

C E L A D O N
Custom Remote Control Systems

Model Number: FGSC-33B Low Volume Remote Control
 Casing: SC-33
 Carrier Frequency: 38KHz - Default (Variable based on protocol)
 Protocol: NEC (Default) Optional: RC5, Sony, Toshiba, Mitsubishi, Matsushita
 System Code: 6E (Default - NEC) Optional: Programmable via Key Press
 Repeat Code: Full Repeat (Default)

Notes:

Factory Default Setting - NEC Protocol, Full Repeat Format, System Code 6E

To Change Protocol:

- NEC** - Press and hold key 1 and key 28 for 3 sec (Default System Code - 6E)
- RC5** - Press and hold key 1 and key 29 for 3 sec (Default System Code - 00)
- Sony** - Press and hold key 1 and key 30 for 3 sec (Default System Code - 00)
- Toshiba** - Press and hold key 1 and key 31 for 3 sec (Default System Code - 00)
- Mitsubishi** - Press and hold key 1 and key 32 for 3 sec (Default System Code - 00)
- Matsushita** - Press and hold key 1 and 33 for 3 sec (Default System Code - 00)

To Return to Default Protocol (NEC)

Press and hold key 1 and key 13 for 3 sec **OR**
 Press and hold key 1 and key 28 for 3 sec

To Change System Code:

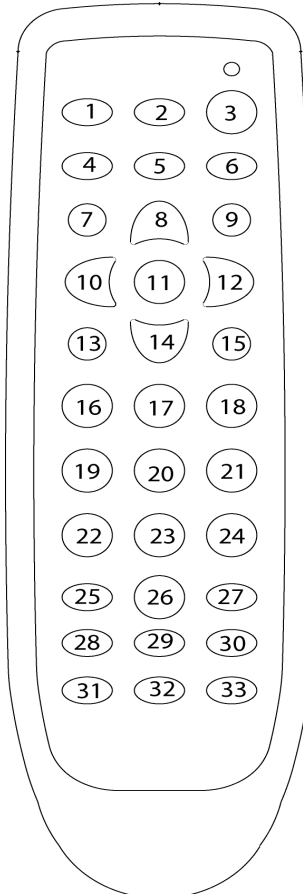
- 1) Press and hold key 3 and 11 for 3 seconds
- 2) Enter 2 digit system code (00-FF) within 5 seconds
- NOTE: For RC5, Sony and Matsusita protocols, enter 2 digit system code (00~1F) within 5 seconds .**
- 3) Press key 11 (Enter) within 3 seconds to store system code in memory

If 2 digit system code is not entered within 5 seconds, exit Change System Code mode and keep existing system code
 If key 11 is not pressed within 3 seconds after 2 digit system code is entered, exit Change System Code mode and keep existing system code.

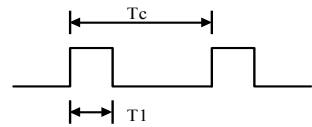
To Return to Default System Code (00, except for NEC - 6E)

Press and Hold Key 3 and 13 for 3 Sec.

Key Number	Key Name	Hex Code	Data Code							
			D0	D1	D2	D3	D4	D5	D6	D7
1	Protocol	00h	0	0	0	0	0	0	0	0
2	-	01h	1	0	0	0	0	0	0	0
3	System Code	02h	0	1	0	0	0	0	0	0
4	-	03h	1	1	0	0	0	0	0	0
5	-	04h	0	0	1	0	0	0	0	0
6	-	05h	1	0	1	0	0	0	0	0
7	-	06h	0	1	1	0	0	0	0	0
8	-	07h	1	1	1	0	0	0	0	0
9	-	08h	0	0	0	1	0	0	0	0
10	-	09	1	0	0	1	0	0	0	0
11	Enter	0Ah	0	1	0	1	0	0	0	0
12	-	0Bh	1	1	0	1	0	0	0	0
13	Default	0Ch	0	0	1	1	0	0	0	0
14	-	0Dh	1	0	1	1	0	0	0	0
15	-	0Eh	0	1	1	1	0	0	0	0
16	1	0Fh	1	1	1	1	0	0	0	0
17	2	10h	0	0	0	0	1	0	0	0
18	3	11h	1	0	0	0	1	0	0	0
19	4	12h	0	1	0	0	1	0	0	0
20	5	13h	1	1	0	0	1	0	0	0
21	6	14h	0	0	1	0	1	0	0	0
22	7	15h	1	0	1	0	1	0	0	0
23	8	16h	0	1	1	0	1	0	0	0
24	9	17h	1	1	1	0	1	0	0	0
25	-	18h	0	0	0	1	1	0	0	0
26	0	19h	1	0	0	1	1	0	0	0
27	-	1Ah	0	1	0	1	1	0	0	0
28	A	1Bh	1	1	0	1	1	0	0	0
29	B	1Ch	0	0	1	1	1	0	0	0
30	C	1Dh	1	0	1	1	1	0	0	0
31	D	1Eh	0	1	1	1	1	0	0	0
32	E	1Fh	1	1	1	1	1	0	0	0
33	F	20h	0	0	0	0	0	1	0	0



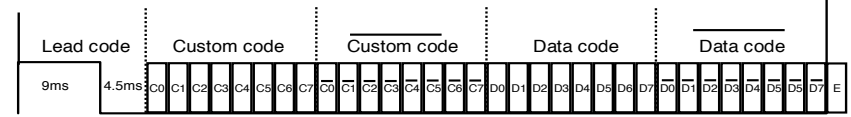
CELADON	FORMAT: NEC INFRARED PROTOCOL	REV.1
	Description: uPD6121G with full repeat code	



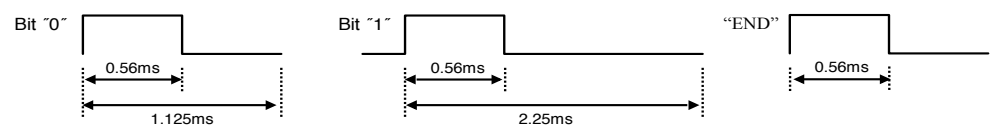
Carrier frequency = 38KHz
Duty ratio = $T_1/T_c = 1/3$

- Configuration of Frame

1st frame

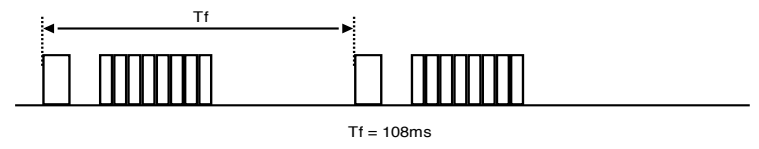


- Bit Description

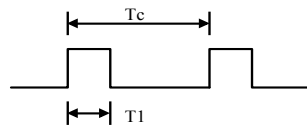


- Frame Interval : Tf

The waveform is transmitted as long as a key is depressed



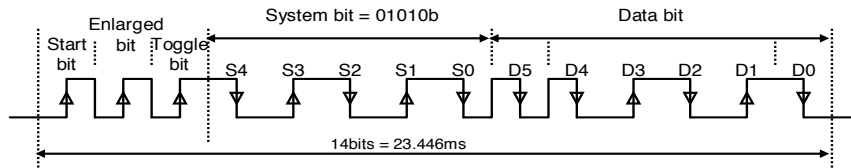
CELADON	FORMAT : PHILIPS INFRARED PROTOCOL	REV.1
	Description : RC5 (SAA3010)	



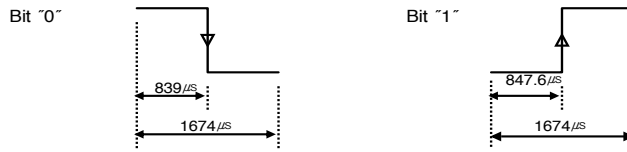
Carrier frequency = 38KHz
Duty ratio = $T_1/T_c = 1/3$

- Configuration of Frame

1st frame

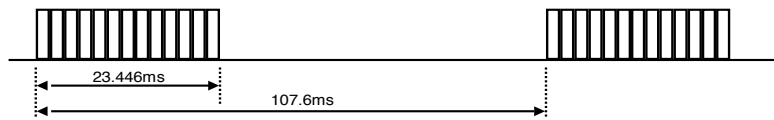


- Bit Description



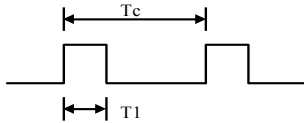
- Frame Interval : Tf

The waveform is transmitted as long as a key is depressed



CELADON	FORMAT : SONY INFRARED PROTOCOL	REV.1
	Description : SONY-D7C5L	

- A single pulse, modulated with 40KHz signal at 480KHz

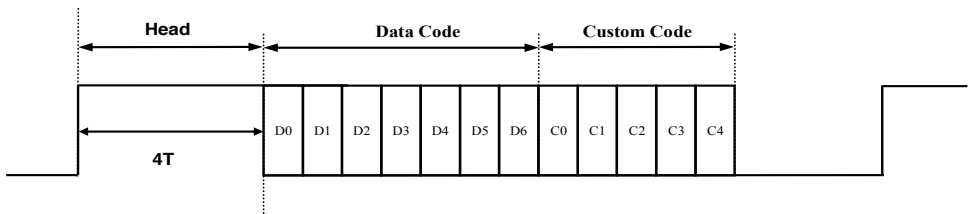


Carrier frequency = 40KHz

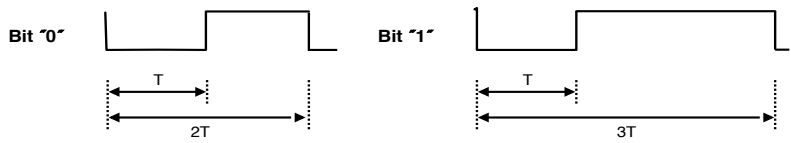
Duty ratio = $T_1/T_c = 1/3$

TIME UNIT = $T = 24T_c = T$

- Configuration of Frame

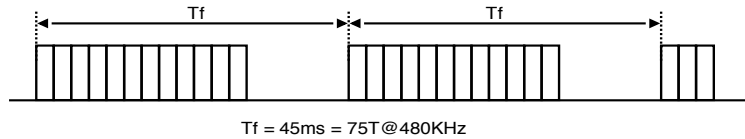


- Bit Description

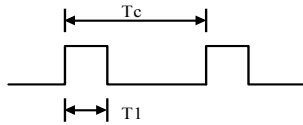


- Frame Interval : T_f

The waveform is transmitted as long as a key is depressed



CELADON	FORMAT: TOSHIBA INFRARED PROTOCOL	REV.1
	Description: TC9012 with Full Repeat Code	

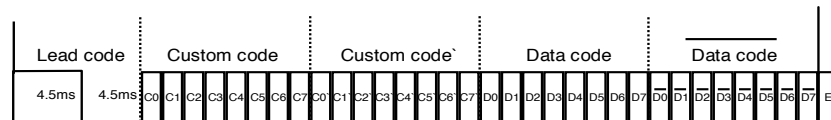


Carrier frequency = 38KHz

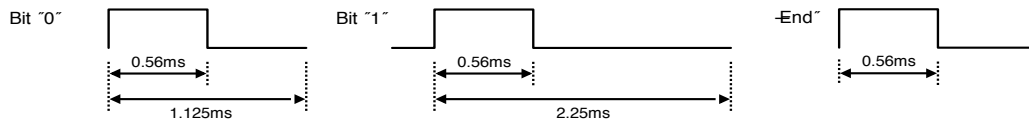
Duty ratio = $T_1/T_c = 1/3$

- Configuration of Frame

1st frame

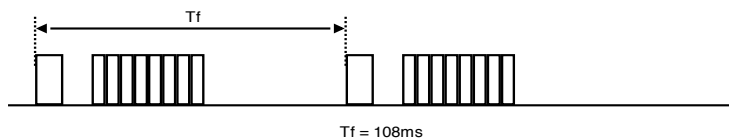


- Bit Description

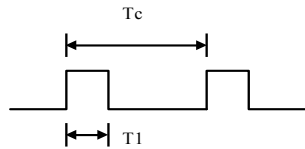


- Frame Interval : Tf

The waveform is transmitted as long as a key is depressed

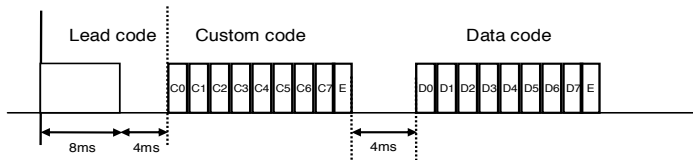


CELADON	FORMAT: MITSUBISHI INFRARED PROTOCOL	REV.1
	Description: M50560	

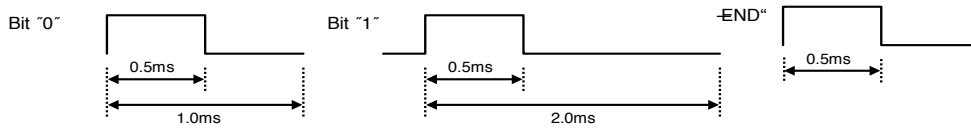


Carrier frequency = 40KHz
Duty ratio = $T1/Tc = 1/3$

- Configuration of Frame
1st frame

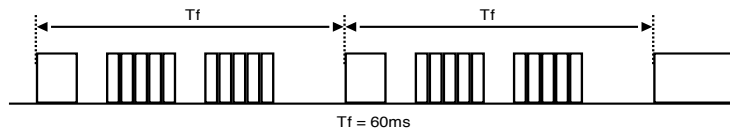


- Bit Description

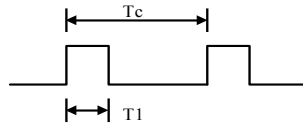


- Frame Interval : Tf

The waveform is transmitted as long as a key is depressed



CELADON	FORMAT: MATSUSHITA INFRARED PROTOCOL	REV.1
	Description: MN6014-C5D6	



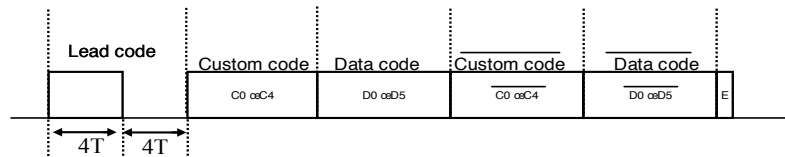
Carrier frequency = 56.8KHz

Duty ratio = $T_1/T_c = 1/3$

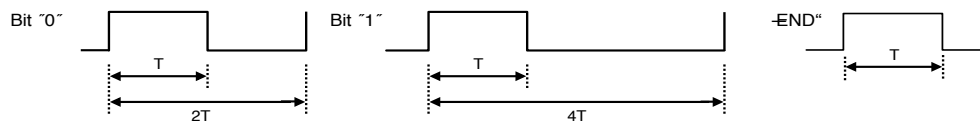
Time Unit = $32T_c = T$

- Configuration of Frame

1st frame

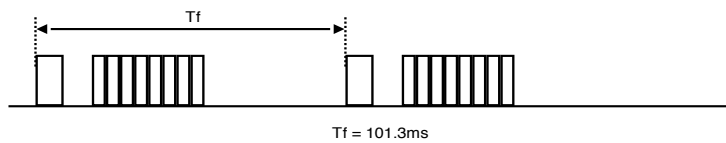


- Bit Description



- Frame Interval : Tf

The waveform is transmitted as long as a key is depressed



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