FT-1000MP Memory Keyer Control
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Introduction
After over five years of owning my FT-1000MP MKV, I still hadn't purchased the FH-1
Remote Control Keypad which enables the internal memory keyer functions.  An article
by W8GF (QST February 2000) was of interest to me, as it showed how to inexpensively
build your own keypad.  But I just wasn't interested in a keypad flopping around on my
operating desk.  While recently re-reading the MKV manual, I realized everything I was
missing by not taking advantage of the internal memory keyer.  Since my issue was with
a keypad, I decided to implement the FH-1 with panel-mounted switches.

The Circuit
Refer to Figure 1.  The "Select" pushbutton enables the keyer function selected by the
rotary switch.  "Write" and "Review" pushbutton switches prove memory access.  A
separate toggle switch enables the "Tune" mode, which lets you stay in "Tune" as long as
necessary without having to hold down a momentary button.  I didn't implement the
contest counter "increment/decrement" capability, as I'm not a contester.  However there
are plenty of switch positions left if you wish to do this.  For the required resistors, I used
series combinations of resistors I had in my junk box to get the desired resistor value (the
target resistor values are shown in parenthesis in the schematic).

The Mechanical Design
All the parts are mounted an aluminum box.  I went with a box larger than necessary to
implemented some relay control circuitry for expanded operation of my Butternut vertical
antenna, so your box can be smaller than what I've called out.  To keep the front panel as
clean as possible, I mounted the Radio Shack terminal strips using the ¼" diameter toggle
switch shoulder, rather than a separate mounting screw.  While there is enough area to
drill out the mounting foot of the terminal strip to the required ¼" diameter, this is a little
tricky to do.  However, I use a Harbor Freight 44060-1VGA ($16.99) hand punch for
most of my metal work now-a-days.  This punch has seven common punch sizes ranging
from 8/32" to 5/32" diameter, and works very well.

To get cables in and out of the box, I used a nibbling tool to notch out space for
grommets on the rear panel as shown in photos "Nibbled" and "Back".   Photo "Inside"
shows the internal wiring of the unit.  Also, you can see in photo "Front" that I labeled
the switch position with the specific messages I normally use.  All labeling was done
using Casio XR-9X "black-on-clear" 9mm labeling tape.

Operation
Operation is very simple.  Just select the memory location you want to use with the rotary
switch (the first two are 20-characters maximum, and the last four are 50 characters
maximum).  To load the memories, press "Write" and then "Select" and key in your
message.  Then press "Write" again.  To play back the message without keying the
transmitter, press "Review" and then "Select".  To key the transmitter, just press
"Select".  Finally, to put out a low power CW carrier for tuning or to check VSWR, flip

the right toggle switch to "Tune".  Photo "With Rig" shows the unit mounted under my FT-1000MP MKV.

Conclusion
The FT-1000MP internal memory keyer adds to the ease and flexibility of cw operation. I've described an inexpensive panel-type of control, rather than the keypad normally used.  Spend a few hours building this unit and increase your cw operating enjoyment.

Parts List

| QTY | Description | Source/Part No. | Cost ea. |
|---|---|---|---|
| 1 | 5x2.25x2.25" box | Mouser 537-108P | $7.94 |
| 1 | 1P 12T rotary switch | Mouser 10WW112 | $1.57 |
| 1 | SPDT on/on toggle switch | All Electronics MTS-4 | $1.00 |
| 1 | SPST red PB switch | All Electronics MPB-1 | $0.35 |
| 2 | SPST black PB switch | All Electronics MPB-1B | $0.35 |
| 1 | Knob | All Electronics KNB-165 | $1.35 |
| 1 | Cable/3.5mm plug | All Electronics CB-322 | $0.45 |
| 3 | Grommetts | Mouser 5167-208 | $0.06 |
| 18 | Resistors (as needed) | All Electronics | 10/$0.50 |
| 1 | 5-lug terminal strip | Radio Shack 274-688 | 4/$1.49 |



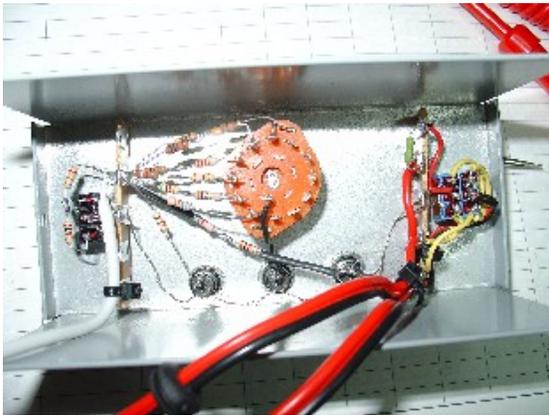Figure 1:  Keyer Control Schematic (target resistor values in parenthesis)
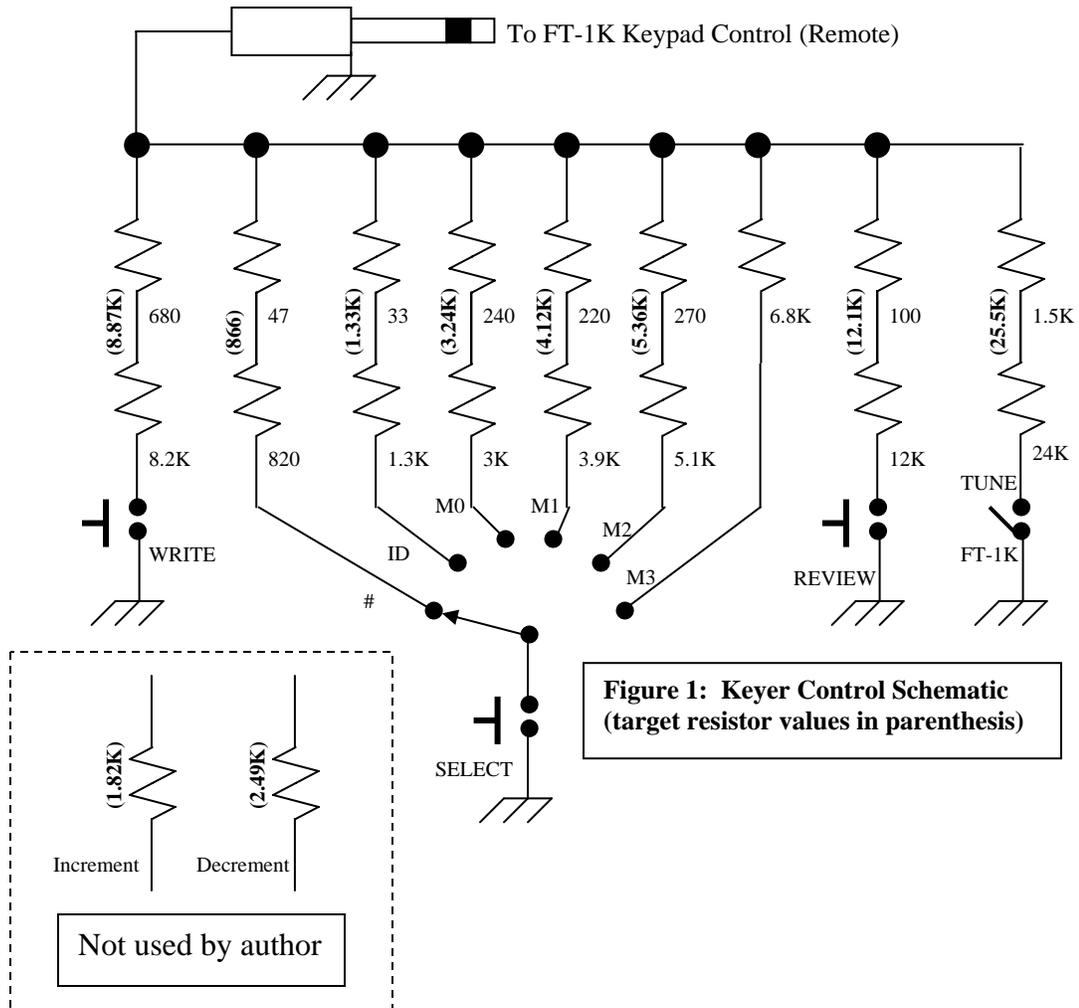
Nibbled


Back, labeled


Inside


Front Panel


Mounted under FT-1K MKV