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| |  | | --- | | **144 Mhz FM, SSB, CW Verici,144MHz All Mode Transceiver** | |  |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | **Devre YO3DAC home page den alınmıştır.** [**Ta2vb Fazlı Çelen Ziraat Müh.Düzce**](http://www.amatortv.com/../../../../ta2cmz/fazlicelen.htm) | | The principal characteristic of the transceiver presented below it is the simplicity, but in the same time to obtain good performance with a minimum investment. The principal component of this radio it is MC3362. This integrated circuit its a FM receiver, double conversion, which have inside everything. Starting with RF amplifier and ending with FM demodulator. Including a VCO up to 180MHz, LO for 10.245Khz, two mixers, IF amplifiers. Using T1 in front end the sensitivity will be 0.2uV at the antenna port. On the RX path, the signal it is amplified by T1 and foreword to the pin 1 of MC3362. The voltage control of the internal VCO its in pin 23, voltage that must not be high than Vcc of the MC3362, in our case 6.2V.The VCO voltage control could be given by a Phase Comparator part of a synthesizer, or could be coming from a tuning potentiometer. Of course, in the last case the frequency stability will not be very good. At pin 20 of MC3362 (VCO out) we have 300mV of RF, enough to drive the TX mixer (gate 2 of T9). FM audio it is on pin 13. From pin 19 we pick-up the signal for SSB and CW. The filter on this path it is a 10.7MHz Crystal Filter. T5 and T6 are IF amplifiers. MC1496 it’s the product detector in RX and DSB balanced modulator in TX. For CW carrier this modulator became an unbalanced modulator using a DC voltage +TX/CW. The 10.7MHz crystal filter it is used also in TX to attenuate one of the side bands. T5 it’s the carrier LO and T8 its FM modulator. The 3W TX output its obtain using a BLX-65. For microphone amplifier we use a LF 356 and for audio power amplifier TBA-820. The variable oscillator (synthesizer board) working in a range of 1 to 3 MHz. Using a 44.1MHz crystal (T15) we’ll select the third harmonic (132.3MHz) which mixed with VCO frequency became an RF signal in a range of 1 to3MHz. This together with VFO output, are applied to the input of the Phase Comparator (CD4046). The error voltage (pin 13 of CD4046) it is the voltage control of the internal VCO of MC3362. To display the working frequency we can use the output of the VCO (pin 20 of MC3362) or VFO output (pin 10 CI-6).    all_mode1 |   all_mode2 | | Büyük resim için, resim üzerine tıklayın. | |  | | Büyük resim için, resim üzerine tıklayın.  **Iulian Rosu, VA3IUL/YO3DAC** | | |