

**Remote Control Code
for MULTEOS M40/M46
LCD4020/4620**

This document describes Remote Control Code for M40/46 and LCD4020/4620, and the specification of the remote controls RU-M111 and RU-M112.

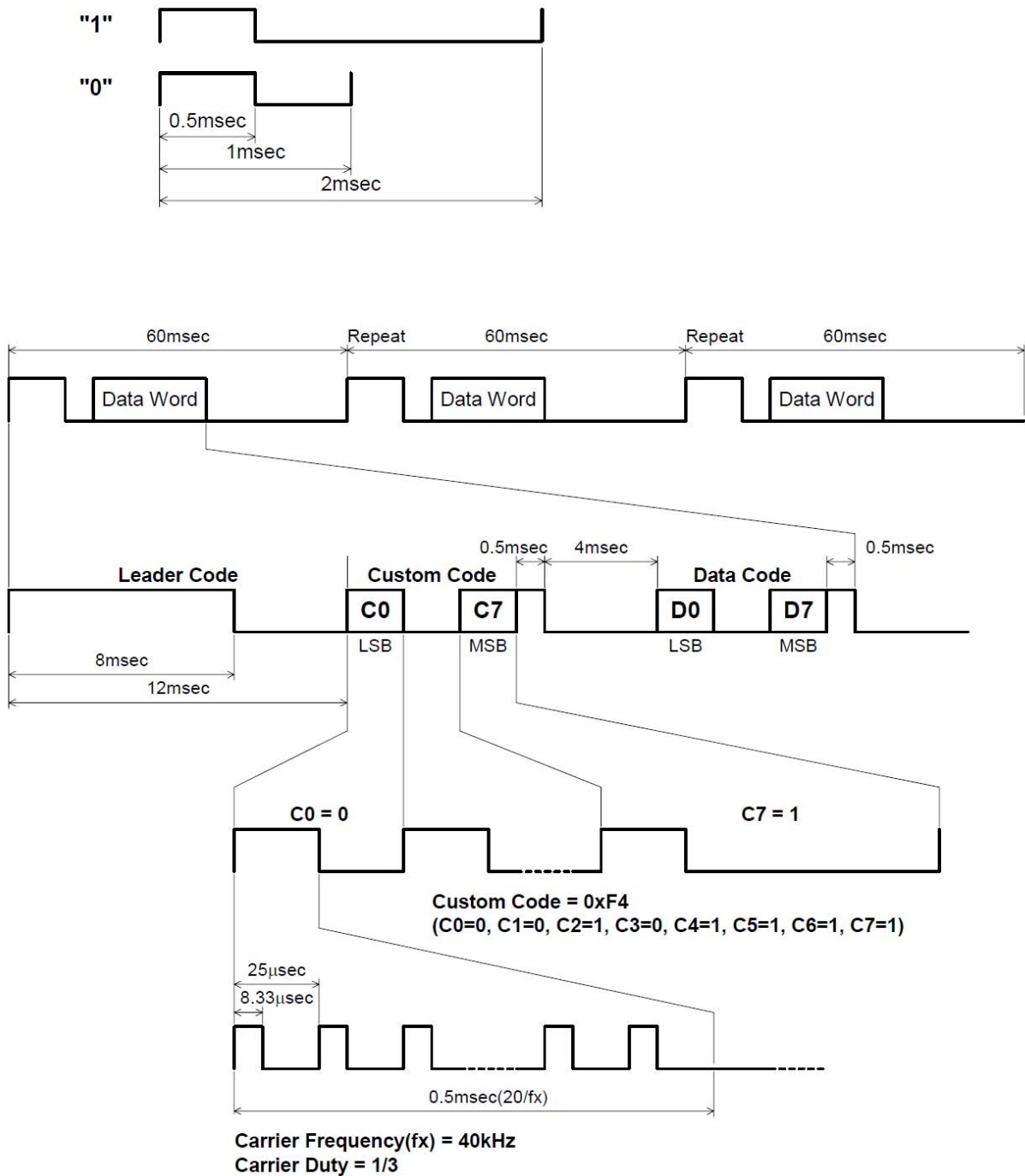
RU-M111 is for M40 BK, M46 BK, LCD4020 BK, LCD4620 BK.

RU-M112 is for M40 IT, M46 IT, LCD4020 IT, LCD4620 IT.

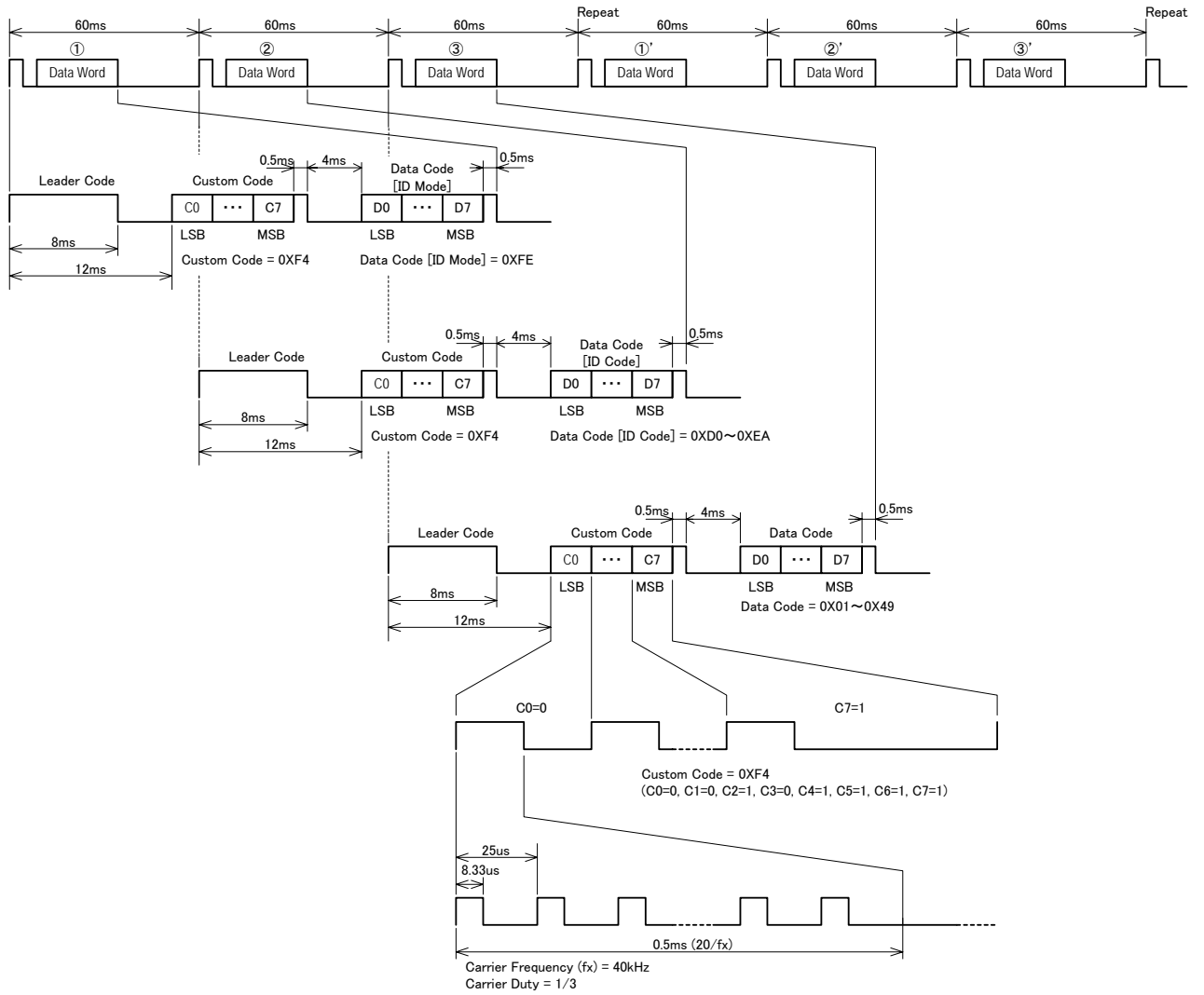
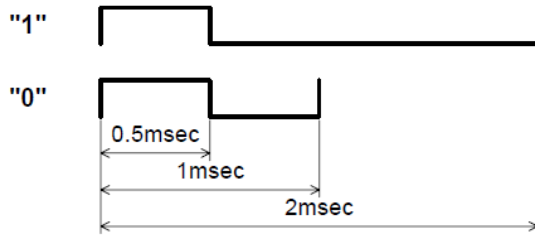
1. Remote Control Specification

RU-M111 and RU-M112 have two modes (Normal mode and ID mode).


1.1 Normal Mode



1.2 ID Mode



2. Remote Control Data Code

Button	Data Code	Function
POWER	03H	Switched the power on/off.
GUIDE	34H	Display TV program guide.
DVI	2DH	Select [DVI].
VGA	04H	Select [VGA].
RGB/HV	2EH	Select [RGB/HV].
OPTION	39H	Select [OPTION].
HDMI	42H	Select [HDMI].
DVD/HD	31H	Select [DVD/HD].
VIDEO	06H	Select [VIDEO] or [S-VIDEO].
TV	05H	Select [TV].
PICTURE MODE	1DH	Select from picture mode, [HIGHBRIGHT],[STANDARD],[sRGB],[CINEMA].
SIZE	29H	Select picture size, [FULL], [NORMAL], [WIDE], [ZOOM].
SOUND	43H	Artificial surround.
AUDIO INPUT	1EH	Select from input audio signal [IN1], [IN2], [IN3], [HDMI], [TV].
1	08H	Input "1". Press to set and change passwords and set REMOTE ID.
2	09H	Input "2".
3	0AH	Input "3".
4	0BH	Input "4".
5	0CH	Input "5".
6	0DH	Input "6".
7	0EH	Input "7".
8	0FH	Input "8".
9	10H	Input "9".
0	12H	Input "0".
- (HYPHEN)	44H	Input "-".
ENT	45H	Sets channels.
DISPLAY	19H	Turns on/off the information OSM.
MENU	20H	Turns on/off the menu mode.
AUTO SET UP	1CH	Enters auto setup menu.
EXIT	1FH	Turns to previous menu with OSM menu.
▲	15H	Acts as ▲ button to move the highlighted area up to select OSM menu.
▼	14H	Acts as ▼ button to move the highlighted area down to select OSM menu.
-	21H	Decreases the adjustment with OSM menu.
+	22H	Increases the adjustment with OSM menu.
SET	23H	Makes selection.
VOL +	17H	Increases audio output level.
VOL -	16H	Decreases audio output level.
CH +	33H	Move channel up.
CH -	32H	Move channel down.
CH RTN	2AH	Returns to previous channel.
MUTE	1BH	Turns on/off mute function.
STILL-ON/OFF	27H	Turns on/off still picture mode.
STILL-CAPTURE	28H	Captures still picture.
	2CH	Select Teletext or Closed Caption.
PIP-ON/OFF	24H	Toggles switches between PIP, POP, side-by-side (aspect / full).
PIP-INPUT	25H	Selects the "picture in picture" input signal.
PIP-CHANGE	26H	Replaces to the main picture and sub picture.
REMOTE ID-SET	46H	Activates REMOTE ID function (SET).
REMOTE ID-RESET	— *1	Activates REMOTE ID function (RESET).
MTS	1AH	Multi channel television sound.
SLEEP	18H	Sets power off timer.
TRANSPARENCY +	49H	Determines the level of OSM transparency.
TRANSPARENCY -	48H	Determines the level of OSM transparency.
INPUT +	01H	Cycles through available inputs.
INPUT -	4AH	Cycles through available inputs.
STADN BY *2	4EH	To Stand by from Power on.
POWER ON *2	52H	To Power on from Stand by.

Notes: 1. "REMOTE ID-RESET" is for internal processing of remote control and does not output data code.

Notes: 2. This button doesn't exist on RU-M111 and RU-M112.

3. Remote Control Data Code [ID Code]

This code is used at ID mode.

ID number	Data Code [ID Code]
0 or 00	D0H
1 or 01	D1H
2 or 02	D2H
3 or 03	D3H
4 or 04	D4H
5 or 05	D5H
6 or 06	D6H
7 or 07	D7H
8 or 08	D8H
9 or 09	D9H
10	DAH
11	DBH
12	DCH
13	DDH
14	DEH
15	DFH
16	E0H
17	E1H
18	E2H
19	E3H
20	E4H
21	E5H
22	E6H
23	E7H
24	E8H
25	E9H
26	EAH



RU-M111



RU-M112

4. Remote Control Data Code sending format via DDC/CI and RS-232C

4.1 DDC/CI

S-6Ea-51a-85a-C2a-10a-CodeHa-CodeL-Cnta-CHKa-P

- S : Start condition.
- a : acknowledge.
- CodeH : Remote control data code upper byte (M4x/LCD4x20 always "00").
- CodeL : Remote control data code lower byte (refer the table "Data Code").
- Cnt : Repeat times.
- CHK : Check code.
- P : Stop condition.

4.2 RS-232C ("Message" part)

Header	Message	Check code	Delimiter
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STX-'C'-'2'-'1'-'0'-CodeH (H)-CodeH (L)-CodeL (H)-CodeL (L)-Cnt (H)-Cnt (L)-ETX

'C'-'2'-'1'-'0' (43h, 32h, 31h, 30h): "Remoto-Control Code Control" command.

CodeH (H): Upper part of remote control data code upper byte (M4x/LCD4x20 always '0').

CodeH (L): Lower part of remote control data code upper byte (M4x/LCD4x20 always '0').

CodeL (H): Upper part of remote control data code lower byte (refer the table "Data Code").

CodeL (L): Lower part of remote control data code lower byte (refer the table "Data Code").

Cnt (H) : Upper part of repeat times.

Cnt (L) : Lower part of repeat times.