PassPort® Firmware R06.02.13 Customer Release Notes

The combinations of software in the table below include enhancements in the area of roaming and mobility. These combinations also address several field issues. For further detail, please refer to Sections I and II.

	Radio Firmware	PassPort Firmware	Motorola Customer Programming Software (CPS)	PassPort Customer Programming Software (PPCPS)
HT1250·LS+™ Portable	R05.03.00 or later	R06.02.13	R06.02.03 or later	R03.02.00
CDM1550·LS+™ Mobile	R05.02.03 or later	R06.02.13	R06.02.03 or later	R03.02.00

For further information regarding compatibility between the different versions of Radio Firmware, PassPort Firmware, Customer Programming Software and PassPort Customer Programming Software, please refer to the PassPort Software Compatibility document included with the PassPort ServicePak R06.02.13.

For any questions, please contact Customer Resources at 1-800-927-2744.

I. PassPort Firmware R06.02.13 Enhancements

This version of PassPort Firmware includes many enhancements to improve the performance of the subscriber units in the areas of roaming and mobility. These enhancements reduce the search time of the radio and also allow the user to customize the radio's search performance.

Item #1: Improved RSSI (Radio Signal Strength Indicator) Mobility

i. RSSI Sampling

Previous versions of PassPort firmware used only idle messages from the PassPort system to sample RSSI. In this new PassPort firmware, the subscriber uses all system generated PassPort messages to maintain the RSSI reading from the site. By using more samples, the RSSI reading is more accurate.

By maintaining a more accurate reading, the subscriber unit does not lose affiliation to the system as often.

Furthermore, due to the subscriber now sampling more PassPort system messages, Roam Wait Time can be reduced considering that the subscriber will now use all PassPort system messages to detect the presence of a site. This results in shorter search times.

Note: *Roam Wait Time must still be greater than the programmed Idle message timer in the NTS.*

ii. RSSI Blitz Searching

When conducting searches with RSSI threshold qualification enabled, the subscriber unit proceeds to the next frequency if it determines that the RSSI of the site on the selected frequency is below the desired threshold.

Note: *"Assume Single Site Per Frequency" must be selected in PPCPS in order to take advantage of this feature.*

iii. RSSI Auto Enable Timer

When RSSI threshold qualification is disabled due to the subscriber unit being in a fringe area, RSSI qualification can be re-enabled through a programmable timer in PPCPS. This allows the subscriber unit to begin searching for a stronger site.

Item #2: Improved Strongest Site Search

i. Quicker Site Sampling

By having a quicker sampling method, the subscriber unit proceeds through its list of sites faster, thereby reducing the amount of time required to perform a strongest site search.

Note: *"Assume Single Site Per Frequency" must be selected in PPCPS in order to take advantage of this feature.*

ii. Near Neighbor Site Sampling

The near neighbor sites in the subscriber unit's almanac are sampled in order to determine the strongest site. The number of near neighbor sites in the almanac can be programmed via the PPCPS.

iii. Preemption Thresholds

PPCPS can set a threshold level that will preempt strongest site search. If a sampled site is above this threshold level, the radio attempts to register, thus minimizing the time the radio is in a search state. PPCPS can also set the type of site this threshold level can apply to (Home, Last Registered, Any).

Item #3: Compressed Seed List Search

Considering that the Almanac is a dynamic list that changes as the subscriber registers to various sites, it is possible that the same frequencies can be present in both the Almanac and Seed List. When the subscriber begins searching seed frequencies, the subscriber will not include duplicate frequencies in the search pattern. By doing so, the subscriber eliminates redundant searches of frequencies. No performance is lost with this change.

II. PassPort Firmware R06.02.13 Corrections

Item #1: NTS Transpond Acknowledgement

In previous firmware, when Home Site Lookback is enabled; the subscriber unit would intermittently fail transpond requests from the NTS causing it to be deregistered from the system. This caused "INVALID GRP ID" to be displayed when the user attempts a dispatch call.

The new firmware ensures that the subscriber unit correctly replies to transpond requests from the NTS.

Item #2: Home Lookback Threshold Level Interrupting Strongest Site Search

In previous firmware, while performing a strongest site search, if the home site was sampled above the Home Lookback Threshold level, strongest site search is interrupted.

The new firmware allows programming of an explicit threshold level (outside Home Lookback Threshold) that preempts strongest site search.

Item #3: Strongest Site Search Not Returning to Strongest Site

In previous firmware, if during strongest site search, no site was sampled above the RSSI Preferred threshold, the subscriber unit would intermittently register to a weaker site than those seen during strongest site search.

The new firmware keeps track of the strongest site regardless of whether or not this site meets the RSSI Preferred threshold. In the case where no sampled site was above RSSI Preferred, the subscriber attempts to register to the strongest available site.

Item #4: Incomplete Neighbor List Roaming

In previous firmware, the last neighbor frequency in the list was not searched during the search pattern. Therefore if the subscriber unit was only in the coverage of a site on that last frequency, the radio would not register to a site.

The new firmware searches all the frequencies stored in the neighbor list in order to find a site.

Item #5: 20th Seed Frequency Not Being Searched in First Pass

In previous firmware, the 20th seed frequency was not included during the first pass of the mobility search pattern. Therefore if the subscriber unit was only in the coverage of a site on that 20th frequency, the user would experience long search times.

The new firmware uses a compressed seed list that ensures that all unique frequencies in the seed list are included in the search pattern.

Item #6: Continuous Search

In previous firmware, the subscriber unit would continually display “SEARCHING” and did not register to a system even though it was located within an available site’s coverage area.

The new firmware eliminates this scenario; the subscriber attempts to register to an available site.

Item #7: Audio Tail

In previous firmware, if the system turnoff code was missed at the end of a dispatch call (due to RF interference), the subscriber unit would intermittently hear approximately 2 seconds of audio from another talk group.

In the new firmware, if the subscriber misses the system turnoff code it intermittently hears only a maximum of 0.2 seconds of audio from another talkgroup. Missing system turnoff codes occurs only during extremely poor signal conditions.

III. PassPort Firmware R06.02.13 Known Issues

Item #1: Keypad Tones Off
Keypad tones cannot be disabled while in PassPort operation.

Item #2: X-Pand™ Front Panel Setting
X-Pand cannot be enabled/disabled via the front panel while in PassPort operation. PPCPS must be used to enable/disable X-Pand.

Item #3: Reacquire Timer On Collect Channel
If during the search pattern, the subscriber searches the collect channel of the site it was previously registered on, the subscriber initiates a registration session regardless of the state of the reacquire timer.

Item #4: Zero Second Scan Hang Timer
If the Scan Hang Time is set to 0 seconds, there is approximately a 250 ms window during which the subscriber unit remains in scan hang timer.

Item #5: Conventional Auto Scan Prevents PassPort Operation
The subscriber unit must not be programmed with Conventional Zones in which Auto Scan is enabled. This configuration prevents PassPort operation.

Item #6: Power On Roam Delay Time
The Power On Roam Delay Time is not supported. The Roam Wait Time determines the amount of time the subscriber unit searches the first frequency.

IV. Required Upgrade Tools

A. PassPort Service Pak

The PassPort firmware Service Pak R06.02.13 can be found on **Motorola Online** at https://businessonline.motorola.com.

Click on "Resource Center > Software > Two-Way > HT-EX-MTX Portables and CDM Mobiles".

B. Programming/Flashing Equipment

- **AAHLN9742B:** Flash Adapter for both portable HT1250·LS$^+$ and mobile CDM1550·LS$^+$
- **AARKN4075A:** Portable RIBless Cable
- **AARKN40181B:** Mobile RIBless Cable

Note: *These accessories are available through Customer Care and Services Division (CCSD) – previously known as Accessories and Aftermarket Division (AAD).*

C. Estimated Upgrade Time

Below are approximate upgrade times for the Windows Operating Systems supported by PassPort ServicePak R06.02.13.

- **Windows 98** : 18 minutes
- **Windows NT**: 14 minutes