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TO:      HAL
FROM:    A.B. White
SUBJECT: ST-8000A FIRMWARE REVISIONS
DATE:    February 22, 1991
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ST-8000A FIRMWARE UPDATE
Version:  1.6
Released: 2-22-91
Checksum: 6E00
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1. Fix the problem with a double length keyline delay if characters arrive when RTS is ON.

2. Add a new remote port command Q to select MARK/SPACE or CENTER/SHIFT display mode on the front panel. Help page L2 is changed to add this new command.

3. Add power on default init. Press CLEAR during power on display.

4. Add P0 command to reset to factory defaults settings.

5. Add new variable in the memory save area to make certain that the data stored there is the correct date. The new flag is stored at CONFIG_SAVE and it is 1 word long.

6. Changed the TX MUTE operation so that the tones and PTT work as the 1280A works. That is, keyline is always active and the tones are completely disabled when MUTE is ON.

7. Add keyline and tone ON to T2, T3, and T4 tests when activated by the remote port or the keypad. T0 turns off keyline and tones.

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ST-8000A FIRMWARE UPDATE
Version:  1.5
Released: 2-14-91
Checksum: 0100
```

1. This release has all of the file headers that show drawing number and version number. I created a new version file: STA.VER that sets the conditional assembly flags and version number and date. All source files were modified to include this file at the beginning. When a new version is released, we need only change the file numbers in the STA.VER file.

2. Copyright notice has been added at offset 0100H

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ST-8000A FIRMWARE UPDATE Version:  1.4
Released: 2-13-91
Checksum: 1800
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1. Minor changes to 2nd-BIT-CHAN so that the options and the switch

indications are left justified.

2. Change the keypad number input routine so that the 0000 is a valid entry.

3. Allow the shift to be 0000 Hz.

4. Minor changes to the G5 status screen so that the columns align.

ST-8000A FIRMWARE UPDATE
Version: 1.3
Released: 2-12-91
Checksum:

1. Added the toggling ENTER LED for all keypad activated internal tests. Previously, the LED did not toggle for ECHO, REMOTE, or CHAN.

2. Fixed the shift option so that any shift up to 2700 Hz is allowed. Previously, the shift was limited from 20 to 2000 Hz.

ST-8000A FIRMWARE UPDATE
Version: 1.2
Released: 2-10-91
Checksum: 7000

1. Changed HELP page 1 to include the actual shift ranges allowed. The first page contained an error.

ST-8000A FIRMWARE UPDATE
Version: 1.1
Released: 2-8-91
Checksum: 8100

1. All remote port and keypad activated tests changed so that the low pass filter oscillator is set when the test is terminated. Previously, the low pass filter would default to 75 baud on test termination.

2. The BIT MARK changed so that it sets the NORMAL flag in hardware. Previously, the REVERSE was set for SPACE, but NORMAL was not forced. When activated from the remote port, T2 - T3 - T2 would leave the SPACE transmit tone active rather than change back to MARK.

3. The BIT ALT test was changed to use the NMI interrupt routine to send the data bits. NMI is set to 4 times the data rate, then the NMI routine counts down a times 4 counter for each bit. The TXD NORM/REV bit is toggled each

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time the count reaches 0.

4. Help page #1 was changed so that the SHIFT operation is correctly shown.
Previously, this page indicated that the SHIFT range was 300 to 3000 Hz.

ST-8000A FIRMWARE UPDATE
Version: 1.1
Released: 2-5-91
Checksum: 2C00

Initial production release.