

GENERAL:

: 31 IC's, 41 Transistors, 2 FET's & 119 Diodes. 1. Semiconductors

Frequency Range : 28.000-29.999MHz

Modes of Operation : AM, FM, LSB, USB & CW 3. 4. Speaker : Dynamic type, 8 ohm.

Microphone : Ceramic type

Power Supply : 11V-16V DC, negative ground. 6.

7. Antenna Impedance : 50 ohm.

Size : 61×156×290mm 8.

RECEIVER:

1. Receiver System : Single Conversion PLL Superheterodyne. SOMMERKAMP

Sensitivity at S/N 10dB : AM0.75 uV : FM ······0.75 μV MODEL: TS-788DX

SSB······0.25μV

3. Selectivity AM ······6KHz at Bandwidth – 6dB. 10 METER

FM6KHz 60dB down at 8 KHz

SSB·····2.4KHz at Bandwidth - 6dB

80dB.

4. AGC Figure of Range 60dB down at 4.8KHz

5. Squelch Range : $1\mu V - 100\mu V$.

6. Audio Output Power : 2.5 Watts 7. Spurious Response : - 60dB

8. I.F. : 10.7MHz.

FM TRANSMITTER:

1. RF Output Power (max) : 50 Watts 1. RF Output Power (max)

: More than 50dB.

2. Deviation : ±1.5KHz. 2. Carrier Suppression : More than 50dB. Harmonic Suppression : More than 60dB. 3. Unwanted Sideband Suppression: More than 60dB.

SSB TRANSMITTER:

: 50 Watts PEP

4. Harmonic Suppression : More than 60dB.

AM TRANSMITTER:

Harmonic Suppression

RF Output Power 1. : 25 watts carrier Modulation Capability : More than 80%

INTRODUCING THE

SOMMERKAMP 10 METER TS-788DX

The SOMMERKAMP TS-788DX transceiver has been designed for continuous heavy duty mobile and base station application on AM, FM, LSB, USB and CW. The best feature of this unit is the continuous coverage of the entire 28.000 - 29.999 MHz. band. This is accomplished by using the frequency selector knob in conjunction with the frequency figure switch. You can select 100KC, 10KC, 1KC or 100Hz. steps. The 5 digit frequency counter displays the results.

Another special feature is the remote control microphone. Up and Down pushbutton switches on the top of the mike select the frequency and scanner functions. On the side are two pots, one is for the Volume and the other is the Clarifier. The PTT button is on the opposite side. On the rear of the mike is a recessed slide switch which selects internal or Mic Speaker. The mike plug is an 8 pin locking-ring type. This transceiver is designed to operate on 13.8 VDC and draws 8.5-10 amps. Use a regulated heavy duty power supply for base station operation.

The receiver section will receive AM/A3, FM/F3, SSB/A3J and CW/Al signals in the 28.000 to 29.999 MHz band. The unique combination of low noise FET's, ceramic and crystal filters, efficient noise limiter (ANL) and a HI-FI quality audio amplifier results in exceptional reception quality. The latest advances in solid state technology have been incorporated into this unit resulting in superb sensitivity and unwanted signal

rejection and noise suppression available previously only in space and military communications equipment. The power supply of the receiver RF, IF and Oscillator section is stabilized by an extreme sharp cut-off Zener diode to obtain the high sensitivity and unwanted signal rejection. The efficient series gate noise limiter, which virtually cuts off the audio output during ignition noise pulses, is defeatable to make even the weakest signal audible which otherwise would be cut off by the threshold level of the ANL switching diode. The high squelch sensitivity is achieved by using a separate squelch detector and switching circuit with a carefully balanced hysteresis. The audio amplifier is of transformerless design and will drive any load between 8 ohms and indefinite, such as, internal speaker or external speaker/microphone or headset combinations. An automatic tuning circuit automatically tunes to the best reception on the entire band.

The transmitter section is designed for continuous heavy transmission on either AM/A3, FM/F3, SSB/A3J and CW/Al signal in the 28.000 - 29.999 MHz. band. The transmitter consists of a Phased-Locked Loop circuit and one crystal controlled oscillator. The output is synthesized in a balanced mixer followed by a double tuned filter, class ABl buffers, auto-tune circuit and power output stage, coupled by series and pi-matching filters to the antenna jack. Output power can be varied. If both Volume and RIT knobs are pulled out, you will be pushing about 10W PEP. Any other combination of these two knobs will give full output

power of about 50W PEP. A VSWR protection circuit disables the transmitter so it cannot be damaged by bad antennas, shorted coax, etc. A lamp behind the Frequency Selector Knob alerts you when this situation arises. It is reset by momentarily switching the transceiver off.

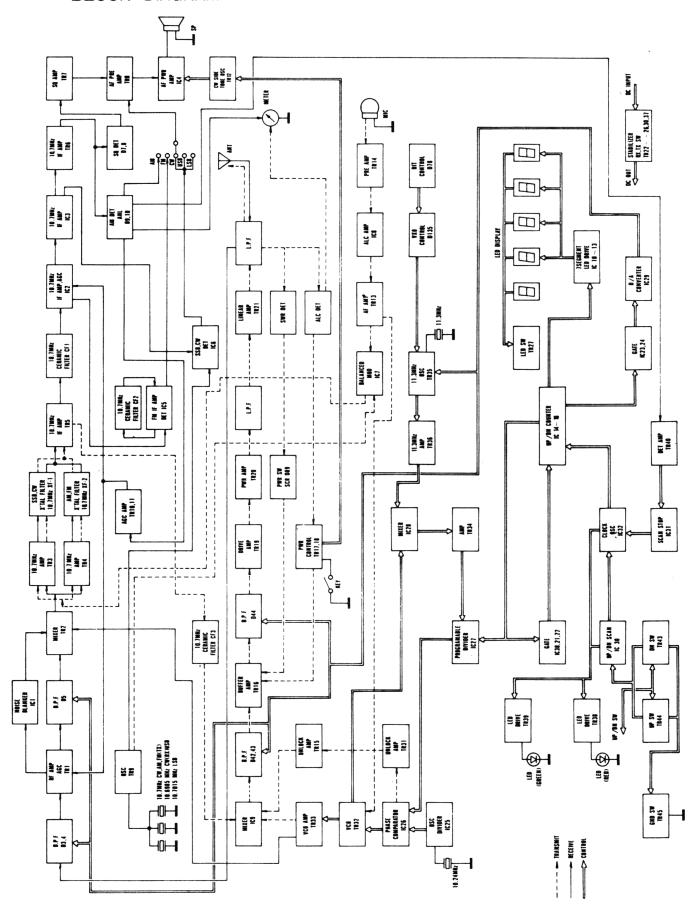
The Modulator consists of an input audio filter, pre-amplifier, ALC amplifier, and audio buffer followed by a balanced modulator for AM/SSB, or directly to the VCO for FM. The input circuit has been designed for a 500 ohm dynamic microphone, a 1000 ohm ceramic microphone or a 32 ohm speaker/microphone combination with a 100 ohm resistor in series.

On all new models the SQUELCH Control pulls out to perform another function. This gives a 100KC offset for repeater use, a very nice function.

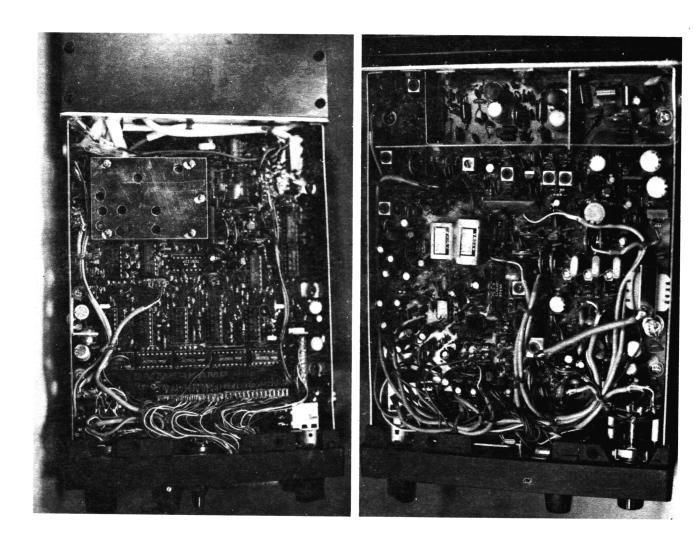
A matching 10 amp continuous/15 amp surge power supply with a built-in base speaker is now available. It is 5" high and has a black face with matching blue side panels. Pushbutton terminals are provided for quick power hookup. A separate cable with a miniature plug on the end plugs into the transciever SP jack for base speaker operation. This mades a really sharp base station set up.

The manual accompanying the unit is also of high quality including schematics, parts layout, wiring layout, voltage charts, parts list, etc..

BLOCK DIAGRAM



The "guts" of the unit is built on two pc boards sandwich together with the component sides up on top and bottom. The high power RF linear is attached to the rear of the unit in its own shielded compartment box with a generous amount of finned anodized aluminum heatsink. It uses an MRF454 to generate the high power output. A 2SC1306 transistor is used as the driver and a 2SC2098 is used as the power amp to drive the MRF454 Linear amp.



THIS UNIT IS EASY TO OPERATE AND A JOY TO USE. ORDER YOURS TODAY FROM SELMAN ENTERPRISES, INC. OR YOUR FAVORITE SECRET CB DEALER OR DISTRIBUTOR.