DATA APPARATUS SUBSTITUTION GUIDE

CONTENTS PAGE

1. GENERAL

1.01 This section provides a description of Uniform Service Order Codes (USOCs) associated with data services. It contains an equipment-keyed index, a customer option decision table for each USOC, and a listing of data apparatus not covered by USOC.

1.02 The Data Apparatus Substitution Guide is intended for use by operating company special service (data) engineers or other personnel with responsibility for selection and ordering of data apparatus. Members of marketing and plant installation organizations may also find this information useful.

1.03 Figure 1 (on the following facing pages) contains the Universal Suffix Table and directions for encoding and decoding the USOC suffix. A USOC followed by ++ requires a suffix determined by the options chosen for the particular service. A USOC followed by 00 does not require a suffix, since no customer options apply.

1.04 The index to this section provides an equipment-keyed cross-reference of data apparatus, service offering, and USOC, and gives the page number in Part 2 on which the options are listed for each particular USOC.

1.05 Part 2 of this section provides an alphabetical treatment of USOCs. Each page contains a USOC, the customer option decisions which are required, and a listing of apparatus which can provide that particular service.

1.06 When selecting the apparatus for a particular data service (USOC), the order of selection should be top to bottom of the option table with the first apparatus codes listed (oldest apparatus) chosen first. This rule applies only if the older codes provide the proper customer options and have no other restrictions which adversely affect the service. Such restrictions are listed as notes which follow the option tables.

1.07 The following symbols are used in the option tables to relate the options to particular apparatus codes:

SYMBOL	MEANING
—	Option not available on this code.
†	Option available but no letter designation is assigned.
X, Y, etc	Letter designation of option.
‡	Option always provided; permanently wired in.

1.08 Part 3 of this section gives a listing of data apparatus and associated service offering not covered by USOC.

UNIVERSAL SUFFIX TABLE

USOC SUFFIX	A	B	C	D	E	F
01	1	3	5	7	9	11
02	2	3	5	7	9	11
03	1	4	5	7	9	11
04	2	4	5	7	9	11
05	1	3	6	7	9	11
06	2	3	6	7	9	11
07	1	4	6	7	9	11
08	2	4	6	7	9	11
09	1	3	5	8	9	11
10	2	3	5	8	9	11
11	1	4	5	8	9	11
12	2	4	5	8	9	11
13	1	3	6	8	9	11
14	2	3	6	8	9	11
15	1	4	6	8	9	11
16	2	4	6	8	9	11
17	1	3	5	7	10	11
18	2	3	5	7	10	11
19	1	4	5	7	10	11
20	2	4	5	7	10	11
21	1	3	6	7	10	11
22	2	3	6	7	10	11
23	1	4	6	7	10	11
24	2	4	6	7	10	11
25	1	3	5	8	10	11
26	2	3	5	8	10	11
27	1	4	5	8	10	11
28	2	4	5	8	10	11
29	1	3	6	8	10	11
30	2	3	6	8	10	11
31	1	4	6	8	10	11
32	2	4	6	8	10	11

USOC SUFFIX	A	B	C	D	E	F
33	1	3	5	7	9	12
34	2	3	5	7	9	12
35	1	4	5	7	9	12
36	2	4	5	7	9	12
37	1	3	6	7	9	12
38	2	3	6	7	9	12
39	1	4	6	7	9	12
40	2	4	6	7	9	12
41	1	3	5	8	9	12
42	2	3	5	8	9	12
43	1	4	5	8	9	12
44	2	4	5	8	9	12
45	1	3	6	8	9	12
46	2	3	6	8	9	12
47	1	4	6	8	9	12
48	2	4	6	8	9	12
49	1	3	5	7	10	12
50	2	3	5	7	10	12
51	1	4	5	7	10	12
52	2	4	5	7	10	12
53	1	3	6	7	10	12
54	2	3	6	7	10	12
55	1	4	6	7	10	12
56	2	4	6	7	10	12
57	1	3	5	8	10	12
58	2	3	5	8	10	12
59	1	4	5	8	10	12
60	2	4	5	8	10	12
61	1	3	6	8	10	12
62	2	3	6	8	10	12
63	1	4	6	8	10	12
64	2	4	6	8	10	12

Fig. 1 — Use of Universal Suffix Table to Encode and Decode the USOC Suffix

USE OF USOC SUFFIX TABLE

TO ENCODE

1. As the choice is made for each decision (A, B, etc) for the USOC involved, make a note of the option number, eg,

(a)		(b)	
A	2	A	1
B	3	B	3
C	6	C	5
D	7		
E	9		
F	12		

2. At the top of the Universal USOC Suffix Table, find the letter for the decision under which the last choice of option was made; eg, in 1.(a) above, the last choice of option was made under decision F, and in 1.(b) it was made under decision C.

3. Under the decision letter selected in 2. above, working down from the top, find the first appearance of the option numeral selected. Moving to the left one column, move down to the numeral that corresponds to the next letter decision (a reverse alphabetical order). The numeral being selected should always lie on the same line or on a lower line than the previous numeral selected. This process is continued to column A. The USOC suffix applicable to the various choices made is found in the number column immediately to the left of the A option number; eg, in 1.(a) above, the USOC suffix is 38, in 1.(b) it is 01.

TO DECODE

1. From the table, make a note of the option numbers shown for each letter (A through F) for the suffix shown on the order, eg, for suffix 13 show

A — 1	D — 8
B — 3	E — 9
C — 6	F — 11

2. Find the number of decisions associated with the 3-character USOC preceding the suffix on the order. Note the options applicable beside the entries made in 1, eg, for USOC DAZ13 show

A — 1	2-wire operation
B — 3	Call terminated by ACU
C — 6	ACR timer not stopped
D — 8	No EON from customer terminal
E — 9	Not applicable
F — 11	Not applicable

3. In some cases the option chosen for one decision determines whether or not the following decision(s) applies, eg, see DLB08 and DLB16. The option numbers for each suffix are as follows:

	08	16
A	2	2
B	4	4
C	6	6
D	7	8
E	9	9
F	11	11

In the case of DLB08, decisions A, B, C, and D only apply because the option chosen for decision D was 7 and the instructions indicate in this case "no E decision is to be made." In the case of DLB16, decisions A, B, C, D, and E apply because the option chosen for decision D was 8 and the instructions show "continue to E decision." In neither case does the F decision apply.

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	DNS++	2400-bps — send and receive with external timing using customer-provided clock — private line only	65
201C	24V++	2400-bps — send and receive — switched network	124
202C	DRA++	Up to 1200 bps — send and receive/also used on private line at speeds up to 1800 bps — rotary dial	71
	DRF++	Up to 1200 bps — send and receive/also used on private line at speeds up to 1800 bps — rotary dial and reverse channel	74
	DRC++	Up to 1200 bps — send and receive/also used on private line at speeds up to 1800 bps — TOUCH-TONE dial	72
	DRL++	Up to 1200 bps — send and receive/also used on private line at speeds up to 1800 bps — TOUCH-TONE dial and reverse channel	75
202D	DRE++	Up to 1200 bps — send and receive/also used on private line at speeds up to 1800 bps — without tel set	73
	DRM++	Up to 1200 bps — send and receive/also used on private line at speeds up to 1800 bps — without tel set — with reverse channel	76
202E	DUD++	Up to 1200 bps — send only — EIA interface — rotary dial	81
	DUE00	Up to 1200 bps — send only — with reverse channel — rotary dial	82
	DUL00	Up to 1200 bps — send only — with auto answer — rotary dial	83
	DUS00	Up to 1200 bps — send only — with reverse channel and auto answer — rotary dial	84
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	DBE00	Up to 1200 bps — send only — with simultaneous reverse signaling — TOUCH-TONE dial	21
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	DWQ00	Up to 1200 bps — send only — with reverse channel and auto answer — TOUCH-TONE dial	90
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	13C++	Up to 1200 bps — send and receive with reverse channel — 2 to 5 individually housed sets	118
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	1M9++	Up to 1800 bps without reverse channel — send and receive on private line — for multiple arrangements	114
	18K++	Up to 1800 bps without reverse channel — send and receive — manual operation only	121
	18L++	Up to 1800 bps without reverse channel — send and receive on private line	122
	18S++	Up to 1800 bps with reverse channel — send and receive on private line	123
208A	G48++	4800-bps — send and receive — private line	108
208B	S48++	4800-bps — send and receive — switched network	110
209A	96T++	Combined sending and receiving arrangement capable of transmitting and receiving customer signals in any multiple of 2400 bps and not exceeding 9600 bps — private line	125
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	DBM00	Send only — alphanumeric with voice answer-back — TOUCH-TONE dial — 3 signals	25
401H	DC300	Send only — alphanumeric with unattended answer for use with customer-provided telemetry equipment — 3 signals	41
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	DMC++	Receive only — alphanumeric with voice answer-back — rotary dial — 3 signals	62
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DATA SET TYPE	USOC	SERVICE OFFERING	PAGE NO.
Data Sets 600-Series — For Electrocardiograph Equipment up to 100 Cycles per Second (Cont)			
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604A	D5C++	Send only — for use with EEG and EKG medical sets — rotary dial with reverse channel (3-channel)	98
	D5R++	Send only — for use with EEG and EKG medical sets — TOUCH-TONE dial with 3-channel analog transmitter	99
604B	D6C++	Receive only compatible with D5C	100
	D6D++	Receive only compatible with D5R	101

DSU	USOC	SERVICE OFFERING	PAGE NO.
500-Series Data Service Units for Digital Data Service			
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DAS	**USOC**	**SERVICE OFFERING**	**PAGE NO.**
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1001B 1001D	CBT++	Provides both data access arrangement and network signaling unit — unattended operation — contact interface	11

2. USOC CUSTOMER OPTIONS AND ASSOCIATED APPARATUS

USOC: CBS++

Arrangement for Unattended Sending and Receiving Through a Voltage-Type Interface and/or Use With Telco- or Customer-Provided Automatic Calling Units

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)		D		E (NOTES 2, 3)	
		1	2	3	4	5	6	7	8	9	10
OPTION		WITH CUSTOMER-PROVIDED POWER	WITH TELCO-PROVIDED POWER	EIA RS232B INTERFACE	EIA RS232C INTERFACE	WITH ASSOCIATED TEL SET	WITHOUT ASSOCIATED TEL SET	COUPLER CONTROLS LINE	TEL SET CONTROLS LINE	RINGER CONNECTED ON TEL SET SIDE OF EXCLUSION KEY	RINGER CONNECTED ON LINE SIDE OF EXCLUSION KEY
DATA COUPLER	1001A (Note 4)	—	‡	‡	—	†	†	†	†	†	†
	1001F (Note 4)	†	†	†	†	†	†	†	†	†	†

Note 1: If decision C is 6, no further decisions are required.

Note 2: If decision E is 9, no audible ring is heard. If decision E is 10, an audible ring is heard until the modem answers the call.

Note 3: If decision E is 9, when exclusion key is down, telephone rings and no ring indication (RI) is given to the modem; when exclusion key is up, ring indication (RI) can be activated but telephone set cannot ring.

Note 4: When exclusion key is down, tel set rings and no ring indication (RI) is given to the modem; when exclusion key is up, a ring indication (RI) is given to the modem and an audible ring is heard until the modem answers the call.

Reference Guide: 590-000-111

USOC: CBT++

Data Access Arrangement for Unattended Sending and Receiving Through a Contact Closure Type Interface

CUSTOMER OPTION DECISION		A (NOTE 1)		B		C	
		1	2	3	4	5 (NOTE 2)	6 (NOTE 3)
OPTION		WITH TELEPHONE	WITHOUT TELEPHONE	COUPLER CONTROLS LINE	TEL SET CONTROLS LINE	RINGER CONNECTED ON TEL SET SIDE OF EXCLUSION KEY	RINGER CONNECTED ON LINE SIDE OF EXCLUSION KEY
DATA COUPLER	1001B (Note 2)	†	†	†	†	†	†
	1001D (Note 2)	†	†	†	†	†	†

Note 1: If decision A is 2, no further decisions are required.

Note 2: If exclusion key is down, only telephone rings; if exclusion key is up, only coupler rings.

Note 3: If exclusion key is down, only telephone set rings; if exclusion key is up, both coupler and telephone set ring.

Reference Guide: 590-000-112

USOC: CDT00

Data Access Arrangement for Connection of Customer-Provided Data Transmitting and Receiving Equipment to Telco Private Line With Telecommunications Network Access—Basic—Manual

DATA COUPLER

1000A

There are no customer options available for USOC CDT.

Reference Guide: 590-000-110

USOC: DAC00

Data Sets 400-Series – Parallel/Sequential Operation up to 20 Characters per Second – Send Only – Alphanumeric With Tone/Electrical Answerback – Rotary Dial – 3 Signals

DATA SET

401M-L1/2/4
401E1
401E2

There are no customer options available for USOC DAC.

Reference Guide: 590-004-100

USOC: DAO++

Data Sets 100-Series — Serial/Sequential Operation up to 300 BPS — Combined Send and Receive for Single Installations — Built into Terminals — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A		B		C		D		E (NOTE 3)		F	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		ANSWER MODE INDICATOR OFF	ANSWER MODE INDICATOR ON	ANSWER CONTROL SEPARATE	ANSWER CONTROL COMBINED	NO SEND DISCON-NECT	SEND DISCON-NECT (3-SEC SPACING)	LOSS OF CXR DIS-CONNECT	NO LOSS OF CXR DIS-CONNECT	SPACE DIS-CONNECT	NO SPACE DISCON-NECT	LONG SPACE DISCONNECT	SHORT SPACE DISCONNECT
DATA SET	103H1* (Note 1)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H
	103H2* (Note 2)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H

*Needs DAS 804P6 (see Part 3).

Note 1: Do not use on long Unigauge loops.

Note 2: Provides option for CC indication early or delayed.

Note 3: If decision E is 9, make decision F. If decision E is 10, make no further decision.

Reference Guide: 590-001-106

USOC: DAS00

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Send Only — Alphanumeric With Tone/Electrical Answerback — TOUCH-TONE Dial — 3 Signals

DATA SET

401M-L1A/2/4
401E2

There are no customer options available for USOC DAS.

Reference Guide: 590-004-100

USOC: DAV++

Data Sets 400-Series — Parallel/Sequential Operation up to 10 Characters per Second — Receive Only — With Code Conversion — ASCII Code — Multiple

CUSTOMER OPTION DECISION		A		B		C (NOTES 5, 6)		D (NOTE 7)	
		1	2	3	4	5	6	7	8
OPTION		ATTENDED ANSWER	UNATTENDED ANSWER	ANSWERBACK TONES GENERATED INTERNALLY OR VOICE ANSWERBACK	EXTERNAL ANSWERBACK	OUT-OF-SERVICE (OOS) FEATURE DESIRED	OOS FEATURE DISABLED	ANSWER TONE DURATION 0.57 SECOND	ANSWER TONE DURATION 1.25 SECONDS
DATA SET	403D7* (Notes 1, 2, 3, 4, 8)	Z	Y	A	F	†	ZC	N	M
	403D13* (Note 8)	Z	Y	A	F	†	ZC	N	M

*Needs DAS 804K (see Part 3).

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: No return-to-data feature.

Note 4: External pad may be required to meet power level requirements.

Note 5: Sales personnel should discuss OOS feature with Engineering before decision is made. OOS feature requires the following decisions:

(1) Will the customer use OOS feature?
(2) How can Telco Provide OOS feature?
  (a) Terminating-only service?
  (b) Third-wire control scheme?
(3) Which way is best for customer if Telco can provide either one?
(4) If extra charge is required for feature in 2(a) or 2(b), will customer still want OOS feature?
(5) If customer wants OOS feature, does the CPE provide ON or OFF signals to data set?

Note 6: Wiring designation depends upon choice of method for providing OOS feature, a Telco option.

Note 7: Most uses of data sets 403D-type will be with TOUCH-TONE telephone sets utilizing standard answerback tone of 0.57 second. However, should the 403D-type have reception from other data sets such as the 401A and 401E or from CPE equipped with an ACU, a longer answer tone of 1.25 seconds may be required, and Engineering advice should be obtained.

Note 8: Line intercept under attendant control.

Reference Guide: 590-004-106

USOC: DAW++

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS — Send Only — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A	
		1	2
OPTION		EIA INTERFACE	CONTACT INTERFACE
DATA SET	202E11 (Note 1)	‡	—
	202E10	Z	Y

Note 1: Reverse channel feature is permanently installed but not required.

Reference Guide: 590-002-104

USOC: DAY++

Data Auxiliary Sets 800-Series — Automatic Calling Units Without Signal Answerback Detection Feature — Rotary Dial

CUSTOMER OPTION DECISION		A		B (NOTE 6)		C		D (NOTE 5)		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		EIA VOLTAGE INTERFACE	CONTACT INTERFACE	CALL TERMINATED THROUGH ACU AFTER DSS ON	CALL TERMINATED THROUGH DATA SET AFTER DSS ON	ACR TIMER STOPPED AFTER DSS ON	ACR TIMER NOT STOPPED AFTER DSS ON	EON SIGNAL FROM CUSTOMER TERMINAL	NO EON SIGNAL FROM CUSTOMER TERMINAL	ACU ANSWER-TONE DETECTION	DS ANSWER-TONE DETECTION W/O EON SIGNAL
DAS	801A3 (Notes 1, 2, 3)	—	‡	w/o Z	Z	Y	w/o Y	‡	—	—	—
	801A4 (Notes 1, 2, 3, 4)	‡	—	w/o Z	Z	Y	w/o Y	‡	—	—	—
	801A5	ZF	ZE	Z or A	G or ZD	R	H	B	†	B	E
	801A6 (Note 4)	ZF	ZE	Z or A	G or ZD	R	H	B	†	B	E

Note 1: Should be upgraded to series 3 (see PEM 9169 and 9198).

Note 2: Cannot be used with data sets 103E, 103G, and 101C.

Note 3: Substitute only on "originate only" service (see PEL 7555 — TIP Monitor).

Note 4: Answer-tone detection feature not used.

Note 5: If decision D is 7, no decision E is required. If decision D is 8, decision E must be made.

Note 6: For DAS 801A5 or A6, call can be terminated through ACU by line transfer (Z) or CL contact (A), or through data set by line transfer (G) or CL contact (ZD).

Reference Guide: 590-008-100

USOC: DAZ++

Data Auxiliary Sets 800-Series — Automatic Calling Units Without Signal Answerback Detection Feature — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A		B (NOTE 1)		C		D (NOTE 5)		E		F	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		2-WIRE	4-WIRE	CALL TERMINATED THRU ACU AFTER DSS ON	CALL TERMINATED THRU DS AFTER DSS ON	ACR TIMER STOPPED AFTER DSS ON	ACR TIMER NOT STOPPED AFTER DSS ON	LINE TRANSFER CONTROLLED BY EON SIGNAL FROM CUSTOMER TERM	NO EON SIGNAL FROM CUSTOMER TERMINAL	LINE TRANSFER AFTER ACU ANSWER-TONE DETECTION	DS ANSWER-TONE DETECTION W/O EON	LOOP START	GROUND START (NOTE 6)
DATA SET	801C1 (Notes 2, 3)	‡	—	Z	w/o Z	R	w/o T	‡	—	—	—	Y	V
	801C2 (Notes 2, 3, 4)	‡	—	Z	w/o Z	R	w/o R	‡	—	—	—	Y	V
	801C3	ZH	ZJ	Z or A	G or ZD	R	H	B	†	B	E	—	V or ZK
	801C4 (Note 4)	ZH	ZJ	Z or A	G or ZD	R	H	B	†	B	E	Y	V or ZK

Note 1: For DAS 801C3 or C4, call can be terminated through ACU by line transfer (Z) or CL contact (A), or through data set by line transfer (G) or CL contact (ZD).

Note 2: Cannot be used with data sets 103E, 103G, and 101C.

Note 3: Should be upgraded to series 4 (see EM 442).

Note 4: Answer-tone and dial tone detection feature not used.

Note 5: If decision D is 7, ACU option B must be installed in 801C3 or C4, and decision E is limited to 9. If decision D is 8, then the choice must be made in decision E between option B or option E in 801C3 or C4.

Note 6: Ground start is provided by option V on 4-wire and ZK on 2-wire in 801C3 or C4.

Reference Guide: 590-008-101

USOC: DBA++

Data Sets 400-Series — Parallel/Sequential Operation up to 10 Characters per Second — Receive Only — With Code Conversion — Binary Coded Matrix Voltage — Multiple

CUSTOMER OPTION DECISION		A		B		C (NOTES 5, 6)		D (NOTE 7)		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		ATTENDED ANSWER	UNATTENDED ANSWER	ANSWERBACK TONES GENERATED INTERNALLY OR VOICE ANSWERBACK	EXTERNAL ANSWERBACK	OUT-OF-SERVICE (OOS) FEATURE DESIRED	OOS FEATURE DISABLED	ANSWER TONE DURATION 0.57 SECOND	ANSWER TONE DURATION 1.25 SECONDS	LINE INTERCEPT UNDER ATTEND-ANT CONTROL	LINE INTERCEPT UNDER CPE CONTROL
DATA SET	403D5* (Notes 1, 2, 3, 4)	Z	Y	A	F	†	ZC	N	M	E	B
	403D11*	Z	Y	A	F	†	ZC	N	M	E	B

*Needs DAS 804K (see Part 3).

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: No return-to-data feature.

Note 4: External pad may be required to meet power level requirements.

Note 5: Sales personnel should discuss OOS feature with Engineering before decision is made. OOS feature requires the following decisions:

(1) Will the customer use OOS feature?
(2) How can Telco provide OOS feature?
  (a) Terminating-only service?
  (b) Third-wire control scheme?
(3) Which way is best for customer if Telco can provide either one?
(4) If extra charge is required for feature in 2(a) or 2(b), will customer still want OOS feature?
(5) If customer wants OOS feature, does the CPE provide ON or OFF signals to data set?

Note 6: Wiring designation depends upon choice of method for providing OOS feature, a Telco option.

Note 7: Most uses of data sets 403D-type will be with TOUCH-TONE telephone sets utilizing standard answerback tone of 0.57 second. However, should the 403D-type have reception from other data sets such as the 401A and 401E or from CPE equipped with an ACU, a longer answer tone of 1.25 seconds may be required, and Engineering advice should be obtained.

Reference Guide: 590-004-106

USOC: DBE00

Data Sets 200-Series – Serial/Sequential Operation up to 1200 BPS – Send Only With Simultaneous Reverse Signaling – TOUCH-TONE Dial

DATA SET

202E11

There are no customer options available for USOC DBE.

Reference Guide: 590-002-104

USOC: DBF00

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Send Only — Alphanumeric — With Voice Answerback — Rotary Dial — 3 Signals

DATA SET

401E3 (Note 1)
401M-L1/2/3

There are no customer options available for USOC DBF.

Note 1: May require external padding to meet signal level requirement of —12 dBm at the central office.

Reference Guide: 590-004-100

USOC: DBH00

Data Sets 600-Series – For Operation With Customer-Provided Telewriting Devices – Electrowriter – Rotary Dial

DATA SET

601A1 (Note 1)

There are no customer options available for USOC DBH.

Note 1: Previously coded J1D601A, List 1).

Reference Guide: 590-006-100

USOC: DBK++

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Send Only — Alphanumeric — With 1-Number Automatic Dialer

CUSTOMER OPTION DECISION		A (NOTE 1)		B	
		1	2	3	4
OPTION		ANSWER TONE TERMINATION	INTERFACE TERMINATION	DS TERMINATES CALL 10 SECONDS AFTER RECEPTION OF 2025-HZ ANSWER TONE	DS TERMINATES CALL 70 SECONDS AFTER RECEPTION OF 2025-HZ ANSWER TONE
DATA SET	401L2 (Notes 2, 3)	†	†	†	†
	401L1 (Note 2)	†	†	†	†

Note 1: If decision A is 2, disregard decision B and make the following decision:

(a) *Terminal equipment controls termination of the call after a minimum of 10 seconds in the data mode by a contact closure on the TCL lead:* This option allows the terminal equipment to terminate the call by placing a contact closure on the TCL lead at any time. The call will be terminated only after the data set has been in the data mode for at least 10 seconds.

(b) *Terminal equipment controls termination of the call at any time with a contact closure on the TCL lead:* This option allows call termination by the terminal equipment placing a contact closure on the TCL lead at any time. The call will be terminated immediately.

Note 2: 558F-51 telephone set is needed with this data set.

Note 3: Electrical answer-back feature is available but not used.

Reference Guide: 590-004-107

USOC: DBM00

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Send Only — Alphanumeric — With Voice Answerback — TOUCH-TONE Dial — 3 Signals

DATA SET

401E5 (Note 1)
401M-L1A/2/3

There are no customer options available for USOC DBM.

Note 1: May require external padding to meet —12 dBm signal level requirements at central office.

Reference Guide: 590-004-100

USOC: DBN++

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Send Only — Alphanumeric — With 1-Number Automatic Dialer — Tone Answerback Detector

CUSTOMER OPTION DECISION		A (NOTE 1)		B	
		1	2	3	4
OPTION		ANSWER TONE TERMINATION	INTERFACE TERMINATION	DS TERMINATES CALL 10 SECONDS AFTER RECEPTION OF 2025-HZ ANSWER TONE	DS TERMINATES CALL 70 SECONDS AFTER RECEPTION OF 2025-HZ ANSWER TONE
DATA SET	401L2 (Note 2)	†	†	†	†

Note 1: If decision A is 2, disregard decision B and make the following decision:

(a) *Terminal equipment controls termination of the call after a minimum of 10 seconds in the data mode by a contact closure on the TCL lead:* This option allows the terminal equipment to terminate the call by placing a contact closure on the TCL lead at any time. The call will be terminated only after the data set has been in the data mode for at least 10 seconds.

(b) *Terminal equipment controls termination of the call at any time with a contact closure on the TCL lead:* This option allows call termination by the terminal equipment placing a contact closure on the TCL lead at any time. The call will be terminated immediately.

Note 2: 558F-51 telephone set is needed with this data set.

Reference Guide: 590-004-107

USOC: DBP++

Data Sets 100-Series – Serial/Sequential Operation up to 300 BPS – Answer Only – Combined Send and Receive – Data Set Suitable for Conditioning Signals at Rates up to 300 BPS in Sequence, for Use Only as an Originating Station – With Data Lamp and Terminal Control – Rotary Dial

CUSTOMER OPTION DECISION		A (NOTE 1)	
		1	2
OPTION		DATA LAMP AND DATA TERMINAL READY (CD) LEAD CONTROL	DATA LAMP BUT NO DATA TERMINAL READY (CD) LEAD CONTROL
DATA SET	113A-L1/2	X	V

Note 1: If neither data lamp nor CD control is required, install option W.

Reference Guide: 590-001-108

USOC: DBQ++

Data Sets 100-Series — Serial/Sequential Operation up to 300 BPS — Answer Only — Combined Send and Receive — Data Set Suitable for Conditioning Signals at Rates up to 300 BPS in Sequence, for Use Only as an Originating Station — With Lamp and Terminal Control — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A (NOTE 1)	
		1	2
OPTION		DATA LAMP AND DATA TERMINAL READY (CD) LEAD CONTROL	DATA LAMP BUT NO DATA TERMINAL READY (CD) LEAD CONTROL
DATA SET	113A-L1A/2	X	V

Note 1: If neither data lamp nor CD control is required, install option W.

Reference Guide: 590-001-108

USOC: DBS00

Data Sets 600-Series — For Operation With Customer-Provided Telewriting Devices — Electrowriter — TOUCH-TONE Dial

DATA SET

601A2

There are no customer options available for USOC DBS.

Reference Guide: 590-006-100.

USOC: DBY00

Data Sets 100-Series — Serial/Sequential Operation up to 300 BPS — Answer Only — Combined Send and Receive — Data Set Suitable for Conditioning Signals at Rates up to 300 BPS in Sequence, for Use Only as an Originating Station — Without Data Lamp and Terminal Control — TOUCH-TONE Dial

DATA SET

113A — L1A
113A — L1A/2 (Note 1)

There are no customer options available for USOC DBY.

Note 1: Wiring option W required.

Reference Guide: 590-001-108

USOC: DBZ00

Data Sets 100-Series – Serial/Sequential Operation up to 300 BPS – Answer Only – Combined Send and Receive – Data Set Suitable for Conditioning Signals at Rates up to 300 BPS in Seqence, for Use Only as an Originating Station – Without Data Lamp and Terminal Control – Rotary Dial

DATA SET

113A-L1
113A-L1/2 (Note 1)

There are no customer options available for USOC DBZ.

Note 1: Wiring option W required.

Reference Guide: 590-001-108

USOC: DCB

Data Sets 400-Series — Parallel/Sequential Operation up to 10 Characters per Second — Single Station — Receive Only — With Code Conversion — Relay Contact Interface

CUSTOMER OPTION DECISION		A		B		C (NOTES 5, 6)		D (NOTE 7)	
		1	2	3	4	5	6	7	8
OPTION		ATTENDED ANSWER	UNATTENDED ANSWER	ANSWERBACK TONES GENERATED INTERNALLY OR VOICE ANSWERBACK	EXTERNAL ANSWERBACK	OUT-OF-SERVICE (OOS) FEATURE DESIRED	OOS FEATURE DISABLED	ANSWER TONE DURATION 0.57 SECOND	ANSWER TONE DURATION 1.25 SECONDS
DATA SET	403E2* (Notes 1, 2, 3, 4)	Z	Y	A	F	†	ZC	N	M
	403E5*	Z	Y	A	F	†	ZC	N	M

*Needs DAS 804G (see Part 3).

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: No third-wire out-of-service or attendant alerting feature.

Note 4: External pad may be required to meet power level requirements.

Note 5: Sales personnel should discuss OOS feature with Engineering before decision is made. OOS feature requires the following decisions:

(1) Will the customer us OOS feature?
(2) How can Telco provide OOS feature?
  (a) Terminating-only service?
  (b) Third-wire control scheme?
(3) Which way is best for customer if Telco can provide either one?
(4) If extra charge is required for feature in 2(a) or 2(b), will customer still want OOS feature?
(5) If customer wants OOS feature, does the CPE provide ON or OFF signals to data set?

Note 6: Wiring designation depends upon choice of method for providing OOS feature, a Telco option.

Note 7: Most uses of DS403E-type will be with TOUCH-TONE tel sets utilizing an answerback tone of 0.57 second. However, should the 403E have reception from other data sets such as 401A or E or from CPE equipped with an ACU, a longer tone of 1.25 seconds may be required and engineering advice should be obtained.

Reference Guide: 590-004-106

USOC: DCC

Data Sets 400-Series – Parallel/Sequential Operation up to 10 Characters per Second – Single Station Receive Only – With Code Conversion – Binary Coded Matrix Voltage

CUSTOMER OPTION DECISION		A		B		C (NOTES 5, 6)		D (NOTES 7)	
		1	2	3	4	5	6	7	8
OPTION		ATTENDED ANSWER	UNATTENDED ANSWER	ANSWERBACK TONES GENERATED INTERNALLY OR VOICE ANSWERBACK	EXTERNAL ANSWERBACK	OUT-OF-SERVICE (OOS) FEATURE DESIRED	OOS FEATURE DISABLED	ANSWER TONE DURATION 0.57 SECOND	ANSWER TONE DURATION 1.25 SECONDS
DATA SET	403E3* (Notes 1, 2, 3, 4)	Z	Y	A	F	†	ZC	N	M
	403E6*	Z	Y	A	F	†	ZC	N	M

*Needs DAS 804G (see Part 3).

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: No third wire out-of-service or attendant alerting feature.

Note 4: External pad may be required to meet power level requirements.

Note 5: Sales personnel should discuss OOS feature with Engineering before decision is made. OOS feature requires the following decisions:

(1) Will the customer use OOS feature?
(2) How can Telco provide OOS feature?
  (a) Terminating-only service?
  (b) Third-wire control scheme?
(3) Which way is best for customer if Telco can provide either one?
(4) If extra charge is required for feature in 2(a) or 2(b), will customer still want OOS feature?
(5) If customer wants OOS feature, does the CPE provide ON or OFF signals to data set?

Note 6: Wiring designation depends upon choice of method for providing OOS feature, a Telco option.

Note 7: Most uses of DS 403E-type will be with TOUCH-TONE tel sets utilizing an answerback tone of 0.57 second. However, should the 403E have reception from other data sets such as 401A or E or from CPE equipped with an ACU, a longer tone of 1.25 seconds may be required and engineering advice should be obtained.

Reference Guide: 590-004-106

USOC: DCS++

Data Sets 400-Series — Parallel/Sequential Operation up to 10 Characters per Second — Single Station Receive Only — With Code Conversion — ASCII Code

CUSTOMER OPTION DECISION		A		B		C (NOTES 5, 6)		D (NOTE 7)	
		1	2	3	4	5	6	7	8
OPTION		ATTENDED ANSWER	UNATTENDED ANSWER	ANSWERBACK TONES GENERATED INTERNALLY OR VOICE ANSWERBACK	EXTERNAL ANSWERBACK	OUT-OF-SERVICE (OOS) FEATURE DESIRED	OOS FEATURE DISABLED	ANSWER TONE DURATION 0.57 SECOND	ANSWER TONE DURATION 1.25 SECONDS
DATA SET	403E4* (Notes 1, 2, 3, 4)	Z	Y	A	F	†	ZC	N	M
	403E7*	Z	Y	A	F	†	ZC	N	M

*Needs DAS 804G (see Part 3)

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: No third wire out-of-service or attendant alerting feature.

Note 4: External pad may be required to meet power level requirements.

Note 5: Sales personnel should discuss OOS feature with Engineering before decision is made. OOS feature requires the following decisions:

(1) Will the customer use OOS feature?
(2) How can Telco provide OOS feature?
  (a) Terminating-only service?
  (b) Third-wire control scheme?
(3) Which way is best for customer if Telco can provide either one?
(4) If extra charge is required for feature in 2(a) or 2(b), will customer still want OOS feature?
(5) If customer wants OOS feature, does the CPE provide ON or OFF signals to data set?

Note 6: Wiring designation depends upon choice of CPE for providing OOS feature, a Telco option.

Note 7: Most uses of DS 403E-type will be with TOUCH-TONE tel sets utilizing an answerback tone of 0.57 seconds. However, should the 403E have reception from other data sets such as 401A or E or from CPE equipped with an ACU, a longer tone of 1.25 seconds may be required and engineering advice should be obtained.

Reference Guide: 590-004-106

USOC: DDQ++

Data Service Unit for Digital Data Service at 2.4 kb/s on Private Line

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)	
		1	2	3	4	5	6
OPTION		CONTINUOUS REQUEST TO SEND	SWITCHED REQUEST TO SEND	SIGNAL GROUND TO FRAME GROUND	SIGNAL GROUND DISCONNECTED FROM FRAME GROUND	LOOPBACK SWITCH AND INDICATOR LAMPS ON FRONT	LOOPBACK SWITCH AND INDICATOR LAMPS ON REAR
DSU	500A-L1/2	YS	YT	YK	YL	XN	XM

Note 1: For single station or stacked multiple station installations, decision C is required. For multiple station installations using the 48A data mounting, decision C6 must always be provided.

USOC: DDW++

Data Service Unit for Digital Data Service at 4.8 kb/s on Private Line

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)	
		1	2	3	4	5	6
OPTION		CONTINUOUS REQUEST TO SEND	SWITCHED REQUEST TO SEND	SIGNAL GROUND TO FRAME GROUND	SIGNAL GROUND DISCONNECTED FROM FRAME GROUND	LOOPBACK SWITCH AND INDICATOR LAMPS ON FRONT	LOOPBACK SWITCH AND INDICATOR LAMPS ON REAR
DSU	500A-L1/3	YS	YT	YK	YL	XN	XM

Note 1: For single station or stacked multiple station installations, decision C is required. For multiple station installations using the 48A data mounting, decision C6 must always be provided.

USOC: DDX++

Data Service Unit for Digital Data Service at 9.6 kb/s on Private Line

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)	
		1	2	3	4	5	6
OPTION		CONTINUOUS REQUEST TO SEND	SWITCHED REQUEST TO SEND	SIGNAL GROUND TO FRAME GROUND	SIGNAL GROUND DISCONNECTED FROM FRAME GROUND	LOOPBACK SWITCH AND INDICATOR LAMPS ON FRONT	LOOPBACK SWITCH AND INDICATOR LAMPS ON REAR
DSU	500A-L1/4	YS	YT	YK	YL	XN	XM

Note 1: For single station or stacked multiple station installations, decision C is required. For multiple station installations using the 48A data mounting, decision C6 must always be provided.

USOC: DDY++

Data Service Unit for Digital Data Service at 56 kb/s on Private Line

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)	
		1	2	3	4	5	6
OPTION		CONTINUOUS REQUEST TO SEND	SWITCHED REQUEST TO SEND	SIGNAL GROUND TO FRAME GROUND	SIGNAL GROUND DISCONNECTED FROM FRAME GROUND	LOOPBACK SWITCH AND INDICATOR LAMPS ON FRONT	LOOPBACK SWITCH AND INDICATOR LAMPS ON REAR
DSU	500A-L1/5	YS	YT	YK	YL	XN	XM

Note 1: For single or stacked multiple station installations, decision C is required. For multiple station installations using the 48A data mounting, decision C6 must always be provided.

USOC: DCQ++

Data Sets 600-Series — for Electrocardiograph Equipment up to 100 Cycles per Second — Receiving — Rotary Dial

CUSTOMER OPTION DECISION		A (NOTE 3)		B	
		1	2	3	4
OPTION		WITH AUTOMATIC ANSWER	WITH MANUAL ANSWER	AUTO ANSWER PERMANENTLY WIRED	AUTO ANSWER KEY-CONTROLLED
DATA SET	603B1 (Notes 1, 2)	†	†	Y	Z
	603B2	†	†	Y	Z

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: If decision A is 2, USOC suffix is 02 and no decision B is required. If decision A is 1, decision B is required.

Reference Guide: 590-006-103

USOC: DCZ00

Data Sets 600-Series — for Electrocardiograph Equipment up to 100 Cycles per Second — Sending — Portable — With Acoustic Coupler

DATA SET

603D1

There are no customer options available with USOC DCZ.

Reference Guide: 590-006-102

USOC: DC300

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Send Only — Alphanumeric — Includes Unattended Answer Feature — For Use With Customer-Provided Telemetry Equipment — 3 Signals

DATA SET

401H1 (Notes 1, 2)
401H2 (Notes 1, 2)
401H3 (Notes 1, 2)
401H4

There are no customer options available for USOC DC3.

Note 1: Reusable when certain loop length and lightning protection considerations are met.

Note 2: Does not provide selective ringing.

Reference Guide: 590-004-100

USOC: DDO

Data Sets 100-Series — Serial/Sequential Operation up to 300 BPS — Answer Only — Combined Send and Receive — for Single Installations — Built into Terminals — With Card Dialer — Rotary Dial

CUSTOMER OPTION DECISION		A		B		C		D		E (NOTE 3)		F	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		ANSWER MODE INDICATION OFF	ANSWER MODE INDICATION ON	ANSWER CONTROL SEPARATE	ANSWER CONTROL COMBINED	NO SEND DISCONNECT	SEND DISCONNECT 3-SECOND SPACING	LOSS OF CXR DISCONNECT	NO LOSS OF CXR DISCONNECT	SPACE DISCONNECT	NO SPACE DISCONNECT	LONG SPACE DISCONNECT	SHORT SPACE DISCONNECT
DATA SET	103H1* (Note 1)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H
	103H2* (Note 2)	W	X	—	‡	w/o T	T	S	w/o S	V or H	w/o V, H	V	H

*Needs DAS 804P7 (see part 3).

Note 1: Do not use on long Unigauge loops.

Note 2: Provides option for CC indication early or delayed.

Note 3: If decision E is 9, make decision F. If decision E is 10, make no further decision.

Reference Guide: 590-001-106

USOC: DDR00

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Unattended Sender — Automatic Answer Only — Alphanumeric Transmission

DATA SET

401H1 (Notes 1, 2)
401H2 (Notes 1, 2)
401H3 (Notes 1, 2)
401H4 (Note 3)

There are no customer options available for USOC DDR.

Note 1: Reusable when certain loop length and lightning protection considerations are met.

Note 2: Does not provide selective ringing.

Note 3: Provides selective ringing.

Reference Guide: 590-004-100

USOC: DDV00

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Unattended Sender — Automatic Answer Only — Alphanumeric Transmission — With Arrangement for Nonsimultaneous Tone Answerback Receiver

DATA SET

401H5 (Note 1)

There are no customer options available for USOC DDV.

Note 1: Provides selective ringing.

Reference Guide: 590-004-100

USOC: DEA

Data Sets 600-Series — for Operation With Customer-Provided Facsimile Devices — 2 Analog Signals in Voltage Form — Send and Receive — Rotary Dial

CUSTOMER OPTION DECISION		A		B		C		D		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		WITH AUTOMATIC ANSWER	WITHOUT AUTOMATIC ANSWER	WITH ACU	WITHOUT ACU	WITH SYNC CHANNEL	WITHOUT SYNC CHANNEL	WITH PRE-EMPHASIS	WITHOUT PRE-EMPHASIS	WITH POST-EMPHASIS	WITHOUT POST-EMPHASIS
DATA SET	602A1 (Notes 1, 2)	Y	w/o Y	K	M	ZC	ZD	‡	—	‡	—
	602C1 (Notes 1, 2)	Y	w/o Y	M	w/o M	ZC	ZD	ZA	w/o ZA	ZB*	w/o ZB
	602C2 (Notes 1, 2, 3)	Y	w/o Y	M	w/o M	ZC	ZD	ZA	w/o ZA	ZB	w/o ZB
	602C5	Y	w/o Y	M	w/o M	ZC	ZD	ZA	w/o ZA	ZB	w/o ZB
	602C6 (Note 3)	Y	w/o Y	M	w/o M	ZC	ZD	ZA	w/o ZA	ZB	w/o ZB

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Reverse-channel feature not used.

Reference Guide: 590-006-101

USOC: DEC++

Data Sets 600-Series — for Operation With Customer-Provided Facsimile Devices — 2 Analog Signals in Voltage Form — Send and Receive — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A		B		C		D		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		WITH AUTOMATIC ANSWER	WITHOUT AUTOMATIC ANSWER	WITH ACU	WITHOUT ACU	WITH SYNC CHANNEL	WITHOUT SYNC CHANNEL	WITH PRE-EMPHASIS	WITHOUT PRE-EMPHASIS	WITH POST-EMPHASIS	WITHOUT POST-EMPHASIS
DATA SET	602C3 (Notes 1, 2)	Y	w/o Y	M	w/o M	ZC	ZD	ZA	w/o ZA	ZB	w/o ZB
	602C4 (Notes 1, 2, 3)	Y	w/o Y	M	w/o M	ZC	ZD	ZA	w/o ZA	ZB	w/o ZB
	602C7	Y	w/o Y	M	w/o M	ZC	ZD	ZA	w/o ZA	ZB	w/o ZB
	602C8 (Note 3)	Y	w/o Y	M	w/o M	ZC	ZD	ZA	w/o ZA	ZB	w/o ZB

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Reverse channel feature not used.

Reference Guide: 590-006-101

USOC: DEO++

Data Sets 100-Series – Serial/Sequential Operation up to 300 BPS – Answer Only – Combined Send and Receive – for Single Installations – Built into Terminals – With Card Dialer – TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A		B		C		D		E (NOTE 3)		F	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		ANSWER MODE INDICATION OFF	ANSWER MODE INDICATION ON	ANSWER CONTROL SEPARATE	ANSWER CONTROL COMBINED	NO SEND DISCONNECT	SEND DISCONNECT 3-SECOND SPACING	LOSS OF CXR DISCONNECT	NO LOSS OF CXR DISCONNECT	SPACE DISCONNECT	NO SPACE DISCONNECT	LONG SPACE DISCONNECT	SHORT SPACE DISCONNECT
DATA SET	103H1* (Note 1)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H
DATA SET	103H2* (Note 2)	W	X	—	‡	w/o T	T	S	w/o S	V or H	w/o V, H	V	H

*Needs DAS 804P7 (see Part 3).

Note 1: Do not use on long Unigauge loops.

Note 2: Provides option for CC indication early or delayed.

Note 3: If decision E is 9, make decision F. If decision E is 10, make no further decision.

Reference Guide: 590-001-106

USOC: DES++

Data Sets 100-Series — Serial/Sequential Operation up to 300 BPS — Answer Only — Combined Send and Receive — for Single Installations — Rotary Dial

CUSTOMER OPTION DECISION		A		B		C		D		E (NOTE 9)		F	
		1	2	3	4	5	6	7	8	9	10	11	12
	OPTION	ANSWER MODE INDICATION OFF	ANSWER MODE INDICATION ON	ANSWER CONTROL SEPARATE	ANSWER CONTROL COMBINED	NO SEND DISCONNECT	SEND DISCONNECT 3-SECOND SPACING	LOSS OF CXR DISCONNECT	NO LOSS OF CXR DISCONNECT	SPACE DISCONNECT	NO SPACE DISCONNECT	LONG SPACE DISCONNECT	SHORT SPACE DISCONNECT
DATA SET	103A2* (Notes 1, 2, 3, 4, 5)	‡	—	—	‡	D to QD	D to LD	—	†	T1 to LS	T1 to NO	T1 to LS	—
	103A2A* (Notes 1, 2, 3, 6)	‡	—	—	‡	D to QD	D to LD	—	†	T1 to LS	T1 to NO	T1 to LS	—
	103A2B* (Notes 1, 2, 3, 4)	‡	—	—	‡	D to QD	D to LD	—	†	T1 to LS	T1 to NO	T1 to LS	—
	103G1 (Note 2)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H
	103G1 (Note 7)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H
	103A3 (Notes 2, 3, 8)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H

*Needs 804B1 (see Part 3).

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Not equipped with loudspeaker.

Note 4: Operates up to 200 baud.

Note 5: Untested and may be marginal between 200 to 300 baud operation.

Note 6: Operates up to 300 baud.

Note 7: Provides options for CC indication early or late.

Note 8: 565K telephone set is needed with this data set.

Note 9: If decision E is 9, make decision F. If decision E is 10, make no further decision.

Reference Guide: 590-001-105

USOC: DFA++

Data Sets 400-Series — Parallel/Sequential Operation up to 10 Characters per Second — Receive Only — With Code Conversion — Relay Contact Interface — Multiple

CUSTOMER OPTION DECISION		A		B		C (NOTES 1, 6)		D (NOTE 2)		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		ATTENDED ANSWER	UNATTENDED ANSWER	ANSWERBACK TONES GENERATED INTERNALLY OR VOICE ANSWERBACK	EXTERNAL ANSWER-BACK	OOS FEATURE DESIRED	OOS FEATURE DISABLED	ANSWER TONE DURATION 0.57 SEC	ANSWER TONE DURATION 1.25 SEC	LINE INTERCEPT UNDER ATTENDANT CONTROL	LINE INTERCEPT UNDER CPE CONTROL
DATA SET	403D3* (Notes 3, 4, 5)	Z	Y	A	F	†	ZC	N	M	E	B
	403D9*	Z	Y	A	F	†	ZC	N	M	E	B

*Needs DAS 804K (see Part 3).

Note 1: Sales personnel should discuss OOS feature with Engineering before decision is made. OOS feature required the following decisions:

(1) Will the customer use OOS feature?
(2) How can Telco provide OOS feature?
  (a) Terminating-only service?
  (b) Third-wire control scheme?
(3) Which way is best for customer if Telco can provide either one?
(4) If extra charge is required for feature in (2a) or (2b), will customer still want OOS feature?
(5) If customer wants OOS feature, does the CPE provide ON or OFF signals to data set?

Note 2: Most uses of data sets 403D-type will be with TOUCH-TONE telephone sets utilizing standard answerback tone of 0.57 second. However, should the 403D-type have reception from other data sets such as the 401A and E or from a CPE equipped with an ACU, a longer answer tone of 1.25 seconds may be required and Engineering advice should be obtained.

Note 3: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 4: Do not use on long Unigauge loops.

Note 5: External pad may be required to meet power level requirements.

Note 6: Wiring designation depends upon choice of method for providing OOS feature, a Telco option.

Reference Guide: 590-004-106

USOC: DFC++

Data Sets 600-Series — for Electrocardiograph Equipment up to 100 Cycles per Second — Receiving — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A (NOTE 3)		B	
		1	2	3	4
OPTION		WITH AUTOMATIC ANSWER	WITH MANUAL ANSWER	AUTOMATIC ANSWER PERMANENTLY WIRED	AUTOMATIC ANSWER KEY-CONTROLLED
DATA SET	603B2 (Notes 1, 2)	†	†	Y	Z
	603B4	†	†	Y	Z

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: If decision A is 2, USOC suffix is 02 and no decision B is required. If decision A is 1, decision B is required.

Reference Guide: 590-006-103

USOC: DFS++

Data Sets 200-Series — Serial/Sequential Operation — 2000 bps — Send and Receive — Internal Timing

CUSTOMER OPTION DECISION		A		B (NOTE 1)		C		D (NOTE 2)		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		EIA INTERFACE	CONTACT INTERFACE	ALTERNATE VOICE	w/o ALTERNATE VOICE	WITH NEW SYNC	WITHOUT NEW SYNC	2-WIRE	4-WIRE	4-WIRE PRIVATE LINE (CONTINUOUS CARRIER)	4-WIRE PRIVATE LINE (CARRIER CONTROLLED BY REQUEST-TO-SEND OR MULTIPARTY)
DATA SET	201A1 (Notes 3, 4, 5)	—	‡	†	†	w/o A	A	ZP, E	ZN or ZO	ZN	ZO
	201A3	ZD, ZF	ZE, ZC	Z, Y	ZJ	ZK	W	ZC	ZA or ZB	ZA	ZB
	201A-L1/2A/3/6/7A (Note 6)	ZR, ZT	ZS, ZU	†	†	ZM	ZL	A	E or B	E	B
	201A-L1A/2A/3/6A/7A (Note 6)	ZR, ZT	ZS, ZU	†	†	ZM	ZL	A	E or B	E	B

Note 1: Specify if automatic answer is required in REMARKS column of service order. It is normally provided as key-controlled (option E in DAS 804A). If automatic answer is to be permanently wired, state on service order in REMARKS column "Automatic Answer Permanently Wired," and use option B in DAS 804A. For alternate voice on private line, use DAS 828-L1/2 or 829 with 48A1 data unit and 565HK telephone.

Note 2: If decision D is 7, decision E is not required. If decision D is 8, make decision E.

Note 3: When alternate voice is required, a 569-NB telephone set is used.

Note 4: Cannot be used with DAS 804A or 801-type ACUs.

Note 5: Cannot provide auto answer with 4-wire operation.

Note 6: Additional polling capability is provided.

Reference Guide: 590-002-100

USOC: DF3++

Data Sets 400-Series — Parallel/Sequential Operation up to 75 Characters per Second — 8 Signals — Receive Only — Attended or Unattended Operation With Simultaneous Reverse Signaling

CUSTOMER OPTION DECISION		A		B		C	
		1	2	3	4	5	6
OPTION		ATTENDED ANSWERING	UNATTENDED ANSWERING	USED WITH 804A (NOTE 3)	USED w/o 804A	WITH OOS CONTROLLED BY CUSTOMER	WITHOUT OOS CONTROLLED BY CUSTOMER
DATA SET	402D2 (Note 1)	w/o N	N	W	w/o W	V	w/o V
	402D4	w/o N	N	W	w/o W	V	w/o V
	402D1 (Notes 1, 2)	w/o N	N	W	w/o W	V	w/o V
	402D3 (Note 2)	w/o N	N	W	w/o W	V	w/o V

Note 1: Reusable where transfer from external telephone is not required (see EM 651).

Note 2: Must be converted by adding 2A1 reverse-channel unit.

Note 3: To provide TOUCH-TONE service, indicate in USOC for class of service (use TOUCH-TONE DAS 804A).

Reference Guide: 590-004-105

USOC: DGA00

Data Sets 600-Series – for Operation With Customer-Provided Telewriting Devices – Phonewriter – Rotary Dial

DATA SET

601B1 (Note 1)

There are no customer options available for USOC DGA.

Note 1: Previously coded J1D601B, List 1.

Reference Guide: 590-006-100

USOC: DGC00

Data Sets 600-Series — for Operation With Customer-Provided Telewriting Devices — Phonewriter — TOUCH-TONE Dial

DATA SET

601B2

There are no customer options available for USOC DGC.

Reference Guide: 590-006-100

USOC: DGS++

Data Sets 200-Series — Serial/Sequential Operation/2400 bps — Send and Receive — Internal Timing/Private Line Data Only

CUSTOMER OPTION DECISION		A		B		C		D		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		EIA INTERFACE	CONTACT INTERFACE	ALTERNATE VOICE (NOTE 11)	w/o ALTERNATE VOICE	WITH NEW SYNC	WITHOUT NEW SYNC	2-WIRE (NOTE 12)	4-WIRE	4-WIRE PRIVATE LINE (CONTINUOUS CARRIER)	4-WIRE PRIVATE LINE (CARRIER-CONTROLLED REQUEST-TO-SEND OR MULTI-PARTY)
DATA SET	201B1 (Notes 1, 2, 3, 4)	—	‡	†	†	w/o A	A	ZP, E	ZN or ZO	ZN	ZO
	201B3 (Note 4)	ZD	ZE	Z, Y	ZJ	ZK	W	ZC	ZA or ZB	ZA	ZB
	201B-L1/2A/ 3/6/7B (Notes 4, 5)	ZR	ZS	†	†	ZM	ZL	A	E or B	E	B
	201B-L1A/2A/ 3/6A/7B (Notes 4, 5)	ZR	ZS	†	†	ZM	ZL	A	E or B	E	B
	201C-L1/2/5 (Notes 6, 8, 9, 10)	‡	—	†	†	YB	YA	XE	XB, XC or XA	XB or XC	XA
	201C-L1/2/4/5 (Notes 7, 8, 9 10)	‡	—	†	†	YB	YA	XE	XB, XC, or XA	XB or XC	XA

Note 1: Cannot be used with DAS 804A or 801-type ACUs.

Note 2: When alternate voice is required, a 569-NB telephone set or channel terminating equipment is used.

Note 3: Cannot provide auto answer with 4-wire operation.

Note 4: Requires channel which meets C2 limits.

Note 5: Additional polling capability is provided.

Note 6: For multiple installations (without stand-alone enclosure), use with 42A-type data mounting.

Note 7: For stand-alone installations (individually housed).

Note 8: Option XB has a 7-ms clear-to-send delay. Option XC has a 0-ms clear-to-send delay.

Note 9: Protective ground is normally connected to signal ground within the data set. It is recommended that the connection remain intact; however, if the customer desires this connection broken, it must be noted in the REMARKS column of the service order.

Note 10: Install internal timing option (YC).

Note 11: For alternate voice on private line, use DAS 828A-L1/2 or 829 with 48A1 data unit and 565HK telephone.

Note 12: If decision D is 7, decision E is not required.

Reference Guide: 590-002-100

USOC: DHA++

Data Sets 400-Series — Parallel/Sequential Operation up to 75 Characters per Second/8 Signals/Combined Send and Receive — Rotary Dial

CUSTOMER OPTION DECISION		A		B (NOTE 6)		C (NOTE 7)	
		1	2	3	4	5	6
OPTION		ATTENDED OPERATION	UNATTENDED OPERATION	WITH 801 ACU	w/o 801 ACU	WITH OOS CONTROLLED BY CUSTOMER	WITHOUT OOS CONTROLLED BY CUSTOMER
DATA SET	402C1/402D3 (Notes 1, 2, 3, 4)	ZC/ w/o N	N/N	T	w/o T	V	w/o V
	402C2/402D3 (Notes 1, 2, 3, 4, 5)	ZC/ w/o N	N/N	T	w/o T	V	w/o V
	402C5/402D3 (Notes 3, 4)	ZC/ w/o N	N/N	T	w/o T	V	w/o V
	402C6/402D3 (Notes 3, 4, 5)	ZC/ w/o N	N/N	T	w/o T	V	w/o V

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: DS 402D4 with reverse channel disabled can be used instead of 402D3.

Note 4: When data set 402C-type is connected to a 402D-type as a transmit-receive terminal, a D50C-61 cord must be supplied.

Note 5: Reverse channel feature of DS 402C not used.

Note 6: Option T is in DS 402C.

Note 7: Option V is in DS 402D.

USOC: DHM++

Data Sets 400-Series — Parallel/Sequential Operation up to 75 Characters per Second/8 Signals/Combined Send and Receive — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A		B (NOTE 6)		C (NOTE 7)	
		1	2	3	4	5	6
OPTION		ATTENDED OPERATION	UNATTENDED OPERATION	WITH 801 ACU	w/o 801 ACU	WITH OOS CONTROLLED BY CUSTOMER	WITHOUT OOS CONTROLLED BY CUSTOMER
DATA SET	402C3/402D3 (Notes 1, 2, 3, 4)	ZC/ w/o N	N/N	T	w/o T	V	w/o V
	402C4/402D3 (Notes 1, 2, 3, 4, 5)	ZC/ w/o N	N/N	T	w/o T	V	w/o V
	402C7/402D3 (Notes 3, 4)	ZC/ w/o N	N/N	T	w/o T	V	w/o V
	402C8/402D3 (Notes 3, 4, 5)	ZC/ w/o N	N/N	T	w/o T	V	w/o V

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: DS 402D4 with reverse channel disabled can be used instead of 402D3.

Note 4: When DS 402C-type is connected to a 402D-type as a transmit-receive terminal, a D50C-61 cord must be supplied.

Note 5: Reverse channel feature of DS 402C not used.

Note 6: Option T is in DS 402C.

Note 7: Option V is in DS 402D.

USOC: DKA++

Data Sets 600-Series — for Electrocardiograph Equipment up to 100 Cycles per Second — Sending — With Reverse Channel Indication — Rotary Dial

CUSTOMER OPTION DECISION		A	
		1	2
OPTION		REVERSE CHANNEL INDICATOR — LAMP OR TONE	REVERSE CHANNEL INDICATOR — CONTACT
DATA SET	603A1	T	V

Reference Guide: 590-006-102

USOC: DLA

Data Sets 600-Series — for Electrocardiograph Equipment up to 100 Cycles per Second — Sending — With Reverse Channel Indication — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A	
		1	2
OPTION		REVERSE CHANNEL INDICATOR — LAMP OR TONE	REVERSE CHANNEL INDICATOR — CONTACT
DATA SET	603A2	T	V

Reference Guide: 590-006-102

USOC: DLB++

Data Auxiliary Sets 800-Series — Automatic Calling Units Without Signal Answerback Detection Feature — Rotary Dial

CUSTOMER OPTION DECISION		A		B (NOTE 4)		C		D (NOTE 5)		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		EIA VOLTAGE INTERFACE	CONTACT INTERFACE	CALL TERMINATED THROUGH ACU AFTER DSS ON	CALL TERMINATED THROUGH DATA SET AFTER DSS ON	ACR TIMER STOPPED AFTER DSS ON	ACR TIMER NOT STOPPED AFTER DSS ON	EON SIGNAL FROM CUSTOMER TERMINAL	NO EON SIGNAL FROM CUSTOMER TERMINAL	ACU ANSWER-TONE DETECTION (DAS 801A6 ONLY)	DS ANSWER-TONE DETECTION W/O EON SIGNAL (DAS 801A5 ONLY)
DAS	801A1 (Notes 1, 2, 3)	—	‡	w/o Z	Z	Y	w/o Y	‡	—	—	—
DAS	801A2 (Notes 1, 2, 3)	‡	—	w/o Z	Z	Y	w/o Y	‡	—	—	—
DAS	801A5	ZF	ZE	Z or A	G or ZD	R	H	B	†	B	E
DAS	801A6	ZF	ZE	Z or A	G or ZD	R	H	B	†	B	E

Note 1: Should be upgraded to series 3 (see PEM 9169 and 9198).

Note 2: Cannot be used with data sets 103E, 103G, and 101C.

Note 3: Substitute only on "originate only" service (see PEL 7555 — TIP Monitor).

Note 4: For DAS 801A5, A6, call can be terminated through ACU by line transfer (Z) or CL contact (A), or through data set by line transfer (G) or CL contact (ZD).

Note 5: If decision D is 7, no decision E is required. If decision D is 8, decision E must be made.

Reference Guide: 590-008-100

USOC: DLC++

Data Auxiliary Sets 800-Series — Automatic Calling Units — With Signal Answerback Detection Feature — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A		B (NOTE 3)		C		D (NOTE 4)		E		F	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		2-WIRE	4-WIRE	CALL TERMINATED THRU ACU	CALL TERMINATED THRU DS AFTER DSS ON	ACR TIMER STOPPED AFTER DSS ON	ACR TIMER NOT STOPPED AFTER DSS ON	LINE TRANSFER CONTROLLED BY EON SIGNAL FROM CUSTOMER TERMINAL	NO EON SIGNAL FROM CUSTOMER TERMINAL	LINE TRANSFER AFTER ACU ANSWER-TONE DETECTION	DATA SET ANSWER-TONE DETECTION w/o EON	LOOP START	GROUND START (NOTE 5)
DAS	801C2 (Notes 1, 2)	‡	—	Z	w/o Z	R	w/o T	‡	—	—	E	Y	V
	801C4	ZH	ZJ	Z or Z	G or ZD	R	H	B	†	B	E	Y	V or ZK

Note 1: Cannot be used with data sets 103E, 103G, and 101C.

Note 2: Should be upgraded to series 4 (see EM 442).

Note 3: For DAS 801C4, call can be terminated through ACU by line transfer (Z) or CL contact (A), or through data set by line transfer (G) or CL contact (ZD).

Note 4: If decision D is 7, ACU option B must be installed in 801C4 and decision E is limited to 9. If decision D is 8, decision E must be made.

Note 5: Ground start is provided by option V on 2-wire and ZK on 4-wire in DAS 801C4.

Reference Guide: 590-008-101

USOC: DMC++

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Receive Only — Alphanumeric — With Voice Answerback — Rotary Dial — 3 Signals

CUSTOMER OPTION DECISION		A		B		C	
		1	2	3	4	5	6
OPTION		ATTENDED OPERATION	UNATTENDED OPERATION	USED WITH ACU	USED WITHOUT ACU	RING INDICATION TO CUSTOMER	OUT-OF-SERVICE CONTROLLED BY CUSTOMER
DATA SET	401J3 (Notes 1, 2, 3, 4)	H	G	F	Remove F	W	X
	401J7 (Note 4)	H	G	F	Remove F	W	X

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Series 1 is usable only if "A" lead control not required and ZC wiring installed (Field Wiring Change SD-1D064).

Note 4: A 24-conductor cord (D24D-61) must replace the 10-conductor cord (D10P-61) when used with 801-type ACUs.

Reference Guide: 590-004-100

USOC: DME++

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Receive Only — Alphanumeric — With Voice Answerback — TOUCH-TONE Dial — 3 Signals

CUSTOMER OPTION DECISION		A		B		C	
		1	2	3	4	5	6
OPTION		ATTENDED OPERATION	UNATTENDED OPERATION	USED WITH ACU	USED WITHOUT ACU	RING INDICATION TO CUSTOMER	OUT-OF-SERVICE CONTROLLED BY CUSTOMER
DATA SET	401J5 (Notes 1, 2, 3, 4)	H	G	F	Remove F	W	X
	401J9 (Note 3)	H	G	F	Remove F	W	X

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: A 24-conductor cord (D24D-61) must replace the 10-conductor cord (D10P-61) when used with 801-type ACUs.

Note 4: Series 1 is usable only if "A" lead control is not required and ZC wiring is installed (field wiring change SD-1D064).

Reference Guide: 590-004-100

USOC: DNA++

Data Sets 200-Series — Serial/Sequential Operation — 2000 BPS — Send and Receive — External Timing

CUSTOMER OPTION DECISION		A		B (NOTE 1)		C		D (NOTE 2)		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		EIA INTERFACE	CONTACT INTERFACE	ALTERNATE VOICE	w/o ALTER-VOICE	WITH NEW SYNC	WITHOUT NEW SYNC	2-WIRE	4-WIRE	4-WIRE PRIVATE LINE (CONTINUOUS CARRIER)	4-WIRE PRIVATE LINE (CARRIER CONTROLLED BY REQUEST-TO-SEND OR MULTI-PARTY)
DATA SET	201A2 (Notes 3, 4, 5)	—	‡	†	†	w/o A	A	ZP, E	ZN or ZO	ZN	ZO
	201A4	ZD, ZF	ZE, ZG	Z, Y	ZJ	ZK	W	ZC	ZA or ZB	ZA	ZB
	201A-L1/2A/4/6/7A (Note 6)	ZR, ZT	ZS, ZU	†	†	ZM	ZL	A	E or B	E	B
	201A-L1A/2A/4/6A/7A (Note 6)	ZR, ZT	ZS, ZU	†	†	ZM	ZL	A	E or B	E	B

Note 1: Specify if automatic answer is required in REMARKS column of service order. It is normally provided as key-controlled (option E in DAS 804A). If automatic answer is to be permanently wired, state on service order in REMARKS column "Automatic Answer Permanently Wired," and use option B in DAS 804A. For alternate voice on private line, use DAS 828A-L1/2 or 829 with 48A1 data unit and 565HK telephone.

Note 2: If decision D is 7, decision E is not required. If decision D is 8, make decision E.

Note 3: When alternate voice is required, a 569-NB telephone set is used.

Note 4: Cannot be used with DAS 804A or 801-type ACUs.

Note 5: Cannot provide auto answer with 4-wire operation.

Note 6: Additional polling capability is provided.

Reference Guide: 590-002-100

USOC: DNS++

Data Sets 200-Series — Serial/Sequential Operation — 2400 BPS — Send and Receive — External Timing — Private Line Data Only

CUSTOMER OPTION DECISION		A		B		C		D		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		EIA INTERFACE	CONTACT INTERFACE	ALTERNATE VOICE (NOTE 11)	w/o ALTERNATE VOICE	WITH NEW SYNC	WITHOUT NEW SYNC	2-WIRE (NOTE 12)	4-WIRE	4-WIRE PRIVATE LINE (CONTINUOUS CARRIER)	4-WIRE PRIVATE LINE (CARRIER-CONTROLLED REQUEST-TO-SEND OR MULTI-PARTY)
DATA SET	201B2 (Notes 1, 2, 4)	—	‡	†	†	w/o A	A	ZP, E	ZN or ZO	ZN	ZO
	201B4 (Note 4)	ZD	ZE	Z, Y	ZJ	ZK	W	ZC	ZA or ZB	ZB	ZB
	201B-L1/2A/4/6/7B (Notes 4, 5)	ZR	ZS	†	†	ZM	ZL	A	E or B	E	B
	201B-L1A/2A/4/6A/7B (Notes 4, 5)	ZR	ZS	†	†	ZM	ZL	A	E or B	E	B
	201C-L1/2/4/5 (Notes 6, 7, 8, 9)	‡	—	†	†	YB	YA	XE	XB, XC or XA	XB or XC	XA
	201C-L1/2/5 (Notes 7, 8, 9, 10)	‡	—	†	†	YB	YA	XE	XB, XC or XA	XB or XC	XA

Note 1: Cannot be used with DAS 804A or 801-type ACUs.

Note 2: When alternate voice is required, a 569-NB telephone set or channel terminating equipment is used.

Note 3: Cannot provide auto answer with 4-wire operation.

Note 4: Requires channel which meets C2 limits.

Note 5: Additional polling capability is provided.

Note 6: For stand-alone installations (individually housed).

Note 7: For multiple installations (without and stand-alone enclosure), use with 42A-type data mounting.

Note 8: Install external timing option (YD).

Note 9: Option XB has a 7-ms clear-to-send delay. Option XC has a 0-ms clear-to-send delay.

Note 10: Protective ground is normally connected to signal ground within the data set. It is recommended that the connection remain intact; however, if the customer desires this connection broken, it must be noted in the REMARKS column of the service order.

Note 11: For alternate voice on private line, use DAS 828A-L1 or 829 with 48A1 data unit and 565HK telephone.

Note 12: If decision D is 7, decision E is not required.

Reference Guide: 590-002-100

USOC: DOC++

Data Sets 100-Series — Serial/Sequential Operation up to BPS — Combined Send and Receive for Single Installations — Built-In Terminals — Rotary Dial

CUSTOMER OPTION DECISION		A		B		C		D		E (NOTE 3)		F	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		ANSWER MODE INDICATOR OFF	ANSWER MODE INDICATOR ON	ANSWER CONTROL SEPARATE	ANSWER CONTROL COMBINED	NO SEND DISCON-NECT	SEND DISCON-NECT (3-SEC SPACING)	LOSS OF CXR DIS-CONNECT	NO LOSS OF CXR DIS-CONNECT	SPACE DIS-CONNECT	NO SPACE DISCON-NECT	LONG SPACE DIS-CONNECT	SHORT SPACE DIS-CONNECT
DATA SET	103H1* (Note 1)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V or H	V	H
DATA SET	103H2* (Note 2)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V or H	V	H

*Needs DAS 804P5 (see Part 3).

Note 1: Do not use on long Unigauge loops.

Note 2: Provides option for CC indication early or delayed.

Note 3: If decision E is 9, make decision F. If decision E is 10, make no further decision.

Reference Guide: 590-001-106

USOC: DPC++

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Receive Only — Alphanumeric — With Tone Answerback — Rotary Dial — 3 Signals

CUSTOMER OPTION DECISION		A		B		C	
		1	2	3	4	5	6
OPTION		ATTENDED OPERATION	UNATTENDED OPERATION	USED WITH ACU	USED WITHOUT ACU	RING INDICATION TO CUSTOMER	OUT-OF-SERVICE CONTROLLED BY CUSTOMER
DATA SET	401J2 (Notes 1, 2, 3, 4)	H	G	F	Remove F	W	X
	401J3 (Notes 1, 2, 3, 4, 5)	H	G	F	Remove F	W	X
	401J6 (Note 4)	H	G	F	Remove F	W	X
	401J7 (Notes 4, 5)	H	G	F	Remove F	W	X

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Series 1 is usable only if "A" lead control not required and ZC wiring installed (Field Wiring Change SD-1D064).

Note 4: A 24-conductor cord (D24D-61) must replace the 10-conductor cord (D10P-61) when used with the 801-type ACUs.

Note 5: Voice answerback feature not used.

Reference Guide: 590-004-100

USOC: DPK++

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Receive Only — Alphanumeric — With Tone Answerback — TOUCH-TONE Dial — 3 Signals

CUSTOMER OPTION DECISION		A		B		C	
		1	2	3	4	5	6
OPTION		ATTENDED OPERATION	UNATTENDED OPERATION	USED WITH ACU	USED WITHOUT ACU	RING INDICATION TO CUSTOMER	OUT-OF-SERVICE CONTROLLED BY CUSTOMER
DATA SET	401J4 (Notes 1, 2, 3, 4)	H	G	F	Remove F	W	X
	401J5 (Notes 1, 2, 3, 4)	H	G	F	Remove F	W	X
	401J8 (Note 4)	H	G	F	Remove F	W	X
	401J9 (Notes 4, 5)	H	G	F	Remove F	W	X

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Series 1 is usable only if "A" lead control not required and ZC wiring installed (Field Wiring Change SD-1D064).

Note 4: A 24-conductor cord (D24D-61) must replace the 10-conductor cord (D10P-61) when used with the 801-type ACUs.

Note 5: Voice answerback feature not used.

Reference Guide: 590-004-100

USOC: DQC++

Data Sets 100-Series — Serial/Sequential Operation up to 300 BPS — Combined Send and Receive — for Use With 3-Row Teletypewriters and COAM Terminals — Can Be Used on TWX Network at Speeds up to 150 BPS

CUSTOMER OPTION DECISION		A		B		C		D		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		WITH ACU	w/o ACU	AUTO-MATIC ANSWER PERMA-NENTLY WIRED	AUTO-MATIC ANSWER KEY-CON-TROLLED	TERMINAL WILL RESPOND TO DISCONNECT	TERMINAL WILL NOT RESPOND TO DISCONNECT	TERMINAL INITIATES DISCONNECT	TERMINAL WILL NOT INITIATE DISCONNECT	MARK HOLD	SPACE HOLD
DATA SET	103A1* (Notes 1, 2, 3)	†	†	†	†	T1 to LS	T1 to NO	D to LD	D to QD	HD to MH	HD to SH

*Needs DAS 804B1 (see Part 3).

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Option connections are provided by straps on TB1.

Reference Guide: 590-001-100

USOC: DQL

Data Sets 100-Series — Serial/Sequential Operation up to 300 BPS — Combined Send and Receive — for Use With 4-Row Teletypewriters and Customer-Provided Equipment — Can be Used on TWX Network at Speeds up to 150 BPS

CUSTOMER OPTION DECISION		A		B		C		D		E		F	
		1	2	3	4	5	6	7	8	9	10	11	12
	OPTION	ROTARY DIAL	TOUCH-TONE DIAL	WITH CARD DIALER	w/o CARD DIALER	LOSS OF CARRIER DIS-CONNECT	NO LOSS OF CARRIER DISCONNECT	SEND SPACE DIS-CONNECT	NO SEND SPACE DISCON-NECT	RECEIVE SPACE DIS-CONNECT (NOTE 8)	NO RECEIVE SPACE DIS-CONNECT	AUTO ANSWER PERMA-NENT	AUTO ANSWER SELECTABLE
DATA SET	103A2* (Notes 1, 2, 3, 4)	‡	—	—	‡	—	‡	D to LD	D to QD	T1 to LS	T1 to NO	†	†
	103A2A* (Notes 1, 2, 5)	‡	—	—	‡	—	‡	D to LD	D to QD	T1 to LS	T1 to NO	†	†
	103A2B* (Notes 1, 2, 3)	‡	—	—	‡	—	‡	D to LD	D to QD	T1 to LS	T1 to NO	†	†
	103G1 (Note 1)	‡	—	—	‡	S	w/o S	T	w/o T	V or H	w/o V or H	†	†
	103G4 (Note 1)	—	‡	‡	—	S	w/o S	T	w/o T	V or H	w/o V or H	†	†
	103G5	‡	—	—	‡	S	w/o S	T	w/o T	V or H	w/o V or H	†	†
	103G6	—	‡	‡	—	S	w/o S	T	w/o T	V or H	w/o V or H	†	†
	103A3 (Notes 1, 6, 7)	†	†	†	†	S	w/o S	T	w/o T	V or H	w/o V or H	†	†
	103G2 (Note 1)	—	‡	—	‡	S	w/o S	T	w/o T	V or H	w/o V or H	†	†
	103G3 (Note 1)	‡	—	‡	—	S	w/o S	T	w/o T	V or H	w/o V or H	†	†

*Needs DAS 804B1 (see Part 3).

Note 1: Do not use on long Unigauge loops.

Note 2: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 3: Operates up to 200 baud.

Note 4: Untested and may be marginal between 200- and 300-baud operation.

Note 5: Operates up to 200 baud.

Note 6: DS 103A3 consists of DS 103E5 and the 38A1 data mounting.

Note 7: Requires one of the following telephone sets:

565HK — Rotary dial
2565HK — TOUCH-TONE dial
662A1 — Rotary Card Dialer
2662A1 — TOUCH-TONE Card Dialer

Note 8: For data sets 103A3 and 103G-type, choice of long or short space disconnect is available.

Reference Guide: 590-001-100

USOC: DRA++

Data Sets 200-Series – Serial/Sequential Operation up to 1200 BPS – Send and Receive – Rotary Dial – Also Used on Private Line Data at Speeds up to 1800 BPS – Individually Housed Data Set with Integrated Telephone

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)		D (NOTE 2)		E (NOTE 3)	
		1	2	3	4	5	6	7	8	9	10
OPTION		EIA INTERFACE	CONTACT INTERFACE	WITH 801 ACU	w/o 801 ACU	TELCO ENGI-NEERED TIMING OPTIONS	CUSTOMER ENGI-NEERED TIMING OPTIONS	WITH AUTO ANSWER	w/o AUTO ANSWER	AUTO ANSWER PERMA-NENTLY WIRED	AUTO ANSWER KEY-CON-TROLLED
DATA SET	202C1 (Notes 4, 5)	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC
	202C5 (Notes 4, 5)	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC
	202C9	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC
	202C2 (Notes 4,5,6)	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC
	202C6 (Notes 4,5,6)	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC
	202C10 (Note 6)	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC

Note 1: Refer to EL 3998 or Reference Guide for specific options.

Note 2: If decision D is 7, decision E is required. If decision D is 8, no decision E is required.

Note 3: Designations Q and ZE are used when the EIA interface option is chosen. Designations ZD and ZC are used when the contact interface is chosen.

Note 4: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 5: Do not use on long Unigauge loops.

Note 6: Reverse channel feature not used.

Reference Guide: 590-002-102

USOC: DRC++

Data Sets 200-Series — Sequential Operation up to 1200 BPS — Send and Receive — TOUCH-TONE Dial — Also Used on Private Line Data at Speeds up to 1800 BPS — Individually Housed Data Set With Integrated Telephone

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)		D (NOTE 2)		E (NOTE 3)	
		1	2	3	4	5	6	7	8	9	10
OPTION		EIA INTERFACE	CONTACT INTERFACE	WITH 801 ACU	w/o 801 ACU	TELCO ENGI-NEERED TIMING OPTIONS	CUSTOMER ENGI-NEERED TIMING OPTIONS	WITH AUTO ANSWER	w/o AUTO ANSWER	AUTO ANSWER PERMA-NENTLY WIRED	AUTO ANSWER KEY-CON-TROLLED
DATA SET	202C7 (Notes 4, 5)	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC
	202C11	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC
	202C8 (Notes 4,5,6)	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC
	202C12 (Note 6)	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC

Note 1: Refer to EL 3998 or Reference Guide for specific options.

Note 2: If decision D is 7, decision E is required. If decision D is 8, no decision E is required.

Note 3: Designations Q and ZE are used when the EIA interface option is chosen. Designations ZD and ZC are used when the contact interface is chosen.

Note 4: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and and the line classed as OSIP.

Note 5: Do not use on long Unigauge loops.

Note 6: Reverse channel feature not used.

Reference Guide: 590-002-102

USOC: DRE++

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS Without Reverse Channel — Send and Receive — Telephone Set Not Included — Also Used on Private Line at Speeds up to 1800 BPS

CUSTOMER OPTION DECISION		A		B		C (2W) (NOTE 7)		C (4W)		D (2W)		D (4W)		E (NOTE 8)		F	
		1	2	3	4	5	6	5	6	7	8	7	8	9	10	11	12
OPTION		MULTIPT (MULTI-STA) CKT APPLICA-TION	PT-TO-PT (2-PT CKT APPLI-CATION	2W OPER-ATION 4W w/ TALK-BACK (NOTE 6)	4W OPER-ATION REQD BY CPE	LOCAL COPY ON PRI-MARY CHAN	NO LOCAL COPY ON PRIMARY CHANNEL	MASTER STA OR CONT CXR OPER-ATION	REMOTE STA OR CXR CON-TROLLED RS OPER-ATION	NO LOCAL COPY ON REV CHAN	LOCAL COPY ON REV CHAN	FAST TURN-AROUND OPER-ATION	NORMAL TURN-AROUND OPER-ATION	TELCO TIMING OP-TIONS	CUST TIMING OP-TIONS (NOTE 9)	OPER-ATION AT 1200 BPS	OPER-ATION AT >1200 BPS
DATA SET	202D1 (Notes 1, 2, 3, 4, 5)	†	†	Z	Y	—	‡	†	†	‡	—	†	†	†	†	†	†
	202D3 (Notes 1, 3)	†	†	Z	Y	—	‡	†	†	‡	—	†	†	†	†	†	†
	202D5 (Notes 1, 3)	†	†	Z	Y	—	‡	†	†	‡	—	†	†	†	†	†	†
	202D2 (Notes 1, 2, 3, 4, 5)	†	†	Z	Y	—	‡	†	†	‡	—	†	†	†	†	†	†
	202D4 (Notes 1, 3)	†	†	Z	Y	—	‡	†	†	‡	—	†	†	†	†	†	†
	202D6 (Notes 1, 3)	†	†	Z	Y	—	‡	†	†	‡	—	†	†	†	†	†	†

Note 1: Alternate voice and switched network (DDD) backup operations are part of the channel termination and are generally separate service offerings.

Note 2: In all installations requiring DAS 804A, the D6AA-61 mounting cord shipped with DS 202D-type must be replaced with a D346B-61 mounting cord.

Note 3: Series 1, 2, 3, 4 should be upgraded to series 5.

Note 4: Series 6 should be used where power line noise is a problem.

Note 5: Data sets are normally provided with frame ground connected to signal ground. If the customer desires this connection broken, it should be specified with descriptive remarks on the service order.

Note 6: For simplex operation, continuous carrier will be provided at the transmitting station if specified in the descriptive remarks.

Note 7: If C (2W) is selected, D (2W) must also be used.

Note 8: For specific options, refer to E.L. 2648.

Note 9: The customer is responsible for the startup operation and interface trouble analysis for systems employing customer-engineered timing options. Telco is responsible for the steady state performance (past startup) of these systems.

USOC: DRF++

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS — Send and Receive With Simultaneous Reverse Signaling — Rotary Dial — Also Used on Private Line Data at Speeds up to 1800 BPS — Individually Housed Data Set With Integrated Telephone

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)		D (NOTE 2)		E (NOTE 3)	
		1	2	3	4	5	6	7	8	9	10
OPTION		EIA INTERFACE	CONTACT INTERFACE	WITH 801 ACU	w/o 801 ACU	TELCO ENGI-NEERED TIMING OPTIONS	CUSTOMER ENGI-NEERED TIMING OPTIONS	WITH AUTO ANSWER	w/o AUTO ANSWER	AUTO ANSWER PERMA-NENTLY WIRED	AUTO ANSWER KEY-CON-TROLLED
DATA SET	202C2 (Notes 4,5)	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC
	202C6 (Notes 4,5)	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC
	202C10	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC

Note 1: Refer to EL 3998 or Reference Guide for specific options.

Note 2: If decision D is 7, decision E is required. If decision D is 8, no decision E is required.

Note 3: Designations Q and ZE are used when the EIA interface option is chosen. Designations ZD and ZC are used when the contact interface is chosen.

Note 4: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 5: Do not use on long Unigauge loops.

Reference Guide: 590-002-102

USOC: DRL++

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS — Send and Receive With Simultaneous Reverse Signaling — TOUCH-TONE Dial — Private Line Data at Speeds up to 1800 BPS — Individually Housed Data Set With Integrated Telephone

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)		D (NOTE 2)		E (NOTE 3)	
		1	2	3	4	5	6	7	8	9	10
OPTION		EIA INTERFACE	CONTACT INTERFACE	WITH 801 ACU	w/o 801 ACU	TELCO ENGI-NEERED TIMING OPTIONS	CUSTOMER ENGI-NEERED TIMING OPTIONS	WITH AUTO ANSWER	w/o AUTO ANSWER	AUTO ANSWER PERMA-NENTLY WIRED	AUTO ANSWER KEY-CON-TROLLED
DATA SET	202C8 (Notes 4,5)	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC
	202C12	N	M	†	ZJ	†	†	†	†	Q or ZD	ZE or ZC

Note 1: Refer to EL 3998 or Reference Guide for specific options.

Note 2: If decision D is 7, decision E is required. If decision D is 8, no decision E is required.

Note 3: Designations Q and ZE are used when the EIA interface option is chosen. Designations ZD and ZC are used when the contact interface is chosen.

Note 4: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 5: Do not use on long Unigauge loops.

Reference Guide: 590-002-102

USOC: DRM++

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS With Reverse Channel — Send and Receive — Telephone Set Not Included — Also Used on Private Line at Speeds up to 1800 BPS

CUSTOMER OPTION DECISION		A		B		C (2W)(NOTE 8)		C (4W)		D (2W)		D (4W)		E (NOTE 9)		F	
		1	2	3	4	5	6	5	6	7	8	7	8	9	10	11	12
OPTIONS		MULTIPT (MULTI-STA) CKT APPLICA-TION	PT-TO-PT (2-PT CKT APPLI-CATION	2W OPER-ATION 4W w/ TALK-BACK (NOTE 7)	4W OPER-ATION REQD BY CPE	LOCAL COPY ON PRI-MARY CHAN	NO LOCAL COPY ON PRIMARY CHANNEL	MASTER STA OR CONT CXR OPER-ATION	REMOTE STA OR CXR CON-TROLLED RS OPER-ATION	NO LOCAL COPY ON REV CHAN	LOCAL COPY ON REV CHAN	FAST TURN-AROUND OPER-ATION	NORMAL TURN-AROUND OPER-ATION	TELCO TIMING OP-TIONS	CUST TIMING OP-TIONS (NOTE 10)	OPER-ATION AT 1200 BPS	OPER-ATION AT >1200 BPS
DATA SET	202D2 (Notes 1, 2, 3, 4, 5, 6)	†	†	Z	Y	—	‡	†	†	‡	—	†	†	†	†	†	†
	202D4 (Notes 1, 2, 3, 6)	†	†	Z	Y	—	‡	†	†	‡	—	†	†	†	†	†	†
	202D6 (Notes 1, 2, 3, 6)	†	†	Z	Y	—	‡	†	†	‡	—	†	†	†	†	†	†

Note 1: Alternate voice and switched network (DDD) backup operations are part of the channel termination and are generally separate service offerings.

Note 2: When reverse channel operation is required, a determination must be made at the reverse channel receiving station as to whether the reverse channel is used by the system or terminal before the primary channel is ready for transmission (ie, clear-to-send *on*). This must be specified on the service order as "reverse channel independent" when reverse channel is received at a station before clear-to-send is *on*; or "reverse channel dependent" when reverse channel is received at a station only after clear-to-send is *on*. The normal operation is for reverse channel to be dependent.

Note 3: In all installations requiring DAS 804A, the D6AA-61 mounting cord shipped with DS 202D-type must be replaced with a D346B-61 mounting cord.

Note 4: Series 1, 2, 3, 4 should be upgraded to series 5.

Note 5: Series 6 should be used where power line noise is a problem.

Note 6: Data sets are normally provided with frame ground connected to signal ground. If the customer desires this connection broken, it should be specified with descriptive remarks on the service order.

Note 7: For simplex operation, continuous carrier will be provided at the transmitting station if specified in the descriptive remarks.

Note 8: If C (2W) is selected, D (2W) must also be used.

Note 9: For specific options, refer to E.L. 2648.

Note 10: The customer is responsible for the startup operation and interface trouble analysis for systems employing customer-engineered timing options. Telco is responsible for the steady state performance (past startup) of these systems.

USOC: DSU00

Data Sets 400-Series — Parallel/Sequential Operation up to 20 Characters per Second — Send Only — Numeric — 2 Signals

DATA SET

401A1 (Notes 1, 2)
401E1 (Note 3)
401E2 (Notes 3, 4)
401M-L1/4

There are no customer options available for USOC DSU.

Note 1: Series 3 is current standard.

Note 2: Series 1 and 2 should be upgraded to series 3 (Field Wiring Change per SD-1D-16, Issue 9).

Note 3: Works with DS 401J-type receiver.

Note 4: With option M installed, works with DS 403D or 403E-type receivers.

Reference Guide: 590-004-100

USOC: DTC++

Data Sets 100-Series — Serial/Sequential Operation up to 300 BPS — Combined Send and Receive — for Multiple Installations in Cabinets or Single Installations in Teletypewriters — No Housing

CUSTOMER OPTION DECISION		A		B		C		D		E (NOTE 1)		F	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		ANSWER MODE INDICATION OFF	ANSWER MODE INDICATION ON	ANSWER CONTROL SEPARATE	ANSWER CONTROL COMBINED	NO SEND DISCONNECT	SEND DISCONNECT (3-SEC SPACING)	LOSS OF CXR DISCONNECT	NO LOSS OF CXR DISCONNECT	SPACE DISCONNECT	NO SPACE DISCONNECT	LONG SPACE DISCONNECT	SHORT SPACE DISCONNECT
DATA SET	103E5 (Notes 2, 3)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H
	103E6 (Note 3)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H

Note 1: If decision E is 9, make decision F. If decision E is 10, make no further decision.

Note 2: Do not use on long Unigauge loops.

Note 3: Electronic package for multiple installations, DS 103G or 103H.

Reference Guide: 590-001-103

USOC: DUA

Data Sets 400-Series — Parallel/Sequential Operation up to 75 Characters per Second — Without Reverse Channel — Send Only — Attended or Unattended Operation — Rotary Dial

CUSTOMER OPTION DECISION		A		B	
		1	2	3	4
OPTION		ATTENDED OPERATION	UNATTENDED OPERATION	WITH 801 ACU	w/o 801 ACU
DATA SET	402C1 (Notes 1, 2)	ZC	N	T	w/o T
	402C2 (Notes 1, 2, 3)	ZC	N	T	w/o T
	402C5	ZC	N	T	w/o T
	402C6 (Note 3)	ZC	N	T	w/o T

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Reverse channel feature not used.

Reference Guide: 590-004-104

USOC: DUC

Data Sets 400-Series — Parallel/Sequential Operation up to 75 Characters per Second — Without Reverse Channel — Send Only — Attended or Unattended Operation — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A		B	
		1	2	3	4
OPTION		ATTENDED OPERATION	UNATTENDED OPERATION	WITH 801 ACU	WITHOUT 801 ACU
DATA SET	402C2 (Notes 1, 2)	ZC	N	T	w/o T
	402C4 (Notes 1, 2, 3)	ZC	N	T	w/o T
	402C7	ZC	N	T	w/o T
	401C8 (Note 3)	ZC	N	T	w/o T

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Reverse channel feature not used.

Reference Guide: 590-004-104

USOC: DUD++

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS — Send Only — Rotary Dial

CUSTOMER OPTION DECISION		A	
		1	2
OPTION		EIA INTERFACE	CONTACT INTERFACE
DATA SET	202E1	Z	Y
	202E2 (Note 1)	‡	—

Note 1: Reverse channel feature is permanently installed but not required.

Reference Guide: 590-002-104

USOC: DUE00

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS — Send Only With Simultaneous Reverse Signaling — Rotary Dial

DATA SET

202E2

There are no customer options available for USOC DUE.

Reference Guide: 590-002-104

USOC: DUL00

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS — Send Only With Automatic Answer — Rotary Dial

DATA SET

202E7
202E9 (Note 1)

There are no customer options available for USOC DUL.

Note 1: Reverse channel feature is permanently installed but not required.

Reference Guide: 590-002-104

USOC: DUS00

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS — Send Only With Simultaneous Reverse Signaling and Automatic Answer — Rotary Dial — Also Used on Private Line Data at Speeds up to 1800 BPS

DATA SET

202E9

There are no customer options available for USOC DUS.

Reference Guide: 590-002-104

USOC: DVC++

Data Sets 600-Series – for Operation With Customer-Provided Facsimile Devices – 2 Analog Signals in Voltage Form – Send and Receive – With Simultaneous Reverse Signaling – Rotary Dial

CUSTOMER OPTION DECISION		A		B		C		D		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		WITH AUTO-MATIC ANSWER	w/o AUTO-MATIC ANSWER	WITH ACU	w/o ACU	WITH SYNC CHAN-NEL	w/o SYNC CHAN-NEL	WITH PRE-EMPHASIS	w/o PRE-EMPHASIS	WITH POST-EMPHASIS	w/o POST-EMPHASIS
DATA SET	602C2 (Notes 1, 2)	Y	w/o Y	M	w/o M	ZC	ZD	ZA	w/o ZA	ZB	w/o ZB
	602C6	Y	w/o Y	M	w/o M	ZC	ZD	ZA	w/o ZA	ZB	w/o ZB

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Reference Guide: 590-006-101

USOC: DVL++

Data Sets 600-Series — for Operation With Customer-Provided Facsimile Devices — 2 Analog Signals in Voltage Form — Send and Receive — With Simultaneous Reverse Signaling — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A		B		C		D		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		WITH AUTO-MATIC ANSWER	w/o AUTO-MATIC ANSWER	WITH ACU	w/o ACU	WITH SYNC CHAN-NEL	w/o SYNC CHAN-NEL	WITH PRE-EMPHASIS	w/o PRE-EMPHASIS	WITH POST-EMPHASIS	w/o POST-EMPHASIS
DATA SET	602C4 (Notes 1, 2)	Y	w/o Y	M	w/o M	ZC	ZD	ZA	w/o ZA	ZB	w/o ZB
	602C8	Y	w/o Y	M	w/o M	ZC	ZD	ZA	w/o ZA	ZB	w/o ZB

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Reference Guide: 590-006-101

USOC: DVS++

Data Set 100-Series — Up to 300 BPS — Full Duplex Serial — Binary FSK Data on Point-to-Point Private Line

CUSTOMER OPTION DECISION		A		B		C		D	
		1	2	3	4	5	6	7	8
	OPTION	CARRIER SQUELCH ON CARRIER FAIL	NO CARRIER SQUELCH ON CARRIER FAIL	MARK TRANSMITTED TO TERMINAL ON CARRIER FAIL	SPACE TRANSMITTED TO TERMINAL ON CARRIER FAIL	COPY IN TEST MODE	NO COPY IN TEST MODE	LOCAL COPY OF OUTGOING TRAFFIC	NO LOCAL COPY OF OUTGOING TRAFFIC
DATA SET	108A (Notes 1, 2, 5, 9)	K	J	N	M	T	S	R	Q
	108E (Notes 1, 3, 4, 9)	K	J	N	M	T	S	R	Q
	108C (Notes 1, 2, 6, 9)	K	J	N	M	T	S	R	Q
	108D (Notes 1, 4, 9)	K	J	N	M	T	S	R	Q
	103F1 (Notes 7, 8)	—	‡	‡	—	—	‡	†	†
	103F2 (Notes 7, 8)	—	‡	‡	—	—	‡	†	†

Note 1: Data set 108A or E communicates with either a 108C or D.

Note 2: Not for multiple installation over six data sets, 2-wire only, no CF lamp.

Note 3: Steady space also reenables carrier indication.

Note 4: 2-wire or 4-wire single or multiple installations, CF lamp.

Note 5: Replace by 108E-L1.

Note 6: Replace by 108D-L1.

Note 7: Not for multiple installation, 2-wire only, no CF lamp.

Note 8: Permanent mode option required. Wiring modification required to turn RS lead ON. (Strap P4-4 to P4-9 on customer interface adapter.)

Note 9: Options listed are on AR17 circuit pack.

USOC: DWB++

Data Sets 400-Series — Parallel/Sequential Operation up to 75 Characters per Second/8 Signals/Send Only — Unattended Operation With Simultaneous Reverse Signaling — Rotary Dial

CUSTOMER OPTION DECISION		A (NOTE 5)		B	
		1	2	3	4
OPTION		ATTENDED OPERATION	UNATTENDED OPERATION	WITH 801 ACU	WITHOUT 801 ACU
DATA SET	402C1 (Notes 1, 2, 3, 4)	ZC	N	T	w/o T
	402C2 (Notes 1, 2, 4)	ZC	N	T	w/o T
	402C5 (Notes 3, 4)	ZC	N	T	w/o T
	402C6 (Note 4)	ZC	N	T	w/o T

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Must be converted by adding reverse channel unit.

Note 4: USOC DWB is used only in those companies where the unattended feature is an additional charge. See USOC DYC where the unattended feature is not an additional charge.

Note 5: Option N must be used in this service.

Reference Guide: 590-004-104.

USOC: DWC00

Data Sets 200-Series – Serial/Sequential Operation up to 1200 BPS – Send Only With Automatic Answer – TOUCH-TONE Dial

DATA SET

202E12
202E13 (Note 1)

There are no customer options available for USOC DWC.

Note 1: Reverse channel feature is permanently installed but not required.

Reference Guide: 590-002-104

USOC: DWQ00

Data Sets 200-Series – Serial/Sequential Operation up to 1200 BPS – Send Only With Simultaneous Reverse Signaling and Automatic Answer – TOUCH-TONE Dial

DATA SET

202E13

There are no customer options available for USOC DWQ.

Reference Guide: 590-002-104

USOC: DWS++

Data Sets 400-Series – Parallel/Sequential Operation up to 75 Characters per Second/8 Signals/Send Only – Unattended Operation With Simultaneous Reverse Signaling – TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A (NOTE 5)		B	
		1	2	3	4
OPTION		ATTENDED OPERATION	UNATTENDED OPERATION	WITH 801 ACU	WITHOUT 801 ACU
DATA SET	402C3 (Notes 1, 2, 3, 4)	ZC	N	T	w/o T
	402C4 (Notes 1, 2, 4)	ZC	N	T	w/o T
	402C7 (Notes 3, 4)	ZC	N	T	w/o T
	402C8 (Note 4)	ZC	N	T	w/o T

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Must be converted by adding reverse channel unit.

Note 4: USOC DWS is used only in those companies where the unattended feature is an additional charge. See USOC DYL where the unattended feature is not an additional charge.

Note 5: Option N must be used in this service.

Reference Guide: 590-004-104

USOC: DWU00

Data Sets 400-Series — Parallel/Sequential Operation up to 75 Characters per Second — Send Only — Attended Operation Only

DATA SET

402C1 (Notes 1, 2)
402C2 (Notes 1, 2, 3, 4)
402C5 (Note 4)
402C6 (Notes 3, 4)

There are no customer options available for USOC DWU.

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Reverse channel feature not used.

Note 4: Install option ZC (attended operation) for this service.

Reference Guide: 590-004-104

USOC: DXM++

Data Sets 100-Series – Serial/Sequential Operation up to 300 BPS – Combined Send and Receive – for Single Installations With Card Dialer – TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A		B		C		D		E (NOTE 1)		F	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		ANSWER MODE INDICATION OFF	ANSWER MODE INDICATION ON	ANSWER CONTROL SEPARATE	ANSWER CONTROL COMBINED	NO SEND DISCONNECT	SEND DISCONNECT (3-SEC SPACING)	LOSS OF CXR DISCONNECT	NO LOSS OF CXR DISCONNECT	SPACE DISCONNECT	NO SPACE DISCONNECT	LONG SPACE DISCONNECT	SHORT SPACE DISCONNECT
DATA SET	103G4 (Note 2)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H
	103G6 (Note 3)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H
	103A3 (Notes 2, 4, 5)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H
	103G5 (Note 6)	W	X	w/o M	M	w/o T	T	S	w/o S	V or H	w/o V, H	V	H

Note 1: If decision E is 9, make decision F. If decision E is 10, make no further decision.

Note 2: Do not use on long Unigauge loops.

Note 3: Provides options for CC lead indication early or delayed.

Note 4: 2662A1 telephone set is needed with this data set.

Note 5: Not equipped with loudspeaker.

Note 6: Suitable only for temporary use if necessary to meet a service date or restore service.

Reference Guide: 590-001-105

USOC: DYA++

Data Sets 400-Series — Parallel/Sequential Operation up to 75 Characters per Second/8 Signals/Receive Only — Attended or Unattended Operation

CUSTOMER OPTION DECISION		A		B		C	
		1	2	3	4	5	6
OPTION		ATTENDED ANSWERING	UNATTENDED ANSWERING	USED WITH 804A (NOTE 3)	USED WITHOUT 804A	WITH OOS CONTROLLED BY CUSTOMER	WITHOUT OOS CONTROLLED BY CUSTOMER
DATA SET	402D1 (Note 1)	w/o N	N	W	w/o W	V	w/o V
	402D2 (Notes 1, 2)	w/o N	N	W	w/o W	V	w/o V
	402D3	w/o N	N	W	w/o W	V	w/o V
	402D4 (Note 2)	w/o N	N	W	w/o W	V	w/o V

Note 1: Reusable where transfer from external telephone is not required (see EM 651).

Note 2: Reverse-channel feature not used.

Note 3: To provide TOUCH-TONE service, indicate in USOC for class of service (use TOUCH-TONE DAS 804A).

Reference Guide: 590-004-105

USOC: DYC++

Data Sets 400-Series — Parallel/Sequential Operation up to 75 Characters per Second — Send Only — Attended Operation With Simultaneous Reverse Signaling — Rotary Dial

CUSTOMER OPTION DECISION		A		B	
		1	2	3	4
OPTION		ATTENDED OPERATION	UNATTENDED OPERATION	WITH 801 ACU	WITHOUT 801 ACU
DATA SET	402C1 (Notes 1, 2, 3, 4, 5)	ZC	N	T	w/o T
	402C2 (Notes 1, 2, 5)	ZC	N	T	w/o T
	402C5 (Notes 3, 4, 5)	ZC	N	T	w/o T
	402C6 (Note 4, 5)	ZC	N	T	w/o T

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Must be converted by adding reverse-channel unit.

Note 4: USOC DYC is used only in those companies where the unattended feature is not an additional charge. See USOC DYL where the unattended feature is not used.

Note 5: Install option ZC (attended operation) in data set.

Reference Guide: 590-004-104

USOC: DYL++

Data Sets 400-Series — Parallel/Sequential Operation up to 75 Characters per Second — Send Only — Attended Operation With Simultaneous Reverse Signaling — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A		B	
		1	2	3	4
OPTION		ATTENDED OPERATION	UNATTENDED OPERATION	WITH 801 ACU	WITHOUT 801 ACU
DATA SET	403C3 (Notes 1, 2 3, 4, 5)	ZC	N	T	w/o T
	402C4 (Notes 1, 2, 4, 5)	ZC	N	T	w/o T
	402C7 (Notes 3, 4, 5)	ZC	N	T	w/o T
	402C8 (Note 4, 5)	ZC	N	T	w/o T

Note 1: When connected to an ESS office, line applique circuit SD-1A297-01 should be assigned to the line and the line classed as OSIP.

Note 2: Do not use on long Unigauge loops.

Note 3: Must be converted by adding reverse-channel unit.

Note 4: USOC DYL is only used in those companies where the unattended feature is not an additional charge. See USOC DWS where the unattended feature is an additional charge.

Note 5: Install option ZC (attended operation) in data set.

Reference Guide: 590-004-104

USOC: DYV00

Data Sets 100-Series – Serial/Sequential Operation up to 300 BPS – Combined Send and Receive – for Use With Private Line Data Only – Sabre Reservation System

DATA SET

103B1

There are no customer options available for USOC DYV.

Reference Guide: 590-001-101

USOC: D5C

Data Sets 600-Series — for Electrocardiograph Equipment up to 100 Cycles per Second — Sending — Three Channels for Use With EEG and EKG Medical Sets — With Reverse Channel — Rotary Dial

CUSTOMER OPTION DECISION		A	
		1	2
OPTION		SIGNAL GROUND CONNECTED TO FRAME GROUND	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND
DATA SET	604A1	M	w/o M

Reference Guide: 590-006-104

USOC: D5R++

Data Sets 600-Series — for Electrocardiograph Equipment up to 100 Cycles per Second — Sending — Three Channels — for Use With EEG and EKG Medical Sets — With Reverse Channel — TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A	
		1	2
OPTION		SIGNAL GROUND CONNECTED TO FRAME GROUND	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND
DATA SET	604A2	M	w/o M

Reference Guide: 590-006-104

USOC: D6C++

Data Sets 600-Series — for Electrocardiograph Equipment up to 100 Cycles per Second — Receiving — Three Channels — for Use With EEG and EKG Medical Sets — With Reverse Channel — Rotary Dial

CUSTOMER OPTION DECISION		A	
		1	2
OPTION		SIGNAL GROUND CONNECTED TO FRAME GROUND	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND
DATA SET	604B1	Z	w/o Z

Reference Guide: 590-006-105

USOC: D6D++

Data Sets 600-Series – for Electrocardiograph Equipment up to 100 Cycles per Second – Receiving – Three Channels – for Use With EEG and EKG Medical Sets – With Reverse Channel – TOUCH-TONE Dial

CUSTOMER OPTION DECISION		A	
		1	2
OPTION		SIGNAL GROUND CONNECTED TO FRAME GROUND	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND
DATA SET	604B2	Z	w/o Z

Reference Guide: 590-006-105

USOC: GHA++

Data Sets 200-Series — Serial/Sequential Operation up to 1800 BPS — Combined Send and Receive Without Simultaneous Reverse Signaling — Equipped for Manual Operation Only — Data Set With Housing

CUSTOMER OPTION DECISION		A		B		C (2W)(NOTE 4)		C (4W)		D (2W)		D (4W)		E (NOTE 6)		F	
		1	2	3	4	5	6	5	6	7	8	7	8	9	10	11	12
OPTION		MULTIPT (MULTI-STA) CKT APPLICA-TION	PT-TO-PT (2-PT CKT APPLI-CATION	2W OPER-ATION 4W w/ TALK-BACK (NOTE 5)	4W OPER-ATION REQD BY CPE	LOCAL COPY ON PRI-MARY CHAN	NO LOCAL COPY ON PRIMARY CHANNEL	MASTER STA OR CONT CXR OPER-ATION	REMOTE STA OR CXR CON-TROLLED RS OPER-ATION	NO LOCAL COPY ON REV CHAN	LOCAL COPY ON REV CHAN	FAST TURN-AROUND OPER-ATION	NORMAL TURN-AROUND OPER-ATION	TELCO TIMING OP-TIONS	CUST TIMING OP-TIONS (NOTE 7)	OPER-ATION AT 1200 BPS	OPER-ATION AT >1200 BPS
DATA SET	202R-L1/2 (Notes 1, 2, 3)	†	†	Z	Y	‡	—	†	†	‡	—	†	†	†	†	†	†

Note 1: Alternate voice and switched network (DDD) backup operations are part of the channel termination and are generally separate service offerings.

Note 2: Data sets are normally provided with frame ground connected to signal ground. If the customer desires this connection broken, it should be specified with descriptive remarks on the service order.

Note 3: For receive-only service, the wiring options are no carrier (option V) instead of continuous carrier (option W). Since option V would not be included in the USOC suffix, this information must be included in the REMARKS column of the service order.

Note 4: If C (2W) is selected, D (2W) must also be used.

Note 5: For simplex operation, continuous carrier will be provided at the transmitting station if specified in the descriptive remarks.

Note 6: For specific options, see E.L. 2648.

Note 7: The customer is responsible for the startup operation and interface trouble analysis for systems employing customer-engineered timing options. Telco is responsible for the steady state performance (past startup) of these systems.

USOC: GHB++

Data Sets 200-Series — Serial/Sequential Operation up to 1800 BPS — Combined Send and Receive Without Simultaneous Reverse Signaling — Equipped for Manual Operation Only — Data Set for Multiple Arrangement

CUSTOMER OPTION DECISION		A		B		C (2W)(NOTE 4)		C (4W)		D (2W)		D (4W)		E (NOTE 6)		F	
		1	2	3	4	5	6	5	6	7	8	7	8	9	10	11	12
OPTIONS		MULTIPT (MULTI-STA) CKT APPLICA-TION	PT-TO-PT (2-PT CKT APPLI-CATION	2W OPER-ATION 4W w/ TALK-BACK (NOTE 5)	4W OPER-ATION REQD BY CPE	LOCAL COPY ON PRI-MARY CHAN	NO LOCAL COPY ON PRIMARY CHANNEL	MASTER STA OR CONT CXR OPER-ATION	REMOTE STA OR CXR CON-TROLLED RS OPER-ATION	NO LOCAL COPY ON REV CHAN	LOCAL COPY ON REV CHAN	FAST TURN-AROUND OPER-ATION	NORMAL TURN-AROUND OPER-ATION	TELCO TIMING OP-TIONS	CUST TIMING OP-TIONS (NOTE 7)	OPER-ATION AT 1200 BPS	OPER-ATION AT >1200 BPS
DATA SET	202R-L1 (Notes 1,2,3)	†	†	Z	Y	‡	—	†	†	‡	—	†	†	†	†	†	†

Note 1: Alternate voice and switched network (DDD) backup operations are part of the channel termination and are generally separate service offerings.

Note 2: Data sets are normally provided with frame ground connected to signal ground. If the customer desires this connection broken, it should be specified with descriptive remarks on the service order.

Note 3: For receive-only service, the wiring options are no carrier (option V) instead of continuous carrier (option W). Since option V would not be included in the USOC suffix, this information must be included in the REMARKS columns of the service order.

Note 4: If C (2W) is selected, D (2W) must also be used.

Note 5: For simplex operation, continuous carrier will be provided at the transmitting station if specified in the descriptive remarks.

Note 6: For specified options, see E.L. 2648.

Note 7: The customer is responsible for the startup operation and interface trouble analysis for systems employing customer-engineered timing options. Telco is responsible for the steady state performance (past startup) of these systems.

USOC: GHC

Data Sets 200-Series — Serial/Sequential Operation — Up to 1200 BPS — Combined Send and Receive — Without Simultaneous Reverse Signaling — Equipped for Manual Operation Only — Data Set With Housing — Rotary Dial

This USOC is obsolete and should not be used for inward movement of data sets.

USOC: GHE

Data Sets 200-Series — Serial/Sequential Operation — Up to 1200 BPS — Combined Send and Receive — Without Simultaneous Reverse Signaling — Equipped for Manual Operation Only — Data Set With Housing — TOUCH-TONE Dial

This USOC is obsolete and should not be used for inward movement of data sets.

USOC: GHF

Data Sets 200-Series – Serial/Sequential Operation – Up to 1200 BPS – Combined Send and Receive – For Multiple Arrangements – Rotary Dial

This USOC is obsolete and should not be used for inward movement of data sets.

USOC: GHG

Data Sets 200-Series – Serial/Sequential Operation – Up to 1200 BPS – Combined Send and Receive – For Multiple Arrangements – TOUCH-TONE Dial

This USOC is obsolete and should not be used for inward movement of data sets.

USOC: G48++

Data Sets 200-Series — Serial/Sequential Operation — 4800 BPS on Private Line — Combined Send and Receive — Including Visual Status Indicators

CUSTOMER OPTION DECISION		A		B (NOTE 1)		C		D		E		F	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		TRANSMITTER INTERNALLY TIMED	TRANSMITTER EXTERNALLY TIMED	CON-TINUOUS CARRIER (NOTE 2)	SWITCHED CARRIER (NOTE 3)	SWITCHED REQUEST-TO-SEND	CON-TINUOUS REQUEST-TO-SEND	1-SEC HOLD-OVER USED (NOTE 4)	1-SEC HOLD-OVER NOT USED (NOTE 5)	NEW SYNC USED (NOTE 6)	NEW SYNC NOT USED	DSR LEAD (CC) ON IN ANALOG LOOP-BACK TEST MODE	DSR LEAD (CC) OFF IN ANALOG LOOP-BACK TEST MODE
DATA SET	208A-L1 (Notes 7, 8, 9)	YC	YD	XB	XA	YT	YS	YX	YW	YB	YA	—	‡
	208A-L1A (Notes 7, 8, 9)	YC	YD	XB	XA	YT	YS	YX	YW	YB	YA	YM	YN

Note 1: If decision B4 is made, decision C5 must be selected.

Note 2: Continuous carrier should be used for multipoint master stations and all point-to-point stations.

Note 3: Switched carrier must be used for outlying stations on multipoint networks.

Note 4: It is recommended that the 1-second holdover option be employed when the distant data set is optioned for continous carrier.

Note 5: Master stations on multipoint networks must have the 1-second holdover disabled.

Note 6: The new sync option should be installed if the interval between messages from different transmitters is less than 100 ms and the terminal is equipped to provide the required new sync signal.

Note 7: Private line data only requires DAS 828A-L1, 828-L1A, or 829 with 44A data mounting.

Note 8: Private line alternate data/voice requires DAS 828A-L1/2, 828-L1A/2 or 829 with 48A data unit and 565HK telephone.

Note 9: The data set may be mounted on a desk or in a Bell System provided equipment cabinet or 10- or 23-inch rack. If the data set is to be mounted in a rack, a D-180467 mounting bracket kit should be ordered separately. This information should appear in the REMARKS column of the service order.

rence Guide: 590-002-110

USOC: LAB++

Data Sets 100-Series — Serial/Sequential Operation up to 300 BPS — Answer Only Data Set

CUSTOMER OPTION DECISION		A		B		C		D	
		1	2	3	4	5	6	7	8
OPTION		COMMON SIGNAL AND FRAME GROUNDS	NO COMMON GROUNDS	COMMON CLEAR-TO-SEND (CB) AND DATA CARRIER DETECTOR (CF) INDICATION	DISCRETE CLEAR-TO-SEND (CB) AND DATA CARRIER DETECTOR (CF) INDICATION	DATA TERM CONTROLS MAKE-BUSY FEATURE	DATA TERM DOES NOT CONTROL MAKE-BUSY FEATURE	DATA TERM CONTROL OF DISCONNECT ONLY	DATA TERM CARRIER DETECTOR CONTROL OF DISCONNECT
DATA SET	113B-L1 (Note 1)	V	w/o V	W	w/o W	w/o X	X	Z	w/o Z

Note 1: Data set for 113B-type data station.

Reference Guide: 590-001-109

USOC: S48

Data Sets 200-Series — Serial/Sequential Operation — 4800 BPS on 2-Wire Switched Network — Combined Send and Receive

CUSTOMER OPTION DECISION		A		B		C		D		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		TRANS-MITTER INTER-NALLY TIMED	TRANS-MITTER EXTER-NALLY TIMED	w/o TELCO 801-TYPE ACU	WITH TELCO 801-TYPE ACU	DSR LEAD (CC) OFF IN ANALOG LOOP-BACK TEST MODE	DSR LEAD (CC) ON IN ANALOG LOOP-BACK TEST MODE	w/o AUTO ANSWER	WITH AUTO ANSWER	DESK MOUNTING	RACK OR CABINET MOUNTING (NOTE 1)
DATA SET	208B-L1 (Note 2)	YC	YD	†	†	YN	YM	YO	YP	†	†
	208B-L1A	YC	YD	†	†	YN	YM	YO	YP	†	†

Note 1: Requires D-180467 mounting bracket kit.

Note 2: Does not provide ring memory.

Reference Guide: 590-002-110

USOC: 1M4++

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS — Send and Receive — Without Reverse Channel/Multiple Mounted Data Sets 202S

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)		D		E		F (NOTE 2)	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		LOCAL COPY ON PRIMARY CHANNEL	NO LOCAL COPY ON PRIMARY CHANNEL	LOCAL COPY ON REVERSE CHANNEL	NO LOCAL COPY ON REVERSE CHANNEL	TELCO ENGI-NEERED TIMING OPTIONS	CUSTOMER ENGI-NEERED TIMING OPTIONS	DSR INTER-FACE LEAD ON IN ANALOG LOOP	DSR INTER-FACE LEAD OFF IN ANALOG LOOP	AUTO ANS-WER	w/o AUTO ANS-WER	SIGNAL GROUND CONNECTED TO FRAME GROUND	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND
DATA SET	202S-L1 (Notes 3, 4)	ZA	ZB	ZE	ZF	†	†	—	‡	B	A	ZG	ZH
	202S-L1A (Note 4)	ZA	ZB	ZE	ZF	†	†	YI	YJ	B	A	ZG	ZH

Note 1: Refer to EL 3998 for specific options.

Note 2: Signal ground is normally connected to frame ground unless otherwise requested by the customer.

Note 3: Ring memory not provided.

Note 4: Requires common equipment for multiple mounting (MDE or MDG) and suitable enclosure.

USOC: 1M7++

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS — Send and Receive — With Reverse Channel/Multiple Mounted Data Sets 202S

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)		D		E		F (NOTE 2)	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		LOCAL COPY ON PRIMARY CHANNEL	NO LOCAL COPY ON PRIMARY CHANNEL	LOCAL COPY ON REVERSE CHANNEL	NO LOCAL COPY ON REVERSE CHANNEL	TELCO ENGINEERED TIMING OPTIONS	CUSTOMER ENGINEERED TIMING OPTIONS	DSR INTERFACE LEAD ON IN ANALOG LOOP	DSR INTERFACE LEAD OFF IN ANALOG LOOP	AUTO ANSWER	w/o AUTO ANSWER	SIGNAL GROUND CONNECTED TO FRAME GROUND	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND
DATA SET	202S-L1/3 (Note 3)	ZA	ZB	ZE	ZF	†	†	—	‡	B	A	ZG	ZH
	202S-L1/3A (Notes 3, 4)	ZA	ZB	ZE	ZF	†	†	—	‡	B	A	ZG	ZH
	202S-L1A/3A (Note 4)	ZA	ZB	ZE	ZF	†	†	YI	YJ	B	A	ZG	ZH

Note 1: Refer to EL 3998 for specific options.

Note 2: Signal ground is normally connected to frame ground unless otherwise requested by the customer.

Note 3: Ring memory not provided.

Note 4: Reverse channel operation independent of the request-to-send circuit.

Note 5: Requires common equipment for multiple mounting (MDE or MDG) and suitable enclosure.

USOC: 1M8++

Data Sets 200-Series — Serial/Sequential Operation up to 1800 BPS Without Reverse Channel — Send and Receive on Private Line — For Multiple Arrangements

CUSTOMER OPTION DECISION		A		B		C (2W)(NOTE 4)		C (4W)		D (2W)		D (4W)		E (NOTE 6)		F	
		1	2	3	4	5	6	5	6	7	8	7	8	9	10	11	12
OPTION		MULTIPT (MULTI-STA) CKT APPLICA-TION	PT-TO-PT (2-PT CKT APPLI-CATION	2W OPER-ATION 4W w/ TALK-BACK (NOTES 5, 8)	4W OPER-ATION REQD BY CPE	LOCAL COPY ON PRI-MARY CHAN	NO LOCAL COPY ON PRIMARY CHANNEL	MASTER STA OR CONT CXR OPER-ATION	REMOTE STA OR CXR CON-TROLLED RS OPER-ATION	NO LOCAL COPY ON REV CHAN	LOCAL COPY ON REV CHAN	FAST TURN-AROUND OPER-ATION	NORMAL TURN-AROUND OPER-ATION	TELCO TIMING OP-TIONS	CUST TIMING OP-TIONS (NOTE 7)	OPER-ATION AT 1200 BPS	OPER-ATION AT >1200 BPS
DATA SET	202T-L1 (Notes 1, 2, 3, 4)	†	†	ZD	ZK	ZA	ZB	†	†	‡	—	†	†	†	†	†	†

Note 1: Alternate voice and switched network (DDD) backup operations are part of the channel termination and are generally separate service offerings.

Note 2: Data sets are normally provided with frame ground connected to signal ground. If the customer desires this connection broken, it should be specified with descriptive remarks on the service order.

Note 3: Requires 40B1 (data mounting for up to 16 data sets) and suitable enclosure.

Note 4: If C (2W) is selected, D (2W) must also be used.

Note 5: For simplex operation, continuous carrier will be provided at the transmitting station if specified in the descriptive remarks.

Note 6: For specific options, see E.L. 2648.

Note 7: The customer is responsible for the startup operation and interface trouble analysis for systems employing customer-engineered timing options. Telco is responsible for the steady state performance (past startup) of these systems.

Note 8: When option ZD is selected, the reverse channel CP is removed and decision D (2W) does not apply.

USOC: 1M9++

Data Sets 200-Series — Serial/Sequential Operation up to 1800 BPS With Reverse Channel — Send and Receive on Private Line — For Multiple Arrangements

CUSTOMER OPTION DECISION		A		B		C (2W)(NOTE 7)		C (4W)		D (2W)		D (4W)		E (NOTE 8)		F	
		1	2	3	4	5	6	5	6	7	8	7	8	9	10	11	12
OPTION		MULTIPT (MULTI-STA) CKT APPLICA-TION	PT-TO-PT (2-PT CKT APPLI-CATION	2W OPER-ATION 4W w/ TALK-BACK (NOTE 6)	4W OPER-ATION REQD BY CPE	LOCAL COPY ON PRI-MARY CHAN	NO LOCAL COPY ON PRIMARY CHANNEL	MASTER STA OR CONT CXR OPER-ATION	REMOTE STA OR CXR CON-TROLLED RS OPER-ATION	NO LOCAL COPY ON REV CHAN	LOCAL COPY ON REV CHAN	FAST TURN-AROUND OPER-ATION	NORMAL TURN-AROUND OPER-ATION	TELCO TIMING OP-TIONS	CUST TIMING OP-TIONS (NOTE 9)	OPER-ATION AT 1200 BPS	OPER-ATION AT >1200 BPS
DATA SET	202T-L1/3 (Notes 1, 2, 3)	†	†	ZC	ZK	ZA	ZB	†	†	ZF	ZE	†	†	†	†	†	†
	202T-L1/3A (Notes 1, 2, 3, 4, 5)	†	†	ZC	ZK	ZA	ZB	†	†	ZF	ZE	†	†	†	†	†	†

Note 1: Alternate voice and switched network (DDD) backup operations are part of the channel termination and are generally separate service offerings.

Note 2: Data sets are normally provided with frame ground connected to signal ground. If the customer desires this connection broken, it should be specified with descriptive remarks on the service order.

Note 3: When reverse channel operation is required, a determination must be made at the reverse channel receiving station as to whether the reverse channel is used by the system or terminal before the primary channel is ready for transmission (ie, clear-to-send *on*). This must be specified on the service order as "reverse channel independent" when reverse channel is received at a station before clear-to-send is *on*; or "reverse channel dependent" when reverse channel is received at a station only after clear-to-send is *on*. The normal operation is for reverse channel to be dependent.

Note 4: Reverse channel operation independent of the request-to-send function.

Note 5: Requires 40B1 (data mounting for up to 16 data sets) and suitable enclosure.

Note 6: For simplex operation, continuous carrier will be provided at the transmitting station if specified in the descriptive remarks.

Note 7: If C (2W) is selected, D (2W) must also be used.

Note 8: For specific options, see E.L. 2648.

Note 9: The customer is responsible for the startup operation and interface trouble analysis for systems employing customer-engineered timing options. Telco is responsible for the steady state performance (past startup) of these systems.

USOC: 4B7

Data Sets 400-Series – Parallel/Sequential Operation up to 10 Characters per Second – Receive Only – Multiple Data Set Arrangements Suitable to Receive Two Signals, One From Each of Two Groups of Four Possible Signals – With Additional Terminal Options

CUSTOMER OPTION DECISION		A		B (NOTE 1)		C (NOTE 2)		D		E		F (NOTE 3)	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		EIA VOLTAGE INTER-FACE	CONTACT EQUIVA-LENT INTER-FACE	SWITCHED NETWORK (DDD)	PRIVATE LINE	NO 2B AUTO-MATIC CALL DISTRI-BUTOR	2B ACD	TERMINAL INITIATED REFERRAL ALWAYS	TERMINAL INITIATED REFERRAL DURING COMPUTER DOWN ONLY	OOS NOT CON-TROLLED BY DTR	OOS CON-TROLLED BY DTR	WITH COMPUTER DOWN DETECTION	WITHOUT COMPUTER DOWN DETECTION
DATA SET	407B-L1 (Note 4)	H	J	A	B	C	D	K	L	M	N	AA, BB or CC	DD

Note 1: If decision B is 4, decision C must be 5.

Note 2: When decision C is 6, coordination with PBX marketing personnel will be required to determine what 2B ACD options apply to the 407-type data station.

Note 3: If decision F is 11, three choices are available for implementation. Option AA provides computer down detection by customer-operated switch only. Option BB provides computer down detection by all DTR off only. Option CC provides computer down detection by either switch or all DTR off. This information must be included in the Remarks column of the service order.

Note 4: Requires a data mounting and a suitable enclosure.

Reference Guide: 590-004-109

USOC: 4RZ

Data Sets 400-Series — Parallel/Sequential Operation up to 10 Characters per Second — Receive Only — Multiple Data Set Arrangement Suitable to Receive Two Signals, One from Each of Two Groups of Four Possible Signals at Rates up to 10 Characters per Second

CUSTOMER OPTION DECISION		A		B (NOTE 1)		C (NOTE 2)	
		1	2	3	4	5	6
OPTION		EIA VOLTAGE INTERFACE	CONTACT EQUIVALENT INTERFACE	SWITCHED NETWORK (DDD)	PRIVATE LINE	NO 2B AUTOMATIC CALL DISTRIBUTOR (ACD)	2B ACD
DATA SET	407A-L1 (Notes 3, 4)	H	J	A	B	C	D
	407A-L1A (Note 3)	H	J	A	B	C	D

Note 1: If decision B is 4, decision C must be 5.

Note 2: When decision C is 6, coordination with the PBX marketing personnel will be required to determine what 2B ACD options apply to the 407A-type data station arrangement.

Note 3: Requires a data mounting and suitable enclosure.

Note 4: Not compatible with early Transaction* telephone.

Reference Guide: 590-004-109

USOC: 13B++

Data Sets 200-Series — Serial/Sequential Operation Operation up to 1200 BPS — Send and Receive — Without Reverse Channel/202S (Single Data Set)

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)		D		E		F (NOTE 2)	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		LOCAL COPY ON PRIMARY CHANNEL	NO LOCAL COPY ON PRIMARY CHANNEL	LOCAL COPY ON REVERSE CHANNEL	NO LOCAL COPY ON REVERSE CHANNEL	TELCO ENGI-NEERED TIMING OPTIONS	CUSTOMER ENGI-NEERED TIMING OPTIONS	DSR INTER-FACE LEAD ON IN ANALOG LOOP	DSR INTER-FACE LEAD OFF IN ANALOG LOOP	AUTO ANS-WER	w/o AUTO ANS-WER	SIGNAL GROUND CONNECTED TO FRAME GROUND	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND
DATA SET	202S-L1/2 (Note 3)	ZA	ZB	ZE	ZF	†	†	—	‡	B	A	ZG	ZH
	202S-L1A/2	ZA	ZB	ZE	ZF	†	†	YI	YJ	B	A	ZG	ZH

Note 1: Refer to EL 3998 for specific options.

Note 2: Signal ground is normally connected to frame ground unless otherwise requested by the customer.

Note 3: Ring memory not provided.

USOC: 13C++

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS — Send and Receive — With Reverse Channel/2 to 5 Individually Housed Data Sets 202S

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)		D		E		F (NOTE 2)	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		LOCAL COPY ON PRIMARY CHANNEL	NO LOCAL COPY ON PRIMARY CHANNEL	LOCAL COPY ON REVERSE CHANNEL	NO LOCAL COPY ON REVERSE CHANNEL	TELCO ENGINEERED TIMING OPTIONS	CUSTOMER ENGINEERED TIMING OPTIONS	DSR INTERFACE LEAD ON IN ANALOG LOOP	DSR INTERFACE LEAD OFF IN ANALOG LOOP	AUTO ANSWER	w/o AUTO ANSWER	SIGNAL GROUND CONNECTED TO FRAME GROUND	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND
DATA SET	202S-L1/2/3 (Notes 3, 4, 5)	ZA	ZB	ZE	ZF	†	†	—	‡	B	A	ZG	ZH
	202S-L1/2/3A (Notes 3, 4, 5)	ZA	ZB	ZE	ZF	†	†	—	‡	B	A	ZG	ZH
	202S-L1A/2/3A (Notes 3, 5)	ZA	ZB	ZE	ZF	†	†	YI	YJ	B	A	ZG	ZH

Note 1: Refer to EL 3998 for specific options.

Note 2: Signal ground is normally connected to frame ground unless otherwise requested by the customer.

Note 3: Ring memory not provided.

Note 4: Reverse channel operation independent of the request-to-send circuit.

Note 5: USOC NCS also required for this application.

USOC: 13G++

Data Sets 200-Series – Serial/Sequential Operation up to 1200 BPS – Send and Receive – With Reverse Channel/202S (Single Data Set)

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)		D		E		F (NOTE 2)	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		LOCAL COPY ON PRIMARY CHANNEL	NO LOCAL COPY ON PRIMARY CHANNEL	LOCAL COPY ON REVERSE CHANNEL	NO LOCAL COPY ON REVERSE CHANNEL	TELCO ENGINEERED TIMING OPTIONS	CUSTOMER ENGINEERED TIMING OPTIONS	DSR INTERFACE LEAD ON IN ANALOG LOOP	DSR INTERFACE LEAD OFF IN ANALOG LOOP	AUTO ANSWER	w/o AUTO ANSWER	SIGNAL GROUND CONNECTED TO FRAME GROUND	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND
DATA SET	202S-L1/2/3 (Notes 3, 4)	ZA	ZB	ZE	ZF	†	†	—	‡	B	A	ZG	ZH
	202S-L1/2/3A (Notes 3, 4)	ZA	ZB	ZE	ZF	†	†	—	‡	B	A	ZG	ZH
	202S-L1A/2/3A (Note 4)	ZA	ZB	ZE	ZF	†	†	YI	YJ	B	A	ZG	ZH

Note 1: Refer to EL 3998 for specific options.

Note 2: Signal ground is normally connected to frame ground unless otherwise requested by the customer.

Note 3: Ring memory not provided.

Note 4: Reverse channel operation independent of the request-to-send circuit.

USOC: 13L++

Data Sets 200-Series — Serial/Sequential Operation up to 1200 BPS — Send and Receive — Without Reverse Channel/2 to 5 Individually Housed Data Sets 202S

CUSTOMER OPTION DECISION		A		B		C (NOTE 1)		D		E		F (NOTE 2)	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		LOCAL COPY ON PRIMARY CHANNEL	NO LOCAL COPY ON PRIMARY CHANNEL	LOCAL COPY ON REVERSE CHANNEL	NO LOCAL COPY ON REVERSE CHANNEL	TELCO ENGI-NEERED TIMING OPTIONS	CUSTOMER ENGI-NEERED TIMING OPTIONS	DSR INTER-FACE LEAD ON IN ANALOG LOOP	DSR INTER-FACE LEAD OFF IN ANALOG LOOP	AUTO ANS-WER	w/o AUTO ANS-WER	SIGNAL GROUND CONNECTED TO FRAME GROUND	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND
DATA SET	202S-L1/2 (Notes 3, 4)	ZA	ZB	ZE	ZF	†	†	—	‡	B	A	ZG	ZH
	202S-L1A/2 (Note 4)	ZA	ZB	ZE	ZF	†	†	YI	YJ	B	A	ZG	ZH

Note 1: Refer to EL 3998 for specific options.

Note 2: Signal ground is normally connected to frame ground unless otherwise requested by the customer.

Note 3: Ring memory not provided.

Note 4: USOC NCS also required for this application.

USOC: 18K++

Data Sets 200-Series — Serial/Sequential Operation up to 1800 BPS Without Reverse Channel — Send and Receive — Manual Operation Only

CUSTOMER OPTION DECISION		A		B (NOTE 3)		C (2W)		C (4W)		D (2W)		D (4W)		E (NOTE 6)		F	
		1	2	3	4	5	6	5	6	7	8	7	8	9	10	11	12
OPTION		MULTIPT (MULTI-STA) CKT APPLICA-TION	PT-TO-PT (2-PT CKT APPLI-CATION	2W OPER-ATION 4W w/ TALK-BACK (NOTES 4, 5)	4W OPER-ATION REQD BY CPE	LOCAL COPY ON PRI-MARY CHAN	NO LOCAL COPY ON PRIMARY CHANNEL	MASTER STA OR CONT CXR OPER-ATION	REMOTE STA OR CXR CON-TROLLED RS OPER-ATION	NO LOCAL COPY ON REV CHAN	LOCAL COPY ON REV CHAN	FAST TURN-AROUND OPER-ATION	NORMAL TURN-AROUND OPER-ATION	TELCO TIMING OP-TIONS	CUST TIMING OP-TIONS (NOTE 7)	OPER-ATION AT 1200 BPS	OPER-ATION AT >1200 BPS
DATA SET	202T-L1/2 (Notes 1, 2)	†	†	ZD	ZK	ZA	ZB	†	†	‡	—	†	†	†	†	†	†

Note 1: Alternate voice and switched network (DDD) backup operations are part of the channel termination and are generally separate service offerings.

Note 2: Data sets are normally provided with frame ground connected to signal ground. If the customer desires this connection broken, it should be specified with descriptive remarks on the service order.

Note 3: If C (2W) is selected, D (2W) must also be used.

Note 4: For simplex operation, continuous carrier will be provided at the transmitting station if specified in the descriptive remarks.

Note 5: When option ZD is selected, the reverse channel CP is removed and decision D (2W) does not apply.

Note 6: For specific options, refer to EL 2648.

Note 7: The customer is responsible for the startup operation and interface trouble analysis for systems employing customer-engineered timing options. Telco is responsible for the steady state performance (past startup) of these systems.

USOC: 18L++

Data Sets 200-Series — Serial/Sequential Operation up to 1800 BPS Without Reverse Channel — Send and Receive on Private Line

CUSTOMER OPTION DECISION		A		B		C (2W) (NOTE 3)		C (4W)		D (2W)		D (4W)		E (NOTE 6)		F	
		1	2	3	4	5	6	5	6	7	8	7	8	9	10	11	12
OPTIONS		MULTIPT (MULTI-STA) CKT APPLICA-TION	PT-TO-PT (2-PT CKT APPLI-CATION	2W OPER-ATION 4W w/ TALK-BACK (NOTES 4, 5)	4W OPER-ATION REQD BY CPE	LOCAL COPY ON PRI-MARY CHAN	NO LOCAL COPY ON PRIMARY CHANNEL	MASTER STA OR CONT CXR OPER-ATION	REMOTE STA OR CXR CON-TROLLED RS OPER-ATION	NO LOCAL COPY ON REV CHAN	LOCAL COPY ON REV CHAN	FAST TURN-AROUND OPER-ATION	NORMAL TURN-AROUND OPER-ATION	TELCO TIMING OP-TIONS	CUST TIMING OP-TIONS (NOTE 7)	OPER-ATION AT 1200 BPS	OPER-ATION AT >1200 BPS
DATA SET	202T-L1/2 (Notes 1, 2)	†	†	ZD	ZK	ZA	ZB	†	†	‡	—	†	†	†	†	†	†

Note 1: Alternate voice and switched network (DDD) backup operations are part of the channel termination and are generally separate service offerings.

Note 2: Data sets are normally provided with frame ground connected to signal ground. If the customer desires this connection broken, it should be specified with descriptive remarks on the service order.

Note 3: If C (2W) is selected, D (2W) must also be used.

Note 4: When option ZD is selected, the reverse channel CP is removed and options ZE and ZF do not apply.

Note 5: For simplex operation, continuous carrier will be provided at the transmitting station if specified in the descriptive remarks.

Note 6: For specific options, see E.L. 2648.

Note 7: The customer is responsible for the startup operation and interface trouble analysis for systems employing customer-engineered timing options. Telco is responsible for the steady state performance (past startup) of these systems.

USOC: 18S++

Data Sets 200-Series — Serial/Sequential Operation up to 1800 BPS With Reverse Channel — Send and Receive on Private Line

CUSTOMER OPTION DECISION		A		B		C (2W)(NOTE 5)		C (4W)		D (2W)		D (4W)		E (NOTE 7)		F	
		1	2	3	4	5	6	5	6	7	8	7	8	9	10	11	12
OPTION		MULTIPT (MULTI-STA) CKT APPLICA-TION	PT-TO-PT (2-PT CKT APPLI-CATION	2W OPER-ATION 4W w/ TALK-BACK (NOTE 6)	4W OPER-ATION REQD BY CPE	LOCAL COPY ON PRI-MARY CHAN	NO LOCAL COPY ON PRIMARY CHANNEL	MASTER STA OR CONT CXR OPER-ATION	REMOTE STA OR CXR CON-TROLLED RS OPER-ATION	NO LOCAL COPY ON REV CHAN	LOCAL COPY ON REV CHAN	FAST TURN-AROUND OPER-ATION	NORMAL TURN-AROUND OPER-ATION	TELCO TIMING OP-TIONS	CUST TIMING OP-TIONS (NOTE 8)	OPER-ATION AT 1200 BPS	OPER-ATION AT >1200 BPS
DATA SET	202T-L1/2/3 (Notes 1, 2, 3)	†	†	ZC	ZK	ZA	ZB	†	†	ZF	ZE	†	†	†	†	†	†
	202T-L1/2/3A (Notes 1, 2, 3, 4)	†	†	ZC	ZK	ZA	ZB	†	†	ZF	ZE	†	†	†	†	†	†

Note 1: Alternate voice and switched network (DDD) backup operations are part of the channel termination and are generally separate service offerings.

Note 2: Data sets are normally provided with frame ground connected to signal ground. If the customer desires this connection broken, it should be specified with descriptive remarks on the service order.

Note 3: When reverse channel operation is required, a determination must be made at the reverse channel receiving station as to whether the reverse channel is used by the system or terminal before the primary channel is ready for transmission (ie, clear-to-send *on*). This must be specified on the service order as "reverse channel independent" when reverse channel is received at a station before clear-to-send is *on;* or "reverse channel dependent" when reverse channel is received at a station only after clear-to-send is *on.* The normal operation is for reverse channel to be dependent.

Note 4: Reverse channel operation independent of the request-to-send function.

Note 5: If C (2W) is selected, D (2W) must also be used.

Note 6: For simplex operation, continuous carrier will be provided at the transmitting station if specified in the descriptive remarks.

Note 7: For specific options, see E.L. 2648.

Note 8: The customer is responsible for the startup operation and interface trouble analysis for systems employing customer-engineered timing options. Telco is responsible for the steady state performance (past startup) of these systems.

USOC: 24V

Data Sets 200-Series — Serial/Sequential Operation — 2400 BPS on Switched Network — Send and Receive

CUSTOMER OPTION DECISION		A		B		C		D (NOTE 1)		E	
		1	2	3	4	5	6	7	8	9	10
OPTION		TRANS-MITTER TIMED BY DATA SET (INTER-NAL)	TRANS-MITTER TIMED BY TERMINAL (EXTER-NAL)	w/o 801 ACU	WITH 801 ACU	EIA RING INDI-CATOR	CON-TACT RING INDI-CATOR	w/o AUTO ANSWER	WITH AUTO ANSWER	AUTO ANSWER PERMA-NENT	AUTO ANSWER SELEC-TIVE
DATA SET	201C-L1/ 2/3 (Note 2)	YC	YD	†	†	YG	YH	YE	YF or YE	YF	YE
DATA SET	201C-L1/ 2/3/4 (Note 3)	YC	YD	†	†	YG	YH	YE	YF or YE	YF	YE

Note 1: If decision D is 7, decision E is not required.

Note 2: For multiple installation (without stand-alone enclosure), use with 42-type data mounting.

Note 3: For stand-alone installations (individually housed), 565HK or 2565HK telephone always provided.

Reference Guide: 590-002-100

USOC: 96T++

Data Sets 200-Series – Serial/Sequential Operation – 9600 BPS on Private Line – Combined Send and Receive Including Arrangement Capable of Transmitting Customer Signals in Any Multiple of 2400 BPS Not to Exceed 9600 BPS

CUSTOMER OPTION DECISION		A		B		C		D		E (NOTE 1)		F	
		1	2	3	4	5	6	7	8	9	10	11	12
OPTION		TRANSMIT TIMING BY DATA SET	TRANSMIT TIMING BY DATA TERMINAL (NOTE 2)	DSR ON IN ANALOG LOOP-BACK MODE	DSR OFF IN ANALOG LOOP-BACK MODE	SLAVE IN (NOTE 3)	SLAVE OUT	ELASTIC STORES IN (NOTE 4)	ELASTIC STORES OUT	CONTINUOUS CARRIER (NOTE 5)	SWITCHED CARRIER	SWITCHED REQUEST-TO-SEND	CONTINUOUS REQUEST-TO-SEND
DATA SET	209A-L1 (Notes 6, 7)	—	YD	YM	YN	WI	WJ	WA,WC, WE&WG	WB,WD, WF&WH	XG or XI	†	XG	XI

Note 1: If decision E is 9, decision F is required. If decision E is 10, decision F is not required.

Note 2: Transmit timing by data terminal cannot be used at both data sets 209A-L1 when multiplexed channels are extended by data sets 208A- or 201C-type.

Note 3: Transmit timing is slaved to receive timing in one data set 209A-L1 when using the many-point multiplexing or DDS outlier service applications.

Note 4: Elastic stores are provided for extension service. The specific connectors optioned for elastic stores must be specified in the REMARKS section of the service order. There are four separate options, one for each connector.

Note 5: Recommended in all applications where possible

Note 6: Signal ground is normally connected to frame ground in the data set. If the customer does not want this connection, it should be specified in the REMARKS column of the service order.

Note 7: Table and rack mounting arrangements are available. The table mounting arrangement is provided unless rack mounting is specified in the REMARKS column of the service order.

Reference Guide: 590-002-115

3. DATA APPARATUS NOT COVERED BY USOC

DATA SET	DESCRIPTION
103F1	Transmitter-receiver, FDX serial data-only service on private line facilities, 0-200 bps.
103F2	Same as 103F1, but in addition provides loop-back test feature.
108A1	Transmitter-receiver, up to 150 baud, works on 2-point loops with 108B at hub office or 108C or 108D at another station.
108C1	Transmitter-receiver, up to 150 baud, used for station-to-station loops with 108A.
108D-L1	Transmitter-receiver, up to 300 baud, used for station-to-station loops with 180A; also used with low voltage hub.
108E-L1	Transmitter-receiver, up to 300 baud, works on 2-point loops with 108D at hub office or 108C or 108D at another station.
109A1	Transmitter-receiver, HDX with lightning protection.
109A2	Transmitter-receiver, HDX without lightning protection.
109B1	Transmitter-receiver, HDX hub office use, with lightning protection.
109B2	Transmitter-receiver, HDX hub office use, without lightning protection.
109C-L1	Transmitter-receiver, HDX data line concentrator use.
109C-L1/2	Transmitter-receiver, HDX data line concentrator use with EOT and send space timer.
109C-L1/3	Transmitter-receiver, HDX data line concentrator use with rotary dial.
109C-L1/4	Transmitter-receiver, HDX data line concentrator use with TOUCH-TONE dial.
109C-L1/2/3	Transmitter-receiver, HDX data line concentrator use with EOT, send space timer, and rotary dial.
109C-L1/2/4	Transmitter-receiver, HDX data line concentrator use with EOT, send space timer, and TOUCH-TONE dial.
109D-L1	Transmitter-receiver, HDX serial limited distance over Data Line Concentrator System and private line.
109E	Transmitter-receiver, FDX/HDX, has remote test capability, mounts in DAS 820-type and 28A data mounting.
109F-L1	Transmitter-receiver, FDX/HDX, has remote test capability, mounts only in special TTY; can be used on private line.
109F-L1/2	Transmitter-receiver, FDX/HDX with EOT and send space timer.

DATA SET	DESCRIPTION
109F-L1/2/3	Transmitter-receiver, FDX/HDX with EOT, send space timer, and rotary dial.
109F-L1/2/4	Transmitter-receiver, FDX/HDX with EOT, send space timer, and TOUCH-TONE dial.
109F-L1/3	Transmitter-receiver, FDX/HDX with rotary dial, for use with Data Line Concentrator System, can be used on private line.
109F-L1/4	Transmitter-receiver, FDX/HDX with TOUCH-TONE dial, for use with Data Line Concentrator System, can be used on private line.
109G-L1	Transmitter-receiver, FDX/HDX, used in 27-type mounting or requires DAS 811K for type 2 hub.
109H-L1	Transmitter-receiver, FDX/HDX, used with Data Line Concentrator System, has remote test capabilities (basic set).
109H-L1/2	Basic 109H with rotary dial.
109H-L1/3	Basic 109H with TOUCH-TONE dial.
109H-L1/4	Basic 109H with a current squelch (CSQ) indication and optional control function.
109H-L1/5	Basic 109H with capability of presenting signals on CC and CF interface leads.
109H-L1/2/4	Combines capabilities of 109H-L1/2 and -L1/4.
109H-L1/2/3	Combines capabilities of 109H-L1/2 and -L1/3.
109H-L1/3/4	Combines capabilities of 109H-L1/3 and -L1/4.
109H-L1/3/5	Combines capabilities of 109H-L1/3 and -L1/5.
109H-L1/4/5	Combines capabilities of 109H-L1/4 and -L1/5.
109H-L1/2/4/5	Combines capabilities of 109H-L1/2, -L1/4, and -L1/5.
109H-L1/3/4/5	Combines capabilities of 109H-L1/3, -L1/4, and -L1/5.
301B	Transmitter-receiver, FDX wideband serial binary data at 40.8 Kb/s.
303B	Transmitter-receiver, wideband serial binary data at 19.2 Kb/s.
303C	Transmitter-receiver, wideband serial binary data at 50.0 Kb/s.
303D	Transmitter-receiver, wideband serial binary data at 230.4 Kb/s.
303E	Transmitter-receiver, wideband serial binary data at 200.0 Kb/s.
303G	Transmitter-receiver, wideband serial binary data at 40.8 Kb/s.
303H	Transmitter-receiver, wideband serial binary data at 18.75 Kb/s.

DATA SET	DESCRIPTION
303J	Transmitter-receiver, wideband serial binary data at 460.8 Kb/s.
306A	Transmitter-receiver, wideband serial binary data at 1.344 Mb/s.

CHANNEL SERVICE UNIT	DESCRIPTION
550A-L1/2	Channel service unit for digital data service at 2.4 Kb/s.
550A-L1/3	Channel service unit for digital data service at 4.8 Kb/s.
550A-L1/4	Channel service unit for digital data service at 9.6 Kb/s.
550A-L1/5	Channel service unit for digital data service at 56.0 Kb/s.

DATA AUXILIARY SET	DESCRIPTION
804A-type	Provides alternate voice and line control for data sets 200-, 300-, and 400-types.
804A1	Rotary dial for 2-wire operation.
804A2	Rotary dial for 2- or 4-wire operation.
804A3	TOUCH-TONE dial for 2-wire operation.
804A4	TOUCH-TONE dial for 2- or 4-wire operation.
804A5	Rotary dial for 2-wire operation and compatible with ESS offices and Unigauge loops.
804A6	Rotary dial for 2- or 4-wire operation and compatible with ESS offices and Unigauge loops.
804A7	TOUCH-TONE dial for 2-wire operation and compatible with ESS offices and Unigauge loops.
804A8	TOUCH-TONE dial for 2- or 4-wire operation and compatible with ESS offices and Unigauge loops.
804B1	Rotary dial, for use with data set 103A-type.
804G	TOUCH-TONE dial, for use with data set 403E-type on 2-wire switched network or 2-wire private line.
804K	Panel set containing a handset, telephone network, and a rotary or TOUCH-TONE dial and a field of 48 keys. It is intended to be used with data set 403D-type to provide service for up to 16 data lines.
804P-type	Provides control and indicating functions for Model 37 TTY or CPE using data set 103H-type.

DATA AUXILIARY SET	DESCRIPTION
804P5	Rotary dial.
804P6	TOUCH-TONE dial.
804P7	TOUCH-TONE dial with card dialer.
804P8	Rotary dial with card dialer.
806B	Remote test capability for wideband data channels.
828A-L1 and -L1A	Terminates 4-wire private line voiceband data channel, provides interface for Telco or customer owned 2- or 4-wire data set, for data-only service.
828A-L1/2 and -L1A/2	Same as 828A-L1 and -L1A but adds capability of alternate voice data service.
828C-L1	Provides station arrangement for DDD backup of voiceband data service. Designed for use only with Telco-provided data sets in conjunction with DAS 828A.
829A-L1	Terminates 4-wire private line voiceband data channels, provides interface for Telco- or customer-provided data sets via 44A1 or 46A1 data mounting for data-only service. Provides amplitude equalization for short loops (600- or 1200-ohm termination).
829B-L1	Same as 829A-L1 except provides amplitude equalization for longer nonloaded loops as well as short loops (150-, 600-, or 1200-ohm termination).
829C-L1	Same as 829A-L1 except provides equalization equivalent to either the 359A or 359K equalizer.

DATA MOUNTING	DESCRIPTION
44A1	Mounting for single DAS 829.
45A1	Mounting for three cards (DAS 829 with 48A and 48B data units).
46A1	Mounting for eight DASs 829.
46B1	Alternate voice nest for up to eight 48A1 data units.
46C1	Dial backup nest for two 48B1 and up to six 48C1 data units.

DATA UNIT	DESCRIPTION
48A1	Alternate voice unit.
48B1	Dial backup unit.
48C1	Switching matrix to connect one of two backup lines to any one of four channels.
48D1	Interface adapter for Call Director telephone.