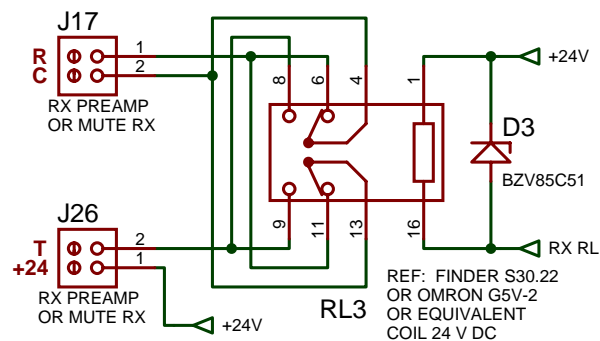
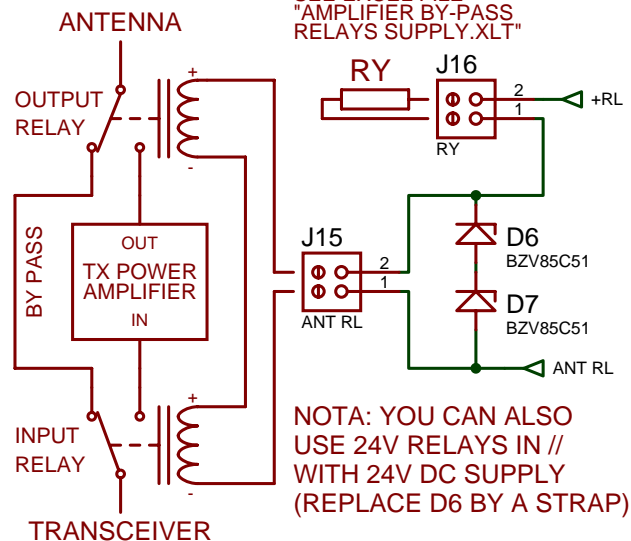
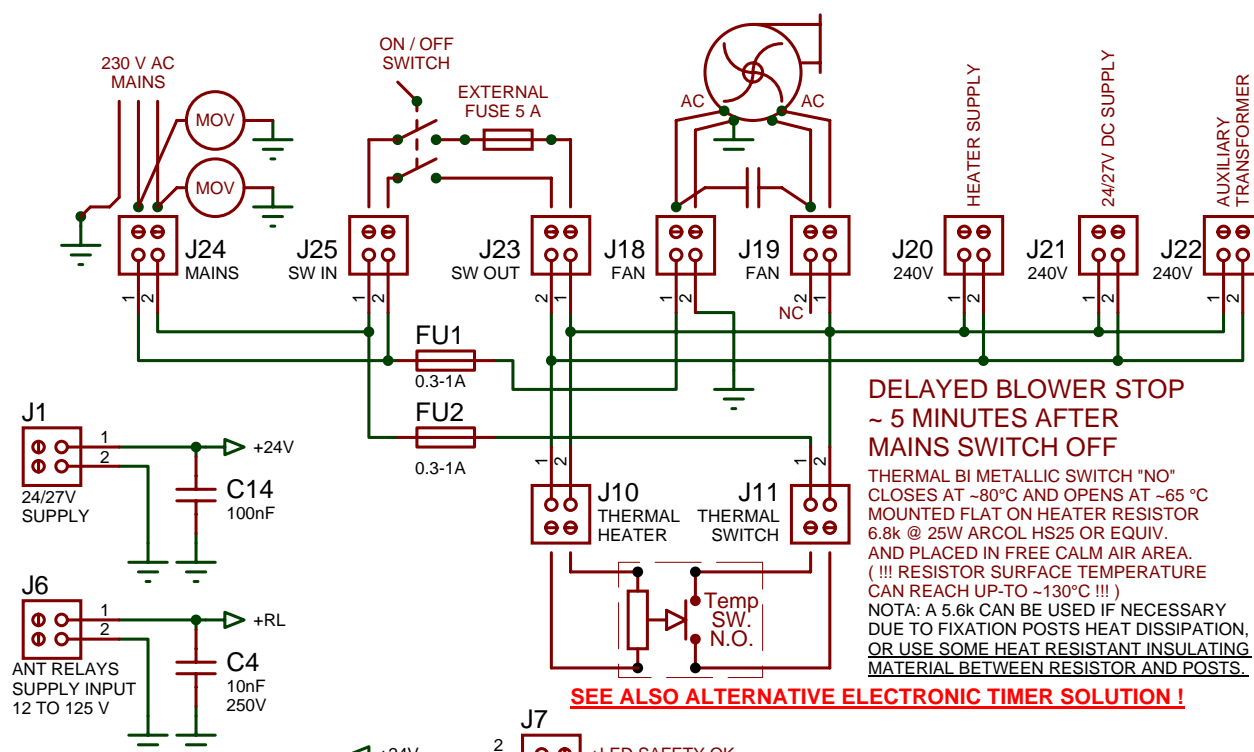


FOR "RY" CALCULATION
SEE EXCEL FILE
"AMPLIFIER BY-PASS
RELAYS SUPPLY.XLT"



J17 / J26 / RL3 CAN BE USED TO ACTIVATE A RX
PREAMPLIFIER OR MUTE A SEPARATE RECEIVER.

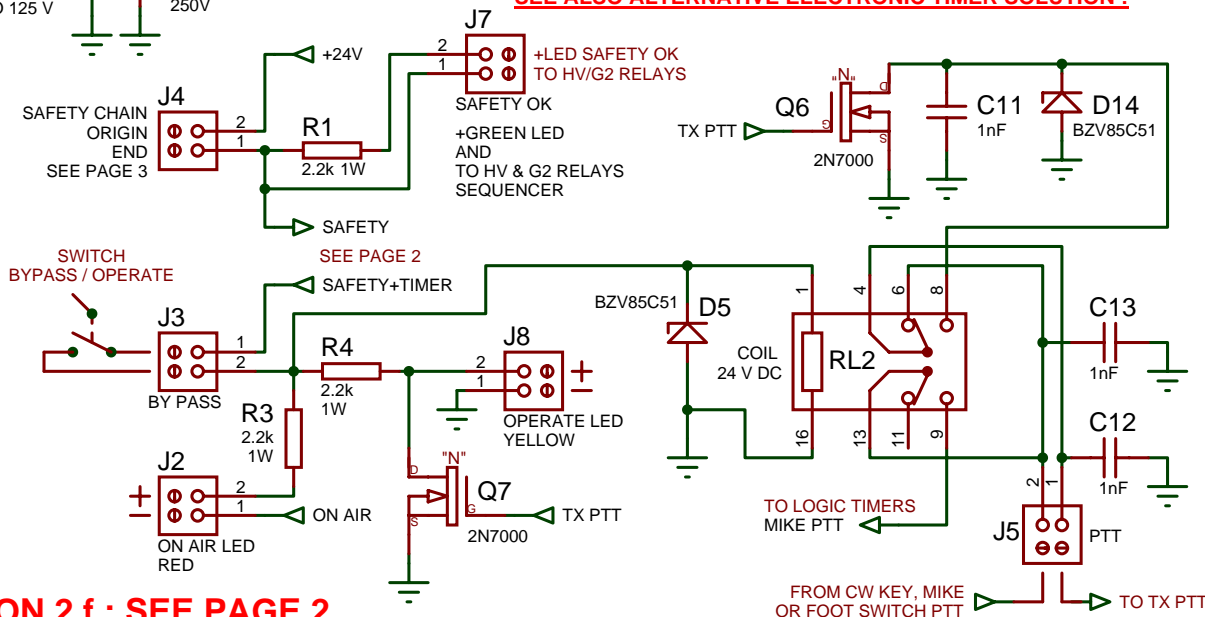
**REVISION 2: REPLACEMENT OF ALL RELAYS
FORMERLY "S" RELAYS BY LESS EXPANSIVE
AND MORE EASY TO FIND STANDARD RELAYS**
REVISION 2e: CORRECTED ERROR IN RL2



**DELAYED BLOWER STOP
~ 5 MINUTES AFTER
MAINS SWITCH OFF**

THERMAL BI METALLIC SWITCH "NO"
CLOSES AT ~80°C AND OPENS AT ~65 °C
MOUNTED FLAT ON HEATER RESISTOR
6.8k @ 25W ARCOL HS25 OR EQUIV.
AND PLACED IN FREE CALM AIR AREA.
(!!! RESISTOR SURFACE TEMPERATURE
CAN REACH UP-TO ~130°C !!!)
NOTA: A 5.6k CAN BE USED IF NECESSARY
DUE TO FIXATION POSTS HEAT DISSIPATING,
OR USE SOME HEAT RESISTANT INSULATING
MATERIAL BETWEEN RESISTOR AND POSTS.

SEE ALSO ALTERNATIVE ELECTRONIC TIMER SOLUTION !



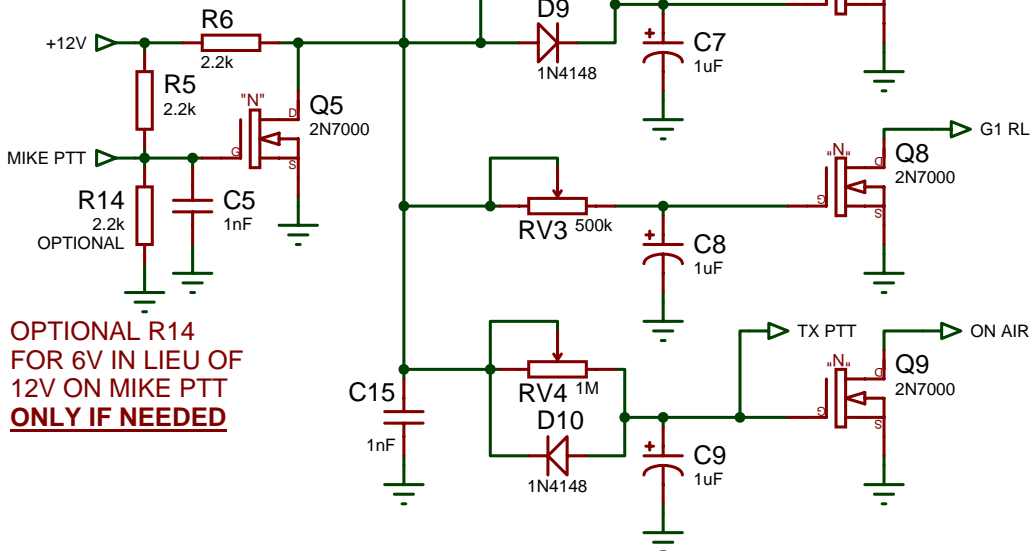
REVISION 2 f : SEE PAGE 2

TRIODE OR TETRODE AMP DESIGN
230VAC SUPPLY, BLOWER & RELAYS

DATE:29/04/14 REV: 2f PAGE: 1/3
BY: F1FRV@SFR.FR
DOC N°: AMATEUR RADIO

BY EXPERIMENT:
FOR CORRECT SEQUENCES
RV1 TO RV4 SHALL BE SET AT
~~ SAME ANGULAR POSITION

SEE EXCEL CALC. SHEET
TIMER T=RC .XLT
TO ADAPT TO YOUR NEEDS

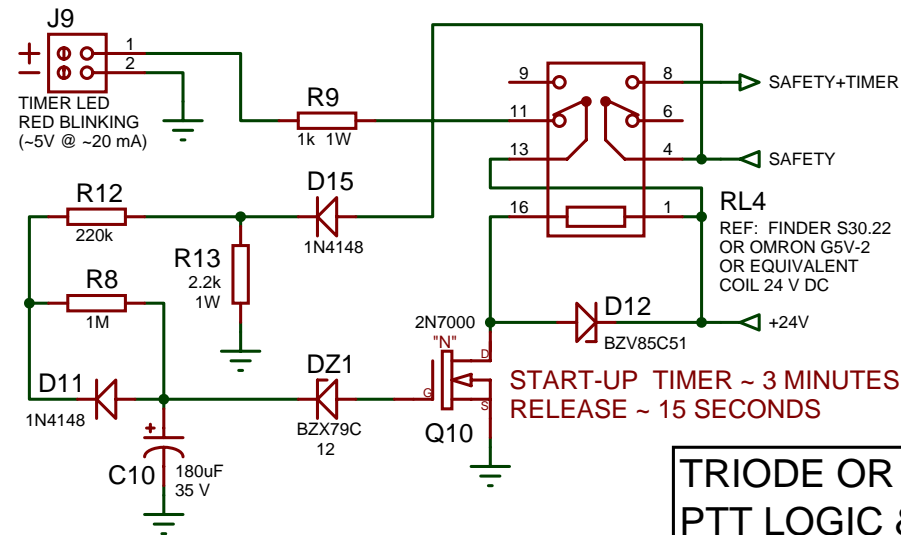


OPTIONAL R14
FOR 6V IN LIEU OF
12V ON MIKE PTT
ONLY IF NEEDED

2N7000: OR EQUIVALENT
"N" MOSFET, P > 0.3W, ID MAX > 200mA, VDS > 60V
RDS(ON) < 5 OHMS @ VGS10V & ID 0.2A

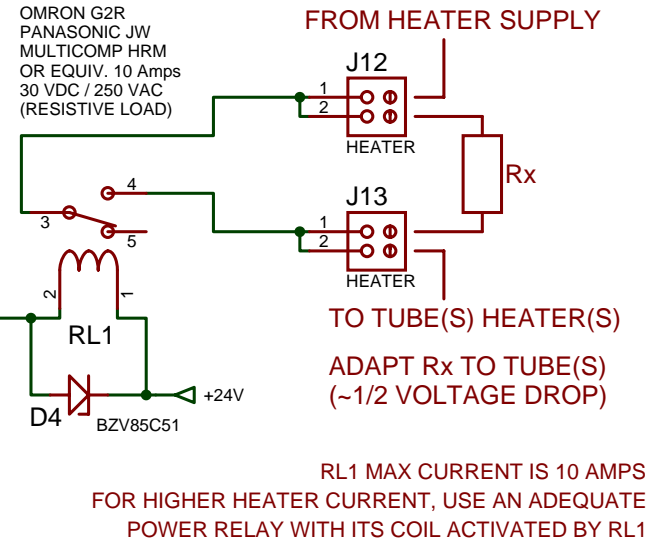
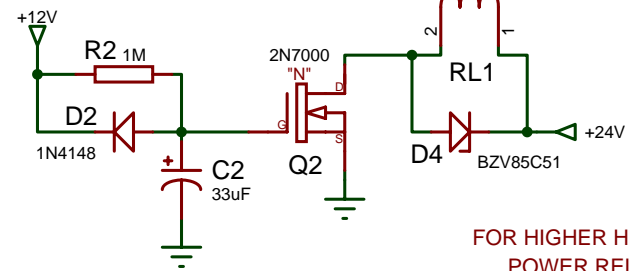
IRF630: OR EQUIVALENT
"N" MOSFET, P > 60W, ID MAX > 4A, VDS > 150V
RDS(ON) < 3 OHMS @ VGS10V & ID 2A

**NEW IN REV 2 f : STARTUP TIMER ~ 3 MINUTES WILL REMAIN
ACTIVE ~ 15 SECONDS, TO AVOID HAVING TO WAIT TOO LONG
IN CASE OF HOT AMPLIFIER SWITCH OFF FOR A SHORT TIME .
EG. IN CASE OF HV SUPPLY TEMPORARY SURGE EXCESS & TRIP.
(OFTEN IF USING BAD REGULATION BRUSHLESS TOO LOW POWER
GENERATORS DURING PORTABLE OPERATION CONTESTS)**



START-UP TIMER ~ 3 MINUTES
RELEASE ~ 15 SECONDS

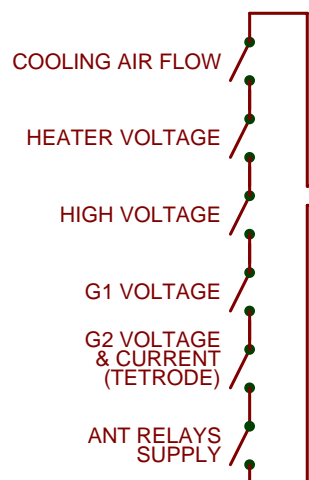
HEATER SOFT START
~ 3 TO 5 SECONDS
1M // 33 uF OR WHAT
YOU HAVE AVAILABLE
FOR SAME TIMING RANGE



RL1 MAX CURRENT IS 10 AMPS
FOR HIGHER HEATER CURRENT, USE AN ADEQUATE
POWER RELAY WITH ITS COIL ACTIVATED BY RL1

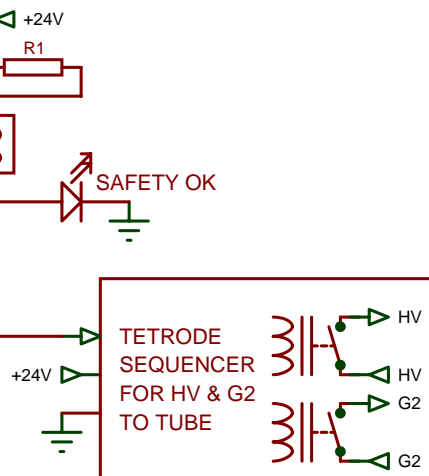
TRIODE OR TETRODE AMP DESIGN PTT LOGIC & START-UP TIMERS

SAFETY CHAIN

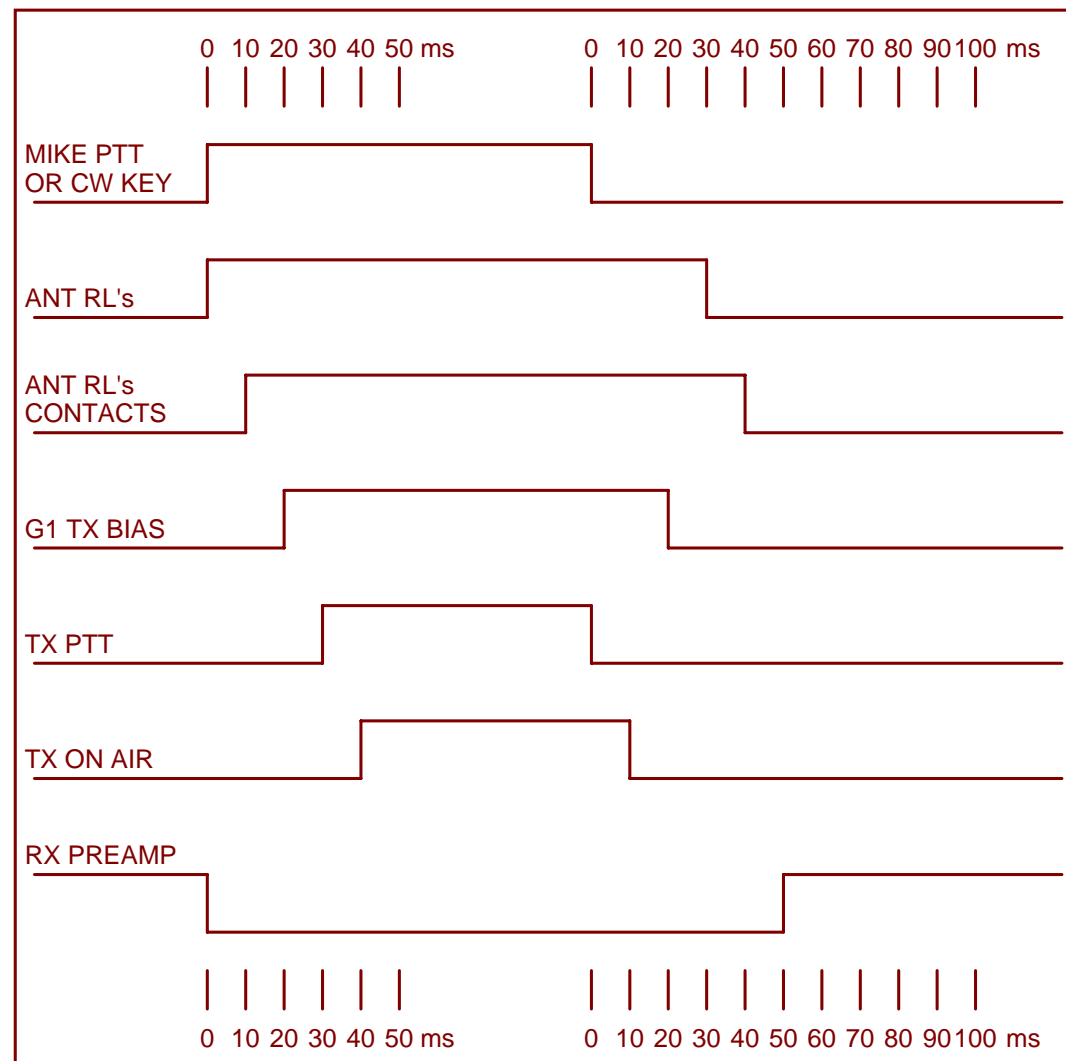


SAFETY CONTACTS
NORMALLY OPEN, CLOSED WHEN OK
YOU CAN ADD OR REMOVE
ALL SAFETIES YOU WANT OR
DONT WANT IN THIS CHAIN ...
(REMOVE AT YOUR OWN RISK)

**FOR TRIODES
MINIMUM SAFETY
IN SAFETY CHAIN
IS ONLY TRIP ON
EXCESS OF GRID CURRENT**



**FOR ANTENNA RELAYS:
BEFORE SELECTING VACUUM RELAYS, CHECK MANUFACTURER DATA
FOR LIFE EXPECTANCY (OFTEN ONLY 100 000 CYCLES !!!!)**



**SEE SPECIFIC FRONT PLATES WITH LEDS
1 FOR TRIODES, 1 FOR TETRODES**