Walkthrough

@1 – Stores the initial key k0

@2 – Stores the plain text value

@3 – Stores the duplicate key value

@4 – Stores the counter for the loop

@5 – Stores the intermediate mask value for the key

@7 – Stores the counter for the loop of the right shift

@9 – Stores L0

@10 – Stores R0

@11 – Stores the mask for L0

@12 – Stores the mask for R0

@13 - Stores the new value for L0

@14 – Stores the new value for R0

@15 – Stores intermediate values when XORing key and R0

@16 – Stores intermediate values when XORing key and R0

@17 – Stores intermediate values when doing the second XORing

@18 – Stores intermediate values when doing the second XORing

@19 - Stores the value of the mask for the right shift

@20 – Stores the of the subtractant for the right shift

@21 – Stores the intermediate and final value after right shifting

@22 – Stores the new left shift value

2 – Copy plain text

3 – Store plain text in RAM9 for L0

5 – Store plain text in RAM10 for R0

7 – Obtain mask value for L0

9 – Store mask value for LO in RAM11

11 – Obtain mask value for R0

13 – Store mask value for R0 in RAM12

15 – Copy the mask value for L0

17 – AND the MASK value for L0 and plain text to obtain L0 in RAM9

19 – Copy the mask value for R0

21 – AND the MASK value for R0 and plain text to obtain R0 in Ram10

23- Copy R0 from RAM9 and store it in RAM 13 for new L0

25 – Copy R0 into RAM13

27 – Copy R0 into RAM14

29 - Copy the initial key

31 – Copy Initial Key to RAM3

33 – XOR R0 and Key to obtain result in ram 14

30 – Copy the value for L0

32 – XOR result and L0 to obtain new R0

00001101

10100111

01010101

10101010

01010101

11111111

10100111

11110010

11111111

01011000

11110010

10101010

01011000

00000000