



# **MT28A3400**

## **DATA SHEET**

**Macro Technology Ltd.**  
**Technical Marketing Dept.**  
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### ⇒ Description

MT28A3400 is an remote control transmitter build in LCD driver with CMOS Technology which is designed for general purpose of Air-conditioner. The device consists the MACRO-SURC core for Air-conditioner.

### ⇒ Features

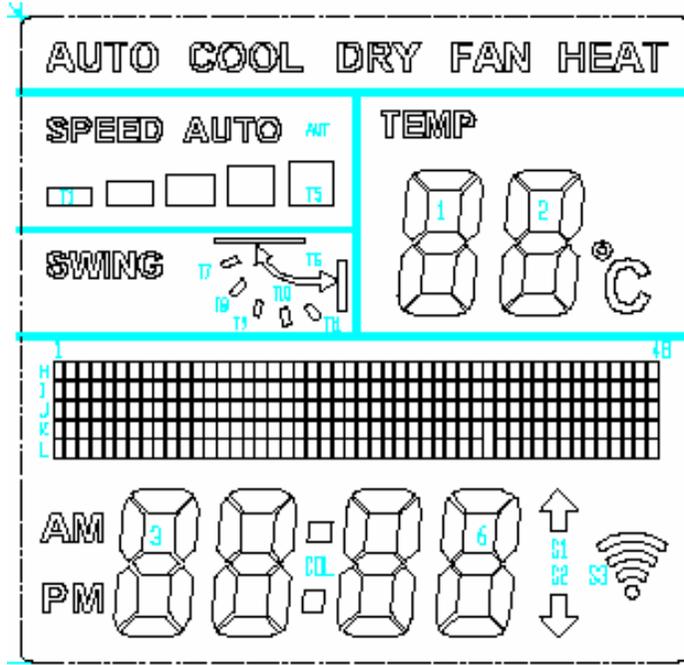
- CMOS Technology With Low Power Consumption
- 2.4-5.0V Operating Voltage.
- Build in LCD Driver with MACRO-SURC core support up to 400 different models of air-conditioner.
- 5\*5 dots matrix character
- Power On/Off with Cool, Heat, Dry, Fan and Auto Modes.
- Temperature control, range from 18 °C – 30 °C and Auto Mode.
- 3 steps Fan Speed Control and Auto Fan Speed Mode.
- Swing and Natural Air Flow Control Function.
- Power On/Off Function.
- Auto Backlight
- Power Saving Mode(4 types)
- Three Air-conditioner Device Keys.
- Calendar Feature
- EEPROM data backup

### ⇒ Application

Universal Air-Conditioners remote controller.



⇒ LCD Display





## **Basic Function**

### **1. Key function (14 key)**

- POWER: Power On or Off
- MODE: Select Auto, Cool, Dry, Fan or Heat.
- SPEED: Select Auto, Low, Medium, High
- AUTO: Swing auto, off
- SWING: Swing direction (S1-S5)
- ▲: Temperature up (Max. 30C). At the setup mode, the code will increase.
- ▼: Temperature down (Min. 18C), At the setup mode, the code will decrease.
- SET: Enter the Setup Mode
- CH+: At the setup mode, the code will increase.
- CH-: At the setup mode, the code will decrease.
- LIGHT: Enable the backlight function.
- Three Device Keys: AIR\_CON1, AIR\_CON2, AIR\_CON3.
- PS Mode: Select 4 type of Power Saving Mode.

### **2. Backlight**

- Press any key to enable the backlight
- If no key be pressed, it will turn off within 5 seconds.
- If you press the backlight key [LIGHT], it will enable the backlight. If you press again, it will disable the backlight function.

### **3. EEPROM**

- It will backup the code on the remote even if no battery..
- It can store 40 characters for Open Greeting. Setup by factory.
- Character including A-Z, 0-9, # ! ( ) + - , / : ; < = > ? @ [ ] \ and space.
- EEPROM content format, it should be referred to EEPROM file.



## Operation Step

### **A. Normal Mode**

1. Power ON display [AIR\_CON1/ AM 12:00]
2. It will show the transmission icon if the key which content data be pressed.
3. No key be press over 15 seconds, it will enter the Sleep Mode

### **B. Sleep Mode**

1. If no key be pressed over 15 seconds at the Normal Mode, it will enter Sleep Mode.
2. It will show the Date & Time.
3. Press **[Down]** key for display Year & Weekday.
4. At the Sleep Mode, you can press SET key for entering setup mode.

### **C. CALENDAR AND TIME SETTING**

1. At the Time Mode or Sleep Mode.
2. Press and hold **[SET]** Key for 3", it will show "SETUP" and flash twice.
3. The digits of **Year** will be flashing. Press **[Up]** or **[Down]** to adjust Year. Press **SET** Key to save the Year and then the digits of **Month** will be flashing. And then setup Day, Hour, Minute, etc. Press **[Up]** or **[Down]** to adjust the number. After pressing the **[SET]** key to store the data and exit the Setting Mode.

Note:

- For 12/24 hour, you can select AM 12:00, or 00:00.
- You can press and hold the [Up] or [Down] key for fast selecting.
- If no key be press over 10 seconds, it will exit the SETUP mode.



### D. Pre-code SETUP

1. Press and hold [SET] key for 3 seconds, it will show “SETUP” and flash twice.
2. Then it will show PRE-CODE. You can use the Up or Down key to select AUTO, PS MODE or RESET. You press and release the [SET] key to select the PRE-CODE setup menu.
3. The code number will flash, you can use the  $\blacktriangledown$  /CH+ or  $\blacktriangleup$  /CH- for adjust the code which you want. (You can see the code table for your device’s brand name.)
4. One Code you select, Power Code will send out automatically.
5. Press and release the [SET] key for store the setting.

Note:

- If no key be pressed over 15 seconds, it will exit the setup mode.
- If you press and hold the  $\blacktriangledown$  /CH+ or  $\blacktriangleup$  /CH-, it will fast increase or decrease.

### E. Auto Search SETUP

- Press and hold [SET] key for 3 seconds, it will show “SETUP” and flash twice.
- Then it will show PRE-CODE. You can use the Up or Down key to select AUTO, PS MODE or RESET. You press and release the [SET] key to select the AUTO setup menu.
- The code number of the Device will be flashing on the LCD.
- Press and release the CH+/ $\blacktriangledown$ , it will start the auto searching.
- If you press and release the CH-/ $\blacktriangleup$ , it will change the searching direction.
- At any code be shown, it will send the relative code POWER.
- After searching the corrected **CODE**, press [SET] Key to save the **CODE**. It will show OK and exit the setup mode.

Note :

1. If no key on your remote is pressed over 30 seconds, the programming process will stop automatically, and you will have to start over.
2. If LCD don’t flash on the setting mode, it stands for exit the setting mode.



### **F. Power Saving Mode**

1. Press and hold [SET] key for 3 seconds, it will show “SETUP” and flash twice.
2. Then it will show PRE-CODE. You can use the Up or Down key to select AUTO, PS MODE or RESET. You press and release the [SET] key to select the PS MODE setup menu.
3. It will show “STYLE1”, you can use the Up/CH+ or Down/CH- for to select STYLE2, STYLE3, or STYLE4.
4. After selecting 1/2/3/4, press and release the [SET] key for store the setting.

OR

1. Press and hold the [PS MODE] key for 3” at the normal mode.
2. It will show “STYLE1”, you can select 1/2/3/4 and press [SET] for store.

Note:

- If no key be pressed over 15 seconds, it will exit the setup mode.
- After setting this mode, you cannot press any key except BACKLIGHT. Otherwise, it will cancel this function.
- After setting this mode, it cannot enter the sleep mode.
- Swing is defaulted for Auto, Fan speed is medium.



**Version History**

DATE	VERSION	DESCRIPTION	REMARK
05-2006	V1.00	ORIGINAL	
07-2006	V1.10	ADD LCD DISPLAY INFO	

**Macro Technology Sales Network**

**Macro Technology Ltd.**  
**Rm. A5, 4/F, Sheung Shui Plaza, 3 Ka Fu Close,**  
**Sheung Shui, Hong Kong**  
**Tel: (852)2639 9800, 2639 9377      Fax: (852)2639 9733**  
**Email: sales@macro-technology.com.hk**  
**ShenZhen Office**  
**Tel: (755)8213 0160, 2588 0054      Fax: (755)8213 0161**  
**Email: macrotech@21cn.com**