

FRG7700

MEMORY EXPANSION



John Mills describes a modification to considerably increase the RG7700's memory facilities

Many users of the FRG7700 receiver from Yaesu must have at some time thought of buying the optional memory unit, but may have been dissuaded by the high cost of the Yaesu version. Owners with the unit already fitted will probably have wished for more than the present 12 memory channels. For both of these reasons the author decided to look more closely at the workings of the 'black box' to find a suitable solution.

and bandswitch positions are 'read' and converted into digital data.

2. When the 'memory write' button is selected this data is stored in ICs Q30-35.

3. When 'memory read' is selected, the unit examines the stored data, and using its own internal PLL VFO, it generates the same VFO and frequency band information as was originally manually selected. At the same time, the settings preset on the main VFO and bandswitch are disabled.

The memory ICs used in the unit are 256 x 4 static random access units. Up to 256 data locations are available via the address inputs A10 to A17 (J02). As will be seen from diagram 2, the memory switch S5A/B selects various address combinations up to a max of only 12.

Herein lies the key to this article, replace S5A/B with a 40 way CB type switch and you have instant access to 40 memory channels. Although this does not change the initial purchase

cost of the unit, it does reduce the cost/memory channel from around £7.50 to £2.25.

At this stage the following points should be considered before proceeding further:

1. Extensive dismantling of the Rx is required and
2. Any warranty claims may be invalidated.

Step By Step

To fit the new switch follow the steps carefully and do not miss out any:

1. Disconnect the Rx totally from the AC mains.
2. If a memory unit is fitted remove from the Rx. Take care when removing the plugs, they are all numbered but pull on the body not the wires to remove them.
3. Remove the top/bottom covers. (Disconnect the plug to the backup battery holder).
4. Disconnect all connections to the main PCB — PB2169. Again take care

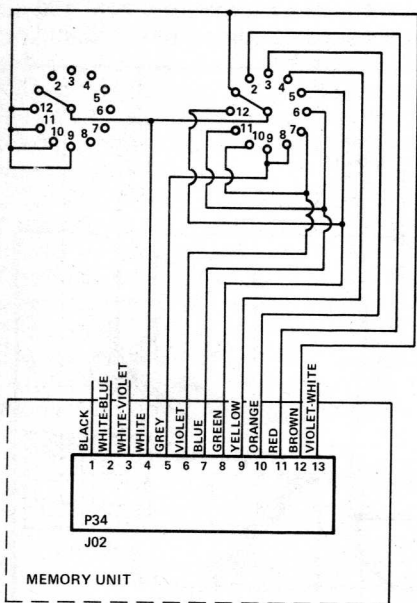


Figure 1: Existing memory switch wiring.

Rx Operations

The FRG7700 is not computer controlled — and this explains the relative complexity of the memory unit. It is not the intention of this article to go into complex electronic descriptions (see the feature published back in December 81/January 82 for more specific details of both the FRG7700 and the Trio R1000), but in essence however operation is as follows:

1. The manually set VFO frequency

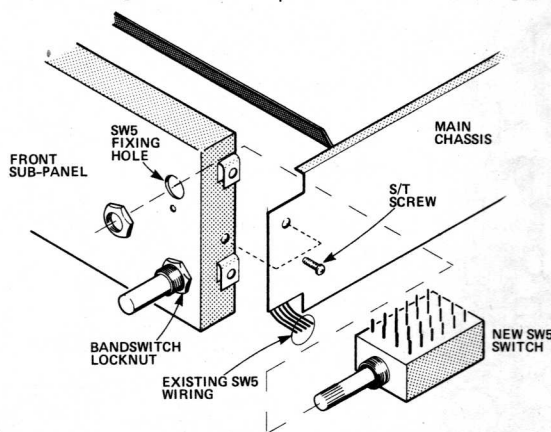
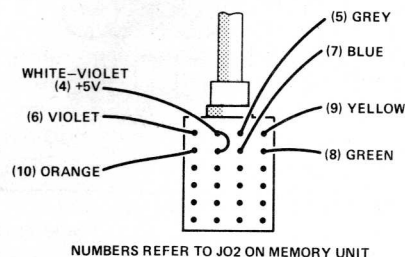


Figure 3: Wiring of new memory switch.

Figure 2: Exploded view of receiver chassis.



NUMBERS REFER TO J02 ON MEMORY UNIT

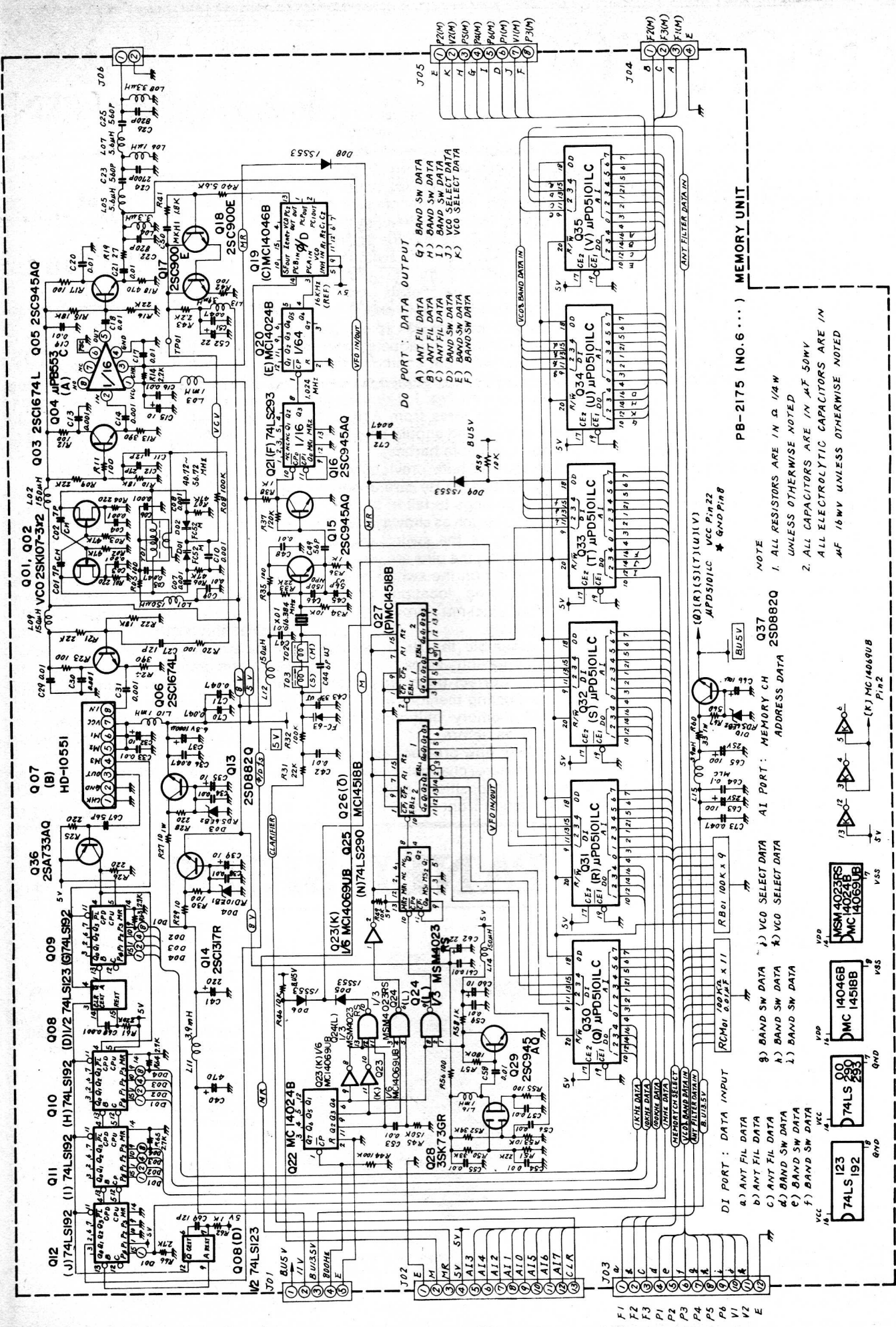


Figure 4: FRG7700 memory expansion unit circuitry.

