VOICE GRADE SERVICE (Regions 1, 11 and 16)

A. AVAILABILITY OF SERVICE

This Product Guide contains terms and conditions, rates and charges for Channel Terminations other than Non-Competitive End User Channel Terminations, Channel Mileage and certain Optional Features and Functions ordered for such Channel Terminations, including Multiplexing. Other Special Access Services needed to complete a circuit are available under Company FCC Tariffs as described in Part 0, Section 1. Effective February 13, 2026, this service is no longer available to new customers. Moves, changes, or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. For wire centers specific service withdrawal information, please refer to Part 0, Section 8D, of this Product Guide. (N) (N)

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B. DESCRIPTION

A Voice Grade channel is a channel which provides voice frequency transmission capability in the nominal frequency range of 300 to 3000 Hz and may be terminated as analog two-wire or four-wire, or, where facilities permit in the operating territories set forth in Part 0, Section 8A, 8B, 8E, 8G, 8I, and 8J, as a four-wire in a digital format when used in conjunction with another Voice Grade Channel Termination at the other end. For Region 1 and Region 16, effective 2-wire and 4-wire circuits are available as an optional feature and function. Voice Grade channels are provided between Customer designated premises or between a Customer designated premises and a Company Hub.

1. Balance

   All signals for transmission over the services provided under this Section shall be delivered by the Customer balanced to ground except for ground start, duplex (DX) and McCulloh-Loop (Alarm System) type signaling.

C. TECHNICAL SPECIFICATIONS PACKAGES

The technical specifications for these parameters are delineated in Technical Reference TR-NWT-000335, Issue 3.

D. CHANNEL INTERFACES

Channel interfaces for Voice Grade Service may be found at the common language product of iconectiv.com.

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E. OPTIONAL FEATURES AND FUNCTIONS

The technical specifications for Voice Grade Service optional features and functions are specified in Technical Reference TR-NWT-000335, Issue 3.

1. Central Office Bridging Capability

   a. Voice Bridging (two-wire and four-wire)
   b. Data Bridging (two-wire and four-wire)
   c. DATAPHONE Select-A-Station Bridging with sequential arrangement ports[1] or addressable arrangement ports
   d. Split Band[2], Active Bridging
      Passive Bridging[3]
      Summation[3]

2. Conditioning

   Conditioning provides more specific transmission characteristics for Voice Grade services. C-Type conditioning controls attenuation distortion and envelope delay distortion. Envelope Delay Distortion denotes a measure of the linearity of the phase versus frequency of a channel. Sealing Current helps maintain continuity on dry metallic loops.

   For two-point services, the parameters apply to each service. For multipoint services, the parameters apply to each mid link or end link. C-Type conditioning and Data Capability may be combined on the same service.

   a. C-Type Conditioning

      C-Type Conditioning is provided for the additional control of attenuation distortion and envelope delay distortion on data services.

   b. Improved Attenuation Distortion

      Improved attenuation distortion is provided for additional control of attenuation distortion.

   c. Improved Envelope Delay Distortion

      Improved envelope delay distortion is provided for additional control of envelope delay distortion.

   d. Sealing Current Conditioning

      Sealing Current Conditioning is provided to help maintain continuity on dry metallic loops. It is usually associated with four-wire DA or NO type channel interfaces.

[1] Not available in Region 1.
[2] Not available in Region 11 and Region 16.
[3] Not available in Region 1 and Region 11.

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E. OPTIONAL FEATURES AND FUNCTIONS (Cont'd)

3. Customer Specified Premises Receive Level

This option allows the Customer to specify the receive level at the Point of Termination. The level must be within a specific range on effective four-wire transmission.

4. Improved Termination and Improved Return Loss (Echo Control)

a. Improved Termination provides for a fixed 600 ohm impedance, variable level range and simplex reversal. Company equipment is required at the Customer's premises where this option is ordered.

b. Improved Return Loss provides for more stringent Echo Control Specifications. In order for this option to be applicable, the transmission path must be four-wire at one POT and two-wire at the other POT. Placement of Company equipment may be required at the Customer's premises with the two-wire POT. Echo Control denotes the control of reflected signals in a telephone transmission path. Return Loss denotes a measure of the similarity between the two impedances at the junction of two transmission paths. The higher the return loss, the higher the similarity.

5. Data Capability

Data Capability (also known as D-Type Conditioning) provides transmission characteristics suitable for data communications. Specifically, Data Capability provides for the control of Signal to C-Notched Noise Ratio and Intermodulation Distortion. It is available for two-point services or multipoint services. Signal-to-C-Notched Noise Ratio denotes the ratio in dB of a test signal to the corresponding C-Notched Noise. C-Notched Noise denotes the C-message frequency weighted noise on a voice channel with a holding tone, which is removed at the measuring and through a notch (very narrow band) filter. Intermodulation Distortion denotes a measure of the non-linearity of a channel. It is measured using four tones, and evaluating the ratios (in dB) of the transmitted composite four-tone signal power to the second-order products of the tones (R2), and the third-order products of the tones (R3).

When a service equipped with Data Capability is used for voice communications, the quality of the voice transmission may not be satisfactory.

6. Signaling Capability

Signaling Capability provides for the ability to transmit signals from one Customer designated premises and alerts another Customer designated premises on the same service with which it wishes to communicate.

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E. OPTIONAL FEATURES AND FUNCTIONS (Cont'd)

7. Four-Wire/Two-Wire Conversions

"Effective 2-Wire" denotes a condition which permits the simultaneous transmission in both directions over a channel, but it is not possible to insure independent information transmission in both directions. Effective 2-wire channels may be terminated with 2-wire or 4-wire interfaces.

"Effective 4-Wire" denotes a condition which permits the simultaneous independent transmission of information in both directions over a channel. The method of implementing effective 4-wire transmission is at the discretion of the Company (physical, time domain, frequency-domain separation or echo cancellation techniques). Effective 4-wire channels may be terminated with a 2-wire interface at the Customer's premises. However, when terminated 2-wire, simultaneous independent transmission cannot be supported because the two wire interface combines the transmission paths into a single path.

When a Customer requests that an effective Four-Wire channel be terminated with a Two-Wire interface at the Customer designated premises in the operating territories of Region 1, then the Effective Four-Wire Transmission with Two-Wire Interface optional feature applies. Placement of Company Equipment (Hybrid) is required at the Customer's premises to convert the Four-Wire channel to the Two-Wire POT. When this option is ordered, a Four-Wire channel termination charge applies. Per the voice grade technical references, certain voice grade service are always provisioned as Four-Wire services and will be billed as a Four-Wire Channel Termination.

When a Customer requests that an effective four-wire channel be terminated with a two-wire channel interface at the Customer designated premises in Region 11 and Region 16, a Four-Wire to Two-Wire Conversion is required. The rate for the conversion is included as part of the basic Channel/Circuit Termination rate.

F. ACCEPTANCE TESTING

At no additional charge, the Company will, at the Customer's request, cooperatively test, at the time of installation, the following parameters:

Acceptance tests will include test for loss, 3-tone slope, DC continuity, operational signaling, C-notched noise and C-message noise when these parameters are applicable and specified in the order for service. Additionally, a balance (improved loss) test will be made if the Customer has ordered the improved return loss optional feature. C-Message Noise denotes the frequency weighted average noise within an idle voice channel. The frequency weighting, called C-message, is used to simulate the frequency characteristic of the 500-type telephone set and the hearing of the average subscriber.

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G. APPLICATION OF RATES AND CHARGES

1. Service Changes/Rearrangements

- In Region 1, if the change involves changing the type of signaling on a Voice Grade service, a charge equal to the Voice Grade channel termination rate element first nonrecurring change charge will apply. The charge will apply per service termination affected.

- In Region 11, if the change involves changing the type of signaling on a Voice Grade service, a charge equal to the Voice Grade channel termination rate element nonrecurring charge will apply on a first and additional basis. The charge will apply per channel termination affected.

- In Region 11, if the change involves the rearrangement of an existing Voice Grade Service or an existing multiplexed Voice Grade Service to a High Capacity Service, a Voice Grade to DS1 Rearrangement Charge will apply to each Voice Grade Service rearranged.

- In Region 11, if the change involves the rearrangement of an existing Voice Grade Service derived from a High Capacity Service to a different High Capacity Service, a Voice Grade to DS1 Rearrangement Charge will apply. The charge applies only when both High Capacity Services involved are between the same Customer premises and Company Hub where the multiplexing function is performed. The Voice Grade to DS1 Rearrangement Charge will apply to each Voice Grade Service rearranged.

- In Region 1, a change from a two-point Special Access Service without bridging to multipoint service or from a multipoint to two-point Special Access Service without bridging will be treated as discontinuance and installation of service.

- For Region 1 and Region 16, additional Service Rearrangement charges are found in Part 0, Section 7A2d.