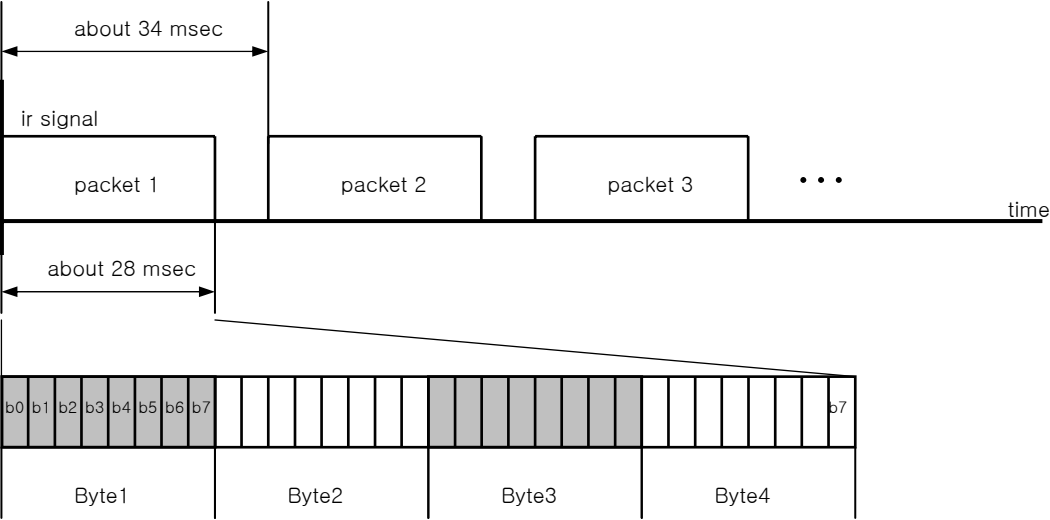


# I. Protocol Specifications

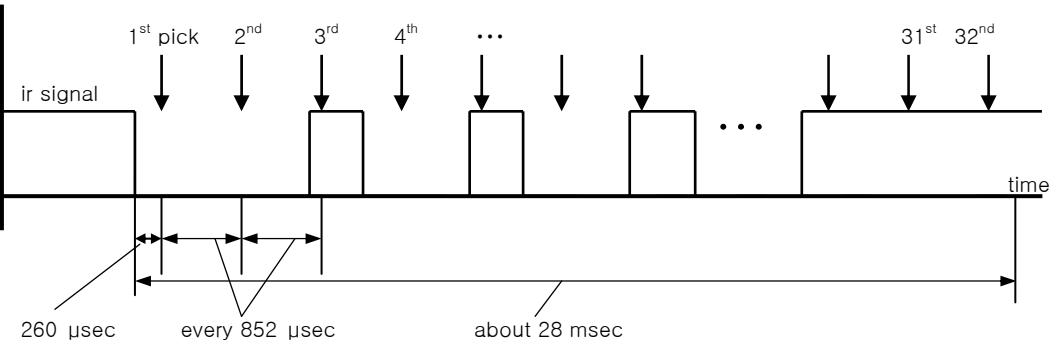
## 1. IR Transmission Format ( Mouse operation )

When moving the mouse pointer using the thumb pad, the data packet will be continuously delivered to the IR receiver as like following picture.

### ■ IR signal ( Mouse operation )



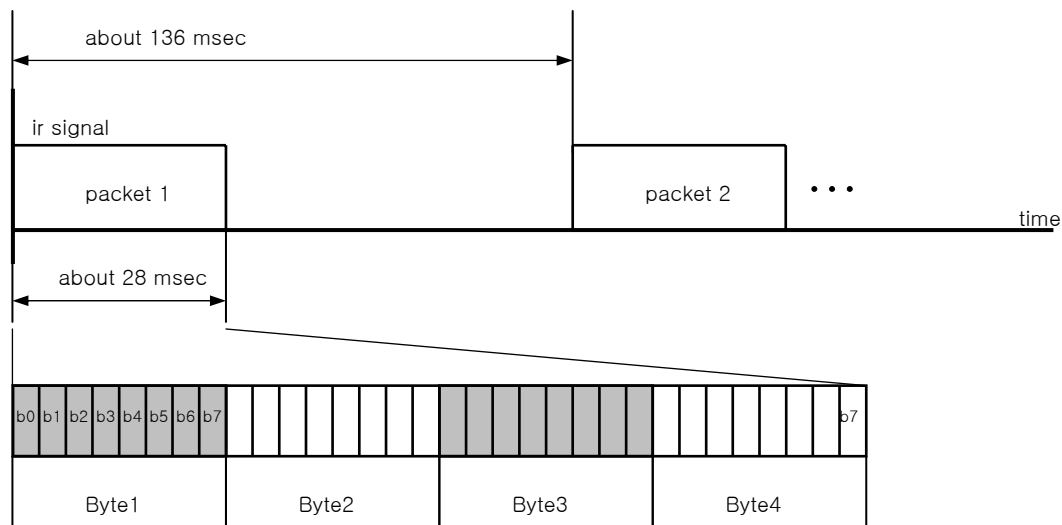
### ■ IR signal detecting timing



## 2. IR Transmission Format ( keyboard operation : repeat code )

When holding down remote button key except the thumb pad, the data packet will be continuously delivered to the IR receiver as like following picture.

When a button key is hold down, then the remote controller will send every 136 milliseconds the same data packet as the key down until the pressed key is released or another key is down.



## II. IR DATA Format

### 1. Data Format for Remote Controller Key Button

	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7
Byte1	start (0)	kb/mouse (0)	PID (1010)				data 0	data 1
Byte2	reserved (1)	reserved (0)	data 2	data 3	reserved (0)	data 4	data 5	reserved (1)
Byte3	data 6	data 7	reserved (0)	reserved (1)	reserved (0)	reserved (1)	reserved (0)	reserved (1)
Byte4	PID (10110)					stop (111)		

- Data code of each key button is composed of yellow cells(data 0 ~ data 7)

## 2. Data Format for Thumb pad and Mouse Button

	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7
Byte1	start (0)	kb/mouse (1)	PID (1010)				X7	Y7
Byte2	Y7'	X0	X1	X2	X3	R	R'	L
Byte3	L'	Y0	Y1	Y2	Y3	reserved (0)	reserved (0)	reserved (1)
Byte4	PID (10110)					stop (111)		

- Data code of each move of thumb pad is composed of blue cells(X0 ~ X3, X7, Y0~Y3, Y7)
- Data code of mouse buttons is composed of pink cells(R, L)
- \* X7 is sign bit of horizontal move, and X0~X3 are magnitude of horizontal movement.
- \* Y7 is sign bit of vertical move, and Y0~Y3 are magnitude of vertical movement.
- \* R is for mouse right button, if mouse right button of remote pressed, value of R is 1.
- \* R' is <not> R.
- \* L is for mouse left button, if mouse left button of remote pressed, value of L is 1.