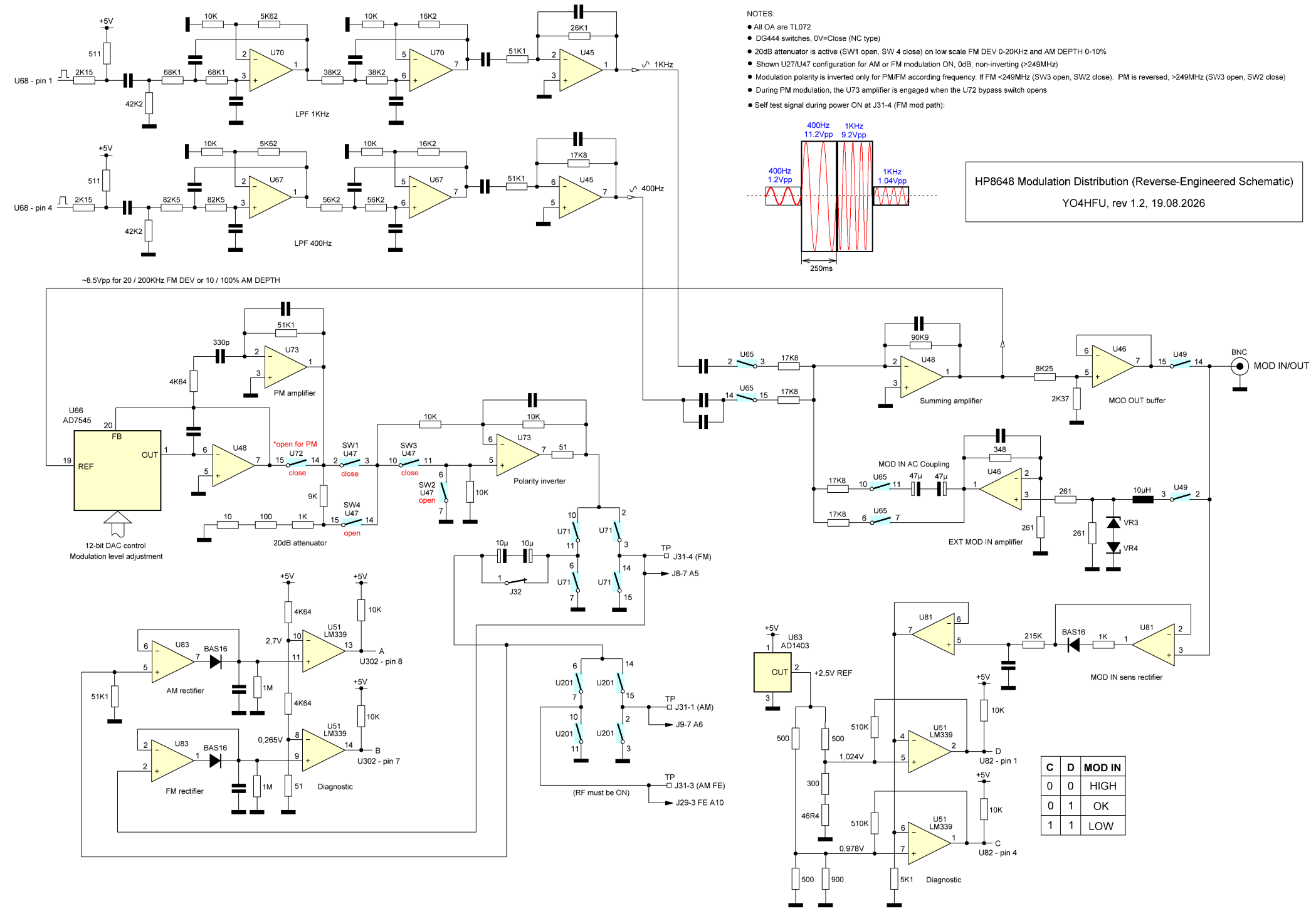

NOTES:
All OA are TL072
DG444 switches, 0V=Close (NC type)
20dB attenuator is active (SW1 open, SW 4 close) on low scale FM DEV 0-20KHz and AM DEPTH 0-10%
Shown U27/U47 configuration for AM or FM modulation ON, 0dB, non-inverting (>249MHz)
Modulation polarity is inverted only for PM/FM according frequency. If FM <249MHz (SW3 open, SW2 close). PM is reversed, >249MHz (SW3 open, SW2 close)
During PM modulation, the U73 amplifier is engaged when the U72 bypass switch opens
Self test signal during power ON at J31-4 (FM mod path):
400Hz 11.2Vpp
1KHz 9.2Vpp
400Hz 1.2Vpp
1KHz 1.04Vpp
250ms
HP8648 Modulation Distribution (Reverse-Engineered Schematic)
YO4HFU, rev 1.2, 19.08.2026
U68 - pin 1
U68 - pin 4
LPF 1KHz
LPF 400Hz
1KHz
400Hz
~8.5Vpp for 20 / 200KHz FM DEV or 10 / 100% AM DEPTH
PM amplifier
Summing amplifier
MOD OUT buffer
MOD IN/OUT
MOD IN AC Coupling
EXT MOD IN amplifier
12-bit DAC control
Modulation level adjustment
20dB attenuator
Polarity inverter
*open for PM
close
open
J32
TP
J31-4 (FM)
J8-7 A5
J31-1 (AM)
J9-7 A6
J31-3 (AM FE)
J29-3 FE A10
(RF must be ON)
AM rectifier
FM rectifier
Diagnostic
U302 - pin 8
U302 - pin 7
MOD IN sens rectifier
+2,5V REF
U82 - pin 1
U82 - pin 4
C D MOD IN
0 0 HIGH
0 1 OK
1 1 LOW