

SPECIAL SERVICES

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4. Channel Interface and Network Channel Codes

This section explains the Channel Interface codes and Network Channel codes that the customer must specify when ordering LATA Access Service. Included is an example which explains the specific characters of the code, a glossary of Channel Interface codes, impedance levels, Network Channel codes and compatible Channel Interfaces.

Example: If the customer specifies a NT Network Channel Code and a 2DC8-3 Channel Interface at the customer's premises, the following is being requested:

MT = Metallic Channel with a Predefined Technical Specification Package (1)
2 = Number of physical wires at customer premises
DC = Facility interface for direct current or voltage
8 = Variable impedance level
3 = Metallic facilities (DC continuity) for direct current/low frequency control signals or slow speed data (30 baud)

4.1 Glossary of Channel Interface Codes and Options

<u>Code</u>	<u>Option</u>	<u>Definition</u>
AB -		accepts 20 Hz ringing signal at customer's point of termination
AC -		accepts 20 Hz ringing signal at customer's end user's point of termination
AH -		Analog high capacity interface*
-	B	60 kHz to 108 kHz (12 channels)
-	C	312 kHz to 552 kHz (60 channels)
-	D	564 kHz to 3084 kHz (600 channels)
CT -		Centrex Tie Trunk Termination
DA -		data stream in VF frequency band at customer's end user's point of termination
DB -		data stream in VF frequency band at customer's point of termination
-	10	VF for TG1 and TG2
DC -		direct current or voltage
-	1	monitoring interface with series RC combination (McCulloch format)
-	2	Telephone Company energized alarm channel
-	3	Metallic facilities (DC continuity) for direct current/low frequency control signals or slow speed data (30 baud)

* Service will be provided only where analog facilities are available.

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4. Channel Interface and Network Channel Codes (Cont'd)

4.1 Glossary of Channel Interface Codes and Options (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>	
DD -		Select-A-Station (and TABS) interface at customer's point of termination	
DE -		Select-A-Station (and TABS) interface at the customer's point of termination	
DS -		digital hierarchy interface	
	★		★ (C)
		A plus D4 with B8ZS clear channel capability	
-	15E	8-bit PCM encoded in one 64 kbps of the DS1 signal	
-	15F	8-bit PCM encoded in two 64 kbps of the DS1 signal	
-	15G	8-bit PCM encoded in three 64 kbps of the DS1 signal	
-	15H	14/11-bit PCM encoded in six 64 kbps of the DS1 signal	
	★		★ (C)
DU -		digital access interface	
-	24	2.4 kbps	
-	48	4.8 kbps	
-	56	56.0 kbps	
-	96	9.6 kbps	
	★		★ (C)
DX -		duplex signaling interface at customer's point of termination	
DY -		duplex signaling interface at customer's point of termination	
EA -	E	Type I E*M Lead Signaling. Customer originates on E Lead.	
EA -	M	Type I E*M Lead Signaling. Customer originates on M Lead.	
EB -	E	Type II E*M Lead Signaling. Customer originates on E Lead.	
EB -	M	Type II E*M Lead Signaling. Customer originates on M Lead.	
EC -		Type III E*M signaling at customer POT	
EX -	A	tandem channel unit signaling for loop start or ground start and customer supplies open end (dial tone, etc.) functions.	

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4. Channel Interface and Network Channel Codes (Cont'd)

4.1 Glossary of Channel Interface Codes and Options (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
EX -	B	tandem channel unit signaling for loop start or ground start and customer supplies closed end (dial pulsing, etc.) functions.
GO -		ground start loop signaling - open end function by customer
GS -		ground start loop signaling - closed end function by customer
IA -		E.I.A. (25 pin RS-232)
LA -		end user loop start loop signaling - Type A OPS registered port open end
LB -		end user loop start loop signaling - Type B OPS registered port open end
LC -		end user loop start loop signaling - Type C OPS registered port open end
LO -		loop start loop signaling - open end function by customer
LR -		20 Hz automatic ringdown interface at customer with Telephone Company provided PLAR
LS -		loop start loop signaling - closed end function by customer
NO -		no signaling interface, transmission only
PG -		program transmission - no dc signaling
-	1	nominal frequency from 50 to 15000 Hz
-	3	nominal frequency from 200 to 3500 Hz
-	5	nominal frequency from 100 to 5000 Hz
-	8	nominal frequency from 50 to 8000 Hz
RV -	0	reverse battery signaling, one way operation originate by customer
-	T	reverse battery signaling, one way operation
SF -		single frequency signaling with VF band
TF -		telephotograph interface
TT -		telegraph/teletypewriter interface
-	2	20.0 milliamperes
-	3	3.0 milliamperes
-	6	62.5 milliamperes

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4. Channel Interface and Network Channel Codes (Cont'd)4.2 Impedance

The nominal reference impedance with which the channel will be terminated for the purpose of evaluating transmission performance:

<u>Value (ohms)</u>	<u>Code(s)</u>
110	0
150	1
600	2
900	3+
135	5
75	6
124	7
Variable	8
100	9

- + For those interface codes with a four-wire transmission path at the customer designated POT, rather than a standard 900 ohm impedance, the code (3) denotes a customer-provided transmission equipment termination.

4.3 Digital Hierarchy Channel Interface Codes (4DSX-*)

This interface is available to customers that select the multiplexed four-wire DSX-1 or higher facility interface option at the customer premises and provide subsequent system and channel assignment data. The various digital bit rates in the digital hierarchy employ the channel interface code 4DS9, 4DS0 or 4DS6 plus the speed options indicated below:

<u>Interface Code and Speed Option</u>	<u>Nominal Bit Rate (Mbps)</u>	<u>Digital Hierarchy Level</u>
4DS9-15	1.544	DS1
4DS9-15L	1.544	DS1

- * See the Product Guide for Competitive Services (FBA Tariff No. 500) available at www.verizon.com/tariffs under Pennsylvania Non-Tariff Documents, for High Capacity Channel Service. (C)
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4. Channel Interface and Network Channel Codes (Cont'd)4.4 Service Designator/Network Channel Code Conversion Table

The purpose of this table is to show the relationship between the service designator codes (e.g. VGC, MT2, etc.) and the network channel codes that are used for:

<u>Service Designator Code</u>	<u>Network Channel Code</u>
MTC	MQ
MT1	NT
MT2	NU
MT3	NV
TGC	NQ
TG1	NW
TG2	NY
VGC	LQ
VG1	LB
VG2	LC
VG3	LD
VG4	LE
VG5	LF
VG6	LG
VG7	LH
VG8	LJ
VG9	LK
VG10	LN
VG11	LP
VG12	LR
APC	PQ
AP1	PE
AP2	PF
AP3	PJ
AP4	PK
DA1	XA
DA2	XB
DA3	XG
DA4	XH

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4. Channel Interface and Network Channel Codes (Cont'd)4.5 Compatible Channel Interfaces

The following tables show the channel interface codes (CIs) which are compatible:

(A) MetallicCompatible CIs

2DC8-1	2DC8-2
2DC8-3	2DC8-3
4DS9-*	2DC8-1
4DS9-*	2DC8-2

(B) Telegraph GradeCompatible CIs

2DB2-10	10IA8
2DB2-10	2TT2-2
2DB2-10	4TT2-2
4DB2-10	10IA8
4DB2-10	2TT2-2
4DB2-10	4TT2-2

Compatible CIs

2TT2-2	2TT2-2
2TT2-3	2TT2-2
2TT2-3	4TT2-2
2TT2-6	2TT2-6
2TT2-6	4TT2-2
4TT2-2	4TT2-2
4TT2-6	2TT2-6

* See 4.3 preceding for explanation.

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4. Channel Interface and Network Channel Codes (Cont'd)4.5 Compatible Channel Interfaces (Cont'd)(C) Voice GradeCompatible CIs

4AB2	4AC2
4AB3	4AC2
4AB2	2AC2
4AB3	2AC2
2AB2	2AC2
2AB3	2AC2
4AH5-B+	6LS2
4AH5-B+	4LS2
4AH5-B+	2LS2
4AH5-B+	2LS3
4AH5-B+	2LA2
4AH5-B+	2LC2
4AH5-B+	6DA2
4AH5-B+	4DA2
4AH5-B+	2DA2

- + Available only to customers selecting the multiplexed four-wire High Capacity analog facility interface option at the customer terminal location and providing subsequent system and channel assignment data. Service will be provided only where analog features are available.

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4. Channel Interface and Network Channel Codes (Cont'd)4.5 Compatible Channel Interfaces (Cont'd)(C) Voice Grade (Cont'd)Compatible CIs

2CT3 4DS9-*

2CT3 6DX2

2CT3 4DX2

2CT3 4DX3

2CT3 9DY3

2CT3 6DY3

2CT3 9DY2

2CT3 6DY2

2CT3 4DY2

2CT3 2DY2

2CT3 9EA3

2CT3 9EA2

2CT3 6EA2-E

2CT3 6EA2-M

2CT3 4EA2-E

2CT3 4EA2-M

* See 4.3 preceding for explanation.

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4. Channel Interface and Network Channel Codes (Cont'd)4.5 Compatible Channel Interfaces (Cont'd)(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>	
2CT3	4SF2	4DS9-*	4AC2
2CT3	4SF3	4DS9-*	2AC2
2CT3	6EB2-E	4DS9-*	6DA2
2CT3	6EB2-M	4DS9-*	4DA2
2CT3	6EB3-E	4DS9-*	2DA2
2CT3	8EB2-E		
2CT3	8EB2-M	4DS9-*	4DE2
		4DS9-*	2DE2
2CT3	8EC2		
		4DS9-*	4DX3
6DA2	6DA2	4DS9-*	4DX2
6DA2	4DA2		
4DA2	4DA2	4DS9-*	9DY3
2DA2	2DA2	4DS9-*	9DY2
		4DS9-*	6DY3
4DB2	6DA2	4DS9-*	6DY2
4DB2	4DA2	4DS9-*	4DY2
4DB2	2DA2	4DS9-*	2DY2
2DB3	2DA2		
2DB2	2DA2	4DS9-*	9EA2
		4DS9-*	9EA3
4DB2	4DB2	4DS9-*	6EA2-E
		4DS9-*	6EA2-M
4DB2	4PR2	4DS9-*	4EA2-E
4DB2	2PR2	4DS9-*	4EA2-M
2DB2	2PR2		
4DD3	4DE2		
4DD3	2DE2		

* See 4.3 preceding for explanation.

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4. Channel Interface and Network Channel Codes (Cont'd)4.5 Compatible Channel Interfaces (Cont'd)(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4DS9-*	8EB2-E	4DS9-*	4NO2	4DX3	9DY2
4DS9-*	8EB2-M	4DS9-*	2NO2	4DX2	6DY3
4DS9-*	6EB2-E			4DX3	6DY3
4DS9-*	6EB2-M	4DS9-*	4SF2	4DX2	6DY2
		4DS9-*	4SF3	4DX3	6DY2
4DS9-*	2GO2			4DX2	4DY2
4DS9-*	2GO3	4DS9-*	4TF2	4DX3	4DY2
		4DS9-*	2TF2	4DX2	2DY2
4DS9-*	6GS2			4DX3	2DY2
4DS9-*	4GS2	4DX2	4DX2		
4DS9-*	2GS2	4DX3	4DX2	6DX2	9EA3
4DS9-*	2GS3	4DX3	4DX3	6DX2	9EA2
				6DX2	6EA2-E
4DS9-*	2LA2	6DX2	9DY3	6DX2	6EA2-M
		6DX2	9DY2	6DX2	4EA2-E
4DS9-*	2LB2	6DX2	6DY3	6DX2	4EA2-M
		6DX2	6DY2	4DX2	9EA2
4DS9-*	2LC2	6DX2	4DY2	4DX3	9EA2
		6DX2	2DY2	4DX2	9EA3
4DS9-*	2LO2	4DX2	9DY3	4DX3	9EA3
4DS9-*	2LO3	4DX3	9DY3	4DX2	6EA2-E
		4DX2	9DY2	4DX3	6EA2-E
4DS9-*	4LR2			4DX2	6EA2-M
4DS9-*	2LR2			4DX3	6EA2-M
				4DX2	4EA2-E
4DS9-*	6LS2			4DX3	4EA2-E
4DS9-*	4LS2			4DX2	4EA2-M
4DS9-*	2LS2			4DX3	4EA2-M
4DS9-*	2LS3				

* See 4.3 preceding for explanation.

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SPECIAL SERVICES

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4. Channel Interface and Network Channel Codes (Cont'd)4.5 Compatible Channel Interfaces (Cont'd)(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
6DX2	8EB2-E	4DX2	6LS2	6EA2-E	4AC2
6DX2	8EB2-M	4DX3	6LS2	6EA2-M	4AC2
6DX2	6EB2-E	4DX3	4LS2	6EA2-E	2AC2
6DX2	6EB2-M	4DX2	4LS2	6EA2-M	2AC2
4DX2	8EB2-E	4DX3	2LS3		
4DX2	8EB2-M	4DX2	2LS3	9EA2	9DY3
4DX3	8EB2-E	4DX3	2LS2	9EA2	9DY2
4DX3	8EB2-M	4DX2	2LS2	9EA2	6DY3
4DX2	6EB2-E	2DX3	2LS2	9EA2	6DY2
4DX2	6EB2-M	2DX3	2LS3	9EA2	4DY2
4DX3	6EB2-E			9EA2	2DY2
4DX3	6EB2-M	6DX2	4SF2	9EA3	9DY3
		4DX2	4SF2		
4DX2	2LC2	4DX3	4SF2		
4DX3	2LC2	4DX2	4SF3		
2DX3	2LC2	4DX3	4SF3		

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4. Channel Interface and Network Channel Codes (Cont'd)4.5 Compatible Channel Interfaces (Cont'd)(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
9EA3	9DY2	4EA2-M	9DY2	4EA3-E	9EA2
9EA3	6DY3	4EA2-M	6DY3	4EA3-E	9EA3
9EA3	6DY2	4EA2-M	6DY2	4EA2-M	4EA2-M
9EA3	4DY2	4EA2-M	4DY2		
9EA3	2DY2	4EA2-M	2DY2	9EA2	8EB2-E
6EA2-E	9DY3			9EA2	8EB2-M
6EA2-E	9DY2	9EA2	9EA2	9EA2	6EB2-E
6EA2-E	6DY3	9EA2	9EA3	9EA2	6EB2-M
6EA2-E	6DY2	9EA2	6EA2-E	9EA3	8EB2-E
6EA2-E	4DY2	9EA2	6EA2-M	9EA3	8EB2-M
6EA2-E	2DY2	9EA2	4EA2-E	9EA3	6EB2-E
6EA2-M	9DY3	9EA2	4EA2-M	9EA3	6EB2-M
6EA2-M	9DY2	9EA3	9EA3	6EA2-E	8EB2-E
6EA2-M	6DY3	9EA3	6EA2-E	6EA2-E	8EB2-
6EA2-M	6DY2	9EA3	6EA2-M	6EA2-E	6EB2-E
6EA2-M	4DY2	9EA3	4EA2-E	6EA2-E	6EB2-M
6EA2-M	2DY2	9EA3	4EA2-M	6EA2-M	8EB2-E
4EA2-E	9DY3	6EA2-E	6EA2-E	6EA2-M	8EB2-M
4EA2-E	9DY2	6EA2-E	6EA2-M	6EA2-M	6EB2-E
4EA3-E	9DY3	6EA2-M	6EA2-M	6EA2-M	6EB2-M
4EA3-E	9DY2	6EA2-E	4EA2-E	4EA2-E	8EB2-E
4EA3-E	6DY3	6EA2-E	4EA2-M	4EA2-E	8EB2-M
4EA3-E	6DY2	6EA2-M	4EA2-E	4EA3-E	8EB2-E
4EA3-E	4DY2	6EA2-M	4EA2-M	4EA3-E	8EB2-M
4EA3-E	2DY2	4EA2-E	4EA2-E	4EA2-E	6EB2-E
4EA2-E	6DY3	4EA3-E	6EA2-E	4EA2-E	6EB2-M
4EA2-E	6DY2	4EA3-E	6EA2-M	4EA3-E	6EB2-E
4EA2-E	4DY2	4EA3-E	4EA2-E	4EA3-E	6EB2-M
4EA2-E	2DY2	4EA3-E	4EA2-M	4EA2-M	8EB2-E
4EA2-M	9DY3	4EA2-E	4EA2-M		

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4. Channel Interface and Network Channel Codes (Cont'd)4.5 Compatible Channel Interfaces (Cont'd)(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4EA2-M	8EB2-M	9EA3	4SF2	6EB3-E	9EA2
4EA2-M	6EB2-E	9EA2	4SF2	6EB3-E	9EA3
4EA2-M	6EB2-M	6EA2-E	4SF3	6EB3-E	6EA2-E
		6EA2-M	4SF3	6EB3-E	6EA2-M
6EA2-E	2LA2	6EA2-E	4SF2	6EB3-E	4EA2-E
6EA2-M	2LA2	6EA2-M	4SF2	6EB3-E	4EA2-M
		4EA3-E	4SF2		
6EA2-E	2LB2	4EA2-E	4SF2	8EB2-E	8EB2-E
6EA2-M	2LB2	4EA2-M	4SF2	8EB2-E	8EB2-M
				8EB2-M	8EB2-M
6EA2-E	2LC2	8EB2-E	9DY3	8EB2-E	6EB2-E
6EA2-M	2LC2	8EB2-E	9DY2	8EB2-E	6EB2-M
		8EB2-E	6DY3		
6EA2-E	2LO3	8EB2-E	6DY2		
6EA2-M	2LO3	8EB2-E	4DY2		
		8EB2-E	2DY2		
6EA2-E	6LS2	8EB2-M	9DY3		
6EA2-M	6LS2	8EB2-M	9DY2		
6EA2-E	4LS2	8EB2-M	6DY3		
6EA2-M	4LS2	8EB2-M	6DY2		
6EA2-E	2LS2	8EB2-M	4DY2		
6EA2-M	2LS2	8EB2-M	2DY2		
6EA2-E	2LS3	6EB3-E	9DY2		
6EA2-M	2LS3	6EB3-E	9DY3		
		6EB3-E	6DY2		
		6EB3-E	6DY3		
		6EB3-E	2DY2		
		6EB3-E	4DY2		

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4. Channel Interface and Network Channel Codes (Cont'd)4.5 Compatible Channel Interfaces (Cont'd)(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
8EB2-M	6EB2-E	8EB2-E	4SF2	8EC2	8EB2-M
8EB2-M	6EB2-M	8EB2-M	4SF2	8EC2	6EB2-E
6EB2-E	6EB2-E	8EB2-E	4SF3	8EC2	6EB2-M
6EB2-E	6EB2-M	8EB2-M	4SF3		
6EB3-E	8EB2-E	6EB3-E	4SF2	8EC2	4SF2
6EB3-E	8EB2-M	6EB2-E	4SF2		
6EB2-M	6EB2-M	6EB2-M	4SF2	6EX2-A	6GS2
				6EX2-A	4GS2
8EB2-E	2LA2	8EC2	9DY2	6EX2-A	2GS2
8EB2-M	2LA2	8EC2	9DY3	6EX2-A	2GS3
		8EC2	6DY2		
8EB2-E	2LB2	8EC2	6DY3	6EX2-B	2LA2
8EB2-M	2LB2	8EC2	4DY2		
		8EC2	2DY2	6EX2-B	2LC2
8EB2-E	2LC2				
8EB2-M	2LC2	8EC2	9EA2	6EX2-B	2LO2
		8EC2	9EA3	6EX2-B	2LO3
8EB2-E	2LO3	8EC2	6EA2-E		
8EB2-M	2LO3	8EC2	6EA2-M	6EX2-B	4LR2
		8EC2	4EA2-E	6EX2-B	2LR2
8EB2-E	6LS2	8EC2	4EA2-M		
8EB2-M	6LS2			6EX2-A	6LS2
8EB2-E	4LS2	8EC2	8EB2-E	6EX2-A	4LS2
8EB2-M	4LS2			6EX2-A	2LS2
8EB2-E	2LS2			6EX2-A	2LS3
8EB2-M	2LS2				
8EB2-E	2LS3				
8EB2-M	2LS3				

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4. Channel Interface and Network Channel Codes (Cont'd)4.5 Compatible Channel Interfaces (Cont'd)(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
6EX2-A	4SF2	6LO2	6LS2	4LR2	4SF2
6EX2-B	4SF2	6LO2	4LS2	4LR3	4SF2
		6LO2	2LS2		
6GO2	6GS2	6LO2	2LS3	6LS2	2LA2
6GO2	4GS2	4LO2	6LS2	4LS2	2LA2
6GO2	2GS2	4LO2	4LS2	4LS3	2LA2
6GO2	2GS3	4LO3	6LS2	2LS2	2LA2
4GO2	6GS2	4LO3	4LS2	2LS3	2LA2
4GO3	6GS2	4LO3	2LS3		
4GO2	4GS2	4LO3	2LS2	6LS2	2LB2
4GO3	4GS2	4LO2	2LS2	4LS2	2LB2
4GO2	2GS2	4LO2	2LS3	4LS3	2LB2
4GO2	2GS3	2LO3	2LS3	2LS2	2LB2
4GO3	2GS2	2LO3	2LS2	2LS3	2LB2
4GO3	2GS3	2LO2	2LS2		
2GO2	2GS2	2LO2	2LS3	6LS2	2LC2
2GO3	2GS2			4LS2	2LC2
2GO2	2GS3	6LO2	4SF2	4LS3	2LC2
2GO3	2GS3	4LO2	4SF2	2LS2	2LC2
		4LO3	4SF2	2LS3	2LC2
6GO2	4SF2				
4GO2	4SF2	4LR3	4LR2	6LS2	2LO3
4GO3	4SF2	4LR3	2LR2	6LS2	2LO2
		4LR2	4LR2	4LS2	2LO2
6GS2	2GO2	4LR2	2LR2	4LS2	2LO3
4GS2	2GO2	2LR2	2LR2	4LS3	2LO2
4GS3	2GO2	2LR3	2LR2	4LS3	2LO3
4GS2	2GO3				

(C) Indicates change.

ISSUED AUGUST 1, 1986.

EFFECTIVE JANUARY 1, 1987.

By J. J. Doherty, Jr., Vice-President, One Parkway, Philadelphia, Pa.

In compliance with the Order of the Pennsylvania Public Utility Commission
of August 9, 1985 in P-830452.

SPECIAL SERVICES

(C)

4. Channel Interface and Network Channel Codes (Cont'd)4.5 Compatible Channel Interfaces (Cont'd)(C) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
6LS2	4SF2	4SF3	9DY2	4SF3	2LA2
4LS3	4SF2	4SF2	9DY3		
		4SF3	6DY3	4SF2	2LB2
4NO2	6DA2	4SF2	6DY2	4SF3	2LB2
4NO2	4DA2	4SF2	6DY3		
4NO2	2DA2	4SF3	6DY2	4SF2	2LC2
2NO2	2DA2	4SF2	4DY2	4SF3	2LC2
		4SF3	4DY2		
4NO2	4NO2	4SF3	2DY2	4SF2	2LO3
4NO2	2NO2	4SF2	2DY2	4SF3	2LO3
2NO2	2NO2				
2NO3	2NO2	4SF3	9EA2	4SF2	2LR2
		4SF3	9EA3	4SF3	4LR2
4SF2	4AC2	4SF3	4EA2-E	4SF3	2LR2
4SF2	2AC2	4SF3	4EA2-M		
				4SF3	6LS2
4SF3	9DY3	4SF3	6EB2-E	4SF2	4LS2
4SF2	9DY2	4SF3	6EB2-M	4SF3	4LS2
				4SF2	2LS2
		4SF2	2GO3	4SF2	2LS3
				4SF3	2LS2
		4SF3	6GS2	4SF3	2LS3
		4SF2	6GS2		
		4SF2	4GS2	4SF3	4SF3
		4SF3	4GS2		
		4SF2	2GS2	4SF3	4SF2
		4SF2	2GS3	4SF2	4SF2
		4SF3	2GS2		
		4SF3	2GS3	4TF2	4TF2
				4TF2	2TF2
		4SF2	2LA2	2TF3	2TF2

(C) Indicates change.

ISSUED AUGUST 1, 1986.

EFFECTIVE JANUARY 1, 1987.

By J. J. Doherty, Jr., Vice-President, One Parkway, Philadelphia, Pa.

In compliance with the Order of the Pennsylvania Public Utility Commission
of August 9, 1985 in P-830452.

SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)4.5 Compatible Channel Interfaces (Cont'd)(D) Program AudioCompatible Cis

2PG2-1	2PG1-1
2PG2-1	2PG2-1
2PG2-3	2PG1-3
2PG2-3	2PG2-3
2PG2-5	2PG1-5
2PG2-5	2PG2-5
2PG2-8	2PG1-8
2PG2-8	2PG2-8

(E) Digital ServiceCompatible CIsCompatible CIsCompatible CIs

4DS9-15*	4DS9-15	4DS9-15*	6DU5-48	4DU5-96	4DU5-96
4DS9-15*	4DU5-24	4DS9-15*	6DU5-56	6DU5-24	6DU5-24
4DS9-15*	4DU5-48	4DS9-15*	6DU5-96	6DU5-48	6DU5-48
4DS9-15*	4DU5-56	4DU5-24	4DU5-24	6DU5-56	6DU5-56
4DS9-15*	4DU5-96	4DU5-48	4DU5-48	6DU5-96	6DU5-96
4DS9-15*	6DU5-24	4DU5-56	4DU5-56		
4DS9-15	4DU5-24S	4DS0-15	6DU5-48S	4DU5-96S	4DU5-96S
4DS9-15	4DU5-48S	4DS9-15	6DU5-56S	6DU5-24S	6DU5-24S
4DS9-15	4DU5-56S	4DS9-15	6DU5-96S	6DU5-48S	6DU5-48S
4DS9-15	4DU5-96S	4DU5-24S	4DU5-24S	6DU5-56S	6DU5-56S
4DS9-15	6DU5-24S	4DU5-48S	4DU5-48S	6DU5-96S	6DU5-96S
4DS9-15B	4DU9-D	4DU5-56S	4DU5-56S		
4DS9-15S	4DU9-S				

(C)
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* Available to customers selecting the multiplexed four-wire DSX channel interface option and providing subsequent system and channel assignment data.

(C) Indicates change.

ISSUED AUGUST 1, 1990.

EFFECTIVE (SEPTEMBER 30, 1990.)
OCTOBER 29, 1990.

By Edward J. Kennedy, Vice-President, 315 N. 2nd St., Harrisburg, Pa.

SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)

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4.6 Channel Interfaces Related to Transmission Function Rate Elements

The following tables show the relationship of channel interface codes to transmission function rate elements:

<u>Service</u>	<u>Category</u>	<u>Interface Codes</u>	<u>Transmission Function</u>
(A) <u>Metallic</u>	(1)	DC/DC	- Metallic
	(2)	DS/DC	- Metallic equivalent
(B) <u>Telegraph</u>	(1)	TT/TT, DB/TT, DS/TT	- Telegraph Grade ★ and Teletypewriter-75 baud
	(2)	DB/IA	- Telegraph Grade ★ and Teletypewriter-150 baud
(C) <u>Voice Grade</u>	(1)	DS/NO, DS/TF, NO/NO, TF/TF	- Voice grade without signaling

(C) Indicates change.

ISSUED OCTOBER 10, 1995.

EFFECTIVE OCTOBER 11, 1995

SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)4.6 Channel Interfaces Related to Transmission Function Rate Elements
(Cont'd)

<u>Service</u>	<u>Category</u>	<u>Interface Codes</u>	<u>Transmission Function</u>
(C) <u>Voice Grade</u> (Cont'd)	(2)	AB/AB, AB/AC, AH/LS*, DS/AC, DS/DE, DS/GO, DS/GS, DS/LO, DS/LR, DS/LS, DS/RV, EX/GS, EX/LO, EX/LS, GO/GS, GS/GO, LO/LS, LR/LR, LS/LO, NO/DA	- Voice grade with basic signaling
	(3)	AH/LA*, AH/LC*, DS/LA DS/LB, DS/LC, EX/LA, DS/LS, DS/RV, EX/GS, EX/LC, LS/LA, LS/LB, LS/LC	- Voice grade with A, B or C signaling
	(4)	DS/DX, DS/DY, DX/DX, DX/DY, DX/LC, DX/LS DS/CT, DX/CT, DY/CT, CT/CT	- Voice grade tieline with- out E & M signaling: customer premises to customer premises customer premises to wire center - wire center to wire center
	(5)	DS/EA, DS/EB, DX/EA, DX/EB, EA/AC, EA/CT, EA/DX, EA/DY, EA/EA, EA/EB, EA/LA, EA/LB, EA/LC, EA/LO, EA/LS, EB/CT, EB/EA, EB/EB, EB/DY, EB/LA, EB/LB, EB/LC, EB/LO, EB/LS, EC/CT, EC/DY, EC/EA, EC/EB, EX/LR	- Voice grade tieline with E & M signaling: customer premises to customer premises
	(6)	AH/DA*, DA/DA, DB/DA, DB/DB, DB/NO, DB/PR, DS/DA, DD/DE, DS/PR	- Voice grade data transmission
	(7)	DS/SF, DX/SF, EA/SF, EB/SF, EC/SF, EX/SF, GO/SF, LO/SF, LR/SF, LS/SF, RV/SF, SF/AC, SF/CT, SF/DX, SF/DY, SF/EA, SF/EB, SF/GO, SF/GS, SF/LA, SF/LB, SF/LC, SF/LO, SF/LR, SF/LS, SF/RV, SF/SF	- Voice grade with SF signaling

* Service will be provided only where analog facilities are available.

(C) Indicates change.

ISSUED AUGUST 12, 1987.

EFFECTIVE OCTOBER 11, 1987.

By J. J. Doherty, Jr., Vice-President, One Parkway, Philadelphia, Pa.

SPECIAL SERVICES

4. Channel Interface and Network Channel Codes (Cont'd)4.6 Channel Interfaces Related to Transmission Function Rate Elements
(Cont'd)

<u>Service</u>	<u>Category</u>	<u>Interface Codes</u>	<u>Transmission Function</u>	
(D) <u>Program Audio</u>			- nominal frequency from 200 to 3500 Hz, non-equalized 100 to 5000 Hz, equalized 50 to 8000 Hz, equalized 50 to 15000 Hz, equalized	
	(1)	PG3/PG3, DS/PG3		
	(2)	PG5/PG5, DS/PG5		
	(3)	PG8/PG8, DS/PG8		
	(4)	PG1/PG1, DS/PG1		
(E) <u>Digital Service</u>	(1)	DU-24/DS-24, DU-24/DU-24	- 2.4 kbps	
	(2)	DU-48/DS-48, DU-48/DU-48	- 4.8 kbps	
	(3)	DU-96/DS-96, DU-96/DU-96	- 9.6 kbps	
	(4)	DU-56/DS-56, DU-56/DU-56	- 56. Kbps	(C)
(F) <u>High Capacity</u>	(1)	4DS15-DU	- 1.544 Mbps.	

(C) Indicates change.

ISSUED FEBRUARY 25, 1987.

EFFECTIVE APRIL 26, 1987.

By J. J. Doherty, Jr., Vice-President, One Parkway, Philadelphia, Pa.