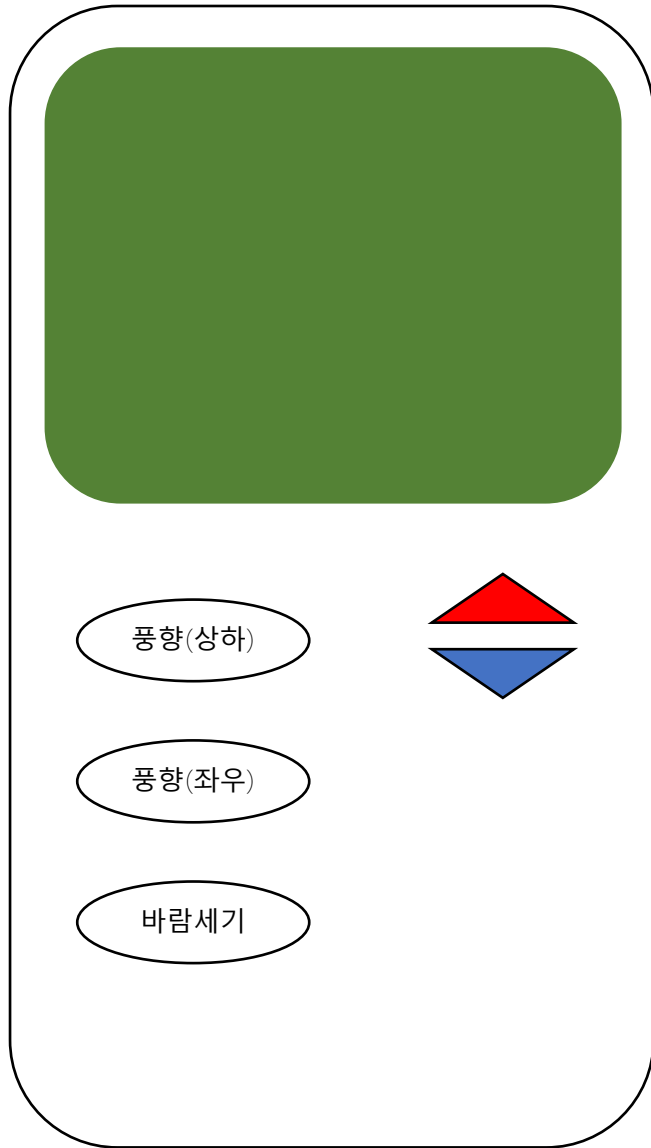


2022 / 2학기 / 리모컨 회로설계

# 논리회로설계 결과발표

2조 / 이용환, 김지애, 원동민

# 01 Project Planning

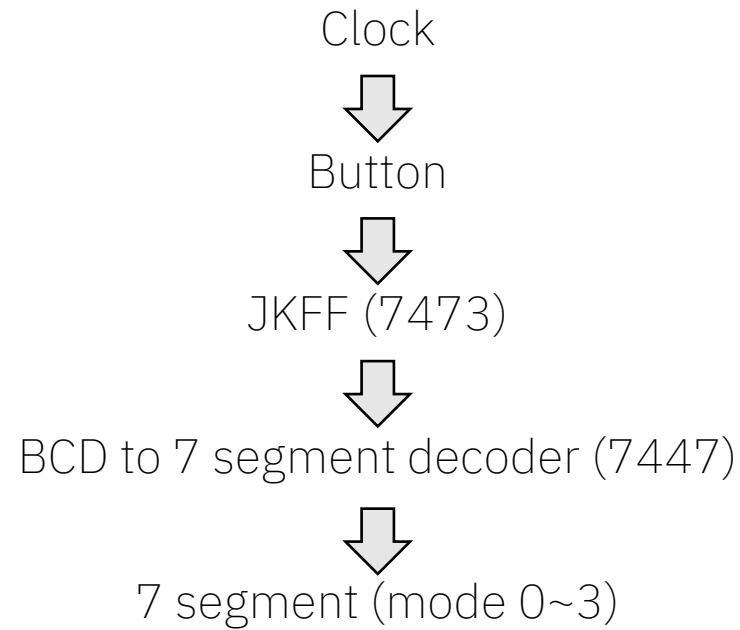


에어컨 리모콘 시스템을 구현하여  
에어컨의 운전/정지와 **온도조절**,  
**풍향조절 및 바람세기를 조절**하는 기능과  
이 신호를 **인코딩**하여 **소리로 송신**하는 회로 설계

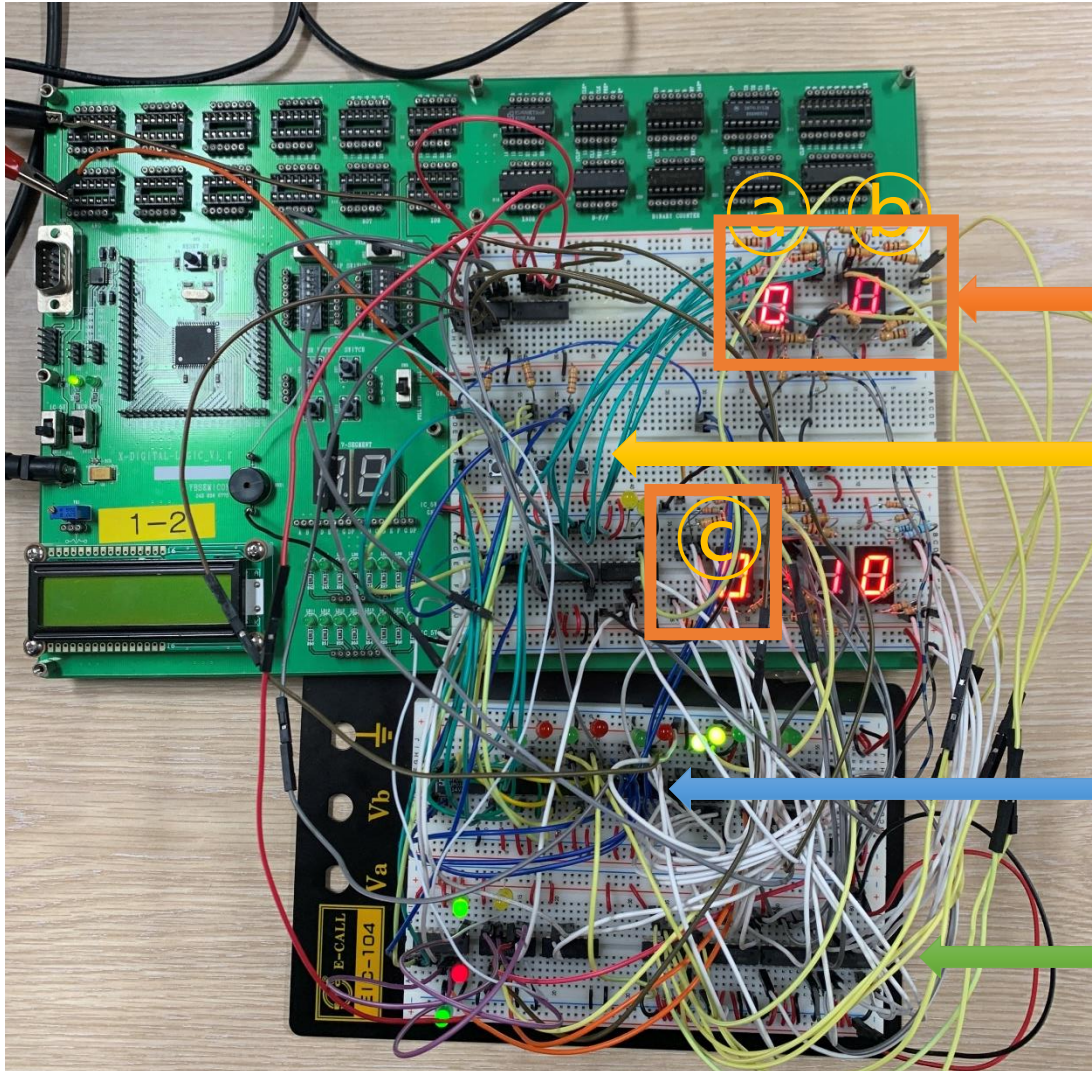
02

# Wind Circuit

# Circuit operation



# Circuit component



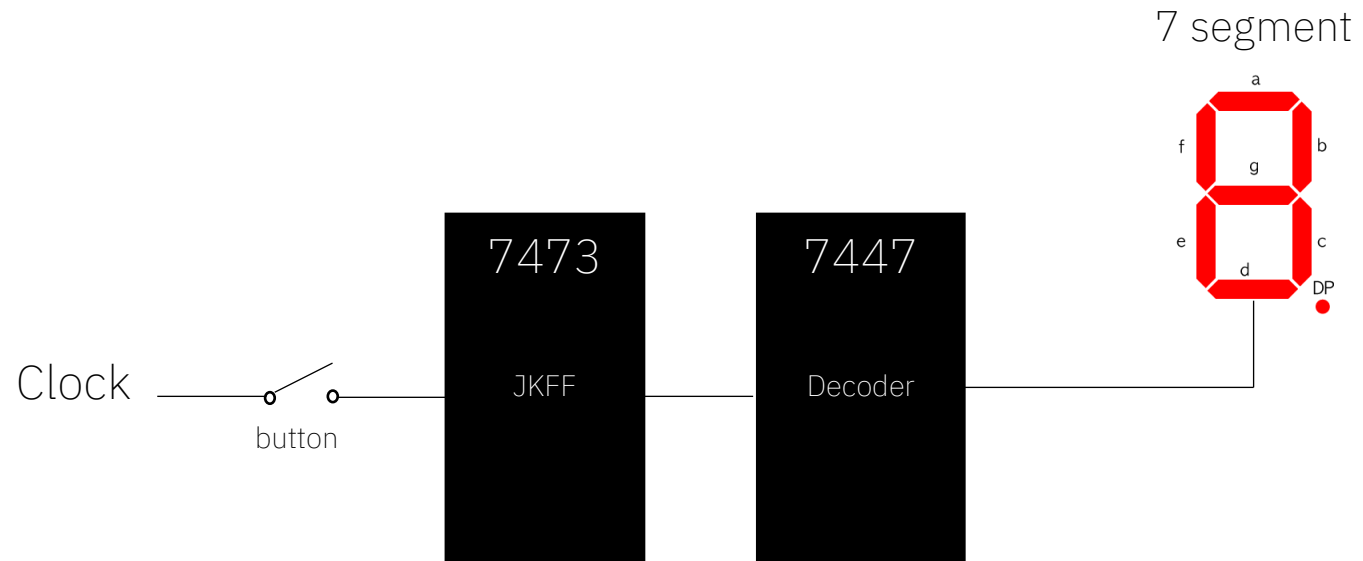
7 segment ( a : 수직 풍향 b: 수평 풍향 c: 바람세기)

Button(1 : 수직 풍향 2: 수평 풍향 3: 바람세기)

JKFF(7443)

Decoder(7447)

## 1) 풍향, 바람세기

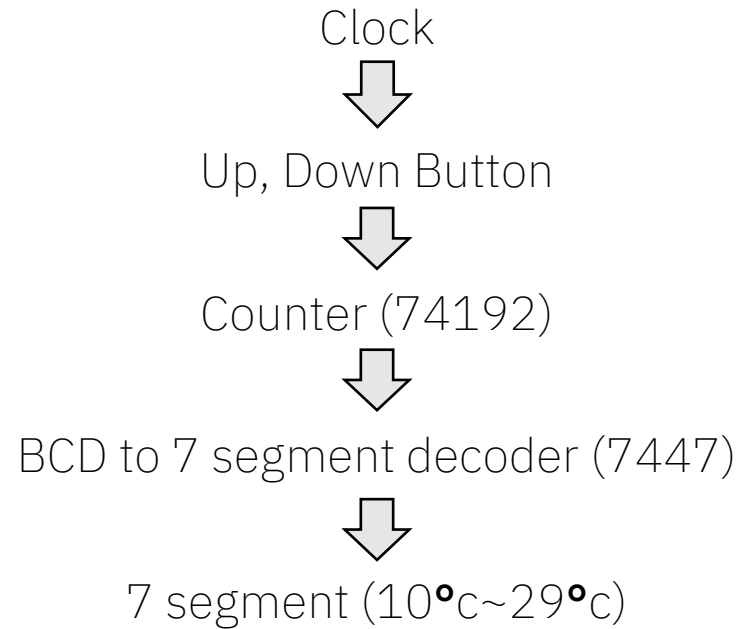


03

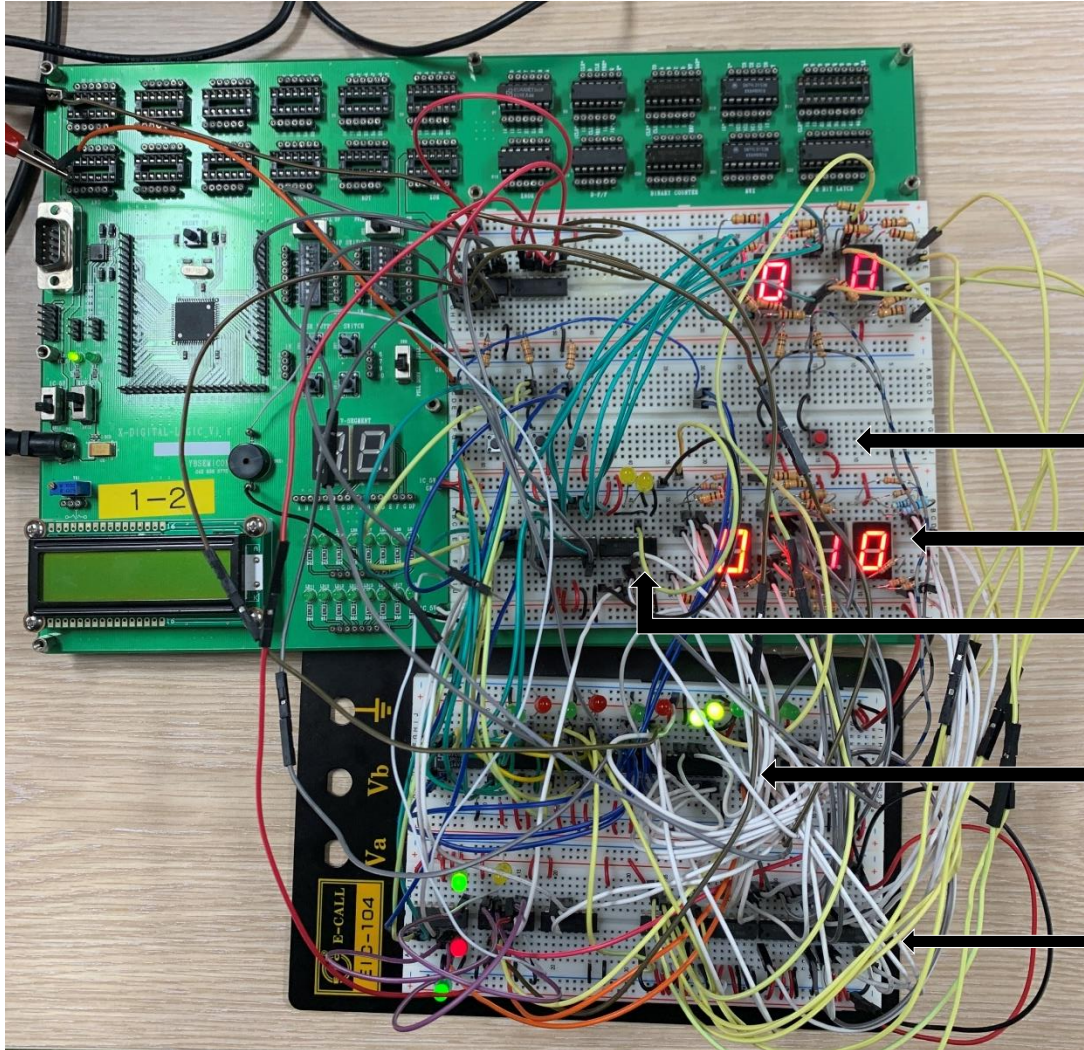
# Temperature Circuit



# Circuit operation



# Circuit component



Button (left : down / right : up)

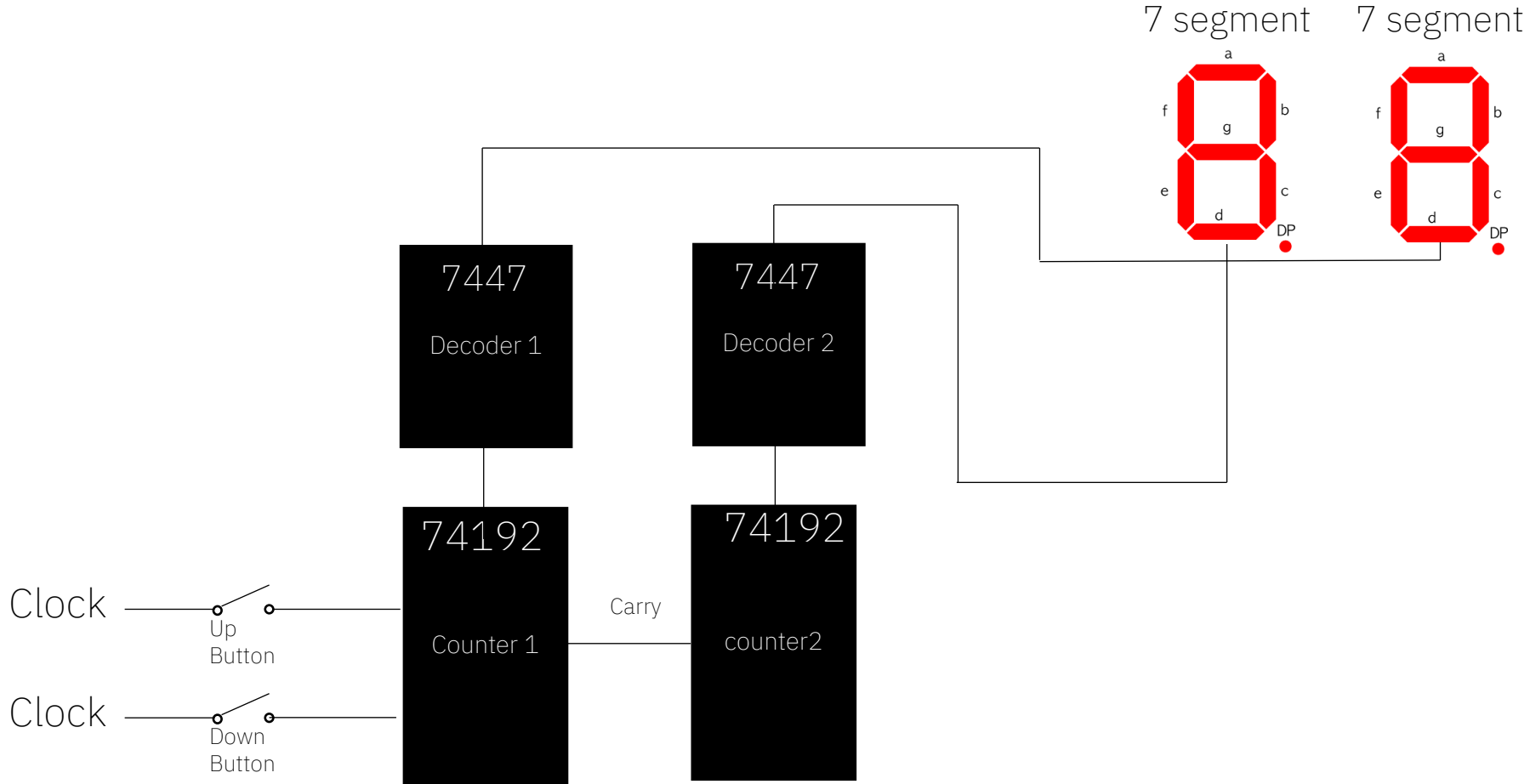
7 segment

Counter 2 (74192)

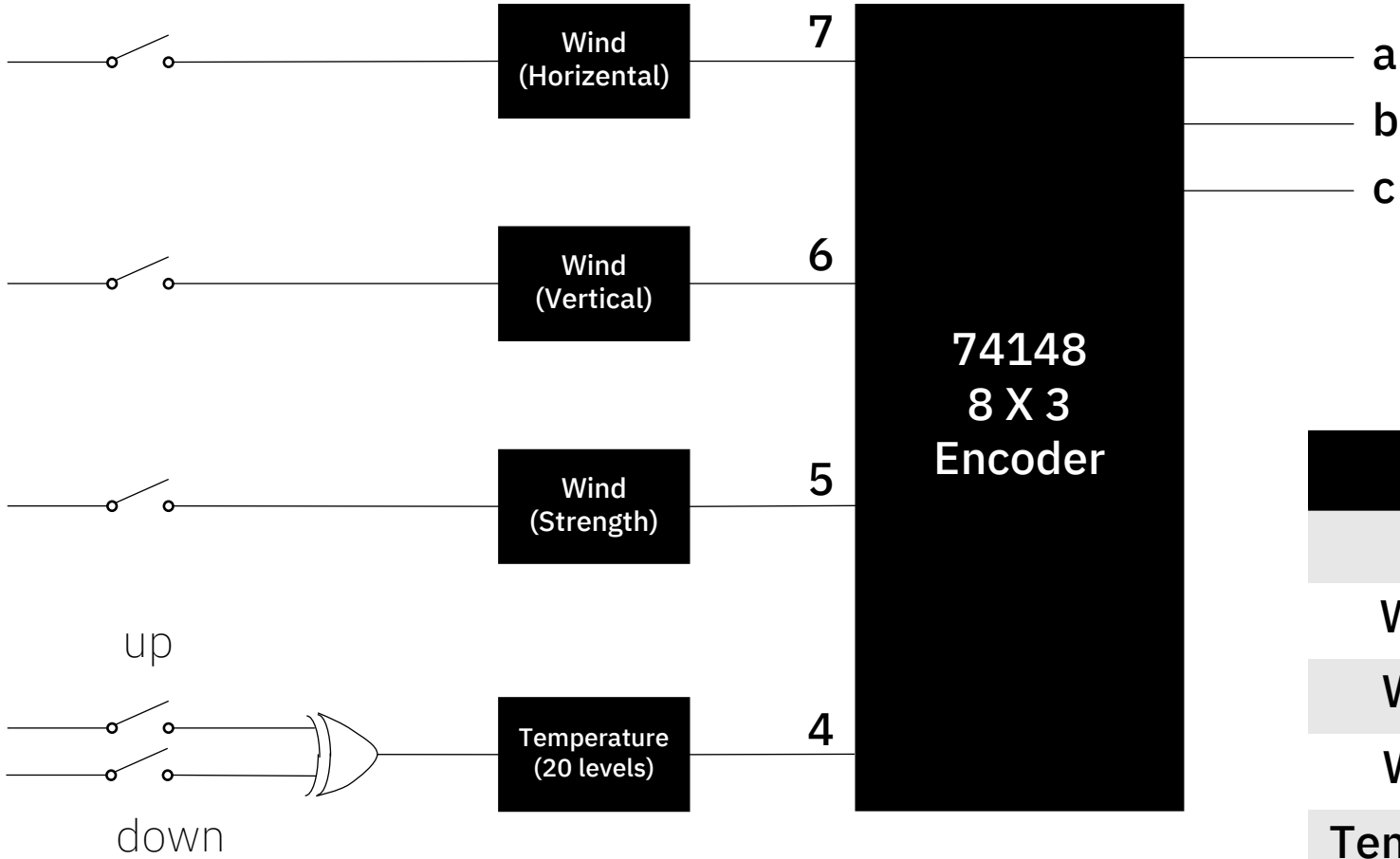
Counter 1 (74192)

Decoder (7447) x2

2022 / 2학기 / 리모컨 회로설계



# 04 Encoding Circuit

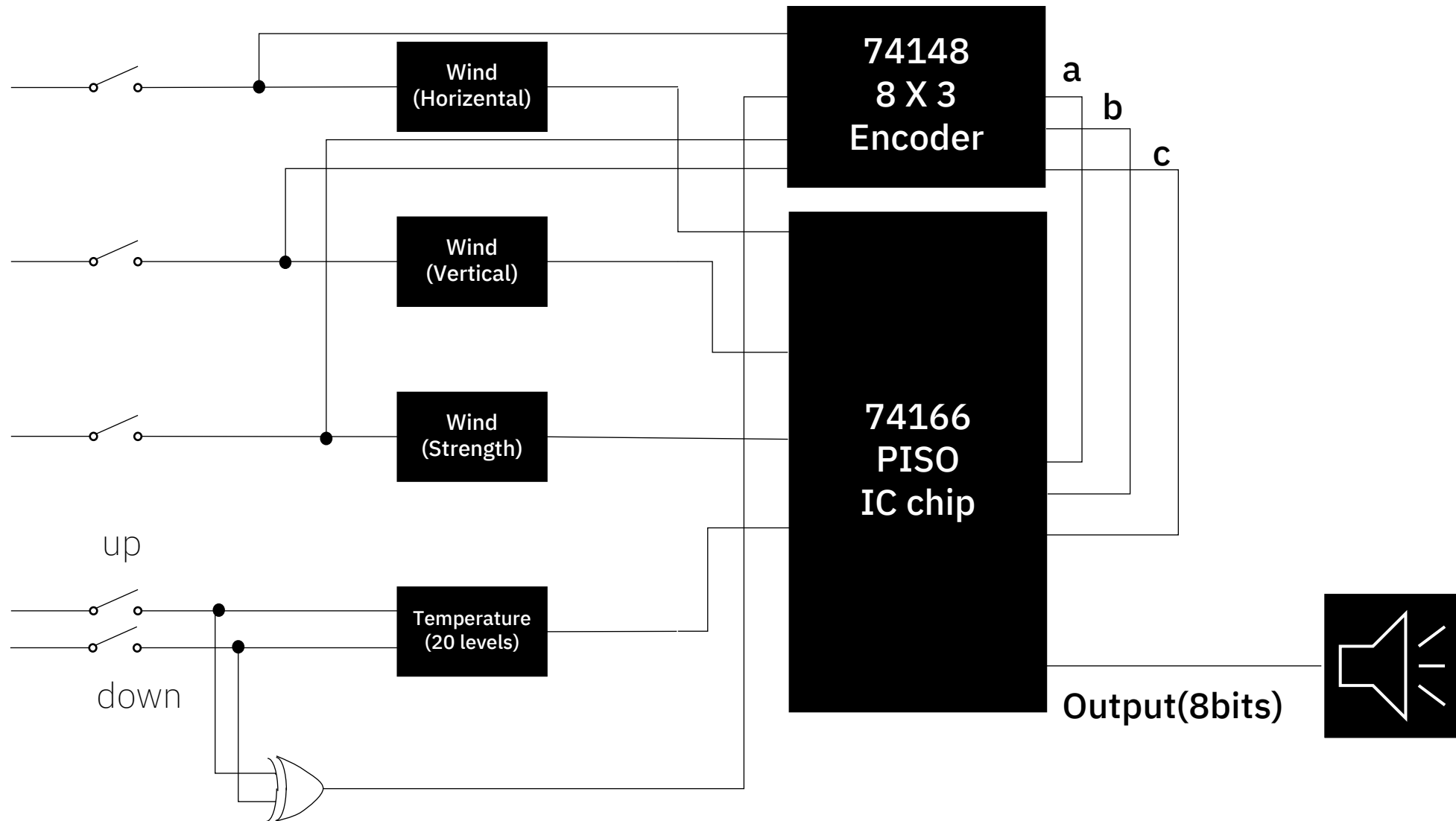


Encode Table

	a	b	c
X	0	x	x
Wind(H)	1	0	0
Wind(V)	1	0	1
Wind(S)	1	1	0
Temperature	1	1	1

# 05 Communication Circuit

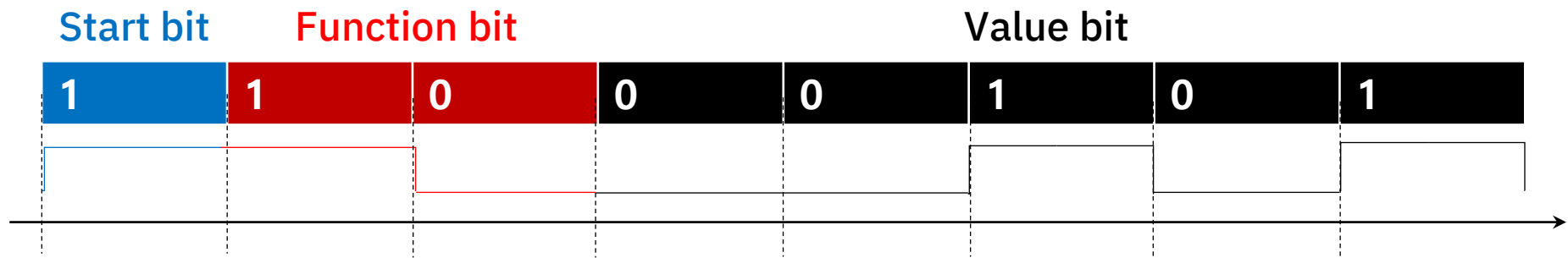
## 2022 / 2학기 / 리모컨 회로설계



Output(8bits)

Ex) Wind(Strength) Encode Table

	1	2	3	4	5	6	7	8
Wind(1)	1	1	0	X	X	X	0	0
Wind(2)	1	1	0	X	X	X	0	1
Wind(3)	1	1	0	X	X	X	1	0
Wind(4)	1	1	0	X	X	X	1	1





## 2022 / 2학기 / 리모컨 회로설계

