MODULUS 31 COMPUTATION
SCAN LINE CHECK DIGIT

1. For each digit of the scan line, a value is assigned based on the following table:

SCAN LINE DIGIT ASSIGNED	VALUE	SCAN LINE DIGIT ASSIGNED	VALUE
1	01	G	17
2	02	H	18
3	03	J	19
4	04	K	20
5	05	L	21
6	06	M	22
7	07	N	23
8	08	P	24
9	09	Q	25
0	10	R	26
A	11	T	27
B	12	U	28
C	13	W	29
D	14	X	30
E	15	Y	31
F	16		

**NOTE: A SCAN LINE VALUE OF I, O, S, V, Z OR BLANK IS BYPASSED.

2. The "Assigned Value" for the "Scan Line Digit" is multiplied by a counter which starts at 1 and increments by 1 for each digit in the scan line. (The counter increments even if the scan line value is one of those which is bypassed.) After a counter value of 9, it rests back to 1.

   For Example:

   01010209123260477003123191123190000000750018000000009 Scanline

   12345678912345678912345678912345678912345678912345678 Counter

   The new value for the 1st scanline digit will be 10 (10 times 1)
   The new value for the 2nd scanline digit will be 2 (1 times 2)
   The new value for the 3rd scanline digit will be 30 (10 times 3)
   And so forth...

3. Each of the above values is added to a "Total" field.

4. After the last scanline digit is converted and added to the total, the total is divided by 31, giving X with a remainder.

5. The remainder is subtracted from 31 and that difference is converted in to the check digit using the following table:

31 MINUS REMAINDER	CHECK DIGIT VALUE	31 MINUS REMAINDER	CHECK DIGIT VALUE
1	1	17	G
2	2	18	H
3	3	19	J
4	4	20	K
5	5	21	L
6	6	22	M
7	7	23	N
8	8	24	P
9	9	25	Q
10	0	26	R
11	A	27	T
12	B	28	U
13	C	29	W
14	D	30	X
15	E	31	Y
16	F		