LAND MOBILE PRODUCT SECTOR PSB # 729 1301 E. ALGONQUIN RD APC # 388,398,684 SCHAUMBURG, IL 60196 Date: 2/09/94 (708) 576-0180 EXPIRES : N/A

Subject: VARIOUS FIRMWARE ISSUES ON THE MSF SERIES RADIOS

MODELS AFFECTED: ALL DIGITAL MSF 5000/10000 STATIONS

WORK IS UNDERWAY ON THE NEXT RELEASE OF STATION FIRMWARE. A FEW ISSUES HAVE BEEN DISCOVERED IN THE CURRENTLY SHIPPING FIRMWARE LISTED BELOW.

SSCB---51-91012H75 V5.45 TTRC---51-91012H80 V5.34 SECURE-51-91012H65 V4.22

THE FOLLOWING ISSUES WILL BE RESOLVED IN THE NEXT RELEASE OF STATION FIRMWARE.

1. Receiver activity is not INHIBUTED during a LINE OR TX CODED PTT in Half Duplex stations. This removes STATUS TONE from LINE 2 while the station is keyed by the console.

2. The SPARE OUTPUT SIGNAL on the TTRC board should be an ACTIVE LOW according to the Service Manual and design requirements. The proposed fix will make the SPARE OUTPUT an ACTIVE LOW by default. It will be capable of being changed to an ACTIVE HIGH in a future release of RSS Firmware.

3. Stations using CODE COUPLING, the MSF would generate EOM instead of passing SECURE AUDIO for the duration of TX CODED PTT.

4. EOM (End of Message) generated during drop out delays varies in frequency (+/- 6 HZ) from the desired 6000 HZ tone. This causes inconsistent recognition of EOM by the secure receivers.

5. In T=R Base stations the receiver is supposed to be inhibited. The MSF correctly inhibits Receiver Code Detects (RX CD DT) and clear receiver activity (RX1 ACT) during LINE or TX CODED PTT's. However, in stations with STATUS TONE generation enabled, the status tone is still incorrectly turned off when CODE is present on the RX frequency.

6. TX CODE LINE QUALIFIER field in the RSS Firmware is supposed to disallow TX CODED PTT's unless there is already present a LINE PTT. The senerio that happens is once a TX CODED PTT gets activated, the LINE PTT is automatically deactivated which causes the TX CODED PTT to deactivate. The change will keep the TX CODED PTT active after the LINE PTT is dropped. It will still be necessary to have a LINE PTT active to re-activate a TX CODED PTT once a station is dekeyed.

7. The requirement to have the presense of TDATA before TSTAT output can be bypassed,

can be remedied by setting TSTAT DOD (in RSS) to 000 ms. When set to 000ms TDATA need not be detected by the MSF in order for the MSF to activate the TSTAT output signal in the Central Controller.

8. Corruption of DPL signals during transmissions. This has been identified to happen during 10% of the keyups on stations that exhibit this issue.

NEW FEATURES:

1. Add the capability to bypass STAC Clear/Coded Repeater Delays if the MSF has determined that the Wireline link with the Comparator has gone down. Future RSS will allow the enabling of this feature. Contact Product Service Engineering for a procedure to enable this feature using the current RSS version 5.19 firmware.

2. Add RF coupling capability in T=R stations (TX audio is received and sent down the wireline). Future RSS will allow the enabling of this feature. Contact Product Service Engineering for a procedure to enable this feature using the current RSS version 5.19 firmware.

If you have any questions concerning these problems or would like to bring up any other firmware issues with the MSF 5000/10000 stations, contact Product Services at (708) 576-0180.

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