Recommended Procedures and Guidelines For Electronic News Gathering

Written by Keith McCutchen
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FORWARD

The Helicopter Association International (HAI) Electronic News Gathering (ENG) Committee and the National Broadcast Pilots Association (NBPA) have developed the ENG Helicopter Recommended Practice and Guidelines. These procedures are only guidelines and you need to refer to the F.A.R 's to insure that your operation is meeting the appropriate regulations. You may need to tailor these recommended guidelines to your operations, however some of the guidelines are put in place for safety reasons and we recommend that you do not lower these standards. (i.e. weather minimums)

We in the industry are always striving to operate as safely as possible and that the years of experience put forth in these recommended procedures will help insure your operation is operating safely. Safety is not an end goal, but a continuing journey towards that goal.

These guidelines are for the Mangers of ENG programs, Pilots, Maintenance Technicians, Reporters and Photographers. It can also include any safety personnel in your operations. Each program should have written procedures for operations of ENG helicopters.

Some of the ENG programs have hired outside services (vendors) to provide the helicopter, pilot and maintenance. Some of these venders run their operations under FAR Part 135 regulations and the Part 135 manual and operations specifications will govern those operations. Those regulations will be primary over anything recommended by this manual, but can be supplemented with facts from this manual. For all other operations utilizing FAR Part 91 regulations, please ensure that your program has incorporated at least the items mentioned in this procedures and guidelines manual.

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HELIPAD SAFETY AND SECURITY

It is incumbent upon the manager of each ENG helicopter operations to provide the utmost security for the helicopter. When at all possible, the helicopter should be in the hangar overnight. When the helicopter is to remain outside, security in and around the helicopter will be provided. It is the pilot's responsibility to make sure that the helicopter remains in a secure environment at all times. With the high visibility of the helicopters and the television stations, each person concerned with the ENG helicopter must be most vigilant to make sure that the helicopter is always secured.

Operating and working around a helicopter in itself is not inherently dangerous. The danger manifests itself in the form of people not understanding the hazards associated with helicopter operations. The purpose of this section is to give you a basic understanding of where the potential dangers exist, how to work around the helicopter safely and effectively. Complacency and lack of attention to the task at hand are factors that contribute to many accidents. Crewmembers who have set forth definite and deliberate habits of safe routines will most likely avoid unplanned events.

Rotor Blades

The helicopter has two sets of rotor blades. The main rotor blades (larger) located on top of the helicopter and the tail rotor blades (smaller) located at the rear of the aircraft. One of the greatest threats to persons around the helicopter is when the rotors are in motion. The main rotor blades will flex during windy conditions and can come low enough to cause serious injury or death. The tail rotor blade operates at a speed that can make it virtually invisible to the eye and also can cause serious injury or death.

Approaching the aircraft

Whenever practical, all operations should be done with the rotor blades not turning. The likely hood of a mishap is more prominent with the rotor blades turning than when in the static position. If it is not absolutely necessary, get all passengers in the aircraft prior to start up and remain in the aircraft until the rotor blades have stopped turning.

The main rotor has the ability to flex up and down. The rotor blades present the most danger when the blades are turning slowly during start up and shut down procedures, and windy conditions exist. These blades can drop to a low enough position to cause serious injury/fatal injury. Therefore people should never approach or depart the aircraft when the rotor blades are turning slowly. If the aircraft engine is in the idle or full throttle position, then people should bend down when approaching the aircraft. Always exercise extreme caution when approaching or departing the aircraft with the rotors turning and make sure you have the pilot's attention/approval prior to approaching and departing the aircraft with the rotors in motion.

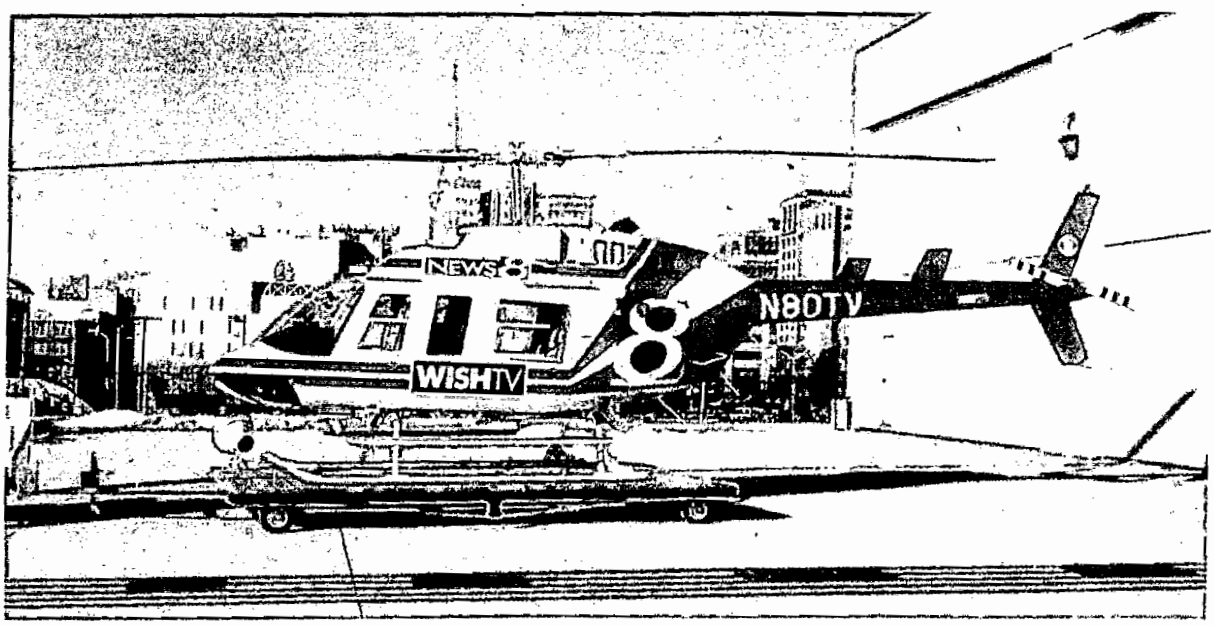
If the aircraft is parked on a slope, the clearance on the up slope side can be reduced thereby reducing the clearance between your body and the rotor system. The pilot will instruct you to approach and depart from the down slope side of the aircraft.

A. Rotors in motion:

1. Always approach the aircraft from the front
2. Approach the aircraft from 45 degrees either side of the nose of the aircraft.
3. Make sure the pilot sees you and has given you a signal allowing you to approach the aircraft.
4. **Never approach the aircraft from the rear.** This ensures you do not approach the tail rotor.
5. Do not wear a hat or any other object that may come off as you approach the aircraft. People have chased hats and other objects towards the tail rotor presenting a very dangerous situation.
6. Do not approach or depart the helicopter from the uphill side of a slope.
7. Do not carry long or tall objects towards the aircraft in a manner so they may intrude into the rotor system and cause damage to the rotor blades.
8. No smoking within 50 feet of the helicopter.

B. Rotors not in motion:

1. It makes good sense to practice the above procedures when the rotors are in the static position, precluding someone from inadvertently approaching the aircraft from the rear. There is no real dangers from the rotors when they are not in motion, just be aware of the antennas and other objects that protrude from the aircraft so we do not damage them.
2. No smoking within 50 feet of the aircraft.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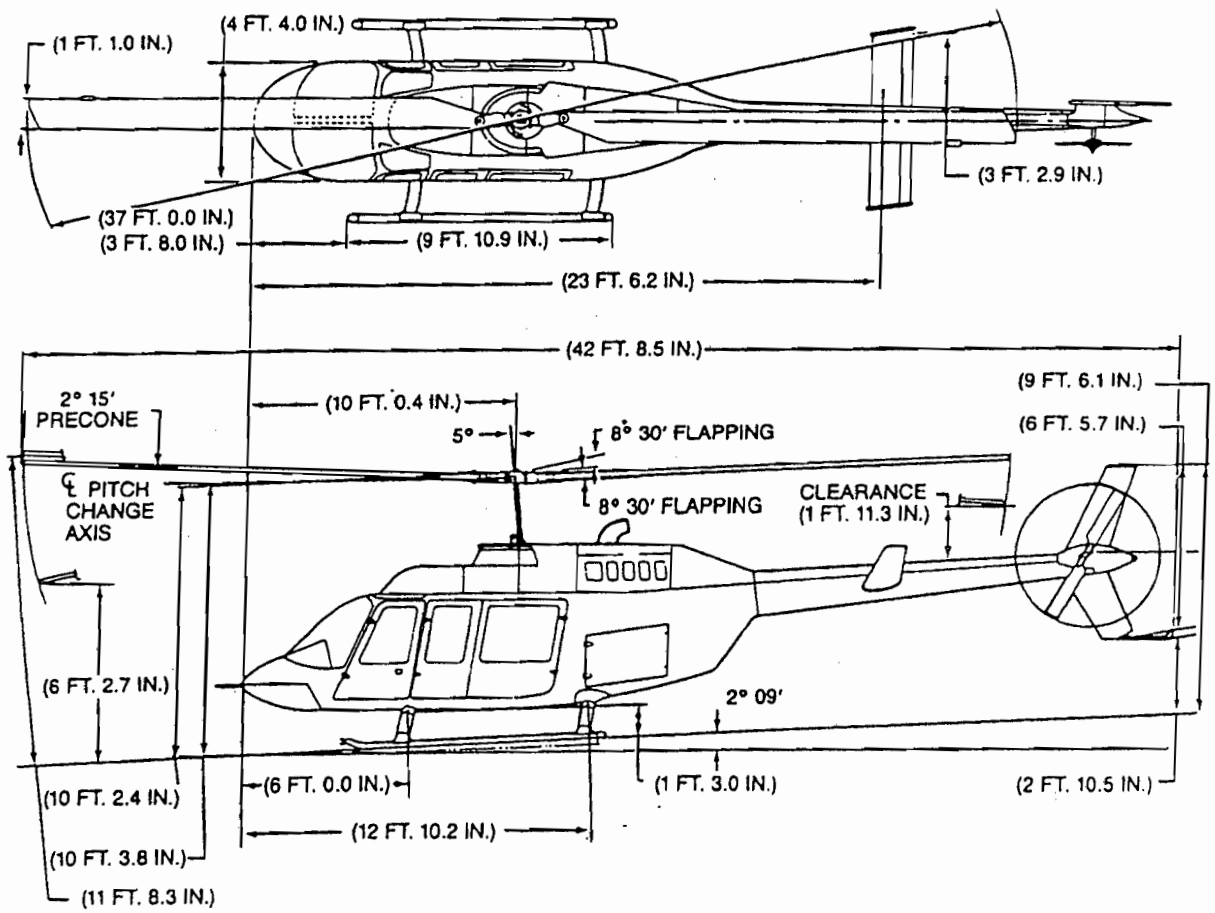
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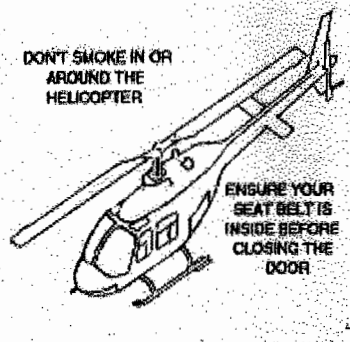
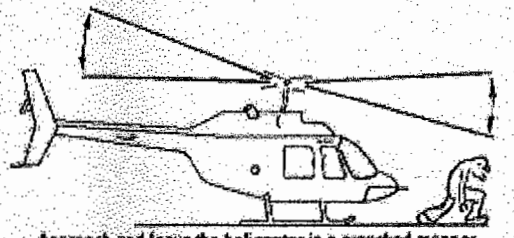
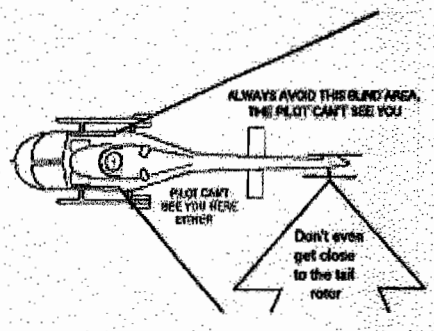
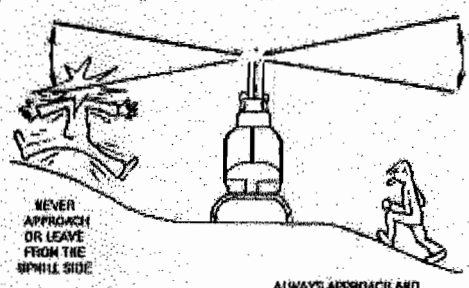
Helicopter Safety Diagrams

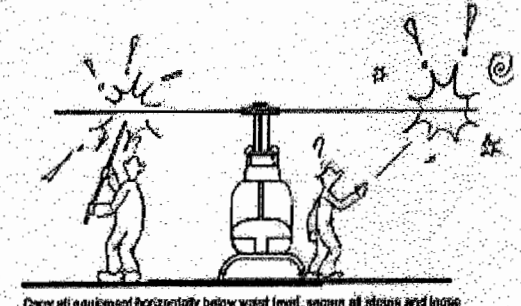




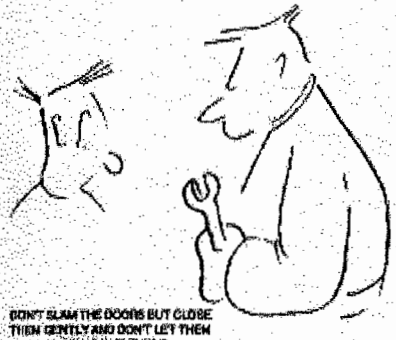
Approach and leave the helicopter in a crouched manner.







Carry all equipment horizontally below waist level, secure all straps and loose articles. Never throw any object in the vicinity of the helicopter.



DON'T SLAM THE DOORS BUT CLOSE THEM GENTLY AND DON'T LET THEM SWING IN THE WIND.

PROTECT YOURSELF

1. **FASTEN SEATBELT** on entering helicopter and leave it fastened until the pilot signals to get out.
2. **ASK THE PILOT** about emergency exits and escape procedures if you are unclear or have questions
3. **DRESS** for the operating environment
4. **KEEP WELL CLEAR** of landing areas when the helicopter is landing or taking off.
5. **SHEILD YOUR EYES** near a helicopter when it is landing of taking off.

REFUELING OPERATIONS:
Refueling operations can present hazards to the aircraft and crew. Whenever possible, all refueling operations should be done with the engines shut down and the rotors blades not in motion. If you need to refuel with the engines on and rotors in motion (hot refueling), you need to make sure that you have training with the refueling personnel prior to this operation. (Refer to Appendix B).

All passengers should remain a safe distance away from the refuel pump and aircraft during all refueling operations. Smoking, lit matches, or open flames are prohibited anywhere near the fuel pump, hangar or helipad at any time.

PASSENGER BRIEFINGS

Most ENG operations fly the same people on board the aircraft. We often consider the personnel as crewmembers but in fact, they are re-occuring passengers. For the purpose of this manual, we will refer to the ENG personnel that fly with us daily as crewmembers. They **should** complete annual recurrent training and read this manual annually. Documentation should be completed on all recurrent training. Since they are not actually crewmembers, they need to have a passenger briefing prior to each flight. Printed material to supplement the passenger briefing is always appropriate. The pilot shall refer to the passenger briefing and ask if there are any questions with ENG crewmembers/passengers.

The passenger briefing should include but not be limited to the following.
1. Smoking
2. Seat Belts
3. Location and use of the emergency exits
4. Location and use of the first aid kit
5. Location and use of the fire extinguisher
6. Avoid the main rotor
7. Avoid the tail rotor
8. Tall objects and loose objects
9. Luggage and/or cargo hauling operations
10. Emergency operations and landings

Throughout the General Passenger Information section, you will see various sections that will cover the passenger briefings. It will always be the Pilot in Command's responsibility to ensure that a passenger briefing is completed.

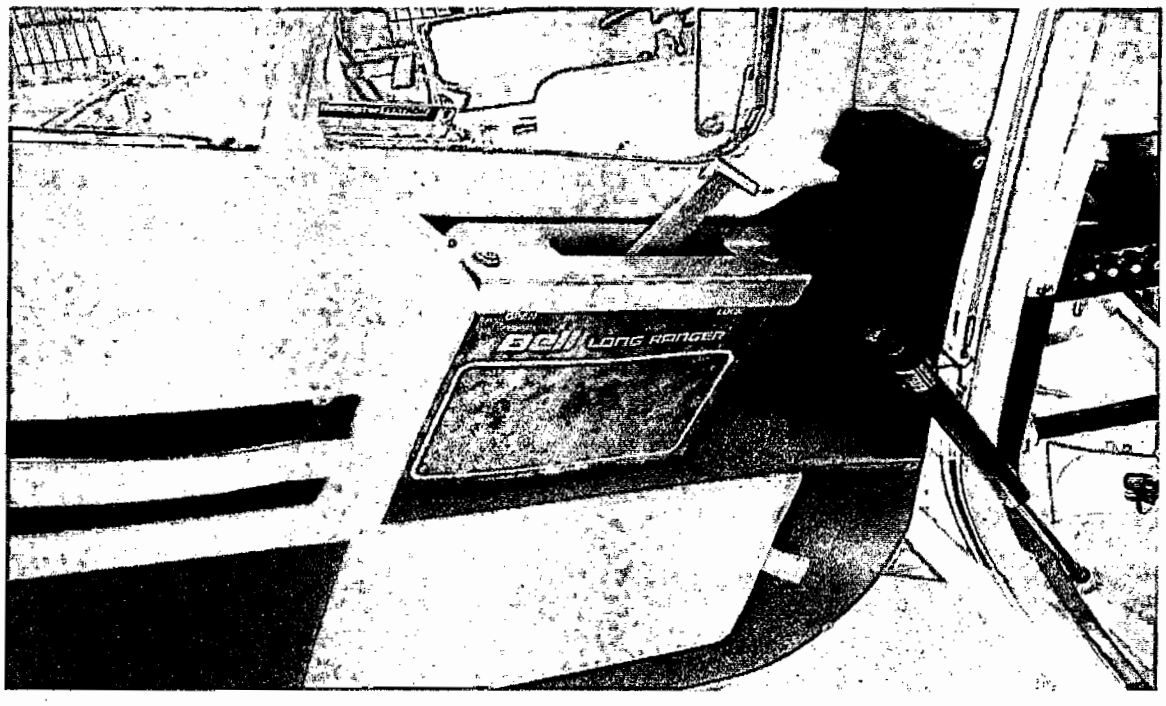
GENERAL PASSENGER INFORMATION

This section contains information every passenger should know. It will give you information on what is expected of you once you have approached the helicopter.

Doors

Location and use of doors is important for each person to know who fly in the helicopter. The outside door handles are simple in operation as you simple pull the handle and gently pull the door open. In windy conditions make sure that you hold onto the door as it can fly open and break the door at the hinges, thereby grounding the helicopter until repairs are made. Once inside the aircraft, you must pull the door shut and hold it in that position while you rotate the handle to the closed position. To open the door, you need to rotate the handle to the open position and push the door open. Take care to hang on to the door during windy conditions while opening it. Always hold onto the door while it is open and remember to close it behind you. Some aircraft may have different latching operations for the doors so you need to review this operation with your pilot.

Doors can come open in flight because of improper latching, and poses no danger to you the passenger. It will only open a few inches due to outside air pressure. The pilot will slow the aircraft down to reduce this outside air pressure and allow you to re-close the door.



Location and Use of Emergency Exits

In the event of an emergency, the door is your emergency exit once the aircraft is safely on the ground and the rotor blades have stopped turning. Should the door be blocked or you are unable to open the door, you can kick out a window for your exit. Remember that if the aircraft has been involved in an accident, the blades may still be turning and hanging extremely low. Please exit the aircraft quickly, remain low as you move a safe distance away from the aircraft. Please take a second prior to exiting the aircraft to ensure no one is injured or needs assistance in leaving the aircraft.

Seatbelts
Seatbelts will be fastened during the entire time the aircraft is in flight. Each passenger will ensure his or her seatbelt is fastened prior to takeoff. The lap belt straps should be adjusted so as to be snug around your lower abdomen with the buckles latched in the middle. If the aircraft is in flight and you need to be out of the seat for any reason (i.e. to reach for a tape, to adjust a camera) please let your pilot know that you will be out of the seat and seatbelt. Once you have completed your task, please return to your seat and fasten your seatbelt as quickly as possible. Once the aircraft is safely on the ground, each passenger will unfasten the seatbelt, and upon exiting the aircraft, they will refasten the seatbelt to ensure that the pilot does not take off with the seatbelt hanging out of the door. This has been the cause for structural damage on many aircraft in the past.

If a shoulder harness is provided, it is highly recommended that each person wear the shoulder harness as it accommodates a higher level of safety. The shoulder harness straps are on an inertial reel so once you have them adjusted for a comfortable fit they will allow you to move around some.

Luggage and Cargo Hauling Operations
Any articles to be carried in and on the helicopter will be approved by the pilot. Care will be used in loading and unloading equipment. The pilot will assist you in loading the aircraft when at all possible because Federal Aviation Regulations state "it is the responsibility of the pilot to see that the aircraft is properly loaded." Loading the aircraft with the engines off and the rotors not in motion is the most ideal situation. Each crewmember and passenger should insure that all personal gear, equipment and cargo are secured prior to flight. Special care must be taken to keep items from interfering with the full movement of the flight controls, or from blocking access to any emergency exit.

The baggage compartment is used to carry heavy or oversized equipment such as tripods and light kits. They should be stowed as far forward as possible in the baggage compartment to assist in the weight and balance of the aircraft. The baggage compartment is located behind the left rear door. There are two push type clips that need to be pushed in to open and close the door. If you have never used the baggage compartment before, please ask the pilot for assistance. Baggage door latches may be different for the helicopter you operate, please review baggage door procedures with your pilot.

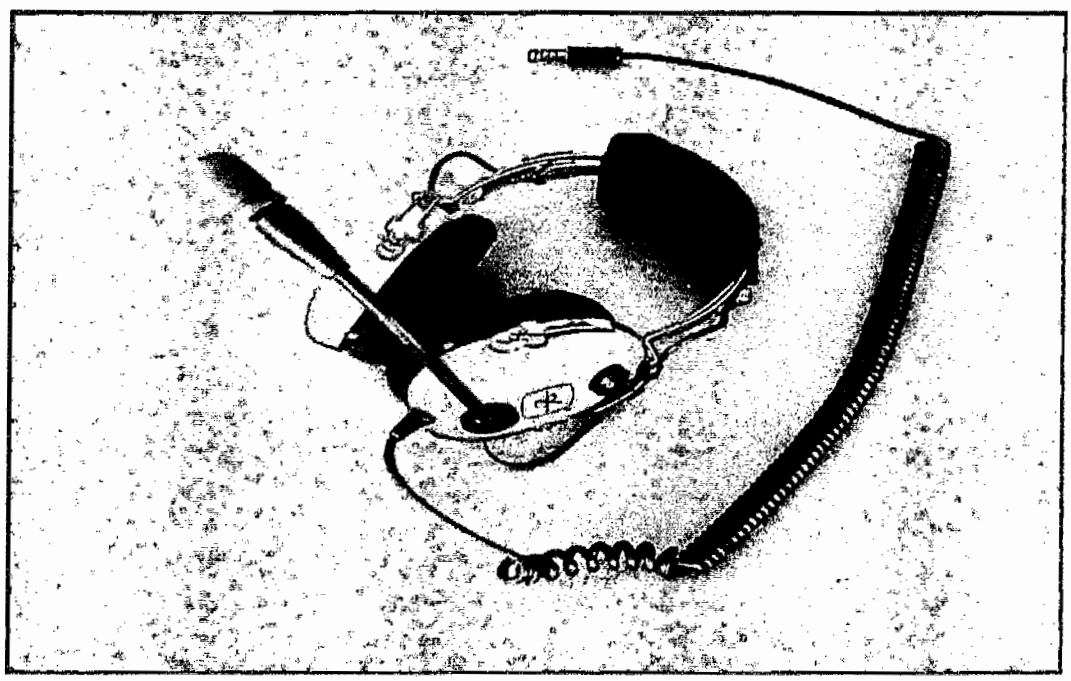
Items loaded in the rear seat area should be gently placed in the seat and never tossed into the aircraft. Items in the seat should be secured by an unused seatbelt whenever possible to prevent movement while in flight, and to prevent them from coming in contact with items that can become scratched or marred. If the object is heavy, do not place it in the hat shelf above the rear seat if your aircraft is so equipped with a hat shelf.

The rear passenger area floor is another area to store items to be carried in the aircraft. Items stored here should be secured whenever possible to ensure that they do not become

lethal weapons in the event of an emergency landing. It is the pilot's responsibility to ensure all items in the aircraft are secured prior to takeoff and landing.

Smoking
There is no smoking in the helicopter or within 50' of the helicopter when it is on the ground.

Use of Radio's While In Flight
Headsets are provided for both front and rear passengers seats. They should be worn whenever the engine is running due to the high noise level. The headset can block out the engine high frequency noise, which can damage your hearing over a period of time. They also allow for communications to other passengers and the pilot. Persons who wear earrings should remove them prior to wearing a headset as it can puncture the ear cups.



If you are going to use the two-way radio or communicate with the pilot, please ensure that he is not involved in conversations with any FAA facility or other aircraft. It can be extremely difficult for the pilot to hear the necessary instructions from the FAA controller with other conversations going on inside the aircraft. When you are shooting live shots, the pilot may turn down the volume on all unnecessary radio's to allow for the safety of the aircraft and passengers which is his first priority.

Prior to each take off and landing from any field site, each news crewmember/passenger should keep a vigilant watch for other air traffic, wires, towers or any other objects that may interfere with the safe operations of the aircraft. Please advise the pilot of any

situation you see that you think might preclude a safe takeoff or landing. Never assume the pilot sees these objects and do not hesitate to point them out.

Most aircraft have a voice activated system that allows two way communication between the pilot and passengers. These systems will activate when you speak into the microphone that should be located within ½ inch from your lip. The voice active (VOX) activation system can be adjusted. You have a volume knob on your headset to adjust the level of conversation that you are listening to. It is incumbent upon you to keep the volume up enough to hear the pilot in the event of an emergency.

Landing and Shut Down Operations

During the landing approach and hovering, do not move about in the cabin. This can cause a change in the center of gravity of the aircraft that could cause the pilot to make added compensation with the flight controls. In cruise flight the pilot's compensation will not be as great, plus you would have time return to your seat at altitude in the event of an emergency. Unless there is some urgency to your departing the aircraft during engine cool down, it is recommended that you stay in your seat with the seat belt fastened. If you must exit the aircraft immediately after landing, then do so during the engine cool down period. While the aircraft is in the idle condition, the pilot has control of the rotor blades. Once the engines are shut down and the rotor brake is applied the pilot has very little control of the rotor system and walking under them during this time can cause serious injury or death. This is especially true during windy conditions. If at all possible, passengers will disembark once the rotor blades have come to a complete halt.

Emergency Landings

In the event the aircraft has an emergency landing, the pilot will be very busy handling the emergency. He will need to report this emergency to the nearest FAA facility while initiating the correct emergency procedures. This is not the time to ask questions, and all newscasts will be on hold until the aircraft is safely on the ground. During the emergency decent, please ensure the seatbelt it tightly secured around your waist, bend over and wrap your arms underneath your knees. The pilot will advise you when you can safely exit the aircraft. Review emergency operations with your pilot to assure correct procedures are being followed by all that are involved.

The fire extinguisher is located in the pilots compartment and is attached to the center console (this could be located in a different place in your aircraft and you should review the location of the fire extinguisher with your pilot). The fire extinguisher is a halon type of extinguisher and therefore use inside the cabin should be judicial. In the event of an aircraft fire, you should make all attempts to exit the aircraft once safely on the ground and move to a safe location.

The first aid kit is located in the hat shelf which is above the rear seat (review with your pilot where the first aid kit is located for your particular aircraft). In the event of an accident and you are in the rear seat, please take the first aid kit with you as you exit the aircraft.

Impairments
No news crewmembers/passengers should fly in the aircraft while under the influence of any alcohol or drugs. There should be no exceptions to this rule and a written guideline set forth by management stating that no pilot or news crewmember/passenger can accept duty to fly if they have had alcohol with in the last 12 hours would be appropriate. If you have a cold or sinus infection, please advise the pilot as altitudes may have an impact on the way you feel. You are not permitted to fly on the aircraft within 24 hours of donating blood or plasma. You are not permitted to fly on the aircraft within 24 hours after scuba diving. Fatigue is insidious and can be deadly. News crewmembers/passengers must learn to identify their own symptoms of fatigue and be diligently alert to these symptoms. Please ensure that you have adequate rest prior to excepting an assignment for flight.

DISPATCHING

If your operation is conducted under FAR Part 135 rules, then who can dispatch the aircraft is defined for you in your operations manual. For FAR Part 91 operations, there should be a clear-cut policy on who in management is allowed to dispatch the aircraft. In most operations it will be the News Director, Assistant News Director, Executive Producers or the News Operations Manager (also noted as the Assignment Desk Manager) who can dispatch for ENG flights. The President or General Manager can assign all other flights. It should be noted that while these people have the authority to dispatch the flight, the pilot has ultimate responsibility in accepting the flight with safety as his primary consideration.

To insure a quick response to dispatching the aircraft, the assignment desk should notify the pilot as quickly as possible to a pending flight. This allows the pilot to complete the preflight planning which includes a check of the weather, fuel considerations, safe landing zones, and if night flight is anticipated he will have to include that in his planning. The pilot will have to take into account higher weather minimums for the portion of any trip that includes night flying. Night flights may not allow for a return trip that was began under day flight weather minimums.

If the pilot is being called in for a flight, then extra time will be needed for his trip to the hangar as well as completing his preflight planning. Additional time may be anticipated if the back up pilot is being called in and his familiarity with the aircraft and operations are not the same as the primary pilot.

If the pilot determines that a flight is not going to be completed for safety reasons, he should inform the desk of those reasons and when he anticipates when the flight could be completed. If the Assignment Desk for any reason has terminated a flight, they should contact the pilot immediately stating termination of the flight.

Once the aircraft has been dispatched to a flight, there needs to be a flight following system in place in case the aircraft is in an accident or contact with the aircraft is lost. This is not an optional procedure and will be completed for each flight. The accuracy

and availability of this information is crucial to providing the best search, recovery and possible rescue of the down aircraft and crew. Each program can develop it's on system for flight following and completion of FAA Form 7233-1 (8-82). Note the example below in appendix A.

The assignment desk should always have an idea of where the aircraft is during flight. The pilot will give the destination-estimated time of arrival (ETA) prior to take off or shortly there after. Upon landing or arrival at the destination, the pilot will inform the assignment desk of the actual time of his/her arrival. Before the return flight, the pilot will advise the assignment desk of his departure time, ETA, planned route of flight, number of soles on board and the amount of fuel on board in hours and minutes. Form 7233-1 can be updated on each leg of the flight.

It is highly recommended that the form 7233-1 be available in written form.

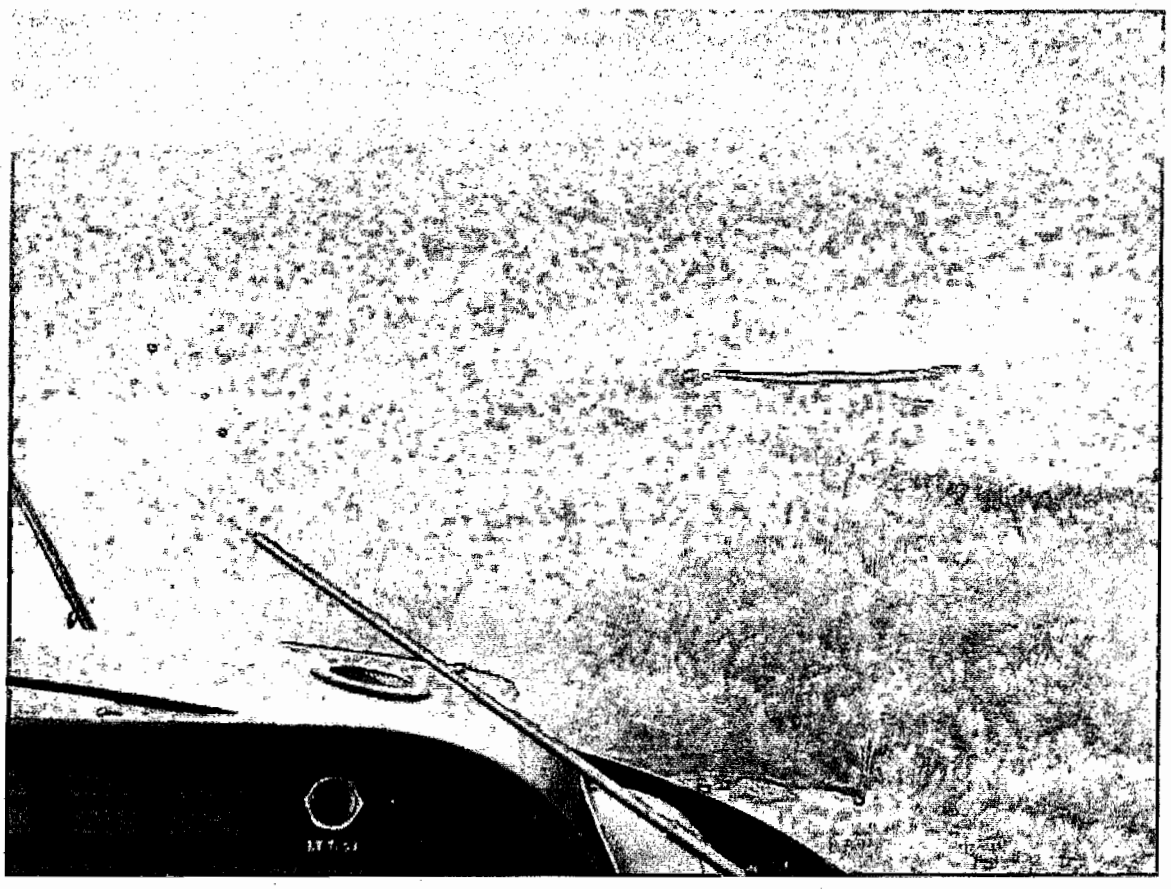
Temporary Flight Restrictions (TFR'S)

Occasionally there will be a major news event where it may be unsafe for several aircraft to operate. TFR's have been established over many major events and usually established for safety reasons. Authorities can ask for, and get, a TFR to cordon off the scene (essentially keeping aircraft away from the scene). Depending on why the TFR was established, the news aircraft may or may not be allowed over the scene for coverage of that incident. It is the pilot's responsibility to ensure that he is not flying into a TFR without filing a flight plan with a Flight Service Station and making contact with the controlling agencies. If the pilot is unable to make contact then he may ask the assignment desk to call the Flight Service Station to see if there is a current TFR over the event the aircraft is headed for. If you find that a TFR is established, get the regulation number and paragraph number under which it was established. This will help the pilot determine if he can in fact fly into this TFR. The assignment desk may elect to check with flight service to see if a TFR has been established prior to notifying the pilot of the pending flight. The pilot should be notified of whether a TFR has or has not been established on initial contact. TFR's are established typically for airplane crashes, explosions or toxic gas leaks, imminent volcano eruptions, hijacking incidents, wildfires, aircraft relief activities.

Night Flights

Night flight operations present a different challenge to the pilot versus a daytime flight. During day flights, a pilot can fly over an area that has little or no ground lights that can help the pilot to establish a horizon reference. During night operations, without the horizon reference the pilot would have to depend on the instruments as his sole horizon reference in the same circumstances. The lights providing ground reference will benefit the pilot during emergency landing operations. Without the ground reference, the pilot should elect not to fly over uninhabited areas with little or no lighting to provide ground reference.

Landing at off airport/heliport sites during night operations can present many hazards to the pilot. Antenna's and power lines can be extremely difficult for the pilot to detect and subjects the pilot and crew to a possible situation where landing safely cannot be assured.



A majority of ENG helicopters are not certified for flights into clouds, more commonly known as IFR (Instrument Flight Rules) flights. Flights at night present the pilot with more adversity than day flights. It can be difficult for the pilot to detect clouds at night and the pilot could inadvertently fly into clouds taking away his visual horizon. Because of this, we use higher weather minimums to determine if we will begin a flight during hours of darkness than during the hours of daylight. If a pilot encounters weather during a night flight that is below the prescribed minimums for his operations, he should land the aircraft at the nearest suitable landing area. The pilot can check the weather to determine if the flight can safely be continued. If he cannot depart safely at that time, he needs to check his flight and duty time limitations to determine what time he should not continue to attempt flight and get his required rest. Company policy will determine where the pilot and crewmembers/passengers will stay to get the necessary rest prior to flight.

For dispatching purposes, the assignment desk should keep the above mentioned facts in mind for night flights.

FUEL

The aircraft flight manual provides weight and balance limitations to the pilot. The station will determine the number of crewmembers/passengers they would like to have on the aircraft. The pilot will determine just how much fuel the pilot can safely depart with considering his crewmember/passenger load. The pilot will let the assignment desk know how much fuel is on board the aircraft in hours and minutes of flight time. There needs to be coordination between the pilot and the mangers of the program to determine which crewmembers/passengers are necessary for the flight (i.e. photographer only, photographer and reporter) and how much flight time they would like to see the aircraft have prior to takeoff. The assignment desk can assist the pilot in determining airports/heliports where fuel can be available to the pilot if he should ask for it. Weather will also play a part in determining how much fuel the aircraft will have on board for departure. Hot summer days will mean the aircraft's performance will not be as good as compared to colder winter days and the pilot may need to take less fuel based on the mission for that flight. Refer to appendix B for refueling operations with the rotors in motion (hot refuel).

Landing Zones

Landing Zones (LZ's) are off airport/heliport landing sites. There are more hazards associated with landing at LZ's than landing at airports/heliports. Because of this the pilot should elect to do a high overhead reconnaissance of the landing area, followed by a lower overhead reconnaissance of that landing area to determine the suitability of that LZ. Safety should always be the number one priority for accepting landing at a LZ.

It is a good idea to get permission from the property owner to land at the LZ. This is important for safety and public relations for the television station. If the assignment desk or producer knows in advance that they want to land at a LZ, they should get the pilot involved as soon as possible so he can make the necessary calls to get permission to land at the LZ. In some instances, the aircraft will be airborne and the pilot can ask the assignment desk to make the necessary calls to get the permission to land at the LZ.

In all cases, the pilot should stay with the aircraft to provide security for the aircraft while shut down at the LZ. If the landowner should come out, and prior permission was not granted for landing, then the pilot needs to be on hand to talk with that person.

For flights into LZ's that are used on a regular basis, the pilot should have a LZ book in the aircraft that describes the LZ and it's associated hazards (i.e. wires, towers, antenna's and buildings). Additional information such as the point of contact for permission to land at a site is useful. This can be especially helpful if the pilot or backup pilot has not been in that LZ for some period of time.

Security for the landing zone if very important. The aircraft will naturally attract attention and people will be drawn to it. If you have someone on the ground, and you are landing to pick up a reporter, drop off someone or a something (i.e. a tape) it is very important that the ground personnel help secure the landing zone. They need to make sure that no one can approach the aircraft from the rear of the aircraft (not in the pilot's

view) once it has safely set down, and communicate to the pilot on the two way radio that the landing zone is secure and safe. If the aircraft is parked and shutdown at a scene, it will be the pilot's responsibility to secure the area around the aircraft.

Law Enforcement Situations
If the assignment desk knows in advance they are sending the crew to a scene that has the local law enforcement personal involved in a hostage or manhunt situation, they need to advise the pilot of this as soon as possible. The pilot will ensure that the aircraft is not interfering with the official operations proceeding on the ground. A higher altitude may be prudent during these operations due to the noise emitted by the aircraft. Another consideration is the people on the ground may be armed and thereby placing the aircraft and it's occupants in danger. The pilot should always keep the aircraft and crewmembers/passengers out of harms way.

One special note here considering manhunt and hostage situations. The News Director should have a written policy on determining what live shots will be shown during these situations to ensure that positions of the law enforcement personal are not given away.

Location of stories
It is imperative that the assignment desk provides as much information to the pilot as to where the story is that the pilot is going to cover. Be as specific as you can when giving the pilot directions to the scene. The best way to tell the pilot is to give him the latitude and longitude of the site. He can use that with a GPS system (if the aircraft is so equipped) that will navigate him to the scene. For scenes over the city, the address and nearest intersection of major streets will assist the pilot in locating the story. For stories away from your local operating area, distance and directions from the nearest town or major landmark will be extremely useful. Get as much information from the police, sheriff or controlling agency as possible so that you can pass this along to the pilot. Always remember, the pilot is navigating from the air and it may be more difficult to find a location than if someone is travelling by ground.

Additional information about the scene will not only help in finding the scene, but will assist the crew in determining what it is they will video and how they will video the story.

The best way to inform the pilot of the above information will be determined by the News Director or manager of the program. There may be some considerations given to whether the station has competing stations in town monitoring their two way communications. Alphanumeric pagers or other means of communication may be opted for. Remember, the use of cell phones are for operations on the ground and not airborne.

Live or Tape
When the helicopter is dispatched to spot news where a live shot is desired, the assignment desk will inform the pilot, master control (insert name of who you will tune your signal in with) as soon as possible. This allows for master control to prepare for tuning in the microwave signal from the aircraft, and it is especially helpful if the assignment desk will let master control know the approximate location of the aircraft.

Master control may need to adjust other live shots if he/she knows the helicopter is airborne and will be tuning in.

If an immediate live shot is not necessary for the spot news story, the assignment desk may opt for a microwave feed from the helicopter. If it doesn't impair the crew's ability to gather information about the incident, a live microwave feed allows the assignment desk and producers to assess the situation and advise on coverage plans and tape feed.

WEATHER

Flights into unknown and unforecasted weather have been the cause of many accidents. For that reason a pilot will check the weather prior to each flight to determine if the flight can be conducted safely. After getting his weather briefing, the pilot will let the assignment desk know if he will be able to begin this flight based on the prescribed weather minimum for the operations. The recommended weather minimums are listed below:

	Day	**Night**
Local	500' Ceilings 2 Miles Visibility	800' Ceilings 2 Miles Visibility
Cross Country	800' Ceilings 3 Miles Visibility	1000' Ceilings 3 Miles Visibility

The local area is that area which is located within 25 miles of your normal base of operations. Ceilings are the heights above the earth's surface of the lowest layer of clouds or obscuring phenomena that is reported. Visibility is the ability, as determined by atmospheric conditions and expressed in units of distance, to see and identify prominent unlighted objects by day and prominent and lighted objects by night.

The above mentioned weather minimums are prescribed for non-mountainous areas of operations. Operations in mountainous areas should use higher minimums. Pilots who are new to a program should use higher minimums until he has had sufficient time to become familiar with the area in which he is flying and the associated hazards to flight in that area. Your program can opt for higher minimums if they so desire, however lower minimums are not recommended. A note to pilots, the minimums prescribed above are where you will end the flight, not necessarily where you will begin the flight.

If a pilot encounters weather less than forecasted and has inadvertently flown into the clouds or fog taking away is visual ground reference, then the pilot should take appropriate action. Inadvertent flight into Instrument Meteorological Conditions (IMC) requires for him to transition to the instruments and fly with sole reference to those instruments. Normal action is to do a 180 degree level turn and fly out of the weather phenomenon or if he is in an IFR certified aircraft, then he should file an IFR flight plan and complete the flight IFR to the nearest airport with an instrument approach. Written standard operating procedures for inadvertent IMC should be incorporated into your program. When a pilot does encounter Inadvertent IMC, he is extremely busy and now is

not the time to disturb the pilot. Once your safely back on the ground is the time for discussions.

If you encounter weather below minimums, landing at the nearest suitable landing area is recommended. Many accidents (including fatal accidents) have occurred as the pilot continues to fly in order to get the aircraft back to the hangar or helipad. It is much better to be on the ground during this situation than to continue to fly into deteriorating weather.

Wind

Wind can affect the rotor blades during the starting and stopping of the helicopter. There are limitations in the helicopter flight manual concerning this and the pilot will let you know when it is unsafe to start or shut down the helicopter. Normally a 25 knot (30 mile per hour) wind is considered high enough winds to not start the aircraft. Another consideration is a 15 knot gust spread (change in wind velocity measured over a period of time), where for some aircraft it is not considered safe to start the rotor blades in motion.

Wind can affect the ride of the helicopter for the passengers in the aircraft. A prudent wind limitation for en route phases of helicopter flight is 35 knots. This is especially true if at the spot news story you will be shooting with a hand held camera during flight. The new gyro stabilized cameras can be affected by the higher gust winds although not a common occurrence.

Rain

Rain by itself imposes no limitations unless it reduces your visibility to below the prescribed weather minimums for your operations. If you encounter heavy rain, the pilot will change heading to fly around the inclement weather, begin an approach to landing or if it appears lighter in intensity for your route of flight he may elect to keep flying. If it is below your weather minimums, then the pilot should land at the nearest safe landing area.

Flight into thunderstorms is not safe or recommended. For that reason pilots should avoid flying in and around thunderstorms.

Icing & Snow

Flight into known or forecasted icing is prohibited. If the pilot suspects icing conditions are present he will inform the assignment desk that he cannot fly. Icing conditions are present when there is visible moisture and the temperature is at the freezing mark. No pilot will except a flight with ice or frost adhering to the aircraft. Flight into falling or blowing snow is allowed and different aircraft will have different limitations for these flights. The pilot will inform you when flight into falling or blowing snow can be accomplished. At no time will a pilot fly into falling or blowing snow when the visibility is reduced below the minimums set forth for that program or aircraft.

Comfort in flight

Many passengers are worried about flying into bad weather. Pilots should not begin or continue a flight if they feel there is any doubt in the safe outcome of that flight. If the

weather is below the minimums for flight then the pilot will elect to not continue the flight and land at the nearest safe landing area. Pilots check the weather before the flight and should be able to tell you what is to be expected of the weather prior to flight. If you encounter bad weather while flying, be sure to listen to the radios prior to questioning the continuation of the flight with the pilot as he may be busy talking to air traffic control or the station. When you can talk to the pilot, please express any concerns you may have about the continuation the flight. He will explain to you why he thinks the trip can continue safely or the options available to him at that time. If you feel that it is to bad, the pilot can elect to turn around or simply land on the ground and wait the weather out.

MANAGERS DUTIES

Managers are considered the person or persons who have discretion in the program operations. The General Manager of the station has the ultimate responsibility for the overall safety of the helicopter program. The general manager should ensure that the pilots are highly qualified to operate the aircraft and assist in managing the program. For FAR Part 135 operations, the general manager will ensure that the vendor is providing the necessary services for a safe program. The general manager will also ensure that there is a safety manual in place for his program. If no safety manual is available and is not written then the general manger can substitute the Helicopter Association International safety manual.

The News Director will be responsible for ensuring that the daily operations concerning the helicopter are completed in a safe and efficient manner. The News Director will also insure that the pilots are properly trained and have the appropriate experience to do the job safely. Training is essential to ensuring a safe operation. It is recommended that at a minimum the pilot go the manufactures initial and recurrent flight school. Additional training for ENG crews should incorporate Cockpit Resource Management, Crew Resource Management, and emergency training. No manager will impose any requirements of the pilot or aircraft that exceeds limitations or places the crew in a dangerous situation. The News Director should be especially cognizant of the flight and duty time of the pilot so that he does not encounter acute or chronic fatigue. He will also insure that the program has written guidelines for each of his personnel who might encounter the helicopter.

Someone in the management team, be it the General Manager, News Director or Chief Engineer, should be ensuring that all maintenance due on the aircraft is being accomplished. This is especially true for station owned aircraft working under FAR Part 91 where the maintenance program should be following the manufacture recommended maintenance program. For those operations where the station has a vendor providing the aircraft and pilot, the management team should have the vendor provide documentation

verifying all maintenance has been accomplished according to their FAR Part 135 Certificate and the manufacture recommended maintenance program.

Managers should not impose undue stress on a pilot to fly. If the pilot does not make decisions to fly based on safety reasons, but instead on the stress applied by the manager then you could be placing the crew and aircraft in harms way. One of the biggest factors in placing stress on the pilot to fly is " because the other guys are flying, why aren't you?" They may be flying in lower than safe weather minimums or against Federal Aviation Regulations. If they are flying against regulations, the pilot is at risk of losing his license should he accept the flight. These undue stresses have been the cause for accidents in previous years.

PILOTS RESPONSIBILITIES

The pilot is the most important key to having a safe program. The pilot's primary responsibility is to fly the aircraft safely. ALL other duties will be secondary while flying. As Pilot In Command (PIC) he/she has the ultimate responsibility for the aircraft and safety of the crewmembers/passengers while in flight. This responsibility cannot be delegated to anyone else. The pilot will attempt to fly the crew wherever they want to go while abiding by all Federal Aviation Regulations, local laws and common sense. The pilot's responsibility requires some specific duties he/she must accomplish in order to fly the aircraft in a safe and efficient manner. This section will outline some of the primary duties.

The pilot should have some sort of flight and duty time limitations. In other words he should have a reliable schedule for the amount of hours he/she can work in a 24 hour period. The recommended schedule for pilots is no more than a 10 hour duty day. The maximum schedule for a pilot would be 14 hours of duty time in a 24 hour period, with a minimum of 10 hours of rest in a 24 hour period. The maximum duty day would be for unusual situations and it is not recommended on a daily basis. The pilot cannot work more than 6 consecutive days in a row without a 24 hour rest period. The maximum allowable flight time in a 24 hour period is 8 hours. These are recommended guidelines for the pilot's flight and duty time, but is incumbent upon the pilot to ensure that he is fully rested prior to excepting any duty for flight.

The first thing each morning the pilot must accomplish a weather check. While we have sophisticated programs for our television weather forecasters, the only approved source for weather is from a FAA approved weather source. The nearest FSS is the best way to check your weather and Notices to Airmen. This should be accomplished first thing in the morning and updated before each flight. By checking the weather first thing in the morning you can advise the assignment desk of the possibility of not flying due to

weather and when they can expect you to be able to fly. This allows the assignment desk to make other plans for spot news coverage.

The pilot should coordinate all up coming maintenance with the managers of the program for all stationed owned aircraft and FAR Part 135 aircraft. He should also be responsible to the assignment desk for informing the desk of up coming maintenance. The assignment desk should have a means of letting all personnel know when the aircraft is not flying due to maintenance.

The pilot will fly the aircraft at a safe altitude so in the event of an emergency a safe landing will occur. If hovering the aircraft, the pilot will avoid operations in the height/velocity curve. With many operations utilizing the gryo-mounted camera balls, we should be able to operate at an altitude that reduces the noise signature to persons on the ground. It is in the best interest of all concerned to **fly neighborly** and it is especially true for late night or early morning flights.

The pilot will always plan to arrive at his final destination with at least 20 minutes of fuel remaining in the aircraft. If the pilot is ever in doubt about having the proper amount of fuel required by the FAA regulations, the pilot will refuel at the appropriate place. The pilot should advise the crew that a fuel stop may be necessary so that the crew can account for the time it takes to make the fuel stop while still meeting the crews requirements for video or live shots.

At the end of the day the pilot will complete the daily inspection/preflight on the helicopter to assure it is in airworthy condition. This will insure the aircraft is ready to fly in the event the pilot is called out during the night or early the next morning for spot news stories.

The chief pilot for the program will be responsible for ensuring that the back up pilot is available and ready for flight when he is scheduled. If the back up pilot is scheduled to be the on call pilot then the back up pilot will inform the chief pilot in the event he can't perform the duties as the on call pilot. This will allow the chief pilot the opportunity to get another back up pilot or to let the assignment desk know if no pilot will be available due to flight and duty time restrictions.

The pilot has a responsibility to inform his passengers of the different possible emergency procedures and can usually accomplish this in his passenger briefing. If you so choose, you can include a section on emergency procedures here to give a more detailed explanation to your passenger/crewmembers.

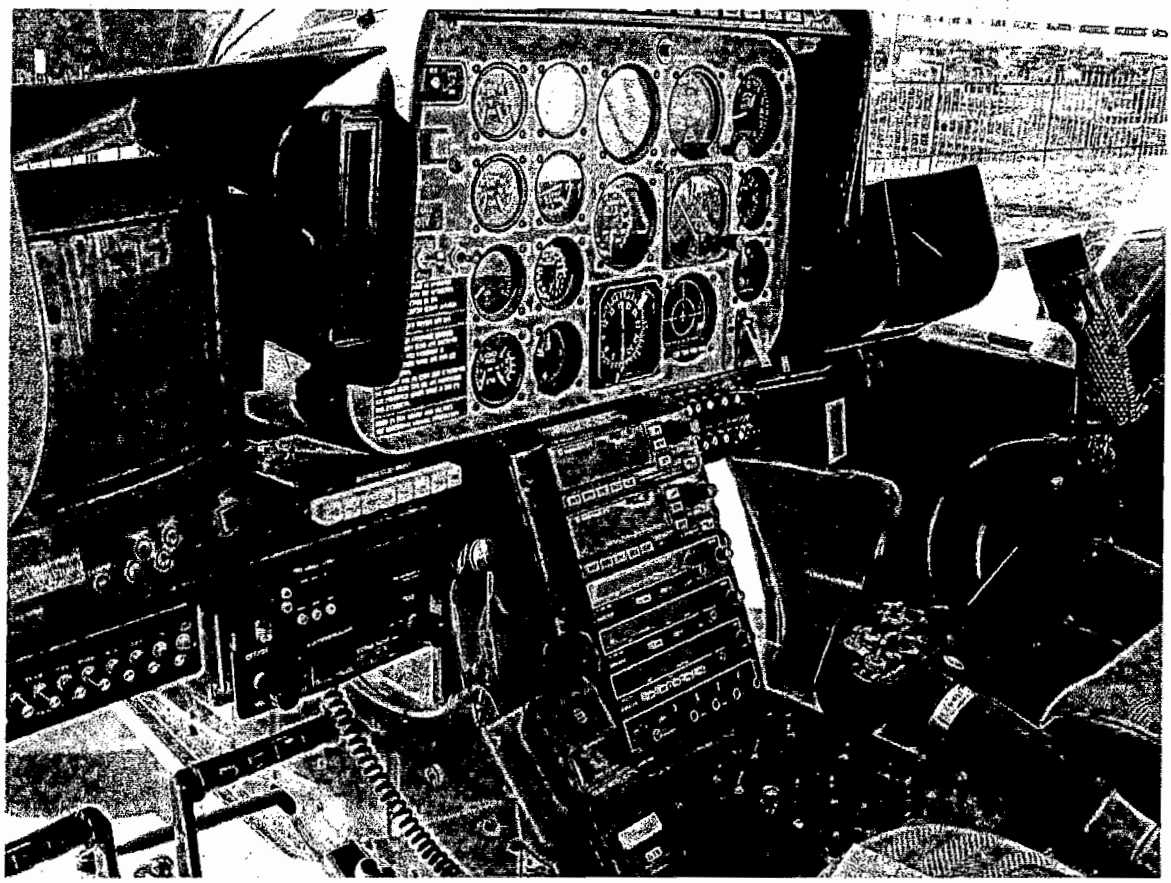
REPORTER RESPONSIBILITES

This section will outline the responsibilities for the reporter. While en route to a story the reporter should brief the pilot on the main elements of the story. This will provide the pilot with the necessary information needed to use the helicopter to its maximum

potential in helping to report the story (this is if the pilot is not the reporter for your operation).

While airborne the reporter will keep a vigilant watch for other aircraft and point out other aircraft to the pilot. The reporter should be asked to listen to Air Traffic Control frequencies when not doing live shots so that he can help monitor where other aircraft are at relative to your aircraft. The reporter needs to know how to select what audio is coming into his headset and how to select the different transmit switches when he needs to talk to the station, producer or assignment desk if necessary. The reporter may also be asked to listen to the scanner or other radios during normal operation. He will need to decide what he can listen to and how to clear the other radio traffic from his headset during live shots. Off air cues for the reporter should come from the pro-channel IFB (may be different for your operations) and should not interfere with his normal duties as a reporter. He will also need to be aware of where other switches are should they be included in his operations. If he needs to switch between the cameras, then he needs to know the location of the switcher and how to switch them.

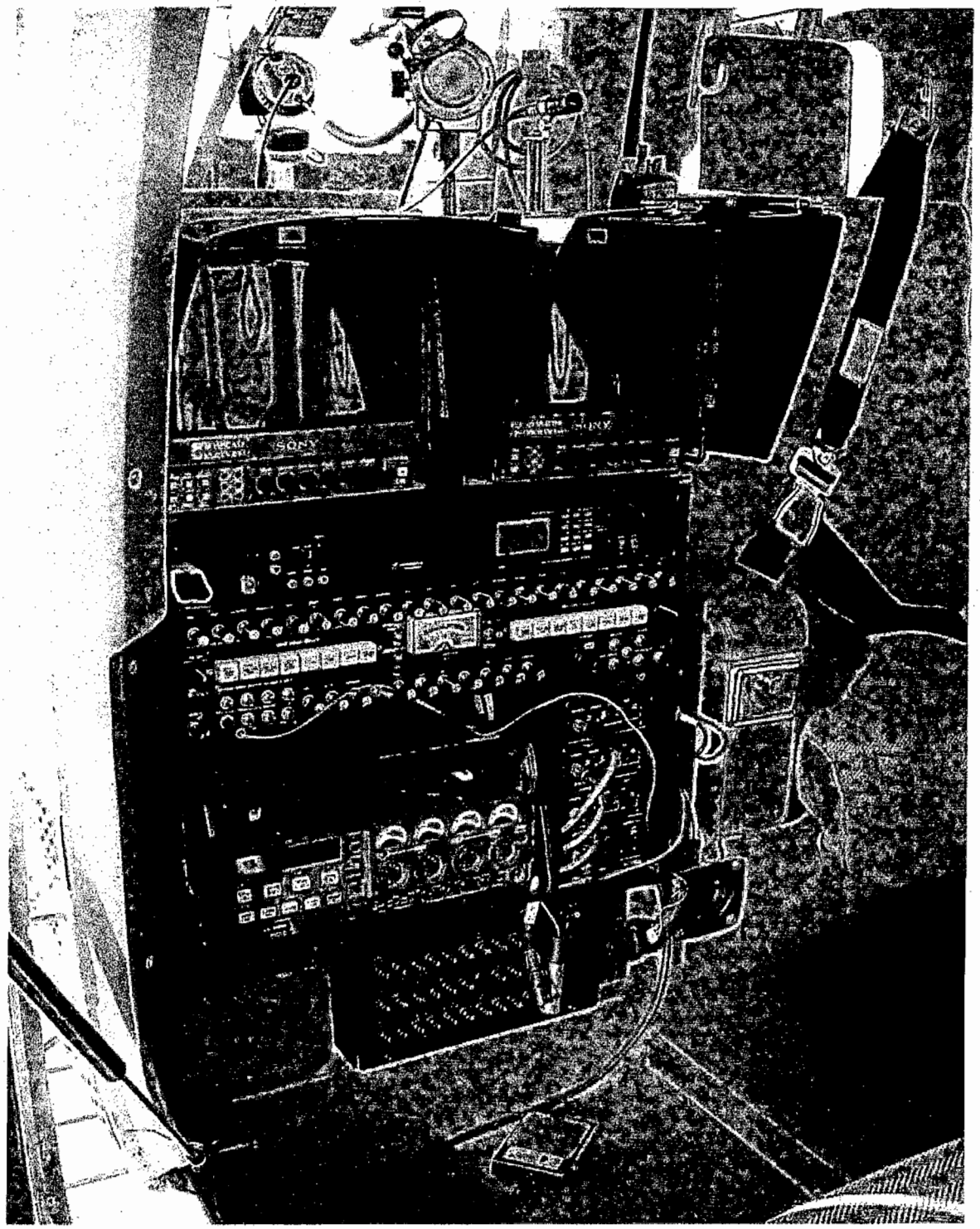
If the reporter is to sit in the front seat, he needs to have a briefing from the pilot to ensure he does not interfere with flight controls. Interference with the flight controls may have a very dramatic affect on the helicopter and could place all personnel in the helicopter in danger.



If the pilot is the reporter, then his workload has increased dramatically and he should coordinate with the photographer to insure that is workload is at a minimum and that he can concentrate on flying as his number one responsibility. The pilot should never let the reporting duties dictate what he is doing and compromise safety of the aircraft at any time.

PHOTOGRAPHER'S RESPONSIBILITIES

The photographer's role in the aircraft is similar to that of the reporter and may include many of those duties, therefore the photographer needs to be familiar with the reporters duties listed above. He will also assist the pilot in looking for other aircraft and to point out that traffic to the pilot. When the aircraft has landed, be on the lookout for personnel who might possibly approach the aircraft and make sure you point these people out to the pilot until the rotors have come to a full stop. The photographer may have the responsibility of running the tape deck and he should have full knowledge of how to do that. The photographer will ensure that there are enough tapes in the aircraft to cover the flight and video required for that story. The photographer should also ensure that the main camera lens is clean at the end of each flight.



The photographer should have the same knowledge as the reporter on how to run the switcher for the cameras, how to transmit to the station and how to select what radios he will listen to. If the photographer is to sit in the front seat, he will need to have the same knowledge of not interfering with the flight controls.

The photographer should keep all equipment that he may have brought on board the aircraft secured during flight. He should let the pilot know what equipment he has brought on board and if he has stored anything in the baggage compartment.

ASSIGNMENT EDITOR RESPONSIBILITES

When the aircraft is dispatched, it is the assignment editor's responsibility to complete the Flight Plan card (see Appendix C) and to keep it updated if the destination of the aircraft changes. The information is necessary in case the aircraft is overdue or involved in an accident. The FAA or emergency crews will need this information so it will need to be very accurate. If the aircraft is overdue, communications are lost or the aircraft is involved in an accident then the assignment editor should enact the plan the station has in place for these events.

If you are operating under FAR Part 135 rules, then you will notify the company providing these services and follow their overdue/accident plan. If you are operating under FAR Part 91, then you should include at least the following as part of your plan.

OVERDUE

Notify the nearest flight service station (FSS) at 800-992-7433.

A. Inform the FSS that you have a helicopter on a part 91-company flight plan that is overdue/accident.
B. The aircraft color is _____, the aircraft type is _____, and the aircraft N number is _____.
C. The aircraft was on a flight from _____ to _____and estimated time of arrival was _____ hours local time.
D. There were _____ number of people on board the aircraft.
E. The aircraft was piloted by _____.
F. There were no dangerous or explosive devices on board.

ACCIDENT

1. In the event of an accident involving the aircraft, passengers or personal and property, you may elect to notify personnel in your company.

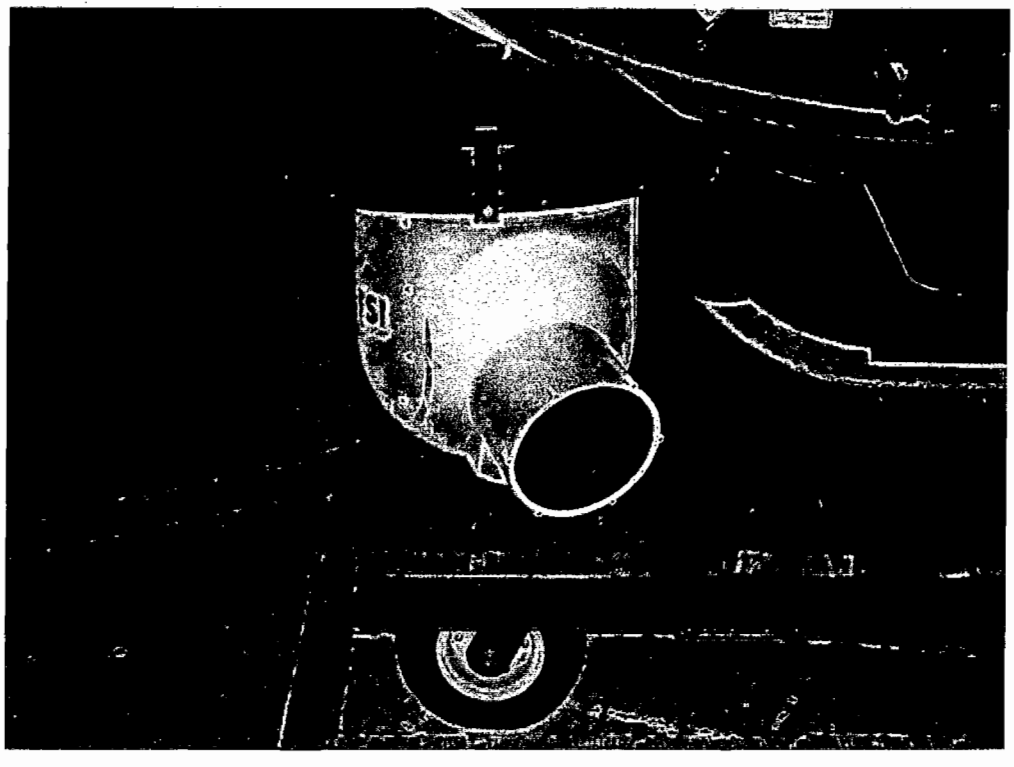
A. Notify your General Manager and News Director immediately. (List phone numbers for those personnel). They will in turn notify the other necessary company personnel.
B. The General Manager or News Director will take such action as required by NTSB 830.5.
C. The local FSS, 800-992-7433 will supply the numbers of the appropriate NTSB office and/or the closest Flight Standards District Office. Both of these agencies should be notified.
D. On the initial call to the FSS, inform them that this is an aircraft accident.
E. Passenger Injuries: In the event of an accident and the pilot is not incapacitated, he will first attend to the injuries of the passengers, and provide treatment or hospitalization of those passengers. He will then stand

by the aircraft until a representative of the NTSB arrives. He will also be responsible for providing security of the aircraft until the NTSB or local FSDO personnel arrive.

Other assignment editor responsibilities were discussed in the dispatching section and the assignment editor needs to be familiar with that portion of this manual.

ELECTRONIC NEW GATHERING EQUIPMENT

Because each aircraft is configured differently, we have elected to keep this section open for each program to incorporate diagrams and/or technical drawings of their equipment. It is highly recommended that you incorporate those into your manual to ensure that the passengers/crewmembers have written documentation of the ENG equipment aboard your aircraft.



This manual is only the beginning and it is up to each program to add to this manual to fit your program but it is highly recommended that you do not subtract the above information. We encourage each program to fly as safely as possible, while still giving

the viewers the most we can. Should you want further help with developing your program, contact the HAI ENG Committee and they will be glad to assist you.

Items that you may wish to include in the back of your manual are pilot's schedule, company telephone roster, photographer's schedule, reporter's schedule, additional information from the rotor craft flight manual (i.e. emergency procedures). These are but a few examples and if you come up with any good ideas on improving this manual then please feel free to share it with the HAI ENG Committee.

ENG HELICOPTER SAFETY BRIEFING

Please sign your name below after you have reviewed the safety briefing.

	NAME	DATE
1.		
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Appendix A

WEATHER LOG

	Ceiling, Visibility, and Precipitation		Winds Aloft	Icing and Freezing Level	Turbulence and Cloud Tops	Position of Fronts, Lows, and Highs
	Reported	Forecast				
Departure						
Enroute						
Destination						
Alternate						

FLIGHT PLAN

1. TYPE	2. AIRCRAFT IDENTIFICATION	3. AIRCRAFT TYPE/ SPECIAL EQUIPMENT	4. TRUE AIRSPEED	5. DEPARTURE POINT	6. DEPARTURE TIME		7. CRUISING ALTITUDE
					PROPOSED (Z)	ACTUAL (Z)	
VFR			KNOTS				
IFR							
DVFR							

8. ROUTE

9. DESTINATION (Name of airport and city)	10. EST. TIME ENROUTE		11. REMARKS
	HOURS	MINUTES	

12. FUEL ON BOARD		13. ALTERNATE AIRPORT(S)	14. PILOT'S NAME, ADDRESS, TEL. NO. & AIRCRAFT HOME BASE	15. NUMBER ON BOARD
HOURS	MINUTES			

16. COLOR OF AIRCRAFT	17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)

CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL

SPECIAL EQUIPMENT SUFFIX

/X—No Transponder
/T—Transponder with no altitude encoding capability
/U—Transponder with altitude encoding capability
/D—DME, no transponder
/B—DME, transponder with no altitude encoding capability
/A—DME, transponder with altitude encoding capability
/C—RNAV, transponder with no altitude encoding capability
/R—RNAV, transponder with altitude encoding capability
/W—RNAV, no transponder
/G—Flight Management System (FMS) and Electronic Flight Instrument System (EFIS) equipped aircraft with /R capability having a "Special Aircraft and Aircrew Authorization" issued by the FAA

Notes and NOTAMs

Position Report

Acft. Ident.	Position	Time	Alt.	IFR/ VFR	Est. Next Fix	Name Following Fix

Report Conditions Aloft — Cloud Tops, Bases, Layers, Visibility, Turbulence, Haze, Ice, Thunderstorms

Appendix B

RAPID REFUELING PROCEDURES

1) **No rapid refueling will be attempted if a thunderstorm is within 5 miles of the area where rapid refueling will take place.**

2) **The line personnel will position the aircraft for rapid refuel. If no line personnel are available, the pilot will position the aircraft.**

3) **Refuel personnel will position outside of the rotor arc until after the aircraft is positioned and the pilot signals for the operation to begin.**

4) **All passengers will exit the aircraft to an area outside the rotor arc. The pilot will brief passengers prior to exiting the aircraft concerning aircraft hazards during refueling operations.**

5) **The pilot will remain at the controls at all times when the rotor blades are turning, with the pilot's door open and all other doors closed. All flashing lights on the aircraft are to be extinguished.**

6) **A fire extinguisher will be available.**

7) **The pilot prior to beginning refueling will give fuel quantity. Pilot will monitor instruments and signal for shut off by giving thumbs up to refuel personnel.**

8) **No radio transmissions will be made during refueling operations.**

9) **Upon completion of refueling, passengers may be boarded for normal operations.**

10) **If aircraft, fuel apparatus, or spilled fuel catch fire, engage all fuel shut-off shut down and evacuate the aircraft. Use available fire extinguishers to fight fire.**

Appendix C

Helicopter Flight Log

Date	Time	TO	ETA	ATA	FUEL	Personnel	Remarks