Memory allocation:

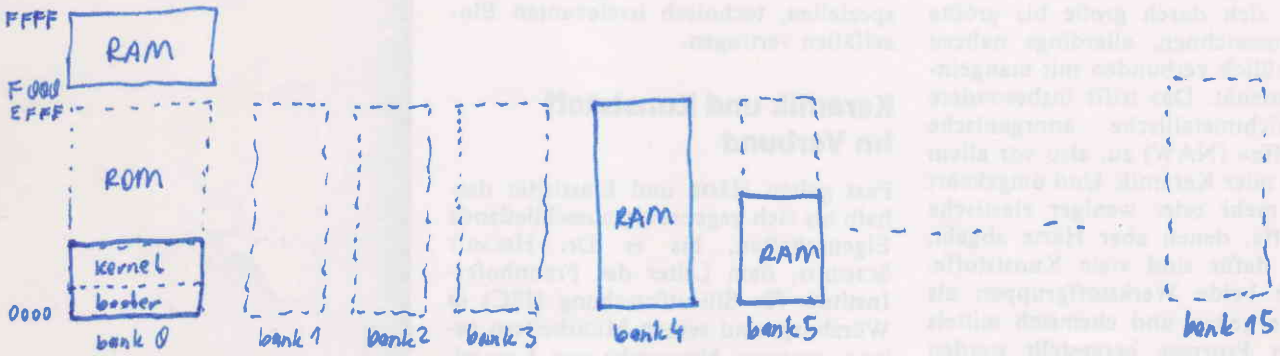
16 banks à 60K memory possible

Banks 0-3 reserved for EPROM files

Bank 4 for programs (TPA) and data

Bank 5-15 for data

On reset, the current bank switches to 0 where the booter is located at address 0000 It copies the system kernel to address F000, a part of RAM that is always present regardless of the bank selected. A ram test is performed to find out the highest addressable RAM location. RAM upgrades must be done so that a contiguous block is formed starting at bank 4.

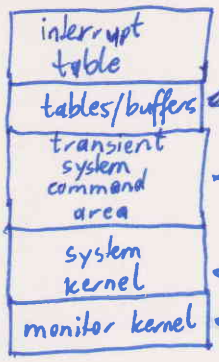


Possible upgrade

System functions for programs: serial i/o, serial i/o port configuration, cassette i/o
data transfer between banks,

Monitor functions: display/modify memory
load/store memory from/to cassette
program/read EPROM
load ROM data/program file
run program
upload/download via RS 232 C
config serial ports
read/write io ports

Extended functions: single step
processor register display/modify
breakpoints
disassembler



RS232 C config

TSCA ← holds functions normally resident in EPROM during execution. like CASSETTE program, EPROM program

system kernel ← interrupt routines, program servicing entry

monitor kernel ← console command processor.

booter: copy boot program to TSCA, give control to it.

boot program: set stack pointer
copy interrupt table to location
copy system kernel to location
copy monitor kernel to location
RAM test and measure amount of RAM
~~check if RS232C config tables in RAM have been battery preserved.~~
initialize default RS232-config tables.
configurate serial I/O ports
initialize buffers & switch to bank 4
start interrupt system
give control to monitor kernel

monitor kernel: displays prompt on console
wait for command from console
load function code from EPROM bank 0 into TSCA and execute it.

TSCA: the monitor can be extended easily by placing additional function code in EPROM which is loaded into TSCA and executed, if the command is given.

TPA: intended for the application which may be loaded from cassette, downloaded via RS-232 or copied from an EPROM module.