Systems

IBM 3270
Information Display System
Description, Configuration, and
Physical Planning:
Dataphone Digital Service
Adapter Features

IBM 3274 Control Unit Model 1C

Feature Numbers 5650 and 5651

IBM

Preface

This interim publication provides descriptive, configuration, and physical planning information about the IBM 3274 Control Unit Model 1C Dataphone* Digital Service Adapter (DDSA) Features (# 5650 and # 5651). The publication is intended for data processing personnel, including managers and system analysts, for operations and administration managers, and for physical planning personnel.

Additional information about the characteristics of the IBM 3270 Information Display System is contained in the following publications:

- *An Introduction to the IBM 3270 Information Display System*, GA27-2739-8

- *IBM 3270 Information Display System: Configurator*, GA27-2849-2

- *IBM 3270 Information Display System: Planning and Setup Guide*, GA27-2827-3

- *IBM 3270 Information Display System: Component Description*, GA27-2749-7

- *IBM 3270 Information Display System: Installation Manual – Physical Planning*, GA27-2787-2**

This publication becomes obsolete when information concerning this feature is included in the appropriate publications listed above.

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**To properly plan an installation of the IBM 3274 Control Unit Model 1C a copy of this manual must be obtained early in the planning cycle, and its recommendations for system installation must be followed.

Contents

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Chapter 1. Description

The Dataphone Digital Service Adapter (DDSA) Features are now available in the U.S. for installation in the IBM 3274 Control Unit Model 1C. Both features (#5650 for point-to-point and #5651 for multipoint operation) permit four-wire half-duplex communication with the host system via American Telephone & Telegraph's nonswitched Dataphone Digital Service. The DDSA features interface with the Dataphone Digital Service through AT&T's Channel Service Unit, or equivalent, thus enabling the user to take advantage of the data transmission techniques offered by this service. In addition, this service eliminates the need for modems.

Characteristics

The DDSA derives its power from the 3274 Control Unit. Data passes through the DDSA in both directions serial by bit and serial by character. No error checking is performed by the feature.

Speeds

The DDSA can operate at synchronous speeds of 2400, 4800, and 9600 bits per second (bps). The speed specified for the DDSA must correspond to the speed of the communication facility. Clocking of the DDSA is derived from the data and control signals on the Dataphone Digital Service communication lines.

3274 Control Unit Maintenance

Wrap facilities are provided in the DDSA for serviceability purposes. A switch is provided at the cable connector for serviceability and also for problem determination.

Figure 1 shows the connection of the 3274 Control Unit to the AT&T Dataphone Digital Service via a Channel Service Unit.
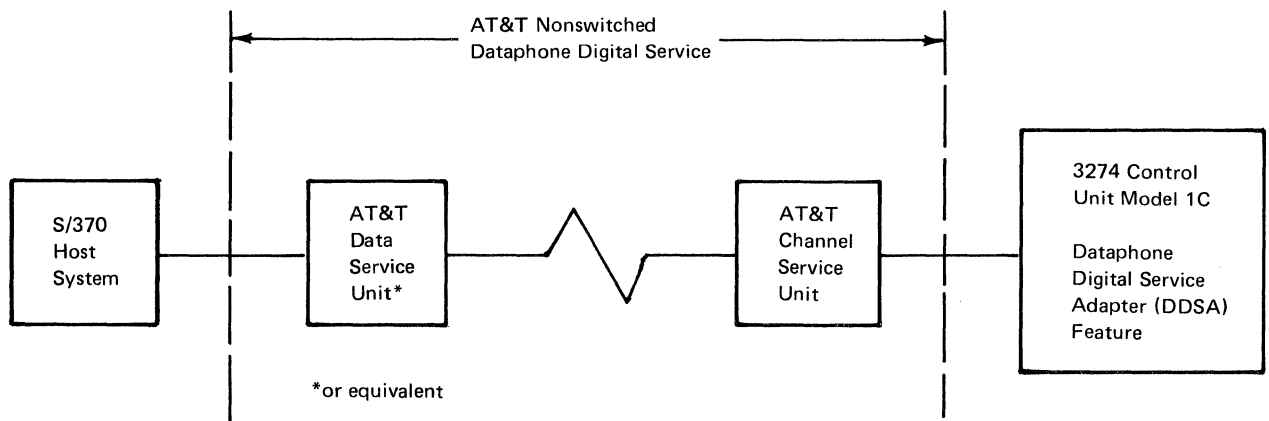

Figure 1. Connection of 3274 Control Unit Model 1C with DDSA Feature

Chapter 2. Configurations

This chapter updates the IBM 3274 Control Unit Model 1C configuration diagram (Figure 2) and feature list (Figure 3) from the *IBM 3270 Information Display System Configurator*, GA27-2849, to reflect the Dataphone Digital Service Adapter Feature.
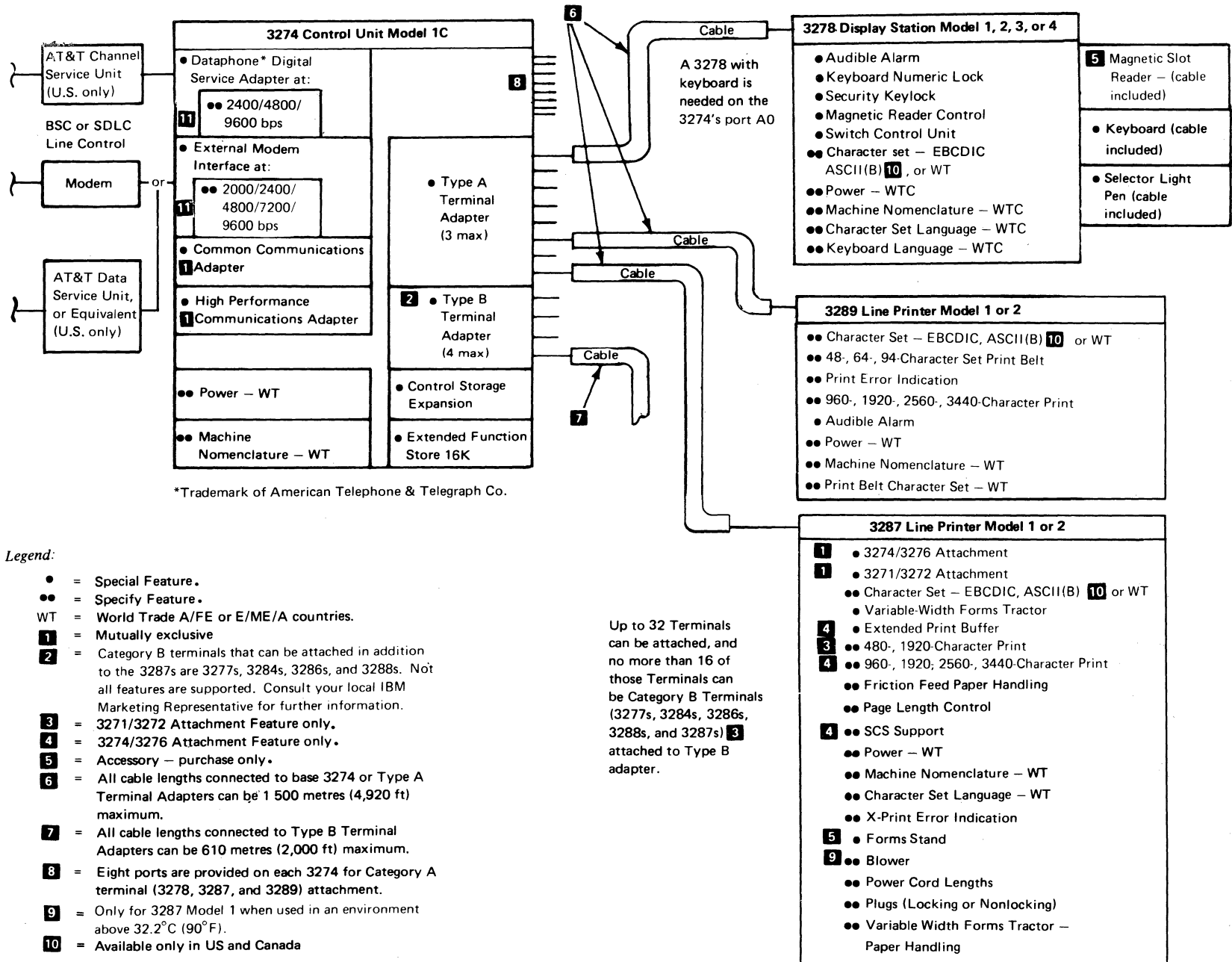
4

3274 Control Unit Model 1C

AT&T Channel Service Unit (U.S. only)

BSC or SDLC Line Control

Modem —or—

AT&T Data Service Unit, or Equivalent (U.S. only)

- Dataphone* Digital Service Adapter at:
  - ⬛11 ●● 2400/4800/ 9600 bps
- External Modem Interface at:
  - ⬛11 ●● 2000/2400/ 4800/7200/ 9600 bps
- Common Communications ⬛1 Adapter
- High Performance ⬛1 Communications Adapter
- ●● Power — WT
- ●● Machine Nomenclature — WT

⬛8

- Type A Terminal Adapter (3 max)

⬛2 • Type B Terminal Adapter (4 max)

- Control Storage Expansion
- Extended Function Store 16K

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⬛6

Cable

A 3278 with keyboard is needed on the 3274's port A0

Cable

Cable

Cable

⬛7

3278 Display Station Model 1, 2, 3, or 4

- Audible Alarm
- Keyboard Numeric Lock
- Security Keylock
- Magnetic Reader Control
- Switch Control Unit
- ●● Character set — EBCDIC ASCII(B) ⬛10 , or WT
- ●● Power — WTC
- ●● Machine Nomenclature — WTC
- ●● Character Set Language — WTC
- ●● Keyboard Language — WTC

⬛5 Magnetic Slot Reader — (cable included)

- Keyboard (cable included)
- Selector Light Pen (cable included)

3289 Line Printer Model 1 or 2

- ●● Character Set — EBCDIC, ASCII(B) ⬛10 or WT
- ●● 48-, 64-, 94-Character Set Print Belt
- ●● Print Error Indication
- ●● 960-, 1920-, 2560-, 3440-Character Print
- Audible Alarm
- ●● Power — WT
- ●● Machine Nomenclature — WT
- ●● Print Belt Character Set — WT

3287 Line Printer Model 1 or 2

- ⬛1 • 3274/3276 Attachment
- ⬛1 • 3271/3272 Attachment
- ●● Character Set — EBCDIC, ASCII(B) ⬛10 or WT
- Variable-Width Forms Tractor
- ⬛4 • Extended Print Buffer
- ⬛3 ●● 480-, 1920-Character Print
- ⬛4 ●● 960-, 1920; 2560-, 3440-Character Print
- ●● Friction Feed Paper Handling
- ●● Page Length Control
- ⬛4 ●● SCS Support
- ●● Power — WT
- ●● Machine Nomenclature — WT
- ●● Character Set Language — WT
- ●● X-Print Error Indication
- ⬛5 • Forms Stand
- ⬛9 ●● Blower
- ●● Power Cord Lengths
- ●● Plugs (Locking or Nonlocking)
- ●● Variable Width Forms Tractor — Paper Handling

Legend:

- ● = Special Feature.
- ●● = Specify Feature.
- WT = World Trade A/FE or E/ME/A countries.
- ⬛1 = Mutually exclusive
- ⬛2 = Category B terminals that can be attached in addition to the 3287s are 3277s, 3284s, 3286s, and 3288s. Not all features are supported. Consult your local IBM Marketing Representative for further information.
- ⬛3 = 3271/3272 Attachment Feature only.
- ⬛4 = 3274/3276 Attachment Feature only.
- ⬛5 = Accessory — purchase only.
- ⬛6 = All cable lengths connected to base 3274 or Type A Terminal Adapters can be 1 500 metres (4,920 ft) maximum.
- ⬛7 = All cable lengths connected to Type B Terminal Adapters can be 610 metres (2,000 ft) maximum.
- ⬛8 = Eight ports are provided on each 3274 for Category A terminal (3278, 3287, and 3289) attachment.
- ⬛9 = Only for 3287 Model 1 when used in an environment above 32.2°C (90°F).
- ⬛10 = Available only in US and Canada
- ⬛11 = Mutually exclusive

Up to 32 Terminals can be attached, and no more than 16 of those Terminals can be Category B Terminals (3277s, 3284s, 3286s, 3288s, and 3287s) ⬛3 attached to Type B adapter.

Figure 2. Remote 3270 Display System Employing a 3274 Control Unit Model 1C (BSC or SDLC Application)

Necessary (N) or Optional (O)	Feature Name	Special Feature Code	Specify Feature Code	Prerequisite (Must be ordered with):	Mutually Exclusive (Must not be ordered with):
[1] N [6] Choose one	Power Plug — Locking 120 Vac (Model 1C only)		9890		
	Power Plug — Locking — 208 Vac		9884		
	Power Plug — Locking — 240 Vac		9894		
	Power Plug — Nonlocking 120 Vac (Model 1C only)		9891		
	Power Plug — Nonlocking — 208 Vac		9885		
	Power Plug — Nonlocking — 240 Vac		9895		
O	Power connector — Watertight (U.S. and Canada)	8801			
[2] O	Power Cable — 1.8 metres (6 ft)		9511		
[3] O Choose one	Communication Cable — (Model 1C only) 3.0 metres (10 ft)		9061		
	Communication Cable — (Model 1C only) 9.1 metres (30 ft)		9062		
	Communication Cable — (Model 1C only) 12.2 metres (40 ft)		9063		
O Choose as needed (8 terminals per adapter)	Terminal Adapter — Type A1	6901			
	Terminal Adapter — Type A2	6902		6901	
	Terminal Adapter — Type A3	6903		6902	7804
O Choose as needed (4 terminals per adapter)	Terminal Adapter — Type B1	7802		[4] 3622	
	Terminal Adapter — Type B2	7803		7802	
	Terminal Adapter — Type B3	7804		7803	6903
	Terminal Adapter — Type B4	7805		7804	6903
O	Extended Function Store — 16K	3622**		1801	
N (Model 1C only) Choose one Special Feature then choose one Specify Feature	External Modem Interface	3701		6302 or 6303	5650 or 5651
	Dataphone* Digital Service Adapter (nonswitched, point-to-point) U.S. only	5650		6302 or 6303	3701 or 5651
	Dataphone* Digital Service Adapter (nonswitched, multipoint) U.S. only	5651		6302 or 6303	3701 or 5650
	2000 bps [7]		9821		
	2400 bps		9822		
	4800 bps		9823		
	7200 bps [7]		9824		
	9600 bps		9825	[5] 6303	
N Choose one	Common Communications Adapter without Business Machine Clock (Model 1C only)	6302			6303
	High-Performance Communications Adapter (Model 1C only)	6303			6302
[4] O	Control Storage Expansion	1801			

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**Not available on Model 1B.

[1] AC voltage, 1 phase, 3-wire, 60 Hz.
[2] 4.3 metres (14 ft) normally supplied. Optionally specify other lengths.
[3] 6.1 metres (20 ft) normally supplied. Optionally specify other lengths.
[4] Models 1A and 1C only.
[5] Prerequisite only when SNA/SDLC protocol is required *and* #7802 is installed.
[6] Not available in E/ME/A countries.
[7] Not available with Special Features 5650 and 5651.

Figure 3. 3274 Control Unit — Universal

Chapter 3. Physical Planning

This chapter contains physical planning information that updates the *IBM Installation Manual – Physical Planning*, GA27-2787.

A 6.1 meter (20 ft) communication cable equipped with a 15-pin connector is supplied when Feature Number 5650 or 5651 is ordered (Figure 4). The 15-pin connector connects the 3274 Control Unit Model 1C with the DDSA Feature to the Channel Service Unit. Optional cable lengths of 3.0 meters (10 ft) (#9061), 9.1 meters (30 ft) (#9062), and 12.2 meters (40 ft) (#9063) are available and must be specified at the time of order. See Figure 3.

Cable ———————— 15-Pin Connector (Connects to AT&T's Channel Service Unit, or equivalent)
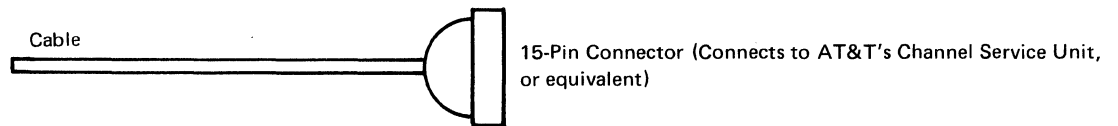
Figure 4. Communication Cable with 15-pin Connector Used to Connect
the 3274 Control Unit Model 1C with the DDSA Feature to
the Channel Service Unit

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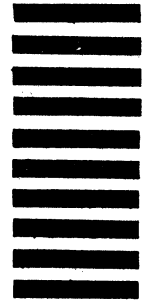
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