

Discovery II keyfob programming code worksheet
Revision 20130405

<p>1a. Enter the 6-character key code from the sticker affixed to the circuit board inside the fob. This is the key code</p>	<p>1 2 3 4 5 6</p> <p><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>
<p>1b. Using the table on the page 3 write the values corresponding to each character in the key code.</p>	<p><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>
<p>1c. Caculate the sum of the numbers in 1b. This is the key code sum.</p>	
<p>2a. Copy the first 4 characters from the key code in 1a here. Decrement the 6th character from the key code and put in position 6 here. The order of characters is: 0 1 2 3 4 5 6 7 8 9 A B C D E F. An A becomes a 9 for example. If the 6th character is a 0, then it becomes an 'F' and the 5th character is decremented from the value in 1a. Otherwise, copy the 5th character from step 1a into the 5th position here. This is the decremented key code.</p>	<p>1 2 3 4 5 6</p> <p><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>
<p>2b. Using the table on the page 3 write the values corresponding to each character in the decremented key code.</p>	<p><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>
<p>2c. Caculate the sum of the numbers in 2b. This is the decremented key code sum.</p>	
<p>3. Create the inverted key code from the key code in step 1a using the following substitution table: 0↔F, 1↔E, 2↔D, 3↔C, 4↔B,5↔A, 6↔9, 7↔8</p>	<p>1 2 3 4 5 6</p> <p><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>
<p>4a. Fob type: North America: J Europe: G South Africa: H Note: These designators are guesses. If one doesn't work, try another.</p>	
<p>4b. Using the table on page 3, write the number corresponding to the Fob type character from step 4a.</p>	
<p>5a. Calculate the following equation for barcode1: $fobtype + keycodesum + deckeycodesum + 30$ were fobtype is step 4b, keycodesum is from 1c and deckeycodesum is from 2c.</p>	
<p>5b. Divide the value in 5a by 43 and record the remainder here. This is the check character value for barcode1.</p>	

5c. Using the table on page 3 find the character corresponding to the value from 5b. Write it here. This is the check character for barcode1 .	
6. Create bar code 1: *[Fob type][key code][decremented key code] FF [check character]* where [key code] is the 6 characters from step 1a, [decremented key code] is the 6 characters from step 2a, and [check character] is the single character from step 5c.	
7a. Calculate the following equation for barcode2: $210 - \text{keycodesum}$ where keycodesum is the value from 1c	
7b. Divide the value in 7a by 43 and record the remainder here. This is the check character value for barcode2.	
7c. Using the table on page 3 find the character corresponding to the value from 7b. Write it here. This is the check character for barcode2 .	
8. Create bar code 2: *FFFFFFF [inverted key code] [check character]* where [inverted key code] is the 6 characters from step 3 and [check character] is the character from 7c.	

Example

1a. Key code	27821D
1b. Key code values from table	2, 7, 8, 2, 1, 13
1c. Key code sum	33
2. Decrementing key code	27821C
3. Inverted code	D87DE2
4a. Fob type (North America)	J
4b. Fob type value from table	19
5a. Bar code 1 Equation	$19 + 33 + 32 + 30 = 114$
5b. Check Character value	remainder $114/43 = 28$
5c. Check Character	S
6. Bar code 1	*J27821D27821CFFS*
7a. Bar code 2 Equation	$210 - 33 = 177$
7b. Check Character value	remainder $177/43 = 5$
7c. Check Character	5
8. Bar code 2	*FFFFFFFD87DE25*

Code39 Values

Char	Value
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
A	10
B	11
C	12
D	13
E	14
F	15
G	16
H	17
I	18
J	19
K	20
L	21
M	22
N	23
O	24
P	25
Q	26
R	27
S	28
T	29
U	30
V	31
W	32
X	33
Y	34
Z	35
-	36
.	37
[space]	38
\$	39
/	40
+	41
%	42