



TECHNICAL NOTE 08-97

PROGRAMMABLE RANS-DV CIRCUIT DEVICES (CHIPS)

INSTRUCTIONS FOR REPLACEMENT

GENERAL

There are times when a programmable device must be changed in the field. This may occur when a program must be updated or a voice message requires changing. The process to change the device is an easy one requiring very few tools to accomplish. There are three programmable devices on each RANS-DV circuit board. Normally any change will require replacement of only one of the chips at any given time.

CAUTION: Do not remove the old programmable device until you have the new one in your possession.

PROCEDURE

There are three programmable devices on the RANS-DV circuit board. The three devices are located in the approximate top center of the circuit board and are labeled as follows:

U10 is a 28-pin device containing the voice message library and is labeled with a name and date, such as RANS DV 7/3/97. U11 is an 8-pin electrically programmable device which contains the specific instructions for your system.

U11 usually contains no label because it is small. U12 is a 40-pin device labeled with a name and date such as DRENC 8/22/97. The device most usually changed in the field for upgrading is U11.

Locate the device that you will be changing. The device will be the same as the one you have for replacement except the handwritten part of the label may be slightly different.

1. Remove power from the unit and wait two minutes before proceeding.
2. Using a PROM puller or a small screwdriver, gently remove the device from its socket. If using a small screwdriver, gently pry a little at a time on one side and then the other so the device is removed straight and the pins are not bent.

NOTE: You may have to remove the piggyback input board to replace U11 or U12. Temporarily remove the piggyback board by removing the six nuts and starwashers, and gently lifting up on the board. Reverse order to reinstall and gently tighten the six nuts.

3. Be sure you are grounded or wearing an anti-static strap before handling any programmable

device not plugged into its socket or into the special anti-static shipping foam.

4. Carefully remove the replacement device from its anti-static foam pad and plug it into the empty socket being very careful to align all the pins to their proper sockets *AND* in the correct direction. The replacement device pins have been used with a socket at the factory so they should easily align with the circuit board socket.
5. Once all pins have begun to seat properly in each proper socket, gently apply pressure

with two fingers on the chip to firmly seat all pins into their sockets.

6. Visually check each pin to be sure each is properly seated before applying power.
7. Apply power to the unit and check full system operation in accordance with the maintenance and operations manual.
8. Use the anti-static foam pad to return the replace device to the factory.

If you have any questions, please contact **CDT** immediately.