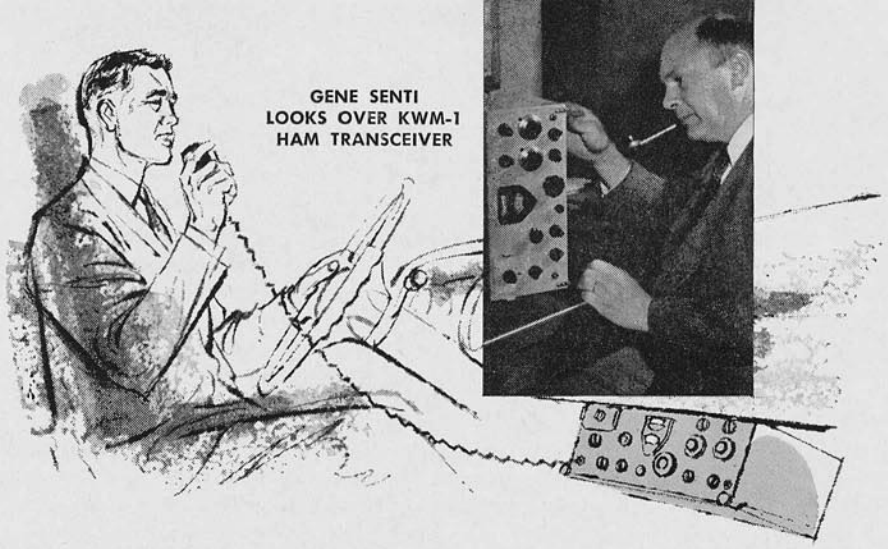

GENE SENTI
LOOKS OVER KWM-1
HAM TRANSCEIVER

THE STORY BEHIND THE KWM-1

At Collins and other electronic companies, engineers usually bring ideas home and work on them; however, in the case of *Gene Senti* and the new KWM-1 Transceiver, the situation is reversed.

Research and development work in the basement of the Senti home coupled with ideas contributed by *Arthur Collins* led to the development of the world's first Amateur transceiver.

About a year ago, at his home, Senti hit on an idea and tried something new with a Collins 75A-4 Amateur Radio Receiver.

Using a portion of the Receiver as an exciter in conjunction with a linear amplifier, he developed a transceiver. Using this equipment, he contacted a number of hams over a fairly long period of time to check his homemade device.

Later, when Senti's home work came to the attention of Mr. Collins, the Company president suggested utilization of his development ideas for a mobile transceiver, thus the KWM-1 project was born.

In a matter of months, the first engineering model was designed and built by Senti and his fellow co-workers. The first models have been both lab and road tested successfully by Senti. Mr. Collins made contacts with both the North and South Poles with one of the first three models, and numerous other ham contacts have been made with the first transceivers by both Mr. Collins and Senti. Recently, one of the transceivers was installed aboard Mr. Collins' boat in Florida, and the maritime operation of the radio was reported as being very favorable.

Fifty of the new transceivers, which are on an MJO, are to be finished this month. Some of these are scheduled for consignment to people within the Collins organization for road tests. In addition to the MJO order, there are 2,000 of the new transceivers on an SPO, and deliveries of these to customers are expected to begin in August.

It is interesting to note that more than 500 orders for the KWM-1 were placed with Collins by phone during the first week they were offered for sale. Collins Amateur Sales personnel point out they consider this quite an endorsement of the Company and its products because when the orders were placed the customers had not seen the equipment nor did they know the price or delivery time.

The new Collins Transceiver is unique in many ways. The fact that it is mobile and especially designed for passenger car mounting (it will be bracket mounted on the floor in the center of the front compartment) in itself is a unique invocation. The light, compact transceiver is so constructed that it can be easily slipped in and out of the mounts and be used with either ac or dc power giving a customer the advantage of using it either as a fixed station or mobile unit.

Operating ease of the new transceiver almost amazes hams according to the Amateur Sales people. The transmitted and received signals are always on the same frequency due to common oscillators.

Due to the fact that crystals can easily be changed in the KWM-1, many possible commercial applications are foreseen for the equipment. The armed forces have also expressed an interest in the new transceiver.

Senti, who has nursed the KWM-1 from infancy, will receive his 15-Year Service Pin from the Company in August. He was employed by the Interstate Power Company in Dubuque before his employment at Collins, and received his EE degree from Iowa State College, Ames, in '39.

The Collins Engineer played a leading role in the design work on the 75A-2 and 75A-4 Receivers, the KWS-1 Transmitter, R392 Signal Corps Receiver, and has assisted in the development of many engineering projects including the permeability tuned type oscillator and others. ★★

Collins KWM-1 SSB Transceiver

The KWM-1 covers the 20, 15, 11 and 10 meter bands with an input of 175 watts PEP on SSB. In addition to SSB emission, it also utilizes the VOX circuits for break-in CW operation with a built-in monitor.

The bands are covered in 100 kc segments with a total of 10 such segments. For MARS or commercial use, injector oscillator crystals can be changed for coverage of any 10 100 kc segments in the frequency range of 14-30 mc. The front panel meter acts as an S-meter on receive and as the tuning meter on transmit.

Frequency stability is comparable to that of the KWS-1/75A-4. Receiver sensitivity and selectivity are outstanding. Maximum convenience in changing between mobile and fixed station is built in. For mobile installation the unit plugs into the mounting rack. The power plug and the antenna coax connector connect automatically. Two knobs tighten to hold the unit securely in place.

An ac power supply is all that is necessary for fixed station installation. A 100 kc crystal calibrator is included. ★★