

Keypad-M540L-Product Functional Specifications

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1. Product Appearance



LED light status indications:

- (1) Red light flashes slowly (once every 2 seconds): keypad is off line.
- (2) Green light flashes in medium speed (once a second): keypad is online and in standby mode.
- (3) Red light flashes once: single tap on a button.
- (4) Green light flashes in high speed (5 times a second): start to enable some feedback function.
- (5) Green light flashes fairly fast (twice a second): starting the response status after press.
- (6) Long bright green light: the keypad data has been submitted.
- (7) Green light flashes slowly (once every 2 seconds): low battery.

2. Feedback Functions

2.1 Turn on/off

- Press [OK] to turn it on.
- Auto power off as per time set in software.

2.2 Sign-in

- Press [OK] to sign in.

2.3 Single choice

- Max choose 1 from 6 options.
- Two submission modes: automatically submit or press [OK] to submit.

2.4 Multiple choice

- Max choose 6 from 6 options.
- Press [OK] to submit after entering your choices.
- Set following function modes as per your onsite demands:
 - (1) Reserve sequence: enable it to keep your original input sequence ;
 - (2) Option limits: enable it to limit the maximum number of options input;
 - (3) Force choosing: enable it to submit only after selecting the specified number of options;
 - (4) Repeat choosing: enable it to repeatedly input the same option.

2.5 Priority ranking

- Max support 6 options of random sequence, when option format in software is alphabetic, buttons 1~6 indicate A~E respectively.

2.6 Software & Functions

Software/Function	Sign-in	Group	Single Choice	Multiple Choice	Priority Ranking
ARS PPT	Press OK	YES	1 out of 6 options	6 out of 6 options	YES

3. Management Functions

3.1 Base station match

- New keypad should match to the specified base station before use to avoid it being reused and added randomly.
- The matched keypad and base station can be identified automatically when used as a whole set without matching them again.

3.2 ID number

3.2.1 Set ID number

- Keypads have to be numbered to assure the uniqueness of voting data.
- Set numbers in two modes: separately (for small quantity of keypads) and in batches (for large number of keypads).

3.2.2 Modify ID number

- ID number will be kept automatically after setting. If you want to modify it, it will be in the same way as number setting.

3.2.3 Check ID number

- Check keypad ID through software.

3.3 Change channel automatically

- After changing the base station channel, keypads can find the matched base station again in about 20 seconds and automatically communicate with it.

3.5 Status indication

- Submission status indication;
- Low power indication (The keypad will display low battery by LED light).

Note: Unable to detect low battery via software.

3.6 Modify the voting method

- Enable it in software to allow the user to modify the submitted results and then resubmit.

3.7 Remotely power off

- All keypads can be powered off through remote command from Base stations.

4. Specifications

4.1 Enclosure

- Material: ABS plastics
- Dimensions: 101mm × 45mm × 22mm (L×W×H)
- Weight: 26g (Net weight without battery)
- Color: white

4.2 Keypad ID

- Each wireless keypad has a unique ID number between 1 – 9999.
- The ID number of each keypad is used as its identification evidence as the keypad responds.

- Support multiple base stations operating at the same place simultaneously without interfering with each other.

Note: M40L has no built-in serial number.

4.3 User input

- 6 voting response buttons: 1/A~6/F
- 1 functional operation button: OK for confirmation

4.4 Feedback indication

- A two-color LED light to indicate the status of locking the channel, pressing buttons, low battery and successful submission.

4.5 Communication parameter

- Specific SunVote ARS communication protocol:
 - Once the base station successfully receive the response data, it will return confirmation message and indicate it on the keypad (Green light is on after successful submission).
 - Keypad can auto track and lock the channel of its base station, no need to change it manually.
 - All keypads can be tested online automatically to get their working status information.
- Employs international two way RF 2.4GHz digital communication technology with multiple channels.
- Channels: 32 channels, RF power < 1mW (0 dBm).
- Operation distance: reliable operation within 30-meter radius.
- Speed: the average speed can reach 50 keypads per second with peak speed up to 200 keypads per second.

4.6 Battery parameter

- Battery type: Two AAA batteries
- Battery life (depends on battery quality and brand):
 - 70-hour continuous working time
 - 6-month standby time

4.7 Secondary development support

- Customize the color, logo, keyboard, feedback indicate and operation distance as per customer needs (contact sales for charges, MOQ and other requirements).
- Support completely new SunVote SDK secondary development software kit (contact sales for details).
- Support completely new SunVote SDK TT test tool software.

4.8 Anti-interference parameter

- As per test result, the keypads will not be influenced by communication devices such as phones and phone

jammers.

- If the interference signal of 2.4G devices (such as wireless router) is strong, it is useful to adjust the base station channel. After adjusting, the keypads will auto track the channel identity and switch automatically.

4.9 Keypad removal and management

- Optional carry cases.

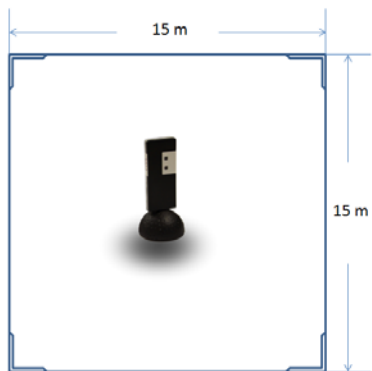
5. System Structure

5.1 Optional (contact sales for more details)

Keypad	Software	Base Station	Applicable Occasions
M40L	ARS PPT Standard Version	EA1200	Suitable for rooms less than 30 meters *30 meters for no more than 150 people

5.2 Typical cases on configurations

- Case 1

	Room size	15 meters * 15 meters
	Seats	Less than 100 people
	Recommended base station	EA1200 * 1pcs
	Spare base station	EA1200 * 1pcs
	Recommended keypad	Number of participants + 2 spares
	Recommended placement of base station	Located anywhere, recommend placing at 1.5 meters high.

6. Service & Support

- Certificate: Contact us for details;
- Warranty: 2 years (limit maintenance, component and manpower).
- Please contact us for details: Sales and agent service: sales@sunvote.com.cn

Technical support service: support@sunvote.com.cn

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15.19 Labelling requirements.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

§ 15.21 Information to user.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

§ 15.105 Information to the user.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.