

MODULE 6

(V)3 SYSTEM OPERATION

OBJECTIVE

Given TO 31S1-2TSC60-12, operate the (V)3 system IAW para 3-110 thru 3-122 and 3-138 thru 3-142.

PREREQUISITES

Must complete QTP Modules 1, 2, 3, and 5.

INFORMATION

In this module we'll discuss operation of the (V)3 system. You will recall from Module 5 that the (V)3 system consists of a TSC-60(V)2 and an OZ-11 van containing a 208U-10A Amplifier-Power Supply. The -12 TO contains step-by-step instructions for equipment connections and switch settings. Read para 3-110 thru 3-122 of the TO, and then we'll discuss what you've read.

When connecting the OZ-11 to create a (V)3 system, you must connect the control cable between the two shelters first. Next, you need to connect two coax cables between the two vans. Look at Table 6-1 on the next page. One cable connects the output of the Exciter to the input of the OZ-11. This cable is usually connected to Entry 3. The other cable connects the PA Simplex Output connector of the OZ-11 to the Receiver if simplex operation on a single antenna is required. This cable is usually connected to Entry 4.

<u>ENTRY</u>	<u>CONNECT TO</u>	<u>(V)2 FUNCTION</u>	<u>OZ-11 FUNCTION</u>
1	RX ORTHO	RECV ANTENNA	
2	TX ORTHO	XMIT ANTENNA	
3	OZ-11	EXCITER OUT	PA INPUT
4	OZ-11	RECV INPUT	PA SIMPLEX OUT
5	TX ORTHO	XMIT ANTENNA	
6	RX ORTHO	RECV ANTENNA	

Table 6-1. Typical RF Patch Panel Connections

Once the connections between the two vans are made and the 10kW antenna is connected to the OZ-11, you can set the controls in the (V)2 van for (V)3 operation. The only settings that are different from the (V)2 system are the Radio-Power AMPL Connection switch (set to RADIO 1 RMTE PA) and the Radio 1 Coupler Control switch (set to NONE) on the Monitor/Switching Panel. This connects the CCCS computer lines of Radio 1 to the OZ-11 PA and disconnects the Transmit Orthogonal from Radio 1. You cannot use the Transmit Orthogonal with the OZ-11 because it is only a 2.5kW antenna. If you left the Radio-1 Coupler Control switch set to one of the couplers, you would connect the CCCS bus to that coupler. When you then tune the Transmitter, you would get a fault because you have no RF going from Radio 1 to the Transmit Orthogonal.

You are also instructed to set the Antenna, Local/Remote Control switch in the OZ-11 shelter to REMOTE. This allows you to select whether the PA will operate into the antenna or the dummy load from the (V)2 console. Once these connections and switch settings are made, operation of the (V)3 system is the same as operation of the (V)2 system.

The (V)3 system can be operated from the OZ-11 shelter instead of the (V)2 shelter. This mode of operation allows only operation and monitoring of the radio that is using the

10kW PA. Paragraphs 138 thru 142 of the -12 describe this mode of operation. Read these paragraphs before going on.

ADDITIONAL INSTRUCTIONS

Answer the review questions and check your answers with the confirmation key. Review the material in the module for any questions you missed. Next, ask your trainer for the KEP questions. After your trainer checks your answers and reviews the questions missed with you, go on to the performance procedures.

REVIEW QUESTIONS

1. List the three connections to be made between the (V)2 van and the OZ-11 van.
2. What would happen if you left the Radio-1 Coupler Control switch set to RADIO 1 while operating the (V)3 on Radio 1, and why?
3. Why should you set the Antenna, Local/Remote Control switch in the OZ-11 shelter to the REMOTE position?
4. What switch settings must be made in the (V)2 shelter to operate the (V)3 system?

PERFORMANCE PROCEDURES

Have your trainer demonstrate the (V)3 system operation procedures. Then practice performing these procedures under the supervision of your trainer until you feel confident. Your trainer will annotate your training records when he/she feels you are proficient.