications network or to the channel services specified in 5.1.2,A,6. following as of June 1, 1978, or (b) such systems are connected to the channel services specified in 5.1.2,A,7. or 5.1.2,A,8. following prior to May 1, 1983, and are of a type system which was directly connected (i.e., without Company-provided connecting arrangements) to the channel services specified in 5.1.2,A,7. or 5.1.2,A,8. following as of April 30, 1980.

Grandfathered Connections of Communications Systems

The term "Grandfathered Connections of Communications Systems" as used in this 5.1 denotes connections via Company-provided connecting arrangements of customer-premises facilities at the customer's premises, in accordance with any telephone company's Product Guide/tariffs, and that are considered to be grandfathered under Part 68 of the Federal Communications Commission's Rules and Regulations because (a) such connections to the telecommunications network or to the channel services specified in 5.1.2,A,6. following were made via Company-provided connecting arrangements prior to January 1, 1980, and such connecting arrangements are of a type of connecting arrangement connected to the telecommunications network or to the channel services specified in 5.1.2,A,6. following as of June 1, 1978, or (b) such connections to the channel services specified in 5.1.2,A,7. or 5.1.2,A,8. following are made via Company-provided connecting arrangements prior to May 1, 1983, and such connecting arrangements are of a type of connecting arrangement connected to the channel services specified in 5.1.2,A,7. or 5.1.2,A,8. following as of April 30, 1980.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.1 GENERAL PROVISIONS (Cont'd)

F. DEFINITIONS (Cont'd)

Grandfathered Terminal Equipment

The term "Grandfathered Terminal Equipment" as used in this 5.1 denotes terminal equipment (including protective circuitry, if any) connected at the customer's premises, in accordance with any telephone company's tariffs/Product Guide, and that is considered to be grandfathered under Part 68 of the Federal Communications Commission's Rules and Regulations because, (a) such terminal equipment was connected to the telecommunications network or to the channel services specified in 5.1.2,A,6. following prior to July 1, 1979, and is of a type of terminal equipment which was directly connected (i.e., without Company-provided connecting arrangements) to the telecommunications network or to the channel services specified in 5.1.2,A,6. following as of October 17, 1977, or (b) such terminal equipment is connected to the channel services specified in 5.1.2,A,7. or 5.1.2,A,8. following prior to May 1, 1983, and is of a type of terminal equipment which was directly connected (i.e., without Company-provided connecting arrangements) to the channel services specified in 5.1.2,A,7. or 5.1.2,A,8. following as of April 30, 1980.

Grandfathered Connections of Terminal Equipment

The term "Grandfathered Connections of Terminal Equipment" as used in this 5.1 denotes connections via Company-provided connecting arrangements of customer-provided terminal equipment connected at the customer's premises, in accordance with any telephone company's tariffs/Product Guide, and that are considered to be grandfathered under Part 68 of the Federal Communications Commission's Rules and Regulations because (a) such connections to the telecommunications network or to the channel services specified in 5.1.2,A,6. following were made via Company-provided arrangements prior to July 1, 1979, and such connecting arrangements are of a type of connecting arrangement connected to the telecommunications network or to the channel services specified in 5.1.2,A,6. following as of October 17, 1977, or (b) such connections to the channel services specified in 5.1.2.,A,7. or 5.1.2,A,8. following are made via Company-provided connecting arrangements prior to May 1, 1983, and such connecting arrangements are of a type of connecting arrangement connected to the channel services specified in 5.1.2,A,7. or 5.1.2,A,8. following as of April 30, 1980.

Registered Equipment

The term "Registered" as used in this 5.1 denotes equipment which complies with and has been approved within the Registration provisions of Part 68 of the Federal Communications Commission's Rules and Regulations.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.2 CONNECTIONS OF REGISTERED EQUIPMENT

A. TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY AND COMMUNICATIONS SYSTEMS

Terminal equipment, protective circuitry, and communications systems that are registered may be connected to those channel services specified in 6., 7. or 8. following, subject to Part 68 of the Federal Communications Commission's Rules and Regulations, 5.1.1 preceding and the following:

1. All combinations of registered equipment and associated non-registered terminal equipment (including but not limited to wiring) shall be installed, operated and maintained so that the requirements of Part 68 of the Federal Communications Commission's Rules and Regulations are continually satisfied.

   The Company may discontinue service or impose other remedies as provided for in Part 68 of the Federal Communications Commission's Rules and Regulations for failure to comply with these provisions.

2. The customer shall notify the Company of each line to which registered equipment is to be connected in advance of such connection and shall notify the Company when such registered equipment is permanently disconnected. The customer shall provide the Company the Registration Number and Ringer Equivalence Number for the registered equipment, and the Universal Service Order Code (USOC) of the Company-provided standard jack required. The customer shall also provide, when appropriate, the off-premises station port signaling capability of a P.B.X. system.

3. The customer shall not connect registered equipment to a Company line if:

   a. The Ringer Equivalence of such equipment in combination with the total Ringer Equivalence of other equipment connected to the same line exceeds the allowable maximum of five or as otherwise determined by the Company, or

   b. The ringer type is not a ringer type designated by the Company as suitable for that particular line.

4. Unless a specific waiver has been granted by the Federal Communications Commission or except as otherwise provided in 5. following, all connections of registered equipment to services furnished by the Company shall be made through Company-provided standard jacks; or, in the case of registered communications systems, through standard jacks wired in other than a standard manner, when such nonstandard wiring of the jack is agreed to by the Company.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.2 CONNECTIONS OF REGISTERED EQUIPMENT (Cont'd)

A. TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY AND COMMUNICATIONS SYSTEMS (Cont'd)

5. The requirement for the use of standard jack as described in 4. preceding is waived for registered equipment which is located in hazardous or inaccessible locations.

6. The connection may be made only at the customer's premises to Series 2000 or 3000 channel service as specified in Part C, Section 3.2.2 that present a two wire or four wire loop signaling interface for such connection under the following conditions:

   a. Registered terminal equipment, registered protective circuitry, and registered key telephone systems may be connected to the station end of the channel services furnished in connections with off-premises stations.

   b. Registered P.B.X. systems may be connected, as a trunk termination, to the station end of channel services furnished in connection with off-premises stations. The customer shall also provide, when appropriate, the off-premises station port signaling capability of a P.B.X. system.

   Foreign Exchange service may be utilized with registered terminal equipment, registered protective circuitry and registered communications systems which are connected to the exchange telephone service associated with such channels.

7. The connection of registered terminal equipment and registered P.B.X. systems may be made only at the customer's premises to Series 2000/3000 channels as specified in Part C, 3.2.2 that present an interface for either two wire or four wire or four wire transmission, with separate E and M signaling leads conventionally known as Type I (battery/ground) or Type II (contact closure type). Such E and M signaling leads are those terminal equipment or P.B.X. leads (other than voice or data communications leads) used for the purpose of transferring supervisory or address signals across the interface.

8. The connections of customer-provided registered terminal equipment and registered P.B.X. systems may be made only at the customer's premises to Series 1000/2000 channels as specified in Part C, Section 3.2 furnished to provide indications of message registration of outgoing calls or automatic identification of outward dialing (AIOD) to such customer-provided equipment or systems.

   a. In addition, customers who intend to install, perform additions to, or make rearrangements of AIOD functions shall give advance notice to the Company in accordance with the procedures specified in Part 68 of the Federal Communications Commission's Rules and Regulations or as otherwise authorized by the Federal Communications Commission.

9. Premises wiring associated with registered communications systems is described in 5.1.2,B. and is subject to the terms of service specified therein.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.3 CONNECTIONS OF GRANDFATHERED TERMINAL EQUIPMENT AND GRANDFATHERED COMMUNICATIONS SYSTEMS

A. DIRECT CONNECTIONS

1. Grandfathered terminal equipment may remain directly connected and be moved and reconnected to the channel services specified in 5.1.2,A,6. preceding for the life of the equipment without registration and may be modified only in accordance with Part 68 of the Federal Communications Commission's Rules and Regulations, subject to the following:

   a. The customer shall notify the Company when such grandfathered terminal equipment is to be connected and shall notify the Company when such grandfathered terminal equipment is to be permanently disconnected; such notification shall include a description of the equipment including the manufacturer's name, model number, and type of equipment;

   b. All such connections are made through Company-provided standard jacks or are otherwise connected by the Company; and

   c. All such connections shall comply with the minimum protection criteria set forth in 5.1.4,F. following.

2. Grandfathered communications systems may remain directly connected and be moved and reconnected to the channel services specified in 5.1.2,A,6. preceding for the life of the equipment without registration and may be modified only in accordance with Part 68 of the Federal Communications Commission's Rules and Regulations, subject to the terms of service specified in 1,a.,b. and c. preceding for grandfathered terminal equipment and the following:

   a. Premises wiring shall conform to Part 68 of the Federal Communications Commission's Rules and Regulations;

   b. No changes may be made to equipment so connected except by the manufacturer thereof, or a duly authorized agent of the manufacturer;

   c. Additions to grandfathered communications systems may be made without registration of any additional equipment involved if:

      (1) equipment so added is being reconnected, i.e., was previously directly connected prior to January 1, 1980, in accordance with telephone company tariffs/Product Guide; and

      (2) such additions comply with the provisions of 1. and 2, a. and b. preceding.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.3 CONNECTIONS OF GRANDFATHERED TERMINAL EQUIPMENT AND GRANDFATHERED COMMUNICATIONS SYSTEMS (Cont'd)

A. DIRECT CONNECTIONS (Cont'd)

2. (Cont'd)

d. Additions of registered equipment to grandfathered communications systems are subject to the terms of service specified in 5.1.2 preceding.

3. Grandfathered terminal equipment and grandfathered communications systems directly connected to the channel services specified in 5.1.2,A,7. and 8. preceding on April 30, 1980, may remain connected for the life of the equipment without registration, and may be modified only in accordance with Part 68 of the Federal Communications Commission's Rules and Regulations, subject to the following:

a. All such connections shall comply with the minimum protection criteria set forth in 5.1.4,F. following.

b. No changes may be made to equipment so connected except by the manufacturer thereof, or a duly authorized agent of the manufacturer.

4. Until May 1, 1983, new installations of terminal equipment or communications systems which have been grandfathered may be connected for use with the channel services specified in 5.1.2,A,7. or 5.1.2,A,8. preceding, subject to the following:

a. The customer shall notify the Company when such equipment or systems are to be connected and shall notify the Company when such equipment or systems are to be permanently disconnected; such notification shall include a description of the equipment including the manufacturer's name, model number, and type of equipment;

b. All such connections are made through Company-provided standard jacks or are otherwise connected by the Company;

c. All such connections shall comply with the minimum protection criteria set forth in 5.1.4,F. following;

d. Premises wiring associated with communications systems shall conform to Part 68 of the Federal Communications Commission's Rules and Regulations;

e. No changes may be made to equipment so connected except by the manufacturer thereof, or a duly authorized agent of the manufacturer.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.3 CONNECTIONS OF GRANDFATHERED TERMINAL EQUIPMENT AND GRANDFATHERED COMMUNICATIONS SYSTEMS (Cont'd)

A. DIRECT CONNECTIONS (Cont'd)

5. Additions to grandfathered terminal equipment or grandfathered communications systems specified in 3. and 4. preceding may be made, subject to 4, a. through e. preceding and to the following:

a. Until May 1, 1983, where the equipment being added is of a type which has been grandfathered, and

b. After May 1, 1983, where the equipment being added is grandfathered.

c. Additions of registered equipment are subject to the provisions of 5.1.2 preceding.

6. Systems connected pursuant to 3. through 5. preceding may remain connected and be moved and reconnected, in accordance with 4, a. through e. preceding, for the life of the equipment and may be modified only in accordance with Part 68 of the Federal Communications Commission's Rules and Regulations.

7. Customer-provided terminal equipment and customer-provided communications systems connected via customer-provided grandfathered circuitry are subject to the provisions of 1. through 6. preceding.

B. ATTESTED EQUIPMENT CONNECTED PRIOR TO JULY 1, 1980

Customer-provided headsets and non-powered conferencing equipment which meet the standards and procedures set forth by the Company in Technical References for Attested Equipment and which were connected at the customer's premises to the channel services specified in 5.1.2,A,6. preceding prior to July 1, 1980, in accordance with the terms of service specified in 5.1.3,D., may remain connected and be moved and reconnected in accordance therewith for the life of the equipment unless subsequently modified.

C. CONFORMING ANSWERING DEVICES CONNECTED PRIOR TO JULY 1, 1979

Customer-provided Conforming Answering Devices which meet the standards and procedures set forth by the Company in Technical References for Conforming Answering Devices and which were connected at the customer's premises to the channel services specified in 5.1.2,A,6. preceding prior to July 1, 1979, in accordance with the terms of service specified in Part A, Section 13, may remain connected and be moved and reconnected in accordance therewith for the life of the equipment, unless subsequently modified.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.4 CONNECTIONS OF CUSTOMER-PROVIDED TERMINAL EQUIPMENT AND COMMUNICATIONS SYSTEMS NOT SUBJECT TO THE FEDERAL COMMUNICATIONS COMMISSION'S REGISTRATION PROGRAM

A. GENERAL

1. Connecting arrangements are not required and minimum protection criteria are not applicable where customer-provided terminal equipment or communications systems are connected with the following channels when such channels are used for the types of transmission specified herein due to the nature of the service provided and/or the type of channels and equipment used.

- Series 1000 Channels
- Mobile Radiotelephone Service
- Series 6000 Channels

2. Except as otherwise provided in 5.1.2 and 5.1.3 preceding, customer-provided terminal equipment and communications systems may be electrically connected to channel services in accordance with this 5.1.4.

a. When the customer-provided terminal equipment or communications system is connected with channel service furnished by the Company and such channel service is not arranged for connection to telecommunications services, such connections shall be made to an Network Interface provided by the Company.

b. When the customer-premises facilities are connected with channel service furnished by the Company and such channel service is arranged for connection to telecommunications services:

(1) except as otherwise specified in D,1,d. following, such connections shall be made through a Network Interface

(2) the connection shall be such that the functions of network control signaling (except customer-provided tone-type address signaling through a Company-provided Network Interface) are performed by equipment furnished by the Company.

c. Customer-premises facilities or communications systems connected pursuant to a. and b. preceding must comply with the minimum protection criteria specified in F. following.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.4 CONNECTIONS OF CUSTOMER-PROVIDED TERMINAL EQUIPMENT AND COMMUNICATIONS SYSTEMS NOT SUBJECT TO THE FEDERAL COMMUNICATIONS COMMISSION'S REGISTRATION PROGRAM (Cont'd)

B. DATA TERMINAL EQUIPMENT

Customer-premises facilities (including telephotograph equipment) may be connected at the customer's premises to channel service when such channel service is arranged as provided in A,2,b. preceding.

C. VOICE TERMINAL EQUIPMENT

1. Customer-premises facilities may be connected at the customer's premises to channel service when such channel service is arranged as provided in A,2,b. preceding.

2. Attested Equipment and Conforming Answering Devices may be used with channel service subject to the provisions of 5.1.3,C. and D. preceding.

D. COMMUNICATIONS SYSTEMS

1. Customer-premises facilities may be connected (other than communications systems connected pursuant to 5.1.2 and 5.1.3 preceding) to channel service in accordance with this 5.1.4,D,1. These facilities (including channels derived from such systems), not exceeding voice grade, may be connected at the customer's premises where the customer has a regular and continuing requirement for the origination or termination of communications over the customer-provided communications system provided that:

a. The normal mode of operation of the customer-premises facilities shall be to provide communications originating or terminating at the premises on which the connection is made.

b. The connection shall be made through switching equipment provided either by the customer, or authorized user.

c. The connection shall be to Series 2000/3000 channels as specified in Part C, Section 3.2.2 furnished by the Company or to channels created therefrom in accordance with the provisions of paragraph 5.1.5 following.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.4 CONNECTIONS OF CUSTOMER-PROVIDED TERMINAL EQUIPMENT AND COMMUNICATIONS SYSTEMS NOT SUBJECT TO THE FEDERAL COMMUNICATIONS COMMISSION'S REGISTRATION PROGRAM (Cont'd)

D. COMMUNICATIONS SYSTEMS (Cont'd)

1. (Cont'd)

d. When the channel service is arranged as provided in A,2,b. preceding, the connection is made through:

(1) Registered or grandfathered terminal equipment, communications system, or protective circuitry which, either singularly or in combination assures that the requirements of Part 68 of the Federal Communications Commission's Rules and Regulations are met at the Network Interface.

Minimum protection criteria as set forth in F. following must be complied with when the connection is made through equipment or systems that are not registered.

In lieu of these requirements for total hardware protection, an optional, alternative method, as described in 4. following is available for the control of signal power only.

2. Customer-premises facilities may be connected through a Network Interface furnished by the Company with Series 2000/3000 channels (entrance facilities) furnished for the purpose of extending the customer-premises facilities to a premises of the customer. The Series 2000/3000 channel or channels created therefrom in accordance with the provisions of 3. may be connected at such customer's premises to other customer-premises facilities in accordance with 1., 1,a.,1,b. and 1,d. preceding.

3. At the customer's request and where a channel service is arranged for joint use as set forth in Part C, Section 3.1.3., a joint user of such service may connect his/her own communications system to such jointly used channel service on the same basis as set forth in A,2. and D,1. preceding and F. following.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.4 CONNECTIONS OF CUSTOMER-PROVIDED TERMINAL EQUIPMENT AND COMMUNICATIONS SYSTEMS NOT SUBJECT TO THE FEDERAL COMMUNICATIONS COMMISSION'S REGISTRATION PROGRAM (Cont'd)

D. COMMUNICATIONS SYSTEMS (Cont'd)

4. Institutional Procedures for Signal Power Control

a. When customer-provided communications systems not subject to Part 68 of the Federal Communications Commission's Rules and Regulations are connected to channel services arranged as provided in 5.1.4,A,2,b. preceding and the connection is through, (a) a Company-provided connecting arrangement or, (b) registered or grandfathered terminal equipment, communications system or protective circuitry which assures that all of the requirements of Part 68 of the Federal Communications Commission's Rules and Regulations are met at the interface for the channel service(s), no further action is required. However, when a customer elects to connect such a communications system to channel service(s) and the registered or grandfathered equipment, system or protective circuitry through which the connection is made does not provide protection for signal power control, the customer must comply with the following institutional procedures:

(1) The customer-provided communications system must be installed, operated and maintained so that the signal power (within the frequency range of 200-4000 Hertz) at the channel service interface continuously complies with Part 68 of the Federal Communications Commission's Rules and Regulations.

(2) The operator(s)/maintainer(s) responsible for the establishment, maintenance and adjustment of the voice frequency signal power present at the channel service(s) interface must be trained to perform these functions by successfully completing one of the following:

- A training course provided by the manufacturer of the equipment used to control voice frequency signal power; or

- A training course provided by the customer or authorized representative, who has responsibility for the entire communications system, using training materials and instructions provided by the manufacturer of the equipment used to control the voice frequency signal power; or

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.4 CONNECTIONS OF CUSTOMER-PROVIDED TERMINAL EQUIPMENT AND COMMUNICATIONS SYSTEMS NOT SUBJECT TO THE FEDERAL COMMUNICATIONS COMMISSION'S REGISTRATION PROGRAM (Cont'd)

D. COMMUNICATIONS SYSTEMS (Cont'd)

3. Institutional Procedures for Signal Power Control

a. (Cont'd)

(2) (Cont'd)

- An independent training course (e.g., trade school or technical institution) recognized by the manufacturer of the equipment used to control the voice frequency signal power; or

- In lieu of the preceding training requirements, the operator(s)/maintainer(s) is under the control of a supervisor trained in accordance with the above requirements.

Upon request the customer is required to provide the proper documentation to demonstrate compliance with the requirements in this sub-paragraph (2).

(3) At least 10 days advance notice must be given to the Company in the form of a notarized affidavit before the initial connection of the customer-provided communications system. A copy of the affidavit must also be maintained at the customer's premises. The affidavit must contain the following information:

- The full name, business address, business telephone number and signature of the customer or authorized representative who has responsibility for the operation and maintenance of the communications system.

- The line(s) which the communications system will be either connected to or arranged for connection to.

- A statement that all operations associated with establishment, maintenance and adjustment of the signal power present at the channel service(s) interface will comply with Part 68 of the Federal Communications Commission's Rules and Regulations.

- A statement describing how each operator/maintainer of the communications system will meet and continue to meet the training requirements for persons installing, adjusting or maintaining the communications system.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.4 CONNECTIONS OF CUSTOMER-PROVIDED TERMINAL EQUIPMENT AND COMMUNICATIONS SYSTEMS NOT SUBJECT TO THE FEDERAL COMMUNICATIONS COMMISSION'S REGISTRATION PROGRAM (Cont'd)

D. COMMUNICATIONS SYSTEMS (Cont'd)

3. Institutional Procedures for Signal Power Control (Cont'd)

b. Extraordinary Procedures

(1) The Company may invoke extraordinary procedures to protect the channel service(s) where one or more of the following conditions are present:

- Information provided in the affidavit gives reason to believe that a violation of Part 68 of the Federal Communications Commission's Rules and Regulations or the Institutional Procedures set forth in a. preceding is likely.

- Harm has occurred and there is reason to believe this harm was a result of operations performed under the Institutional Procedures set forth in a. preceding.

(2) The extraordinary procedures which can be invoked by the Company include:

- Requiring the use of protective apparatus which either protects solely against signal power or which assures that all of the requirements of Part 68 are met at the Network Interface. This protective apparatus may be provided by either the Company or the customer.

- Disconnecting service

E. ACCESSORIES

Accessories provided by a customer may be used with channel service provided that such accessories comply with the provisions of 5.1.1,B. and 5.1.4,A,2, b,(2).

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.4 CONNECTIONS OF CUSTOMER-PROVIDED TERMINAL EQUIPMENT AND COMMUNICATIONS SYSTEMS NOT SUBJECT TO THE FEDERAL COMMUNICATIONS COMMISSION'S REGISTRATION PROGRAM (Cont'd)

F. MINIMUM PROTECTION CRITERIA FOR ELECTRICAL CONNECTIONS

1. Since channel services utilize Company facilities and equipment in common with other services it is necessary in order to prevent excessive noise and cross-talk that the power of the signal applied to the Company channel service be individually engineered. A single valued limit for all applications cannot be specified. Therefore, the power of the signal in the band above 300 Hertz which may be applied by the customer-provided equipment to the interface will be specified by the Company for each application to be consistent with the signal power allowed on the telecommunications network.

2. To protect other services, it is necessary that the signal which is applied by the customer-provided equipment to the Company interface located on the customer's premises meet the following limits:

   a. The power in the band from 3,995 Hertz to 4,005 Hertz shall be at least 18dB below the power of the signal as specified in 1. above.

   b. The power in the band from 4,005 Hertz to 10,000 Hertz shall not exceed 16dB below one milliwatt.

   c. The power in the band from 10,000 Hertz to 25,000 Hertz shall not exceed 24dB below one milliwatt.

   d. The power in the band from 25,000 Hertz to 40,000 Hertz shall not exceed 36dB below one milliwatt.

   e. The power in the band above 40,000 Hertz shall not exceed 50dB below one milliwatt.

3. Where there is connection to telecommunications services, to prevent the interruption or disconnection of a call, or interference with network control signaling, it is necessary that the signal applied by the customer-provided equipment to the Company interface located on the customer's premises at no time have energy solely in the 2450 to 2750 Hertz band. If signal power is in the 2450 to 2750 Hertz band, it must not exceed the power present at the same time in the 800 to 2450 Hertz band.

G. ACOUSTIC OR INDUCTIVE CONNECTIONS

1. Customer-provided voice or data terminal equipment (including telephotograph equipment) may be acoustically or inductively connected at the customer's premises to a channel service provided the acoustic or inductive connection is made externally to the network control signaling unit when such unit is provided by the Company.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.4 CONNECTIONS OF CUSTOMER-PROVIDED TERMINAL EQUIPMENT AND COMMUNICATIONS SYSTEMS NOT SUBJECT TO THE FEDERAL COMMUNICATIONS COMMISSION'S REGISTRATION PROGRAM (Cont'd)

G. ACOUSTIC OR INDUCTIVE CONNECTIONS (Cont'd)

2. Customer-provided communications systems may be acoustically or inductively connected with channel service as specified in a. following, provided the acoustic or inductive connection is made externally to the network control signaling unit when such unit is provided by the Company.

   a. Customer-provided communications systems may be connected at the premises of the customer or authorized user where the customer has a regular and continuing requirement for the origination or termination of communications over the customer-provided communications system provided that:

      (1) The normal mode of operation of the customer-provided communications system shall be to provide communications originating or terminating at the premises on which the connection is made.

      (2) The connection shall be made to voice grade channels furnished by the Company.

3. At the customer's request and where a channel service is arranged for joint use as set forth in 5.1.3 of this Product Guide, a joint user of such service may acoustically or inductively connect his/her own communications system to such jointly used channel service on the same basis as set forth for the customer in 2. preceding.

4. Customer-provided tone-type address signaling is permitted through such connections; however, the services of the Company are not designed for such use and the Company makes no representation as to the reliability of address signaling which is performed in such manner.

5. Acoustic or Inductive Connections must comply with the minimum protection criteria set forth in 5.1.4,F. preceding.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.5 CHANNEL DERIVATION DEVICES

A. Customer-provided channel derivation devices which are used to create additional channels may be connected to channel services offered by the Company subject to the terms of service contained in Section 2., 5.1.1, 5.1.2 and 5.1.3 preceding.

1. Usage of such channels by customers for this purpose is subject to the normal transmission characteristics of the type of channel being furnished, and

2. The Company makes no representation as to the suitability of the channels provided by it for subdivision into additional channels by such equipment, or the suitability of the resultant derived channels for any communications purpose.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.6 CONNECTIONS OF CERTAIN FACILITIES OF A POWER, PIPE LINE OR RAILROAD COMPANY AND THE TURNPIKE AUTHORITIES

A. GENERAL

Facilities of a power, pipe line or railroad company and the Turnpike Authorities provided primarily to communicate with points located along a right-of-way (including premises of such company anywhere in cities, towns or villages along the right-of-way) owned or controlled by such company may, in lieu of the provisions of 5.1.3 and 5.1.4,D. preceding, be connected with services furnished by the Company to the same customer, in accordance with the terms of service permitting such connections and specified in Part A, Section 6.1.5,A. and B. Channel facilities are furnished by the Company to such customers as follows:

1. Channels for telephone purposes will be furnished by the Company between a terminal of customer facilities within a telephone exchange area or local service area, and a location within such exchange or local service area for connection at such location with terminal equipment furnished by the customer.

2. In this connection, equipment provided by the customer on his/her circuits for the purpose of deriving telephone, teletypewriter or Morse, telephotograph, data transmission, remote metering, supervisory control or miscellaneous signaling channels may be used, if suitable for such use, to derive such channels over the channels furnished by the Company.

3. Private line teletypewriter service and Series 1000 channels furnished by the Company as specified in Part C, Section 3.2 may be connected to facilities of the customer which are used for the same purposes.

4. When the Company's facilities are connected with those of a customer as provided herein, they may be used for the communications of, and be connected with facilities furnished by the Company to other power, pipe line, railroad companies and Turnpike Authorities which:

   a. Are operated with the customer as part of an integrated power, pipe line, or railroad system under direct or common ownership or control, or

   b. Own or operate a power, pipe line, or railroad system jointly with the customer, or

   c. Own or operate power, pipe line, or railroad facilities interconnected with those of the customer.

   Such use is subject to the same conditions as applicable to the customer except that exchange and message telecommunication connections for such companies and its employees are limited to the circumstances specified in Part A, Section 6.1.5,A. and B.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.7 CONNECTIONS OF CERTAIN FACILITIES OF THE U.S. ARMY, NAVY, AIR FORCE AND COAST GUARD

A. GENERAL

Facilities of the U.S. Department of the Army, Navy, Air Force and of the Coast Guard will be connected with services furnished by the Company, in lieu of the provisions of 5.1.3 and 5.1.4,D. preceding, as provided in 1. thru 4. following, where the Secretary of the appropriate Department or his authorized representative, notifies the Company in writing that such connection is required for reasons of military necessity. Such connections are made by means of switching or connecting equipment furnished by the Company.

1. Telephone facilities of the aforesaid departments or administration will be connected to channel services furnished by the Company as specified in Part C, Section 3.2.2 for voice transmission utilizing a Series 2000/3000 channel for communications with stations associated with such services; provided, however, that such department or administration facilities will not be connected to a local or toll central office line to form a through connection except in cases of emergency involving safety of life or property, unless such facilities are provided in locations where it is impracticable for the Company to furnish its services.

2. Teletypewriter or Morse, telephotograph, data transmission, remote metering, supervisory control or miscellaneous signaling facilities of the aforesaid departments or administration will be connected to channel services furnished for such purposes.

3. Customer-provided terminal equipment and communications systems connected to the channel services specified in 5.1.2,A,6. preceding in accordance with 1. and 2. preceding prior to January 1, 1980, may remain connected and be moved and reconnected for the life of the equipment without registration unless subsequently modified. New installations of customer-provided terminal equipment or communications systems subject to Part 68 of the Federal Communications Commission's Rules and Regulations connected to such channel services must meet the requirements of Part 68 of the Federal Communications Commission's Rules and Regulations.

4. Effective May 1, 1983, new installations of or additions to customer-provided terminal equipment and communications systems subject to Part 68 of the Federal Communications Commission's Rules and Regulations, connected to the channel services specified in 5.1.2,A,7. or 8. preceding in accordance with 1. and 2. preceding, must meet the requirements of Part 68 of the Federal Communications Commission's Rules and Regulations.

The provisions formerly contained within this Section have been incorporated within Verizon Tariff FCC No. 1, Interstate Access Service, and Tariff B.P.U.-N.J.-No. 6, Access Service.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.8 CONNECTIONS OF CUSTOMER-PROVIDED TEST EQUIPMENT

The terms of service governing the connections of customer-provided test equipment set forth in this 5.1.12 have been extended indefinitely pending adoption of a permanent program which complies with Part 68 of the FCC's Rules and Regulations unless sooner cancelled or changed.

A. TOTALLY PROTECTIVE CONNECTIONS

1. Customer-provided test equipment may be connected to those channel services specified in 5.1.2 preceding at the premises of the customer through registered or grandfathered terminal equipment, protective circuitry, or communications systems subject to Part 68 of the Federal Communications Commission's Rules and Regulations which, either singularly or in combination, assures that all of the requirements of Part 68 of the Federal Communications Commission's Rules and Regulations (total protection) are met at the channel service interface.

2. Customer-provided test equipment may be connected to those channel services specified in 5.1.4,A,2. preceding at the premises of the customer either (a) directly at the channel service interface, or (b) through other equipment, provided that the minimum protection criteria specified in 5.1.4,F. preceding is continually met at the channel service interface.

B. INTERIM PROGRAM FOR CONNECTIONS OF CUSTOMER-PROVIDED TEST EQUIPMENT

Customer-provided test equipment may also be connected at the premises of the customer, either (a) directly to the Network Interface of those channel services specified in 5.1.2 preceding, or (b) through customer premises facilities subject to Part 68 of the Federal Communications Commission's Rules and Regulations which does not provide protection for signal power control under the following Interim Program provided that:

1. The customer-provided test equipment is limited to transmission signal power generating and/or detection devices, or similar devices, utilized by the customer for the detection and/or isolation of a communications service fault.

2. The customer-provided test equipment is of a type that was lawfully directly connected to the telecommunications network or channel service(s) as of March 6, 1981. Such test equipment may remain connected, be moved or reconnected during the life of the test equipment unless it has been subsequently modified.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.8 CONNECTIONS OF CUSTOMER-PROVIDED TEST EQUIPMENT (Cont'd)

B. INTERIM PROGRAM FOR CONNECTIONS OF CUSTOMER-PROVIDED TEST EQUIPMENT (Cont'd)

3. Direct connections of customer-provided test equipment or connections through terminal equipment, or communications systems subject to Part 68 of the Federal Communications Commission's Rules and Regulations are made up to and including the RDP.

4. Customer-provided test equipment must be operated in accordance with the Institutional Procedures for Signal Power Control as specified in C. following.

5. The customer notifies the Company of each channel service at each premises to which the customer-provided test equipment will be connected in advance of the initial connection. The customer must also notify the Company when such test equipment is permanently disconnected at each premises.

6. No customer-provided test equipment or combination of test equipment with terminal equipment, protective circuitry or communications systems subject to Part 68 of the Federal Communications Commission's Rules and Regulations may cause electrical hazards to Company personnel, damage to Company equipment, malfunction of Company billing equipment, or degradation of service to persons other than the user of the subject test equipment or the user's calling or called party.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)
5.1.8 CONNECTIONS OF CUSTOMER-PROVIDED TEST EQUIPMENT (Cont'd)

C. INSTITUTIONAL PROCEDURES FOR SIGNAL POWER CONTROL

1. In accordance with B,4. preceding, the customer must comply with the following Institutional Procedures:

a. The customer must install, operate and maintain the test equipment so that its signal power at the channel service interface complies with Subpart D of Part 68 of the Federal Communications Commission's Rules and Regulations.

b. The operator(s)/maintainer(s) responsible for the test equipment signal power present at the channel service interface must be trained to perform these functions by successfully completing one of the following:

(1) a training course provided by the manufacturer of the test equipment, or

(2) a training course provided by the customer, or authorized representative of the customer, using training materials and instructions provided by the manufacturer of the test equipment, or

(3) an independent training course (e.g., trade school or technical institution) recognized by the manufacturer of the test equipment, or

(4) in lieu of the preceding training requirements, the operator(s)/maintainer(s) is under the control of a supervisor trained in accordance with (1) through (3) preceding.

Upon request, the customer is required to provide proper documentation to demonstrate compliance with the requirements in this paragraph b.

c. Advance notice must be given to the Company in the form of a notarized affidavit before the initial connection of the customer-provided test equipment at each premises after September 25, 1981. A copy of the affidavit must also be maintained at the customer's premises. The affidavit must contain the following information:

(1) The full name, business address, business telephone number and signature of the customer or authorized representative who has responsibility for the operation of the test equipment.

CONNECTIONS

5.1 CONNECTIONS OF TERMINAL EQUIPMENT, PROTECTIVE CIRCUITRY, COMMUNICATIONS SYSTEMS AND PREMISES WIRE (Cont'd)

5.1.8 CONNECTIONS OF CUSTOMER-PROVIDED TEST EQUIPMENT (Cont'd)

C. INSTITUTIONAL PROCEDURES FOR SIGNAL POWER CONTROL (Cont'd)

1. (Cont'd)

c. (Cont'd)

(2) The line(s) to which the test equipment will be either connected to or arranged for connection to.

(3) A statement that all operations associated with the establishment, maintenance and adjustment of the test equipment signal power present at the Channel Service interface will comply with Subpart D of Part 68 of the Federal Communications Commission's Rules and Regulations.

(4) A statement describing how each operator of the test equipment will meet and continue to meet the training requirements for persons installing, connecting, adjusting or maintaining the test equipment.

2. Extraordinary Procedures

a. The Company may invoke extraordinary procedures to protect the telecommunications network where one or more of the following conditions are present:

(1) Information provided in the affidavit gives reason to believe that a violation of Part 68 of the Federal Communications Commission's Rules and Regulations or the Institutional Procedures set forth in 1. preceding is likely.

(2) Harm has occurred and there is reason to believe this harm was a result of operations performed under the Institutional Procedures set forth in 1. preceding.

b. The extraordinary procedures, which can be invoked by the Company, include:

(1) Requiring the use of protective apparatus which either protects solely against excessive signal power or which assures that all of the requirements of Part 68 of the Federal Communications Commission's Rules and Regulations are met at the Channel Service interface.

(2) Disconnecting service.

CONNECTIONS

5.2 SPECIAL ARRANGEMENTS FOR THE CONNECTION OF FACILITIES OF THE COMPANY WITH FACILITIES PROVIDED BY CUSTOMERS

5.2.1 GENERAL PROVISIONS

Customer-premises facilities connected to the telecommunications network or to channel services, through Company provided connecting arrangements, in accordance with 5.1 and as specified in Part A, Section 6., may remain connected, be moved or reconnected in accordance with the terms of service governing grandfathered installations through Company-provided connecting arrangements.

Except as otherwise provided in Part A, Section 6, installations of new connecting arrangements will not be made (a) after July 1, 1979 for connection of customer-provided terminal equipment, (b) after January 1, 1980 for connection of customer-provided communications systems to the telecommunications network, (c) after May 1, 1983 for the connection of customer-provided terminal equipment or communications systems to channel services, and (d), after July 1, 1980 for Equipment-to-Equipment connections. Treatment with respect to grandfathered installations which include such connecting arrangements is covered in 5.1.3,B.

Any equipment offered herein which has grandfathered status under the Federal Communications Commission's Registration Program is offered and provided only to the extent of available stock.

5.2.2 CUSTOMER-PROVIDED COMMUNICATIONS SYSTEMS

A. BASIS OF CONNECTION

Customer-provided communications systems, including channels derived from such systems, may be connected at a customer's premises, to the telecommunications network through a Network Interface. Connections to the network or a WATS access line shall be made only through a network control signaling unit furnished by the Company or through customer-provided equipment which effects such connections externally to a Company network control signaling unit by means of an acoustic or inductive connection. The customer-provided system shall comply with the minimum network protection criteria specified in 5.1.4,F.

CONNECTIONS

5.2 SPECIAL ARRANGEMENTS FOR THE CONNECTION OF FACILITIES OF THE COMPANY WITH FACILITIES PROVIDED BY CUSTOMERS (Cont'd)
5.2.2 CUSTOMER-PROVIDED COMMUNICATIONS SYSTEMS (Cont'd)

B. ALTERNATE ARRANGEMENTS

1. United States Army, Navy, Air Force and Coast Guard

a. General

In lieu of the intercommunication arrangements provided for under paragraphs A., B. and C. preceding, and in Part A, Section 6, provisions are made under the term of standard agreements with the United States Army, Navy, Air Force and Coast Guard for connection of communications systems owned and maintained by the United States Army, Navy, Air Force and Coast Guard with the facilities of the Company.

b. Centrex Service (Grandfathered)

2. Power, Pipe Line or Railroad Companies and Turnpike Authorities

In lieu of the interconnection arrangements provided for under paragraphs A., B. and C. preceding, and in Part A, Section 6 interconnections of Company facilities with those of power, pipe line or railroad companies, and Turnpike Authorities are permitted by means of switching or connecting equipment furnished by the Company as provided for in 5.1.6 preceding.