

[0070] (4) The macro button is provided with the transmission delay function such that the controlled electrical appliances can properly receive the remote control codes corresponding to the macro button.

[0071] Although the present invention has been explained in relation to its preferred embodiment, it is to be understood that many other possible modifications and variations can be made without departing from the spirit and scope of the invention as hereinafter claimed.

What is claimed is:

1. An intelligent touch-type universal remote control comprising:

- a body;
- a touch-type screen arranged on the body;
- an infrared transmitter arranged at a predefined position of the body for transmitting remote control codes;
- an infrared receiver arranged at a predefined position of the body for receiving remote control codes to perform a learning procedure;
- a basic button set arranged on the body; and
- a processing unit arranged in the body, the processing unit having a microprocessor and a memory unit, the microprocessor being connected to the touch-type screen, infrared transmitter, infrared receiver and basic button set, the memory unit being provided to store default remote control codes and control commands,

wherein, the touch-type screen can be activated by operating the basic button set to display a main menu page having a macro button, a previous page button, a next page button, and multiple items, each further corresponding to at least one menu page, for corresponding to various appliances to be controlled, each button being selected simply by touching, and,

wherein the touch-type screen can be activated by operating the basic button set to display a setting menu screen for programming the universal remote control.

2. The intelligent touch-type universal remote control as claimed in claim 1, wherein the basic button set includes a power on button, a power off button, a menu/setting button, a mute/enter button, a channel-up/play button, a channel-down/stop button, a volume/backward button, and a volume/forward button, the menu/setting button being used to activate the touch-type screen to display the main menu and the setting menu.

3. The intelligent touch-type universal remote control as claimed in claim 1, wherein the setting menu has an adjust item for changing the size, position and title of each item on the touch-type screen.

4. The intelligent touch-type universal remote control as claimed in claim 3, wherein the size and position of an item is changed by the steps of:

- touching the item to be changed;
- touching the touch-type screen at a desired position;
- touching the touch-type screen at a diagonal position corresponding to the desired position, so as to define a new position and size for the item; and
- touching the item again, so that the item is moved to the new position with a new size.

5. The intelligent touch-type universal remote control as claimed in claim 3, wherein the title of an item is changed by the steps of:

- entering an edit text mode in which a keyboard pattern is present on the touch-type screen;
- using the previous page button and the next page button to select re-defined characters; and
- pressing the mute/enter button.

6. The intelligent touch-type universal remote control as claimed in claim 1, wherein a channel classification item is positioned under a TV item of the main menu for managing CATV channels, so as to gather channels of the same type together for being controlled by a specific button.

7. The intelligent touch-type universal remote control as claimed in claim 6, wherein the channel classification function is performed by the steps of:

- selecting a desired classification type; and
- entering channel identification numerals corresponding to the desired classification type for being stored.

8. The intelligent touch-type universal remote control as claimed in claim 1, wherein the setting menu has a timer item for providing a remote timer control capability.

9. The intelligent touch-type universal remote control as claimed in claim 1, wherein the setting menu has a program item for selecting an automatic learning procedure, which includes:

- an automatic button assignment step in which the universal remote controller automatically assigns a button to be programmed;
- a first determination step for determining whether the assigned button is going to be programmed, and whether a remote control code is entered;
- a calculation step for determining the carrier frequency and cycle of the entered remote control code;
- an analysis/storage step to analyze the data type and cycle of the remote control code for being compressed and stored; and
- a second determination step for determining whether the remote control code is terminated in transmission.

10. The intelligent touch-type universal remote control as claimed in claim 1, wherein the setting menu has a program item for selecting an automatic searching procedure, which includes:

- a remote control code determination step to determine whether there is a remote control code input;
- a comparing value generation step in which the universal remote control automatically learns data of the remote control code so as to generate comparing value;
- an automatic comparing step to compare the comparing value and the default remote control codes, and determine whether there is a same remote control code in the universal remote control;

a prompt and test step for displaying a message to notify the user to test a learned remote control code and confirm its correctness; and

a storage procedure for writing the confirmed default remote control code into a specific location of the memory unit.

11. The intelligent touch-type universal remote control as claimed in claim 9, wherein the setting menu has a duplicate