

Virginia Department of Transportation HAR Operational Guidelines



August 1995



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INTRODUCTION

These guidelines have been developed to help Virginia Department of Transportation (VDOT) personnel effectively operate highway advisory radio (HAR) systems. Operators should continually bear in mind that it is of paramount importance that HAR messages be *accurate*, *timely*, and *useful*. While this document provides guidance, it can in no way replace the sound judgement of HAR operators.

The guidelines are organized in five sections: personnel, transmitter placement, advisory signing, message development, and equipment maintenance. Each section contains information that applies to both portable and permanent HAR. Appendices A and B contain sample HAR messages for incident and non-incident situations. Appendix C includes information on maintaining and updating the guidelines.

The guidelines are based on research reported by the Virginia Transportation Research Council in *An Investigation of Operational Procedures for Highway Advisory Radio*.

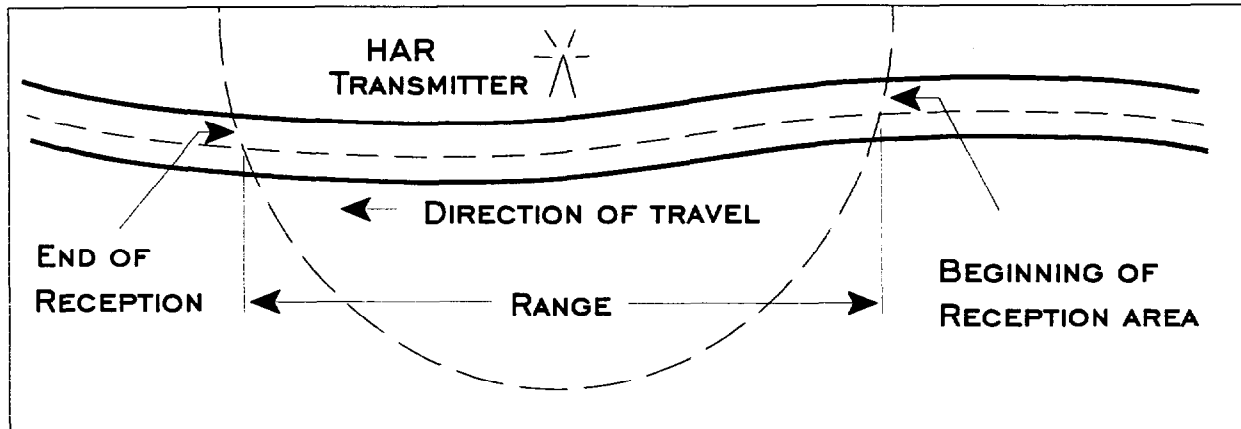
PERSONNEL

Each HAR station operated by VDOT shall have a designated HAR officer. The HAR officer is responsible for ensuring accurate, timely, and useful HAR messages at all times. When the HAR officer is unable to fulfill this responsibility (vacations, business travel, etc.), he or she is responsible for selecting an acting HAR officer. Specific responsibilities of the HAR officer or acting HAR officer are to:

1. Provide 365 day/year, 24 hour/day access to HAR message creation or modification, and deployment of portable units. The statewide Transportation Emergency Operations Center (EOC) shall have a contact telephone number where the HAR officer (or acting HAR officer) can be reached to post a new or modified message at all times. Messages shall be posted to permanent installations and active portable units within *15 minutes* of receipt of information.
2. Inform the EOC of HAR location and usage. This will allow the EOC to develop traveler information strategies during emergency situations and maintain a station log as required by the FCC.
3. Ensure all messages broadcast on VDOT HAR comply with the guidelines in this document.

4. Monitor the broadcast range of HAR transmitters in operation on a weekly basis. The broadcast range is the distance from where the signal can be understood using a typical car radio to where the signal is no longer intelligible. Figure 1 is a schematic of the broadcast range.

Figure 1. Signal Broadcast Range for an HAR.



TRANSMITTER PLACEMENT

HAR technology allows operation on a permanent or portable basis. Permanent HAR transmitters generally produce a higher quality signal which covers a larger broadcast range. However, they operate from fixed locations. Portable HAR transmitters are extremely flexible in their application, but they tend to produce broadcasts with shorter range. In the following subsections, guidelines are presented for the selection of permanent HAR sites, and the placement of portable HAR transmitters.

Permanent HAR Site Selection

The following criteria shall be met by VDOT permanent HAR sites:

1. The site experiences frequent congestion or incidents, represents a strategic diversion point, or exhibits other characteristics that warrant frequent travel advisory messages.
2. Topographic conditions are suitable for quality HAR broadcasting. In general, flat or rolling terrain is ideal.
3. Few physical obstructions exist. Examples of such obstructions are: high tension power lines, tall buildings, and television broadcast antennae. In addition, permanent HAR sites

should not be located in heavily wooded areas, as the trees may significantly impede broadcasts.

4. Adequate space exists for the installation of a ground plane as specified by the HAR manufacturer. In addition, the site's soil type and geology should provide a good conductive ground plane. In general, dry, sandy soils have low conductivities and should be avoided. Soil with higher moisture content is preferable.
5. The site satisfies the non-interference requirements of the Federal Communications Commission (FCC). The FCC requires that newly installed HAR stations be located a straight-line distance of at least 9.3 miles (15 km) from the 0.5 mV/meter contour of any commercial AM station operating on an adjacent frequency. If there is a commercial AM station operating on the same frequency as the intended HAR, the straight line distance between the HAR and the 0.5 mV/meter contour range of the commercial station may be no less than 81 miles (130 km). Contact the Equipment Division for assistance with HAR licensing.

Portable HAR Placement

Ideally, portable HAR should only be operated at sites which meet the requirements defined for permanent HAR. However, some of the requirements may be relaxed, particularly in emergency situations. The following procedure is recommended when placing a portable HAR transmitter.

1. Select a site which meets as closely as possible the topographic, physical obstruction, and ground plane requirements of permanent HAR.
2. Using a standard vehicle radio, verify that there are no other stations broadcasting within 30 kHz of the HAR's frequency (eg., if the HAR is operating on 650 AM, then stations between 620 AM and 680 AM should be checked). Under normal circumstances, if stations are found within this range, a new location should be chosen, unless it is known that harmful interference will not occur. In emergency conditions, some minimal interference may be acceptable, provided that the other station consents.
3. Set up the transmitter and check the standing wave ratio (SWR). The standing wave ratio (SWR) is a measure of forward power to reflected power in the antenna feed line. The SWR is adversely affected by improper antenna placement or tuning, or inadequate grounding. The SWR should be as close to 1.0 as possible, but values in the range 1.1 to 1.5 are realistic and acceptable. Higher values may result in a very short-range broadcast or poor signal quality.

ADVISORY SIGNING

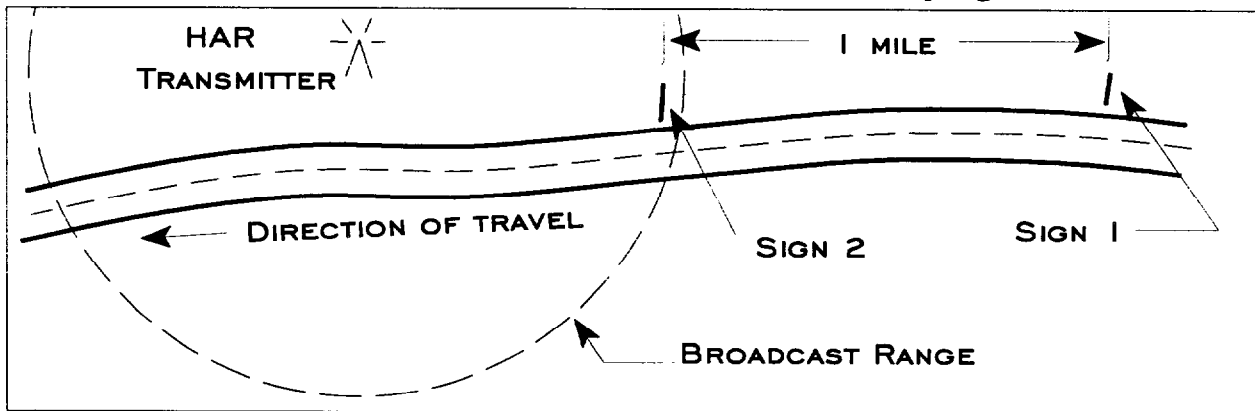
Advance signing for HAR is critical to the success of the system. If motorists are not aware that the system is operating, they are not likely to tune in. Changeable message signs (CMS) can be used to provide motorists with directions for tuning in and specific reasons to do so. While static signs can be used for advance notification of HAR, a CMS is preferred whenever one is available. In areas with heavy truck traffic, or on facilities with three or more lanes in one direction, dual indication (signs on both sides of the road) may be desirable. In such cases, additional signs (either static or changeable) should be used.

Static signs used as HAR advisory signs

The following guidelines should be used in placing static signs:

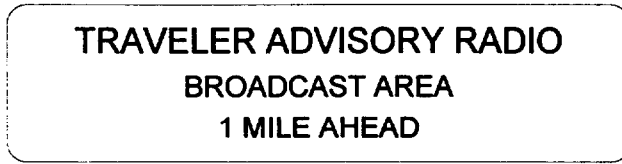
1. A minimum of two signs shall be used for each direction of traffic for which the message is intended. Where appropriate, large post-mounted signs should be used.
2. Sign 1 shall be placed upstream of the broadcast area, approximately one mile prior to the outer edge of the broadcast range (Figure 2). This sign is intended to inform motorists that they are approaching an HAR broadcast area. A suggested sign is shown in Figure 3.

Figure 2. Broadcast Range of HAR Station and Placement of Advisory Signs.



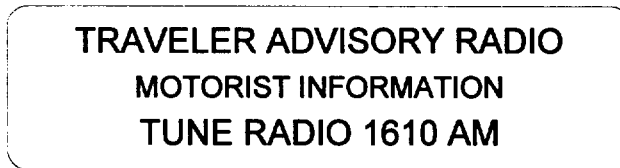
Note: Due to the differences in radio receiver quality and signal strength under different weather conditions, several vehicles should be driven through the area under different weather conditions. The minimum range should be chosen in determining the sign location.

Figure 3. HAR Advisory Sign 1.



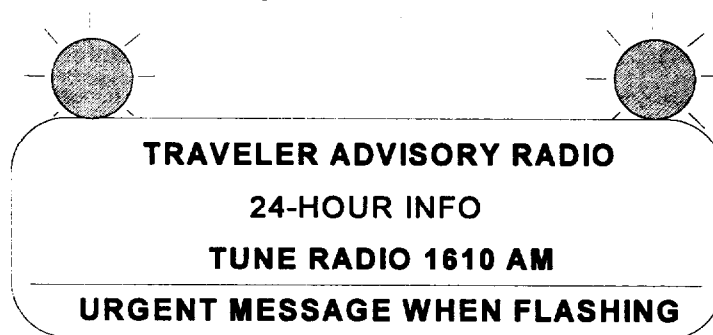
3. Sign 2 should be placed at the first point at which the broadcast can be received and clearly understood. The placement of this sign is also shown in Figure 2, and a suggested sign is shown in Figure 4.

Figure 4. HAR Advisory Sign 2.



4. In the case of static signs equipped with flashing beacons, the lights shall be used only when motorists will experience prolonged delays or when an alternate route is recommended. Prolonged delays are defined as those that cause an increase in travel time of at least 30 minutes. Signs with flashing beacons should make it clear to motorists that a message is playing at all times, but that the message is urgent when the lights are flashing. A suggested message for a sign with flashing beacons is shown in Figure 5.

Figure 5. Suggested Format for an HAR Advisory Sign With Flashing Beacons.



Changeable Message Signs Used as HAR Advisory Signs

Either portable or permanent CMS may be used. However, unless installed specifically for an HAR transmitter, it is unlikely that a permanent CMS will be in an appropriate position.

1. At least two signs should always be used to advise of an HAR coverage area.
2. Sign 1 should be placed approximately one mile from the edge of the coverage area (see Figure 2). If only one CMS is available, a static sign like the one in Figure 3 should be used.
3. The CMS should be placed at the edge of the coverage area, just as Sign 2 shown in Figure 2.
4. The CMS should notify the motorist of the presence of HAR and give a reason for the motorist to tune in. For example, the first screen of the CMS should state the nature of the incident and the second screen should state the frequency of the broadcast. Figure 6 shows a suggested message configuration for the CMS.

Figure 6. Suggested Message Configuration for HAR Advisory, Assuming Eight-Character-by-Three-Line CMS.

<u>screen 1</u>	<u>screen 2</u>
ACCIDENT	TUNE
ON I-495	RADIO TO
BELTWAY	1610 AM

5. Under no circumstances should CMS messages with more than two screens be used to instruct motorists to tune to HAR. It may take several seconds for the instruction statement, "TUNE RADIO TO (*frequency*) AM," to sink in. If there is extensive information to relay, it is best to relay this information on the HAR message, rather than taking the risk that motorists will not be able to read and understand the entire CMS message.

MESSAGE DEVELOPMENT

Message development is the most important task in HAR operations. Messages broadcast must be accurate, timely, and useful. HAR messages fall into two categories: incident and non-incident. A discussion of each category follows.

When developing messages for either incident or non-incident conditions, a speaking rate of 175 words per minute should be used. At this rate, every 30 words will require approximately 10 seconds of air time. Speaking rates higher than 175 words per minute could result in a decrease in clarity, making it harder for the motorist to understand the message. Messages should be rehearsed before broadcast, to ensure professional delivery.

Incident Messages

Incident messages are intended to alert and inform motorists of incident conditions on the roadway. Used properly, incident messages can be a significant aid to motorists in avoiding unnecessary delay and inconvenience. The most important requirement for incident messages is to contain timely and accurate information. In incident operations, the situation must be closely monitored, and the message should usually be updated every 10 to 15 minutes. Even if no new information is available, the time stamp should be updated. Table 1 presents the elements of an incident message. Discussion of each of the message elements follows.

1) Begin each message with a short attention statement. This should indicate to drivers that the message has ended and is starting over, and should usually call attention to the group of drivers intended to follow the advisory message. A slight pause may help indicate the beginning of a new message.

“Attention *northbound* I-81 traffic” would be used to alert motorists traveling north on I-81. Motorists may not know that HAR is a short-range, local broadcast. By including a statement identifying the target traffic, motorists can determine whether or not the broadcast is intended for them. The situation may dictate some other attention statement, such as “Attention airport traffic” or “All football game traffic.” Simply saying “Attention drivers,” however, is not particularly helpful, as it is not used to assure specific drivers that the message is intended for them.

2) Briefly state the problem and indicate its severity. There is no need to elaborate beyond what indicates the severity of the problem.

3) Give the location of the incident. Provide sufficient information to allow drivers to make educated decisions about whether or not to exit or divert, and where to do so.

To assist unfamiliar drivers, refer to locations as relative to exit numbers or major highways (“after Exit 175”). When diversion is an option, it is best to give the location of incidents as being *after* some appropriate diversion point. For example, with an accident at milepost 104, saying “accident after Exit 103” is preferable to “Accident before Exit 105.”

4) Give a reason for following the advisory. Drivers will not act unless they perceive an inconvenience along their intended route. It is therefore helpful to give some indication that

Table 1. Incident Message Elements.

Statement	Purpose	Examples
Attention Statement	Indicates to whom message is intended; indicates start of message.	“This is the Virginia Department of Transportation Traveler Advisory Radio. Attention (northbound I-81 traffic / Virginia Beach traffic / football traffic).”
Problem Statement	Briefly state the problem and its severity. Be explicit in telling motorists how it effects them, but do not elaborate beyond what indicates severity of situation.	“An accident causing heavy congestion” “A short detour because of road construction” “Right lane closed for maintenance” “A hurricane alert has been declared for the Tidewater area for Tuesday evening.”
Location of Incident	This allows drivers to make educated decisions about where to expect the conditions, and whether to divert.	“Southbound on I-95 at mile 115” “Eastbound, after the Glebe Road Exit” “For 10 miles, beginning at milepost 144” “After Exit 155”
Reason to Follow Advisory	This may be delay associated with not following advisory, or some other consequence.	“To avoid heavy congestion, ...” “To avoid a one hour delay, ...” “For parking at The Diamond, ...” “Speeding in work zones carries a maximum fine of \$250.”
Give the Advisory	In many cases this is simply informational, while at other times some action is required on the part of the motorist. Sometimes the advisory is implied, given the problem statement.	“Use Route 29 south to Exit 49.” “Use alternate routes.” “Expect 30 minute delays.” “Merge left.”
Time Statement	Should indicate when message was last updated, or when future conditions will be in effect. Include time, day-of-week, and date.	“This message recorded 5:50 p.m., Monday, August 16.”
FCC Call Letters	FCC rules require this to be broadcast at least every 30 minutes.	“This is WPDF 247” (<i>or appropriate call sign</i>). Say each letter or number individually.

congestion can be expected, work crews are present, the speed limit is being enforced, or the time associated with the delay.

5) **Give the advisory.** The advisory portion of the message will often be simply a cautionary or informational statement. For example, after telling motorists that an accident has occurred 1 mile past exit 165, the HAR advisory might be “Expect delays,” or “Be alert to slow-moving traffic.”

Diversions will only be recommended for severe conditions when the incident management team has concluded that such action is necessary. When a diversion strategy is implemented, the HAR message can be used to make the motorists aware of the diversion and, in some cases, to describe the alternate route. If the advisory includes a diversion, consider the following:

- i) Detours and instructions must be of reasonable length and complexity. Most drivers can adequately recall six to eight units of information, if repetition is used to emphasize important instructions such as street names. An example of an eight-unit message which uses repetition, is:

Table 2. Message “Units” and Use of Repetition.

Message Element	Information Unit
Take <i>exit 25</i>	1
to <i>Harper Parkway.</i>	2
Turn <i>east.</i>	3
Continue <i>east</i>	3, repeated
on <i>Harper Parkway</i>	2, repeated
to <i>Rugby Road.</i>	4
Turn <i>left</i>	5
onto <i>Rugby Road,</i>	4, repeated
and continue to <i>Cherie Boulevard.</i>	6
Turn <i>left,</i>	7
and follow <i>Cherie Boulevard</i>	6, repeated
back to <i>the Interstate.</i>	8

Instructions requiring 10 or more units of information should never be broadcast. If the need arises for a complicated diversion route, trailblazing signs should be used, and the HAR message should instruct motorists to follow the signs.

- ii) Give specific instructions. When formulating instructions, consider the mix of familiar and unfamiliar drivers on the facility. When appropriate, use freeway exit numbers to tell drivers where to exit the highway.
- iii) Use route descriptors for unfamiliar drivers. Citing landmarks at intersections or along the route may be helpful on long and complex routes. For example, “Follow Huffman Road *past the golf course* and turn left on O’Malley” or “continue on Woodstock *to the mall*. Turn right onto Seward Highway.” When using landmarks, however, be sure not to violate FCC regulations by mentioning any business names. Do *not* say “continue past *the Exxon station*” or “turn at *the Holiday Inn*.”
- iv) It may be helpful to specify the distance traveled along the diversion route (“Continue along Arctic Boulevard *for 4 miles* to Route 20”), or, if the diversion route is signalized, the number of signals encountered before motorists should change routes (“Turn back on to Route 184 *at the third traffic light*”).

6) Include a brief time statement. A time statement shall always be included to assure drivers that the message is up-to-date. This shall include the time of day, day of the week, and day of the month.

7) Broadcast your FCC call sign at least every 30 minutes. The call sign may be included in the advisory message or may repeat automatically after a specified number of minutes depending on the capabilities on the particular equipment used. This feature may save several seconds of message time. It is generally of the form “This is WPDF 247” (or appropriate call sign). It is not necessary to include the broadcast frequency in the message (e.g., “Broadcasting on 530 AM”).

Message Length

An effective HAR message will contain all the elements described in the previous section in the most concise manner possible. Because the range of HAR systems is limited, messages must convey a maximum amount of information in a minimum amount of time. The following should be considered when evaluating the length of a proposed message.

1. It is imperative that drivers be able to hear all the information being broadcast. Generally, incident messages should be limited to 60 seconds. Avoid *wordy* messages which contain unnecessary information.
2. If message time is limited, a condensed format may be preferable, in which “dead” words are omitted. An abbreviated message might say: “Accident ahead causing major

congestion. To avoid delay, use Exit 44 and follow signs.” Note that the words “*there has been an [accident]*” have been omitted.

Route Descriptors

When identifying roadways, keep in mind that names are retained better than numbers. It is easier for most drivers to remember “Little River Turnpike” than “Route 236.” If a facility is well known by *both* its route number and a proper name (e.g., “I-495, the Capital Beltway” or “Lee Highway, Route 29”), it may be best to use both names.

Non-Incident Messages

VDOT permanent HAR shall broadcast at all times. When no local incidents exist, messages should provide motorists with *useful* information. The suggested format of a non-incident message is shown in Table 3.

A brief explanation of each message element follows:

- 1) **Attention Statement.** This statement informs the driver that the message is starting, and that the information source is VDOT. For non-incident conditions, there is generally no need to specifically call for the attention of any particular group of drivers (such as those on I-95 northbound).
- 2) **HAR Purpose Statement.** This statement informs the driver that the HAR station is intended to provide advisories about unusual local traffic conditions. This reinforces the idea that HAR does not continuously transmit a single fixed message.
- 3) **Local Traffic Conditions.** This statement informs the driver that there are no unusual conditions in the local area. *Note: this statement makes it especially important to immediately update the HAR message in the event of a local incident.*
- 4) **Regional and/or Educational Message.** This component of the message is intended to provide some piece of *useful* information to the traveler. For example, this component may alert a traveler to a work zone located 45 miles from the HAR site. Or, the component may serve an educational purpose. An example of this would be a short statement requesting that motorists move their vehicles out of travel lanes in the event of an accident.

The idea behind this component is that drivers who tune into HAR need to receive *useful* information. It is suggested that HAR officers actively seek out new regional and educational messages, and update this message component frequently. A minimum of weekly updates is recommended. Appendix B contains sample regional and educational messages.

- 5) **Date Statement.** In the case of a non-incident message, the time of the message is generally not needed. However, a date statement shall be included.

6) **FCC Call Letters.** The call sign may be included in the advisory message or may repeat automatically after a specified number of minutes depending on the capabilities on the particular equipment used. This feature may save several seconds of message time. It is generally of the form “This is WPDF 247” (or appropriate call sign).

Table 3. Non-Incident Message Elements.

Statement	Purpose	Examples
Attention Statement	Begin message by stating the source of the information	“This is the Virginia Department of Transportation Traveler Advisory Radio.”
HAR Purpose Statement	Briefly state the purpose of HAR broadcast.	“The purpose of this station is to inform travelers of local traffic conditions and regional transportation information.”
Local Traffic Conditions	Tell drivers that no unusual local conditions exist which will affect their travel.	“Currently, local traffic conditions are normal.” <i>NOTE: Such a message would be broadcast only if the situation could be <u>closely</u> monitored, and the message changed immediately following an incident.</i>
Regional and/or Educational Message	Provide an educational message, information on regional work zones, or any other general message. This portion of the message should be changed weekly, at a minimum. Suggestions for such messages are included in Appendix B.	“A two-mile work zone is located along both directions of I-81 in Harrisonburg.” “High Occupancy Vehicle, or HOV lanes are reserved for vehicles with 2 or more occupants” “Speeding in a Virginia work zone carries a maximum \$250 fine” “For Virginia road conditions, call the Highway Help Line, toll free at 1-800-367-R-O-A-D”
Date Statement	Should indicate when message was last updated.	“This message recorded on Monday, August 16.”
FCC call letters	FCC rules require this to be broadcast at least every 30 minutes.	“This is WPDF 247” (or appropriate call sign). Say each letter or number individually.

EQUIPMENT MAINTENANCE

Routine Maintenance

Proper maintenance of HAR equipment is essential to successful operations. Part 90.433 of the FCC regulations requires all maintenance records to be maintained for one year, and to be available to the FCC on demand. Although HAR transmitters do not inherently require a great deal of routine maintenance, a few general upkeep details for permanent and portable units are described below.

1. Permanent HAR installation sites shall be periodically checked for interference. Nearby vegetation, especially trees and large bushes, should be trimmed or removed to ensure that they do not interfere with broadcast signals. The area surrounding the site should be checked to ensure that no new construction or sign installations interfere with signals.
2. The range of permanent stations shall be periodically checked by driving through the coverage area and recording the distance for which the signal can be clearly understood. Additional information such as time of day and weather conditions should also be recorded. If significant decreases in range or trends of decreasing signal strength are observed, then equipment (power supply, transmitter, antenna assembly, ground plane, etc.) should be examined for loose connections, physical damage, or other malfunctions. If performance does not improve, the manufacturer should be contacted.
3. In portable HAR maintenance, it is very important to ensure that the batteries are always properly charged. If the portable unit is not properly charged, the range and performance of the unit will be significantly diminished. Many portable units are equipped with solar cells to help maintain the unit's power while in service. However, solar cells may take days to charge, and if the battery charge is allowed to drop too low, the solar cells will not be able to replenish the unit's power and an external charge will have to be applied to the batteries. It is extremely important to routinely check the power level on portable units, especially when they are not in use. In general, it is sufficient to leave a portable unit outside, clear from obstructions, and facing south, to maintain its charge. If no site is clear of obstructions, or during the winter, it may be advisable to charge the unit inside, under fluorescent lighting. Proper maintenance of the power supply on portable units will ensure that they can be readily deployed for incidents, construction, or other needs.
4. Due to the sensitivity of the transmission range to the position of the antenna, all antenna anchor bolts should be securely tightened to eliminate deflection of the antenna due to wind. These bolts should be checked frequently to ensure that they have not loosened.
5. If not being used regularly, HAR transmitters should be powered up and tested regularly to verify proper charging cycle, transmitter operation, proper system output levels, and overall system readiness.

APPENDIX A • Sample Incident Messages

WORK ZONE

“This is the Virginia Department of Transportation traveler advisory radio. Attention eastbound I-64 traffic. Road work is underway between exits 148 and 152. Expect left lane closures and possible delays. The maximum speed in the work zone is posted at 55 mph. Speeding in Virginia work zones carries a fine up to \$250. This message was recorded at 9:50 a.m. on Monday, May 1.” [Length ≈ 22 seconds]

MINOR ACCIDENT

“This is the Virginia Department of Transportation traveler advisory radio. Attention southbound I-81 traffic. An accident near milepost 152 is closing the right lane. Merging traffic is backed up approximately one mile. Be alert for slow-moving traffic and move out of the right lane. This message was recorded at 4:35 p.m., Wednesday, August 16.” [Length ≈ 20 seconds]

MAJOR ACCIDENT, WITH CLOSURE AND DIVERSION

“This is the Virginia Department of Transportation traveler advisory radio. Attention northbound I-95 traffic. A major accident has occurred on I-95 north of Fredericksburg, near milepost 148. Both lanes of traffic are closed. Be aware of emergency crews working. Traffic for northern Virginia or Washington can avoid a lengthy delay by diverting to Route 1 at Exit 140 or 143. I repeat, to avoid a long delay, leave I-95 at Exit 140 or 143 and take Route 1 north. You may return to I-95 from Route 619 in the town of Triangle. This message last updated at 9:50 p.m., Wednesday, December 27.” [Length ≈ 40 seconds]

Note: one must never divert traffic without considering the impacts on the diversion route.

MAJOR INCIDENT IN ANOTHER STATE ALONG A MAJOR CORRIDOR

“This is the Virginia Department of Transportation traveler advisory radio. Attention northbound I-95 traffic. A major accident has occurred near Baltimore, Maryland. Traffic continuing north may experience significant delays on Interstate 95 near Baltimore. This message last updated at 10:10 a.m., Friday, January 3.” [Length ≈ 15 seconds]

WEATHER ADVISORY--HURRICANE WARNING

“Attention all traffic. A hurricane warning is in effect for the Norfolk/Virginia Beach area. A severe storm is expected between 2 and 4 p.m. Thursday, June 23. Please make arrangements to be safely off the roads at this time. This message last updated at 11 p.m. on Wednesday, June 22.” [Length ≈ 17 seconds]

SPECIAL EVENTS

“Attention football traffic. Parking for today’s game is available at University Hall. Shuttle buses will be available every 5 minutes. From I-64, take exit 118B *north* on Route 29 and follow the signs to University Hall parking. Please be alert for pedestrians.” [Length ≈ 14 seconds]

APPENDIX B • Sample Non-Incident Messages

REGIONAL TRAFFIC INFORMATION

“This is the Virginia Department of Transportation Traveler Advisory Radio. The purpose of this station is to inform travelers of unusual local traffic conditions. Currently, local traffic conditions are normal. Travelers destined for the Eastern Shore should be aware that there has been an accident in the northbound section of the Chesapeake Bay Bridge-Tunnel. Currently, there are extensive delays. Further information will be available on Hampton Roads traveler advisory radio stations. This message was last updated Tuesday, July 13, at 5:20 p.m.” [Length ≈ 30 seconds]

Note: Regional information such as this should not include *detailed* information about the incident such as expected delays or alternate routes, unless the information can be *guaranteed* to be accurate and verified at regular intervals. Also, note that a time statement is important for regional traffic information.

REGIONAL WORK ZONE ADVISORIES

“This is the Virginia Department of Transportation Traveler Advisory Radio. The purpose of this station is to inform travelers of unusual local traffic conditions. Currently, local traffic conditions are normal. Work zones exist along I-81 north of Harrisonburg. Please use caution and be alert for trucks entering the highway from the median. The maximum speed limit in these work zones is posted at 55 mph. Speeding in a Virginia work zone carries a maximum fine of \$250. This message was last updated Tuesday, July 13.” [Length ≈ 30 seconds]

FUTURE WORK ZONES

“This is the Virginia Department of Transportation Traveler Advisory Radio. The purpose of this station is to inform travelers of unusual local traffic conditions. Currently, local traffic conditions are normal. From August 10 through August 16, there will be road work on Interstate 66 every day from 6 p.m. to midnight. This will result in one closed lane in both directions, between mileposts 54 and 68. Please consider alternate routes during the evening, such as Route 29. Once again, from 6 p.m. to midnight, August 10 through 16, please consider alternate routes. This message recorded Tuesday, August 5.” [Length ≈ 35 seconds]

“This is the Virginia Department of Transportation Traveler Advisory Radio. The purpose of this station is to inform travelers of unusual local traffic conditions. Currently, local traffic conditions are normal. On Route 29 northbound, bridge work will be underway next week, August 10 through August 16, just north of Madison. Please use caution and be alert for workers. The maximum fine for speeding in a Virginia work zone is \$250. This message recorded Tuesday, August 5.” [Length ≈ 25 seconds]

DRIVER EDUCATION

“This is the Virginia Department of Transportation Traveler Advisory Radio. The purpose of this station is to inform travelers of unusual local traffic conditions. Currently, local traffic conditions are normal. High occupancy vehicle--or HOV--lanes in the center of the road are reserved for vehicles with two or more occupants. Violators are subject to a fine of up to \$300. These special lanes reverse direction during peak morning and afternoon commuting periods. This message recorded Tuesday, August 5.” [Length ≈ 27 seconds]

“This is the Virginia Department of Transportation Traveler Advisory Radio. The purpose of this station is to inform travelers of unusual local traffic conditions. Currently, local traffic conditions are normal. During peak morning and afternoon periods, the right shoulder may be used as a travel lane. The eastbound shoulder may be used between 7 and 10 a.m., and the westbound shoulder may be used from 3 to 6 p.m. At other times, you may not drive on the shoulder. Refer to overhead green arrows and red ‘X’s. This message recorded Tuesday, August 5.” [Length ≈ 32 seconds]

CELLULAR #77 SERVICE

“This is the Virginia Department of Transportation Traveler Advisory Radio. The purpose of this station is to inform travelers of unusual local traffic conditions. Currently, local traffic conditions are normal. Cellular phone owners take note of emergency road service -- just dial #77 in an emergency. This message recorded Tuesday, August 5.” [Length ≈ 20 seconds]

HIGHWAY HELP LINE

“This is the Virginia Department of Transportation Traveler Advisory Radio. The purpose of this station is to inform travelers of unusual local traffic conditions. Currently, local traffic conditions are normal. For general information on road conditions throughout Virginia, call the Highway Help Line, toll free at 1-800-367-ROAD. This message recorded Tuesday, August 5.” [Length ≈ 20 seconds]

CAR POOL INFORMATION

“This is the Virginia Department of Transportation Traveler Advisory Radio. The purpose of this station is to inform travelers of unusual local traffic conditions. Currently, local traffic conditions are normal. A community ride share program exists in the Hampton Roads area. Car pool to and from work, save gas, money, and frustration. For more information, call 325-3868. This message recorded Tuesday, August 5.” [Length ≈ 22 seconds]

APPENDIX C • Maintaining and Updating Guidelines

The HAR Operational Guidelines have been developed for the Statewide Incident Management (SIM) Committee by the Virginia Transportation Research Council. The SIM Committee is responsible for maintaining and updating the guidelines as required. Any comments on the guidelines, or suggestions for modifications should be directed to the SIM Committee. Please contact either:

Jon C. DuFresne
ITS Operations Engineer
Traffic Engineering Division

or

Steve Mondul
Director
Transportation Emergency Operations
Center

(804) 786-2885

(804) 786-2848