EGV+/9B

KB2

Electronic Keyer

User Manual

Last update: March 01 2023

ea3gcy@gmail.com

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KB2 KEYER

The EGV-9B electronic keyer is the "KB2" chip which is the same chip used by the "KB-2 CW keyer / beacon" kit (www.ea3gcy.com). Therefore, the functions and characteristics of the CW keyer for the EGV-9B are the same as the KB-2 kit.

Note: For the first tests, you may prefer to use a straight key or a simple switch. See the "Straight Key function" paragraph at the end of this chapter.

PLEASE READ THOROUGHLY ALL THE FUNCTION'S MANUAL AT LEAST ONCE BEFORE YOU START USING IT.

NORMAL OPERATION:

Conventions
- When we enter a command, the keyer will respond with "R" (except in the commands that invert the current state, actual "A", "D", "K", "L".
- It will also respond with "R" when we send a digit and do not wait for anything else (example: the message number in the "B" command.
- When the keyer receives a digit that he does not understand or that is not what he expects at that moment, he will respond with "NO".
- The commands and letters or numbers input to programming are always entered with keyer in mode A.
- All commands that make an inversion of the state of a function, if the activation occurs, the keyer responds with "Y" (Yes) and if the deactivation occurs it responds with "N" (No).

Messages playback
The playback is very comfortable and effective, but you should carefully follow the procedure indicated below. Once you have practiced a few times, you will see be extremely simple.

Message 1
Press the CMD button for <1 second. The keyer transmits the message M1.

Message 2
First, press and hold CMD button and before 2 seconds we press and hold the dash paddle, then wait more than >2 seconds. Next, let's release the CMD button first, wait a few moments and then let go of the paddle. Transmission of the M2 message starts.

Message 3
First, press and hold CMD button and before 2 seconds we press and hold the dot paddle, then wait more than >2 seconds. Next, let's release the CMD button first, wait a few moments and then let go of the paddle. Transmission of the M3 message starts.

Message 4
First, press and hold CMD button and before 2 seconds we press and hold both dash and dot paddles, then wait more than >2 seconds. Next, let's release the CMD button first, wait a few moments and then let go of the paddles. Transmission of the M4 message starts.

Stop a message
Press and hold any paddle or CMD button until playback stops.

COMMAND LIST:

Command mode
To enter command mode:
We press the CMD button for more than> 2 seconds until the keyer answers "R" indicating that it waits for command. The keyer waits for 2 seconds for a command to be entered, if nothing is received it sends "NO" and returns to normal keyer mode. If an unknown command is received, it goes out in the same way by sending "NO".

Before entering the letter of the command, you must enter command mode (press CMD until "R" sounds).

"A" Enable/Disable the monitor local tone.
We enter **"A"**. If it was activated, it deactivates it and the keyer sends "N". If it was disabled, will activate it and send "Y".

"B" Indicates which message will act as a beacon.
We program what message the "1", "2", "3" or "4" will act as a beacon.
If we enter "0", no message will act as a beacon.
Enter **"B",** the keyer answers "R". We enter the message number we want to act as a beacon (1, 2, 3 or 4). The keyer will respond with "R".
To stop the playback of a message in Beacon mode:
Press and hold any paddle or CMD button until playback stops.
Related commands: "C", "D"

NOTE: You can use the beacon to repeat a message when working normally. The automatic beacon must be deactivated (command "D") so that it does not activate automatically when the equipment is switched on.

"C" Adjust the time between repetitions of the beacon.
Adjust the time between beacon repeats from 00 to 99 seconds
We enter **"C"** and the keyer responds with "R" and waits for us to enter two numbers from 01 to 99.
Within 2 seconds we have to **enter the first number (tens) and wait for the keyer to respond with an "E"**. Next, we have 2 seconds to **enter the second number (units), then the keyer responds with "R"** and exits the command mode.
Attention: you should always enter two numbers. For example, for 5 seconds you must enter "0" and then "5".

"D" Enable/Disable Automatic Beacon mode.
Enter **"D".** If it was activated, it deactivates it and the keyer sends "N". If it was disabled, will activate it and send "Y".
The Automatic Beacon makes the keyer always work in Beacon mode when it starts up.
For the automatic beacon to work, the "B" command is used with the message that you want to be the beacon and the "C" command with the time between beacon repetitions.

"E" Adjust PPM speed of the keyer with the paddles.
Enter "E", answer with "R" and then with the paddle dash increase the speed and the paddle dot decrease it. To exit, press and release the CMD button, the keyer will respond with "R".

"F" Adjust the Sidetone monitor frequency.
Enter **"F"**, answer "R". The Dash paddle increase frequency and Dot paddle decrease.
To exit, press and release the CMD button.

"K" Change the keyer mode.
Enter **"K"**. If it was in A mode it changes to B mode and vice-versa.
Respond with "A" if mode A is activated or "B" if mode B is activated

"L" Enable/Disable KEY output for tests or practices.
Enter **"L"**. If it was activated, it deactivates it and the keyer sends "N". If it was disabled, will activate it and send "Y".

"P" Paddles swap.
Enter **"P"**. The keyer answer "R" and swap the Dash – Dot paddles or vice-versa.

"R" Record the specified memory.
Recording messages is very convenient and effective, but you should carefully follow the procedure indicated below. Once you have practiced a few times, you will see that it will be extremely simple.
To enter messages, you have to change your usual CW transmitting way and listen carefully to the keyer's response signals. To make it easier for messages enter, it may be a good idea to reduce PMM speed ("E" or "S" commands)

Enter to command mode (press CMD until "R" sounds).
Enter **"R"**, the keyer respond us "R". We enter the memory number we want to record (1, 2, 3 or 4), the keyer responds with "R". Next we will enter the message.
The steps to enter a message are the following:

*1.- Before 2 seconds **we enter a CW** carácter (letter, number or punctuation mark).*
*2.- **We hope it sounds a point (letter "E").***
We will repeat the previous two steps 1 and 2, entering characters until a word ends
…..
When you want to insert a space between words, do not enter anything after hearing the point (E) and wait 2 more seconds until you hear three points (S) and then continue entering the letters of the next word.

When the message is finished, stop entering anything and wait ... You will hear point (E), then the three points (S) and then you will hear "END",

Each message allows the entry of 60 characters including the spaces between words.

"S" Adjusts the speed of keyer transmission in PPM (from 01 to 50)
We enter **"S"** and the keyer responds with "R" and waits for us to enter two numbers from 01 to 50. Within 2 seconds we have to enter the first number (tens) and wait for the keyer to respond with an "E" point. Next, we have 2 seconds to enter the second number (units). Then the keyer responds with "R" and exits the command mode.
Attention: You should always enter two numbers. For example, for 8 PPM you must enter "0" and then "8".

"T" Tune.
Enter **"T",** the keyer respond R and will activate the KEY output. The Dash paddle acts as OFF and the Dot paddle as ON. To exit tune mode, press and release the CMD button

OTHER FUNCTIONS

RESET
The RESET has no command. It is done by connecting the KB-1 power supply while pressing the CMD button. The parameters after the RESET are:

Keyer MODE = Mode B
PPM = 18 words / minute
Keyer Output = Enabled
Monitor = Enabled
Output keyer command monitor = Disabled
Swap Paddles = Normal
Automatic Beacon = Disabled
Monitor Tone frequency = 700Hz
Beacon = Disabled
Beacon interval repetition = 4 segundos
Messages= It maintains the existing ones before the "reset".

Delete a message.
It is unusual for you to need to delete a message, because when you record a new message, the previous message is deleted. However, if you want to leave a message "blank", enter the "R" command and the message number as if you will record a message normally, but do not enter any character in the message and wait to hear "END". That message will be deleted.

Automatic Beacon Function.
The Automatic Beacon makes the keyer always work in beacon mode when it starts up.
This function converts the KB-2 keyer into a universal generator of morse signals for beacon.
To work as Automatic Beacon, you must perform the following steps:

- Record the message destined to Beacon in one of the memories ("R" command).
- Then you must select that message to act as a beacon ("B" command).
- Set the interval time between repetitions ("C" command).
- Activate the Automatic Beacon function ("D" command).
Note: if you do not select Automatic Beacon ("D" command) the beacon will act when you press the CMD button, but it will not start automatically when the keyer is turned ON.
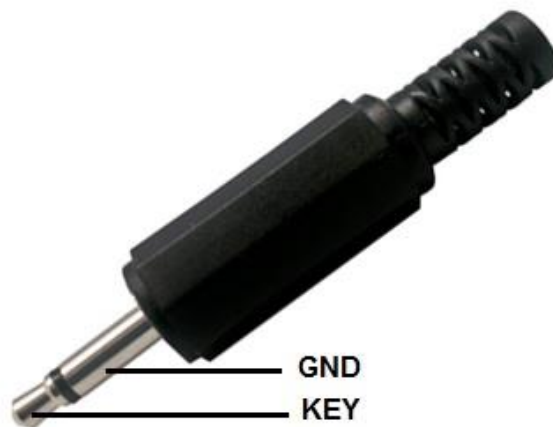
STRAIGHT KEY Function
When the system starts up, it checks the center ring and the tip of the stereo input jack connector, if one of them is connected to GND, then it considers that the other contact will be connected to a straight key.
If you use a mono jack connector, then the center ring will always be GND.
See the following images.

Paddles keyer Jack (stereo)

- GND
- DASH
- DOT

Straight keyer Jack (stereo)

- GND
- GND
- KEY

Straight keyer Jack (mono)

- GND
- KEY

Notes:
- You can program a paddle from a paddle keyer to act as a vertical key simply by holding a paddle tight while power up KB-2 circuit (this setting is not maintained when turning off the power to the KB-2 circuit).
- With a straight vertical key you can't enter commands or program the keyer, so you will need a paddles keyer to enter commands and record messages.
However, you can send # 1message "M1" by pressing CMD. To stop playing the message, press CMD again.