Programming Options

How to Program Alpha™ and Beta-Brite® LED Displays

There are three basic ways to program messages into the Alpha and Beta-Brite LED Displays (also called "signs" or "readerboards").

1.   Keyboard -- Every unit is shipped with an Infrared Remote Keyboard for programming messages.

2.   Software -- Several message editing computer programs are available (see **AlphaNET** brochure). If you are a programmer, a <u>Protocol Manual</u> is also available, and you have the option of writing your sign software.

3.   Message Loader -- This device stores and transmits messages to a sign.

The Keyboard, Software and Message Loader can be used together in various combinations. The paragraphs that follow describe briefly how they are used alone and how they can be used in conjunction with each other.

1.   **Infrared Remote Keyboard**

   Alpha and Beta-Brite LED Displays come with a battery-operated Infrared Remote Keyboard. This keyboard can be used to type messages and to invoke the special features that are built into the signs. These features include: 25 display modes, a choice of character fonts and sizes, various animation options, and message colors (if your display has multiple colors). You can also use the keyboard to create dot picture graphics, to set specific start and stop times for your messages, to insert a time of day code into your messages, and to specify the play sequence of each of the messages.

Requirements:	The Infrared Remote Keyboard and Keyboard Programming Manual.
Advantages:	Low cost; no wiring between signs; no computer and no phone equipment required.
Disadvantages:	Typing on the Infrared Remote Keyboard is somewhat tedious and time-consuming. The longer the message is, the slower editing becomes. Messages can be easily lost if a mistake is made by the programmer. Messages have to be retyped if they are lost. Messages have to be typed into each sign.

2.   **Software** -- *AlphaNet*™, *AlphaNET* **Plus**™ *AlphaNet* **Plus II**™ *AlphaNet* **Plus** *for Windows*™ or a similar program.

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A message editing program and the use of a personal computer greatly simplify the task of creating attractive messages. The message editing programs have pull-down menus that simplify selecting readerboard features -- display modes, fonts, preprogrammed animations, user-designed graphics, multiple colors, time of day, etc. The messages may be transmitted directly into your sign, or they may be transmitted to a Message Loader. If you notice a mistake in a message, or if you decide to make a change, the message may be easily retrieved from disk, edited and re-transmitted to the readerboard(s).

Requirements: A message editing program and an inexpensive computer that has a Serial port. An RS-232 cable is required when one sign or Message Loader is being programmed. RS-485 hardware and cabling between each of the signs are required when multiple signs are being programmed.

Advantages: Editing software is very easy to use. There is no editing delay, regardless of the length of the message. New messages may be created using the format of previously designed and saved messages. Messages are created much faster. Messages only have to be typed once, not once for each sign. Messages are rarely lost by making a mistake. If signs are connected, all signs may be programmed without leaving your desk.

Disadvantages: This option is more expensive than the Infrared Remote Keyboard option. Software programs start at $50. An RS-232 cable is $28. RS-485 components add about $113. The computer will cost at least $300, or you may use an existing computer. The computer is only required during message editing and transmission. Once the message is transmitted to the readerboard's memory, it displays automatically. Connectivity between the computer and sign(s) can also be a disadvantage to using the software option when installing cabling is difficult or impossible.

3.   **Message Loader**

The Message Loader is a portable battery-operated device with three message storage buffers. This enables it to store up to three different sets of messages at once. There are two ways to load messages into the Message Loader – from a computer or from a sign.

A.   From A Computer

Use one of the software programs described in **2.** above to prepare the message(s). Connect the Message Loader to the computer's Serial Port using a special RS-232 adapter and RS-232 modular cable. Use the software program to transmit the message(s) into the Message Loader.

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B.   From A Sign

Use the Infrared Remote Keyboard described in **1.** above to input the message(s) into a sign. Connect the Message Loader to the sign's RS-232 port using the cable that is provided with the Message Loader. Follow the directions on the Message Loader to copy the message(s) from the sign into the Message Loader.

Once the messages have been copied into the Message Loader by either method, the stored message(s) can be transmitted (copied) by infrared (wireless) from the Message Loader into another sign.

Question: Can the Message Loader create a message?

Answer: No. Messages are not created by the Message Loader, since the Message Loader has neither a keyboard nor a screen. The message(s) must first be typed into a sign using the Infrared Remote Keyboard or using a message editor program running on a computer. Messages can be copied from the sign into the Message Loader, or they may be transmitted from a message editor program into the Message Loader. The message could also be transmitted from a message editor program into a sign and then copied from the sign into the Message Loader.

Requirements: A Message Loader, its sign cable and an Infrared Remote Keyboard (Cost $179); or a Message Loader, message editing software, and an RS-232 Serial Port Adapter and RS-232 Modular Cable (Cost from $257 to $456, depending on the message editing program used)

Advantages: Programming the second and subsequent signs with the same messages as those in the first sign is as simple as touching a button. Messages only have to be typed once, not once for each sign. The Message Loader can store up to three different sets of messages. No cabling is required between signs. Once a message is stored in the Message Loader, it is less likely to be lost by making a mistake. The Message Loader is a good option when your signs cannot be connected together in a local sign network due to the physical characteristics of the building or buildings in which the signs are located, or when connecting the signs via modem and phone line is not possible or is cost prohibitive. The Message Loader can be carried easily in a briefcase or pocket and can be used to program signs on public transportation or in remote locations.

Disadvantages: You must walk from sign to sign to program each one with the Message Loader. Signs must be programmed with exactly the same messages that have been copied into the Message Loader from another sign or from message editing software. However, the Infrared Remote Keyboard can be used to edit the messages in the sign once they have been copied from the Message Loader into the sign.

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