

SECTION II

SPECIFICATIONS

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1. SPECIFICATIONS	1	1.01 Technical specifications for the B325 terminal are contained in Table A. Fig. 1 indicates typical frequency response, and Fig. 2 provides typical delay distortion for two-wire and four-wire connections.
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TABLE A
B325 TERMINAL SPECIFICATIONS

PARAMETER	PERFORMANCE SPECIFICATION
GENERAL	
Channels per Terminal	24
Carrier Mode	Pulse Code Modulation (PCM)
Channel Sampling Rate	8000 samples per second (8 kHz)
Bits (Binary Digits per Channel)	8 (labeled B1 through B8)
Bits per Frame (24 Channels)	193 (192 channel bits plus one frame bit)
Bit Assignments	
Speech Code	8 bits (B1 through B8). Most significant bit first.
Signaling Code	Eight bit every sixth frame of the channel word is used for signaling.
Framing Code	Framing bit shared between terminal framing (FT) and signaling framing (FS). FT alternates sending p or 1. FS sends 000-111-000 etc. FT and FS alternate every other frame.

TABLE A (Cont)
B325 TERMINAL SPECIFICATIONS

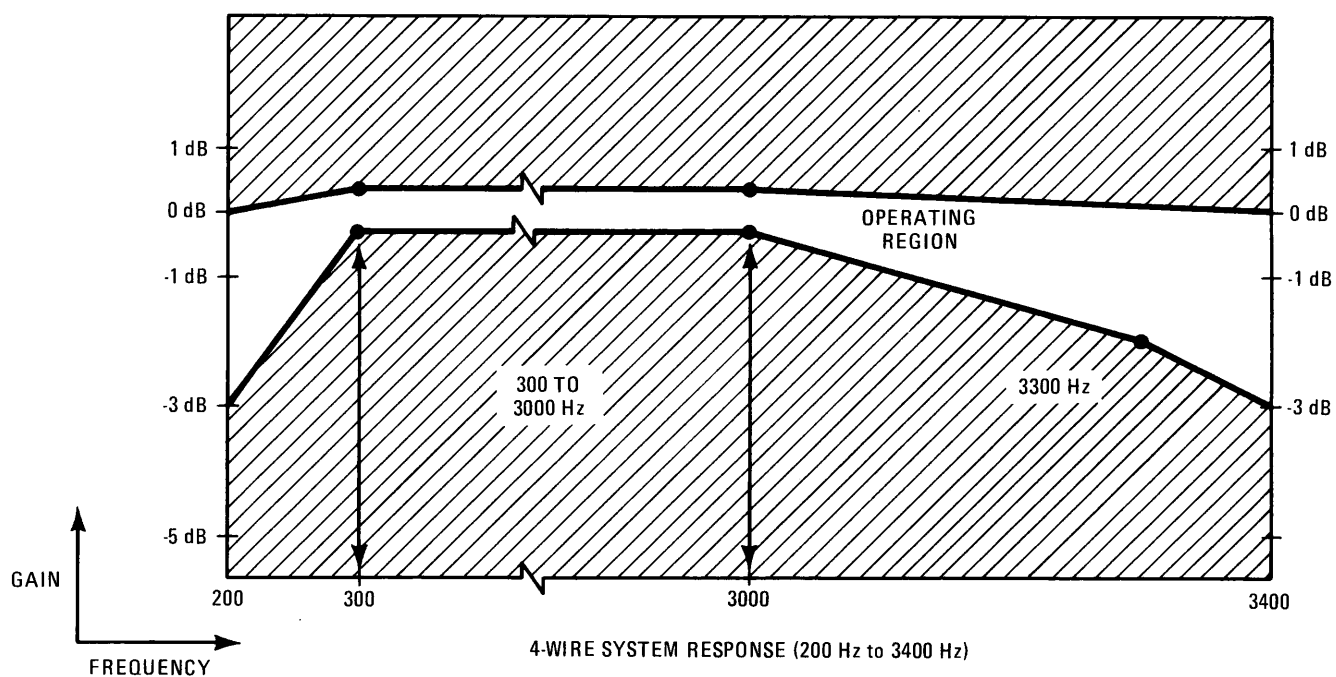
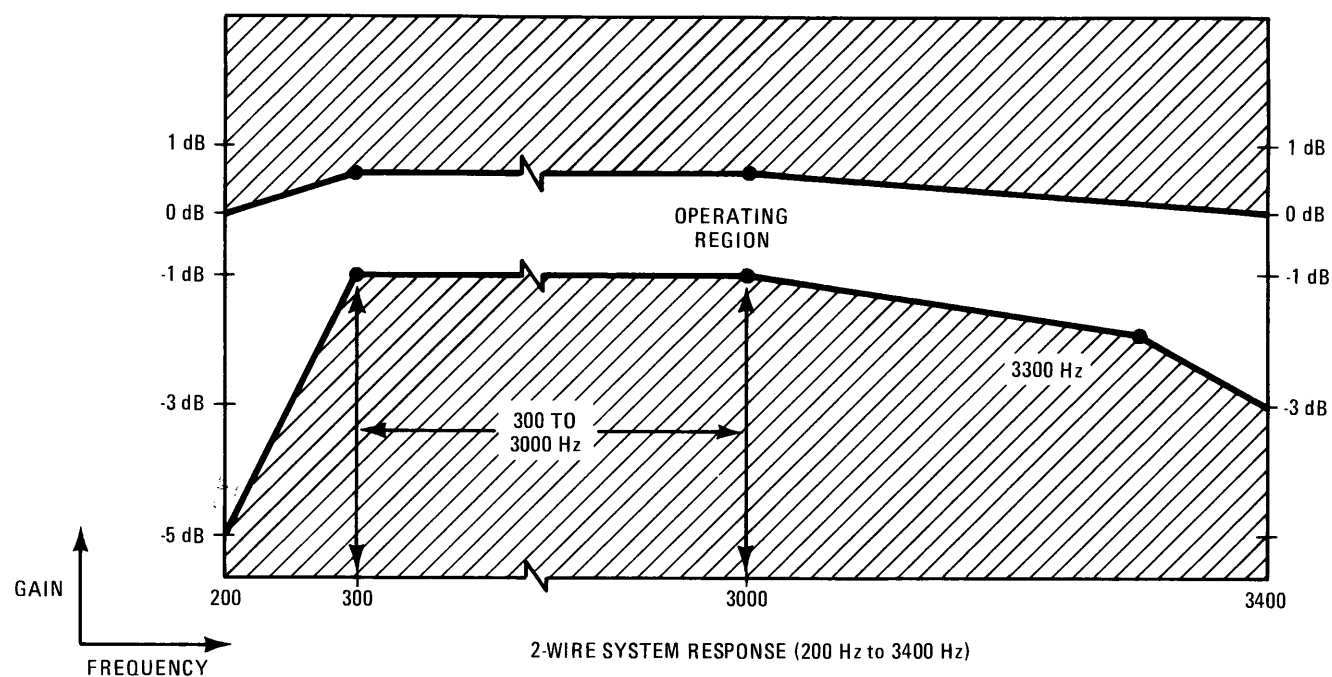
PARAMETER	PERFORMANCE SPECIFICATION																			
GENERAL (Cont)																				
Remote Alarm	Transmitted by suppression of second bit of each channel word.																			
Quantizing Levels	255 (2 ⁸ -1)																			
Bit Rate (Clock Rate)	1.544 megabits per second (1.544 MHz) ±40 Hz nonadjustable.																			
Pulse Characteristics (On-Line)																				
Type	Balanced bipolar transmission																			
Height	±3V nominal (6V peak-to-peak)																			
Width	324 nsec nominal																			
Frame-Loss Alarm Time	Frame sync loss for more than approximately 280 msec gives alarm, may be strapped to provide 2 second delay before alarm.																			
Maximum Expected Frame-Loss Recovery Time	11 msec																			
Voice-Frequency Characteristics																				
Channel-Frequency Response	Loss relative to 1-kHz loss. <i>Measured with 0-dBmO Input.</i>																			
<table><tr><th>Frequency</th><th>2-Wire to 2-Wire</th><th>4-Wire to 4-Wire</th></tr><tr><td>60 Hz</td><td>-20 dB, minimum</td><td>> 0 dB</td></tr><tr><td>200 Hz</td><td>0 to 5 dB</td><td>0 to 3 dB</td></tr><tr><td>300 to 3000 Hz</td><td>-0.5 to +1.0 dB</td><td>-0.3 to +0.3 dB</td></tr><tr><td>3300 Hz</td><td>1.5 dB, maximum</td><td>1.5 dB, maximum</td></tr><tr><td>3400 Hz</td><td>0 to 3 dB</td><td>0 to 3 dB</td></tr></table>			Frequency	2-Wire to 2-Wire	4-Wire to 4-Wire	60 Hz	-20 dB, minimum	> 0 dB	200 Hz	0 to 5 dB	0 to 3 dB	300 to 3000 Hz	-0.5 to +1.0 dB	-0.3 to +0.3 dB	3300 Hz	1.5 dB, maximum	1.5 dB, maximum	3400 Hz	0 to 3 dB	0 to 3 dB
Frequency	2-Wire to 2-Wire	4-Wire to 4-Wire																		
60 Hz	-20 dB, minimum	> 0 dB																		
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3300 Hz	1.5 dB, maximum	1.5 dB, maximum																		
3400 Hz	0 to 3 dB	0 to 3 dB																		
Level Stability	±0.5 dB, over 3 months																			

TABLE A (Cont)
B325 TERMINAL SPECIFICATIONS

PARAMETER	PERFORMANCE SPECIFICATION
GENERAL (Cont)	
Impedances	
Two-Wire	325EM02: 600 ohms balanced. All others are 900 ohms balanced.
Four-Wire	325EM01: 600 ohms balanced.
Signaling Types	E&M 2-wire, E&M 4-wire, dial pulse, foreign exchange.
Return Loss	
Four-Wire	28 dB at 1 kHz; 23 dB from 300 to 3000 Hz, minimum
Echo Return Loss (Two-Wire)	30 dB, minimum
Singing Point Return Loss	24 dB, minimum
Idle Channel Noise	23 dBrcO, maximum
Delay Distortion	
Two-Wire (Maximum)	375 usec, 800 to 2700 Hz 190 usec, 1000 to 2500 Hz 150 usec, 1150 to 2300 Hz
Four-Wire (Maximum)	225 usec, 800 to 2700 Hz 115 usec, 1000 to 2500 Hz 65 usec, 1150 to 2300 Hz
Overload Threshold	+3 dBmO
Interchannel Crosstalk	25 dBrcO, 200 to 3400 Hz
Single-Frequency Distortion	-28 dBmO at 0 to 12 kHz (input level 0 dBmO), -40 dBmO at 1.02 kHz.
POWER REQUIREMENTS	
Full 24-Channel, All Busy, E&M Signaling, and a Full Set of Common Equipment	540 ma, typical
Unit Consumption (At -50-Volt Supply Input)	
Common Equipment Only	280 ma

TABLE A (Cont)
B325 TERMINAL SPECIFICATIONS

PARAMETER	PERFORMANCE SPECIFICATION	
POWER REQUIREMENTS (Cont)		
Channel Units:	<i>Idle</i>	<i>Busy</i>
325EM01	2 ma	10 ma
325EM02/03	4 ma	12 ma
325DP01	14 ma	40 ma
325DP02	3 ma	14 ma
325FX01	12 ma	37 ma
325FX02	3 ma	18 ma
CHANNEL UNIT TEST ACCESS		
Two-Wire Units	Pin jacks bridged at 2-wire ports.	
Four-Wire Units	Pin jacks bridged at 4-wire ports.	
MECHANICAL SPECIFICATIONS		
Dimensions	10-1/2 inches (26.7 cm) by 19-inches (48.3 cm) by 12-1/2 inches (31.8 cm), height, width and depth, respectively.	
Projection	4-1/2-inch (11.4 cm) projection from front of rack.	
Weight	43 pounds (19.5 Kg)	
Construction	Steel chassis houses 2-layer printed circuit motherboard, which mounts plug-in units and provides circuit interconnections.	
Connectors	Shorting pins on channel unit connectors provide busy condition, when unit is unplugged.	
ENVIRONMENTAL		
Operating Ambient-Temperature Range	32°F (0°C) to 158°F (70°C)	
Relative Humidity	Up to 95%	
Maximum Operating Altitude	15,000 feet (4572 meters)	



NOTE: Frequency response meets ATT compatibility requirements.

Loss Relative to 1 kHz Loss Measured with 0 dBmO Input		
Frequency	2-Wire to 2-Wire	4-Wire to 4-Wire
60 Hz	20 dB Min. In transmit end	> 0 dB
200 Hz	0 to 5 dB	0 to 3 dB
300 to 3000 Hz	-0.5 to +1.0 dB	-0.3 to +0.3 dB
3300 Hz	1.5 dB Max.	1.5 dB Max.
3400 Hz	0 to 3 dB	0 to 3 dB

Fig. 1—B325 Typical Frequency Response

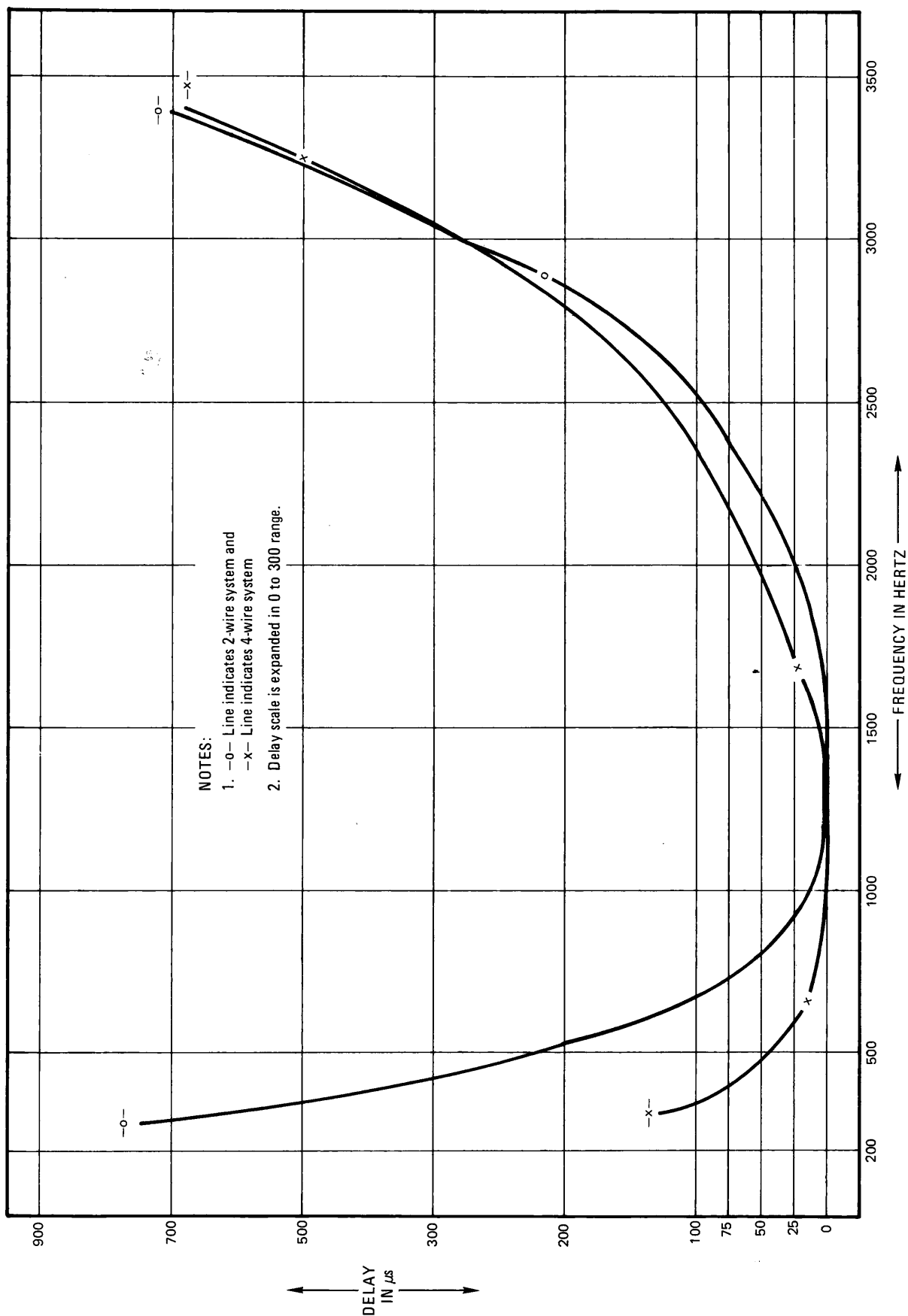


Fig. 2—B325 Typical Delay Distortion