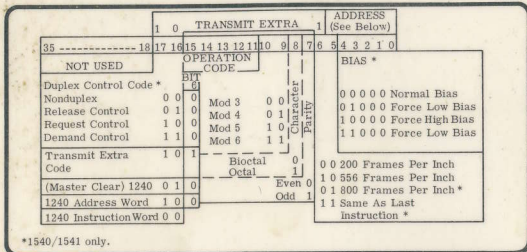


1240/1540/1541 MAGNETIC TAPE UNITS

FUNCTION CODE FORMAT



*1540/1541 only.

ADDRESS BITS

1540 ADDRESSING				1240 ADDRESSING					
Bits				Bits					
4	3	2	1 0	5	4	3	2 1 0		
Switch # Position				Cabinet					
0	1	X	0 1	1	0	1	0 0 1	1	1
0	1	X	1 0	2	0	0	1 0 1 0	1	2
0	1	X	1 1	3	0	0	1 0 1 1	1	3
0	1	1	0 0	4	0	0	1 1 0 0	1	4
1	0	X	0 1	5	0	1	0 0 0 1	2	1
1	0	X	1 0	6	0	1	0 0 1 0	2	2
1	0	X	1 1	7	0	1	0 0 1 1	2	3
1	0	1	0 0	8	0	1	0 1 0 0	2	4
1	1	X	0 1	9	0	1	1 0 0 1	3	1
1	1	X	1 0	10	0	1	1 0 1 0	3	2
1	1	X	1 1	11	0	1	1 0 1 1	3	3
1	1	1	0 0	12	0	1	1 1 0 0	3	4
0	0	X	0 1	13	1	0	0 0 0 1	4	1
0	0	X	1 0	14	1	0	0 0 1 0	4	2
0	0	X	1 1	15	1	0	0 0 1 1	4	3
0	0	1	0 0	16	1	0	0 1 0 0	4	4

Indicates position of address switch on each tape transport.
X = zero or one.

INTERFACE

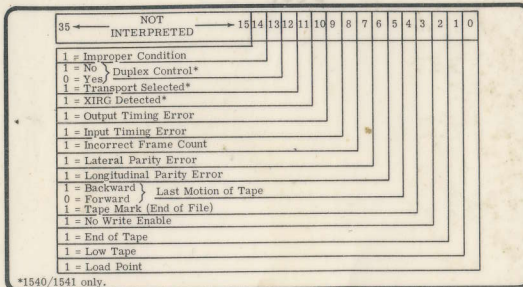
18, 24, 30, 36 bits

DATA FORMAT

Binary

1240/1540/1541 MAGNETIC TAPE UNITS

STATUS CODE FORMAT



*1540/1541 only.

OPERATION CODES

00 000	Read	01 000	Write	01 110	*Write; Tape	10 110	Backsearch File;
00 001	Read; Selective	01 001	Write; XIRG	01 111	*Write; Tape Mark XIRG	10 111	Type I Backsearch File;
00 010	*Read; Modified Stop/Read; Ignore	01 010	Write; Ignore Error Halt	10 000	*Backread/Backspace	10 000	Type II Backsearch File;
00 011	Error Halt	01 011	Write; XIRG	10 001	*Backread; Selective	11 000	Rewind
00 100	Space File Search; Type I	01 100	Ignore Error Halt	10 010	*Backread; Modified Stop/Backspace Read	11 001	Rewind Clear Write Enable
00 101	Type II Search	01 101	*Write; Modified Stop/Write Tape Mark	10 011	Backspace File	11 100	Rewind-Read; Clear Write Enable
00 110	File Search	01 110	*Write; Edit/Write; Tape Mark XIRG	10 100	Backsearch; Type I	11 101	Request
00 111	Type I Search File; Type II	01 111	*Write; Edit/Write; Tape Mark XIRG	10 101	Backsearch; Type II	11 111	Request Transport Status

*1540/1541 only.

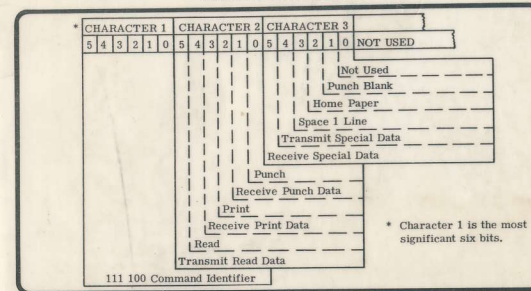
EDUCATION

UNIVAC
FEDERAL SYSTEMS DIVISION
St. Paul, Minnesota

DEPARTMENT

INPUT/OUTPUT CODES

1004 CARD PROCESSOR
(UNIVERSAL PLUGBOARD)
COMMAND CODE FORMAT



* Character 1 is the most significant six bits.

INTERFACE

BITS	CHARACTERS
18	3
30	5
36	6

DATA FORMAT

XS-3 CHARACTERS

MESSAGE SIZE

TYPE OF MESSAGE	NUMBER OF CHARACTERS
Command	30
Reply	30
Print	150
Punch	90
Read	90

CHARACTER CODES

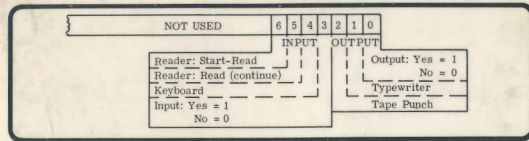
Character	1232 I/O Console Field Data	XS-3	ASCII	Teletype	Flexowriter Upper and Lower Case	BCD Tape Character	BCD Character	Card Punch
A	06	24	101	30	30	01	21	12-1
B	07	25	102	23	23	62	22	12-2
C	10	26	103	16	16	63	23	12-3
D	11	27	104	22	22	64	24	12-4
E	12	30	105	20	20	65	25	12-5
F	13	31	106	26	26	66	26	12-6
G	14	32	107	13	13	67	27	12-7
H	15	33	110	05	05	70	30	12-8
I	16	34	111	14	14	71	31	12-9
J	17	44	112	32	32	41	41	11-1
K	20	45	113	36	36	42	42	11-2
L	21	46	114	11	11	43	43	11-3
M	22	47	115	07	07	44	44	11-4
N	23	50	116	06	06	45	45	11-5
O	24	51	117	03	03	46	46	11-6
P	25	52	120	15	15	47	47	11-7
Q	26	53	121	35	35	50	50	11-8
R	27	54	122	12	12	51	51	11-9
S	30	65	123	24	24	22	62	0-2
T	31	66	124	01	01	23	63	0-3
U	32	67	125	34	34	24	64	0-4
V	33	70	126	17	17	25	65	0-5
W	34	71	127	31	31	26	66	0-6
X	35	72	130	27	27	27	67	0-7
Y	36	73	131	25	25	30	70	0-8
Z	37	74	132	21	21	31	71	0-9
Space	05	00	040	04	04	-	-	-
Tape Feed	-	-	-	-	00	-	-	-
Color Shift	-	-	-	-	02	-	-	-
Stop	-	-	-	-	43	-	-	-
Carriage	-	-	-	-	-	-	-	-
Return	04	-	015	02	45	-	-	-
Shift Up	01	-	-	-	47	-	-	-
Shift Down	02	-	-	-	57	-	-	-
Tab	-	-	-	-	51	-	-	-
Backspace	-	-	-	-	61	-	-	-
Delete	-	-	-	-	77	-	-	-
Line Feed	03	-	012	10	-	-	-	-
Master	-	-	-	-	-	-	-	-
Space	00	-	-	-	-	-	-	-
Figures	-	-	-	33	-	-	-	-
Letters	-	-	-	37	-	-	-	-

CHARACTER CODES (Continued)

Character	1232 I/O Console Field Data	XS-3	ASCII	Teletype	Flexowriter UC	LC	BCD Tape Character	BCD Character	Card Punch
0	60	03	060	15	37	12	00	00	0
1	61	04	061	35	52	01	01	01	1
2	62	05	062	31	74	02	02	02	2
3	63	06	063	20	70	03	03	03	3
4	64	07	064	12	64	04	04	04	4
5	65	10	065	01	62	05	05	05	5
6	66	11	066	25	66	06	06	06	6
7	67	12	067	34	72	07	07	07	7
8	70	13	070	14	60	10	10	10	8
9	71	14	071	03	33	11	11	11	9
-	41	02	055	30	56	56	40	40	11
+	42	63	053	-	-	54	60	20	12
<	43	36	074	-	-	-	-	-	-
>	45	76	076	-	-	-	-	-	-
=	44	37	075	-	-	44	13	13	3-8
≠	-	60	-	-	-	-	-	-	-
-0	-	-	-	-	-	52	52	52	-
+0	-	-	-	-	-	72	32	32	-
)	40	77	051	11	42	-	74	34	12-4-8
(51	55	050	36	46	-	34	74	0-4-8
^	75	22	056	07	-	42	73	33	-
/	74	64	057	27	54	-	21	61	0-1
\	-	15	134	-	-	-	-	-	-
!	55	43	041	26	-	-	-	-	-
"	52	-	042	21	-	-	-	-	-
:	53	21	072	16	-	-	-	-	-
;	-	-	-	-	44	-	-	-	12-3-8
,	56	62	54	06	-	46	33	73	0-3-8
.	73	16	073	17	-	-	-	-	-
!	-	-	-	-	-	50	-	-	-
*	46	41	052	-	50	-	-	-	-
\$	47	42	044	22	-	53	53	53	11-3-8
%	-	56	100	-	-	-	-	-	-
!	72	40	047	32	-	14	14	14	-
#	-	35	043	-	-	-	-	-	-
&	-	20	046	13	-	-	-	-	-
?	54	23	077	23	-	-	-	-	-
←	-	-	137	-	-	-	-	-	-
↑	77	-	138	-	-	-	-	-	-
↓	-	01	135	-	-	-	-	-	-
□	76	-	-	-	-	-	-	-	-
□	-	17	133	-	-	-	-	-	-
0	-	-	-	24	-	-	-	-	-
Δ	-	57	-	-	-	-	-	-	-
∞	-	61	045	-	-	-	-	-	-
%	-	-	-	-	-	-	-	-	-
R.M.	-	-	-	-	-	-	32	-	72
□	-	75	-	-	-	-	-	-	-

1232/1532 I/O CONSOLE

FUNCTION CODE FORMAT



DATA FORMAT

EQUIPMENT	INTERFACE	KEYBOARD/PRINTER	READER/PUNCH
1232	8 Bit Maximum	Field Data Character (Modified)	Binary
1532	8 Bit Maximum	ASCII Character	Binary

ANGULAR RESOLUTION EQUIVALENTS OF BINARY DIGITS

n	2 ⁿ	ANG. EQU.	DEGREE/BIT	RAD/BIT	1/2 ⁿ
0	1	360,000°	360	6.28318	1.0000000
1	2	180,000°	180	3.14159	0.5000000
2	4	90,000°	90	1.57079	0.2500000
3	8	45,000°	45	0.78540	0.1250000
4	16	22,500°	22.5	0.39240	0.0625000
5	32	11,250°	11.25	0.19635	0.0312500
6	64	5,625°	5.625	0.09817	0.0156250
7	128	2,813°	2.813	0.04909	0.0078130
8	256	1,406°	1.406	0.02454	0.0039060
9	512	42,188 m	0.7031	0.01277	0.0019530
10	1,024	21,094 m	0.3516	0.006136	0.0009770
11	2,048	10,547 m	0.1758	0.003068	0.0004880
12	4,096	5,2734m	0.0879	0.001534	0.0002440
13	8,192	2,6367m	0.04395	0.000767	0.0001220
14	16,384	1,3134m	0.02197	0.000384	0.0000610
15	32,768	39,55s	0.01099	0.000192	0.0000305
16	65,536	19,78s	0.005493	0.000096	0.0000153
17	131,072	9,89s	0.002747	0.000048	0.0000076
18	262,144	4,94s	0.001373	0.000024	0.0000038
19	524,288	2,47s	0.000687	0.000012	0.0000019
20	1,048,576	1,24s	0.000343	0.000006	0.00000095
21	2,097,152	0,62s	0.000172	0.000003	0.00000047
22	4,194,304	0,31s	0.000086	0.0000015	0.00000024
23	8,388,608	0,16s	0.000043	0.0000007	0.00000012
24	16,777,216	0,08s	0.000021	0.0000004	0.00000006