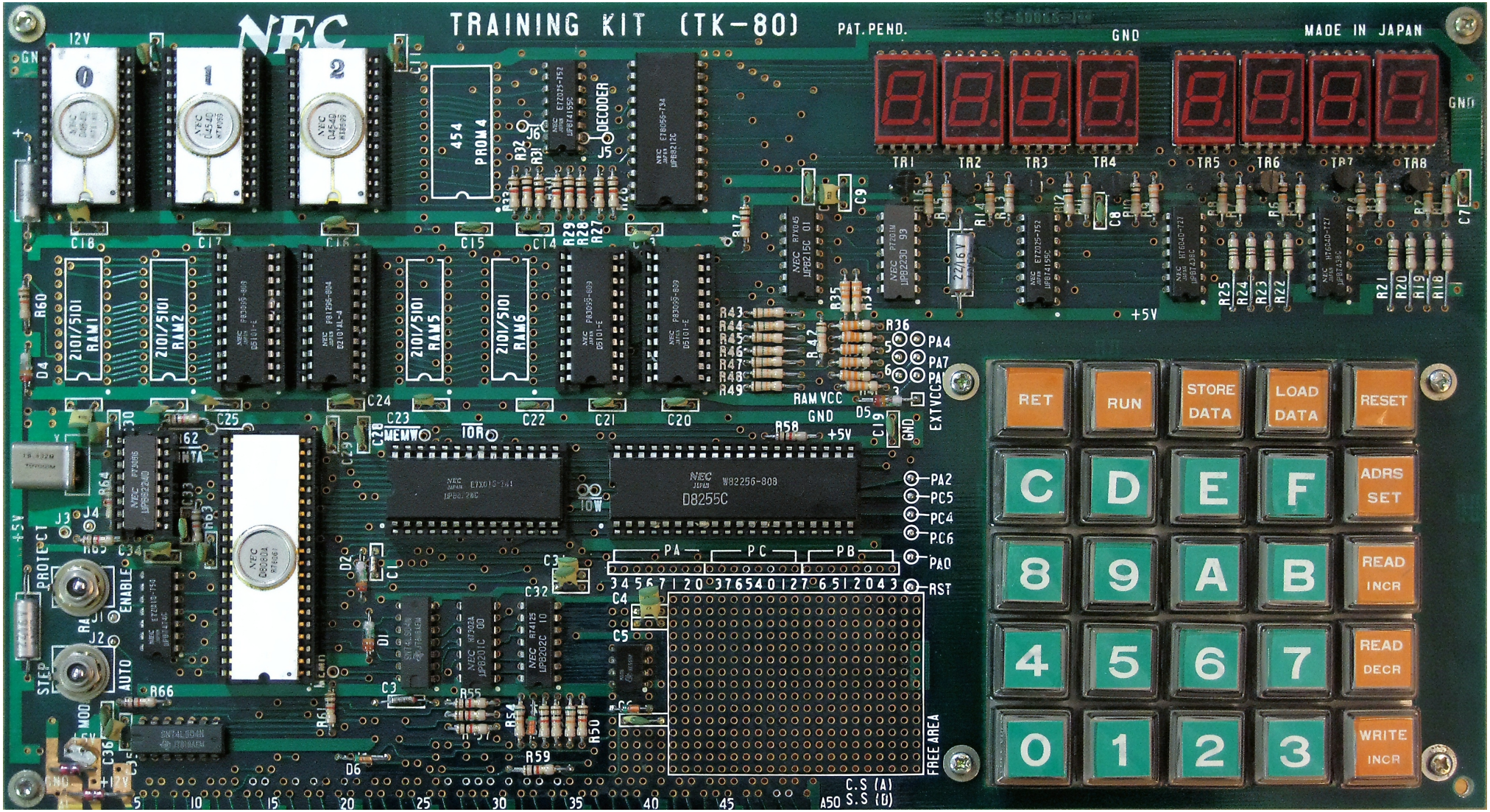
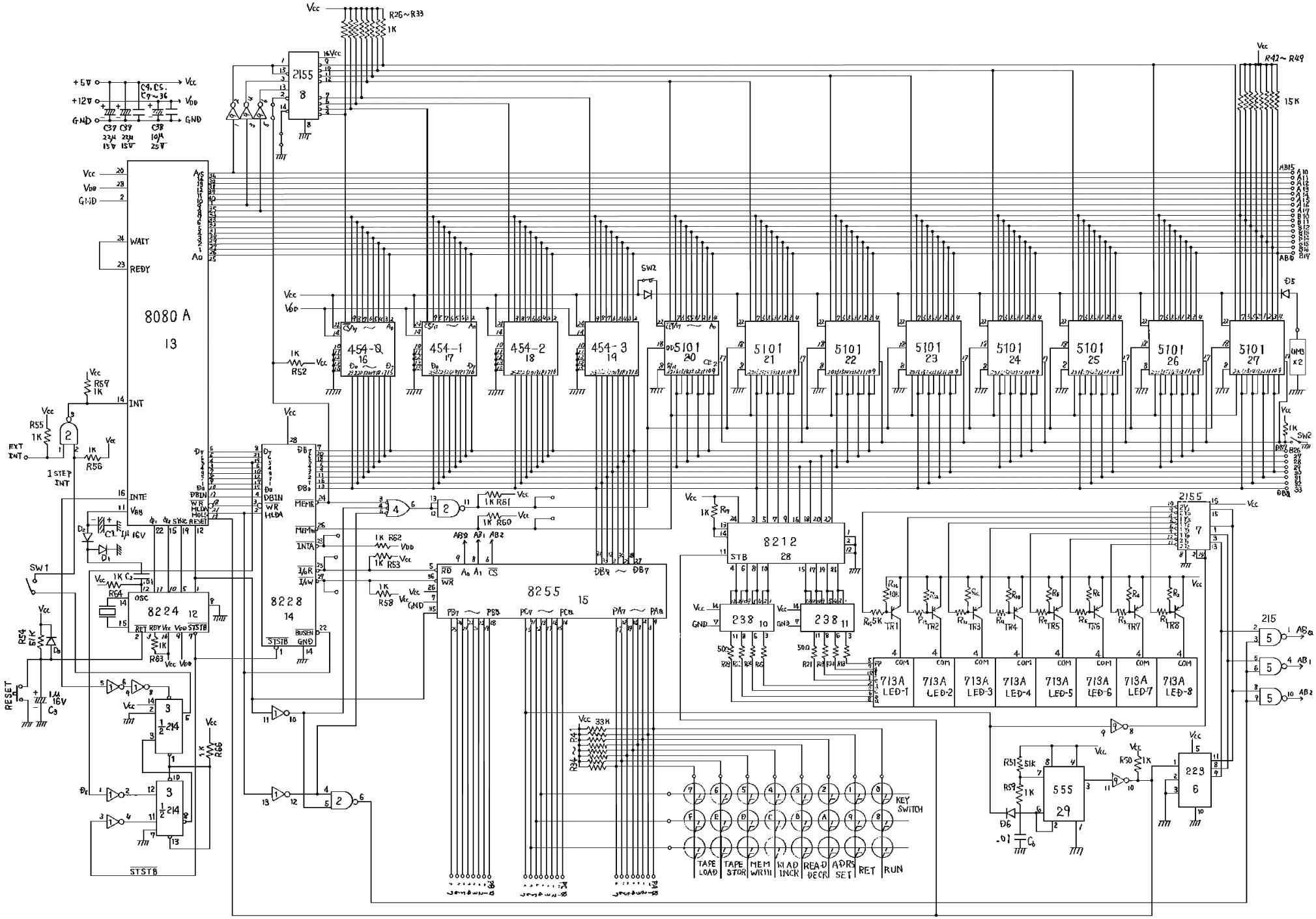
NEC TK-80 (8 bit microcomputer system with Hex keyboard along with programmable nine function keys)

In 1977, I applied an NEC TK-80 for µPD777 breadboard system. SRAMs on the breadboard store µPD777 program ROM (127 x 15 x 12) and pattern ROM (128 x 7) contents. µPD5101 SRAMs (256 x 4) assembled on TK-80 (1,024 x 8) were unable to store the program and pattern ROM contents. The firmware enables to read and write data between SRAMs on the breadboard, high speed puncher/reader, and keyboard to update ROM codes.

I also obtained strong assist and arrangement from automation system promotion department (自動化推進部), IC division (集積回路事業部) who designed TK-80 (A primary designer, Tomio Goto (後藤富雄), manually made a beautiful TK-80 schematic attached next page), and the firmware design realizes the functions above was outsourced, programmed the firmware in µPD454 EEPROM (256 x 8), and ran on the breadboard properly. Due to early stage of microcomputer system, the size of the memory LSIs implemented is amazingly small (256 x 4 and 256 x 8). This means that optimized system design such as minimizing the firmware (ROM) size was indispensable and had to be achieved. This was the same as desktop calculator LSI design I was involved in. It is presumable that such dense design work was best fitted to Japanese who like elaboration at that time.





NEC TK-80 Schematics

[Downloadable Files]