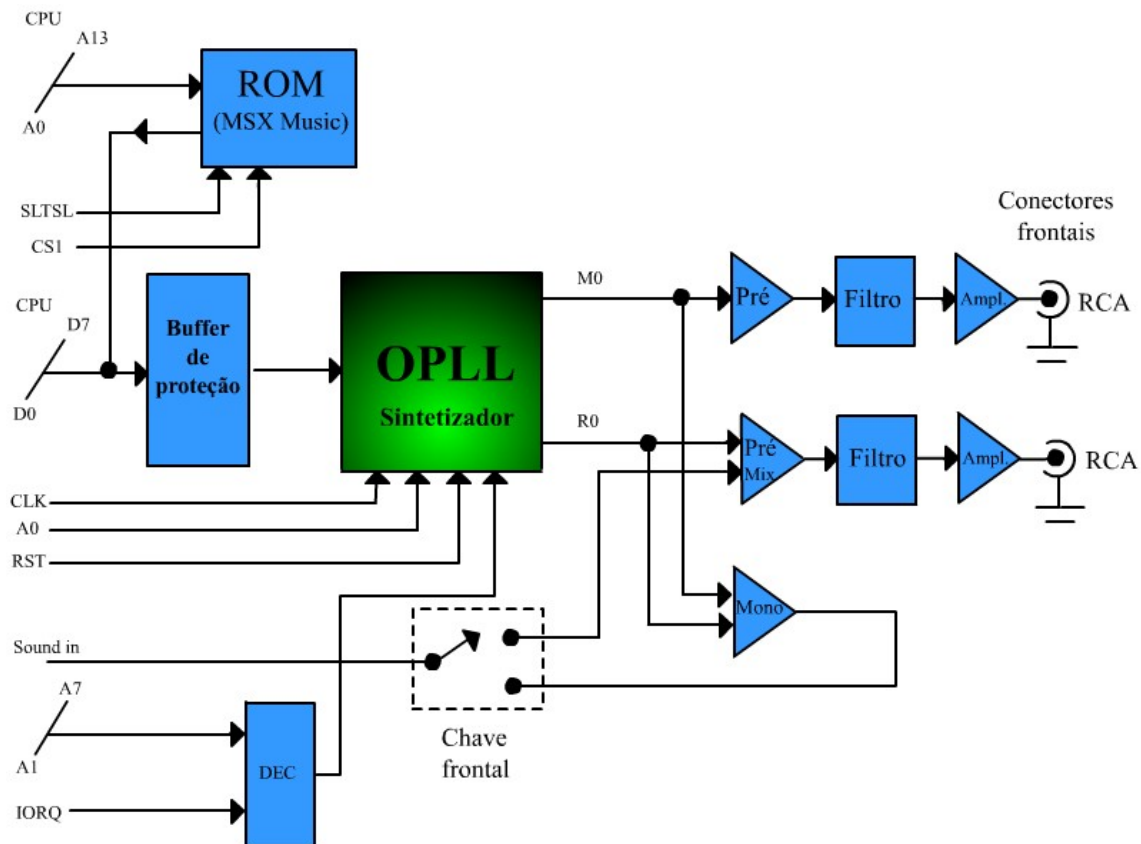


## FM PAK/FMPAC design

(collected by HansO. 2008)

The following diagram shows the brazilian (Tecnobytes) design.  
Not complete, but has all major signals explained.



Design of similar circuit, by Leonard Silva de Oliveira, for the SMS system.

Note that for MSX the DEC decoder has to decode for ports \$7C – \$7D

A7 A6 A5 A4 A3 A2 A1 A0

0 1 1 1 1 1 0 any

A0 -> YM2413 A0

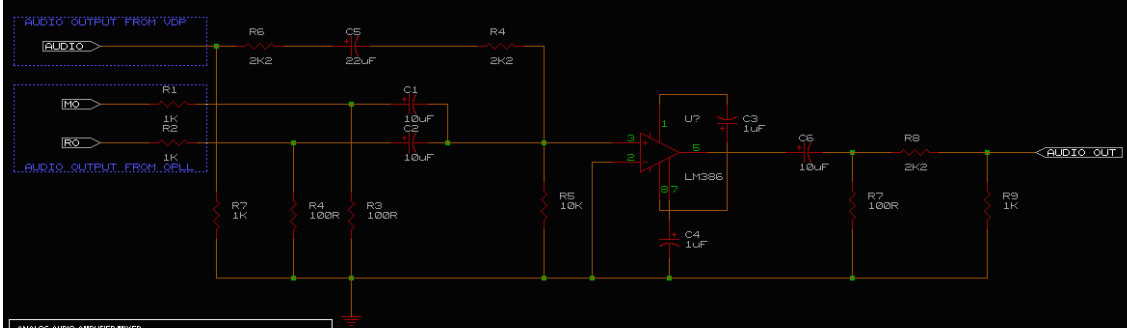
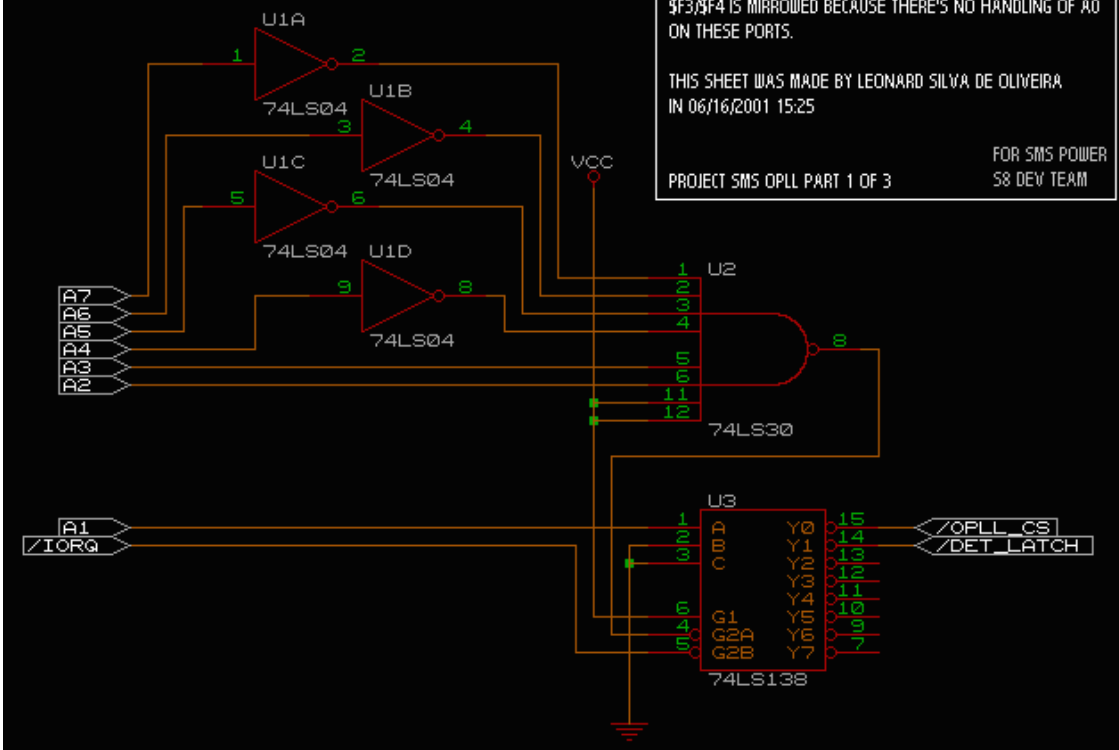
YM2413 WE# tied low. Cartridge may only write

OPLL I/O ADDRESS CIRCUIT FOR PORTS \$F0-\$F1 (/OPLL\_CS)  
 DETECTION LATCH IN PORTS \$F2-\$F3 (/DET\_LATCH)  
 \$F3-\$F4 IS MIRRORRED BECAUSE THERE'S NO HANDLING OF A0  
 ON THESE PORTS.

THIS SHEET WAS MADE BY LEONARDO SILVA DE OLIVEIRA  
 IN 06/16/2001 15:25

FOR SMS POWER  
 S8 DEV TEAM

PROJECT SMS OPLL PART 1 OF 3



ANALOG AUDIO AMPLIFIER/MIXER.  
 MIXES THE AUDIO FROM BOTH MELODIC AND PERSISTIVE OUTPUTS OF  
 THE OPLL CHIP WITH THE SN76436 PSG AUDIO OUTPUT THE SMS HAS INSIDE THE  
 VOP.

THIS SHEET WAS MADE BY LEONARDO SILVA DE OLIVEIRA IN 06/17/2001 21:35

FOR SMS POWER  
 SMS S-8 DEV TEAM

PROJECT SMSOPLL PART 3 OF 3