

To our customers,

Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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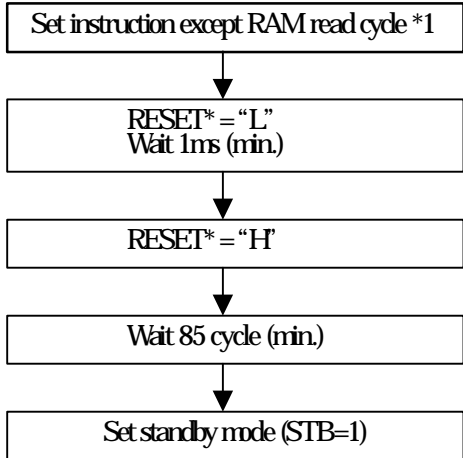
HITACHI SEMICONDUCTOR TECHNICAL UPDATE

| | | | |
|---------------------|---|----------------|---------------|
| DATE | 8 February 2000 | No. | TN-PLC-346A/E |
| THEME | HD66732 Procedure for setting Standby/Sleep/Display off mode. | | |
| CLASSIFICATION | <input type="checkbox"/> Spec. Change <input checked="" type="checkbox"/> Limitation on Use <input type="checkbox"/> Supplement of Documents | | |
| PRODUCT NAME | HD66732 series, HCD66732 series, HWD66732 series | | |
| REFERENCE DOCUMENTS | LCD Controller/Driver Data Sheet | Effective Date | Long time |
| | | From | Now |

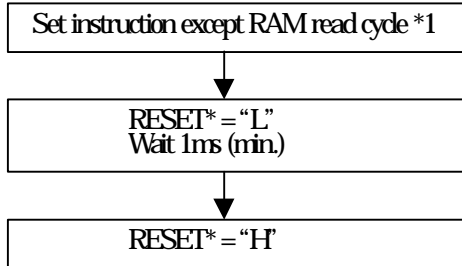
Follow the next procedure when you set standby/sleep/display off mode.

1. Serial interface

i) Standby mode

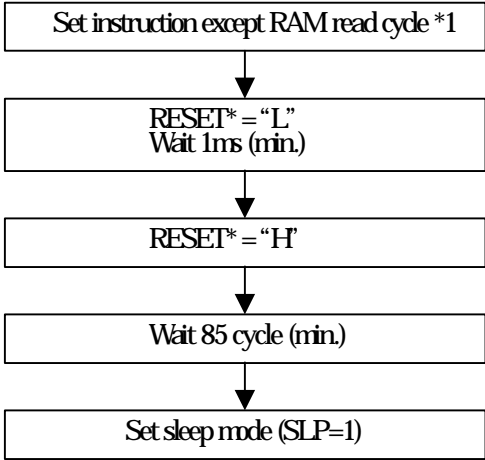


iii) Display off mode (DC=DS=0)



*1 RAM : DDRAM, CGRAM and SEGRAM

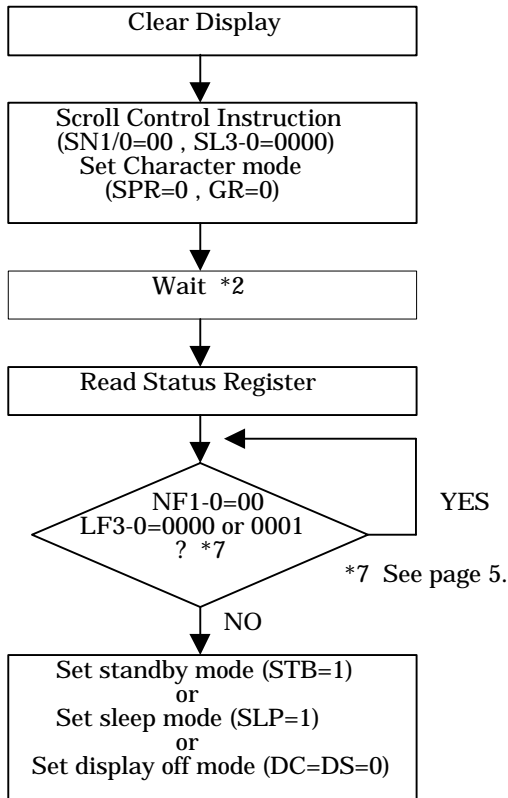
ii) Sleep mode



2. 8/4 bit bus interface

Following procedure is also possible for the 4/8-bit bus interface mode by instruction set.

i) Drive Duty Ratio : 1/54

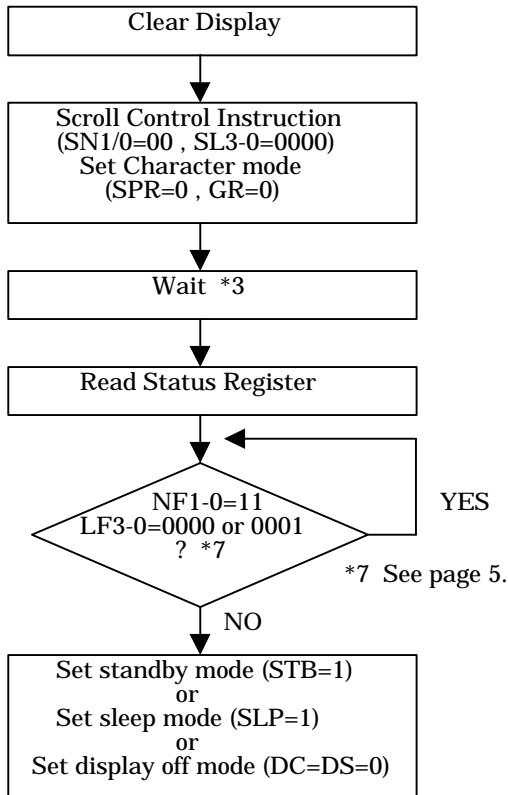


*2

Table2 Wait time (min.) (clock)

| Number of Display characters | 6 | 8 | 10 |
|------------------------------|------|------|------|
| Wait time | 1296 | 1728 | 2160 |

ii) Drive Duty Ratio : 1/41

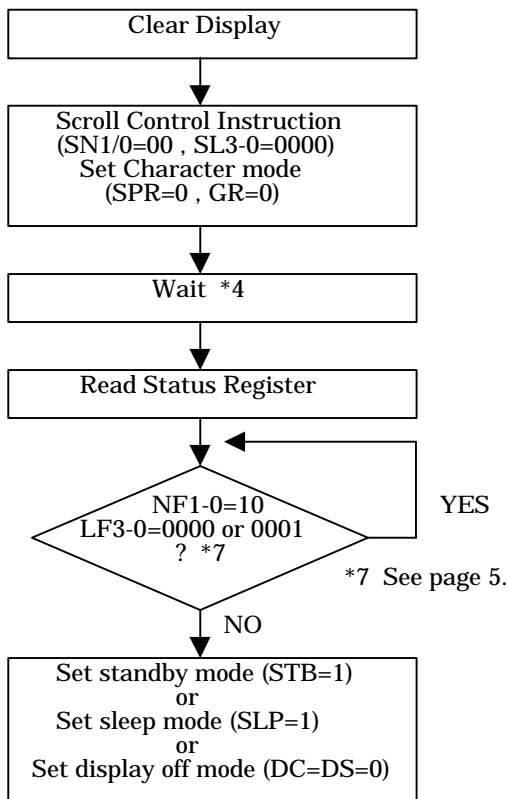


*3

Table3 Wait time (min.) (clock)

| Number of Display characters | 6 | 8 | 10 |
|------------------------------|------|------|------|
| Wait time | 1312 | 1640 | 2132 |

iii) Drive Duty Ratio : 1/28



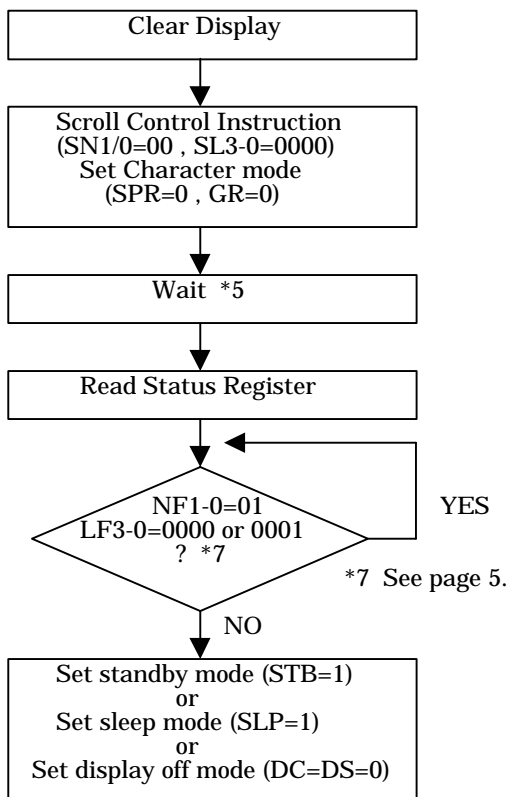
*4

Table4 Wait time (min.) (clock)

| Number of Display characters | 6 | 8 | 10 |
|------------------------------|------|------|------|
| Wait time | 1232 | 1680 | 2128 |

*7 See page 5.

iv) Drive Duty Ratio : 1/15



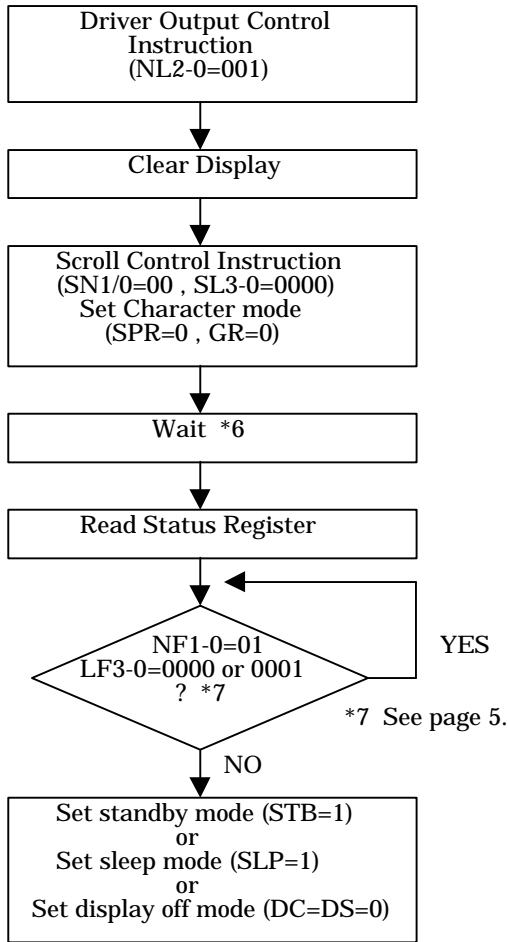
*5

Table5 Wait time (min.) (clock)

| Number of Display characters | 6 | 8 | 10 |
|------------------------------|------|------|------|
| Wait time | 1260 | 1680 | 2160 |

*7 See page 5.

v) Drive Duty Ratio : 1/2



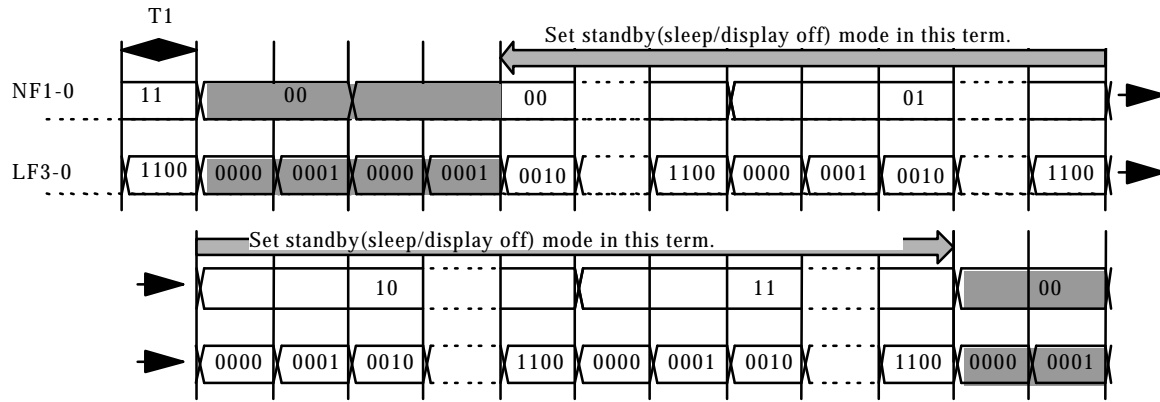
*6

Table6 Wait time (min.) (clock)

| Number of Display characters | 6 | 8 | 10 |
|------------------------------|------|------|------|
| Wait time | 1280 | 1712 | 2168 |

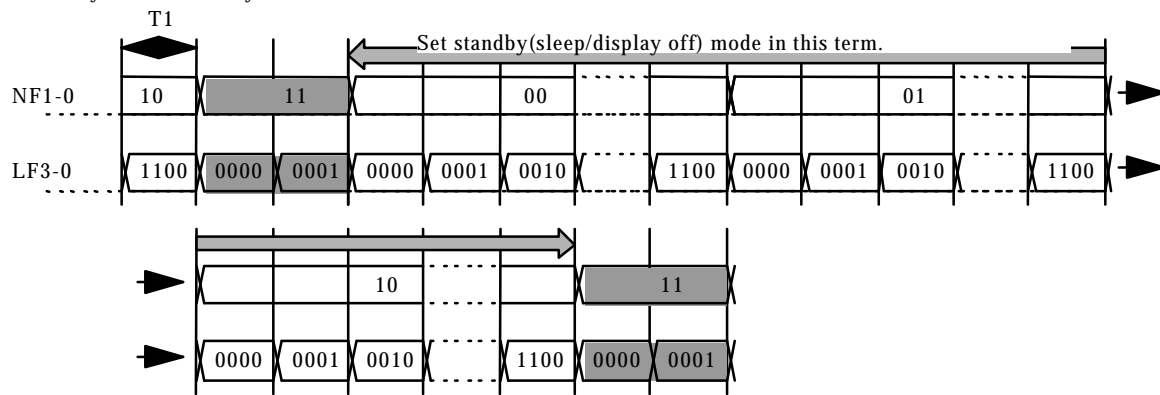
*7 See page 5.

● Drive duty ratio : 1/54duty



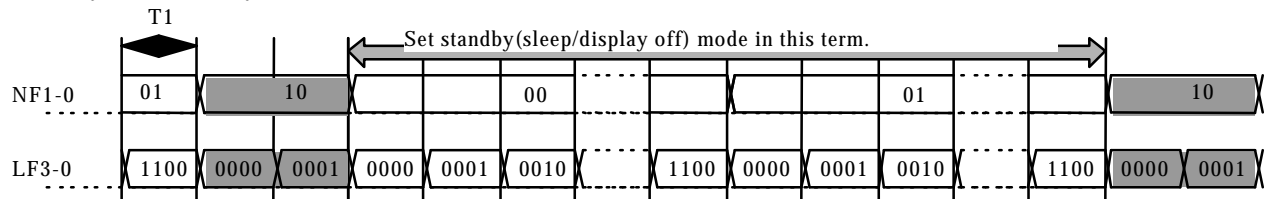
| | | | |
|------------------------------|----|----|----|
| Number of display characters | 6 | 8 | 10 |
| T1 (clock) | 12 | 16 | 20 |

● Drive duty ratio : 1/41duty



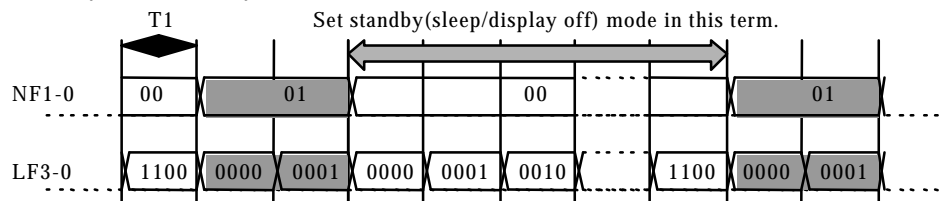
| | | | |
|------------------------------|----|----|----|
| Number of display characters | 6 | 8 | 10 |
| T1 (clock) | 16 | 20 | 26 |

● Drive duty ratio : 1/28duty



| | | | |
|------------------------------|----|----|----|
| Number of display characters | 6 | 8 | 10 |
| T1 (clock) | 22 | 30 | 38 |

● Drive duty ratio : 1/15duty



| | | | |
|------------------------------|----|----|----|
| Number of display characters | 6 | 8 | 10 |
| T1 (clock) | 42 | 56 | 72 |