



**Prairie Mobile  
Communications  
Kenwood Nexedge  
Digital Quick - Deploy  
Communications  
Package**

**SARSAV**  
Chapter System Manual



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## System Storage

### Repeater Storage

Store repeater with the front and rear covers on. Stand repeater on edge or on flat. Do not stack batteries or heavy object on repeater. Store the transportable repeater in a dry place. Do not drop or throw the transportable repeater while handling.

### AGM Battery Storage and Charging

The 110 Amp Hour Absorbed Glass Matt (AGM) battery should be stored in its battery box in a warm, dry place. It should be fully charged before going into long term storage. During storage, it should be charged once every 90 days to ensure a full or close to full charge in the case of a sudden deployment. The AGM battery is spill proof and does not require any special venting.

#### Charging Manual

Refer to the Genius 3500 charger manual for specific instructions.

#### Opening Battery Box

To remove the lid, push the tabs on the side of the battery box in to allow the lid to be removed. When putting the cover back on, make sure that the index tabs are fully seated.

#### Positive and Negative Terminals

If it becomes necessary to clip directly onto the battery terminals, remove the battery box lid and set it where it will not get lost. Clip the supplied alligator style clips to the battery ensuring that the black (negative or ground) clip goes onto the negative or ground terminal on the battery marked with a minus sign or “-” symbol, and the red (positive or power) clip goes onto the positive or power terminal marked with a plus sign or “+”. **Do not reverse these connections and do not allow anything to short circuit the two battery terminals together. Short circuit conditions can result in a fire.**

#### Fuses

All power delivery cables are fused for added protection. All fuses must be 15AMP minimum. It is recommended that each chapter pick up a package of replacement fuses to keep on hand. They can be stored in the repeater enclosure for safe keeping.

### Antenna, Mast and Drive-On Plate Storage

Remove the antenna from the mast for storage to reduce the overall length. Store both in a warm or cool dry place. Store the Drive-On Plate with these two items and keep them together. When the mast is not in the drive-on plate, turn the T-Bolt that normally tightens the mast into place in as far as it can go to avoid losing it or having it back out when handled. Do not set items on the antenna for storage.

## Portables Storage

### Battery Storage and Charging

Whenever possible, fully charge all portable radio batteries prior to storage. NiMH batteries will lose about 1% of their charge daily in storage. For guaranteed deployment ready radios, charge batteries once every 60 days. Store the portable radio batteries in a warm dry place. Keep them in the Pelican case to avoid losing them. When in storage, ensure that no metal objects come into contact with either the charging or radio side contacts to avoid a short circuit. **Do not reverse these connections and do not allow anything to short circuit the two battery terminals together. Short circuit conditions can result in a fire.**

### Battery Charging

Place batteries in the charger either on or off the portable radio. Ensure that the battery is fully back in the charger, and that the index tabs line up and engage to hold the battery pack firmly against the charger contacts. Charge the battery until the “charge complete” light comes on. DO NOT leave charged batteries in the charger base for storage. Continued long term charging will shorten the overall life of the battery pack. Remove the battery pack from charger once the charging cycle is complete and place it in the Pelican case for storage.

### Pelican Case

A hard shell Pelican case has been supplied to house and store the portables and their accessory items. The case is supplied with individual compartments to assist in storage of different items such as batteries, speaker mics, and such. This case is stackable and can support some weight. Do not store an AGM battery on top of the Pelican case.

## Computer Storage

Store the KAS-10 GPS laptop computer in the hard shell Pelican case supplied. There is room under the computer in the case for additional accessory items. Do not store heavy items on the computer case such as AGM batteries. Fully charge the laptop before placing it in long term storage. Charge the computer once per month while not in use to ensure a full or as close to full charge when a deployment is required.

# Repeater System Set-Up

## Repeater System Set Up Theory

The Kenwood Nexedge Digital Repeater package is designed to improve portable to portable radio coverage over a search area. It receives incoming portable radio transmissions and repeats them using a stronger signal and better antenna. The repeater should be located as central to the search area as

possible. All radios, even the command post radios, must be able to reach the repeater. Effective range of the repeater will vary depending on the physical characteristics of the search area. Flatter ground will provide better coverage while rougher ground will provide poorer coverage. Locate the repeater on as high a ground as possible, in as central a location as possible, on firm packed ground that will support a vehicle parked on the drive-on plate that will support the antenna mast and antenna.

## Set Up Steps

1. First thing you need to do when you receive your equipment is to attach the Base Antenna clamps to the mast. This is accomplished by putting both clamps loosely on the top of the mast as shown. (Figure 1)



Figure 1 - Attach Antenna to the Mast

2. Mount the upper clamp about one inch from the top of the mast and tighten the U bolt with a 10mm wrench. Remember to alternate between both sides of the clamp and tighten it evenly.
3. Slide the Base Antenna into the clamps (Silver portion not the white). Keep the Base antenna about a  $\frac{1}{4}$  to  $\frac{1}{2}$  inch from the top of the silver. Secure the upper Clamp around the antenna. (Figure 2).



Figure 2

4. Slide the lower clamp onto the bottom of the Base Antenna. Keep the Clamp  $\frac{1}{4}$  to  $\frac{1}{2}$  inch away from the bottom.



Figure 3

5. Ensure the Base Antenna and masts are in a straight line. Then tighten the U bolt on the lower mount to the mast.

6. Finally tighten all the bolts and nuts so that everything is secure. The Antenna Mast should not twist or move. Be careful not to over tighten the bolts.
7. Remove collar and slide over Antenna Cable. Attach the Antenna cable to the Base Antenna. The cable only needs to be hand tight. Once cable is connected to antenna, screw collar back onto antenna. Ensure to keep the antenna connectors free and clear of dirt, debris, and moisture. (Figure 4)



Figure 4

8. Loosen the bolt; with two people extend the mast to its maximum. We recommend painting a mark on the mast so you know when it is fully extended (Figure 5).

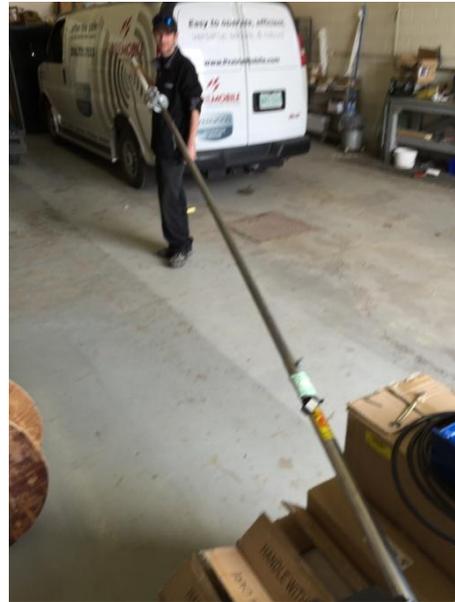


Figure 5

9. If you wish, guy wires can be attached to circular plates on the mast, and tied or staked to the ground to provide more stability.
10. Drive vehicle onto base plate. Keep as much distance between the mast and vehicle as possible, **but ensure the tire is completely on the plate.** Try to find a firm, level spot to setup as this will help maximize range from Base Antenna (Figure 6).



Figure 6

11. Loosen the T-Handle bolt on base plate. With two people carefully lift Mast into place and ensure it is slide all the way into the base plate. Tighten T-Handle bolt (Figure 7).



Figure 7

12. Once Mast is in place step back and look at Base Antenna and mast from a distance. The mast and antenna should be as close to straight and level as you can get. (Figure 8)



Figure 8

13. Take other end of antenna cable and connect to the repeater, **HAND TIGHT ONLY**. Be sure to keep the antenna connectors free and clear of dirt, debris and moisture. The covers do not need

to be removed for repeater operation, however on days in excess of 30 degrees C; the front cover should be removed if possible to assist in cooling. (Figure 9)



Figure 9

14. Insert power cable into power connector on the repeater. It does not matter which plug you use on the case of the repeater. All of them will power the repeater. You can also plug multiple batteries in at a time. Up to a maximum of 4 batteries can be connected at one time. Line up Red to Red and black to black. (Figure 10)



Figure 10

15. Determine which power source best suits your situation. All are pictured. (Figure 11) Battery with fly away connector, battery clamps, cigarette lighter plug with leads, and cig buddy. Just remember if using the Cigarette lighter plugs or Battery clamps on the vehicle on site, after extended operation you will start to drain your vehicles battery. Be sure to start the vehicle and let it run from time to time to ensure adequate battery level.



Figure 11

16. Connect the other end of the power wire from the repeater to your chosen source. In this picture the battery is the chosen source. (Figure 12)



Figure 12

17. Remove the front cover of the box to expose the repeater. (Figure 13)



Figure 13

18. On the right hand side of the repeater there is a button with a green led. If the LED isn't on, then push the button. You can also tell if the repeater is powered up from the LED display. It will show the 1 in the display. If you open the cover and the number one is blinking wait a couple of minutes for it to stop blinking. If you are finished setting up the repeater you can replace the front cover of the box to protect the repeater from the elements. (Figure 14)



Figure 14

19. You can use the repeater like a mobile radio by plugging in the supplied microphone. You plug the microphone into the jack on the far right of the repeater. (Figure 15)



Figure 15

20. Between the power button and the led display is a knob. This knob is the volume knob. You can turn this clockwise to hear the incoming radio conversations. (Figure 16)



Figure 16

21. To make a Radio call from the repeater, press the push to talk button on the left side of the microphone. Speak into the microphone. Release the push to talk button. Speak calmly and clearly across the face of the microphone, keeping it about 2" away from your mouth. Digital radios respond positively to calm and even tone voice, even in high noise environments.
22. During normal repeater operation the TX and RX LED will light up as conversations are happening.
23. If for any reason the repeater stops working follow these simple steps to troubleshoot.
  - Ensure good power source.
  - Ensure Power is turned on
  - Ensure antenna connected
  - Attempt to use different power connector on repeater case
  - Open back cover of repeater case, pull out the fuse holder and inspect fuses.

## Command Post Set-Up

When setting up your Command Center with the laptop running the KAS-10 Software, follow these instructions.

1. Pick up your Command Center Radio. Ensure you have the correct radio for the command center. There is a label on the top of the radio that says Command XX. The XX represents the ID of the Command radio. In the example below, the ID is 1. (Figure 17)



Figure 17

2. Remove the long rectangular cover from the back of the radio. Set it aside for re-use during storage. (Figure 18)

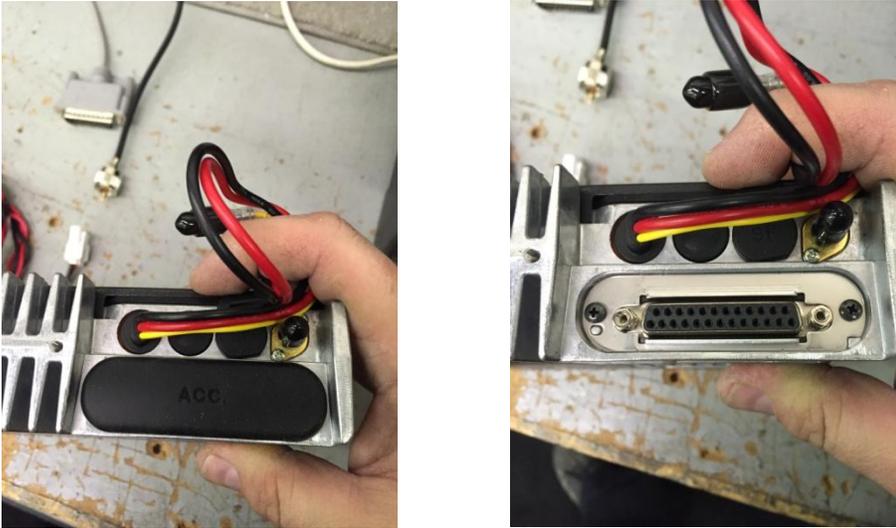


Figure 18

3. Attach the 25 Pin serial cable to the back of the radio. You can use the thumb screws to ensure a secure connection to the radio. These only need to be finger tight. Over tightening may cause damage to the radio. (Figure 19)

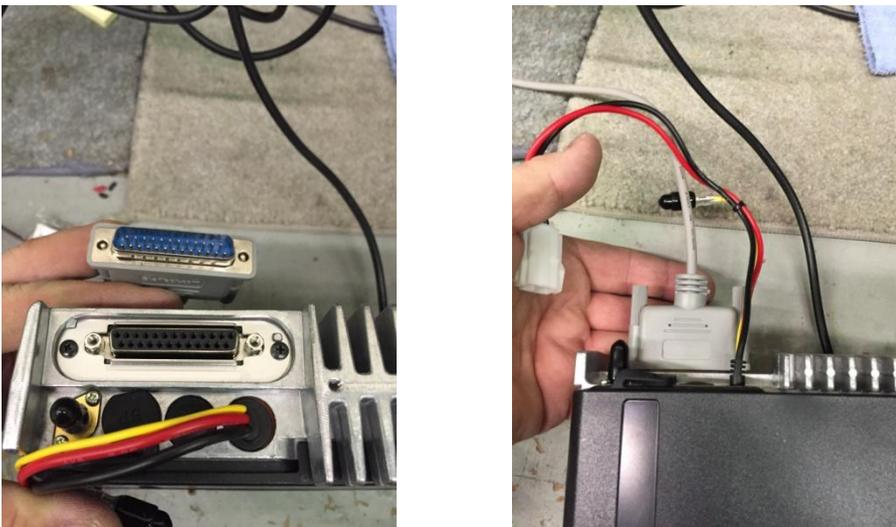


Figure 19

4. Take the radio power harness. One end will have a white connector; the other end will have fuse holders and a black and red connector. Connect the white connector on the radio to the white connector on the harness. (Figure 20)

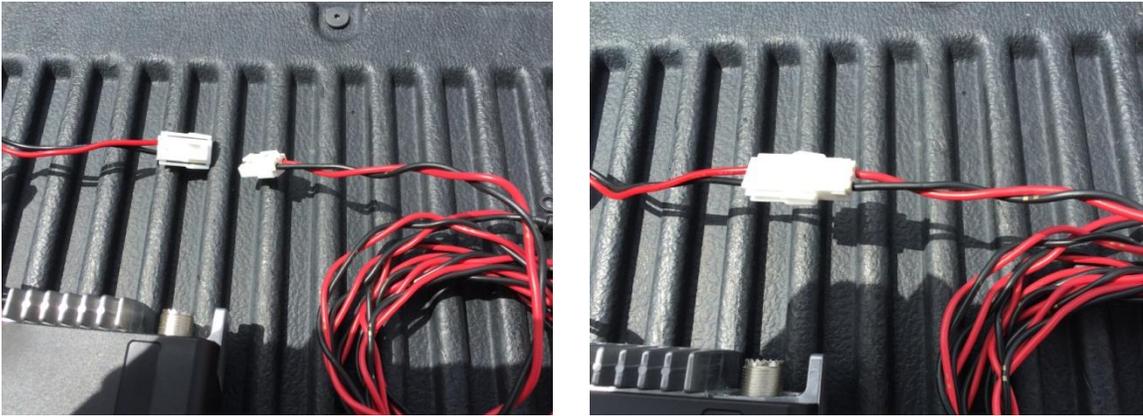


Figure 20

5. The yellow wire secured to the radio power harness does not need to be connected to anything. (Figure 21)

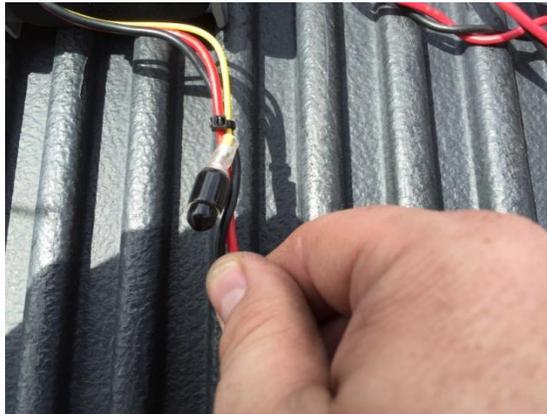


Figure 21

6. Choose a power source for the radio.
7. As you can see the power connectors for the repeater and Command Center radios are the same. Match red to red and black to black to connect the accessories together. (Figure 22)



Figure 22

8. Connect the other end of the radio power harness to your chosen source. In this Picture I have chose the battery. (Figure 23)



Figure 23

9. Find a suitable place to place the magnetic mount antenna. Attach the antenna connector to the back of the radio. This only needs to be finger tight. (Figure 24)



Figure 24

- The radio should power up. If the radio does not power on when connected to your power source, press the round button on the upper left side of the radio. You can confirm you have the proper radio for the command center. By looking at the display of the radio, above the channel description it MUST say Command Center. (Figure 25)



Figure 25

- Open the Laptop Case and Remove the Laptop. (Figure 26)



Figure 26

12. Below the Laptop are the laptop accessories. (Figure 27)



Figure 27

13. Attach the nine pin serial cable to the connector on the back of the laptop. As you can see in the first picture the connector attaches by a friction fit. You will have to ensure if moving the laptop after setup to ensure this cable stays connected to your laptop. (Figure 28)



Figure 28

14. You can plug the ac adapter for the laptop into the round power port on the left hand side of the laptop. (Figure 29)



Figure 29

15. Press the power button on the upper right hand side of the laptop. (Figure 30)

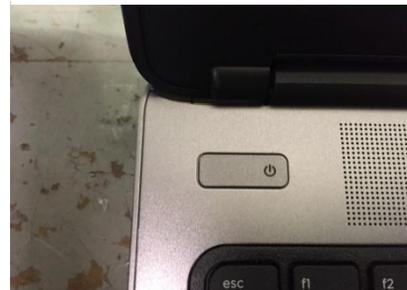


Figure 30

16. After a couple of minutes the computer will start-up and you be brought to the KAS-10 Software. (Figure 31)

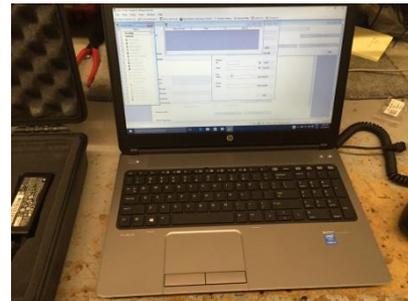


Figure 31

17. The Command center radio can also be used for Radio communication. Just attach the supplied microphone to the front of the radio. (Figure 32)



Figure 32

**Do not use your radio without an Antenna connected. This will cause damage to your radio.**

18. When finished with your Command center radio, inspect your antenna cable for damage. If you find any damage have the cables repaired or replaced immediately. A bad antenna cable will result in poor to no radio communication, and prolonged use will damage your radio.

## Mobile Radio Setup

1. Ensure you have the Mobile radio. Look for the label on the top of the radio. There is a label on the top of the radio that says Mobile XXXX. The XXXX represent the ID of the Mobile Radio. In the picture below, the mobile ID is 1000. (Figure 33)



Figure 33

2. Take the radio power harness. One end will have a white connector; the other end will have fuse holders and a black and red connector. Connect the white connector on the radio to the white connector on the harness.(Figure 34)



Figure 34

3. The yellow wire secured to radio power harness does not need to be connected to anything. (Figure 35)



Figure 35

4. Place your magnetic antenna on the roof of your vehicle. Please ensure the surface is clean and free of dirt and debris, if not you will scratch your paint. **This antenna will only stay securely in position on steel. Vehicle manufacturers are now deploying aluminum/steel alloy. The magnetic mount antenna will not stay where positioned.** (Figure 36)



Figure 36

5. Route the cable through a door, or window. Be careful not to kink this cable sharply. The weather stripping around the door will offer some protection against cable damage. (Figure 37)



Figure 37

6. Route antenna cable to where you wish to use the radio. Be careful to keep the cable out of the way of the driver and passengers.
7. Attach antenna cable to back of radio. This only needs to be finger tight. (Figure 38)

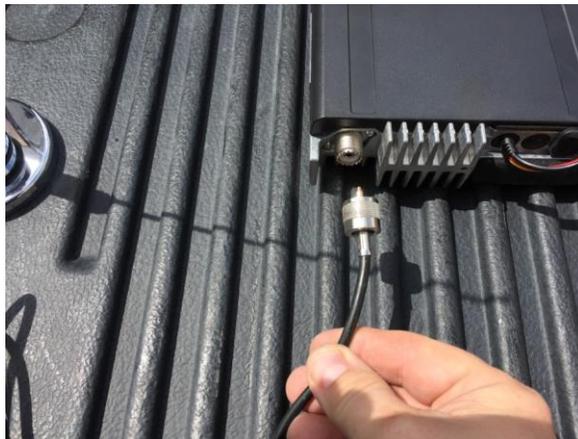


Figure 38

- Find a place to keep the radio from moving around. Here I have placed it under the armrest of the truck. (Figure 39)

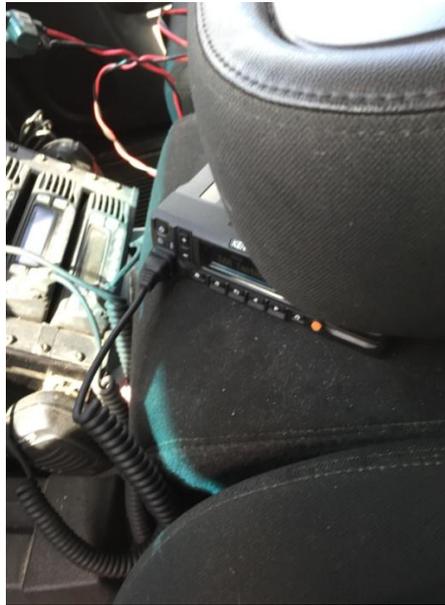


Figure 39

- Chose your power source. (Figure 40)

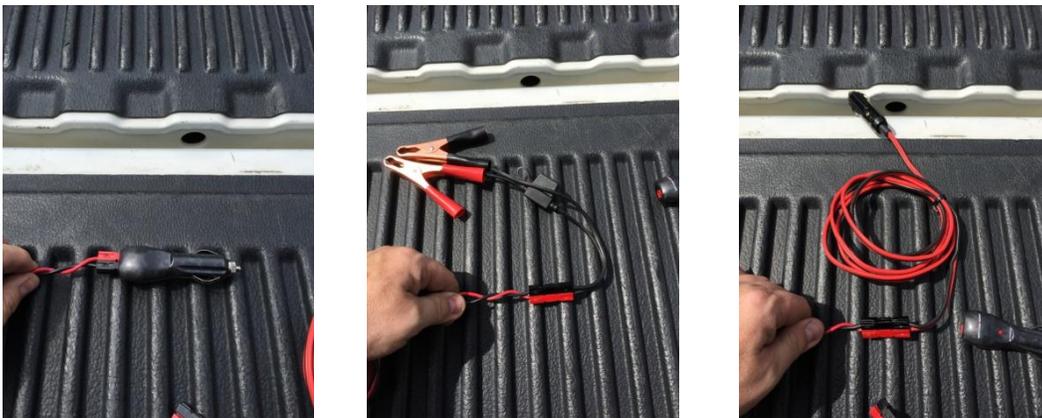


Figure 40

10. These are the same connectors used on the Repeater, and Command center. Just match up the colors red to red, and black to black.
11. For this application I chose the Cig Buddy. Insert the Cig Buddy into your vehicle cigarette lighter plug. (Figure 41)



Figure 41

12. The radio should power on. If not press the round button on the left hand side of the radio.
13. To ensure you have the correct radio, above the channel information on the radio it should read Mobile. (Figure 42)



Figure 42

14. Attach the microphone to the radio. (Figure 43)



Figure 43

- 15. Do not use your radio without an Antenna connected. This will cause damage to your radio.**
16. When finished with the radio, be sure to inspect your antenna lines for damage. If you find any damage have the cables repaired or replaced immediately. A bad antenna cable will result in poor to no radio communication, and prolonged use will damage your radio.

## System Usage

### Base Station Voice Calls

To make a voice call on the base station, first step is to ensure you're on the correct channel. Look to the front of the NX5700 Base Radio and make sure that you're on the desired channel. Channel select is on the right side of the display, up and down. Adjust the speaker volume with the up/down controls on the left side of the display (figure 43). Lift and speak into the palm microphone while depressing the push-to-talk button. Be sure to press the button before speaking or you may cut off a portion of your first spoken word. Speak calmly and clearly across the face of the microphone, keeping it about 2" away from your mouth. Digital radios respond positively to calm and even tone voice, even in high noise environments.

### Portable Radio Use

#### Voice Calls

To make a voice call on a portable radio, first step is to ensure you're on the correct channel. Look to the front of the NX5200 portable and make sure that you're on the desired channel. Adjust the channel with the rotary channel selector on the top of the portable or on the limited keypad controls on the face. Speak across the face of the portable radio while depressing the push-to-talk button on the side. Be sure to press the button before speaking or you may cut off a portion of your first spoken word. Speak calmly and clearly across the face of the portable, keeping it about 2" away from your mouth. Digital radios respond positively to a calm and even tone voice even in high noise environments.

#### Portable Radio Show GPS Position

The portable radio can display its GPS position in Degrees, Minutes, and Seconds on demand. Press and hold the GPS Position button (Key 1, figure 50). The GPS position data will appear in the display.

#### Sending Status Messages back to Base

Sometimes when absolute confidentiality must be maintained, it becomes necessary to communicate to the command center via Status Message rather than by verbal communication. Status messages are a list of canned or pre-determined messages as set out by SARSAV for use in the field. To send a Status message from a portable, press the Stack and Status message button (Key 8, figure 50) on the face of the radio until it shows the status message list. Scroll down through the list until you have selected the message you want to send, and then press the push-to-talk button on the portable to send it to the Command Center. It will appear to the dispatcher on KAS-10.

### Speaker Microphones

The speaker microphone is a convenient extension of the portable radio that can be clipped onto your jacket or vest. It has both an external speaker to bring the audio closer to your ear and a microphone to pick up your voice for transmissions. The speaker mic also has a push-to-talk button on the side. Speak across the face of the speaker mic while depressing the push-to-talk button on the side. Be sure to press the button before speaking or you may cut off a portion of your first spoken word. Speak calmly and clearly across the face of the speaker mic, keeping it about 2" away from your mouth. Digital radios respond positively to a calm and even tone voice even in high noise environments. To attach the speaker mic, remove the protective cover from the speaker mic jack, set the connector housing tab at the bottom of the connector and screw the connector locking screw into place.

*Note! Speaker mics make the radio easier and more convenient to use, but you will lose some range wearing the radio on your hip while in use.*

### AA Battery Housing

If AC power can't be found and portable radio batteries can't be charged, auxiliary battery housing has been supplied that uses AA batteries. The housing separates into two halves and AA cells are loaded according to the polarity chart in the housing. The housing replaces the battery pack.

*Take care to store the unused rechargeable batteries in the supplied Pelican case.*

### Setting the Clock

Press and hold **Orange button** on Radio for 2 seconds. The display should change to Clock Adjust.

Use the arrow buttons to move the flashing cursor to adjust the time and date. (figure 44) The left and right arrows move the flashing cursor around the display. The up and down arrows change value of the flashing cursor. Pressing OK saves the setting.

When the radio is first turned on, check the clock settings and set it when required. This will be needed if the radio has not been charged for some time.



Figure 44

## KAS-10 GPS Tracking and Messaging Software

A complete KAS-10 User Manual by JVCKenwood has been supplied in electronic format and stored on the KAS-10 Dispatch PC. It most completely covers all aspects of the GPS Location and Messaging Software. The following topics are the most commonly used in practical application and in real time in the Command Post Environment.

For quick Reference, Toolbar Master Locations will be used. All topics will be sorted by the Toolbar Master Headings in KAS-10. Those headings are: Files View Setup Tools Window Help

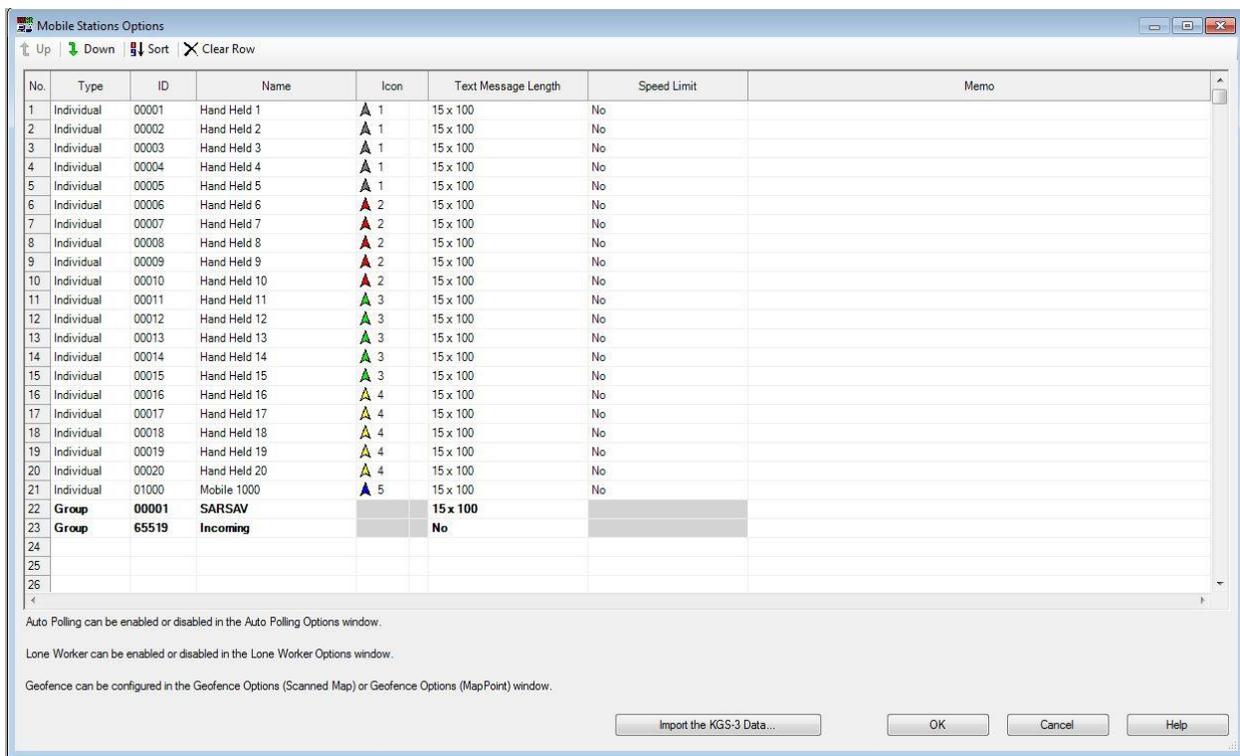
Any time changes are made, a password will be asked for. The default password is Kenwood, case sensitive. When changes are made, hit "OK" to save and wait until the "activity spinner" closes.

### Setting up the Portables and/or Mobiles to be Used for the Search into the System

#### Setting Up Global and Individual Tracking Parameters and Rules for Radios

Location: Setup / Mobile Station Options

Password to make changes: Kenwood (case sensitive)



No.	Type	ID	Name	Icon	Text Message Length	Speed Limit	Memo
1	Individual	00001	Hand Held 1	A 1	15 x 100	No	
2	Individual	00002	Hand Held 2	A 1	15 x 100	No	
3	Individual	00003	Hand Held 3	A 1	15 x 100	No	
4	Individual	00004	Hand Held 4	A 1	15 x 100	No	
5	Individual	00005	Hand Held 5	A 1	15 x 100	No	
6	Individual	00006	Hand Held 6	A 2	15 x 100	No	
7	Individual	00007	Hand Held 7	A 2	15 x 100	No	
8	Individual	00008	Hand Held 8	A 2	15 x 100	No	
9	Individual	00009	Hand Held 9	A 2	15 x 100	No	
10	Individual	00010	Hand Held 10	A 2	15 x 100	No	
11	Individual	00011	Hand Held 11	A 3	15 x 100	No	
12	Individual	00012	Hand Held 12	A 3	15 x 100	No	
13	Individual	00013	Hand Held 13	A 3	15 x 100	No	
14	Individual	00014	Hand Held 14	A 3	15 x 100	No	
15	Individual	00015	Hand Held 15	A 3	15 x 100	No	
16	Individual	00016	Hand Held 16	A 4	15 x 100	No	
17	Individual	00017	Hand Held 17	A 4	15 x 100	No	
18	Individual	00018	Hand Held 18	A 4	15 x 100	No	
19	Individual	00019	Hand Held 19	A 4	15 x 100	No	
20	Individual	00020	Hand Held 20	A 4	15 x 100	No	
21	Individual	01000	Mobile 1000	A 5	15 x 100	No	
22	Group	00001	SARSAV		15 x 100		
23	Group	65519	Incoming		No		
24							
25							
26							

Auto Polling can be enabled or disabled in the Auto Polling Options window.

Lone Worker can be enabled or disabled in the Lone Worker Options window.

Geofence can be configured in the Geofence Options (Scanned Map) or Geofence Options (MapPoint) window.

Import the KGS-3 Data... OK Cancel Help

Figure 45 – Mobile Stations List

Each SARSAV Chapter will be issued a quantity of portable handheld radios for use in the field. In order to track those units by GPS, they may need to be entered into the Mobile Stations list. An example of the mobile stations list is shown in Figure 45. Each chapter may only have four or five portables, but in larger searches or Exercises, additional radios from other chapters may also be used. Each portable has a unique ID programmed into it. To see the ID, power-cycle the radio and watch the display when it powers up. The ID will be displayed. The portables and their ID's along with some additional information needs to be set up in KAS-10. You will need to set a few parameters for the system to work. We'll need to set the Type, ID, Name, Icon, and Test Message length in the system. Additional fields that may be visible are Speed Limit and Auto Polling. Refer to the manual for setup instructions on those.

**Type** – Drop Down Box Field. Choices are Individual, Group and All.

Refer to Figure 45 again. Portables should always be set to Individual.

*Note: In figure 45, note the last two entries in lines 22 and 23. These two entries must always be entered and must appear in your mobile stations list. They must always be at the end of the list. The Up/Down buttons in the upper left corner can be used to quickly move entire lines up and down. If Sort is used, these entries will be placed at the top and will have to be moved to the bottom. They should always be the last two entries in the field. This will eliminate confusion when looking at the Icons on the map window when tracking.*

**ID** – Manual Entry Field

Enter the radio ID number. Power-cycle the radio and watch the display to get the ID. When entering the data into the field, just enter the ID number in short form, if it's 0004, just enter 4 into the field. The proper number will appear with all the zeros, and so on.

**Name** – Manual Entry Field

Enter the name as Handheld 1, 2 or 3 and so on. User names can also be entered here and will appear on the map with the location Icon.

**Icon** – Drop Down Box Field (20 choices)

20 radio icons are available and more can be imported in the proper format (refer to manual). Either choose a different color icon for individual units or group search teams of multiple radios with the same color.

*Note: The arrow shows direction of travel when displayed on the map.*

**Test Message Length** – Drop Down Box Field, Choices are NO, 100, 15 X 100 and 4096.

This specifies whether the portable can send test messages and the length. This should be set to 15 X 100.

## Turning Portables On and Getting GPS Positional Lock

When portable radios are given to search team members, they will not begin to report GPS until the radios are turned on and are outdoors with a view to the sky. When first turned on, it may take up to two minutes for the portable to achieve a GPS lock. It often happens much faster depending on conditions. If you can't get a GPS report from a portable while using KAS-10, it likely means the radio and the user are indoors.

*Note: Command Center protocol should include mandatory notice from users to command that they are unavailable for tracking when their status changes.*

## Selecting a Scanned Map for the Search Area

Location: Setup / Map Options

Password: Kenwood (case sensitive)

Click Set Up . . .

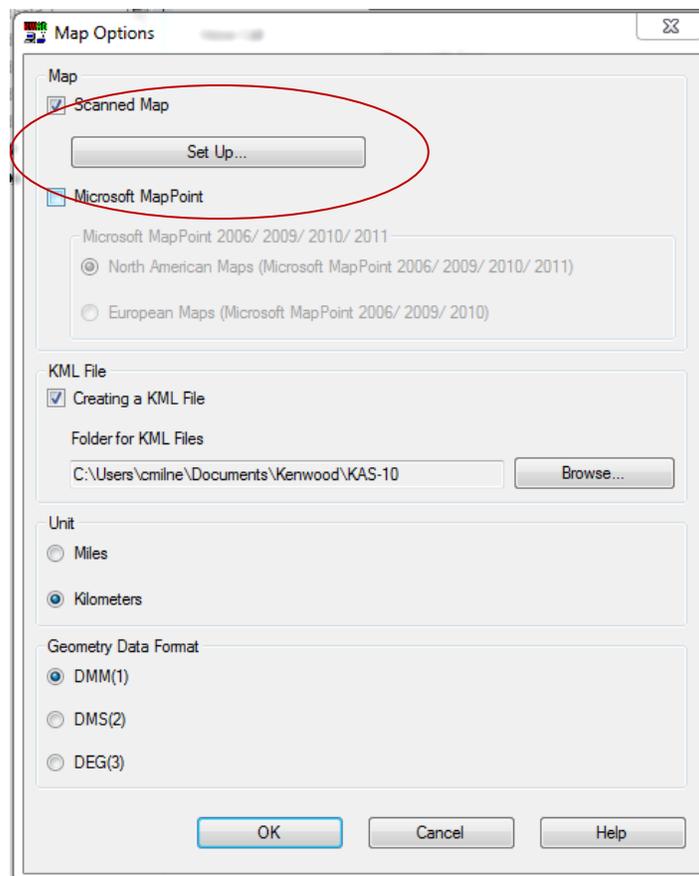


Figure 46 - Map Options

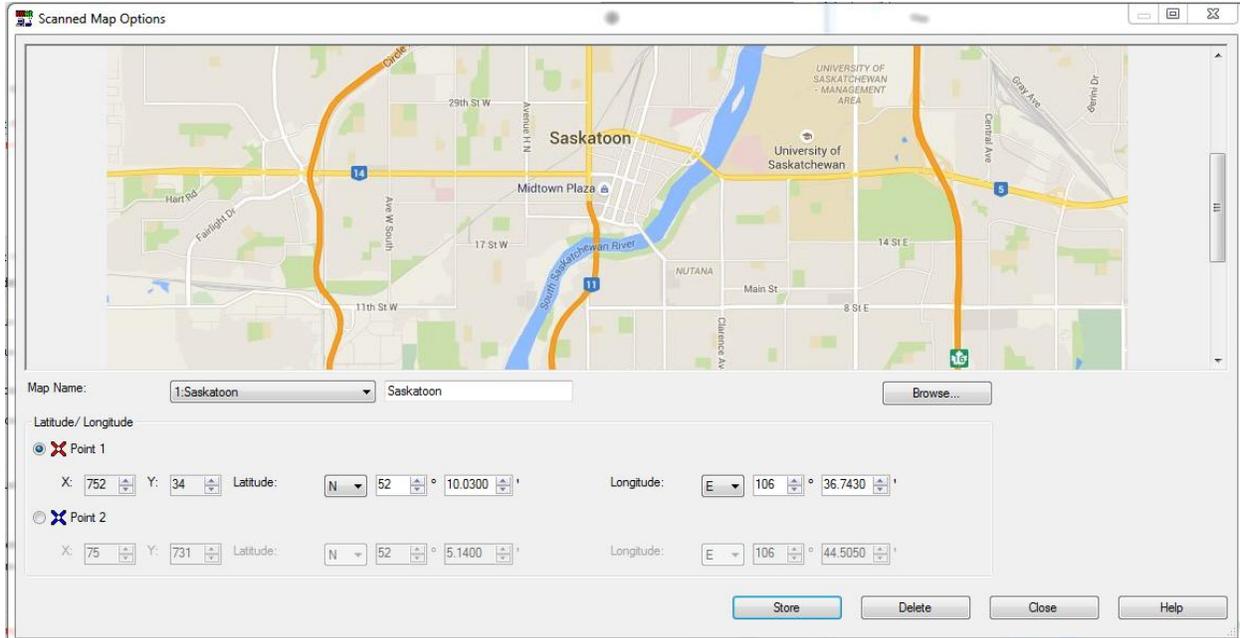


Figure 47 – Scanned Map Options

The Scanned Map Options box appears. Here you can choose a map from file. Maps can be scanned or imported to use with KAS-10. See the user manual for details on acceptable map size and file type.

When a new map is imported, ensure the map to be used is in scale. To have portable GPS locations report accurately, we must pick two points on our scanned map and teach KAS-10 their actual GPS position. Typically, this is done prior to an event or exercise. Once the map is chosen and displays in the window (figure 47), set the actual GPS coordinates for points in the upper right and lower left corners. Select Point 1, move the red X cursor over a known GPS point, and enter the GPS data into the field. Repeat the process for Point 2 and the blue X cursor. Save your entries and name the map so you can find it in the file. As long as the map is to scale and your GPS data is accurate, you should now be able to track anywhere on the scanned map.

## Setting up the PC KAS-10 Desktop for Practical Use

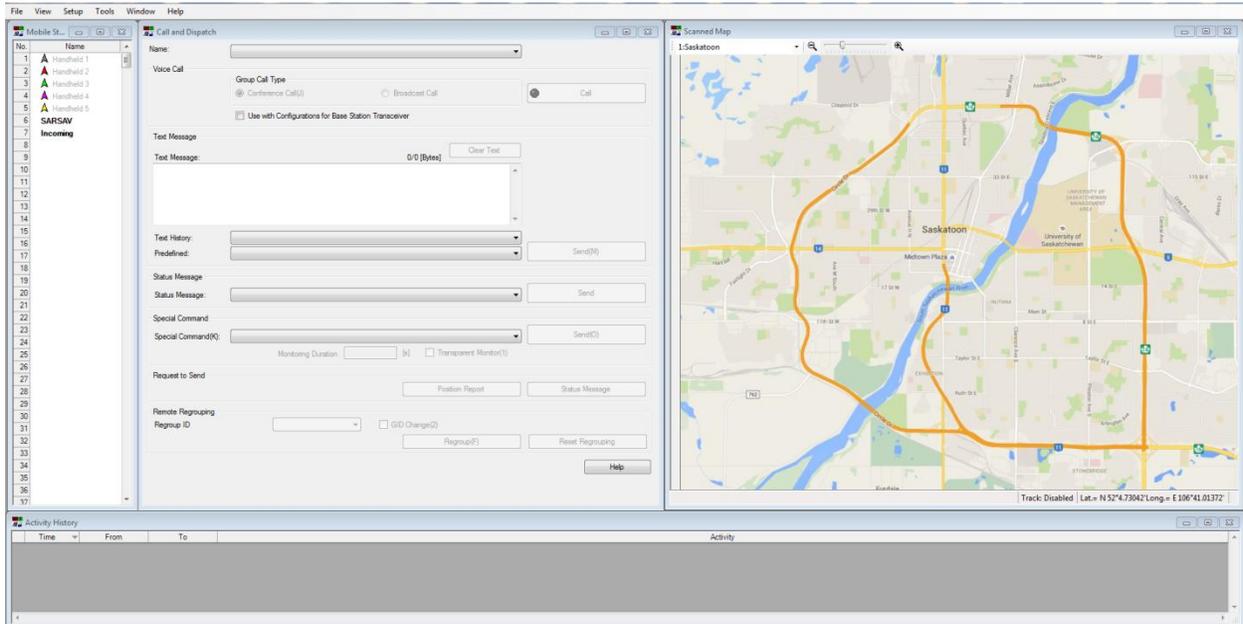


Figure 48- Practical Desktop Setup for KAS-10

For practical use, KAS-10 should be set up to display the radios list, the messaging window, the scanned map and the event history as above in figure 48. These are the four main components that will be used in real time. Windows can be resized as desired. Please take some time to work with KAS-10 and become familiar with it and change the shape and location of the windows as you see fit.

### Requesting a GPS Position Report

Right click on the unit that you want to update GPS location data for. A box will open with several choices. Select “Request Position Report” and left click on it. The NX5700 KAS-10 Base radio will transmit its request to the portable in the field and the portable will return its GPS position data as long as it’s in range of the system.

*Note. The portables will also transmit their GPS position data every time they transmit to another portable or to the base station. The dispatcher should be contacting all the radios on scene on a regular basis as standard practice.*

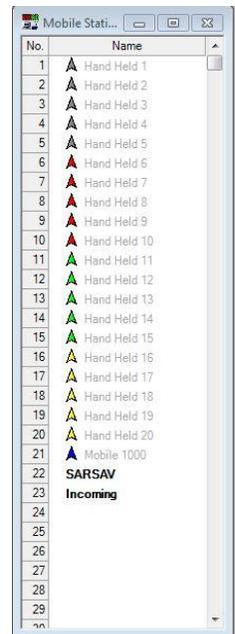


Figure 49 - Mobile Stations List

## Messaging – Text and Status Use vs. Voice Communication

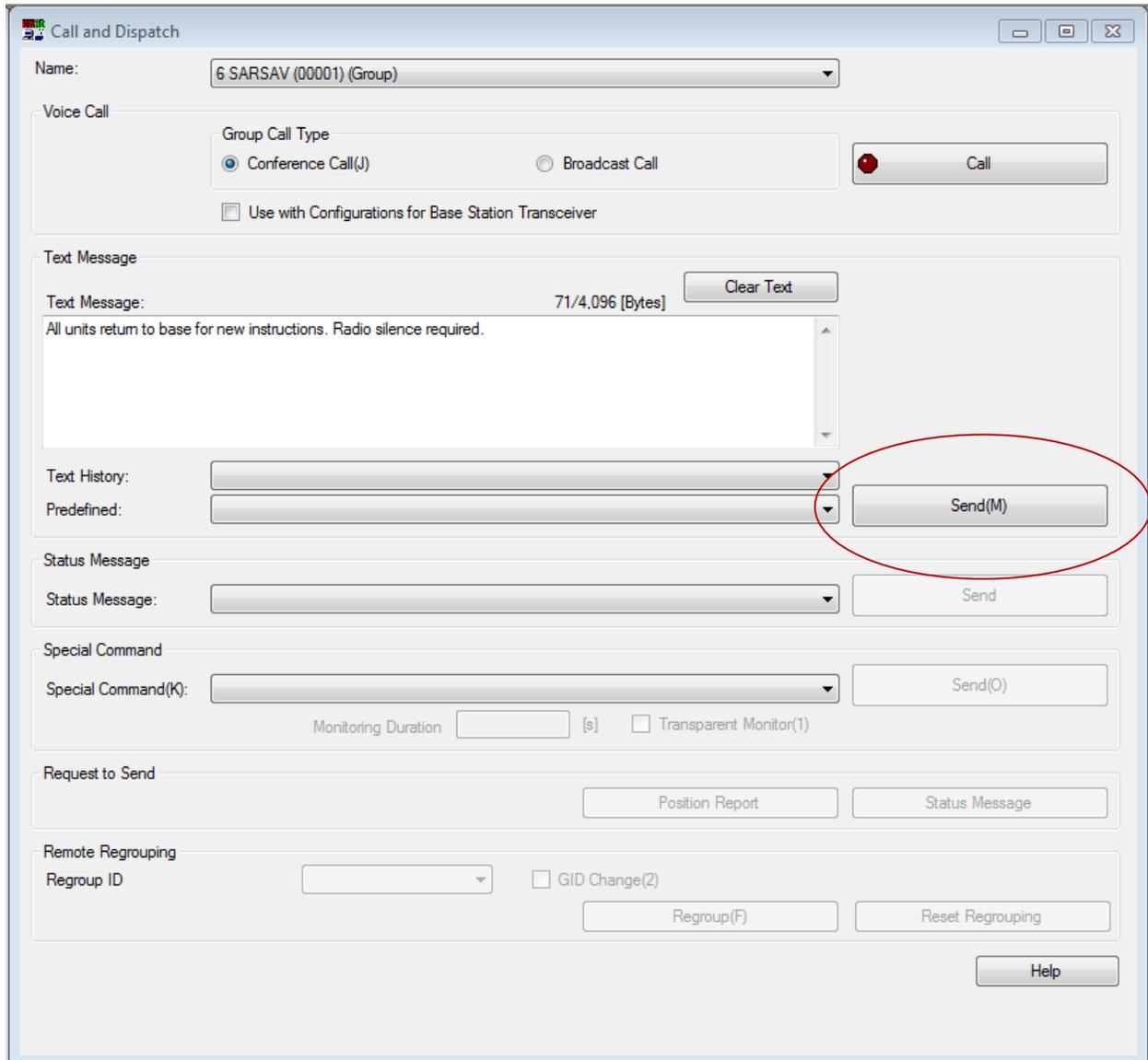


Figure 50 - Call and Dispatch Window

There will be times during a search event where verbal communications no longer suits the situation. We must constantly be aware that regardless of how hard we try to secure voice communications, sometimes things get heard accidentally that should not be public knowledge. This happens when we forget to turn a radio down when we're eating, or in down-time during the search. Before you can get to it, a call comes through and everyone nearby hears it. We often can't control who's nearby, so we must understand that when a situation arises that simply can't be released to the public at that time, we need

to use messaging to convey the information. Command Center dispatchers can type messages and send to the portables in the field, either to a single radio privately, or to the entire group.

From the KAS-10 computer, simply type in your text message and hit send. (Shown on figure 50). Portable radios will sound a tone indicating that they have received a message and it's in the stack for review. Hit the Stack button on the portable to see the last incoming message. It will scroll if it's too long to fit on the screen.

From the Portable radio, hit the Stack and Status Message Key (key 8, figure 51).

### Programmable Functions Key

(Enter the programmed function names for each key.)

No.	Programmed Function Name	Comment
①	GPS Location	To Access received status message press the Stack button (8).
②		
③	Key Lock	
④		To Send Status Message press and hold Stack Button (8) scroll down list of status messages, press PTT (Push To Talk) Switch
⑤		
⑥		
⑦	Channel Selector	NOTE: When Radio Channel Selector (7) is turned to an unused channel, The Display will show "*****" and the radio will emit a long steady tone.
⑧	Stack & Status Message	
⑨		
⑩		
⑪		
⑫	Scan Delete/Add	
⑬		
⑭	Scan On/Off	
⑮	Exit	
⑯		
⑰		
⑱		

Figure 51 - Portable Radio Function Keys

This will bring up the list of canned or pre-defined status messages that the portable can send back to the command center base radio. Scroll up or down to the desired message and when you're on the message you want to send, press the push-to-talk switch to send the message. Hitting the home key will return the portable to normal operating mode.

## Activity History

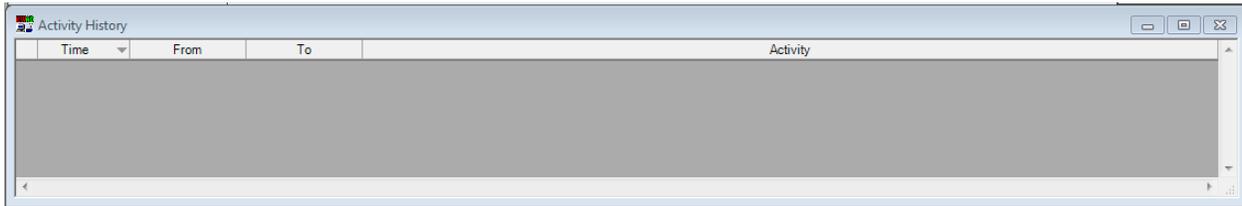


Figure 52 - Active History Window

All calls regardless of nature will show up in the Active History window. This includes voice calls start, voice calls end, GPS reports, incoming and outgoing messages, and any special notifications if set up. This list can be quickly scrolled through to check on times of transmissions and GPS position reports.

## GPS Track Replay

Location: Tools / Position Report Log File Replay

Password: Kenwood (case sensitive)

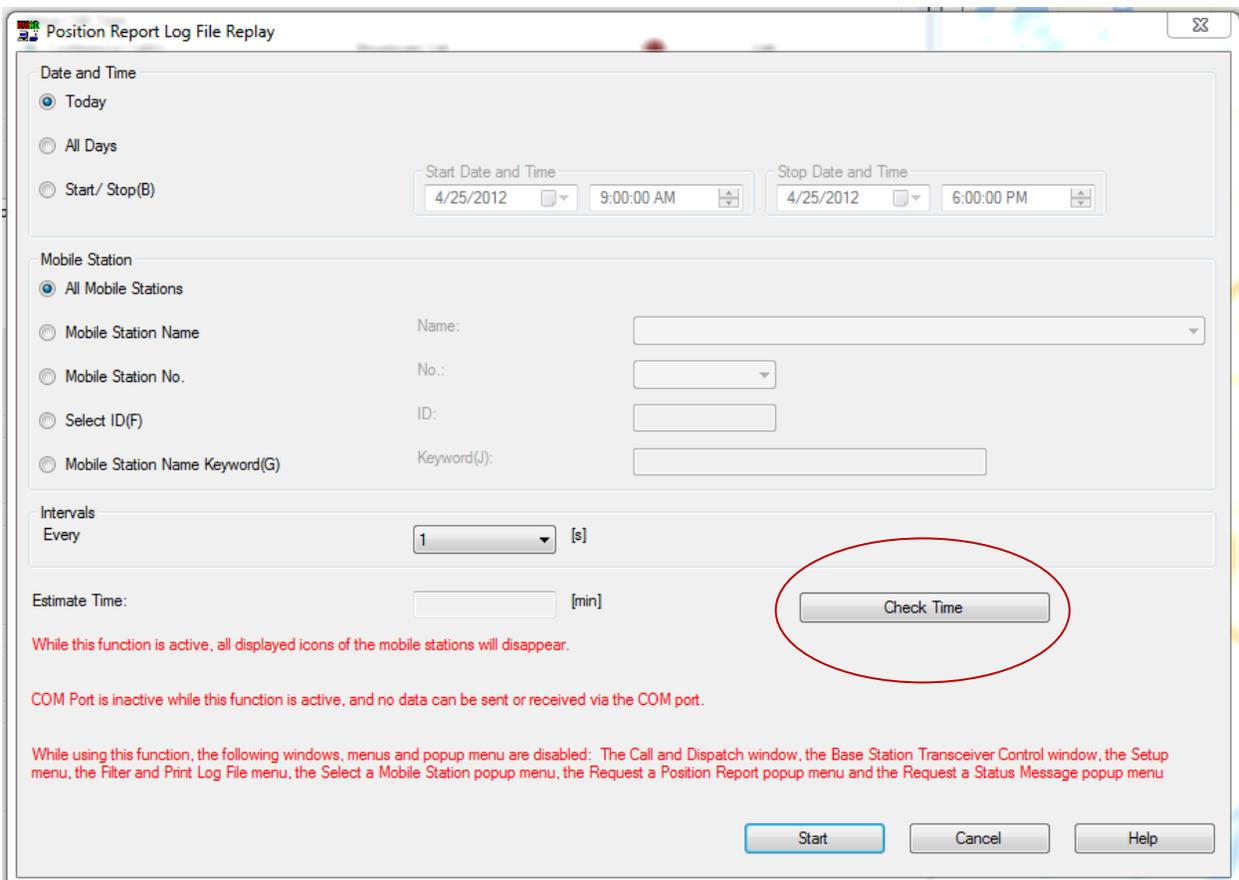


Figure 53 - Position Report Log File Replay Window

You can replay the track of all the portables in the field or individual units when needed. Select Tools, Position Report Log File Replay. You will see the log file replay window open (figure 53). Set the replay parameters by day of the week, time of the day, and for either all or individual mobile stations. Once your parameters are entered, click the Check Time button and the system will tell you how long the replay will take.

*Note: While the replay happens, no further KAS-10 action can happen until the replay is complete. This includes GPS reporting and recording.*

## System Take Down

At the end of the search follow these simple steps to put away your repeater.

1. Disconnect the power from the power source. Battery shown in this picture. (Figure 54)



Figure 54

2. Disconnect power cable and Antenna cable from repeater. Be sure to ensure to keep the connectors free and clear of dirt and debris. (Figure 55)



Figure 55

3. If you have used guy wires to stabilize the antenna mast first undo them, then loosen T-Bar bolt, then remove antenna mast from Base plate. Be sure to have two people handle the mast. (Figure 56)



Figure 56

4. Collapse Mast by loosening handle and push the upper and lower sections together. Careful when collapsing the mast, as the rings for the guy wires can force or kink the Antenna cable and damage it. (Figure 57)

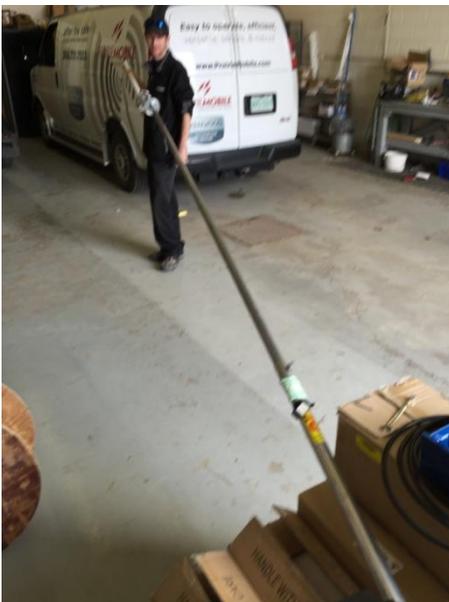


Figure 57

5. Remove silver collar protecting the antenna connector on the base antenna. Remove the antenna cable from the base antenna. Replace the silver collar at the end of the base antenna. (Figure 58)



Figure 58

6. Loosen the clamps securing the base antenna to the mast.
7. Slide the base antenna from the mast. Be careful to protect the antenna connector from dirt and debris. (Figure 59)



Figure 59

8. When storing antenna cable be sure not to kink the cable. Antenna cable should be coiled up and stored away carefully.
9. There is room inside the case of the repeater. From the front, you have enough room to coil and store your antenna cable, and power cord accessories ***BELOW*** the repeater. This will allow you to keep all your accessories for the repeater in one place. (Figure 60)



Figure 60

10. If your repeater case has been exposed to the elements (Puddles, Rain, Snow, High Humidity) PMC strongly recommends once you return to your base of operations that you open the repeater case covers. Wipe down any visible moisture, and allow the equipment to air out at room temperature for 24 to 48 hours. Inspect the equipment to ensure it is clean and dry before storing it.

11. There is no need to remove the antenna clamps from the mast. If there is some concern for losing the nuts when they are loose on the threaded rod, we would recommend replacing the nuts on the mounts with a nylon lock nut.

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