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RESULTS OF THE FLIGHT NOISE MEASUREMENT PROGRAM USING A STANDARD AND MODIFIED SH-3A HELICOPTER

by Robert J. Pegg, Herbert R. Henderson, and David A. Hilton

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Hampton, Va. 23665

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16. Abstract

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Based on an analysis of the measured results, the average of the overhead, overall, on-track noise levels was approximately 4 dB lower for the modified helicopter than for the standard helicopter. The improved in-flight noise characteristics, and associated small footprint areas and time durations, were judged to be mainly due to tail-rotor noise reductions. The noise reductions were obtained at the expense of required power increases at airspeeds greater than 70 knots for the modified helicopter.

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SUMMARY

A field noise measurement program has been conducted using both a standard SH-3A helicopter and an SH-3A helicopter modified to reduce external noise levels. Modifications included reducing rotor speed, increasing the number of rotor blades, modifying the blade-tip shapes, and acoustically treating the engine air intakes and exhaust. The purpose of this study was to document the noise characteristics recorded on the ground of each helicopter during flyby, hover, landing, and take-off operations.

Based on an analysis of the measured results, the average of the overhead, overall, on-track noise levels was approximately 4 dB lower for the modified helicopter than for the standard helicopter. The improved in-flight noise characteristics, and associated small footprint areas and time durations, were judged to be mainly due to tail-rotor noise reductions. The noise reductions were obtained at the expense of required power increases at airspeeds greater than 70 knots for the modified helicopter.

INTRODUCTION

A reduction in the external noise level of current helicopters would greatly enhance their tactical usefulness for military operations and would also enhance their public acceptance for commercial use. The theoretical and experimental studies of references 1 to 3 have sought to identify and quantify the mechanisms by which helicopter noise is generated, propagated, and received and to find means of reducing the noise with minimum penalties in helicopter performance.

The present work forms a part of the Quiet Helicopter Program, utilizing the Sikorsky SH-3A, Kaman HH-43B, and Hughes OH-6A helicopters (refs. 4 to 8), which was a joint project with the Eustis Directorate, U.S. Army Air Mobility Research and

Development Laboratory, the Advanced Research Projects Agency, and the NASA Langley Research Center. The program included modifications to the three helicopters for the purpose of noise reduction and evaluations of these modifications as a basis for possible acoustic and aerodynamic performance tradeoffs.

The purpose of the present report is to document the ground noise measurements made during flyby, hover, landing, and take-off operations on a standard SH-3A helicopter and on one which was modified especially to reduce the external noise levels. The results are presented in the form of overall noise time histories and frequency spectra for both the standard and modified aircraft under similar operating conditions.

APPARATUS AND METHODS

Test Helicopters

Standard aircraft.- Figure 1 is a three-view drawing of the standard SH-3A helicopter and table 1 is a list of the principal aircraft dimensions. In figure 2, a photograph is shown of the standard helicopter. The SH-3A helicopter has a five-bladed lifting rotor and a five-bladed antitorque tail rotor. The aircraft is powered by two General Electric T58-GE-8B gas turbine engines located above the cabin and forward of the main-rotor gear box. The helicopter has a flying-boat-type hull with two outrigger sponsons into which the dual main landing gear retract. A horizontal stabilizer is installed on the upper right-hand side of the pylon which supports the tail rotor. The normal operating weight during the noise tests was approximately 7080 kg, which corresponds to a rotor-blade mean lift coefficient of 0.38 at sea level and at a rotor speed of 100 percent. Additional information regarding this helicopter is contained in reference 9.

Modified aircraft.- The modified SH-3A helicopter, shown in figure 3, was altered from the standard version so as to reduce its external noise characteristics. Configuration changes included reducing rotor speed by 10 percent, modifying the blade tips (twisted, trapezoidal shape), increasing the number of rotor blades from five to six, reducing the tail-rotor speed by 34.4 percent, increasing the number of tail rotor blades from 5 to 10, redesigning the vertical fin so as to unload the tail rotor in forward flight, and acoustically treating the engine air intakes and exhaust. A detailed description of the changes and alterations is given in reference 8.

Test Site

Figure 4 indicates the location of the test area in relation to the overall runway layout at NASA Wallops Station, Virginia. Four recording stations having three microphones each were utilized to obtain the measurements. Typical terrain features of the Wallops Station are shown in the photograph of figure 5, which is a view looking north from the end of runway 4-22. Indicated on the photograph are the flight track and the microphone positions for the tests. Figure 6 is a schematic diagram showing the locations of the microphones relative to the ground track and to ground zero, the ground-zero point being the position of touchdown and the beginning of take-off. The hover tests were made with the helicopter hovering over the ground-zero point. Flyover noise measurements were made with the helicopter flying south to north along the flight track. Landing-approach and take-off and climbout operations were also made along the south-to-north flight track.

Noise-Measurement Equipment

Four mobile data-acquisition vans, each containing three microphones, signal conditioning equipment, and tape recorder, were used in the noise-measurement program. A schematic diagram of the noise data-acquisition system is shown in figure 7. During the entire test program, the microphones were fitted with wind screens and were positioned 1.5 m above the ground surface and were oriented for grazing incidence. The microphones are commercially available, piezoelectric ceramic-type having a frequency response flat to within 3 dB over the frequency range of 20 to 12 000 Hz. The signal outputs from all microphones at each of the four mobile data-acquisition stations were recorded on multichannel, frequency-modulated magnetic tape recorders at 76.2 cm/sec with a center frequency of 54 kHz. The frequency response of the complete recording system was flat to within 3 dB from 20 to 12 000 Hz.

The entire sound-measurement system was calibrated in the field prior to and after each day's testing by means of conventional discrete frequency calibrators with a 1000-Hz sine wave signal at a sound pressure level of 114 dB. Real-time correlation between all microphone positions was recorded on magnetic tape with a standard IRIG-B time code format. Data records were played back from the original magnetic tapes (using the playback system shown in fig. 7) in the form of sound-pressure-level time histories and spectra data. All measurements were made in accordance with recommendations of reference 10 and are presented with a reference value of 20 $\mu N/m^2$ and have not been corrected for slant-range or atmospheric effects.

Atmospheric Conditions

Both the surface and atmospheric soundings were taken by the U.S. Weather Bureau support facility at Wallops Station during the time of the tests. Surface observations of temperature, humidity, and wind velocity and direction were made at a location approximately 305 m from the center of the test area as indicated in figure 5.

Atmospheric soundings were obtained from ground level up to about 305 m mean sea level by means of a constant rate-of-ascent balloon ascending at approximately 5.8 m/sec and a double-optical theodolite tracking system. The atmospheric data from these soundings are given in table 2. During the noise-data recording periods the surface wind velocity did not exceed 13 knots, with acoustical data being recorded only when surface winds were 10 knots or less as recommended in reference 10.

Helicopter Operations

Noise measurements were taken on both the standard and modified helicopters during flyover, hover, and simulated landing and take-off conditions. Tables 3 and 4 list, for the various flight conditions and run numbers, pilot-display readouts of altitude, indicated airspeed, rotor speed, engine power, and turbine-outlet temperature for the standard and modified helicopters. The gross weight of the helicopters was approximately 7080 kg. For all flight conditions, aircraft-position information was provided by a GSN-5 precision approach radar unit located adjacent to runway 4-22 (see figs. 4 and 5). Additional information regarding this system is given in reference 11. The measured altitudes and calculated slant-range distances of the standard and modified helicopters at each of the noise-measuring positions are tabulated in tables 5 and 6, respectively.

Flyover noise survey. - The constant-altitude flyover noise measurements were obtained from the microphone array shown in figure 6. The helicopters were flown at nominal altitudes of 61 and 152 m at airspeeds of 40, 70, 100, and 120 knots. Five repeat flights were made at each combination of altitude and airspeed. The helicopter flight path and power conditions were maintained for about 1600 m prior to and beyond the microphone array.

Hovering noise survey. - The hovering tests were made in and out of ground effect at nominal altitudes of 3.1, 31, 61, and 152 m. The noise surveys were made with the helicopter hovering directly above the ground-zero point (see fig. 6) and on a heading of 022° magnetic. The pilot was provided information by the GSN-5 radar tracking system

regarding displacement from overhead of the ground-zero position. Simultaneous measurements of noise at ground level were obtained for each test altitude from the microphones positioned at 0°, 90°, 180°, and 270° azimuth at radial distances along the ground of 61, 152, and 213 m.

Simulated landing and take-off. - The landing-approach and take-off and climbout operations were conducted concurrently. The landing-approach operations were initiated at 152 m and an airspeed of 55 to 60 knots with a rate of descent of approximately 2.8 m/sec. The airspeed was gradually decreased throughout the approach until a flare to hover was made approximately 31 m above the ground-zero point. At this point the take-off and climbout operations were initiated, wherein altitude and airspeed were increased simultaneously until the helicopter reached an altitude of 152 m and an airspeed of 60 knots. Five repeats of the simulated landings and take-offs were accomplished.

RESULTS AND DISCUSSION

The noise measurements obtained from this investigation are presented in tabular form in tables 7 to 10. Tables 7 and 8 contain overall sound pressure levels for the standard and modified helicopters for all flights and at each microphone position. Tables 9 and 10 contain listings of octave-band noise levels for specific microphone positions located under the flight track and perpendicular to the flight track for the standard and modified helicopters. Where there are no entries in the table, either the data do not exist or they could not be properly interpreted. The results discussed in the following sections consist of flyover noise time histories and one-third octave-band spectra, narrow-band data and overall sound pressure levels under hover conditions, and overall noise levels during landing and take-off operations. None of the noise data contained in the tables or figures have been corrected for distance differences or standard data atmospheric conditions.

Figure 8 is a spectrum of the ambient noise level measured in the test area. The cross-hatched region represents the range of ambient noise levels existing during the test period.

Flyover Tests

On-track measurements. - Figure 9 is a sample time-history plot of the averaged overall sound pressure levels associated with the standard and modified helicopters during

a flyover at 70 knots and an altitude of 61 m. All data were measured from microphones located on the flight track center line. The sound pressure levels for both helicopters reach a maximum as the helicopter passes overhead and decrease as the helicopter passes beyond the measuring position. The peak noise level associated with the modified aircraft is approximately 3 to 4 dB lower than that of the standard aircraft.

In addition to the data presented in figure 9, figure 10 contains the time histories from four flights as measured for both the standard and modified helicopters. The data show that the flyover time histories are reasonably consistent between flights.

A comparison of the spectral content of the noise from both helicopters is presented in figure 11. Shown in the figure is a comparison of the noise levels for one-third octave band for on-track flyover data at 70 knots and an altitude of 61 m for both the standard and modified helicopters at the overhead position. In general the shape of the curves are similar; the modified aircraft exhibits a shift in frequency and slight reduction in level due to the modifications made to the main rotor system.

The one-third octave spectra before and after the helicopter passes the overhead position are presented in figure 12 for a flyover at 70 knots and an altitude of 61 m. Data in figure 12 are presented for five points in time: 10 seconds before overhead, 5 seconds before overhead, overhead, 5 seconds after overhead, and 10 seconds after overhead. The spectral shape is approximately the same for all five positions, except at the lower frequencies when main and tail rotor harmonics are evident. Significant differences in noise levels occur at the higher frequencies as the helicopter approaches the microphone. The effect of helicopter airspeed on the noise spectrum was also investigated and showed no significant variations throughout the speed range investigated (0 to 120 knots). It should be noted that no blade slap was observed during the noise-measurement tests on either the standard or the modified helicopter for all the flight conditions, including landing and take-off maneuvers, hover, and flybys.

The effect of the configuration change on performance is shown in figure 13. These data were taken from instrument panel readings on the test helicopters. From this figure only minor changes in power are observed over the speed range up to 70 knots; however, significant changes in power are noticed as airspeed increases above 70 knots. A maximum increase in power required of approximately 25 percent is noted at 120 knots.

Lateral measurements. - During the tests of the two aircraft, noise measurements were made with microphones located in an array perpendicular to the flight track as shown

in figure 6. Overall sound pressure levels from these microphones are presented in figure 14 for altitudes of 152 m and 61 m during a 120-knot and 70-knot flyover for both helicopters. The symbols at each of the microphone positions represent averaged data from five flights. Very little scatter was observed at any recording position. For both the standard and modified helicopter, the peak overall sound pressure level generally decreases as the lateral distance from the flight-track center line increases. In general, the levels for the modified helicopter are lower than those for the standard helicopter at both altitudes.

The data of figure 15 present a comparison of measured flyover noise spectra obtained at 70 knots and an altitude of 61 m for the standard and modified helicopters at the farthest lateral microphone position (number 6). The symbols represent the averaged values from five flights measured at the lateral position of 213 m from the flight-track center line. The shapes of the two curves are generally similar; however, there is a definite drop in noise level between 80 and 250 Hz, due primarily to improved tail-rotor-noise radiation characteristics.

Hover Tests

Narrow-band frequency analyses (4-Hz bandwidth) from both the standard and modified helicopters were made from data taken while the helicopters were hovering at four heights. These analyses were made to determine whether there were any significant differences with azimuth angle around the helicopters. These data were measured at a distance of 61 m from the zero position and at four azimuth locations 90° apart. Figure 16 shows a comparison of narrow-band spectra of the standard and modified helicopters hovering at 3.1 m. The measuring station was on the tail-rotor side of both helicopters. From this figure (fig. 16), it is seen that the modifications have changed the noise data to give a reduction in harmonic content on the tail-fin side of the helicopter. All of the narrow-band frequency data for both modified and standard aircraft showed evidence of a ground-plane-reflection effect. This effect became more severe with increasing hover height. A typical example of ground reflection or image interference is shown in figure 17. In this figure the increasing effects of cancellation and re-enforcement are evident in the narrow-band spectra in the form of peaks and valleys in the noise levels. This effect makes analysis of hovering data at altitude extremely difficult.

Overall sound pressure levels for both the modified and standard helicopters, taken at the microphone positions shown in figure 6, were taken at a hovering height of

31 m. These data are presented in figure 18. Inspection of figure 18(a) shows a significant noise reduction aft of the modified helicopter; this is due to the modified tail rotor and engine exhaust treatment. Only a slight reduction in noise is noted on the tail-rotor side of the helicopter (fig. 18(b)). From these data, noise contour footprints are projected. In figure 19 contours of overall noise level are plotted for the hover condition at an altitude of 31 m for both the standard (fig. (19(a)) and modified (fig. 19(b)) helicopters. These sound-pressure-level contours are determined from average sound-pressure-level time histories taken at the various microphone locations. In general, the modified helicopter shows only a slight reduction in the noise footprint at the lower noise levels.

Landing and Take-Off Tests

A series of flights were performed with the test helicopters to determine the overall sound pressure levels occurring during an approach to a landing and a climbout from a hover. Shown in figure 20 is a comparison of flight trajectories for the landing-approach operation (positions 7, 8, and 9) and the take-off and climbout operations (positions 1, 2, and 3) for both the standard and modified helicopters. The symbols represent the average value from five flights, and the vertical bars represent the highest and lowest altitudes encountered. It can be seen that the trajectories were much more consistent during the landing-approach maneuver than they were during the climbout from hover. Figure 21 shows the resulting maximum sound pressure levels for the landing-approach and climbout conditions for all on-track microphone positions for both the standard and modified helicopters. Noise levels increase for both helicopters as the aircraft flares to land. During the landing operation, the noise level of both helicopters is approximately the same. During the take-off operation, the modified helicopter is slightly quieter than the standard helicopter.

CONCLUDING REMARKS

A field noise measurement program has been conducted using a standard SH-3A helicopter and one which was modified to reduce the external noise level. The modifications included increasing the number of rotor blades, reducing rotor speed, modifying the blade-tip shapes, and acoustically treating the air intakes and exhaust. The purpose of this study was to document the noise characteristics of each helicopter during flyby, hover, landing, and take-off operations.

Based on the analysis of the measured results, the average overhead, on-track, overall noise levels associated with the modified helicopter were approximately 4 dB lower than those of the standard helicopter operating at an altitude of 31 m and an airspeed of 70 knots in level flight. The improved in-flight noise characteristics, and associated smaller footprint areas and time durations, were judged to be mainly due to tail-rotor noise reductions. Engine power data indicated that the modifications to the basic aircraft resulted in increased power requirements at airspeeds greater than 70 knots. At 120 knots this increase in power was about 25 percent.

Langley Research Center,
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Hampton, Va., August 16, 1973.

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TABLE 1.- PHYSICAL CHARACTERISTICS OF THE TEST HELICOPTERS

	Standard	Modified
Main rotor:		
Diameter, m	18.88	18.88
Number of blades	5	6
Blade chord, m	0.463	0.463
Airfoil section	Modified 0012	
Twist, deg	-8	-8
Blade area (each), m^2	3.71	3.71
Disk area, m^2	281	281
Solidity	0.066	0.0782
Design operating speed, rpm	203	183
Tip speed, m/sec	201	181
Rotor shaft tilt (forward), deg	4	4
Tail rotor:		
Diameter, m	3.05	3.05
Number of blades	5	10
Blade chord, m	0.186	0.186
Airfoil section	Modified 0012	
Twist, deg	0	0
Blade area (each), m^2	0.682	0.682
Disk area, m^2	7.80	7.80
Solidity	0.0437	0.0874
Design operating speed, rpm	1243	815
Tip speed, m/sec	204	135
General:		
Normal gross weight, kg	7080	7080
Empty weight, kg	5380	5380
Overall length (nose to trailing edge of tail), m	16.68	16.68
Horizontal tail span, m	1.83	1.83
Power (two T58-GE-8B), kW	1566	1566
Maximum level airspeed, knots	120	120

TABLE 2.- SUMMARY OF SURFACE- AND UPPER-AIR WEATHER MEASUREMENTS

Time of radiosonde release, e.s.t.	Altitude, m	Temperature, K	Relative humidity, percent	Wind direction, deg	Wind velocity, knots
Aug. 26, 1969					
01:00:00	Surface	304.2			
01:00:15	83	305.8		266.2	9.0
01:00:30	155	305.7		339.9	9.2
01:00:45	256	304.2		323.1	8.5
01:01:00	376	303.2		318.8	12.1
01:01:15	437	302.8		317.1	13.4
01:01:30	570	301.2		325.8	12.7
01:01:45	654	300.0		324.6	13.2
01:02:00	782	299.9		318.9	14.1
01:02:15	896	297.7		313.5	13.1
01:02:30	1064	296.2		312.9	12.7
01:02:45	1112	295.2		313.0	9.0
01:03:00	1249	294.2		316.5	6.4
01:03:15	1318	293.2		322.6	12.3
01:03:30	1400	292.6		331.7	13.0
01:03:45	1492	292.6		335.7	8.9
01:04:00	1591	291.7		327.1	10.4
01:04:15	1668	290.7		326.4	14.2
01:04:30	1784	289.7		326.5	14.0
01:04:45	1873	288.8		323.6	14.2
01:05:00	1873	288.4		0	
01:45:00	Surface		47		
01:45:15	59		46	249.6	19.4
01:45:30	135		48	300.5	15.2
01:45:45	209		48	305.7	16.4
01:46:00	298		49	306.1	18.5
01:46:15	395		50	308.3	18.8
01:46:30	465		51	314.3	14.6
01:46:45	555		51	316.2	13.2
01:47:00	617		52	316.4	14.5
01:47:15	693		52	316.5	14.6
01:47:30	756		53	316.6	13.6
01:47:45	827		54	320.8	12.2
01:48:00	891		55	319.0	13.4
01:48:15	933		56	315.4	9.9
01:48:30	1027		57	316.5	7.0
01:48:45	1088		62	315.2	9.7
01:49:00	1187		65	306.6	9.0
01:50:00	1873		68	0	0

TABLE 2.- SUMMARY OF SURFACE- AND UPPER-AIR WEATHER MEASUREMENTS – Continued

Time of radiosonde release, e.s.t.	Altitude, m	Temperature, K	Relative humidity, percent	Wind direction, deg	Wind velocity, knots
02:47:00	Surface		56		
02:47:15	62		57	141.1	7.8
02:47:30	125		56	62.0	12.3
02:47:45	187		58	49.3	12.6
02:48:00	257		59	49.8	10.4
02:48:15	315		58	37.4	10.9
02:48:30	372		57	2.2	11.7
02:48:45	440		56	358.0	14.3
02:49:00	495		55	1.1	14.1
02:49:15	549		55	347.0	12.0
02:49:30	627		54	348.9	16.0
02:49:45	649		58	345.7	12.3
02:50:00	721		58	325.2	9.4
03:20:00	Surface	301			
03:20:15	95	299.6		153.8	6.9
03:20:30	180	298.1		62.8	19.3
03:20:45	275			47.9	7.7
04:00:00	Surface		71		
04:00:15	78		71	188.4	4.8
04:00:30	155		72	38.9	7.6
04:00:45	249		72	21.6	8.6
04:01:00	338		72	1.0	10.3
04:01:15	429		71	342.5	11.0
04:01:30	535		72	337.6	11.3
04:01:45	623		69	338.8	14.5
04:02:00	725		69	340.8	17.3
04:02:15	826		70	340.7	16.7
04:02:30	927		72	339.6	17.3
04:02:45	1023		74	340.1	16.6
04:03:00	1076		74	334.2	11.9
04:03:15	1198		75	334.0	14.0
04:03:30	1260		76	336.5	19.5
04:03:45	1371		77	330.6	16.3
04:04:00	1467		77	324.5	12.3
04:04:15	1546		76	324.5	12.7
04:04:30	1640		78	324.3	17.1
04:04:45	1723		78	322.7	19.1
04:05:00	1873		76	0	0

TABLE 2.- SUMMARY OF SURFACE- AND UPPER-AIR WEATHER MEASUREMENTS – Continued

Time of radiosonde release, e.s.t.	Altitude, m	Temperature, K	Relative humidity, percent	Wind direction, deg	Wind velocity, knots
04:30:00	Surface	300			
04:30:15	71	299		60.0	6.8
04:30:30	138	299		78.3	4.0
04:30:45	226	298		43.8	4.4
04:31:00	298	298		355.4	6.4
04:31:15	406	299		345.2	11.9
04:31:30	462	299		342.7	12.1
04:31:45	575	297		340.6	11.7
04:32:00	645	297		342.4	16.5
04:32:15	735	296		341.2	18.0
04:32:30	817	296		342.6	16.2
04:32:45	906	295		341.9	17.8
04:33:00	966	295		340.9	17.8
04:33:15	1044	294		337.3	15.2
04:33:30	1103	293		337.3	16.6
04:33:45	1174	293		339.5	17.7
04:34:00	1238	292		338.6	15.4
04:34:15	1336	291		339.0	19.1
04:34:30	1397	291		339.7	19.3
04:34:45	1481	291		336.5	12.6
04:35:00	1873	290		0	0
05:00:00	Surface		67		
05:00:15	91		69	93.9	5.1
05:00:30	181		72	79.0	4.6
05:00:45	283		72	7.0	6.8
05:01:00	392		70	339.2	11.0
05:01:15	482		61	339.3	13.3
05:01:30	596		62	342.5	14.5
05:01:45	676		64	344.6	16.4
05:02:00	789		65	346.6	18.6
05:02:15	901		67	346.9	20.5
05:02:30	956		69	345.6	17.3
05:02:45	1063		72	345.9	12.6
05:03:00	1106		75	349.4	15.0
05:03:15	1214		75	352.1	21.4
05:03:30	1278		77	353.8	18.7
05:03:45	1397		77	352.6	17.3
05:04:00	1445		78	347.8	18.1
05:04:15	1530		79	342.6	14.9
05:04:30	1608		82	336.9	18.1
05:04:45	1700		82	333.3	21.2
05:05:00	1873		83	0	

TABLE 2.- SUMMARY OF SURFACE- AND UPPER-AIR WEATHER MEASUREMENTS – Continued

Time of radiosonde release, e.s.t.	Altitude, m	Temperature, K	Relative humidity, percent	Wind direction, deg	Wind velocity, knots
05:50:00	Surface	298.6			
05:50:15	77	298.9		83.8	0.3
05:50:30	170	298.6		350.5	2.2
05:50:45	247	298.0		344.4	4.2
05:51:00	344	297.2		322.8	6.0
05:51:15	429	296.3		329.9	10.3
05:51:30	509	295.6		340.6	16.4
05:51:45	603	295.8		346.7	21.6
05:52:00	708	294.8		348.6	25.0
05:52:15	821	294.2		348.6	28.6
05:52:30	909	293.6		349.5	27.1
05:52:45	998	292.5		352.8	22.0
05:53:00	1069	291.4		353.5	23.5
05:53:15	1131	290.6		352.5	24.1
05:53:30	1212	289.8		351.8	20.2
05:53:45	1316	289.0		351.7	23.6
05:54:00	1374	288.4		350.5	23.7
05:54:15	1467	287.4		349.6	15.3
05:54:30	1535	286.6		347.6	16.7
05:54:45	1613	286.0		344.4	20.0
05:55:00	1873	285.2		0	0
06:20:00	Surface		78		
06:20:15	89		72	353.4	9.4
06:20:30	181		61	353.7	12.3
06:20:45	172		61	353.6	18.6
06:21:00	401		61	354.0	21.3
06:22:15	507		61	356.9	20.5
06:22:30	611		59	357.0	20.8
06:22:45	728		62	358.3	24.9
06:23:00	824		63	358.4	23.0
06:23:15	942		68	358.6	19.0
06:23:30	1031		71	356.7	19.4
06:23:45	1142		73	356.5	19.7
06:24:00	1225		75	353.8	17.4
06:24:15	1873			0	0

TABLE 2.- SUMMARY OF SURFACE- AND UPPER-AIR WEATHER MEASUREMENTS – Continued

Time of radiosonde release, e.s.t.	Altitude, m	Temperature, K	Relative humidity, percent	Wind direction, deg	Wind velocity, knots
Aug. 28, 1969					
05:00:00	Surface				
05:00:15	80			75.0	5.3
05:00:30	307			128.5	6.5
05:00:45	349			155.8	4.4
05:01:00	647			56.9	5.1
05:01:15	668			40.9	2.7
05:01:30	931			15.5	7.8
05:01:45	949			29.9	7.2
05:02:00	1162			47.1	8.1
05:02:15	1243			41.9	9.4
05:02:30	1472			30.5	15.7
05:02:45	1557			18.0	15.3
05:03:00	1873			0	0
05:44:00	Surface		80		
05:44:15	94		66	66.2	3.8
05:44:30	185		59	93.7	3.4
05:44:45	277		57	98.1	3.2
05:45:00	364		55	101.6	3.4
05:45:15	458		50	89.2	3.4
05:45:30	555		40	56.7	4.3
05:45:45	641		40	31.9	5.3
05:46:00	734		45	21.3	5.5
05:46:15	836			31.2	7.3
05:46:30	913			35.3	6.9
05:46:45	1027			48.2	6.5
05:47:00	1114		17	55.7	8.0
05:47:15	1194		10	54.1	6.1
05:47:30	1305		10	47.7	6.8
05:47:45	1403		10	37.7	12.0
05:48:00	1509		12	29.0	14.2
05:48:15	1594		11	18.5	12.6
05:48:30	1687		11	9.7	13.7
05:48:45	1722			10.8	12.3
05:49:00	1873			0	0

TABLE 2.- SUMMARY OF SURFACE- AND UPPER-AIR WEATHER MEASUREMENTS – Continued

Time of radiosonde release, e.s.t.	Altitude, m	Temperature, K	Relative humidity, percent	Wind direction, deg	Wind velocity, knots
06:10:00	Surface	287.4			
06:10:15	78	291.8		52.2	3.6
06:10:30	159	291.6		70.0	4.0
06:10:45	237	290.8		73.7	3.7
06:11:00	318	289.6		90.0	3.0
06:11:15	400	288.8		82.6	3.0
06:11:30	486	287.7		65.2	3.8
06:11:45	574	287.6		47.6	5.4
06:12:00	663	286.9		37.6	6.5
06:12:15	748	286.4		33.5	6.5
06:12:30	826	285.8		33.4	6.3
06:12:45	906	285.8		41.7	6.3
06:13:00	982	285.7		56.1	7.1
06:13:15	1079	284.9		64.7	9.0
06:13:30	1151	283.8		66.3	7.7
06:13:45	1248	284.6		42.3	5.9
06:14:00	1305	284.9		24.4	8.1
06:14:15	1409	284.9		29.4	11.6
06:14:30	1473	284.6		30.5	13.7
06:14:45	1573	284.6		20.1	13.8
06:15:00	1872	284.6		0	0
06:45:00	Surface		61		
06:45:15	79		60	56.8	3.1
06:45:30	156		59	71.4	3.0
05:45:45	238		60	75.4	1.9
06:46:00	318		60	75.6	2.1
06:46:15	388		59	97.7	2.5
06:46:30	480		57	74.2	3.8
06:46:45	548		53	53.0	6.1
06:47:00	643		52	45.2	6.4
06:47:15	724		51	38.6	5.5
06:47:30	812		51	39.5	5.7
06:47:45	902		51	48.8	7.4
06:48:00	975		48	59.7	8.2
06:48:15	1055		49	71.5	8.6
06:48:30	1125		49	73.1	8.1
06:48:45	1191		40	61.4	5.7
06:49:00	1273		32	39.8	6.5
06:49:15	1356		34	37.8	10.3
06:49:30	1450		34	30.5	12.7
06:49:45	2537		34	19.3	13.2
06:50:00	1872		34	0	0

TABLE 2.- SUMMARY OF SURFACE- AND UPPER-AIR WEATHER MEASUREMENTS – Continued

Time of radiosonde release, e.s.t	Altitude, m	Temperature, K	Relative humidity, percent	Wind direction, deg	Wind velocity, knots
07:30:00	Surface	294.2			
07:30:15	96	295.9		50.6	3.5
07:30:30	183	295.2		74.1	2.8
07:30:45	268	294.8		79.5	3.1
07:31:00	359	293.8		82.5	3.7
07:31:15	444	292.7		76.2	5.2
07:31:30	532	291.8		68.0	5.0
07:31:45	621	291.8		53.4	4.7
07:32:00	706	291.6		42.2	6.4
07:32:15	791	290.9		36.5	6.6
07:32:30	893	290.0		41.1	7.6
07:32:45	981	289.7		55.6	9.0
07:33:00	1073	288.9		67.9	9.1
07:33:15	1170	288.6		68.6	9.3
07:33:30	1253	288.0		60.1	7.6
07:33:45	1368	288.4		46.8	9.9
07:34:00	1435	288.8		38.1	11.4
07:34:15	1560	288.8		26.7	11.9
07:34:30	1646	289.0		30.1	14.9
07:34:45	1728	289.6		26.4	12.2
07:35:00	1873	289.0		0	0
08:00:00	Surface				
08:00:15	131			58.0	4.5
08:00:30	299			30.2	3.3
08:00:45	388			67.4	4.3
08:01:00	579			45.6	7.6
08:01:15	637			31.8	6.2
08:01:30	857			38.2	6.6
08:01:45	894			48.4	7.9
08:02:00	1103			67.5	9.9
08:02:15	1159			65.2	8.5
08:02:30	1374			42.1	8.1
08:02:45	1434			38.2	9.9
08:03:00	1660			29.0	12.9
08:03:15	1873			0	0

TABLE 2.- SUMMARY OF SURFACE- AND UPPER-AIR WEATHER MEASUREMENTS – Continued

Time of radiosonde release, e.s.t.	Altitude, m	Temperature, K	Relative humidity, percent	Wind direction, deg	Wind velocity, knots
08:30:00	Surface	296.6			
08:30:15	100	299.2		67.4	5.3
08:30:30	191	297.9		73.1	4.6
08:30:45	285	296.4		74.4	3.9
08:31:00	373	295.7		66.4	4.2
08:31:15	455	294.8		66.2	5.1
08:31:30	546	293.9		61.0	5.3
08:31:45	631	292.8		47.7	6.5
08:32:00	718	292.2		34.4	6.7
08:32:15	815	292.0		34.1	7.1
08:32:30	899	291.0		46.7	7.9
08:32:45	997	290.0		56.0	9.0
08:33:00	1077	289.8		62.1	8.8
08:33:15	1163	289.2		72.9	8.2
08:33:30	1250	288.6		72.2	7.3
08:33:45	1361	288.8		53.7	8.0
08:34:00	1425	289.4		42.5	8.3
08:34:15	1564	289.9		34.8	11.3
08:34:30	1633	289.8		36.6	14.9
08:34:45	1753	289.8		32.7	13.3
08:35:00	1873	289.8		0	0
09:15:00	Surface		44		
09:15:15	80		45	85.6	4.7
09:15:30	164		45	88.4	4.4
09:15:45	219		51	109.6	3.2
09:16:00	315		54	358.6	6.4
09:16:15	393		57	59.3	9.6
09:16:30	491		57	94.0	12.9
09:16:45	585		52	60.8	7.0
09:17:00	673		58	46.6	6.3
09:17:15	746		47	41.9	7.4
09:17:30	828		45	44.3	8.0
09:17:45	908		45	53.6	8.8
09:18:00	983		43	59.6	8.9
09:18:15	1063		40	68.3	8.6
09:18:30	1139		35	76.5	8.1
09:18:45	1218		32	69.1	6.2
09:19:00	1298		20	55.1	7.0
09:19:15	1372		19	56.5	9.0
09:19:30	1464		19	54.1	10.7
09:19:45	1543		20	45.9	11.9
09:20:00	1873		20	0	0

TABLE 2.- SUMMARY OF SURFACE- AND UPPER-AIR WEATHER MEASUREMENTS – Continued

Time of radiosonde release, e.s.t.	Altitude, m	Temperature, K	Relative humidity, percent	Wind direction, deg	Wind velocity, knots
09:45:00	Surface	297.2			
09:45:15	100	297.2		66.3	5.8
09:45:30	196	295.2		58.6	5.0
09:45:45	278	295.2		61.4	5.3
09:46:00	355	293.9		59.9	5.0
09:46:15	442	293.0		42.6	5.5
09:46:30	520	292.8		38.4	6.1
09:46:45	600	291.8		47.1	5.7
09:47:00	676	291.4		51.6	5.6
09:47:15	757	290.6		64.0	5.8
09:47:30	834	289.6		69.4	6.5
09:47:45	1612	288.8		54.3	32.5
09:48:00	996	288.6		66.4	7.3
09:48:15	1773	288.2		224.6	18.3
09:48:30	1154	287.1		61.9	7.3
09:48:45	1237	287.1		69.3	7.3
09:49:00	1316	287.3		61.8	9.1
09:50:15	1395	287.3		48.5	10.7
09:50:30	1482	288.6		50.7	12.0
09:50:45	1553	289.2		44.3	12.0
09:51:00	1873	289.2		0	0
03:30:00	Surface	297.7			
03:30:15	23	296.4		186.5	17.7
03:30:30	49	296.2		159.8	9.4
03:30:45	76	296.0		149.6	9.2
03:31:00	100	295.6		137.3	8.9
03:31:15	134	295.2		139.7	9.9
03:31:30	164	294.8		141.1	10.7
03:31:45	196	294.4		137.8	9.7
03:32:00	235	294.2		133.1	9.0
03:32:15	280	294.2		127.9	9.4
03:32:30	333	293.2		125.8	9.4
03:32:45	393	292.4		122.6	9.9
03:33:00	457	291.9		118.7	10.3
03:33:15	519	291.2		113.9	9.1
03:33:30	581	290.2		107.1	9.0
03:33:45	649	289.8		110.1	10.6
03:34:00	705	289.0		106.9	10.3
03:34:15	765	288.2		96.2	8.4
03:34:30	817	287.9		96.2	9.8
03:34:45	868	287.2		98.1	13.9
03:34:00	1873	287.0		0	0

TABLE 2.- SUMMARY OF SURFACE- AND UPPER-AIR WEATHER MEASUREMENTS – Continued

Time of radiosonde release, e.s.t.	Altitude, m	Temperature, K	Relative humidity, percent	Wind direction, deg	Wind velocity, knots
04:00:00	Surface		48		
04:00:15	80		51	184.6	12.8
04:00:30	162		51	120.9	8.0
04:00:45	242		52	128.7	7.9
04:01:00	329		53	133.4	8.1
04:01:15	420		54	126.0	9.1
04:01:30	502		55	111.6	7.9
04:01:45	596		56	103.1	8.0
02:02:00	674		57	94.5	4.9
04:02:15	766		59	80.9	4.1
04:02:30	848		60	16.3	3.1
04:02:45	951		62	340.8	6.3
04:03:00	1039		62	347.9	9.1
04:03:15	1130		51	.7	9.1
04:03:30	1220		50	20.4	7.0
04:03:45	1304		32	37.2	6.7
04:04:00	1373		30	38.5	6.9
04:04:15	1464		30	28.5	6.5
04:04:30	1528		30	25.7	5.1
04:04:45	1611		34	37.2	3.4
04:05:00	1873		34	0	0
04:30:00	Surface	297.0			
04:30:15	92	295.2		182.8	15.0
04:30:30	181	294.4		182.4	7.7
04:30:45	283	293.4		127.0	8.1
04:31:00	374	291.8		128.9	8.9
04:31:15	472	291.2		133.3	9.3
04:31:30	560	290.2		123.4	8.1
04:31:45	652	289.8		111.3	6.7
04:32:00	738	287.8		98.7	5.4
04:32:15	824	287.8		53.0	4.0
04:32:30	903	287.8		15.7	4.9
04:32:45	976	288.2		350.2	7.7
04:33:00	1077	288.4		.4	8.1
04:33:15	1129	288.4		18.8	6.5
04:33:30	1230	287.8		24.7	6.1
04:33:45	1299	287.2		48.6	5.8
04:34:00	1370	287.9		50.8	5.2
04:34:15	1464	288.2		38.7	5.8
04:34:30	1538	288.8		24.9	5.5
04:34:45	1628	288.8		22.3	4.2
04:35:00	1628	288.4		0	0

TABLE 2.- SUMMARY OF SURFACE- AND UPPER-AIR WEATHER MEASUREMENTS – Concluded

Time of radiosonde release, e.s.t.	Altitude, m	Temperature, K	Relative humidity, percent	Wind direction, deg	Wind velocity, knots
Aug. 29, 1969					
12:05:00	Surface	298		135	7
12:05:15	62	296		141	9
12:05:30	133	295		159	16
12:05:45	198	294		165	8
12:06:00	276	293		157	10
12:06:15	326	292		163	8
12:06:30	400	291		177	7
12:06:45	446	291		178	7
12:07:00	511	290		191	6
12:07:15	569	290		219	6
12:07:30	723	290		219	13
12:07:45		289		277	5
12:08:00	867	289			10
12:08:15		289			
12:08:30	896	290		126	2
12:08:45	921	290		112	2
12:09:00	957	290		137	4
12:09:15	975	290		143	5
12:09:30	1013	291		133	5
12:09:45	1062	291		137	5
16:00:00	Surface	297	54	240	6
16:00:15	70	297		179	10
16:00:30	151	297		184	11
16:00:45	219	296		187	11
16:01:00	304	296		193	11
16:01:15	379	295		206	10
16:01:30	467	295		221	7
16:01:45	546	295		215	6
16:02:00	632	294		214	5
16:02:15	717	294		218	3
16:02:30	799	294		203	2
16:02:45	888	295		203	4
16:03:00	964	295		203	5
16:03:15	1047	296		203	4
16:03:30	1130	295		198	2
16:03:45	1200	294		198	2
16:04:00	1285	294		204	1
16:04:15	1361	294		188	4
16:04:30	1454	293		173	4
16:04:45	1492	292		71	2

TABLE 3.- SUMMARY OF NOMINAL OPERATING CONDITIONS

FOR THE STANDARD SH-3A HELICOPTER

Item	Run	Indicated airspeed, knots	Altitude above ground, m	Rotor speed, rpm	Power, kW	Turbine-outlet temperature, K	Power, kW	Turbine-outlet temperature, K
					Engine 1		Engine 2	
Flyby								
1A	1	40	61	203	336	527	343	527
	2	46	62	203	317	533	336	533
	3	40	61	203	327	533	327	533
	4	40	61	203	327	533	326	533
	5	38	61	203	354	527	354	527
2A	1	69	62	203	327	533	327	533
	2	70	61	203	317	533	317	533
	3	68	61	203	306	533	306	533
	4	70	61	203	317	533	327	533
	5	70	61	203	317	531	327	531
3A	1	98	59	203	409	555	391	539
	2	101	59	203	391	555	391	539
	3	102	62	203	455	555	409	539
	4	98	66	203	455	555	409	539
	5	102	67	203	474	561	418	544
4A	1	120	61	203	518	578	574	578
	2	119	61	203	500	583	574	583
	3	121	61	203	518	589	574	589
	4	123	61	203	645	589	574	589
	5	117	61	203	474	588	544	589
5A	1	50	152	203	362	533	373	533
	2	36	151	203	317	533	317	533
	3	45	152	203	317	533	317	528
	4	45	152	203	298	533	298	533
	5	35	152	203	306	533	306	533

TABLE 3.- SUMMARY OF NOMINAL OPERATING CONDITIONS

FOR THE STANDARD SH-3A HELICOPTER – Continued

Item	Run	Indicated airspeed, knots	Altitude above ground, m	Rotor speed, rpm	Power, kW	Turbine-outlet temperature, K	Power, kW	Turbine-outlet temperature, K
					Engine 1		Engine 2	
Flyby								
6A	1	70	152	203	336	522	336	522
	2	70	155	203	327	511	336	511
	3	70	152	203	327	528	336	528
	4	60	149	203	298	522	298	522
	5	67	152	203	298	522	298	522
7A	1	102	152	203	425	555	444	555
	2	99	158	203	324	555	455	550
	3	100	148	203	455	555	434	544
	4	90	143	203	409	550	397	550
	5	90	152	203	518	555	409	544
8A	1	120	152	203	544	578	544	578
	2	124	152	203	574	578	574	578
	3	117	151	203	526	578	526	578
	4	118	155	203	544	578	563	578
	5	123	140	203	544	578	574	578

TABLE 3.- SUMMARY OF NOMINAL OPERATING CONDITIONS

FOR THE STANDARD SH-3A HELICOPTER – Concluded

Item	Run	Indicated airspeed, knots	Altitude above ground, m	Rotor speed, rpm	Power, kW	Turbine-outlet temperature, K	Power, kW	Turbine-outlet temperature, K
					Engine 1		Engine 2	
Hover								
11A	1	0	3	203	500	578	500	578
	2	0	3	203	518	578	500	578
12A	1	0	30	203	563	589	589	589
13A	1	0	61	203	556	583	682	583
14A	1	0	152	203	556	583	582	583
Landing								
9A	1-4	(*)		203				
Take-off								
10A	1-4	(**)		203				

*Transition to a hover: Starting from approximately 152 m and 60 knots, set up a rate of descent of approximately 167 m/min. Decrease airspeed gradually throughout the approach to a 3-m hover.

**Transition to forward flight: Increase altitude and airspeed simultaneously until 60 knots and 152 m are reached.

TABLE 4.- SUMMARY OF NOMINAL OPERATING CONDITIONS

FOR THE MODIFIED SH-3A HELICOPTER

Item	Run	Indicated airspeed, knots	Altitude above ground, m	Rotor speed, rpm	Power, kW	Turbine-outlet temperature, K	Power, kW	Turbine-outlet temperature, K
					Engine 1		Engine 2	
Flyby								
1	1	38	58	183	358	539	309	522
	2	38-42	55	183	350	539	301	522
	3	35	61	183	350	539	309	522
	4	38	61	183	342	539	309	528
	5	38	58	183	333	539	309	528
2	1	67	61	183	350	539	301	533
	2	68	61	183	350	539	301	533
	3	70	61	183	350	533	294	522
	4	68-70	61	183	354	539	294	522
	5	68	61	183	342	533	283	519
3	1	100	61	183	488	555	488	555
	2	100	61	183	455	555	455	555
	3	100	61	183	447	555	440	555
	4	103	58	183	455	555	455	555
	5	100	61	183	474	555	474	555
4	1	120	58	183	667	589	667	589
	2	120	58	183	692	589	692	589
	3	122	64	183	701	589	685	589
	4	122	58	183	701	589	685	589
	5	120	61	183	701	589	685	589
5	1	44	148	185	317	533	324	527
	2	44	152	183	317	522	324	516
	3	40	152	183	334	553	309	522
	4	41	152	183	334	531	309	522
	5	43	158	183	324	533	300	527

TABLE 4.- SUMMARY OF NOMINAL OPERATING CONDITIONS

FOR THE MODIFIED SH-3A HELICOPTER – Continued

Item	Run	Indicated airspeed, knots	Altitude above ground, m	Rotor speed, rpm	Power, kW	Turbine-outlet temperature, K	Power, kW	Turbine-outlet temperature, K
					Engine 1		Engine 2	
Flyby								
6	1	66	152	183	324	528	283	511
	2	70	152	183	309	522	317	522
	3	68	152	183	324	522	317	516
	4	70	152	183	334	528	334	522
	5	69	152	183	317	528	324	528
7	1	101	152	183	488	561	512	555
	2	101	152	183	488	550	488	550
	3	101	152	183	482	550	474	555
	4	100	152	183	455	550	447	550
	5	100	152	183	455	550	447	544
8	1	122	152	183	686	589	693	594
	2	122	152	183	686	589	693	597
	3	124	152	183	686	594	693	600
	4	122	152	183	686	594	693	600
	5	123	152	183	686	594	693	600

TABLE 4.- SUMMARY OF NOMINAL OPERATING CONDITIONS

FOR THE MODIFIED SH-3A HELICOPTER – Concluded

Item	Run	Indicated airspeed, knots	Altitude above ground, m	Rotor speed, rpm	Power, kW	Turbine-outlet temperature, K	Power, kW	Turbine-outlet temperature, K
					Engine 1		Engine 2	
Hover								
11	1	0	3	183	529	572	529	578
12	1	0	30	183	544	572	544	578
13	1	0	61	183	544	578	544	578
14	1	0	152	183	537	572	537	578
Landing								
9	1-4	(*)		183				
Take-off								
10	1-4	(**)		183				

*Transition to a hover: Starting from approximately 152 m and 60 knots, set up a rate of descent of approximately 167 m/min. Decrease airspeed gradually throughout the approach to a 3-m hover.

**Transition to forward flight: Increase altitude and airspeed simultaneously until 60 knots and 152 m are reached.

TABLE 5. - SUMMARY OF MEASURED ALTITUDES AND CALCULATED SLANT-RANGE DISTANCES FOR THE STANDARD SH-3A HELICOPTER AT EACH NOISE-MEASURING POSITION

Altitude, m	Airspeed, knots	Item	Run	Altitude and slant-range distance at microphone position																							
				1		2		3		4		5		6		7		8		9		10		11		12	
				Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m
Flyby; Aug. 28, 1969																											
61	40	1A	1	51	51	53	53	52	52	51	84	51	166	51	225	51	52	55	55	57	58	51	75	51	155	51	214
			2	65	65	67	67	65	65	64	91	64	169	64	227	64	64	62	63	62	62	64	86	64	161	64	219
			3	55	55	53	54	52	52	57	81	57	160	57	218	58	58	59	59	58	58	57	86	57	166	57	224
			4	60	60	62	62	62	62	60	88	60	167	60	225	61	61	63	63	63	63	60	83	60	160	60	218
			5	46	46	46	46	47	47	45	78	45	162	45	221	47	47	50	50	53	53	45	73	45	156	45	215
	70	2A	1	64	64	64	64	65	65	64	89	64	166	64	224	64	64	65	65	66	66	64	88	64	164	64	222
			2	57	57	58	58	57	57	57	86	57	166	57	224	57	57	58	58	59	59	57	81	57	160	57	218
			3	60	60	59	59	61	61	60	87	60	165	60	223	60	60	61	61	63	63	60	84	60	162	60	220
			4	59	59	60	60	59	59	60	88	60	167	60	225	61	61	60	60	60	61	60	84	60	161	60	219
			5	60	60	60	60	61	61	61	90	61	169	61	227	62	62	61	61	60	60	61	83	61	159	61	217
	100	3A	1	58	58	57	57	57	57	58	81	58	159	58	217	59	59	58	58	59	59	58	87	58	167	58	225
			2	56	56	56	56	57	57	57	83	57	162	57	220	59	59	58	58	59	59	57	84	57	163	57	221
			3	62	62	60	60	59	59	62	87	62	165	62	222	64	64	65	65	66	66	62	87	62	165	62	222
			4	67	67	67	67	68	68	66	91	66	167	66	224	67	67	68	68	66	66	66	89	66	165	66	222
			5	71	71	73	73	73	73	70	93	70	168	70	225	69	69	67	67	67	67	70	93	85	168	70	225
	120	4A	1	72	72	72	72	71	71	71	93	71	167	71	224	72	72	73	73	73	73	71	94	71	169	71	226
			2	72	72	71	71	70	70	71	94	71	169	71	226	72	72	72	72	73	73	71	93	71	168	71	224
			3	66	66	66	66	66	66	66	90	66	166	66	223	66	66	66	66	65	65	66	91	66	166	66	224
			4	62	62	62	62	62	62	63	87	63	164	63	221	62	62	63	63	62	62	63	88	63	166	63	224
			5	62	62	62	62	63	63	62	89	62	167	62	224	61	61	62	62	61	61	62	86	62	163	62	220
152	40	5A	1	157	157	158	159	159	160	155	164	155	212	155	257	156	156	154	154	153	153	155	170	155	223	155	271
			2	146	147	146	148	145	147	148	154	148	201	148	246	149	150	152	153	155	156	148	167	148	225	148	273
			3	160	160	160	160	159	159	159	171	159	222	159	268	161	161	160	160	162	162	159	170	159	219	159	265
			4	168	168	163	163	160	160	168	177	168	224	168	268	168	168	170	170	173	173	168	180	168	229	168	274
			5	152	153	153	154	154	155	152	159	152	205	152	250	154	155	157	157	159	160	152	170	152	226	152	275
	70	6A	1	171	171	172	172	172	173	168	178	168	226	168	271	166	166	164	164	164	164	168	179	168	227	168	272
			2	152	153	151	151	153	153	154	163	154	212	154	256	154	154	155	155	156	156	154	168	154	221	154	269
			3	150	151	150	151	151	151	151	161	151	210	151	257	152	152	152	152	151	151	151	166	151	219	151	268
			4	148	148	146	147	146	147	148	157	148	208	148	254	179	179	180	180	182	182	148	162	148	216	148	265
			5	152	152	151	151	152	152	152	165	152	218	152	265	154	154	153	153	155	155	152	163	152	213	152	260
	100	7A	1	160	160	158	158	158	158	162	173	162	222	162	268	162	162	163	163	162	162	162	173	162	222	162	268
			2	163	163	162	162	160	160	165	175	165	223	165	268	167	167	166	166	169	169	165	176	165	226	165	271
			3	145	145	145	145	146	146	145	157	145	210	145	258	146	146	145	145	143	143	145	157	145	210	145	258
			4	137	138	136	136	169	169	138	148	138	201	138	249	140	140	141	141	141	141	138	154	138	210	138	259
			5	142	142	141	141	144	144	141	154	141	208	141	256	141	141	142	142	143	143	141	154	141	207	141	255

TABLE 5.- SUMMARY OF MEASURED ALTITUDES AND CALCULATED SLANT-RANGE DISTANCES FOR THE STANDARD SH-3A HELICOPTER AT EACH NOISE-MEASURING POSITION – Concluded

Altitude, m	Airspeed, knots	Item	Run	Altitude and slant-range distance at microphone position																							
				1		2		3		4		5		6		7		8		9		10		11		12	
				Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m
Flyby; Aug. 28, 1969																											
152	120	8A	1	162	162	164	164	165	165	162	173	162	221	162	266	162	162	163	163	163	163	162	174	162	224	162	270
			2	155	155	155	155	155	155	153	168	153	221	153	269	153	153	154	155	154	155	153	162	153	211	153	256
			3	149	149	149	149	150	150	149	161	149	213	149	260	149	149	149	149	148	148	149	161	149	213	149	260
			4	155	155	157	157	157	157	155	166	155	216	155	262	155	155	155	155	155	155	155	168	155	219	155	266
			5	138	138	137	137	136	136	139	152	139	207	139	255	139	139	140	140	140	140	139	152	139	206	139	253
Landing; Aug. 28, 1969																											
152	120	9A	1							6	58	6	149	6	210	18	19	29	30	37	37	6	64	6	155	6	216
			2							8	59	8	150	8	210	18	18	30	30	39	39	8	64	8	156	8	216
			3							6	57	6	148	6	209	18	19	32	32	40	40	6	65	6	156	6	217
			4							6	59	6	150	6	211	17	17	31	31	37	37	6	63	6	155	6	216
Take-off; Aug. 28, 1969																											
152	120	10A	1	15	16	23	23	35	35																		
			2	18	18	30	30	43	43																		
			3	18	19	31	31	41	41																		
			4	18	18	30	30	38	38																		

TABLE 6.- SUMMARY OF MEASURED ALTITUDES AND CALCULATED SLANT-RANGE DISTANCES FOR THE MODIFIED SH-3A HELICOPTER AT EACH NOISE-MEASURING POSITION

Altitude, m	Airspeed, knots	Item	Run	Altitude and slant-range distance at microphone position																							
				1		2		3		4		5		6		7		8		9		10		11		12	
				Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m
Flyby; Aug. 26, 1969																											
61	40	1	1	54	55	53	53	52	52	56	80	56	159	56	217	58	58	60	60	62	62	56	86	56	166	56	224
			2	50	51	48	50	49	51	51	87	51	170	51	229	51	52	49	50	49	51	51	72	51	151	51	210
			3	59	59	58	58	56	59	55	92	55	166	55	225	55	56	57	57	58	58	55	79	55	158	55	216
			4	59	59	58	58	58	58	59	87	59	166	59	224	59	60	60	61	60	60	59	83	59	161	59	219
			5	54	54	54	54	54	54	54	81	54	162	54	220	55	55	57	57	56	56	54	81	54	162	54	220
	70	2	1	64	64	62	62	62	62	64	91	64	169	64	226	64	64	65	65	63	64	64	86	64	162	64	219
			2	61	61	62	62	61	61	61	91	61	171	61	229	62	62	62	62	62	62	61	81	61	157	61	215
			3	62	63	62	62	61	61	62	94	62	174	62	232	62	62	63	64	64	65	62	80	62	155	62	212
			4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			5	66	66	66	66	67	67	66	93	66	171	66	229	64	64	64	64	63	63	66	86	66	161	66	218
	100	3	1	66	66	65	65	63	63	66	93	66	170	66	227	68	68	68	68	67	67	66	87	66	162	66	219
			2	65	65	68	68	67	67	66	88	66	164	66	221	65	65	64	64	63	63	66	91	66	168	66	226
			3	61	61	59	59	60	60	62	88	62	166	62	224	62	62	61	62	63	63	62	85	62	163	62	222
			4	53	53	53	53	55	55	51	82	51	164	51	223	53	53	54	55	56	57	51	77	51	157	51	216
			5	59	59	59	59	60	60	59	87	59	166	59	224	59	59	60	60	59	59	59	83	59	161	59	219
	120	4	1	54	54	56	56	55	55	56	80	56	159	56	217	55	55	55	55	54	54	56	86	56	166	56	224
			2	58	58	57	57	56	56	59	86	59	165	59	223	59	59	58	58	57	57	59	83	59	162	59	219
			3	63	63	63	63	61	61	63	85	63	162	63	219	62	62	63	63	63	63	63	90	63	168	63	225
			4	58	58	56	56	55	55	56	82	56	162	56	220	58	61	58	58	59	59	56	84	56	163	56	222
			5	68	69	68	68	69	69	68	89	68	163	68	220	67	67	66	66	67	67	68	94	68	171	68	228
Flyby; Aug. 28, 1969																											
152	40	5	1	149	149	149	149	150	150	148	160	148	211	148	258	148	148	148	148	146	146	148	161	148	214	148	262
			2	157	157	157	157	156	156	158	170	158	221	158	267	157	157	157	157	157	157	158	169	158	218	158	264
			3	158	158	158	158	159	159	157	171	157	224	157	271	157	157	157	158	157	157	157	166	157	214	157	259
			4	162	162	162	162	162	162	163	174	163	223	163	269	162	162	162	162	163	163	163	174	163	223	163	268
			5	163	163	163	163	163	163	162	175	162	225	162	271	164	164	162	162	164	164	162	172	162	220	162	265
	70	6	1	159	159	160	160	160	160	160	171	160	220	160	265	160	160	160	160	159	159	160	172	160	222	160	268
			2	163	163	163	163	163	163	162	173	162	223	162	268	161	161	160	160	160	160	162	173	162	222	162	268
			3	165	165	166	166	165	165	164	176	164	227	164	273	164	164	165	165	164	164	164	164	164	220	164	267
			4	168	168	168	169	167	165	168	175	168	220	168	263	168	168	168	168	167	167	168	182	168	234	168	280
			5	165	165	166	166	167	166	165	174	165	220	165	264	165	165	164	164	164	164	165	179	165	230	165	276
	100	7	1	164	165	163	164	164	164	163	171	163	217	163	261	162	162	162	162	162	162	163	177	163	230	163	276
			2	168	168	167	167	167	167	167	179	167	228	167	273	166	166	166	166	166	166	167	177	167	225	167	269
			3	160	160	160	160	159	159	158	170	158	220	158	266	158	158	158	158	157	157	158	170	158	220	158	266
			4	157	157	156	156	155	155	155	168	155	219	155	265	157	157	157	157	158	158	155	166	155	216	155	262
			5	151	151	152	152	151	151	152	164	152	215	152	262	150	150	151	151	152	152	152	163	152	215	152	262

TABLE 6.- SUMMARY OF MEASURED ALTITUDES AND CALCULATED SLANT-RANGE DISTANCES FOR THE MODIFIED SH-3A HELICOPTER AT EACH NOISE-MEASURING POSITION – Concluded

Altitude, m	Airspeed, knots	Item	Run	Altitude and slant-range distance at microphone position																							
				1		2		3		4		5		6		7		8		9		10		11		12	
				Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m	Alt, m	SR, m
Flyby; Aug. 28, 1969																											
152	120	8	1	144	144	146	146	145	145	144	156	144	208	144	256	145	145	143	143	144	144	144	158	144	211	144	259
			2	149	149	151	151	152	152	147	159	147	212	147	259	145	145	145	145	143	143	147	159	147	212	147	259
			3	150	150	150	150	150	151	149	160	149	149	149	257	151	151	151	151	151	151	149	163	149	217	149	264
			4	140	140	141	141	139	139	140	153	140	177	140	256	140	140	139	139	139	139	140	152	140	206	140	254
			5	149	149	147	147	148	148	149	163	149	217	149	264	151	151	150	150	151	151	149	160	149	210	149	257
Landing; Aug. 29, 1969																											
152	120	9	1							9	61	9	152	9	213	17	17	30	30	40	40	9	62	9	154	9	215
			2							9	54	9	145	9	206	9	9	31	32	37	37	9	69	9	160	9	221
			3							8	60	8	151	8	212	17	17	32	32	38	38	8	63	8	154	8	215
			4							6	59	6	150	6	211	21	21	34	34	40	40	6	63	6	155	6	216
Take-off; Aug. 29, 1969																											
152	120	10	1	23	23	43	43	54	54																		
			2	15	15	30	30	44	44																		
			3	16	16	27	27	41	41																		
			4	18	19	27	28	40	40																		

TABLE 7.- OVERALL SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER AT EACH NOISE-MEASURING POSITION

Altitude, m	Airspeed, knots	Item	Run	Sound pressure level, dB, at microphone position –											
				1	2	3	4	5	6	7	8	9	10	11	12
Flyby; Aug. 28, 1969															
61	40	1A	1	100.0	100.8	101.0	93.7	87.3	85.0	99.8	99.8	99.2	94.0	86.2	83.4
			2	99.3	99.1	98.8	92.0	87.3	84.3	98.0	98.7	98.1	93.5	86.2	83.5
			3	100.2	100.6	101.2	93.2	87.9	85.2	99.9	100.0	99.9	93.7	85.6	83.6
			4	99.6	99.6	99.0	93.1	87.7	85.6	99.2	99.6	99.0	93.4	86.4	83.1
			5	102.5	101.9	100.7	94.2	87.7	85.1	100.8	100.9	100.1	94.0	85.5	82.3
	70	2A	1	95.7	95.0	96.4	92.7	86.9	85.0	94.1	95.7	94.2	92.7	86.2	82.8
			2	95.2	95.2	96.0	93.4	87.1	84.8	94.5	95.4	95.4	93.2	86.9	83.7
			3	96.4	96.4	96.7	93.1	86.8	84.8	94.8	94.8	94.5	93.3	86.4	83.1
			4	95.0	94.6	95.6	93.1	87.0	84.6	93.4	94.4	93.9	92.7	86.8	83.2
			5	94.1	94.4	93.9	93.1	86.9	84.7	93.4	93.7	93.0	93.1	86.3	82.9
	100	3A	1	94.0	94.4	94.7	94.6	88.5	86.7	93.0	93.9	92.2	94.8	88.5	86.1
			2	94.5	93.5	94.1	94.7	88.2	86.6	93.5	94.0	93.3	94.8	88.1	85.2
			3	94.0	94.1	93.9	94.1	88.0	86.7	93.4	92.7	92.2	94.9	89.0	86.1
			4	91.7	92.1	92.7	93.0	88.4	86.7	91.6	91.8	92.2	94.8	89.9	85.8
			5	90.9	91.9	91.4	93.6	88.3	87.7	91.2	92.0	91.8	94.5	88.8	86.7
	120	4A	1	95.0	94.9	94.7	96.1	91.8	90.0	95.7	94.8	94.8	97.4	90.3	88.9
			2	95.5	93.8	95.0	96.3	91.7	90.8	94.8	94.9	94.7	96.9	90.6	88.1
			3	94.9	95.9	95.1	96.5	91.3	90.3	94.9	96.8	95.9	97.5	90.9	89.5
			4	97.8	97.6	97.4	99.8	94.3	91.7	98.3	97.8	97.1	99.0	92.0	90.4
			5	96.0	95.0	94.9	96.3	90.6	89.3	95.4	94.6	94.9	97.0	90.5	89.3
152	40	5A	1	91.4	91.0	91.4	89.2	84.0	83.1	91.2	92.1	91.7	91.0	90.7	85.6
			2	92.6	92.2	92.9	90.4	85.4	83.4	91.6	92.3	91.8	90.9	86.5	85.8
			3	90.7	91.2	91.3	87.6	83.8	83.4	90.7	91.3	91.3	91.9	86.5	85.7
			4	90.8	91.6	91.1	88.1	84.2	84.3	90.1	91.1	90.4	91.2	86.7	85.4
			5	91.6	91.6	91.8	88.4	84.6	84.0	90.7	91.2	91.3	90.1	86.7	85.7

TABLE 7.- OVERALL SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER AT EACH NOISE-MEASURING POSITION – Concluded

Altitude, m	Airspeed, knots	Item	Run	Sound pressure level, dB, at microphone position –											
				1	2	3	4	5	6	7	8	9	10	11	12
Flyby; Aug. 28, 1969															
152	70	6A	1	86.0	85.1	84.9	84.1	83.8	83.7	84.9	86.4	85.5	88.1	85.1	83.5
			2	86.3	85.7	86.7	84.1	84.6	83.5	85.4	86.2	85.9	88.7	85.3	83.2
			3	86.7	86.1	86.4	84.5	84.5	83.1	85.6	85.8	86.0	88.8	85.2	84.2
			4	86.4	86.3	87.3	86.5	84.7	83.1	86.5	86.3	86.3	89.2	85.4	84.3
			5	86.2	85.8	87.2	84.6	84.8	83.2	86.1	87.2	86.1	88.7	84.8	83.5
	100	7A	1	85.1	85.2	85.7	86.3	85.3	83.8	85.3	85.4	85.1	88.1	87.7	85.8
			2	85.7	85.4	86.4	85.8	85.5		85.6	86.1	85.5	88.1	87.9	85.6
			3	86.2	86.4	86.8	87.0	86.1		86.1	88.1	86.8	89.7	87.9	86.1
			4	86.6	87.2	87.4	87.4	86.0		86.8	87.0	86.3	89.5	87.1	85.7
			5	86.5	87.1	86.5	86.5	85.6		84.2	86.3	86.2	88.9	87.8	85.8
	120	8A	1	88.4	88.3	88.3	88.8	88.0	87.5	88.1	88.4	87.8	90.2	89.8	88.5
			2	90.0	89.5	88.9	85.6	84.5	84.1	89.3	89.2	89.6	91.7	92.1	89.3
			3	88.8	87.7	87.9	83.9	82.6	82.3	88.1	88.5	88.3	91.2	90.1	87.6
			4	88.5	88.5	88.6	83.9	84.0	82.6	87.8	88.3	87.9	91.0	90.2	88.5
			5	89.7	89.0	90.8	85.5	84.6	84.2	89.3	90.0	89.6	92.0	90.8	88.6
Landing; Aug. 28, 1969															
152	120	9A	1	106.7	88.6	85.8	101.0	90.1	86.5	112.0	105.3	104.6	98.4	89.1	85.2
			2	103.2	88.6	85.5	100.6	90.2	87.1	112.2	105.1	104.2	99.4	88.0	84.3
			3	106.7	88.3	84.6	100.1	89.8	87.3	111.8	104.2	102.6	101.8	88.5	84.6
			4	103.0	87.4	98.8	99.6	90.2	86.5	113.6	105.9	105.0	97.9	87.8	84.7
Take-off; Aug. 28, 1969															
152	120	10A	1	111.6	105.8	99.1	98.8	88.4	84.6	102.6	90.1	83.7	97.7	90.9	87.9
			2	106.5	103.4	96.6	98.6	88.5	85.9	101.2	90.9	86.0	97.0	87.7	86.0
			3	108.6	100.3	96.6	99.3	88.9	86.5	102.2	89.8	83.9	96.6	88.3	85.7
			4	110.1	100.5	97.5	95.1	87.1	89.3	101.3	87.9	84.7	96.0	87.4	84.8

TABLE 8.- OVERALL SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER AT EACH NOISE-MEASURING POSITION

Altitude, m	Airspeed, knots	Item	Run	Sound pressure level, dB, at microphone position –											
				1	2	3	4	5	6	7	8	9	10	11	12
Flyby; Aug. 26, 1969															
61	40	1	1	95.1	95.5	94.8	94.9	83.6	79.9	95.5	96.8	96.2	92.6	83.6	79.6
			2	98.3	98.8	98.8	92.1	82.0	78.3	98.5	97.9	97.7	93.0	83.3	79.5
			3	96.2	95.7	95.2	94.5	83.7	79.4	94.8	95.1	96.5	93.0	83.4	79.8
			4	96.5	95.7	95.7	92.5	82.7	78.8	96.5	96.0	94.8	92.5	82.9	80.0
			5	96.3	95.4	95.4	94.4	83.0	79.3	95.3	96.0	97.1	92.9	83.7	79.3
	70	2	1	91.2	91.1	91.1	90.7	81.3	78.5	91.3	91.7	91.3	91.4	83.7	79.7
			2	91.6	92.0	90.9	91.1	81.7	78.6	91.4	91.4	91.1	91.2	83.4	79.1
			3	92.3	92.4	92.3	91.0	81.6	79.0	92.3	91.6	91.3	91.2	83.5	79.4
			4	91.1	91.3	91.1	90.9	81.4	79.0	90.8	91.0	90.8	90.8	83.4	79.3
			5	90.7	90.7	90.6	90.7	81.8	78.7	90.7	90.6	90.2	90.8	83.6	79.2
	100	3	1	93.4	94.6	95.4	91.1	85.0	82.6	92.2	92.8	94.7	93.7	87.3	82.9
			2	94.7	94.0	93.8	92.9	86.4	84.1	95.1	95.4	95.4	93.4	87.0	82.8
			3	94.6	94.6	95.4	91.9	84.5	82.6	94.4	93.8	94.5	93.9	86.3	81.7
			4	96.7	96.8	96.7	92.6	86.3	83.4	96.3	95.5	95.6	95.6	86.8	82.1
			5	94.7	94.8	94.2	92.0	85.0	82.9	94.4	94.8	94.8	94.2	86.8	82.0
	120	4	1	98.8	99.0	98.1	97.5	91.1	87.8	98.8	98.6	98.9	96.2	87.7	84.8
			2	98.8	99.2	99.0	98.1	91.4	88.0	98.1	98.4	97.4	96.9	88.6	85.0
			3	97.7	98.2	97.7	97.5	91.6	87.8	97.6	97.7	97.6	95.7	88.3	84.0
			4	99.1	98.5	98.6	98.4	91.5	88.2	99.0	99.0	98.2	96.2	88.4	84.1
			5	96.4	97.1	97.2	96.3	90.8	87.8	97.1	97.2	97.5	95.6	87.9	84.4
Flyby; Aug. 28, 1969															
152	40	5	1	87.1	87.4	87.2	90.9	83.7	81.0	87.8	87.5	88.1	85.6	84.5	83.2
			2	86.3	86.6	86.3	89.4	83.8	80.7	86.5	86.4	86.5	85.0	83.4	80.7
			3	86.6	86.8	86.5	89.6	83.7	81.0	86.9	87.1	87.0	83.9	83.0	82.5
			4	87.0	86.7	86.6	90.1	84.0	81.3	87.2	87.3	87.4	84.6	83.2	82.3
			5	86.7	86.7	86.5	89.1	83.4	80.6	86.6	86.9	86.8	84.8	83.7	83.2

TABLE 8.- OVERALL SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER AT EACH NOISE-MEASURING POSITION – Concluded

Altitude, m	Airspeed, knots	Item	Run	Sound pressure level, dB, at microphone position –											
				1	2	3	4	5	6	7	8	9	10	11	12
Flyby; Aug. 28, 1969															
152	70	6	1	83.0	83.1	82.6	85.5	81.5	79.2	83.0	82.8	83.2	84.3	82.5	81.9
			2	83.4	83.1	83.0	84.5	80.9	78.9	83.6	83.8	83.6	84.2	82.2	81.6
			3	82.9	82.7	82.3	85.0	81.4	79.2	82.7	83.1	82.8	83.8	82.1	81.9
			4	82.9	83.0	82.9	84.5	81.3	79.4	82.6	82.8	82.6	84.1	81.6	81.5
			5	82.3	82.0	82.0	84.7	81.5	79.5	81.9	81.9	82.1	83.7	81.5	81.9
	100	7	1	86.3	86.1	86.4	85.0	80.9	80.0	86.3	86.4	86.0	88.4	85.2	85.7
			2	86.0	85.7	85.9	84.3	80.5	79.5	85.8	86.4	86.5	88.4	85.2	85.0
			3	86.3	85.6	86.3	84.3	80.6	79.8	85.7	86.4	86.1	88.1	85.0	85.6
			4	86.5	86.4	86.9	84.5	80.9	80.1	85.9	86.5	86.3	88.4	85.4	86.0
			5	86.1	86.0	86.2	84.5	81.0	79.6	85.9	86.1	86.0	88.1	85.4	85.9
	120	8	1	91.5	91.1	91.7	89.7	87.8	87.5	90.9	91.8	91.0	93.0	89.5	89.3
			2	90.9	90.3	90.5	89.4	87.8	87.2	90.6	91.6	90.7	92.4	88.4	88.8
			3	92.0	91.5	91.7	90.1	88.6	87.7	90.8	91.5	90.7	93.1	89.0	89.4
			4	91.0	90.7	91.2	89.6	88.1	86.9	90.7	91.1	90.4	92.6	88.4	89.1
			5	90.7	89.7	90.4	88.6	87.3	86.6	89.2	89.6	89.7	91.8	87.9	88.7
Landing; Aug. 28, 1969															
152	120	9	1	106.2	85.1	82.2	98.8	86.9	82.5	110.5	103.2	99.7	103.2	87.0	84.0
			2	98.2	84.7	80.2	95.8	85.2	82.5	111.9	107.6	102.6	103.8	86.6	82.8
			3	103.2	85.7	80.7	97.0	85.4	82.7	111.7	105.1	103.4	102.7	86.1	82.3
			4	103.9	87.0	82.3				113.7	108.5	105.5	95.5	85.5	82.1
Take-off; Aug. 28, 1969															
152	120	10	1	108.8	102.4	87.6	96.4	84.6	82.1	99.4	88.6	84.0	94.2	84.6	81.7
			2	111.6	97.5	91.6	80.4	83.3	79.5	88.0	78.6	73.6	95.6	83.4	80.1
			3	109.0	102.8	97.3	85.8	79.2	80.4	98.1	85.2	79.8	94.2	84.1	80.9
			4	111.6	100.5	97.3	97.1	85.5	81.5	96.5	85.1	79.8	94.9	85.9	82.2

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
					Flyby																															
40	61	1A	1	1	100.0	59	72	98	91	68	86	77	65	71	76	88	78	72	81	76	81	77	78	78	76	74	72	72	71	68	67	62	62	64	65	64
				2	99.3	57	72	98	89	67	86	75	64	69	76	84	76	68	77	72	77	77	79	76	75	72	71	70	68	64	65	61	61	62	63	60
				3	100.2	58	72	99	89	75	88	76	64	68	77	83	79	72	78	75	80	79	78	77	75	74	72	72	70	67	66	63	62	64	66	62
				4	99.6	58	73	99	88	66	83	70	66	69	74	83	74	65	75	71	75	79	79	78	76	74	72	70	70	66	65	62	62	63	64	60
				5	102.5	61	76	92	92	69	82	72	62	69	76	84	78	72	79	75	80	80	79	80	77	76	72	72	71	68	68	65	64	65	68	65
			2	1	100.8	62	74	90	90	66	84	72	66	72	73	85	75	69	76	73	78	81	82	80	78	74	72	72	70	68	67	66	66	67	66	65
				2	99.1	58	72	98	89	68	83	72	63	67	72	84	74	68	75	72	74	77	78	76	75	72	70	68	68	66	66	66	63	63	64	61
				3	100.6	59	73	90	90	72	87	75	65	71	74	83	76	71	77	75	80	80	80	78	77	73	70	71	71	67	67	66	66	65	66	66
				4	99.6	58	72	99	90	67	81	71	61	73	74	86	75	67	79	74	78	77	78	77	76	74	71	70	72	67	66	65	65	65	65	63
				5	101.9	59	74	91	93	72	85	77	62	72	78	88	79	73	80	77	81	83	82	80	78	77	74	73	73	70	71	67	66	68	68	67
			3	1	101.0	59	74	90	90	70	82	70	64	64	74	84	75	71	76	72	77	78	78	76	77	73	72	72	71	68	66	63	63	63	63	61
				2	98.8	56	70	97	90	69	83	74	62	65	73	86	75	71	77	73	77	76	77	76	74	71	69	70	69	65	64	61	62	60	60	59
				3	101.2	60	75	91	89	70	83	72	68	75	77	78	76	69	79	74	79	77	79	78	75	73	71	70	69	67	64	63	63	64	63	62
				4	99.0	59	72	98	90	64	81	72	61	72	74	85	73	67	76	71	76	76	77	76	76	73	71	70	69	65	65	62	61	60	61	59
				5	100.7	60	75	90	88	69	84	70	66	70	73	79	72	67	79	72	77	78	79	79	78	76	72	72	70	66	66	64	64	64	64	62
			4	1	93.7	52	62	87	84	65	84	78	77	64	70	84	80	78	76	77	80	79	80	80	81	78	75	75	74	71	70	70	69	70	72	68
				2	92.0	47	57	81	83	65	83	80	72	61	66	80	80	81	75	78	78	78	79	78	78	77	75	73	73	71	69	67	66	67	68	62
				3	93.2	49	61	87	83	65	85	76	72	63	67	86	79	76	72	78	75	78	79	80	78	76	76	74	70	69	67	67	67	66	71	66
				4	93.1	48	57	84	83	67	88	84	74	62	68	81	75	76	73	74	78	77	76	78	77	77	74	74	72	70	68	66	66	68	70	63
				5	94.2	50	63	89	84	66	81	74	81	69	65	80	77	80	78	76	82	80	82	81	81	79	79	77	74	73	71	70	70	71	73	68
			5	1	87.3	47	57	84	79	58	75	66	70	68	64	72	61	64	73	74	73	66	71	71	71	71	69	68	64	63	61	57	56	54	53	49
				2	87.3	42	53	81	79	59	75	71	73	65	67	67	62	72	77	76	70	72	76	72	73	72	71	70	67	65	62	60	60	57	54	51
				3	87.9	45	59	85	78	59	78	70	75	67	62	70	59	65	73	72	68	67	74	68	72	70	67	65	64	61	59	57	54	54	53	52
				4	87.7	43	57	84	77	58	77	68	70	60	58	64	59	69	76	75	72	69	76	72	71	70	69	68	66	63	62	58	56	55	54	53
				5	87.7	45	57	84	77	57	79	70	74	70	66	73	62	64	72	72	72	70	69	75	69	71	68	67	64	61	60	59	58	57	55	53
			6	1	85.0	47	54	80	76	54	74	68	70	68	65	74	67	59	65	70	72	70	67	71	70	68	68	67	66	64	61	57	54	51	49	43
				2	84.3	40	52	80	77	55	72	67	68	66	66	70	61	60	69	71	71	65	68	69	68	67	65	62	62	57	56	53	52	50	47	41
				3	85.2	45	54	80	77	58	76	71	71	68	66	74	64	56	67	69	70	69	66	71	68	68	66	66	64	62	59	57	55	52	52	46
				4	85.6	48	57	82	75	56	74	66	69	62	59	68	59	61	72	71	73	67	69	72	67	69	68	64	63	60	59	56	53	51	46	43
				5	85.1	48	55	79	74	57	79	71	70	69	65	71	66	61	63	66	70	71	71	67	72	65	69	66	65	63	60	59	57	55	53	47
			7	1	99.8	59	73	99	90	71	83	71	60	64	74	85	77	72	77	75	82	79	77	79	79	73	71	70	70	69	68	64	63	61	60	59
				2	98.0	55	69	96	86	66	85	75	66	80	83	85	81	75	83	76	79	78	77	75	74	72	68	69	67	65	66	62	62	58	58	56
				3	99.9	57	71	99	91	73	85	75	62	73	76	85	75	70	80	74	78	79	79	79	76	73	72	72	68	67	66	63	62	61	59	57
				4	99.2	56	71	98	90	67	82	73	61	73	71	86	74	69	78	72	76	77	78	77	73	73	71	71	70	68	67	61	60	59	58	57
				5	100.8	61	73	99	93	75	85	76	65	72	77	89	78	74	82	78	81	81	82	80	79	76	74	73	69	69	67	64	63	62	61	59
			8	1	99.8	57	72	99	91	72	83	72	60	67	73	86	77	72	77	74	79	78	80	77	77	75	69	70	69	66	65	64	63	63	64	56
				2	98.7	57	72	98	89	66	81	72	64	71	70	84	75	68	76	72	78	73	77	76	74	74	71	70	70	68	64	62	61	61	62	54
				3	100.0	58	72	99	89	71	84	73	64	67	75	85	74	69	79	73	79	79	77	77	75	73	71	71	69	64	65	63	63	62	63	56
				4	99.6	57	72	98	88	67	82	72	64	71	72	85	75	70	77	74	78	78	76	76	74	73	71	70	70	64	65	60	63	62	62	54
				5	100.9	59	73	90	92	74	80	69	57	63	68	87	77	72	81	74	80	81	79	78	78	75	72	71	69	66	67	64	64	65	66	58

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
40	61	1A	9	1	99.2	58	71	98	89	69	81	69	57	65	74	85	75	68	77	73	79	77	78	78	75	73	70	68	70	69	67	64	62	61	62	61
				2	98.1	56	71	97	87	68	83	72	57	71	74	83	76	69	78	73	77	77	77	76	74	72	69	68	68	66	64	62	61	58	61	58
				3	99.9	58	72	99	89	68	86	74	62	69	74	83	75	70	75	72	77	78	78	76	75	72	71	71	70	67	64	64	60	60	62	61
				4	99.0	56	71	98	90	68	81	72	57	66	72	85	72	69	75	73	79	76	78	77	77	75	71	70	70	67	64	61	61	58	61	58
				5	100.1	63	74	99	89	70	86	73	69	72	72	80	74	72	80	77	77	78	78	78	73	71	70	69	70	66	63	64	63	62	65	64
			10	1	94.0	56	59	85	89	64	86	88	74	70	70	61	67	72	81	75	71	80	76	77	75	74	74	72	72	70	68	65	64	64	62	60
				2	93.5	48	59	86	89	64	76	76	77	67	67	84	80	80	76	77	81	76	77	78	79	75	74	73	71	70	68	65	62	62	62	59
				3	93.7	47	57	85	87	63	87	86	69	66	66	74	71	76	78	75	75	75	78	78	77	76	76	75	74	72	70	68	66	67	64	61
				4	93.4	49	57	83	86	67	87	87	68	63	61	79	75	75	76	71	78	74	77	77	78	76	75	75	74	71	69	68	64	63	62	59
				5	94.0	48	59	86	88	64	87	87	78	69	68	71	65	72	80	77	71	75	77	74	74	72	73	73	71	70	68	66	65	64	62	61
			11	1	86.2	44	50	77	77	55	78	76	67	68	67	72	65	65	73	74	73	65	72	73	70	71	71	70	68	66	64	61	58	55	54	53
				2	86.2	43	50	75	77	57	76	76	73	66	67	71	63	69	75	76	71	68	74	72	73	73	73	70	68	67	66	64	58	54	52	51
				3	85.6	46	53	77	80	54	76	77	69	67	68	71	63	60	70	72	72	67	69	71	68	68	65	64	64	62	59	57	55	52	50	51
				4	86.4	40	48	72	71	57	78	72	69	62	62	65	63	72	78	77	70	73	74	73	74	73	72	70	69	66	63	60	58	56	56	55
				5	85.5	45	52	78	78	57	78	75	64	62	64	71	62	60	71	72	73	68	65	72	70	67	67	68	66	64	63	61	60	56	55	52
			12	1	83.4	47	48	74	75	54	74	72	61	63	64	76	69	59	61	67	73	70	67	66	70	65	68	64	63	61	60	57	54	52	46	47
				2	83.5	38	48	73	76	53	73	72	65	58	63	76	69	60	65	68	71	68	66	70	71	66	65	65	64	62	60	58	54	49	46	45
				3	83.6	40	49	75	76	53	74	73	60	63	65	75	68	59	64	67	71	69	66	68	72	67	67	66	64	64	62	59	56	52	47	46
				4	83.1	45	45	73	71	54	75	71	64	63	62	73	66	61	69	73	72	69	65	72	68	68	67	65	64	63	61	57	56	52	48	46
				5	82.3	41	46	74	71	55	69	63	64	64	64	75	66	62	61	63	70	71	70	65	71	67	67	67	65	62	60	58	57	55	50	47
70	61	2A	1	1	95.7	53	69	94	87	65	81	71	62	68	76	86	75	70	79	72	74	75	75	74	73	73	70	70	67	65	64	60	60	60	63	57
				2	95.2	58	70	94	81	72	70	62	60	65	72	82	73	67	77	70	76	77	78	76	74	73	72	71	69	67	66	63	62	62	64	61
				3	96.4	57	70	95	82	69	86	72	70	74	80	83	77	72	80	76	79	79	77	76	75	73	72	72	69	65	66	62	61	61	63	61
				4	95.0	54	70	93	85	67	76	67	61	65	73	86	75	68	78	71	76	77	76	76	75	73	71	73	71	66	66	63	62	62	64	61
				5	94.1	55	70	92	83	66	75	65	59	68	72	85	74	68	77	69	76	76	77	77	75	73	72	72	69	66	66	63	62	63	63	60
			2	1	95.0	58	70	93	82	71	78	68	63	70	75	85	76	69	78	71	78	75	75	75	73	72	69	68	69	65	65	63	63	62	61	59
				2	95.2	57	70	94	83	70	73	65	61	66	72	84	73	66	76	71	77	76	76	74	73	73	71	70	71	68	66	67	64	65	66	64
				3	96.4	56	69	95	85	67	78	67	63	70	75	86	75	67	79	71	77	79	77	77	75	74	71	72	71	66	67	66	65	65	65	63
				4	94.6	57	70	94	80	67	74	65	63	66	71	80	72	66	73	70	76	77	75	77	75	73	71	70	71	67	67	66	64	64	65	63
				5	94.4	57	70	93	79	71	77	64	60	63	72	80	74	69	73	71	78	75	77	75	74	73	71	70	70	68	66	66	65	64	64	62
			3	1	96.4	55	71	95	82	68	81	68	67	69	77	83	74	68	78	72	76	73	75	75	73	71	69	67	68	63	62	58	58	60	57	55
				2	96.0	54	69	92	85	75	76	70	65	73	84	90	79	74	82	76	78	77	77	78	77	74	73	73	72	68	66	62	63	62	62	61
				3	96.7	58	70	95	87	69	78	69	59	72	74	87	75	68	81	72	77	77	75	76	75	73	71	71	70	67	64	62	61	61	60	59
				4	95.6	56	69	93	84	67	77	68	63	72	75	87	78	73	79	73	75	76	78	77	75	74	72	71	70	68	67	63	62	63	62	61
				5	93.9	55	71	93	77	70	74	62	62	67	71	75	70	68	72	70	75	75	75	75	73	73	71	69	69	66	65	62	62	60	59	57
			4	1	92.7	51	59	80	85	66	80	83	65	54	65	85	82	75	71	75	75	82	80	78	78	76	75	73	73	71	71	67	67	68	67	60
				2	93.4	51	61	83	85	70	80	81	70	60	67	87	81	80	76	77	78	79	79	78	81	78	76	75	74	71	69	69	68	67	70	63
				3	93.1	51	60	87	84	67	81	72	67	56	70	85	80	78	71	78	76	81	79	79	79	77	75	72	72	70	68	68	66	66	68	64
				4	93.1	53	60	85	85	65	82	79	62	58	68	86	78	78	71	78	76	81	78	79	79	77	75	75	73	70	70	69	66	68	68	64
				5	93.1	57	62	85	86	67	80	78	68	57	69	87	80	77	71	77	75	79	78	78	80	76	74	73	72	71	70	66	66	67	69	63

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																																
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																					
70	61	2A	5	1	86.8	44	58	83	76	61	73	67	67	61	62	63	62	69	74	73	69	73	75	72	72	70	70	67	66	63	58	57	56	53	51	49
				2	87.1	46	57	83	73	58	71	63	67	65	64	66	57	69	78	73	74	70	75	73	75	72	72	69	67	65	62	59	58	56	54	51
				3	86.8	44	56	82	79	60	70	64	68	64	64	66	59	69	76	75	73	70	75	71	73	71	70	68	66	62	60	59	59	55	55	52
				4	87.0	45	56	83	78	56	70	66	64	63	64	64	56	67	75	74	69	72	76	71	73	72	69	67	65	63	59	59	57	55	53	49
				5	86.9	49	56	83	79	55	68	65	65	64	63	66	62	68	73	75	71	72	74	71	74	72	71	68	65	64	60	59	57	55	53	50
			6	1	85.0	42	54	80	79	58	66	63	63	62	64	71	62	59	69	71	72	69	69	73	70	70	68	65	66	62	60	56	54	52	49	43
				2	84.8	44	53	80	78	57	65	67	68	60	62	70	65	59	69	71	73	72	69	71	68	70	68	67	64	62	61	57	55	53	50	45
				3	84.8	60	56	75	79	57	63	62	68	64	62	74	69	58	66	69	75	73	67	73	72	71	68	68	65	62	60	58	57	54	50	45
				4	84.6	47	52	78	79	57	59	61	63	64	63	71	65	56	66	69	73	71	67	73	68	71	68	67	65	64	61	59	56	56	53	47
				5	84.7	44	55	80	79	54	65	62	67	62	63	70	67	58	67	71	72	70	68	72	68	69	67	62	63	61	60	58	56	51	50	44
			7	1	94.1	55	68	92	84	69	75	66	59	67	69	86	75	68	77	70	72	75	74	75	73	73	70	70	69	66	65	60	60	59	56	54
				2	94.5	54	71	93	82	69	73	65	57	68	73	84	75	69	77	70	78	78	78	76	75	74	71	72	70	66	67	64	63	61	59	58
				3	94.8	55	69	94	81	67	81	67	64	67	71	79	72	68	74	71	79	78	76	77	75	73	71	70	69	68	67	64	62	60	58	56
				4	93.4	56	70	93	78	60	74	62	61	64	70	76	72	66	72	71	77	76	76	74	73	72	70	70	69	66	66	64	64	59	58	55
				5	93.4	55	69	92	79	69	76	64	60	65	71	78	72	65	73	69	77	76	75	75	73	71	69	68	68	68	65	62	62	59	58	55
			8	1	95.7	56	70	94	84	69	82	70	64	70	76	85	78	70	76	72	75	74	75	75	75	72	70	70	67	66	64	62	62	62	61	53
				2	95.4	56	72	94	81	66	80	69	63	66	75	82	75	70	75	72	78	76	77	76	74	73	71	70	70	68	66	64	62	62	63	57
				3	94.8	55	68	93	84	66	80	68	63	73	74	85	77	68	76	71	77	78	76	76	74	74	70	71	70	66	65	65	63	62	62	55
				4	94.4	56	69	93	83	67	77	66	59	68	76	84	74	68	76	72	78	77	76	75	75	73	69	70	71	64	66	64	63	62	62	55
				5	93.7	56	72	93	78	67	73	62	62	62	69	75	71	66	71	70	75	74	74	75	75	72	69	67	69	63	64	62	62	60	61	55
			9	1	94.2	57	68	93	83	67	77	65	58	68	70	83	71	64	75	67	74	76	75	75	74	72	69	68	70	65	64	61	60	58	59	57
				2	95.4	56	71	94	82	68	80	67	60	71	76	83	76	67	76	73	79	78	77	77	77	74	70	70	69	68	63	64	62	59	62	58
				3	94.5	59	70	93	79	67	81	68	65	69	75	77	74	71	73	73	75	76	76	74	72	72	68	69	70	67	63	64	61	59	60	58
				4	93.9	56	70	93	78	67	80	68	64	62	72	79	74	71	74	73	76	75	75	75	74	71	70	69	71	65	65	63	61	60	61	60
				5	93.0	54	67	91	81	70	74	66	59	66	73	85	74	69	78	72	75	75	76	75	74	72	71	69	69	66	65	63	62	59	60	60
			10	1	92.7	53	64	86	84	67	74	69	70	57	68	89	79	76	69	74	73	75	76	76	76	76	74	76	73	71	69	66	65	64	64	61
				2	93.2	46	61	80	82	68	79	77	73	64	66	89	84	78	74	76	79	78	78	78	79	77	77	75	75	73	71	68	66	67	64	63
				3	93.3	58	64	84	84	62	78	73	69	60	67	88	83	81	75	75	78	78	77	78	78	80	77	75	74	71	70	67	65	64	64	62
				4	92.7	49	62	84	82	69	76	70	68	57	66	88	81	77	71	77	76	77	77	79	78	78	76	74	74	71	70	67	65	64	64	63
				5	93.1	60	64	84	83	69	77	70	70	60	69	89	81	78	73	79	75	77	77	77	78	77	76	76	75	73	69	67	64	65	65	63
			11	1	86.2	45	55	63	70	57	79	78	63	62	64	63	61	69	77	76	68	72	74	75	73	72	71	71	68	66	65	59	57	56	52	51
				2	86.9	46	51	59	68	63	78	76	69	62	62	63	64	70	80	78	72	71	76	73	75	75	71	71	69	66	63	60	58	58	57	54
				3	86.4	49	48	65	70	57	77	74	69	65	62	62	65	72	80	77	71	72	75	73	74	72	72	71	67	65	62	60	58	55	55	53
				4	86.8	48	47	68	70	62	79	74	66	62	62	63	62	72	80	76	69	73	75	75	74	73	75	71	67	66	61	58	56	54	54	52
				5	86.3	50	51	74	72	66	79	73	65	62	59	62	63	74	78	77	67	74	73	72	73	73	72	69	68	65	62	60	57	55	56	54
			12	1	82.8	48	49	62	68	59	76	73	64	61	63	68	64	59	70	73	72	68	66	71	67	70	69	67	64	61	61	58	55	51	48	45
				2	83.7	44	46	69	75	57	66	70	65	62	65	74	71	61	63	71	73	73	70	70	74	70	68	68	67	64	63	59	55	50	47	46
				3	83.1	42	48	66	73	56	69	72	62	63	67	73	68	60	68	72	71	71	66	73	72	69	68	67	65	64	62	61	55	54	49	46
				4	83.2	51	56	75	66	55	70	62	61	63	62	71	63	60	72	72	75	70	67	74	70	71	67	65	63	63	60	58	55	49	47	47
				5	82.9	49	49	68	76	59	64	66	63	59	63	75	72	59	65	70	72	70	66	69	70	67	67	67	65	64	62	59	55	51	46	45

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
100	61	3A	1	1	94.0	54	59	75	88	73	76	81	65	67	73	83	88	73	78	83	77	77	81	78	76	75	73	75	75	71	68	67	66	64	63	60
				2	94.5	52	59	75	89	76	74	81	66	62	72	83	89	76	77	83	78	77	80	78	74	76	75	76	75	70	70	67	64	63	63	64
				3	94.0	54	58	76	89	71	72	79	65	61	71	83	87	73	77	83	78	78	82	82	76	72	72	72	72	67	66	65	62	63	62	62
				4	91.7	57	59	73	84	70	72	76	62	61	69	81	84	70	77	80	78	77	80	81	76	75	73	72	73	68	67	66	62	63	63	60
				5	90.9	49	55	71	84	69	72	77	61	56	67	80	86	74	72	80	75	76	77	77	71	71	68	71	69	66	64	63	59	60	59	58
			2	1	94.4	55	56	75	89	78	74	82	69	64	72	83	89	77	75	81	77	78	80	78	77	74	73	72	74	70	70	69	67	65	64	63
				2	93.5	52	57	76	89	73	73	80	67	62	71	82	88	76	73	81	74	75	77	77	74	73	71	74	72	68	69	67	67	64	65	63
				3	94.1	54	59	75	89	71	74	79	67	63	71	83	89	72	76	82	78	77	80	79	77	76	74	74	74	71	68	68	67	65	65	63
				4	92.1	54	59	75	84	75	74	77	66	62	72	83	86	72	77	81	78	75	79	77	76	74	72	72	73	70	70	69	67	64	63	61
				5	91.9	54	60	72	86	70	73	78	65	62	70	81	87	75	73	79	73	76	79	79	75	71	68	70	61	68	67	66	63	62	62	59
			3	1	94.7	58	64	77	90	75	76	83	69	65	71	82	89	75	75	82	76	78	81	80	76	75	72	75	72	70	68	67	63	63	62	60
				2	94.1	52	61	75	89	77	73	81	67	60	72	82	89	76	73	81	75	78	79	79	76	74	74	74	72	70	67	68	66	62	62	61
				3	93.9	56	58	75	89	70	73	78	64	62	71	82	88	73	77	84	77	78	82	81	76	75	73	74	71	69	67	67	63	62	63	61
				4	92.7	51	60	75	86	75	73	78	61	61	70	82	86	71	77	82	78	77	81	80	77	75	72	73	69	68	67	65	63	61	60	59
				5	91.4	51	56	72	85	74	69	76	64	59	66	81	86	74	74	79	74	74	79	77	74	74	70	72	71	68	66	64	61	59	59	55
			4	1	94.6	50	61	83	85	70	76	77	66	60	68	90	84	79	74	81	77	82	81	79	80	79	78	76	76	72	71	70	68	70	71	65
				2	94.7	57	62	81	85	70	76	79	70	63	69	90	85	80	73	79	78	81	81	80	80	79	77	75	75	72	71	70	70	70	71	65
				3	94.1	50	56	77	80	67	76	78	70	60	68	90	85	81	74	80	78	81	81	81	79	78	76	75	75	72	71	68	67	68	71	64
				4	93.0	56	60	80	82	67	74	73	71	59	69	89	80	76	74	80	76	80	80	79	77	78	75	75	75	73	70	67	67	68	67	62
				5	93.6	53	57	70	75	67	72	76	69	61	68	90	86	78	75	78	75	80	84	79	77	76	75	74	74	72	70	67	66	65	65	59
			5	1	88.5	44	57	83	79	64	76	69	71	63	65	71	63	71	77	76	75	73	78	75	75	72	72	72	69	67	65	62	60	57	56	52
				2	88.2	44	56	80	83	61	69	69	69	67	66	73	65	66	73	77	73	69	77	75	76	73	72	71	68	65	63	58	57	57	56	51
				3	88.0	46	52	75	83	64	65	69	68	66	63	70	68	68	77	78	73	69	77	74	76	74	72	68	68	66	62	60	59	56	54	47
				4	88.4	44	56	83	77	62	75	67	64	62	60	66	63	70	81	77	70	76	78	74	74	73	71	72	68	65	62	60	59	56	54	51
				5	88.3	43	55	82	81	60	73	67	68	63	63	61	64	73	80	74	68	77	76	76	75	74	71	69	68	66	61	58	56	56	54	49
			6	1	86.7	50	57	79	80	61	63	63	69	62	65	74	68	61	70	73	76	76	69	76	72	74	69	69	66	63	60	59	57	54	53	55
				2	86.6	53	60	79	82	61	66	68	67	63	65	75	69	60	67	71	74	75	69	75	71	72	69	67	66	66	62	60	57	56	53	47
				3	86.7	43	53	78	81	62	64	61	64	61	62	73	67	60	72	73	76	73	72	77	73	74	71	71	68	68	63	60	59	57	53	46
				4	86.7	46	54	74	83	58	63	68	68	63	63	74	72	61	69	74	73	71	72	75	71	74	69	68	66	64	62	59	56	54	51	44
				5	87.7	56	65	79	82	70	66	68	67	63	66	77	68	62	70	76	74	72	75	76	72	72	70	70	69	65	62	60	57	54	51	44
			7	1	93.0	55	60	74	85	77	72	77	60	64	69	84	87	70	81	82	79	78	81	80	77	75	75	75	72	70	68	67	64	60	60	56
				2	93.5	50	57	76	86	70	73	78	60	63	71	83	88	72	78	83	78	78	81	79	74	75	73	74	73	69	68	67	63	60	59	58
				3	93.4	50	56	73	87	71	72	76	63	61	70	82	88	73	79	83	81	78	82	79	76	75	73	74	72	69	69	64	62	60	57	55
				4	91.6	49	53	69	84	71	71	78	65	61	67	80	87	73	71	79	73	75	79	78	76	75	72	71	70	69	67	65	62	58	56	53
				5	91.2	56	59	70	84	73	73	77	62	61	69	81	86	74	75	80	75	76	78	77	74	72	70	71	70	66	67	65	63	58	55	54
			8	1	93.9	54	59	80	89	70	74	77	62	66	73	84	86	72	80	81	81	77	79	77	76	77	75	73	74	70	68	68	65	64	64	57
				2	94.0	55	57	78	88	73	75	78	64	62	74	83	88	73	80	84	80	78	81	77	74	73	73	74	73	70	68	67	64	62	63	56
				3	92.7	55	57	74	85	74	70	78	64	63	72	83	87	72	77	83	78	77	80	79	76	75	72	73	71	66	67	65	64	62	62	55
				4	91.8	48	55	72	86	70	70	77	65	60	69	82	87	73	73	79	73	77	79	78	75	74	71	72	70	66	64	63	62	60	59	54
				5	92.0	52	57	72	86	72	72	76	64	61	69	82	87	75	75	81	76	76	77	77	72	72	71	71	72	67	64	66	63	60	60	54

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
100	61	3A	9	1	92.2	60	69	81	79	73	72	66	55	67	74	89	78	71	80	72	74	80	79	77	75	74	73	74	73	71	68	67	63	60	63	62
				2	93.3	60	62	79	89	70	74	79	59	63	72	81	86	73	80	81	78	76	78	76	75	73	72	73	73	71	67	66	63	61	62	62
				3	92.2	52	54	69	87	74	71	80	71	57	64	78	87	73	68	77	73	74	80	80	74	75	71	71	69	66	65	65	59	58	59	59
				4	92.2	54	59	73	87	75	74	79	64	64	70	81	87	73	72	79	74	76	78	76	75	73	73	71	71	69	65	65	61	58	59	60
				5	91.8	52	58	73	86	71	74	77	58	57	65	80	87	70	73	80	72	72	78	77	75	74	71	72	73	70	65	66	61	58	60	59
			10	1	94.8	58	63	86	83	68	76	70	68	61	67	90	84	81	76	80	81	80	79	80	82	79	78	76	75	73	70	69	65	66	66	63
				2	94.8	62	64	86	85	73	77	72	69	63	64	90	84	82	75	79	79	78	79	79	82	78	78	77	76	73	72	69	68	67	65	64
				3	94.9	55	62	84	82	72	74	70	65	60	66	91	85	80	72	80	80	81	79	78	81	79	77	75	75	74	70	68	65	66	65	62
				4	94.8	56	63	86	82	68	70	68	65	57	67	91	83	80	74	79	77	80	79	81	79	79	77	75	77	73	70	68	65	65	63	62
				5	94.5	53	62	87	79	65	73	70	63	58	69	91	81	78	75	81	75	80	79	79	79	78	78	76	74	72	69	67	66	63	62	62
			11	1	88.5	50	58	82	75	63	74	66	69	64	64	62	64	73	79	80	73	73	76	75	77	75	75	73	70	67	65	61	59	57	57	55
				2	88.1	49	57	82	76	63	74	68	65	62	66	63	63	72	77	80	73	71	77	72	76	75	74	73	70	67	65	61	60	59	58	57
				3	89.0	45	59	82	69	65	70	62	60	64	59	61	67	74	82	80	73	78	76	76	76	75	74	71	68	65	62	60	59	58	59	56
				4	89.9	64	65	79	71	72	73	73	75	74	73	74	72	72	79	77	72	76	76	75	73	74	75	71	67	67	66	74	65	82	79	79
				5	88.8	49	58	81	75	65	76	71	65	65	62	65	69	76	80	79	72	78	74	78	76	75	73	74	72	69	65	63	61	60	59	57
			12	1	86.1	43	49	64	74	59	63	69	68	65	68	78	79	61	63	73	74	76	71	73	76	71	71	70	67	66	62	59	58	53	49	51
				2	85.2	46	50	63	67	61	68	68	66	64	63	77	72	63	68	77	76	75	69	75	73	73	70	70	67	66	63	62	59	57	53	52
				3	86.1	41	49	66	65	62	69	67	69	65	64	76	72	65	73	78	77	74	71	77	72	75	71	71	68	67	65	63	60	57	51	47
				4	85.8	46	50	74	71	60	72	68	70	66	65	70	63	64	74	78	77	69	73	77	73	73	71	69	68	68	64	62	59	57	52	47
				5	86.7	41	46	63	74	60	62	69	63	62	65	78	81	60	65	74	76	76	67	75	76	72	70	70	70	67	64	62	60	55	51	46
120	61	4A	1	1	95.0	54	61	75	91	74	71	79	64	62	72	80	89	76	76	86	79	80	79	80	75	74	73	72	74	69	68	65	64	62	61	59
				2	95.5	53	62	77	92	73	70	77	65	68	75	81	89	75	77	85	80	79	79	80	75	75	74	74	74	69	66	66	68	62	62	60
				3	94.9	54	62	75	89	76	72	79	66	64	73	80	89	79	77	86	80	81	81	82	77	78	75	75	77	72	69	67	64	64	64	60
				4	97.8	53	59	75	94	75	72	77	65	61	74	81	91	79	76	87	78	81	82	85	80	79	77	77	78	75	73	69	67	64	63	62
				5	96.0	52	62	74	92	78	75	79	67	63	68	79	89	77	77	87	80	80	80	83	79	76	72	74	73	70	68	66	64	65	64	61
			2	1	94.9	55	62	77	90	67	71	80	63	64	75	81	88	76	80	85	80	79	80	80	76	76	74	76	75	72	72	71	69	66	64	63
				2	93.8	52	63	69	89	76	71	80	63	61	67	78	89	77	71	84	76	77	76	79	76	72	71	73	73	69	67	68	64	63	61	60
				3	95.9	50	60	72	91	82	72	80	73	64	71	79	91	79	72	83	77	79	78	82	77	77	73	74	77	72	70	69	67	63	63	61
				4	97.6	52	60	78	94	75	70	78	65	65	75	83	90	76	80	87	83	82	82	83	80	79	78	78	75	75	76	73	72	68	67	64
				5	95.0	53	61	73	90	77	72	79	66	63	73	82	89	75	78	86	80	80	82	82	80	77	77	77	73	72	73	72	69	69	66	64
			3	1	94.7	51	59	70	90	72	71	78	66	61	68	79	90	76	72	85	75	77	79	80	78	75	73	74	74	69	68	66	65	61	59	56
				2	95.0	54	60	72	90	73	67	79	63	63	72	79	90	75	73	85	77	80	79	81	77	76	74	75	75	73	69	66	64	61	59	56
				3	95.1	52	61	72	90	79	69	77	63	65	71	80	89	77	75	85	77	79	80	82	78	75	73	74	73	69	71	67	65	63	62	61
				4	97.4	51	62	75	94	80	71	80	71	64	68	80	90	79	75	84	76	79	82	86	81	78	76	76	75	75	73	68	66	64	60	59
				5	94.9	57	62	75	90	75	72	78	62	68	74	81	87	74	80	87	82	81	82	82	79	75	77	75	74	72	69	69	65	63	63	61
			4	1	96.1	53	61	71	87	75	75	81	67	59	70	90	91	79	77	83	77	80	84	82	80	78	77	76	74	72	71	68	66	67	67	62
				2	96.3	58	62	73	84	68	77	82	70	63	71	92	90	79	78	81	76	81	85	82	79	79	75	76	76	75	72	70	67	67	68	63
				3	96.5	59	61	72	87	71	76	81	71	64	72	91	91	83	75	82	79	81	83	81	79	79	79	76	76	74	72	70	69	69	70	63
				4	99.8	56	61	81	96	76	76	83	71	66	70	92	93	83	78	83	82	84	84	84	83	83	80	78	78	75	75	73	70	72	72	66
				5	96.3	53	60	74	88	74	77	84	68	66	67	89	91	83	75	79	79	82	83	82	80	79	78	77	76	74	72	71	68	69	72	65

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
120	61	4A	5	1	91.8	47	54	71	89	71	67	82	69	75	67	65	67	67	75	83	72	70	77	74	75	71	70	70	69	66	64	62	59	56	55	51
				2	91.7	49	56	70	89	69	69	80	73	76	70	69	72	69	74	83	75	70	77	75	76	72	71	69	67	63	64	59	59	56	58	56
				3	91.3	52	57	70	89	70	65	80	71	75	68	66	72	68	73	82	75	69	76	77	76	73	70	71	69	67	64	60	58	56	54	53
				4	94.3	50	56	76	92	71	70	81	75	77	68	70	76	70	78	85	76	72	78	80	78	76	73	74	71	69	67	62	62	61	57	55
				5	90.6	47	56	77	87	70	67	70	72	68	66	70	70	72	79	78	74	75	80	76	78	74	73	73	70	69	65	63	62	62	59	55
			6	1	90.0	53	53	74	87	63	64	73	73	71	68	74	77	62	75	79	74	71	76	78	72	71	71	70	68	64	61	57	56	55	52	51
				2	90.8	58	57	72	88	67	69	76	74	74	68	73	79	61	69	78	75	73	73	78	75	75	71	70	68	66	64	62	58	55	55	55
				3	90.3	59	61	71	88	68	67	76	71	72	68	73	78	65	67	76	73	75	69	76	74	73	70	70	68	65	61	60	58	54	51	50
				4	91.7	54	55	73	89	68	68	80	73	76	72	73	80	65	70	78	75	78	74	73	74	73	70	71	69	68	66	63	62	58	56	53
				5	89.3	61	61	77	86	67	60	65	69	66	64	76	73	61	71	76	76	77	72	78	73	74	74	71	72	69	66	62	59	57	56	51
			7	1	95.7	51	63	73	92	80	71	79	67	60	68	78	90	78	69	83	75	79	79	82	78	73	73	74	74	69	70	68	63	58	57	54
				2	94.8	53	59	73	91	75	69	78	63	60	66	78	89	78	71	83	75	78	77	80	77	75	71	72	75	70	68	65	62	58	58	53
				3	94.9	58	60	77	89	79	76	76	63	70	76	85	87	73	81	84	81	79	81	82	77	78	76	77	76	73	71	71	66	62	60	58
				4	98.3	52	62	80	95	78	73	80	64	66	74	84	91	77	80	88	83	81	82	83	82	81	78	79	80	77	74	72	70	66	61	58
				5	95.4	59	60	76	89	81	72	77	61	66	76	81	86	76	82	87	83	81	83	84	80	78	74	76	75	73	73	69	67	64	59	57
			8	1	94.8	58	61	75	90	74	71	78	63	62	74	80	89	74	78	85	81	79	80	79	76	76	73	74	74	71	68	66	64	63	61	54
				2	94.9	62	60	75	91	74	68	78	64	62	72	81	88	75	78	86	82	79	79	79	76	76	74	74	74	72	68	67	65	63	61	54
				3	96.8	55	63	78	93	79	71	79	65	65	75	81	90	76	79	87	83	81	81	80	78	77	75	75	76	73	71	70	67	65	62	57
				4	97.8	54	62	77	95	76	73	78	62	63	72	81	90	74	76	86	80	81	81	83	80	77	77	77	75	74	72	68	67	64	60	56
				5	94.6	55	60	73	89	68	71	77	60	62	72	80	88	73	78	86	79	79	81	82	77	77	73	76	75	72	70	68	65	64	63	55
			9	1	94.8	51	62	73	90	71	72	79	63	63	72	80	89	75	74	85	78	79	79	79	77	76	74	74	75	72	69	69	65	62	61	60
				2	94.7	53	63	74	90	72	70	75	62	60	70	81	89	73	74	85	78	78	80	81	75	75	71	74	75	72	68	67	64	59	60	60
				3	95.9	52	60	76	92	74	73	79	63	61	70	80	89	77	75	85	80	79	81	82	78	78	74	75	75	73	70	71	65	63	62	61
				4	97.1	48	60	74	94	77	71	80	69	62	66	77	90	79	71	84	75	76	80	83	82	79	78	75	75	75	72	70	65	60	60	60
				5	94.9	58	63	74	90	80	73	78	67	62	71	79	88	75	74	85	78	79	81	83	79	78	75	75	73	72	70	69	64	63	62	62
			10	1	97.4	58	61	81	85	72	74	74	73	62	68	93	93	80	72	81	79	81	80	80	82	80	80	77	76	75	71	68	67	66	63	62
				2	96.9	56	63	82	83	73	72	69	69	63	71	94	91	76	75	80	79	80	80	80	79	80	77	78	76	74	72	70	67	66	64	62
				3	97.5	56	61	83	86	74	70	75	71	65	68	92	92	82	76	81	81	82	81	82	81	81	80	80	77	74	72	70	67	66	64	64
				4	99.0	58	65	83	92	71	72	79	74	68	68	92	93	83	79	82	84	82	84	83	82	84	81	81	79	78	75	72	69	69	66	63
				5	97.0	55	60	81	86	72	73	75	73	66	66	91	93	79	73	82	79	79	80	79	81	80	78	77	77	77	72	69	67	67	65	64
			11	1	90.3	50	51	71	82	63	66	70	71	66	64	66	71	76	80	83	76	78	78	80	79	78	77	75	73	71	69	64	63	60	59	57
				2	90.6	46	53	70	85	67	69	79	72	72	63	67	73	72	77	82	78	76	78	74	79	77	75	73	74	71	69	67	62	60	57	54
				3	90.9	61	64	69	84	68	69	79	70	68	69	67	76	75	78	82	80	76	70	76	79	78	77	73	74	73	69	66	62	61	58	56
				4	92.0	49	54	74	86	68	70	77	72	68	66	70	75	73	79	83	82	75	70	78	81	78	76	76	73	72	69	66	62	61	58	57
				5	90.5	55	54	77	80	67	77	79	68	64	66	70	72	75	80	83	77	78	78	78	79	77	75	75	73	70	67	65	62	62	59	57
			12	1	88.9	45	46	68	78	60	66	71	69	65	63	77	78	67	76	83	80	72	72	79	74	75	74	71	70	67	66	63	60	57	52	52
				2	88.1	45	55	64	80	67	69	76	65	69	68	73	82	65	68	77	77	76	70	75	76	73	72	71	69	65	65	61	58	53	50	51
				3	89.5	41	51	64	81	65	67	76	65	66	69	75	84	64	66	75	79	79	73	75	79	72	73	73	71	70	66	64	60	56	50	51
				4	90.4	55	55	72	82	65	64	70	69	65	70	77	80	66	73	81	83	78	71	80	77	77	76	76	71	69	70	67	62	59	55	53
				5	89.3	54	55	65	79	66	68	75	69	69	67	76	83	66	67	79	79	78	71	76	78	75	74	73	70	68	65	64	60	58	52	51

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
40	152	5A	1	1	91.4	50	63	90	82	60	73	64	57	65	67	79	67	62	69	65	69	69	71	70	67	66	63	63	60	58	56	50	52	49	49	49
				2	92.6	50	64	91	84	66	80	69	54	66	74	78	68	68	71	66	73	71	72	71	68	66	63	62	61	58	55	51	49	51	50	48
				3	90.7	49	64	90	79	65	77	71	64	68	67	70	67	60	71	65	69	68	68	68	67	63	60	60	59	54	53	52	51	49	49	46
				4	90.8	53	64	90	80	58	75	64	59	65	64	71	67	61	69	64	68	68	66	67	65	64	61	61	61	56	55	51	50	49	49	46
				5	91.6	48	62	89	84	65	81	72	55	61	68	80	72	69	73	68	71	72	71	70	67	65	63	63	61	57	53	49	49	47	49	48
			2	1	91.0	49	63	90	82	60	73	64	56	63	66	78	66	61	70	63	69	68	68	69	68	64	65	64	63	58	57	55	52	50	50	50
				2	92.2	50	65	91	82	64	77	66	58	56	65	71	65	62	71	66	72	69	71	70	67	64	63	63	63	60	57	56	52	52	50	48
				3	91.2	49	64	90	81	69	75	71	68	69	66	76	68	60	68	64	67	69	67	68	67	65	63	60	61	59	55	54	53	52	50	47
				4	91.6	48	62	90	84	61	77	70	58	61	64	79	67	63	72	64	67	70	69	68	66	64	62	63	60	58	57	53	53	50	49	47
				5	91.6	52	63	90	83	66	78	68	54	64	71	78	70	66	72	66	72	70	69	69	66	62	60	61	61	57	54	51	52	50	49	47
			3	1	91.4	51	64	90	81	58	74	64	51	65	65	75	64	60	69	62	67	69	68	68	65	64	61	62	59	57	55	52	51	49	48	47
				2	92.9	49	63	92	85	67	77	69	58	67	66	80	69	64	71	67	71	70	69	70	67	66	63	62	61	58	55	52	51	49	49	45
				3	91.3	48	64	90	83	72	76	72	70	71	69	79	68	63	72	64	68	67	68	67	66	64	62	59	62	58	56	51	50	47	47	45
				4	91.1	48	62	89	83	60	80	71	55	65	75	79	68	68	73	67	69	68	68	66	65	64	60	60	59	55	53	50	50	46	45	45
				5	91.9	52	63	91	82	63	76	66	56	60	64	71	67	65	70	64	69	69	71	67	67	63	62	62	61	59	55	50	50	49	47	45
			4	1	89.2	49	64	88	77	59	67	56	60	57	61	69	65	59	69	65	69	67	68	69	69	67	63	63	62	58	56	55	53	52	52	48
				2	90.4	49	63	89	80	65	77	66	61	61	65	69	67	64	72	68	68	68	69	70	70	66	64	63	63	60	57	56	54	55	52	49
				3	87.6	48	62	86	74	68	74	68	68	64	65	72	68	65	67	66	63	67	67	68	67	64	62	59	60	57	53	51	50	49	48	47
				4	88.1	51	63	87	75	57	71	60	64	56	62	72	66	62	65	66	64	66	67	67	66	64	61	60	58	55	54	53	51	49	50	45
				5	88.4	45	60	86	78	61	79	69	61	61	69	73	68	65	71	68	68	68	69	69	68	67	63	61	60	59	55	54	52	51	50	44
			5	1	84.0	43	48	74	73	56	78	73	65	52	60	77	71	68	61	68	68	68	69	69	71	66	65	64	62	60	56	56	52	52	49	51
				2	85.4	41	55	79	69	63	82	70	68	55	57	69	70	71	65	68	67	69	69	68	65	63	60	60	56	54	52	50	48	47	46	45
				3	83.8	41	55	79	72	64	73	68	66	58	60	74	71	69	64	69	67	70	71	69	67	67	64	62	60	59	55	51	50	48	45	41
				4	84.2	43	51	79	75	53	73	65	68	54	62	76	71	68	63	72	66	69	70	69	68	66	63	63	61	57	54	51	47	45	41	42
				5	84.6	41	53	79	76	61	65	63	67	55	61	77	72	69	62	70	66	71	72	70	69	68	66	65	63	61	56	53	51	49	44	43
			6	1	83.1	40	52	78	74	56	73	66	66	53	51	74	66	68	66	63	70	63	68	66	69	67	65	63	62	59	55	54	50	50	48	44
				2	83.4	39	52	80	76	57	61	57	68	56	54	73	66	71	67	63	68	65	67	69	67	65	62	60	58	57	54	54	52	50	49	43
				3	83.4	41	51	78	75	62	74	70	66	60	53	72	66	69	67	62	69	64	67	70	66	67	65	65	63	59	56	53	52	50	47	40
				4	84.3	41	52	79	79	52	70	68	68	59	57	72	69	69	67	65	71	66	67	68	67	66	63	62	61	57	54	52	48	46	43	42
				5	84.0	45	54	81	77	61	72	66	63	55	55	72	68	68	65	62	67	63	68	66	65	64	63	61	56	55	53	52	49	46	43	42
			7	1	91.2	49	64	90	80	60	75	64	50	65	69	75	67	65	69	64	69	72	72	71	69	67	65	62	62	60	56	52	52	50	48	48
				2	91.6	49	63	90	83	67	78	69	53	64	65	77	69	66	73	66	71	71	70	69	66	63	61	61	60	57	56	52	50	48	46	45
				3	90.7	50	62	89	82	63	78	71	59	67	66	79	68	66	73	65	69	70	69	67	67	62	61	60	59	57	55	51	51	47	45	45
				4	90.1	48	61	89	80	57	79	69	54	62	70	76	70	69	71	67	68	66	69	67	65	63	60	60	58	57	53	49	50	47	46	45
				5	90.7	46	61	89	82	64	79	71	55	60	71	80	71	65	73	67	71	71	70	71	66	65	62	61	59	56	54	50	50	48	45	45
			8	1	92.1	50	65	91	82	59	74	64	52	65	68	76	65	61	70	64	69	70	68	70	69	65	63	62	62	60	58	53	52	51	50	48
				2	92.3	50	65	91	83	64	76	66	55	64	66	74	66	64	72	66	71	68	69	68	68	65	63	63	62	58	56	51	52	51	48	46
				3	91.3	51	64	90	81	59	76	67	57	61	66	74	68	61	70	65	68	67	67	66	64	64	61	61	58	57	55	52	50	49	48	45
				4	91.1	49	63	90	82	62	78	69	56	66	74	76	68	63	71	67	69	69	67	67	64	63	59	60	58	55	55	51	50	50	48	45
				5	91.2	48	64	90	82	63	76	67	52	62	68	70	65	61	71	64	66	69	69	66	67	64	61	59	58	56	55	52	49	49	48	45

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
40	152	5A	9	1	91.7	49	63	90	83	61	75	67	55	66	67	80	68	62	69	65	69	70	69	70	67	65	63	64	62	59	58	52	51	49	50	49
				2	91.8	51	64	91	81	62	77	66	56	66	65	71	66	63	70	64	69	71	71	68	65	62	61	61	60	54	55	50	50	47	46	46
				3	91.3	50	63	90	82	59	76	66	57	59	64	74	67	63	69	64	66	68	68	69	66	64	62	61	59	54	54	51	50	46	47	46
				4	90.4	50	62	89	81	58	76	67	51	56	63	74	67	63	69	64	67	67	67	65	65	63	60	60	59	55	53	52	49	46	46	46
				5	91.3	49	62	90	83	66	79	70	57	59	70	78	72	68	72	69	72	70	70	67	66	63	60	62	57	53	53	49	48	46	47	48
			10	1	91.0	49	61	89	81	61	75	65	58	58	64	83	72	59	74	69	70	69	70	72	71	70	68	67	66	64	61	56	55	55	53	54
				2	90.9	46	61	87	85	65	78	74	61	57	67	82	74	67	70	74	70	70	69	70	70	68	65	64	63	61	59	56	54	53	50	50
				3	91.9	49	62	89	86	63	69	66	63	65	69	83	73	64	72	68	71	70	72	71	71	69	67	66	65	64	60	56	53	52	52	50
				4	91.2	50	61	88	85	61	70	65	61	71	71	82	74	65	75	70	72	70	69	69	68	68	65	64	63	61	57	54	52	51	50	48
				5	90.1	43	54	81	85	61	80	83	75	67	65	72	71	74	72	69	78	72	72	70	66	65	64	61	61	60	55	52	49	48	47	50
			11	1	90.7	58	62	77	78	71	79	78	75	77	77	81	77	79	78	78	82	79	72	74	71	69	66	65	64	62	59	80	58	67	69	73
				2	86.5	42	52	78	79	54	81	80	68	60	58	68	63	68	69	63	70	69	69	65	67	64	63	62	61	58	54	51	48	46	46	49
				3	86.5	39	56	78	81	56	78	78	68	60	61	75	71	71	68	71	73	68	68	67	67	68	66	65	63	62	60	56	53	50	46	44
				4	86.7	42	54	80	80	58	77	73	65	56	63	79	73	71	64	74	70	71	66	68	65	66	64	61	62	60	56	52	50	48	47	45
				5	86.7	40	51	78	82	57	76	79	73	67	68	70	67	71	73	67	73	72	68	65	66	65	63	62	61	58	55	49	48	44	42	44
			12	1	85.6	46	50	75	77	56	81	80	67	59	57	62	60	64	69	68	63	69	64	68	67	65	63	63	61	59	57	53	51	47	48	50
				2	85.8	39	50	77	76	54	81	78	62	62	60	64	61	67	73	66	66	67	67	70	69	67	65	64	62	59	59	56	52	48	45	44
				3	85.7	38	52	76	78	54	79	80	70	63	61	67	64	68	71	66	66	68	66	66	68	65	64	62	61	58	57	53	52	45	45	45
				4	85.4	48	49	74	80	53	75	79	69	66	69	59	62	65	73	73	63	72	68	69	64	63	61	59	56	53	52	48	46	41	43	44
				5	85.7	43	51	78	80	56	77	78	75	66	64	60	61	67	71	69	64	69	65	66	66	63	61	60	58	56	53	48	47	41	42	44
70	152	6A	1	1	86.0	45	60	85	75	60	63	55	55	57	64	74	65	61	68	60	66	69	66	67	66	64	61	60	59	55	53	49	49	47	49	49
				2	86.3	48	61	85	74	57	63	55	53	59	66	76	64	61	70	61	69	69	67	67	66	63	62	62	60	57	54	51	50	48	48	47
				3	86.7	46	60	85	75	60	62	57	54	62	65	77	65	60	71	62	68	69	67	68	67	66	63	62	61	56	55	50	49	49	48	47
				4	86.4	44	54	77	75	67	70	69	59	70	72	80	75	72	79	71	74	70	69	69	69	66	67	67	64	59	56	51	50	50	48	48
				5	86.2	46	59	82	77	59	73	65	58	64	69	80	70	61	73	66	67	71	69	67	65	64	63	64	62	59	55	51	50	48	48	47
			2	1	85.1	45	58	83	74	58	56	52	54	57	64	76	65	59	69	60	65	67	65	62	62	62	60	61	59	56	54	51	50	48	50	48
				2	85.7	43	61	83	74	63	67	59	57	60	66	77	64	59	70	65	68	68	67	67	66	64	63	63	64	60	55	55	53	51	49	46
				3	86.1	45	58	84	75	56	65	58	58	62	67	78	68	61	72	64	67	68	69	68	67	65	63	62	63	58	57	55	54	51	51	47
				4	86.3	50	48	64	76	63	68	76	62	58	66	78	78	74	69	80	74	71	69	68	66	65	63	63	64	60	58	54	51	47	45	44
				5	85.8	44	58	84	74	61	70	59	57	61	67	76	66	58	71	62	68	68	68	68	67	65	63	62	60	58	56	55	54	50	49	49
			3	1	84.9	46	58	83	73	57	58	52	55	59	67	77	63	62	69	60	66	67	65	65	64	61	61	60	60	57	54	50	49	48	45	44
				2	86.7	49	55	82	76	64	72	62	59	64	74	81	71	69	75	68	69	66	68	68	68	67	65	64	63	59	57	53	51	47	47	46
				3	86.4	46	59	85	75	59	66	58	58	58	64	76	65	60	68	62	68	69	67	68	66	65	63	64	61	59	55	53	52	50	49	45
				4	87.3	52	50	64	78	64	65	73	62	57	57	72	77	73	71	80	83	71	73	70	67	63	62	61	60	57	57	50	48	43	39	40
				5	87.2	46	61	85	74	62	73	63	56	70	74	75	65	66	73	67	70	69	68	68	68	67	64	63	60	59	56	54	52	49	46	46
			4	1	84.1	47	61	83	69	59	67	59	53	50	61	70	65	60	65	65	69	66	67	67	67	66	62	60	58	57	55	53	50	49	50	41
				2	84.1	43	59	82	68	58	68	57	55	50	60	70	68	62	69	67	69	69	69	70	69	67	65	62	60	58	56	54	53	51	51	44
				3	84.5	47	61	83	67	59	68	55	56	48	59	71	67	66	66	69	67	69	70	68	69	66	62	61	60	58	54	52	51	50	48	43
				4	86.5	46	58	81	75	64	73	65	59	65	69	77	73	65	76	73	75	72	72	72	73	70	66	65	64	61	57	55	52	53	52	45
				5	84.6	44	56	81	74	61	70	61	59	55	64	72	68	60	69	67	70	69	69	72	69	69	65	64	61	61	57	54	51	50	50	44

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of -																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
					Flyby																															
70	152	6A	5	1	83.8	41	54	77	75	58	73	66	56	46	60	78	69	68	63	69	65	73	67	68	66	65	64	62	61	58	55	52	49	45	42	41
				2	84.6	42	51	75	77	59	74	72	56	50	60	79	72	67	62	68	67	72	69	68	69	67	65	63	62	59	56	52	51	48	46	43
				3	84.5	42	54	78	77	62	73	69	58	46	60	78	73	67	63	67	67	72	69	70	69	65	63	62	61	58	56	53	49	45	43	45
				4	84.7	44	53	80	74	61	62	61	69	53	61	75	75	73	66	72	67	70	68	70	70	67	66	64	62	60	55	54	52	49	45	43
				5	84.8	40	52	79	77	59	74	68	58	47	57	76	70	70	60	68	66	69	68	68	68	66	64	63	58	57	54	49	49	45	41	43
			6	1	83.7	40	53	79	76	56	71	66	56	51	58	75	68	68	68	64	70	68	68	68	66	67	64	63	61	60	56	55	51	48	46	43
				2	83.5	40	52	78	77	57	72	68	53	51	53	73	67	66	68	61	68	66	68	68	68	65	65	63	61	60	57	55	51	48	46	42
				3	83.1	43	53	78	77	57	72	68	57	55	51	73	69	65	68	59	69	65	68	68	65	65	62	62	61	58	54	54	50	48	43	41
				4	83.1	39	51	79	76	57	58	55	64	57	52	67	67	69	69	63	70	64	67	68	67	65	64	61	60	58	55	53	51	48	44	41
				5	83.2	41	53	79	76	58	72	66	60	55	50	68	65	69	68	61	68	61	68	68	67	66	62	62	61	59	56	52	50	46	43	41
			7	1	84.9	45	61	84	69	56	68	56	54	57	66	65	64	59	66	63	68	66	66	65	64	63	61	60	60	58	54	53	49	46	45	45
				2	85.4	43	58	83	74	55	60	54	51	60	66	79	67	64	70	62	66	69	67	68	65	66	63	62	61	59	57	52	53	47	44	45
				3	85.6	45	56	83	75	58	62	56	54	59	63	79	67	62	72	61	67	69	69	66	67	66	64	63	62	59	57	52	52	47	44	45
				4	86.5	50	59	83	74	60	75	64	56	68	69	77	74	69	74	68	71	70	71	70	69	68	63	62	62	61	57	55	52	50	45	45
				5	86.1	46	61	84	76	58	71	61	50	61	66	76	66	61	71	63	68	69	69	67	67	66	62	59	61	58	56	51	51	48	44	44
			8	1	86.4	47	62	85	75	59	67	57	51	60	65	77	65	60	69	62	67	69	68	67	65	64	61	62	61	58	56	52	49	48	47	46
				2	86.2	45	60	84	75	58	64	56	53	59	62	78	66	60	70	61	67	68	67	66	65	65	64	63	61	56	55	51	50	49	46	42
				3	85.8	48	61	85	72	58	65	57	51	58	64	69	65	57	65	61	68	68	65	65	66	63	61	60	59	55	55	51	49	47	46	41
				4	86.3	49	63	85	73	58	74	60	54	60	67	70	68	64	67	65	68	68	68	69	65	65	63	62	62	57	56	52	52	48	46	42
				5	87.2	46	60	85	77	56	73	62	54	63	71	78	65	62	72	66	69	70	69	68	68	65	65	64	63	59	58	52	52	50	48	42
			9	1	85.5	48	60	84	74	60	67	56	52	57	65	74	65	60	68	62	67	67	68	67	66	65	62	62	60	56	55	50	48	46	47	47
				2	85.9	47	60	85	74	59	63	57	55	59	62	73	64	60	66	60	68	69	68	68	66	65	62	62	62	56	57	51	50	46	46	44
				3	86.0	48	59	84	75	59	69	60	53	58	66	77	66	61	69	63	68	68	69	68	66	64	62	62	62	57	55	52	48	46	47	45
				4	86.3	51	61	84	75	62	73	61	54	65	65	76	67	61	69	63	68	69	70	68	67	64	63	63	63	58	58	52	50	49	47	46
				5	86.1	47	61	85	73	57	74	61	61	60	68	66	65	61	68	65	68	67	68	66	66	64	62	62	61	56	57	52	51	48	47	47
			10	1	88.1	44	57	84	76	62	72	63	57	57	68	84	72	62	75	66	69	71	69	69	68	67	67	67	66	62	59	56	53	52	50	50
				2	88.7	50	55	78	80	62	73	71	60	59	67	86	78	65	70	70	70	71	70	70	70	70	68	68	67	66	61	56	54	52	49	46
				3	88.8	41	53	79	80	61	71	69	60	59	66	86	78	61	72	69	69	68	68	70	68	69	68	66	66	63	60	56	56	52	49	46
				4	89.2	45	58	83	80	57	73	68	59	67	75	84	77	69	76	74	71	70	72	72	72	69	68	65	66	64	61	57	53	52	50	47
				5	88.7	49	59	82	81	58	68	62	56	58	67	84	75	62	73	69	71	70	70	68	69	70	70	67	67	63	60	57	54	52	51	51
			11	1	85.1	39	52	71	73	61	64	63	65	57	62	82	75	68	62	70	67	70	69	71	70	71	67	66	64	62	59	56	51	49	46	46
				2	85.3	41	52	75	72	60	70	64	63	53	62	82	73	68	65	71	67	72	72	71	71	71	67	66	65	63	59	56	53	49	48	46
				3	85.2	47	50	76	73	62	72	66	59	52	61	81	74	70	65	69	66	68	69	72	71	70	67	66	64	61	58	56	51	48	47	45
				4	85.4	47	55	75	75	56	74	69	67	57	63	79	75	73	68	71	68	71	71	71	71	70	67	66	65	62	59	56	53	50	47	46
				5	84.8	46	57	74	75	59	68	66	60	53	59	80	74	69	65	70	68	70	71	72	70	69	67	66	65	62	58	57	51	49	45	44
			12	1	83.5	38	50	73	70	57	74	70	62	54	60	76	70	69	70	64	72	67	70	71	69	70	67	67	66	64	63	58	54	49	45	45
				2	83.2	40	52	77	72	61	73	65	60	55	54	73	68	69	72	63	71	66	70	70	70	68	66	65	63	59	58	54	53	47	44	46
				3	84.2	44	51	76	73	61	76	70	59	55	55	74	69	70	73	63	71	69	72	72	69	68	67	67	63	63	60	58	55	50	46	45
				4	84.3	44	52	74	73	57	76	71	69	58	57	73	70	73	73	64	73	69	72	70	70	68	68	65	64	62	60	57	55	50	47	45
				5	83.5	45	52	78	72	57	73	65	60	58	56	71	68	71	71	64	73	68	72	69	69	68	67	64	62	60	58	55	54	49	45	44

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
100	152	7A	1	1	85.1	48	51	64	80	61	63	72	61	55	59	73	80	66	64	72	64	68	72	71	66	63	59	63	61	58	52	52	49	44	43	46
				2	85.7	45	51	66	81	59	65	74	61	57	61	74	80	65	66	74	65	69	70	69	66	67	63	64	61	58	52	52	47	44	42	47
				3	86.2	47	51	69	80	66	68	73	62	55	64	77	80	66	72	76	72	69	73	72	65	65	62	65	63	60	54	54	50	49	48	47
				4	86.6	46	50	68	81	64	67	75	64	56	62	76	81	65	68	76	68	71	72	69	68	65	63	66	65	62	59	57	52	51	47	47
				5	86.5	51	54	67	81	66	66	73	56	53	64	77	81	67	71	76	68	70	73	70	67	67	64	63	64	58	56	55	51	48	48	48
			2	1	85.2	47	51	66	80	62	67	73	60	57	60	74	79	65	68	74	69	68	71	71	66	62	62	64	65	60	59	57	54	49	46	47
				2	85.4	51	54	66	81	59	63	74	61	55	59	73	80	66	63	72	62	67	72	68	64	63	62	63	64	59	55	54	50	46	44	44
				3	86.4	50	54	68	81	61	65	75	61	55	62	76	81	63	69	75	70	69	72	71	67	65	63	65	64	61	59	57	57	50	48	46
				4	87.2	48	51	71	82	67	64	74	63	56	64	77	81	65	71	75	71	70	73	72	68	67	65	66	66	61	62	59	57	53	50	47
				5	87.1	47	56	70	83	68	64	71	63	56	66	76	81	66	67	75	67	70	73	71	67	66	64	64	66	62	61	59	56	51	48	47
			3	1	85.7	47	51	65	80	64	62	72	60	54	62	75	79	65	69	75	71	70	73	74	67	65	63	65	64	58	58	56	52	48	45	43
				2	86.4	42	48	67	81	62	66	74	62	54	63	76	81	64	68	75	69	70	71	72	66	64	64	64	63	59	57	56	49	47	43	43
				3	86.8	48	52	68	81	68	66	74	63	58	66	76	80	66	70	77	70	69	74	72	67	67	65	67	65	61	60	57	53	48	45	42
				4	87.4	47	52	70	83	60	65	73	63	55	64	77	81	64	70	76	71	69	73	72	69	68	66	67	68	63	61	59	54	50	46	44
				5	86.5	45	52	67	82	65	64	71	63	59	57	73	82	68	63	73	64	68	72	74	65	64	61	63	61	58	58	54	51	47	43	42
			4	1	86.3	48	53	74	76	67	65	65	59	62	67	83	75	64	72	69	69	72	72	70	72	71	66	68	65	66	61	60	55	52	51	46
				2	85.8	39	49	67	83	60	63	70	58	55	54	71	78	68	61	67	64	70	73	75	70	69	65	65	64	62	57	54	49	48	44	43
				3	87.0	48	54	75	77	68	64	65	58	54	68	83	76	65	75	71	71	70	74	73	72	70	67	68	66	65	62	59	56	55	53	45
				4	87.4	50	52	75	81	62	65	69	61	54	65	82	78	67	75	73	73	71	74	72	71	70	68	67	65	65	63	60	58	55	53	47
				5	86.5	52	51	71	79	60	66	71	57	54	65	80	80	64	73	73	69	71	73	72	71	70	67	68	65	65	61	58	56	54	53	46
			5	1	85.3	44	51	74	75	62	71	68	64	61	62	82	74	68	64	68	65	72	72	68	65	65	64	63	60	58	56	51	49	46	44	45
				2	85.5	44	49	72	76	57	68	70	61	54	58	82	76	70	64	70	65	71	72	70	68	66	64	64	62	60	57	55	49	45	41	46
				3	86.1	44	50	77	75	60	73	69	62	52	62	82	74	72	65	71	68	74	72	70	70	67	67	65	62	61	57	55	51	49	45	44
				4	86.0	45	51	76	78	60	70	68	60	54	59	82	74	71	66	70	70	72	71	70	71	67	68	64	64	61	60	55	55	51	47	47
				5	85.6	46	50	73	77	60	69	70	63	56	59	81	75	71	66	68	69	69	70	68	72	69	67	66	63	60	58	56	54	51	46	46
			6	1	83.8	42	50	75	76	59	72	69	63	58	58	78	71	70	67	64	69	67	71	68	66	65	65	64	62	59	56	54	51	49	46	43
				2																																
				3																																
				4																																
				5																																
			7	1	85.3	50	53	66	77	64	66	73	60	60	65	77	80	63	70	74	70	69	73	72	66	65	65	65	64	59	58	56	52	46	43	45
				2	85.6	44	49	67	81	58	63	73	57	59	61	74	80	65	68	74	65	67	70	68	67	66	64	62	62	60	58	54	49	44	41	44
				3	86.1	48	53	65	82	61	59	71	64	59	56	71	81	69	64	67	64	65	70	75	67	63	60	63	60	58	57	54	50	45	41	43
				4	86.8	46	51	69	82	63	64	74	56	55	66	76	80	66	69	76	72	71	73	70	67	65	64	65	65	61	61	57	53	47	44	43
				5	84.2	48	56	77	69	57	65	59	54	56	62	80	68	64	74	63	68	72	74	69	69	64	64	64	64	62	58	56	54	49	46	46
			8	1	85.4	50	51	68	80	71	65	72	60	55	63	75	79	65	68	74	67	68	71	70	66	65	63	63	62	59	57	55	52	47	44	44
				2	86.1	49	53	69	81	62	64	74	55	57	63	75	80	65	69	75	71	69	71	70	66	64	63	64	63	60	58	57	51	49	43	40
				3	88.1	50	55	72	85	65	67	74	58	57	64	76	81	66	69	76	69	71	74	73	68	67	65	67	66	62	58	58	55	52	48	42
				4	87.0	48	53	68	83	66	65	74	57	57	63	75	81	69	67	75	67	69	70	70	65	64	61	64	64	61	57	56	50	47	44	42
				5	86.3	49	54	68	82	66	64	72	58	52	62	76	80	64	69	76	68	69	73	70	64	65	62	64	62	59	57	55	51	49	47	42

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Airspeed, knots	Altitude, m	Item	Microphone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
100	152	7A	9	1	85.1	49	52	65	80	61	64	71	59	55	58	73	80	69	63	72	63	68	72	73	67	64	62	63	65	59	57	54	49	46	43	45
				2	85.5	47	50	66	81	59	66	75	61	58	59	73	80	66	65	73	64	67	72	69	66	64	62	63	64	58	57	52	47	43	40	44
				3	86.8	51	54	70	82	61	66	73	61	56	64	76	80	65	70	76	68	69	74	71	68	67	64	65	63	61	59	57	52	50	47	45
				4	86.3	49	52	69	81	59	67	74	54	53	60	75	81	65	68	75	67	69	73	70	67	65	62	65	65	61	60	58	52	47	45	43
				5	86.2	51	54	69	82	64	66	71	59	56	64	75	80	66	69	76	69	69	72	71	66	67	64	66	64	61	58	55	53	49	46	44
			10	1	88.1	49	53	72	68	64	67	65	60	60	67	87	77	63	73	70	70	69	69	67	68	68	66	68	64	62	60	56	54	51	50	50
				2	88.1	50	56	80	73	63	71	63	58	54	65	86	73	63	75	67	71	71	70	70	69	68	65	67	66	63	60	57	54	51	47	45
				3	89.7	49	54	73	71	64	66	64	62	56	65	88	80	65	75	72	72	70	72	71	70	70	68	68	65	66	61	58	57	53	49	48
				4	89.5	49	57	82	76	57	69	63	62	58	66	87	75	66	77	71	71	68	72	70	68	70	68	67	65	64	62	57	54	53	49	46
				5	88.9	53	62	81	72	65	68	62	60	58	66	86	74	64	79	71	74	71	73	70	68	70	68	66	67	64	61	59	55	53	49	46
			11	1	87.7	44	51	72	72	60	63	62	63	62	61	85	79	72	67	73	69	72	70	71	69	68	67	65	64	63	60	56	51	48	47	49
				2	87.9	50	52	74	75	61	68	66	59	56	60	85	78	71	65	75	69	73	70	71	70	70	68	67	65	64	60	57	53	51	46	46
				3	87.9	45	48	70	73	63	66	65	64	54	59	85	81	72	64	71	70	71	72	72	72	71	69	68	66	65	61	58	55	52	50	47
				4	87.1	41	46	67	72	64	65	68	65	57	57	83	81	72	67	72	72	69	71	71	73	71	68	67	64	64	60	58	54	52	50	45
				5	87.8	43	48	73	73	57	69	65	62	56	60	85	77	73	67	72	71	73	71	73	74	72	71	69	66	63	60	59	55	53	48	48
			12	1	85.8	48	54	80	74	52	71	64	60	60	60	79	72	73	70	68	72	71	70	72	71	69	66	65	63	61	58	58	56	51	45	46
				2	85.6	44	50	76	76	58	71	70	59	57	57	80	76	74	69	69	73	68	70	70	71	68	66	66	66	62	61	59	56	52	48	46
				3	86.1	43	53	77	74	61	74	69	68	58	60	81	73	70	74	67	74	70	71	72	70	69	70	67	66	65	63	60	56	51	47	46
				4	85.7	46	54	82	76	58	72	66	63	56	55	74	71	71	74	64	71	71	71	70	72	69	69	65	62	63	59	56	54	50	45	46
				5	85.8	45	54	80	76	60	72	69	64	58	59	77	70	73	74	66	74	70	71	71	72	69	68	66	63	63	60	58	56	51	48	45
120	152	8A	1	1	88.4	49	54	71	85	74	65	71	59	55	64	74	80	67	72	77	73	71	73	74	70	68	65	64	65	63	60	59	52	50	48	47
				2	90.0	48	57	70	87	71	67	70	61	55	64	75	82	70	70	79	70	72	74	76	69	66	66	65	66	63	57	55	51	48	48	47
				3	88.8	50	55	71	85	69	67	71	58	59	66	76	81	69	72	80	73	71	75	76	70	70	68	66	68	65	59	60	54	51	49	48
				4	88.5	49	56	69	84	69	62	70	58	56	67	76	82	69	71	79	71	72	73	74	70	67	67	66	66	64	59	58	53	51	48	48
				5	89.7	48	52	67	87	70	66	71	61	59	58	72	83	71	63	74	68	73	72	77	73	68	66	65	67	63	59	56	51	48	47	45
			2	1	88.3	43	51	68	85	62	65	69	59	57	62	74	82	69	68	78	69	70	70	73	68	67	63	65	66	62	62	59	56	51	46	45
				2	89.5	49	57	70	87	67	67	72	61	60	60	73	83	70	64	76	66	71	72	74	71	67	63	66	68	64	62	59	54	49	46	46
				3	87.7	45	53	65	83	64	63	71	58	55	59	74	82	70	67	78	70	73	72	75	69	67	63	65	67	62	60	57	54	50	47	46
				4	88.5	46	54	67	84	66	63	69	61	58	64	75	83	71	69	78	68	71	73	75	70	68	65	66	69	65	64	61	56	52	49	46
				5	89.0	52	55	69	86	66	63	71	57	57	62	74	82	69	69	79	70	73	73	76	70	67	64	68	68	63	63	61	58	52	52	48
			3	1	88.3	47	53	66	85	65	63	70	59	52	63	72	81	69	65	78	70	74	73	77	72	66	65	66	67	64	59	57	54	49	42	41
				2	88.9	46	54	67	87	72	66	74	65	60	59	70	82	70	63	73	67	71	71	75	72	63	62	62	64	62	58	55	50	46	40	42
				3	87.9	50	54	68	84	66	63	70	60	54	61	73	81	66	68	79	71	70	72	74	70	66	63	67	68	62	56	55	53	47	46	44
				4	88.6	47	54	69	85	67	63	71	64	55	63	73	82	70	69	78	69	71	72	75	70	67	65	66	66	60	60	57	53	49	45	45
				5	90.4	52	56	72	87	68	62	72	59	54	66	77	83	67	71	81	75	73	74	77	73	71	68	68	69	67	63	62	57	52	48	45
			4	1	88.8	48	55	71	86	68	66	73	58	55	63	74	80	69	68	77	71	72	76	75	73	71	68	70	69	67	62	58	57	54	50	43
				2	85.6	44	54	69	77	63	63	68	52	56	64	80	79	68	71	72	70	68	70	73	69	67	65	64	65	64	62	56	54	51	49	42
				3	83.9	47	48	67	71	63	64	61	53	55	64	80	74	64	72	68	70	67	69	72	68	68	64	63	61	61	58	54	52	48	48	42
				4	83.9	44	49	66	78	61	59	64	53	51	61	75	78	65	68	72	69	67	70	69	68	65	64	64	63	63	56	56	53	49	46	40
				5	85.5	47	50	67	82	67	63	66	54	48	60	73	77	69	67	74	66	69	72	73	68	67	64	62	63	64	58	54	54	51	48	43

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																																
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																					
120	152	8A	5	1	88.0	42	51	70	83	65	65	75	62	60	56	78	83	74	65	70	69	69	70	72	71	69	67	65	64	64	61	56	52	50	44	47
				2	84.5	42	47	66	82	64	60	73	61	60	51	68	75	69	64	63	68	65	66	67	66	64	62	61	62	61	58	54	50	46	41	41
				3	82.6	45	50	67	75	58	61	69	60	54	54	78	76	69	63	65	66	64	66	68	65	64	60	60	59	54	51	49	47	44	41	41
				4	84.0	44	49	67	75	60	64	67	61	53	57	81	76	66	62	68	66	69	67	69	67	65	64	63	60	60	54	52	49	46	42	43
				5	84.6	47	47	67	81	63	63	71	62	60	51	74	78	70	63	66	68	65	67	72	67	67	63	64	62	59	57	52	47	48	44	42
			6	1	87.5	52	54	69	85	64	63	73	66	66	55	70	77	71	73	75	71	70	72	72	72	70	67	66	65	64	61	57	52	48	42	41
				2	84.1	40	47	68	82	63	61	69	63	63	53	66	72	68	68	71	66	68	68	68	67	65	63	61	59	56	52	49	45	43	40	39
				3	82.3	43	47	72	77	59	64	65	62	55	51	75	71	71	70	63	69	64	68	68	66	63	62	62	58	56	53	51	48	48	43	39
				4	82.6	39	45	65	80	55	57	71	62	63	52	63	69	67	69	72	64	65	65	68	64	63	61	60	59	57	52	50	46	41	38	39
				5	84.2	38	48	68	82	63	59	69	64	64	53	63	70	68	69	73	66	68	67	70	70	67	65	64	63	59	56	51	45	45	40	38
			7	1	88.1	47	57	67	84	67	66	70	59	55	67	75	81	66	69	79	73	72	72	75	71	67	64	67	66	62	61	59	53	47	43	45
				2	89.3	44	51	68	86	71	66	72	62	55	63	74	83	70	68	80	70	72	72	76	73	67	65	64	67	63	60	57	52	48	43	46
				3	88.1	48	58	69	83	73	71	72	60	61	66	76	82	68	70	77	71	71	72	73	68	67	65	67	65	62	60	58	54	49	44	45
				4	87.8	49	53	68	83	63	61	71	54	59	63	74	81	67	70	80	72	71	74	74	70	68	64	66	67	65	62	60	55	48	44	46
				5	89.3	45	54	69	84	72	63	73	61	60	69	76	82	69	73	80	75	74	75	76	70	68	67	68	67	66	63	60	57	51	46	45
			8	1	88.4	49	55	69	85	68	66	70	58	59	63	74	82	71	67	78	71	71	71	73	70	66	64	63	63	60	59	55	51	48	44	43
				2	89.2	44	55	67	86	70	66	68	60	52	59	71	83	69	66	77	70	71	71	77	72	68	65	65	66	62	60	57	53	50	47	45
				3	88.5	48	54	70	84	65	65	72	59	54	63	76	83	70	71	79	72	71	74	75	70	67	64	65	65	62	57	57	54	51	48	45
				4	88.3	48	53	67	83	67	62	69	58	56	64	75	83	70	70	79	71	72	73	75	70	69	65	66	68	64	61	59	53	50	46	44
				5	90.0	47	54	72	86	68	68	71	59	57	66	77	84	67	72	81	73	71	73	77	72	68	67	67	68	64	62	60	56	52	50	45
			9	1	87.8	42	51	65	85	66	61	69	59	51	60	69	80	69	62	74	65	70	69	75	71	66	63	63	66	62	60	56	50	46	42	42
				2	89.6	50	55	70	87	70	66	71	58	57	65	74	82	70	68	79	70	73	73	75	70	68	65	66	68	64	63	59	55	49	47	45
				3	88.3	48	55	67	85	78	67	74	69	57	60	71	81	71	65	75	66	71	71	74	71	67	64	65	68	60	58	55	51	46	44	46
				4	87.9	46	52	67	86	69	66	67	59	58	56	69	80	69	63	72	66	69	69	73	72	69	66	66	66	63	59	56	51	45	43	46
				5	89.6	50	55	71	86	65	66	70	56	57	65	75	82	69	69	79	72	72	74	77	71	68	65	66	68	62	63	60	55	50	49	48
			10	1	90.2	57	54	75	79	68	68	69	57	58	68	88	82	67	72	71	74	71	72	73	72	72	72	70	69	67	63	59	56	53	51	48
				2	91.7	52	58	79	79	64	73	72	56	59	71	90	81	67	74	71	74	72	73	71	72	71	68	67	69	65	63	60	55	52	51	50
				3	91.2	54	58	72	80	68	70	75	60	61	68	87	86	71	73	76	73	72	74	75	73	73	70	72	70	68	66	61	59	55	51	51
				4	91.0	51	54	74	84	64	68	73	61	56	66	85	87	70	70	75	71	71	73	73	72	73	71	69	70	67	64	61	58	52	51	49
				5	92.0	54	56	75	87	71	69	77	60	56	67	83	88	72	68	75	73	73	73	74	74	73	73	70	69	69	64	62	59	55	53	51
			11	1	89.8	41	51	72	84	67	66	73	63	59	61	82	86	74	67	73	71	70	72	71	71	71	70	66	67	65	63	57	53	50	45	46
				2	92.1	47	55	78	83	65	70	72	65	60	65	88	86	77	66	77	72	74	75	75	74	73	70	69	68	67	62	60	55	52	49	49
				3	90.1	49	51	72	78	66	65	68	62	60	61	86	84	78	67	76	75	72	73	73	73	72	71	69	66	65	63	59	54	52	49	50
				4	90.2	47	52	74	77	66	65	66	61	57	61	88	81	75	66	75	73	75	73	74	74	73	71	70	67	67	62	57	54	51	50	50
				5	90.8	51	54	76	80	64	64	66	59	55	62	87	84	78	69	76	75	76	76	74	75	74	73	71	70	66	63	61	58	54	51	51
			12	1	88.5	46	53	76	82	62	65	68	65	61	59	83	80	75	71	68	75	71	74	74	73	71	72	69	68	67	64	62	58	51	46	45
				2	89.3	50	56	79	83	62	70	69	67	63	59	83	80	77	73	70	77	74	73	73	74	73	72	72	67	65	62	59	55	52	50	50
				3	87.6	50	54	78	77	60	69	68	65	62	59	81	76	77	74	68	77	74	76	74	72	72	70	69	66	64	62	59	57	52	50	51
				4	88.5	50	55	79	79	66	71	68	64	62	58	83	77	78	72	71	78	70	75	75	74	72	70	69	67	65	62	59	56	54	50	50
				5	88.6	45	53	74	82	66	68	71	67	63	59	78	80	76	74	72	75	76	76	75	76	74	72	71	68	66	63	61	58	53	49	51

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of -																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Landing																																				
		9A	1	1	106.7	81	94	98	96	95	98	99	98	94	94	92	92	89	85	84	87	87	86	82	79	78	78	80	77	76	73	74	72	75	78	80
				2	103.2	85	90	91	90	96	95	96	95	91	89	88	82	83	82	79	79	79	80	78	77	74	75	77	73	74	71	71	71	73	76	78
				3	106.7	93	94	97	90	95	95	95	96	97	96	92	91	88	85	84	85	84	82	77	79	74	72	76	74	73	71	70	69	72	74	76
				4	103.0	79	88	91	95	96	92	94	93	92	91	88	86	82	81	79	80	81	81	79	75	72	73	77	73	72	70	69	70	71	73	75
			2	1	88.6	50	52	71	73	64	83	83	80	74	74	72	68	66	60	63	70	72	75	72	68	62	66	64	65	58	61	58	58	54	51	53
				2	88.6	54	59	73	75	63	84	83	79	70	69	70	64	65	63	61	69	72	73	74	71	62	66	66	62	60	60	56	57	55	53	53
				3	88.3	47	56	83	76	60	73	67	77	75	73	75	74	71	63	68	74	78	80	75	72	67	67	70	69	63	65	60	59	58	58	57
				4	87.4	52	60	76	71	61	76	68	79	78	78	76	75	69	66	60	69	74	75	77	72	67	65	70	66	63	62	60	57	56	57	55
			3	1	85.8	52	57	63	64	58	79	82	75	68	68	68	62	64	61	58	65	70	75	72	70	65	64	65	63	60	55	52	48	48	44	40
				2	85.5	49	56	70	70	59	81	80	75	65	64	65	62	62	61	60	64	71	73	71	69	63	65	62	57	54	49	48	47	43	41	41
				3	84.6	38	45	65	72	55	75	80	75	68	69	68	61	60	59	58	69	73	75	71	62	65	64	62	60	56	54	50	51	48	42	40
				4	98.8	54	58	75	78	71	94	94	89	81	83	81	77	77	76	75	79	83	85	84	81	75	82	77	75	73	74	68	67	61	59	56
			4	1	101.0	56	62	89	85	69	97	90	88	82	81	87	82	80	82	81	87	90	90	87	88	82	80	78	80	73	72	69	67	70	73	69
				2	100.6	53	60	87	82	69	96	89	89	87	84	87	81	81	82	78	85	88	89	88	88	84	78	79	80	76	71	70	69	70	72	68
				3	100.1	54	62	86	82	66	93	88	89	86	87	88	81	80	83	81	88	88	89	87	89	83	80	82	82	76	73	74	71	72	74	68
				4	99.6	53	59	86	83	67	94	90	89	84	83	85	81	78	80	79	84	89	88	85	85	83	78	80	79	75	72	74	73	72	74	71
			5	1	90.1	44	55	83	76	59	85	75	71	68	71	77	75	75	79	72	71	69	73	75	74	74	70	70	71	68	66	59	56	54	52	52
				2	90.2	47	57	82	76	62	85	76	76	73	73	79	73	75	77	73	73	71	74	76	77	74	68	68	69	64	64	58	57	56	54	52
				3	89.8	50	56	82	79	61	84	79	78	74	75	77	73	71	73	65	67	73	77	77	75	70	66	68	64	61	62	58	53	50	49	48
				4	90.2	45	56	83	77	60	83	76	75	68	74	82	74	74	78	69	68	73	77	78	76	73	68	69	67	63	61	58	56	55	54	51
			6	1	86.5	51	56	80	73	60	82	73	67	65	67	76	71	71	70	64	66	67	72	71	71	71	76	65	62	59	59	57	52	50	47	45
				2	87.1	41	52	80	72	58	82	73	70	67	69	76	73	72	73	66	67	69	71	72	75	72	69	67	66	62	59	57	53	50	49	45
				3	87.3	49	51	77	78	64	81	80	77	69	68	72	67	67	69	67	66	70	74	73	74	70	69	66	66	62	62	58	54	50	49	43
				4	86.5	45	54	80	77	57	78	74	68	73	71	76	69	64	68	67	67	69	73	73	72	68	63	67	63	57	60	54	54	50	47	44
			7	1	112.0	71	83	89	83	81	86	95	90	82	86	97	91	93	90	93	91	92	89	88	87	85	80	83	80	78	78	77	76	74	77	76
				2	112.2	71	84	90	98	85	97	95	94	81	82	99	93	93	89	87	87	88	85	84	83	81	78	78	76	73	74	73	73	72	73	76
				3	111.8	71	83	98	90	85	97	96	91	80	87	95	95	94	91	94	91	92	88	88	86	85	81	79	79	76	75	73	73	72	73	77
				4	113.6	73	84	92	94	85	95	94	92	87	89	97	96	97	94	94	91	93	93	91	89	85	83	84	82	79	79	77	76	74	76	78
			8	1	105.3	60	68	90	92	76	84	89	82	87	94	97	97	92	95	93	96	93	94	90	85	80	79	79	77	69	71	68	69	70	71	65
				2	105.1	67	71	94	91	78	90	87	80	90	95	98	96	88	97	93	94	89	88	86	84	81	77	76	73	71	73	70	70	71	72	67
				3	104.2	58	65	91	92	74	88	90	80	88	93	96	95	88	96	90	94	92	91	85	84	79	76	76	75	71	71	69	69	71	73	66
				4	105.9	64	73	99	96	79	99	93	81	84	91	94	94	86	96	93	92	91	90	83	80	81	76	75	74	71	70	70	69	70	72	67
			9	1	104.6	63	71	98	96	75	96	90	74	82	90	95	94	87	94	90	92	90	86	85	83	78	75	74	74	70	69	66	66	66	70	71
				2	104.2	63	69	95	93	72	96	88	75	88	93	95	93	87	95	92	93	89	87	83	81	79	75	74	73	70	68	66	66	67	70	69
				3	102.6	58	59	79	87	71	80	86	79	78	86	93	94	92	93	95	92	91	90	89	84	81	76	77	79	68	69	71	66	65	67	70
				4	105.0	61	71	99	96	73	93	86	75	86	90	94	93	89	97	92	93	91	89	84	83	79	76	75	75	71	69	67	66	66	70	72

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of -																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Landing																																				
		9A	10	1	98.4	58	67	93	86	65	82	77	80	79	79	91	83	82	82	81	81	86	87	83	83	83	80	80	80	75	75	71	69	67	69	68
				2	99.4	89	91	95	85	86	88	86	85	84	82	87	79	81	81	72	71	73	75	76	75	72	72	73	71	67	65	64	65	65	65	65
				3	101.8	91	93	94	90	90	95	89	87	85	84	86	83	83	83	76	77	77	79	82	82	82	81	77	74	69	70	68	70	64	66	67
				4	97.9	52	64	91	84	66	85	77	80	82	81	87	85	83	86	84	84	85	86	84	85	82	83	82	80	76	75	72	69	71	70	68
			11	1	89.1	50	52	76	68	59	69	68	77	74	77	86	76	76	72	67	62	65	68	69	70	72	70	70	67	61	63	57	55	53	53	51
				2	88.0	40	52	77	70	59	71	67	70	70	69	84	72	68	69	65	68	70	75	77	78	76	73	70	66	64	61	57	54	51	52	53
				3	88.5	60	58	78	69	59	71	64	64	71	71	79	74	73	70	64	70	75	79	80	79	77	71	78	72	66	66	63	58	54	54	53
				4	87.8	47	51	77	70	57	73	66	68	69	70	82	72	70	76	74	68	71	75	77	75	75	74	72	71	67	66	59	57	54	53	54
			12	1	85.2	66	70	72	68	64	65	65	72	71	73	83	73	69	67	61	58	55	59	63	62	62	62	61	63	58	54	51	49	46	45	44
				2	84.3	49	57	76	69	52	72	64	67	62	66	81	70	67	68	65	61	67	67	69	69	69	66	65	65	56	54	53	50	48	46	46
				3	84.6	59	61	75	71	65	71	65	68	65	66	80	69	69	70	64	64	68	69	74	74	69	65	64	61	61	56	51	51	45	45	45
				4	84.7	44	50	75	68	52	69	62	64	65	68	80	69	67	73	71	65	64	69	73	72	72	70	70	68	63	62	55	54	48	47	46
Take-off																																				
		10A	1	1	111.6	91	95	98	94	94	94	93	95	98	97	96	94	91	95	90	91	89	91	89	87	85	86	88	86	83	81	79	77	79	83	82
				2	106.5	82	83	88	97	98	95	93	96	95	91	92	92	92	91	88	94	91	91	89	89	89	91	92	88	85	83	80	77	77	79	83
				3	108.6	90	97	99	91	90	91	97	97	96	90	97	89	88	91	88	86	85	86	86	84	82	82	84	80	80	80	76	76	76	78	78
				4	110.1	93	90	98	94	99	90	90	99	97	95	96	91	90	92	88	88	88	88	88	87	85	84	85	82	80	79	77	76	76	80	79
			2	1	105.8	85	87	98	95	96	96	93	89	84	89	99	88	83	89	87	89	89	90	89	87	85	83	82	83	80	82	80	82	83	84	84
				2	103.4	72	67	85	87	83	80	78	70	78	83	95	86	83	93	91	96	95	94	91	90	87	84	84	82	77	80	77	76	75	77	77
				3	100.3	64	68	89	87	76	81	78	67	73	83	95	86	80	89	84	87	87	88	88	87	85	83	85	83	80	82	78	78	77	79	77
				4	100.5	63	71	86	86	78	82	74	68	74	81	98	85	79	85	83	85	86	87	88	87	82	80	78	80	78	78	77	78	78	81	80
			3	1	99.1	61	67	91	84	73	79	77	67	70	80	87	81	77	88	83	89	88	90	89	86	85	83	83	81	77	77	75	72	72	73	73
				2	96.6	55	67	88	81	69	75	69	63	69	77	89	80	76	88	79	82	85	86	84	82	83	80	83	81	77	74	72	71	70	70	71
				3	96.6	57	70	89	79	70	74	69	62	69	78	93	81	77	73	76	82	84	83	83	82	79	78	79	75	74	73	70	70	69	70	70
				4	97.5	60	66	89	83	71	76	73	60	68	77	94	83	76	85	76	82	83	83	81	83	81	80	82	79	74	76	73	72	72	72	72
			4	1	98.8	52	62	87	77	68	89	80	85	87	85	93	87	88	87	85	85	80	79	79	81	79	75	72	73	70	70	67	67	67	71	67
				2	98.6	54	61	87	80	69	88	80	87	86	86	92	87	86	87	83	83	80	83	82	84	82	78	78	79	75	76	72	70	68	71	67
				3	99.3	54	58	84	77	64	84	79	88	82	85	96	87	86	88	84	86	82	81	82	84	82	79	78	77	75	73	70	67	67	72	70
				4	95.1	54	62	87	77	68	87	76	78	80	82	88	83	82	85	78	77	75	79	78	79	77	71	71	71	69	69	65	64	65	70	68
			5	1	88.4	46	49	75	67	58	78	68	76	75	75	82	77	78	79	78	74	68	68	70	71	71	70	68	68	65	65	56	55	53	51	50
				2	88.5	51	51	75	67	58	77	68	74	74	74	84	76	75	77	75	74	71	68	70	71	69	72	70	68	66	67	58	57	54	52	51
				3	88.9	56	60	72	67	61	72	70	77	74	75	86	75	75	78	76	73	69	67	69	71	70	70	70	68	67	66	59	57	54	52	53
				4	87.1	45	47	67	56	56	69	62	68	66	69	83	74	73	79	71	67	70	74	76	76	73	69	67	68	64	62	60	57	55	53	53
			6	1	84.6	41	45	67	58	48	67	59	65	64	67	81	72	67	69	63	68	68	73	75	71	70	66	62	62	62	59	55	53	50	48	44
				2	85.9	53	57	66	58	57	68	59	65	65	66	84	71	64	67	63	68	72	74	73	71	71	65	64	66	63	60	57	53	50	48	44
				3	86.5	48	49	71	64	54	69	66	73	70	72	84	74	74	76	70	67	64	61	63	65	64	62	62	59	60	57	54	52	48	46	43
				4	89.3	47	51	72	64	57	72	65	73	70	70	85	76	71	72	69	75	76	78	78	79	76	69	68	69	67	64	61	57	55	53	51

TABLE 9.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE STANDARD SH-3A HELICOPTER – Concluded

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Take-off																																				
		10A	7	1	102.6	55	61	87	77	64	84	78	88	88	91	88	88	93	94	95	95	90	87	88	85	81	79	76	75	76	73	70	69	67	65	61
				2	101.2	59	63	86	75	66	83	76	87	77	85	90	94	92	89	91	94	91	86	82	83	79	75	73	74	74	71	67	67	67	64	64
				3	102.2	53	60	85	76	63	73	71	83	84	89	89	89	88	93	94	94	95	89	89	88	81	77	75	75	72	72	70	68	65	65	63
				4	101.3	49	60	86	76	59	72	69	80	79	84	89	88	91	94	94	92	89	90	87	86	82	82	79	77	75	71	73	68	68	67	65
			8	1	90.1	47	54	79	68	56	78	70	79	79	82	79	78	82	81	77	71	72	70	69	68	61	61	61	64	64	57	57	53	51	51	42
				2	90.9	48	55	79	69	57	59	63	77	77	77	84	84	83	81	78	73	74	70	69	70	67	69	68	71	67	61	59	56	56	52	47
				3	89.8	48	53	78	68	58	62	61	77	82	81	81	78	81	79	75	71	70	71	73	71	70	67	69	70	66	64	60	58	54	54	47
				4	87.9	47	54	79	69	54	66	64	71	74	76	76	80	80	80	77	69	69	68	68	68	65	64	65	65	63	59	60	54	53	54	47
			9	1	83.7	44	58	75	67	62	67	61	72	66	71	76	70	74	74	69	66	66	66	70	71	68	63	61	61	59	55	52	48	47	45	39
				2	86.0	42	53	75	65	50	59	59	72	75	77	78	77	78	74	71	72	71	68	64	64	62	58	53	53	53	49	48	44	43	42	40
				3	83.9	52	54	73	63	53	68	62	73	70	72	76	75	75	75	72	65	63	60	62	61	60	59	57	53	53	48	46	45	43	43	43
				4	84.7	39	50	76	66	53	62	60	66	70	73	77	79	77	75	70	61	60	56	59	59	59	58	57	56	53	49	48	45	43	42	39
			10	1	97.7	52	62	88	79	62	80	79	76	81	83	93	84	83	89	78	77	80	82	84	84	83	83	80	76	74	72	68	68	67	65	66
				2	97.0	64	66	87	78	70	82	74	79	82	84	91	84	84	90	78	77	76	79	82	81	81	77	74	75	70	69	66	66	66	66	65
				3	96.6	50	62	86	77	67	86	78	82	83	85	93	83	80	84	75	73	74	78	77	79	77	75	73	70	68	67	64	64	63	65	64
				4	96.0	55	63	88	79	66	83	76	78	80	82	92	82	80	83	74	71	73	73	77	79	80	79	79	76	74	71	68	66	64	65	66
			11	1	90.9	56	58	76	71	65	70	65	73	74	74	88	77	75	74	65	64	66	69	74	76	77	78	80	76	71	70	64	60	55	52	53
				2	87.7	55	59	75	67	56	66	64	72	75	77	83	77	77	74	64	62	65	68	69	74	75	75	72	66	62	61	56	55	54	53	52
				3	88.3	53	55	78	68	60	71	65	65	64	70	86	73	68	74	62	59	63	69	69	71	70	70	67	67	64	63	59	59	55	55	54
				4	87.4	46	51	76	67	56	64	63	69	72	72	85	75	72	75	63	60	63	65	69	70	71	71	70	65	61	60	57	55	54	54	52
			12	1	87.9	52	53	71	64	57	65	62	72	71	71	83	73	72	73	63	60	62	67	71	73	76	77	78	78	73	70	65	60	52	51	49
				2	86.0	59	54	70	65	65	70	61	69	71	73	83	75	74	73	62	56	59	63	68	70	71	72	69	65	59	58	57	52	50	49	49
				3	85.7	48	51	75	65	54	61	60	62	64	67	84	71	66	67	59	59	59	62	65	65	66	65	65	66	62	59	57	54	51	49	50
				4	84.8	57	54	74	64	59	62	61	63	64	68	83	71	70	66	55	57	59	62	66	64	64	65	65	64	60	57	55	54	50	49	49

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of -																																
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
					Flyby																																
40	61	1	1	1	95.1	52	60	80	94	72	70	77	63	68	75	77	78	72	81	77	79	79	80	78	78	72	71	71	68	61	63	58	57	62	69	69
				2	98.3	53	64	86	98	73	69	72	62	69	77	77	75	70	78	75	77	80	79	77	77	72	70	70	67	62	62	59	59	64	73	68
				3	96.2	51	63	86	95	73	73	79	60	67	72	74	78	69	75	74	78	78	79	78	77	72	69	68	66	62	61	58	57	62	70	67
				4	96.5	51	62	83	96	72	67	69	63	67	73	75	74	67	76	73	76	77	77	77	75	71	68	70	67	63	61	59	58	63	68	69
				5	96.3	52	62	85	95	72	75	81	61	69	74	75	76	67	77	75	80	77	78	77	73	70	67	69	64	61	60	55	58	62	71	67
			2	1	95.5	49	62	81	94	74	70	77	63	68	73	80	78	71	80	77	80	78	80	78	77	73	72	70	67	66	67	61	61	64	71	73
				2	98.8	54	64	86	98	73	70	73	65	69	74	80	77	72	76	76	79	79	79	79	78	73	71	69	68	65	65	62	61	66	73	74
				3	95.7	55	63	80	95	73	70	70	61	61	71	78	76	67	76	75	79	78	80	76	76	74	72	73	70	66	65	63	63	63	68	71
				4	95.7	52	60	82	95	73	67	75	62	65	72	78	76	68	75	73	76	74	79	76	74	71	69	69	66	65	65	61	61	63	71	71
				5	95.4	54	61	82	94	70	66	75	64	68	74	78	74	68	77	75	78	79	78	77	76	72	71	72	68	65	65	61	62	63	72	73
			3	1	94.8	55	61	80	93	69	70	77	64	63	71	77	75	68	79	75	80	79	79	76	76	73	73	70	67	64	62	59	59	62	70	69
				2	98.8	53	64	86	98	73	69	77	67	70	74	77	77	69	78	73	77	77	78	77	77	73	71	71	67	64	63	61	60	65	71	71
				3	95.2	54	63	84	94	69	68	72	56	67	70	76	74	70	77	73	77	78	78	77	78	73	70	70	66	64	63	59	58	63	71	67
				4	95.7	55	61	82	95	70	68	69	61	63	74	78	74	68	76	73	77	76	77	77	79	73	73	70	66	65	62	58	58	64	71	68
				5	95.4	54	60	81	94	70	67	78	62	66	74	77	76	70	76	74	77	76	77	76	75	72	72	70	66	64	62	60	58	67	73	69
			4	1	94.9	51	60	85	93	74	77	83	74	67	61	70	75	75	71	73	79	76	78	75	79	72	70	68	64	64	60	60	59	64	70	67
				2	92.1	48	59	84	89	65	77	78	76	69	63	56	67	71	71	70	70	75	72	74	82	68	67	66	62	60	57	56	57	59	65	62
				3	94.5	60	60	80	93	70	72	82	67	64	62	70	75	75	67	75	76	78	80	80	81	75	73	71	68	66	65	60	61	64	67	63
				4	92.5	53	57	77	91	68	70	79	67	64	61	70	77	78	70	73	77	75	75	77	79	72	70	68	65	64	61	60	59	64	67	64
				5	94.4	53	63	86	92	67	78	83	76	69	58	67	73	75	73	70	76	73	76	75	79	73	68	66	63	62	60	58	57	63	69	66
			5	1	83.6	40	49	74	81	59	71	75	64	61	62	61	53	53	62	67	66	63	63	65	63	61	60	59	54	52	48	46	46	47	51	48
				2	82.0	38	48	75	79	58	69	71	66	61	62	59	57	52	55	61	64	66	61	62	67	56	57	59	52	49	48	44	44	46	50	48
				3	83.7	41	50	76	81	58	73	75	63	60	61	60	54	54	64	67	68	64	62	65	64	61	60	58	53	52	49	49	49	48	50	47
				4	82.7	41	50	75	80	57	69	71	65	61	62	60	56	52	62	65	66	63	60	64	61	60	59	58	52	50	49	46	46	45	48	45
				5	83.0	42	51	75	80	59	71	75	65	60	62	56	54	54	60	65	66	64	61	65	64	60	59	57	51	51	47	45	45	47	49	48
			6	1	79.9	37	46	71	77	57	67	72	61	58	60	58	59	55	50	59	64	66	60	57	63	56	57	55	51	48	47	45	43	43	47	44
				2	78.3	36	46	69	75	55	65	67	60	59	60	58	59	54	52	58	63	66	65	57	62	57	56	54	51	52	48	46	47	46	48	45
				3	79.4	45	48	61	75	56	59	69	65	68	61	61	58	55	55	64	65	66	61	66	66	66	63	63	59	58	51	51	50	49	49	47
				4	78.8	36	45	71	76	52	63	66	61	58	59	56	56	54	51	62	62	65	59	58	65	53	53	55	47	50	45	41	40	40	44	41
				5	79.3	34	46	72	76	54	65	67	62	64	68	59	58	55	52	58	61	65	62	57	64	56	56	53	50	50	47	46	45	44	46	43
			7	1	95.5	52	62	81	94	73	66	73	63	68	75	78	75	71	80	76	81	79	79	77	78	73	70	70	67	63	62	59	58	58	64	66
				2	98.5	53	64	86	98	73	69	77	65	68	77	79	74	72	78	75	78	79	79	79	78	74	71	69	66	64	64	61	60	61	67	66
				3	94.8	53	62	82	93	67	66	72	62	64	73	79	75	69	78	75	78	79	78	76	78	72	70	70	67	64	63	60	59	58	65	65
				4	96.5	54	61	83	96	70	66	69	62	65	72	76	73	70	77	73	77	77	77	76	78	71	69	68	65	65	62	58	57	60	65	63
				5	95.3	52	59	80	94	71	68	76	59	66	73	76	77	69	77	75	77	78	78	77	74	74	71	71	68	65	64	59	60	59	63	66
			8	1	96.8	53	64	84	96	74	69	78	58	68	76	79	76	70	77	73	78	78	75	75	77	70	68	66	63	62	60	58	58	62	69	65
				2	97.9	56	64	85	97	72	65	72	61	66	74	76	74	69	77	74	78	78	77	77	76	72	68	69	66	64	63	61	61	63	70	66
				3	95.1	57	63	81	94	71	67	73	64	66	75	78	73	70	77	73	77	78	80	76	76	71	69	69	65	63	62	58	60	62	67	64
				4	96.0	56	62	83	95	71	66	73	58	65	73	76	72	68	73	72	77	77	76	77	75	70	68	68	64	63	61	57	59	61	70	65
				5	96.0	51	61	81	95	71	66	70	60	66	73	76	74	67	75	73	74	76	77	76	73	72	70	69	67	64	61	58	60	62	68	64

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of -																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
40	61	1	9	1	96.2	50	63	83	95	72	65	75	59	64	72	76	71	68	74	74	76	78	77	78	79	72	69	67	64	62	61	58	57	56	67	69
				2	97.7	54	63	85	97	72	65	74	65	68	71	77	73	68	74	74	79	78	78	78	77	74	70	68	66	66	62	61	59	59	70	73
				3	96.5	51	62	83	96	72	67	74	65	68	73	76	73	70	77	74	77	78	78	77	75	72	69	69	65	65	60	58	58	60	68	71
				4	94.8	54	59	81	94	71	66	69	60	65	70	76	74	68	72	71	75	76	76	76	75	70	68	68	67	63	62	58	58	59	67	69
				5	97.1	53	64	85	96	72	69	67	58	68	76	79	73	72	76	73	78	77	79	79	81	73	67	67	65	61	60	59	58	58	68	70
			10	1	92.6	48	57	79	90	73	76	84	72	69	62	70	75	76	70	75	75	74	75	75	75	73	69	69	67	63	62	61	59	62	65	66
				2	93.0	51	61	77	91	68	73	83	71	69	58	68	73	75	72	73	76	74	76	75	78	73	72	70	67	66	64	61	61	63	66	66
				3	93.0	49	59	80	91	71	76	82	70	66	63	71	77	76	70	76	75	77	76	75	76	73	71	70	66	64	62	60	59	62	63	65
				4	92.5	47	59	77	91	66	71	83	67	65	63	70	76	76	67	75	76	74	74	75	76	72	71	69	66	65	64	61	60	61	64	67
				5	92.9	50	58	77	91	66	72	83	71	70	57	65	75	76	70	71	78	73	75	75	79	75	71	71	67	65	63	61	61	61	65	67
			11	1	83.6	46	47	68	79	62	70	78	66	64	64	57	57	64	69	70	66	64	69	63	68	64	62	61	58	56	54	52	50	53	57	57
				2	83.3	42	47	68	79	56	67	76	73	68	62	58	55	65	67	70	67	64	70	66	70	67	65	63	60	57	56	52	52	54	57	57
				3	83.4	38	49	67	79	58	68	78	65	63	64	58	55	63	68	69	67	63	69	64	68	62	62	60	58	56	54	51	50	52	55	55
				4	82.9	39	49	67	80	62	61	67	67	64	62	59	60	68	69	73	64	66	70	66	69	66	64	62	59	58	55	52	49	52	55	56
				5	83.7	37	50	69	81	59	66	76	70	67	62	56	57	63	65	68	68	63	69	67	68	64	63	61	58	56	54	53	50	51	56	58
			12	1	79.6	41	43	62	76	57	62	71	66	64	64	62	60	57	56	64	66	66	61	64	69	62	59	58	56	55	51	50	47	48	49	48
				2	79.5	35	42	63	74	55	64	73	68	65	62	63	61	59	56	65	66	66	63	64	67	62	62	59	56	55	54	50	49	51	52	51
				3	79.8	40	42	63	73	58	66	75	66	64	62	57	61	58	60	65	67	66	60	65	63	62	59	59	57	55	52	51	49	50	53	52
				4	80.0	38	42	64	75	54	65	74	66	64	59	61	61	55	60	65	66	66	60	66	67	62	61	60	56	54	54	52	48	47	51	50
				5	79.3	36	46	63	75	55	62	72	66	65	64	60	59	56	56	63	68	66	59	63	66	60	59	58	56	54	53	50	48	48	49	50
70	61	2	1	1	91.2	47	57	77	90	70	67	73	58	63	72	74	70	64	72	68	74	73	73	74	73	71	68	69	66	62	62	58	58	61	69	69
				2	91.6	51	58	77	91	68	68	65	57	62	73	73	70	64	70	70	73	74	72	73	72	69	68	70	67	62	62	58	58	61	67	70
				3	92.3	51	60	78	92	70	63	63	58	63	69	70	67	66	72	68	73	71	71	71	71	70	67	69	68	63	61	58	59	63	68	69
				4	91.1	48	58	77	90	68	63	65	57	65	71	72	70	65	71	68	73	72	72	72	73	68	68	70	66	63	62	58	58	62	68	69
				5	90.7	47	57	77	89	72	65	68	57	60	71	72	69	63	72	69	73	72	73	73	73	70	69	68	65	61	62	57	57	62	68	68
			2	1	91.1	49	57	78	90	69	69	74	56	63	70	73	73	65	70	68	72	75	76	72	75	68	68	69	66	64	63	60	58	63	72	72
				2	92.0	50	57	78	91	70	68	70	55	64	72	76	70	66	71	69	76	73	74	73	72	71	69	70	68	63	64	62	62	62	71	72
				3	92.4	51	60	80	91	69	68	68	56	64	70	73	72	64	72	68	73	73	72	71	72	69	68	68	65	63	64	60	60	64	71	70
				4	91.3	48	56	75	90	71	67	67	56	63	72	70	70	61	69	65	73	72	71	70	71	69	69	70	66	65	65	62	63	63	68	70
				5	90.7	44	56	74	90	69	69	69	56	60	72	73	71	66	70	67	74	73	72	73	71	69	69	69	67	65	63	62	62	63	68	70
			3	1	91.1	49	58	77	90	69	67	71	57	64	70	72	69	66	71	69	73	73	73	73	78	71	70	70	67	64	62	60	58	65	74	69
				2	90.9	53	62	77	90	70	67	68	60	63	72	69	68	64	69	68	71	72	72	72	72	71	71	69	67	63	63	59	59	66	73	70
				3	92.3	55	61	79	91	72	65	61	56	66	71	72	71	65	70	68	73	71	72	71	75	69	69	69	66	62	60	59	59	65	71	68
				4	91.1	51	59	79	90	69	67	72	55	65	70	71	68	64	69	65	73	72	72	72	73	69	69	69	65	63	62	58	57	64	71	68
				5	90.6	53	58	77	90	69	65	67	55	64	71	69	68	64	70	66	72	71	71	71	76	72	69	68	67	63	60	59	58	62	68	68
			4	1	90.7	47	58	84	86	63	81	79	66	62	59	67	73	73	71	70	75	73	74	74	76	71	67	65	63	60	57	57	57	62	66	62
				2	91.1	51	62	80	86	66	80	83	65	60	61	69	77	77	70	74	76	74	76	76	79	73	69	67	65	63	61	58	60	64	67	65
				3	91.0	51	60	81	87	66	78	82	67	61	57	67	78	78	70	74	79	74	73	74	78	72	68	67	66	63	60	60	59	66	66	65
				4	90.9	54	62	85	87	62	80	80	67	62	58	66	75	76	69	70	76	71	74	75	76	70	68	67	64	63	60	57	59	62	66	63
				5	90.7	54	60	81	87	64	78	81	65	60	63	70	77	77	70	74	78	74	73	75	77	73	69	66	65	64	61	58	58	64	67	64

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
70	61	2	5	1	81.3	39	48	72	76	52	70	70	58	60	60	59	54	62	66	71	67	62	66	67	70	64	60	60	55	53	51	50	48	48	50	49
				2	81.7	44	49	74	77	56	71	71	61	62	62	59	54	59	65	68	68	63	68	65	67	63	62	61	58	55	52	49	48	49	50	51
				3	81.6	48	50	67	76	59	67	71	65	62	61	60	56	65	68	70	68	65	71	68	71	66	63	62	58	56	54	50	50	50	54	53
				4	81.4	44	54	68	77	54	66	71	66	63	63	57	58	67	67	71	67	64	70	67	69	64	61	62	57	54	53	49	48	50	53	53
				5	81.8	47	51	72	77	59	68	71	63	62	64	58	56	64	67	71	69	63	70	66	69	63	61	61	58	54	52	50	49	48	52	50
			6	1	78.5	47	50	62	74	56	60	62	62	60	63	58	55	54	62	66	68	65	64	68	64	64	60	60	56	56	51	49	47	48	49	47
				2	78.6	42	46	68	74	55	66	69	64	59	64	60	58	53	56	65	68	64	59	66	62	63	59	59	56	51	49	48	46	45	48	47
				3	79.0	47	48	63	74	55	63	68	60	61	63	60	55	54	61	66	70	67	63	68	64	64	61	60	56	53	51	48	47	48	50	50
				4	79.0	40	47	62	74	58	56	62	63	62	64	62	54	54	61	67	68	65	66	70	63	64	61	61	58	55	51	49	48	47	50	49
				5	78.7	51	51	64	75	56	59	63	62	59	63	56	55	55	61	67	69	65	64	69	63	63	60	62	56	53	51	48	48	48	52	48
			7	1	91.3	50	57	80	90	69	68	72	56	64	70	73	71	66	72	68	75	74	74	73	75	68	67	66	65	63	61	59	58	58	64	64
				2	91.4	53	58	77	90	69	64	63	58	64	70	73	72	66	71	68	73	75	72	72	73	70	69	68	67	64	63	60	58	59	63	65
				3	92.3	50	58	78	91	70	70	66	58	64	74	74	69	66	71	68	75	73	73	74	76	70	68	69	67	64	63	60	59	60	64	66
				4	90.8	48	57	76	90	66	68	68	58	64	72	70	67	64	70	66	72	72	72	72	72	69	66	69	65	62	62	59	59	59	64	66
				5	90.7	51	60	78	89	68	67	70	55	66	72	72	70	65	70	69	74	75	73	72	74	69	67	67	64	62	61	61	59	60	64	64
			8	1	91.7	51	60	79	91	71	69	68	53	64	70	73	71	64	70	68	74	73	71	73	72	69	67	67	64	62	62	58	59	62	69	64
				2	91.4	49	56	75	91	68	66	68	59	66	74	72	72	66	70	70	74	72	73	72	72	68	69	67	66	63	60	60	58	62	68	64
				3	91.6	50	63	79	91	68	65	68	60	66	72	74	71	64	69	67	74	72	72	70	72	68	67	68	63	61	60	58	60	63	67	65
				4	91.0	51	59	79	90	65	65	70	55	63	68	71	68	64	70	67	71	72	71	71	71	67	66	68	64	62	61	58	60	61	68	63
				5	90.6	54	57	77	90	68	66	68	56	64	70	72	68	67	71	68	72	72	71	70	72	69	67	67	65	62	61	59	59	61	67	63
			9	1	91.3	52	59	76	90	70	63	56	58	64	70	70	69	65	70	68	74	72	73	71	77	70	69	68	65	63	60	59	58	59	67	70
				2	91.1	53	59	76	90	72	66	68	58	62	71	72	67	65	69	67	72	71	72	71	75	68	67	68	65	62	61	59	58	59	67	70
				3	91.3	47	60	79	90	69	62	67	59	62	68	68	69	65	69	68	72	73	73	73	74	70	66	66	63	62	61	59	58	60	67	70
				4	90.8	51	58	79	90	67	64	68	59	64	69	71	69	63	69	66	73	70	71	71	76	68	65	63	65	62	60	57	59	58	68	69
				5	90.2	50	58	76	89	69	61	63	58	65	71	73	68	64	70	68	72	71	72	73	75	70	67	67	65	63	62	58	59	59	67	70
			10	1	91.4	49	56	75	90	67	69	80	65	62	62	70	74	75	66	73	71	74	73	75	77	73	72	69	68	66	63	61	59	60	63	64
				2	91.2	50	57	75	89	66	70	80	62	59	62	70	74	77	68	75	70	75	75	76	77	74	70	70	67	66	63	62	59	61	63	66
				3	91.2	51	56	73	90	67	69	80	63	64	60	67	74	77	68	74	73	74	74	74	74	72	71	70	67	65	64	61	60	61	63	65
				4	90.8	48	56	74	89	67	68	79	65	65	61	65	73	76	67	74	73	73	72	74	75	70	70	71	68	67	63	62	61	60	65	64
				5	90.8	48	56	73	89	65	67	80	64	63	61	68	74	76	67	75	74	74	73	76	76	74	72	70	67	66	64	61	60	61	63	65
			11	1	83.7	45	50	65	80	60	62	61	65	67	63	57	61	72	71	71	63	68	74	70	71	69	65	63	61	59	55	54	50	52	55	55
				2	83.4	45	47	66	80	58	60	67	64	64	63	57	62	70	70	71	64	70	73	70	70	68	66	64	58	57	57	53	51	52	55	56
				3	83.5	44	49	65	81	58	63	63	62	64	61	56	60	70	71	70	66	70	72	69	69	68	66	63	61	59	56	54	52	53	56	56
				4	83.4	43	52	65	80	56	61	57	65	65	60	56	63	69	71	71	63	69	71	72	72	68	64	63	60	58	55	54	51	52	54	54
				5	83.6	44	49	66	80	60	57	61	65	66	57	54	66	73	71	72	64	70	72	71	70	68	66	63	59	57	56	53	51	51	56	56
			12	1	79.7	44	47	60	76	55	58	60	64	65	68	58	61	60	61	69	69	67	62	68	64	65	60	59	56	55	51	51	48	48	49	47
				2	79.1	37	41	59	75	54	54	59	61	67	63	60	60	62	61	67	69	68	61	67	65	64	59	58	56	53	52	50	48	47	48	48
				3	79.4	44	46	59	75	57	54	59	63	59	64	62	60	63	62	67	67	67	63	71	65	65	62	62	58	57	54	51	48	46	48	47
				4	79.3	36	44	58	75	56	57	59	64	64	61	57	59	62	63	67	68	67	64	69	65	66	61	58	56	55	53	50	48	47	49	47
				5	79.2	38	47	59	75	57	56	55	63	64	64	59	64	63	63	66	68	67	64	69	65	66	62	59	56	55	52	50	47	47	48	48

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Airspeed, knots	Altitude, m	Item	Microphone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
100	61	3	1	1	93.4	52	63	82	92	72	68	69	59	64	71	73	72	68	72	71	73	76	72	70	73	68	67	67	65	63	63	58	58	59	67	68
				2	94.7	60	64	82	94	77	66	69	60	68	74	74	71	68	72	70	72	75	72	71	71	68	66	68	67	62	63	58	60	59	65	67
				3	93.6	57	61	81	94	80	73	69	63	69	72	76	71	68	73	70	72	73	73	70	70	68	66	69	67	63	63	59	58	62	65	68
				4	96.7	59	63	84	96	73	76	68	60	69	72	77	74	69	74	72	74	76	73	73	74	71	69	71	69	65	66	62	61	62	66	70
				5	94.7	58	67	85	94	71	70	73	60	67	71	74	71	65	73	69	74	77	74	71	72	67	66	68	65	60	62	59	58	61	68	67
			2	1	94.6	52	63	81	94	79	67	70	62	67	74	76	74	68	74	72	74	75	73	72	73	69	67	69	67	65	65	62	62	63	69	70
				2	94.0	56	63	84	93	75	71	76	60	66	71	75	73	66	73	69	73	76	73	71	72	67	66	68	64	64	64	62	59	61	68	68
				3	94.6	54	63	83	94	73	71	73	58	66	70	75	73	66	72	69	72	78	72	70	73	67	66	68	64	64	66	61	61	61	68	69
				4	96.8	58	67	87	96	78	71	70	61	64	73	75	73	67	75	72	75	77	75	72	73	68	67	69	66	66	67	64	61	63	71	70
				5	94.8	56	65	82	94	72	69	70	60	65	72	77	74	66	74	70	73	76	73	72	73	69	68	70	66	64	65	65	61	62	69	69
			3	1	95.4	58	63	86	94	70	70	72	59	67	71	75	72	64	71	70	72	74	73	71	72	68	68	69	64	64	63	61	60	61	66	68
				2	93.8	55	64	83	93	72	68	68	60	63	70	74	73	67	72	68	71	74	70	69	71	66	67	69	66	64	63	60	60	60	63	66
				3	95.4	56	60	81	95	73	70	69	63	67	72	77	74	68	74	69	73	74	73	70	74	70	71	69	67	65	63	61	60	60	64	68
				4	96.7	55	63	84	96	80	72	73	57	68	75	78	74	69	75	72	74	74	73	72	76	70	69	71	66	66	64	62	62	61	66	68
				5	94.2	53	62	84	93	74	73	73	58	65	71	74	73	66	74	69	72	74	70	70	73	70	68	69	66	64	64	61	60	59	66	65
			4	1	91.1	52	55	69	84	73	74	77	67	65	64	73	78	80	71	76	78	83	79	78	82	74	71	69	68	66	65	63	62	64	69	65
				2	92.9	55	64	74	88	78	71	77	67	65	69	74	82	83	70	79	77	83	81	80	80	74	73	72	69	67	64	62	62	65	71	66
				3	91.9	55	61	73	83	74	73	79	70	65	68	74	83	83	70	80	78	85	80	79	79	73	70	70	67	66	65	62	62	64	67	63
				4	92.6	54	63	67	84	77	77	88	74	72	64	68	74	83	79	72	77	77	80	77	79	74	71	69	67	68	65	62	62	63	66	61
				5	92.0	53	54	69	85	72	74	81	69	68	66	74	80	84	71	76	78	84	81	80	79	75	71	71	68	67	65	63	64	64	69	64
			5	1	85.0	51	54	63	81	65	69	75	65	68	61	59	58	68	71	72	70	71	76	71	71	67	63	62	61	58	55	53	51	52	52	51
				2	86.4	44	57	63	83	65	64	77	68	66	67	62	60	72	71	75	73	70	75	71	72	69	67	65	62	61	57	53	52	53	54	51
				3	84.5	50	55	62	79	68	64	75	68	69	65	60	60	69	69	73	71	69	74	72	73	68	66	63	61	58	55	53	53	52	52	49
				4	86.3	46	59	62	81	68	68	79	69	74	66	65	58	66	70	74	74	69	75	75	71	69	67	65	61	61	55	55	52	51	50	46
				5	85.0	52	56	65	80	68	66	72	68	68	65	62	61	69	71	74	73	69	76	70	74	70	66	63	62	59	56	54	52	50	51	48
			6	1	82.6	45	48	61	78	65	63	69	67	67	61	62	56	61	65	70	72	67	73	73	69	67	63	61	59	58	55	53	50	50	51	48
				2	84.1	48	52	61	80	66	66	71	67	67	67	63	57	60	64	72	76	71	69	74	68	70	64	64	60	59	55	54	51	51	50	47
				3	82.6	62	63	62	75	68	63	71	66	67	62	60	55	61	63	72	74	68	73	74	68	67	64	63	61	59	53	51	48	46	46	41
				4	83.4	51	59	63	78	65	64	72	66	68	65	65	58	59	63	70	74	72	69	75	70	70	63	65	60	59	56	53	49	47	47	43
				5	82.9	49	55	62	77	60	61	69	65	69	65	65	62	63	65	71	74	70	69	74	69	71	66	65	60	58	55	51	48	46	44	42
			7	1	92.2	55	62	78	91	72	67	70	59	66	69	75	73	69	74	72	74	77	72	72	73	68	65	67	66	63	65	61	60	59	62	63
				2	95.1	56	64	83	94	75	71	71	61	69	75	78	75	67	76	70	76	76	75	72	74	69	68	70	66	65	64	60	58	58	61	65
				3	94.4	53	61	80	94	73	71	63	59	67	73	75	72	68	75	72	73	76	72	73	72	67	65	67	64	64	65	59	59	58	61	63
				4	96.3	54	67	86	95	82	75	75	60	69	73	76	74	69	75	72	76	77	75	72	74	70	68	69	68	65	65	62	60	60	62	64
				5	94.4	51	64	83	93	71	71	73	63	71	74	77	72	69	74	70	73	78	73	72	75	68	67	68	68	64	65	60	59	57	61	65
			8	1	92.8	55	62	81	92	73	68	66	58	67	74	73	72	69	76	71	73	76	71	70	73	67	64	66	64	63	61	58	59	61	66	64
				2	95.4	60	63	81	95	80	71	69	64	67	73	73	73	67	75	69	74	75	72	70	71	69	67	67	66	63	62	60	60	61	64	62
				3	93.8	55	65	83	93	71	71	72	59	68	73	74	73	66	72	68	72	76	73	71	72	67	66	67	65	63	62	59	59	61	65	62
				4	95.5	56	66	88	94	78	76	74	60	65	70	76	74	66	72	70	74	75	73	70	76	68	67	68	65	63	63	60	60	61	69	63
				5	94.8	59	66	83	94	72	71	70	60	68	72	72	71	66	72	69	71	76	72	69	72	67	65	66	65	62	63	60	60	61	65	62

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
					Flyby																															
100	61	3	9	1	94.7	50	61	83	94	72	70	68	61	67	73	76	73	67	73	70	72	77	74	71	75	68	64	65	65	62	62	60	59	59	66	71
				2	95.4	59	64	83	95	75	70	71	62	67	72	75	72	66	72	68	73	72	73	70	76	68	66	67	67	64	64	59	59	59	65	70
				3	94.5	54	62	82	94	73	72	67	60	66	72	73	70	67	74	69	72	73	69	70	73	67	66	68	66	63	64	58	59	58	65	70
				4	95.6	54	63	84	95	74	73	68	59	66	75	74	71	68	73	69	73	78	75	71	77	69	64	66	65	65	64	60	61	60	66	70
				5	94.8	58	65	86	94	73	72	74	61	66	71	76	73	69	75	69	72	74	72	72	72	67	64	65	65	63	63	60	58	58	66	68
			10	1	93.7	50	59	77	92	72	66	74	62	60	62	69	75	79	72	78	77	75	74	75	77	74	71	70	69	67	65	63	60	61	63	64
				2	93.4	60	61	79	92	73	67	70	67	61	61	69	76	81	73	75	75	75	77	79	78	75	71	71	68	67	65	63	61	61	61	61
				3	93.9	55	62	81	93	71	65	67	65	62	61	69	77	78	71	78	74	77	77	77	75	74	70	70	68	66	64	62	60	59	63	61
				4	95.6	55	62	81	94	73	69	70	66	62	64	70	78	80	79	77	81	77	80	80	82	76	73	72	69	69	65	64	62	63	64	63
				5	94.2	57	62	80	93	74	69	70	68	62	63	73	78	81	75	77	78	77	77	78	76	74	72	71	68	67	64	62	61	61	63	62
			11	1	87.3	43	51	72	85	67	66	65	67	65	66	58	67	76	75	74	66	73	74	74	72	69	66	62	59	59	55	54	52	52	54	55
				2	87.0	48	56	69	84	63	61	66	67	65	66	62	62	74	75	75	71	70	77	72	74	69	66	64	62	61	58	55	52	52	54	54
				3	86.3	44	52	68	83	68	60	65	66	66	66	64	62	71	73	75	71	70	75	73	75	70	67	66	64	62	59	56	53	52	52	51
				4	86.8	49	51	71	83	66	64	69	64	66	67	65	62	74	74	75	74	69	76	71	73	73	69	69	66	62	59	58	54	54	54	54
				5	86.8	48	52	70	83	63	67	70	66	67	64	60	63	72	73	76	72	71	77	72	75	71	67	65	62	61	57	53	51	49	51	51
			12	1	82.9	47	49	63	79	62	63	67	62	64	62	64	63	64	64	71	72	72	67	73	71	69	64	61	60	58	55	53	50	48	49	48
				2	82.8	42	48	65	77	60	59	63	65	66	67	62	66	65	65	72	72	71	67	74	70	69	66	62	59	57	55	52	48	47	47	45
				3	81.7	64	64	65	77	66	64	68	65	65	66	63	64	67	63	69	71	69	68	69	70	66	64	61	56	57	54	52	49	47	46	45
				4	82.1	45	54	59	75	61	60	70	67	69	66	65	66	69	63	66	70	73	72	66	70	66	65	61	59	58	55	51	48	46	43	44
				5	82.0	40	47	58	74	60	57	69	63	64	68	65	62	66	61	68	71	73	71	68	74	68	67	65	63	61	57	54	49	46	44	45
120	61	4	1	1	98.8	62	67	88	98	79	75	74	64	68	75	79	77	70	77	74	77	78	77	76	77	72	68	71	68	65	67	63	62	61	67	68
				2	98.8	58	70	87	98	81	74	72	63	68	77	77	76	71	74	74	76	75	77	75	74	71	70	70	67	65	65	62	61	62	66	66
				3	97.7	61	68	87	97	76	74	71	64	68	75	78	76	71	77	71	77	75	77	74	74	70	68	69	68	64	65	61	60	60	64	66
				4	99.1	58	68	92	98	74	73	71	62	68	75	79	76	71	78	73	78	78	79	75	76	70	69	69	68	64	65	62	60	62	67	66
				5	96.4	60	67	84	96	79	70	70	61	66	73	76	75	70	77	72	76	76	76	72	74	71	68	70	68	64	66	61	60	60	64	63
			2	1	99.0	62	69	89	98	76	75	74	63	69	75	77	77	71	76	74	78	78	79	76	77	71	71	69	69	67	69	66	64	62	69	71
				2	99.2	60	70	88	98	82	74	71	63	72	78	79	78	71	78	73	78	77	78	75	76	73	70	71	68	67	68	65	64	64	67	69
				3	98.2	57	67	88	97	75	71	72	62	66	77	77	79	69	73	71	77	77	79	74	76	71	69	70	68	66	69	65	63	62	67	68
				4	98.5	65	68	92	97	81	78	72	64	67	74	76	77	70	76	74	76	77	78	74	77	70	69	68	67	66	68	65	63	63	69	69
				5	97.1	63	66	84	96	82	72	72	64	65	76	78	76	70	77	74	77	75	77	76	72	70	68	71	67	67	67	64	61	61	65	65
			3	1	98.1	59	68	89	97	74	69	72	60	68	71	75	75	69	76	72	77	78	77	75	78	72	73	71	68	66	67	64	62	60	66	67
				2	99.0	58	69	88	98	78	72	68	60	69	74	77	75	71	76	72	77	74	76	76	78	72	70	71	69	67	68	63	61	61	64	67
				3	97.7	58	69	87	97	76	66	74	62	70	74	75	74	70	76	72	76	74	76	74	78	72	69	69	67	66	65	64	62	61	64	65
				4	98.6	63	70	92	97	74	76	73	64	64	74	77	77	71	75	74	75	75	76	71	75	70	70	70	69	66	65	64	60	61	65	65
				5	97.2	63	68	85	97	72	70	70	58	68	73	77	75	68	76	70	73	72	75	73	75	72	68	71	67	64	64	61	60	59	62	63
			4	1	97.5	54	60	76	94	78	76	89	74	68	69	76	83	86	76	79	81	82	83	83	82	78	75	74	70	69	68	66	64	66	69	65
				2	98.1	60	62	70	95	83	78	92	80	75	66	68	75	84	81	74	79	78	82	81	79	75	72	70	68	67	67	64	63	63	65	59
				3	97.5	53	67	73	95	81	74	91	79	72	63	73	78	83	79	74	80	78	81	82	79	76	71	71	68	68	67	64	63	63	65	60
				4	98.4	57	63	73	96	83	79	91	76	70	67	73	79	84	80	75	80	79	82	81	79	76	73	71	69	68	66	65	64	64	66	62
				5	96.3	54	58	71	93	82	75	90	77	71	63	74	78	84	76	74	78	75	80	81	77	75	69	69	67	67	65	64	63	61	63	59

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
120	61	4	5	1	91.1	55	59	66	89	71	71	83	72	72	71	64	59	71	75	74	77	72	77	77	75	71	69	67	65	64	59	56	55	53	51	48
				2	91.4	59	56	70	89	73	71	83	72	73	70	62	61	70	74	76	77	71	80	76	74	71	69	67	64	62	58	55	55	52	51	49
				3	91.6	60	61	69	89	72	70	83	71	72	70	64	63	73	76	76	75	71	79	74	75	70	67	65	64	61	58	55	54	51	50	49
				4	91.5	52	61	65	89	73	74	85	71	74	70	66	59	68	74	77	76	71	76	78	73	71	69	67	64	61	58	56	54	54	49	46
				5	90.8	52	52	66	88	73	67	84	71	67	68	64	60	71	76	74	74	68	77	74	77	73	68	67	65	61	58	56	53	51	50	48
			6	1	87.8	56	56	66	85	66	66	78	70	72	71	67	63	64	66	72	76	75	70	75	72	70	67	65	62	62	58	54	51	47	44	43
				2	88.0	50	55	62	85	70	70	80	68	71	72	69	64	63	65	68	73	74	71	73	73	68	67	65	61	60	57	54	51	47	45	43
				3	87.8	50	58	67	85	69	69	78	70	72	69	63	59	65	71	76	77	69	74	74	71	70	66	63	60	60	55	54	49	48	47	42
				4	88.2	54	56	64	85	70	70	80	68	70	70	67	61	62	65	73	76	74	70	76	71	71	67	67	62	60	57	55	54	50	45	42
				5	87.8	56	55	62	84	68	64	80	66	67	67	63	62	62	69	73	76	72	73	78	71	70	65	66	63	60	55	54	51	48	46	43
			7	1	98.8	54	67	90	98	76	73	72	62	69	77	78	75	69	78	74	78	78	77	74	78	72	70	69	69	66	67	62	60	60	62	65
				2	98.1	58	68	85	97	80	73	72	64	70	79	77	76	72	78	74	76	78	78	74	79	74	69	69	68	67	66	63	61	62	61	63
				3	97.6	62	69	88	97	79	74	71	64	71	78	79	78	71	78	74	75	76	76	74	77	70	67	67	65	64	66	62	59	59	60	63
				4	99.0	60	68	91	98	77	72	70	62	68	78	80	78	70	78	75	78	77	78	73	79	72	68	68	68	67	65	63	61	60	61	64
				5	97.1	63	67	86	96	77	71	71	63	70	76	77	77	70	76	72	75	77	77	73	76	71	68	69	67	65	65	62	60	58	59	62
			8	1	98.6	59	71	88	98	80	74	73	62	67	74	76	77	68	77	74	75	78	76	76	77	72	69	68	68	65	66	63	61	63	66	63
				2	98.4	60	67	86	98	84	78	72	64	70	77	78	78	72	77	73	78	76	78	73	76	72	69	71	68	66	66	63	62	63	66	62
				3	97.7	57	69	87	97	79	72	69	61	65	74	76	75	68	74	70	76	75	76	74	76	72	68	69	67	65	65	62	61	62	64	63
				4	99.0	65	68	90	98	78	70	71	63	70	76	77	77	72	75	73	74	78	76	73	77	69	69	69	68	66	66	64	62	62	66	62
				5	97.2	58	66	86	97	78	68	70	64	66	74	77	74	69	74	72	75	75	79	72	76	70	69	67	67	64	64	62	61	61	65	60
			9	1	98.9	60	70	90	98	76	74	73	62	67	77	78	76	71	78	72	76	74	75	74	78	71	67	68	68	66	66	62	61	61	67	68
				2	97.4	61	67	85	97	78	71	72	63	67	76	78	76	70	78	72	75	75	78	75	79	71	69	68	66	67	66	62	61	61	66	66
				3	97.6	57	67	87	97	72	70	69	62	70	73	77	77	71	76	72	76	75	78	74	78	72	66	66	67	65	65	61	61	58	62	67
				4	98.2	59	70	88	97	75	72	72	63	68	74	77	75	69	75	71	76	76	78	75	79	71	68	68	67	64	65	62	59	60	66	68
				5	97.5	57	67	87	97	73	71	70	58	67	74	77	75	70	74	73	75	72	76	74	78	70	66	67	67	65	65	61	59	59	63	66
			10	1	96.2	61	66	84	94	75	69	77	65	65	61	72	81	81	80	78	83	78	79	80	80	76	74	72	70	69	67	65	63	63	63	63
				2	96.9	58	64	83	95	79	75	82	71	64	65	74	80	82	80	81	82	78	81	81	82	78	76	74	72	70	67	66	65	63	64	64
				3	95.7	56	62	84	94	73	73	78	68	63	64	73	79	81	74	79	78	79	79	79	79	77	73	72	71	69	66	64	61	61	62	61
				4	96.2	59	65	86	94	74	77	81	74	67	64	74	81	81	79	78	79	77	78	80	79	78	73	72	70	68	67	64	62	61	63	62
				5	95.6	55	64	83	94	73	71	74	69	63	64	70	75	78	75	80	78	77	78	79	78	77	74	72	70	69	65	62	61	60	60	59
			11	1	87.7	52	53	73	83	64	70	70	69	67	68	65	63	73	77	77	76	70	78	73	75	71	70	68	63	62	58	55	54	51	53	52
				2	88.6	49	55	75	84	64	73	72	72	68	68	64	66	75	76	77	75	72	79	75	77	74	71	69	68	64	61	58	56	54	53	54
				3	88.3	50	55	72	84	68	68	76	66	65	68	63	65	73	78	77	73	71	79	73	76	71	70	68	66	64	58	57	54	54	53	52
				4	88.4	51	54	68	83	68	69	80	69	66	69	66	61	69	79	76	75	71	78	74	77	73	70	70	65	64	60	59	55	53	51	51
				5	87.9	50	57	60	79	62	69	78	69	69	69	64	61	73	77	78	78	71	77	77	79	74	72	69	65	62	59	57	54	51	50	51
			12	1	84.8	50	52	63	76	66	67	72	67	71	69	67	71	71	64	71	74	77	75	71	75	70	67	68	63	62	60	58	53	48	48	47
				2	85.0	46	52	56	74	64	67	77	69	69	71	65	68	70	67	71	74	75	73	74	77	70	69	66	64	60	58	55	50	48	44	45
				3	84.0	49	56	63	77	65	67	77	67	69	67	66	67	68	67	71	74	74	71	74	75	70	67	64	61	61	56	54	50	45	45	45
				4	84.1	51	48	69	76	71	68	72	68	67	68	67	71	67	67	71	72	75	70	73	72	69	67	65	62	59	57	55	51	45	46	46
				5	84.4	49	49	57	77	67	64	73	68	64	69	69	66	66	65	70	73	74	74	68	76	74	68	65	62	60	58	56	52	46	43	46

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																																
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
					Flyby																																
40	152	5	1	1	87.1	44	51	69	86	63	62	71	59	57	64	68	69	58	67	64	67	68	67	66	64	65	63	66	60	55	54	49	47	48	50	47
				2	86.3	40	52	71	85	63	61	69	57	60	63	65	66	61	69	63	68	68	68	67	69	62	61	62	58	53	51	47	46	45	50	48
				3	86.6	44	50	72	86	62	60	63	55	58	65	67	66	58	67	64	69	69	68	67	66	63	62	61	58	56	51	47	47	45	48	46
				4	87.0	45	52	73	86	60	59	65	55	58	65	70	65	59	68	65	68	69	68	69	71	63	60	61	55	52	50	46	44	46	51	48
				5	86.7	41	52	73	86	61	55	64	56	60	64	68	65	60	67	63	67	69	68	66	72	63	59	60	56	52	50	46	45	46	50	46
			2	1	87.4	45	53	70	87	62	61	71	59	57	65	68	69	60	66	65	70	69	69	66	65	64	63	64	61	56	57	52	51	52	50	51
				2	86.6	42	52	72	85	63	59	71	58	61	68	68	66	61	68	65	66	69	69	67	73	62	61	59	58	55	54	50	49	48	52	50
				3	86.8	42	52	74	86	61	56	62	58	61	65	70	65	60	63	64	68	71	70	69	73	62	60	62	59	55	54	50	50	48	52	50
				4	86.7	46	50	72	86	63	60	69	56	58	67	70	65	59	68	65	67	67	69	67	66	62	61	62	58	55	55	51	49	48	49	47
				5	86.7	42	52	73	86	63	60	66	57	59	66	68	65	60	67	64	69	67	68	67	72	63	60	62	58	55	54	50	49	46	51	49
			3	1	87.2	45	51	71	86	64	61	69	57	62	64	69	67	62	68	65	67	68	70	69	68	63	63	64	59	55	54	50	48	63	72	49
				2	86.3	48	54	71	85	62	61	68	54	58	67	68	64	62	67	64	66	69	69	67	71	62	62	62	57	55	51	48	46	45	46	47
				3	86.5	44	51	73	85	60	57	62	56	59	66	70	62	63	65	63	67	67	67	67	74	62	61	61	58	55	51	48	45	44	45	45
				4	86.6	46	51	72	86	62	59	65	55	58	66	70	65	60	69	65	68	69	68	68	70	63	61	59	58	53	52	48	45	43	46	46
				5	86.5	44	51	73	86	61	61	66	57	58	64	69	64	60	67	65	67	67	68	69	71	61	59	61	56	55	51	46	46	43	48	44
			4	1	90.9	46	55	76	90	65	64	75	57	57	67	71	69	61	67	64	69	71	70	70	75	67	64	62	61	57	56	54	49	51	52	52
				2	89.4	46	54	76	88	63	65	74	54	56	66	67	68	61	67	67	69	67	68	69	74	66	61	60	56	56	54	51	49	51	52	51
				3	89.6	47	55	76	89	63	63	74	54	56	60	68	65	58	64	64	69	69	69	69	71	65	63	62	59	58	54	51	48	47	50	47
				4	90.1	45	55	77	89	64	64	74	57	57	64	69	67	60	66	66	69	66	68	69	72	65	63	61	59	57	55	51	48	49	50	46
				5	89.1	43	54	75	88	64	65	75	54	57	65	69	67	60	67	64	68	68	68	69	71	65	63	61	59	57	53	50	47	48	50	46
			5	1	83.7	39	52	74	82	56	62	69	64	59	51	57	63	65	58	63	63	64	64	65	67	60	55	55	51	48	44	40	40	40	43	46
				2	83.8	42	51	74	82	56	62	68	61	54	55	62	64	69	55	64	64	67	65	66	64	61	58	56	51	50	44	41	41	41	42	42
				3	83.7	40	51	76	82	55	64	67	60	53	49	58	61	66	60	65	65	62	63	63	71	59	55	56	50	49	44	40	40	38	40	42
				4	84.0	46	52	74	83	57	61	67	62	56	53	60	66	65	56	65	63	66	64	65	65	60	58	56	51	49	45	40	40	41	40	44
				5	83.4	41	49	73	82	55	59	67	61	56	54	62	66	68	58	64	61	67	65	67	68	60	57	54	50	49	43	42	42	41	40	44
			6	1	81.0	35	47	72	79	52	60	66	63	59	46	50	60	65	62	57	61	63	61	61	65	59	57	54	50	46	45	41	39	36	36	40
				2	80.7	37	48	71	79	56	62	65	65	58	50	56	62	65	62	56	63	60	64	61	61	59	57	55	48	48	46	41	39	38	37	37
				3	81.0	36	48	73	79	54	63	67	60	56	46	51	58	63	60	55	63	61	62	61	62	59	56	54	50	46	43	41	38	37	34	38
				4	81.3	38	48	73	80	55	64	68	63	56	48	52	58	61	61	54	62	61	63	60	60	56	54	54	50	48	43	42	38	36	36	38
				5	80.6	35	48	73	79	52	61	66	64	57	47	53	60	62	60	53	63	60	61	60	59	57	56	53	49	47	43	42	40	37	36	38
			7	1	87.8	43	52	72	87	64	56	67	58	60	66	72	69	63	69	66	70	69	70	69	76	64	62	62	59	58	55	49	47	45	47	46
				2	86.5	45	52	72	85	61	57	67	56	57	66	69	64	62	67	64	68	68	68	68	74	63	61	61	58	56	55	50	47	42	45	46
				3	86.9	47	52	74	86	60	58	59	57	61	66	68	65	60	68	63	69	68	68	69	74	63	61	60	58	58	54	49	47	42	44	43
				4	87.2	46	51	73	86	60	57	65	58	61	67	69	65	60	69	66	68	69	69	67	72	64	60	60	58	57	54	48	46	42	43	41
				5	86.6	44	51	71	86	62	60	67	51	57	63	64	66	63	68	65	69	69	67	65	70	63	62	61	58	55	53	49	47	41	43	40
			8	1	87.5	50	51	70	87	64	63	72	54	55	64	67	68	60	70	65	68	68	67	65	66	64	63	65	62	55	54	52	47	47	48	44
				2	86.4	46	51	71	86	61	61	69	53	56	63	69	66	60	68	64	69	67	68	65	66	63	62	61	58	55	53	49	45	45	49	45
				3	87.1	44	52	73	86	61	57	61	54	59	65	67	65	60	65	62	69	69	69	66	72	62	59	60	57	55	54	46	45	44	47	43
				4	87.3	45	52	73	86	63	58	67	58	59	66	68	65	61	64	63	69	69	66	68	71	62	59	59	58	56	52	47	45	44	48	41
				5	86.9	45	51	72	86	61	59	66	55	57	62	66	66	60	66	63	68	68	68	66	72	63	60	61	59	55	51	46	45	43	47	43

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of -																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
					Flyby																															
40	152	5	9	1	88.1	47	52	71	87	64	59	69	52	55	65	67	68	59	68	66	68	68	69	69	67	65	63	64	61	55	54	48	47	46	48	50
				2	86.5	43	52	71	86	60	59	66	56	58	64	68	66	61	66	64	68	70	67	67	74	62	61	62	57	55	55	48	48	43	47	48
				3	87.0	48	52	73	86	60	57	62	56	58	65	65	64	60	67	64	69	70	69	69	73	63	61	63	58	56	56	47	45	42	45	47
				4	87.4	49	53	72	87	63	58	64	55	56	64	67	67	59	65	63	67	70	69	68	68	64	60	62	59	55	53	47	44	42	46	47
				5	86.8	40	51	72	86	62	59	61	54	58	65	67	66	62	68	64	66	69	68	66	73	62	61	61	56	54	55	48	45	42	46	46
			10	1	85.6	45	49	66	84	63	66	76	58	59	59	65	67	64	62	71	68	70	69	68	68	68	67	66	64	61	57	53	51	50	50	48
				2	85.0	46	47	68	83	60	63	74	56	54	63	69	65	62	67	67	69	67	68	69	74	68	65	64	61	62	56	51	48	49	50	47
				3	83.9	39	47	64	81	59	65	78	57	55	57	63	67	67	57	67	66	67	66	66	71	66	64	63	62	58	54	52	47	45	44	44
				4	84.6	40	48	66	82	62	64	78	59	57	60	62	68	66	58	66	65	68	66	66	70	68	65	64	63	59	56	52	48	47	46	44
				5	84.8	39	48	65	83	60	64	77	58	59	60	63	65	65	62	69	67	69	67	66	68	66	64	62	61	59	55	52	48	46	47	45
			11	1	84.5	38	48	67	83	60	62	73	61	60	56	61	66	69	62	65	66	68	67	68	67	65	64	62	59	56	52	49	45	45	44	45
				2	83.4	40	48	66	81	58	61	74	60	61	57	61	64	66	60	67	66	68	66	67	67	64	62	59	58	56	50	48	44	45	44	43
				3	83.0	39	47	67	80	58	62	72	57	53	57	64	68	67	61	70	67	67	67	68	73	65	62	61	59	56	53	48	47	45	45	44
				4	83.2	40	47	66	81	58	61	74	59	57	56	62	65	68	57	68	65	67	65	67	67	64	62	59	57	54	51	48	45	43	40	45
				5	83.7	42	47	66	82	60	63	75	58	58	55	60	66	69	61	69	65	66	65	65	66	64	60	58	55	54	51	47	44	44	41	44
			12	1	83.2	38	48	67	82	56	62	72	64	59	51	57	65	65	64	59	64	63	66	64	63	61	59	59	56	52	50	47	45	42	41	40
				2	80.7	35	45	59	77	55	60	77	61	55	54	47	57	63	63	62	58	66	60	62	64	60	58	58	55	52	49	45	39	36	37	38
				3	82.5	39	49	69	81	56	63	73	62	57	50	60	64	66	62	58	65	63	66	65	67	61	59	60	56	52	50	46	44	42	40	40
				4	82.3	36	46	68	81	57	63	72	59	56	51	59	63	66	61	61	65	60	65	64	67	62	58	59	55	51	49	47	44	41	42	40
				5	83.2	37	47	68	81	56	63	74	61	59	51	59	66	67	62	58	64	64	66	63	67	61	58	60	54	52	49	45	43	42	42	41
70	152	6	1	1	83.0	42	49	66	82	60	58	64	54	56	65	64	62	55	62	60	66	66	64	64	64	62	61	63	57	55	52	48	46	45	48	45
				2	83.4	43	51	69	83	59	57	54	56	58	65	62	60	58	63	59	65	63	62	62	67	61	61	60	57	52	50	46	45	45	49	45
				3	82.9	44	52	69	82	58	57	60	53	53	62	65	62	58	64	60	65	63	65	62	70	59	59	59	56	52	50	46	44	45	49	45
				4	82.9	41	51	66	82	60	57	60	52	55	62	62	59	54	61	58	63	63	63	63	62	59	60	61	59	52	50	47	44	46	47	44
				5	82.3	36	47	65	81	58	57	62	54	58	67	63	62	54	59	58	66	64	63	63	64	62	61	60	59	55	51	47	44	45	47	44
			2	1	83.1	42	49	70	82	59	60	66	54	56	63	68	65	60	62	63	67	65	65	66	71	62	60	59	57	54	51	51	49	44	52	50
				2	83.1	41	50	70	82	58	57	60	47	56	65	62	62	56	62	61	65	64	64	62	70	62	59	61	57	54	52	49	48	47	52	50
				3	82.7	47	50	68	82	62	61	57	53	55	63	63	59	57	61	60	65	63	63	63	66	60	60	61	59	55	55	51	49	47	50	48
				4	83.0	40	48	67	82	60	58	62	55	57	64	61	60	54	62	59	63	64	63	61	64	60	60	61	57	55	53	51	48	47	47	47
				5	82.0	41	47	64	81	59	58	63	55	55	64	64	63	52	62	60	65	63	64	63	63	63	61	61	60	53	54	51	48	46	48	44
			3	1	82.6	38	50	65	81	63	60	64	53	58	67	65	64	58	62	63	65	64	64	63	66	62	62	60	60	55	53	50	46	44	47	45
				2	83.0	41	49	69	82	59	59	61	52	58	62	61	59	58	63	61	64	63	63	65	69	61	60	60	57	54	52	48	46	45	47	47
				3	82.3	45	51	67	81	60	58	55	52	57	65	65	58	55	63	59	65	64	64	61	63	60	60	60	57	54	52	48	44	44	45	42
				4	82.9	44	49	68	82	60	58	61	55	58	65	64	63	59	63	60	63	64	63	62	65	58	59	61	57	53	52	47	46	44	46	45
				5	82.0	42	46	67	81	57	57	62	57	60	65	66	64	57	63	61	64	63	65	63	67	61	60	59	56	52	51	48	45	45	44	45
			4	1	85.5	43	52	75	84	57	64	72	55	55	61	66	67	59	63	62	69	66	66	66	68	64	61	60	58	55	53	50	49	49	52	46
				2	84.5	45	56	76	83	62	66	70	50	54	60	65	66	58	63	64	67	64	65	65	67	62	58	59	57	54	49	49	48	49	52	46
				3	85.0	45	55	76	83	60	67	71	52	54	60	62	68	60	65	61	67	65	66	68	67	62	60	59	56	56	50	49	48	49	52	45
				4	84.5	44	55	74	83	59	60	67	52	53	61	64	65	58	61	60	68	65	63	61	66	62	59	59	58	57	51	50	48	48	52	46
				5	84.7	44	51	75	83	57	64	69	49	51	60	64	63	57	64	64	69	63	64	64	67	63	59	59	57	56	52	50	47	48	52	45

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																																
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																					
70	152	6	5	1	81.5	40	47	70	78	54	68	73	53	50	57	65	68	68	58	65	65	66	64	66	64	60	57	55	52	49	47	40	41	42	40	38
				2	80.9	46	50	75	77	54	70	69	58	51	51	58	66	64	57	64	65	62	63	62	67	59	54	53	50	46	45	41	39	37	39	38
				3	81.4	45	52	74	78	54	70	71	56	47	52	60	67	67	56	65	66	63	63	64	64	59	55	54	51	48	46	40	38	38	36	34
				4	81.3	40	48	73	78	58	70	71	57	49	60	63	66	65	57	67	62	65	64	64	67	59	56	55	52	49	45	41	39	39	38	35
				5	81.5	38	50	73	78	54	69	72	57	51	59	64	66	64	56	67	63	64	64	64	64	61	56	53	51	49	46	41	40	39	36	34
			6	1	79.2	41	47	73	75	52	69	68	56	55	49	53	60	65	62	58	62	61	62	60	61	57	55	53	50	47	44	41	38	36	34	34
				2	78.9	40	46	70	75	55	68	70	53	50	48	55	66	67	61	58	65	60	63	62	61	58	56	54	51	47	45	42	40	39	37	35
				3	79.2	40	49	70	75	52	68	70	56	50	48	55	63	66	61	58	66	61	63	62	60	58	55	54	50	48	44	42	40	38	37	35
				4	79.4	38	51	72	76	53	68	69	56	48	48	55	64	67	61	61	66	61	62	61	59	58	55	53	50	48	45	43	39	40	38	36
				5	79.5	42	47	70	76	55	67	70	50	50	49	57	65	68	63	58	66	60	63	62	64	59	56	55	50	47	45	43	39	38	37	35
			7	1	83.0	37	50	66	82	60	60	64	51	57	68	65	64	58	63	60	65	63	66	63	68	63	61	60	58	55	54	50	46	43	43	41
				2	83.6	45	50	69	83	61	59	57	52	56	63	64	60	58	65	60	65	64	63	63	71	60	60	60	59	55	54	49	46	44	42	42
				3	82.7	45	52	68	82	58	56	54	50	54	63	64	62	54	61	61	64	63	64	62	69	61	61	59	59	56	53	49	46	43	42	41
				4	82.6	41	49	69	82	58	60	59	52	56	63	64	60	54	62	60	65	62	62	63	69	60	59	59	56	55	53	49	45	42	42	41
				5	81.9	42	49	67	81	62	59	59	53	55	64	64	60	54	61	59	63	63	63	62	65	62	61	61	58	57	54	49	46	43	42	38
			8	1	82.8	43	49	69	81	57	61	64	53	60	66	64	62	57	63	61	64	64	64	64	70	61	61	60	60	54	51	47	44	43	46	44
				2	83.8	47	53	73	83	59	57	60	53	57	64	64	62	55	62	61	64	63	63	63	68	60	58	59	57	53	52	47	46	47	49	43
				3	83.1	45	50	69	82	60	56	55	53	56	63	64	61	57	63	59	64	63	62	63	68	62	58	60	57	53	53	48	45	42	46	42
				4	82.3	43	51	66	82	60	56	58	54	57	62	60	61	54	61	57	63	63	61	60	60	60	59	61	57	52	51	47	43	45	46	39
				5	81.9	44	52	66	81	61	52	56	54	57	65	64	59	56	61	59	63	64	63	62	63	62	59	60	59	53	52	48	43	44	46	39
			9	1	83.2	47	48	68	82	61	60	63	50	58	67	66	62	59	64	60	66	66	64	64	68	61	61	62	59	55	56	48	45	43	45	45
				2	83.6	44	50	71	83	59	57	54	53	55	64	66	60	57	62	58	63	65	65	64	70	60	57	59	56	53	53	48	45	43	46	47
				3	82.8	39	51	71	82	60	57	60	51	56	62	64	60	55	63	60	64	64	64	63	70	61	59	59	56	53	53	47	45	42	46	44
				4	82.6	42	53	68	82	59	60	59	53	57	61	61	59	56	60	57	65	61	62	62	62	60	59	62	58	55	54	48	44	43	44	43
				5	82.1	48	50	66	81	61	62	59	53	58	65	64	61	55	60	59	64	63	64	61	62	61	60	61	59	55	54	48	44	44	45	44
			10	1	84.3	44	48	65	83	64	61	74	58	55	60	64	65	63	62	65	66	66	66	65	67	66	65	63	61	60	54	53	50	49	47	46
				2	84.2	44	49	68	83	62	63	72	55	54	61	63	63	61	62	64	66	63	65	66	67	64	63	63	61	60	56	51	50	49	48	45
				3	83.8	44	49	68	83	60	62	72	55	54	60	62	64	60	63	65	64	64	65	64	68	64	63	63	61	59	55	51	50	49	48	45
				4	84.1	46	49	68	83	61	62	71	56	55	61	64	64	60	62	63	66	65	64	66	69	64	62	62	60	62	56	51	49	47	46	43
				5	83.7	45	50	68	82	62	64	72	53	53	61	65	65	61	63	65	65	65	65	66	72	65	64	62	60	60	54	50	49	49	48	46
			11	1	82.5	38	47	64	81	60	60	72	60	60	51	60	64	68	60	65	65	67	64	65	65	61	62	60	57	54	51	47	45	42	44	45
				2	82.2	38	47	64	80	57	59	71	57	58	56	59	65	69	61	66	66	66	65	64	67	62	59	59	56	56	51	48	46	44	43	45
				3	82.1	45	44	64	80	58	60	72	56	59	54	61	62	66	57	65	64	66	64	66	67	63	60	57	56	56	52	48	45	43	41	39
				4	81.6	34	44	64	80	55	57	66	56	54	56	60	67	69	60	66	64	66	64	66	67	63	61	60	58	54	51	46	44	42	41	40
				5	81.5	40	45	65	79	59	59	67	50	50	54	62	68	67	58	67	65	67	68	68	70	62	61	59	57	55	52	47	43	43	41	40
			12	1	81.9	39	47	65	80	57	55	65	59	60	49	54	67	69	65	57	65	63	66	64	67	61	60	58	56	52	50	47	44	42	41	40
				2	81.6	39	47	66	80	55	55	62	59	58	47	58	66	69	63	60	64	63	65	65	68	61	59	60	56	53	50	47	45	41	41	39
				3	81.9	40	49	67	80	56	58	66	58	56	50	56	67	67	63	61	67	64	66	66	71	63	59	60	56	53	50	49	45	41	41	39
				4	81.5	39	47	65	80	56	55	59	59	54	50	55	66	71	65	59	65	63	67	65	68	61	58	56	55	52	49	45	43	40	39	39
				5	81.9	38	48	66	80	56	56	63	57	58	50	55	68	69	64	59	68	63	67	66	69	61	58	59	56	52	49	46	44	41	39	40

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																														
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																			
100	152	7	1	1	86.3	45	55	76	85	58	60	60	56	56	64	65	62	59	64	61	63	68	65	64	70	59	57	58	57	53	52	48	46	47	49	47
				2	86.0	43	54	76	85	61	59	56	54	57	63	66	66	60	63	59	65	67	65	62	69	60	56	58	56	54	52	47	46	46	49	47
				3	86.3	48	53	75	85	59	59	57	56	57	63	62	61	59	65	62	65	68	66	62	72	61	57	59	58	56	52	48	47	48	51	50
				4	86.5	47	54	73	86	62	60	50	56	58	62	65	62	59	64	61	63	69	66	64	73	61	59	61	59	55	54	49	47	49	50	50
				5	86.1	45	52	75	85	61	57	57	56	60	64	65	66	60	66	61	63	69	65	64	73	61	58	59	59	58	54	49	48	48	51	52
			2	1	86.1	48	54	75	85	61	60	60	54	55	61	63	64	58	63	59	64	66	63	63	69	60	58	59	59	55	54	51	50	49	52	49
				2	85.7	48	55	77	85	59	56	59	54	59	64	63	62	57	63	60	62	68	63	61	64	59	57	57	57	55	51	50	50	47	51	49
				3	85.6	41	55	73	85	61	58	59	57	58	65	67	63	59	65	60	65	68	63	63	72	61	58	59	59	56	56	53	50	49	51	51
				4	86.4	49	55	75	85	62	61	58	57	57	62	67	63	59	66	61	65	68	64	63	70	60	59	59	59	57	54	52	50	50	51	52
				5	86.0	43	55	76	85	59	58	62	54	57	61	63	63	57	63	60	65	69	63	62	67	59	57	58	59	56	54	52	52	51	53	52
			3	1	86.4	46	56	74	86	62	60	59	57	60	65	67	61	58	62	62	62	65	65	63	73	60	56	58	57	55	52	50	48	45	48	46
				2	85.9	48	51	73	85	63	61	58	54	58	59	62	62	57	63	59	64	67	64	64	72	60	58	58	57	54	52	49	48	45	46	45
				3	86.3	50	55	76	85	62	62	60	57	61	65	68	64	59	64	60	62	66	63	64	74	60	58	58	57	56	53	50	49	47	48	48
				4	86.9	51	55	75	86	62	59	59	54	57	62	66	64	61	63	61	65	68	63	64	74	60	57	59	59	56	53	50	49	49	49	48
				5	86.2	49	56	75	85	61	61	58	58	61	64	66	63	58	65	61	64	69	64	63	74	60	58	59	57	56	53	50	49	48	50	50
			4	1	85.0	50	55	75	83	61	63	67	53	55	63	66	70	62	67	65	68	72	68	65	70	63	61	62	61	59	56	52	49	49	52	46
				2	84.3	49	55	77	82	58	62	64	53	54	58	64	68	61	65	64	70	69	66	65	69	61	59	61	58	57	53	52	50	50	53	45
				3	84.3	46	54	79	81	58	65	65	57	55	59	65	69	60	63	66	68	68	67	65	65	60	60	57	58	56	52	49	49	50	53	56
				4	84.5	47	58	80	80	60	66	62	59	56	62	65	71	63	65	69	67	70	66	65	66	60	60	58	55	54	52	50	49	51	53	45
				5	84.5	47	57	76	82	62	65	67	56	58	65	69	70	61	68	66	69	70	67	66	72	62	61	60	58	57	53	53	51	51	55	48
			5	1	80.9	43	48	55	72	57	61	71	57	56	53	59	70	73	60	66	66	74	70	67	71	63	58	59	54	54	52	47	44	42	41	39
				2	80.5	43	50	72	73	57	70	67	60	49	55	62	72	68	59	70	65	68	65	67	68	59	57	56	52	50	47	43	41	41	39	40
				3	80.6	41	44	54	71	58	60	73	57	58	52	62	67	72	61	67	69	73	69	66	68	63	59	58	55	54	50	48	46	44	41	40
				4	80.9	41	50	57	70	60	59	67	59	60	55	65	74	74	59	67	67	72	68	67	70	62	59	57	56	55	51	45	44	42	41	39
				5	81.0	43	47	57	73	56	60	74	60	58	50	61	69	73	63	66	71	70	69	66	68	63	59	58	55	53	51	49	46	44	42	39
			6	1	80.0	47	47	55	72	57	65	75	60	61	50	54	64	72	66	59	68	63	68	64	67	63	56	54	53	52	48	44	41	38	35	34
				2	79.5	38	51	54	73	56	64	73	60	61	50	58	66	72	67	59	65	61	66	65	65	60	57	56	54	52	49	46	42	39	37	36
				3	79.8	41	42	55	73	59	59	74	59	60	51	54	64	71	67	59	67	67	69	66	65	62	56	56	54	51	49	45	43	40	37	34
				4	80.1	45	46	55	74	60	60	71	61	62	52	55	68	72	65	62	70	66	69	66	65	60	58	57	55	52	50	47	44	42	41	37
				5	79.6	43	49	54	71	55	61	75	62	59	52	53	63	71	67	63	63	67	64	64	67	60	57	57	53	54	49	44	42	41	37	35
			7	1	86.3	50	54	74	85	60	58	54	52	59	63	68	65	58	64	61	62	66	64	63	72	61	58	59	59	57	56	50	47	46	43	44
				2	85.8	45	54	73	85	61	53	57	54	58	63	66	63	58	63	62	63	67	63	63	71	59	57	58	57	57	55	50	48	44	44	44
				3	85.7	44	51	73	85	61	56	56	54	55	62	66	64	60	63	63	64	67	63	62	72	61	56	59	59	57	55	50	49	45	45	44
				4	85.9	43	53	75	85	63	59	57	56	58	66	67	64	58	63	60	64	70	64	62	69	59	57	58	58	56	55	52	49	46	46	45
				5	85.9	44	51	73	85	61	60	59	54	59	66	65	64	59	63	61	66	69	64	64	72	62	58	58	58	56	57	51	50	47	47	47
			8	1	86.4	51	59	79	85	62	64	64	52	59	64	64	62	59	64	59	63	69	62	60	62	56	55	58	57	55	53	48	48	48	48	45
				2	86.4	46	53	76	86	59	55	58	53	60	58	65	60	57	63	60	62	66	63	62	68	60	57	59	58	56	52	50	48	47	47	42
				3	86.4	43	58	79	85	60	61	62	54	57	65	66	62	58	65	61	64	69	62	60	62	58	58	59	57	55	52	49	49	49	50	45
				4	86.5	45	56	77	86	59	59	56	53	56	64	62	63	60	64	61	65	69	64	62	63	58	56	59	58	56	55	49	49	47	50	47
				5	86.1	48	56	75	85	62	56	55	54	57	63	67	64	58	65	61	66	70	64	63	69	59	57	60	58	57	56	51	51	49	50	46

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Flyby																																				
100	152	7	9	1	86.0	51	53	77	85	61	61	59	53	59	61	63	63	56	64	59	63	67	64	63	66	59	57	60	58	54	54	49	47	44	45	47
				2	86.5	46	56	76	86	60	56	59	52	56	62	66	63	58	64	61	63	69	64	61	66	59	57	60	57	53	53	48	46	43	45	48
				3	86.1	45	54	76	85	62	62	56	54	58	63	65	62	59	64	61	63	70	64	63	68	59	58	58	58	54	54	49	47	46	47	48
				4	86.3	47	57	77	85	60	59	59	53	57	64	66	62	55	63	60	65	71	65	61	61	58	57	59	59	54	53	48	48	44	48	50
				5	86.0	47	53	76	85	59	62	60	49	59	63	63	62	57	64	62	65	71	65	63	67	58	58	60	59	55	55	51	48	46	50	50
			10	1	88.4	47	58	75	88	63	60	63	53	56	65	66	67	60	66	63	67	68	67	67	73	64	61	62	61	59	55	52	51	50	50	48
				2	88.4	49	57	75	88	63	62	61	52	58	61	66	65	59	65	65	67	67	66	64	73	63	60	62	61	61	56	55	51	50	50	50
				3	88.1	47	55	75	87	63	62	64	56	57	63	66	66	61	66	64	69	68	67	67	75	65	61	62	61	61	58	53	52	50	50	49
				4	88.4	48	56	76	87	61	64	69	56	59	65	67	67	60	65	66	67	69	68	66	75	65	60	62	62	59	55	54	52	51	50	50
				5	88.1	44	54	74	87	63	63	64	56	58	63	67	64	61	65	64	67	68	67	67	76	65	63	62	60	62	57	54	52	52	50	50
			11	1	85.2	39	52	69	84	61	57	59	57	56	58	63	70	70	64	70	65	69	68	69	71	65	62	60	59	57	54	50	46	44	45	46
				2	85.1	42	47	67	84	61	58	67	59	58	55	62	68	73	62	68	69	68	67	67	68	65	62	59	58	57	53	49	47	45	44	44
				3	85.0	41	53	67	83	63	58	65	59	55	58	64	67	71	62	71	70	69	68	69	68	66	63	59	58	57	54	50	47	46	45	46
				4	85.4	39	49	67	84	62	58	65	61	58	56	62	66	69	65	71	70	70	68	69	69	64	61	59	57	58	55	51	47	47	45	44
				5	85.4	45	52	68	84	61	59	63	59	57	56	64	65	73	68	72	71	71	69	69	68	65	63	61	58	57	55	51	48	47	45	46
			12	1	85.7	44	53	72	84	59	56	60	58	56	53	57	70	71	69	63	69	66	70	69	71	63	60	60	58	54	52	48	46	42	39	42
				2	85.0	45	54	69	84	61	58	64	59	59	53	59	66	72	69	62	70	66	70	70	70	64	61	60	59	55	53	49	47	42	41	41
				3	85.6	45	51	72	84	61	62	63	60	58	54	60	69	72	72	62	69	66	71	68	70	63	60	59	57	56	53	50	47	45	44	45
				4	86.0	43	52	72	84	58	60	58	57	57	54	61	69	75	70	63	70	66	71	68	71	63	63	61	59	55	52	49	47	45	44	45
				5	85.9	44	52	71	84	61	59	60	57	58	56	60	69	72	72	62	71	69	71	67	68	64	63	61	59	55	54	51	47	45	45	45
120	152	8	1	1	91.5	48	58	81	91	65	62	63	55	60	67	69	68	64	69	64	69	69	72	69	74	64	62	61	60	57	56	52	50	50	53	51
				2	90.9	49	59	80	90	65	62	64	58	63	69	69	68	63	69	63	69	68	72	66	71	64	60	60	59	56	55	52	51	49	52	51
				3	92.0	57	60	79	91	70	59	60	56	61	66	69	68	62	69	65	68	66	71	66	74	62	60	61	60	56	56	52	50	50	52	50
				4	91.0	51	59	83	90	64	62	63	57	62	65	68	66	60	68	64	66	68	72	65	67	60	60	61	58	56	54	51	50	49	51	51
				5	90.7	50	58	80	90	65	59	61	57	60	66	70	67	61	67	65	65	69	74	67	70	62	59	60	58	57	54	51	51	50	50	50
			2	1	91.1	50	61	81	90	68	62	63	58	60	65	68	67	61	68	65	67	67	71	66	70	61	61	61	60	59	57	55	53	52	55	52
				2	90.3	54	56	76	90	66	63	65	60	60	70	68	68	63	68	66	67	67	69	67	71	63	61	61	61	58	59	56	54	53	52	51
				3	91.5	53	60	80	91	68	63	64	58	60	67	70	68	60	68	64	68	67	69	68	73	63	61	61	59	58	57	56	54	53	53	52
				4	90.7	49	62	78	90	66	64	61	59	60	67	67	65	62	69	63	68	66	70	66	73	64	58	60	60	57	56	55	53	51	54	52
				5	89.7	51	60	79	89	64	64	61	58	60	65	68	65	59	66	64	69	66	70	65	66	62	58	58	59	57	56	53	52	51	52	51
			3	1	91.7	49	59	82	91	65	62	65	59	57	65	69	67	62	66	65	67	68	72	65	74	64	61	61	58	57	56	53	51	50	51	49
				2	90.5	49	62	81	90	68	63	65	62	62	70	68	67	65	68	65	69	66	69	66	72	63	59	59	59	57	55	52	52	49	50	50
				3	91.7	52	60	81	91	67	61	64	55	63	66	68	66	62	68	64	67	67	70	68	75	64	60	61	59	57	55	53	52	51	51	50
				4	91.2	52	59	79	91	65	62	61	55	61	67	69	66	63	67	65	65	67	71	68	76	65	59	60	59	58	55	52	51	50	50	49
				5	90.4	51	58	82	89	64	62	62	55	59	66	67	65	61	67	63	65	67	72	66	69	62	58	58	58	56	54	51	50	48	49	49
			4	1	89.7	45	59	77	89	66	63	71	56	60	67	73	72	67	69	67	72	71	74	69	72	66	64	63	60	59	58	56	53	53	55	49
				2	89.4	46	59	73	88	69	64	73	61	56	68	70	73	69	69	68	72	71	74	73	72	66	63	63	60	61	57	53	53	52	54	50
				3	90.1	49	50	63	88	74	66	83	69	56	61	68	71	74	61	69	66	71	77	74	69	66	60	63	61	59	54	54	52	52	50	46
				4	89.6	50	52	61	88	75	65	81	68	56	61	64	70	74	63	67	66	73	76	73	68	66	61	61	59	59	54	53	51	50	50	45
				5	88.6	53	60	71	87	68	64	72	58	59	67	71	73	69	67	68	71	73	74	70	68	66	62	63	58	59	58	53	51	51	52	47

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
					Flyby																															
120	152	8	5	1	87.8	45	53	59	85	74	63	82	71	65	58	54	62	72	69	63	65	68	69	70	66	64	61	60	56	55	51	50	46	42	38	38
				2	87.8	47	51	61	85	70	67	82	68	62	60	62	66	72	70	61	69	68	71	69	67	66	62	60	57	57	54	49	48	46	43	44
				3	88.6	40	48	59	86	73	65	82	70	64	56	56	66	74	69	60	69	67	70	69	69	68	61	58	58	55	53	49	46	43	42	43
				4	88.1	51	51	62	86	70	64	81	67	59	54	63	68	75	71	62	69	67	73	69	67	64	61	61	58	56	55	51	48	45	43	44
				5	87.3	41	51	62	85	68	64	80	64	59	54	64	70	75	65	63	72	69	70	70	67	64	61	59	57	55	53	51	46	46	43	44
			6	1	87.5	49	51	64	85	66	65	80	66	62	57	56	70	75	70	62	70	70	72	69	68	65	62	61	56	56	54	51	46	45	42	36
				2	87.2	43	49	61	85	69	67	81	67	63	60	62	65	72	70	67	64	70	71	71	67	63	60	59	57	53	53	49	45	42	39	39
				3	87.7	42	49	61	86	70	63	81	67	62	59	54	62	72	72	66	64	69	69	72	65	63	61	59	56	56	53	50	44	42	38	39
				4	86.9	50	48	61	85	68	64	80	65	60	55	53	63	71	71	63	68	70	71	70	67	65	62	60	56	54	51	48	46	42	40	40
				5	86.6	45	46	61	84	67	63	80	65	61	54	55	65	73	70	63	66	67	70	68	68	64	60	60	55	54	52	47	45	42	39	39
			7	1	90.9	45	58	78	90	69	58	63	53	58	67	70	70	63	70	65	67	66	71	66	74	65	59	60	59	58	58	53	54	49	48	45
				2	90.6	48	61	79	90	69	63	66	60	58	67	69	69	63	67	64	68	65	70	66	72	64	60	59	60	59	59	53	53	49	48	48
				3	90.8	46	58	76	90	67	58	64	55	60	69	70	67	64	68	65	68	68	72	66	74	64	61	62	59	59	59	53	52	49	48	47
				4	90.7	48	58	80	90	64	62	61	52	62	68	69	65	62	70	65	68	68	72	67	71	63	59	60	57	59	56	53	51	49	46	48
				5	89.2	47	60	77	89	66	59	61	54	59	65	68	68	62	67	65	65	67	71	66	71	62	58	60	57	57	56	52	51	48	46	45
			8	1	91.8	51	61	77	91	68	59	59	55	59	68	70	70	64	69	66	68	68	71	67	73	64	63	62	61	58	58	54	54	50	50	45
				2	91.6	52	62	79	91	67	63	61	58	57	69	69	68	65	70	65	68	68	71	67	72	64	62	62	60	58	57	55	53	50	50	47
				3	91.5	52	60	81	91	66	62	65	55	61	66	71	66	60	68	66	69	68	70	66	71	64	60	59	60	57	58	52	52	51	53	47
				4	91.1	53	60	80	90	65	60	59	54	60	68	67	66	63	68	63	68	68	72	65	70	61	59	60	59	58	57	52	52	50	51	47
				5	89.6	47	58	77	89	65	59	57	56	60	63	69	68	64	68	63	67	65	72	65	71	62	60	59	58	57	56	51	51	48	49	46
			9	1	91.0	49	58	77	91	68	64	60	54	61	69	69	67	63	67	64	69	70	71	66	73	63	62	61	62	59	59	55	53	50	50	50
				2	90.7	52	59	77	90	68	69	64	56	59	68	70	69	65	69	63	67	67	70	67	72	64	61	61	60	58	58	53	53	49	50	50
				3	90.7	46	61	79	90	66	63	62	54	62	70	68	67	61	68	63	67	66	72	67	72	64	60	60	59	56	55	52	51	49	50	52
				4	90.4	51	56	79	90	65	61	61	57	59	67	67	66	61	67	64	67	69	72	67	72	62	60	61	59	57	57	53	51	48	50	52
				5	89.7	55	60	81	89	63	61	63	55	54	63	66	67	57	66	63	66	68	71	65	65	62	59	60	58	55	54	50	49	47	49	51
			10	1	93.0	53	61	82	92	66	61	69	61	61	69	70	70	62	68	70	72	71	69	70	76	69	65	64	63	62	60	56	55	53	51	50
				2	92.4	56	62	81	92	66	66	67	63	62	67	69	69	65	68	70	72	71	71	69	75	68	65	64	64	62	59	57	54	51	53	52
				3	93.1	52	59	80	93	67	64	70	56	59	67	70	71	67	69	70	73	70	71	71	75	68	65	64	63	62	60	56	54	53	53	52
				4	92.6	53	64	84	92	66	66	68	59	59	67	70	70	64	69	66	72	70	70	69	76	68	64	62	62	60	58	53	52	51	52	52
				5	91.8	51	62	81	91	66	61	67	57	58	64	68	70	62	67	66	71	70	70	68	72	67	64	63	62	61	56	55	52	52	51	52
			11	1	89.5	46	56	75	88	63	66	74	64	60	59	69	74	75	68	74	73	71	72	73	70	69	67	64	63	59	55	54	51	47	47	46
				2	88.4	47	56	72	87	65	64	73	65	55	65	67	72	74	68	74	73	70	71	70	71	70	65	64	62	61	57	54	51	49	48	51
				3	89.0	47	53	74	88	65	65	73	60	56	61	65	74	75	66	74	72	71	71	71	69	67	66	63	60	59	56	54	52	49	49	51
				4	88.4	48	55	74	87	63	65	72	60	56	59	66	70	71	65	74	71	71	71	72	72	69	65	63	62	59	56	54	49	47	48	49
				5	87.9	45	54	72	86	64	63	72	62	54	59	67	71	72	64	75	72	70	70	71	72	66	65	64	61	59	56	53	49	48	46	49
			12	1	89.3	47	57	76	88	63	64	74	65	63	56	63	71	74	76	64	72	71	73	71	70	66	65	64	60	59	55	53	49	47	44	46
				2	88.8	48	54	75	87	66	65	69	66	59	66	64	71	75	72	65	72	71	73	71	70	68	64	63	58	58	53	52	50	47	48	50
				3	89.4	46	53	75	88	65	66	75	63	62	57	64	73	76	73	65	73	72	74	71	70	69	65	63	60	58	56	53	50	46	49	51
				4	89.1	47	55	74	88	63	67	74	63	65	60	62	72	74	74	64	72	70	74	71	70	67	65	65	61	60	56	54	50	46	43	46
				5	88.7	46	55	75	87	64	68	73	64	60	57	63	73	74	72	68	74	69	74	70	69	68	64	63	60	58	56	53	48	46	45	46

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Landing																																				
		9	1	1	106.2	80	83	96	80	82	96	97	92	91	88	83	84	81	79	78	77	79	78	75	70	69	69	67	65	65	64	62	61	63	66	72
				2	98.2	80	87	85	91	88	86	89	91	81	85	81	80	81	76	75	74	78	78	77	74	67	70	70	64	65	62	60	61	63	68	70
				3	103.2	87	93	93	93	95	95	92	92	90	90	87	85	85	81	81	81	86	85	82	76	75	75	75	69	72	65	63	63	64	67	69
				4	103.9	85	87	94	97	96	92	96	94	88	88	88	86	82	79	77	79	81	83	78	73	74	73	74	69	69	65	63	63	65	68	73
			2	1	85.1	47	52	67	76	58	61	71	71	71	76	79	75	73	70	67	63	66	68	68	70	69	63	62	60	55	56	55	52	51	52	54
				2	84.7	55	58	61	69	58	67	74	75	76	74	75	73	70	70	67	68	70	71	72	70	70	67	67	66	60	62	59	55	53	54	53
				3	85.7	47	47	67	74	58	68	77	80	78	75	73	72	70	68	65	61	68	69	68	67	64	63	62	61	56	58	55	52	51	53	54
				4	87.0	51	60	67	75	58	69	73	78	79	77	77	77	76	73	70	69	67	69	67	67	66	65	67	67	60	59	55	54	53	51	53
			3	1	82.2	53	54	58	76	64	60	78	64	72	72	67	62	62	57	58	60	62	65	64	61	55	49	52	53	43	45	41	44	50	57	42
				2	80.2	36	43	53	66	56	65	69	71	72	70	71	67	65	64	61	63	64	65	66	66	65	63	60	56	54	53	47	46	43	41	41
				3	80.7	42	46	64	71	56	66	70	74	73	70	71	68	67	63	59	60	57	60	60	61	62	61	63	53	50	50	47	43	41	41	42
				4	82.3	50	50	60	68	56	69	73	73	73	74	68	69	68	65	63	63	63	66	64	70	66	68	67	67	56	56	53	50	45	44	45
			4	1	98.8	57	62	77	92	74	75	83	81	84	88	85	84	81	74	83	89	92	88	83	84	80	79	79	77	73	70	69	65	65	67	64
				2	95.8	62	60	77	91	73	75	83	77	77	79	77	82	80	76	79	85	86	86	81	82	77	75	74	71	68	67	66	62	63	66	63
				3	97.0	59	53	72	86	69	71	81	83	85	84	86	87	86	82	78	81	89	88	82	83	82	78	77	76	74	68	70	64	65	65	61
			5	1	86.9	48	45	65	76	65	68	79	70	72	75	76	77	78	75	74	70	68	73	72	71	69	64	66	65	57	59	53	51	51	48	49
				2	85.2	52	51	61	74	62	68	81	74	74	73	70	73	73	70	65	67	66	70	69	69	65	62	64	64	57	57	52	50	50	49	49
				3	85.4	45	45	61	74	63	66	80	73	77	74	69	70	71	71	69	67	68	69	69	70	69	69	69	66	62	62	57	52	51	50	48
			6	1	82.5	45	59	58	69	60	66	76	68	70	68	71	75	72	70	65	66	66	69	67	64	61	61	62	55	56	53	51	48	49	46	43
				2	82.5	38	46	60	75	55	66	78	68	70	70	67	67	66	64	64	61	66	64	65	70	65	62	59	60	55	52	48	47	46	44	42
				3	82.7	46	50	56	70	57	65	78	69	72	71	64	64	67	65	65	69	67	68	69	69	67	65	65	64	60	58	56	52	46	45	42
			7	1	110.5	66	74	95	90	88	85	97	77	80	88	92	93	85	92	91	91	89	90	86	87	81	79	75	73	71	70	68	69	69	73	74
				2	111.9	69	76	98	91	88	86	96	78	82	88	93	91	88	90	93	91	90	89	88	89	81	78	76	74	71	71	68	68	71	71	73
				3	111.7	69	77	96	91	91	87	95	75	78	91	92	91	84	90	91	92	91	91	88	91	83	79	78	76	72	73	69	68	71	74	76
				4	113.7	73	80	90	93	90	87	98	78	83	93	93	93	89	93	94	94	93	90	89	88	83	79	79	74	71	71	70	69	71	73	75
			8	1	103.2	55	64	84	98	74	84	94	76	82	93	95	92	86	92	91	90	87	84	79	78	76	73	71	66	67	65	64	63	68	73	70
				2	107.6	62	72	95	97	86	87	98	78	74	79	83	85	84	81	86	82	83	80	79	79	74	72	72	68	66	65	64	63	68	71	66
				3	105.1	59	68	88	94	82	81	92	74	81	88	91	89	81	87	84	88	84	83	80	79	75	73	72	68	67	65	64	64	70	75	70
				4	108.5	67	73	95	98	82	86	98	77	76	83	86	86	79	83	86	87	86	85	81	81	77	76	73	70	69	68	65	67	70	73	68
			9	1	99.7	54	63	76	94	77	71	85	69	81	89	93	87	84	90	86	88	84	83	79	78	74	70	71	67	64	64	62	62	64	76	73
				2	102.6	56	64	82	91	79	75	88	74	83	91	89	87	83	88	85	84	85	83	81	80	73	71	72	67	64	64	62	63	64	76	75
				3	103.4	57	66	83	91	80	80	90	78	86	93	92	88	84	90	87	89	86	84	80	80	74	73	70	68	65	67	63	63	64	76	76
				4	105.5	61	70	91	95	82	83	95	74	73	80	86	82	79	81	82	81	82	79	77	77	74	71	70	68	66	63	62	64	64	69	69
			10	1	103.2	91	92	88	98	98	94	88	90	84	85	83	89	84	80	79	75	73	76	73	74	71	72	73	70	67	68	68	67	65	64	62
				2	103.8	84	91	96	97	98	94	91	89	89	83	83	83	81	77	73	70	69	71	70	72	68	70	68	66	63	64	61	63	62	62	61
				3	102.7	88	92	98	95	94	89	89	86	84	83	83	88	83	78	74	72	71	70	71	74	71	69	70	67	64	66	62	62	63	64	64
				4	95.5	58	61	77	90	72	77	87	78	79	79	79	82	84	74	78	81	83	83	82	81	77	77	75	72	69	67	65	63	63	66	67

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Continued

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																														
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Landing																																			
			11	1	87.0	44	50	69	85	64	69	80	69	69	67	68	68	69	66	61	64	67	71	70	69	63	61	64	60	56	54	53	49	48	50	50
				2	86.6	48	55	70	84	64	65	77	67	70	68	65	72	70	65	64	64	68	71	71	72	65	64	65	62	59	57	55	51	50	52	50
				3	86.1	59	59	69	83	62	67	79	66	69	69	65	68	67	64	61	62	69	72	71	70	65	60	62	59	55	54	50	47	46	48	49
				4	85.5	45	54	67	82	63	67	74	69	73	70	66	67	69	64	62	65	71	75	76	72	67	62	64	61	56	53	49	47	48	49	50
			12	1	84.0	49	51	66	81	62	64	76	70	71	67	65	67	67	66	64	62	62	63	63	66	64	61	59	58	51	50	48	45	44	43	43
				2	82.8	52	54	67	80	63	63	72	62	66	64	67	70	71	65	64	63	63	65	65	64	64	63	60	56	53	51	48	46	45	44	44
				3	82.3	50	49	65	80	58	62	74	64	66	65	63	63	66	62	61	61	60	61	63	65	64	61	60	59	53	52	46	43	43	44	43
				4	82.1	61	61	68	77	65	66	75	64	68	68	66	66	68	64	63	59	62	63	69	67	66	61	60	56	54	52	48	45	46	44	44
Take-off																																			
		10	1	1	108.8	83	99	99	92	91	95	93	88	89	88	88	89	87	89	92	90	88	88	85	85	80	79	81	77	74	74	72	71	73	77	77
				2	111.6	95	96	92	94	94	94	97	98	99	96	97	97	92	94	96	92	94	92	90	87	83	81	81	79	78	74	75	72	74	79	81
				3	109.0	92	94	98	97	92	91	97	98	97	97	94	89	90	90	95	92	88	86	85	84	81	81	80	78	77	76	72	72	71	75	77
				4	111.6	92	90	93	91	91	94	93	90	90	90	98	94	95	94	92	89	89	90	86	86	82	80	81	77	75	76	72	71	74	77	80
			2	1	102.4	54	60	74	88	73	71	73	71	71	71	80	85	90	87	96	94	94	94	90	87	82	81	83	81	76	75	72	71	71	72	73
				2	97.5	51	59	76	88	69	76	83	72	71	65	77	83	85	84	85	90	89	85	85	84	81	80	82	79	75	74	74	71	71	74	76
				3	102.8	86	85	87	93	94	95	94	93	93	91	88	86	83	84	85	83	82	81	76	77	75	72	70	68	68	68	68	69	69	73	74
				4	100.5	61	66	75	90	78	79	89	77	79	74	76	81	89	88	86	93	91	93	90	85	83	80	79	75	73	74	71	72	73	76	79
			3	1	87.6	53	61	73	77	63	65	68	61	62	72	75	72	68	75	73	76	78	79	77	77	74	71	69	68	65	66	64	63	65	68	70
				2	91.6	48	61	74	87	69	69	72	63	61	66	76	76	73	72	78	81	82	82	79	77	77	76	73	72	67	67	64	63	64	66	68
				3	97.3	58	66	73	86	72	72	75	63	69	78	82	81	79	86	85	90	89	89	87	84	80	81	79	74	71	71	68	66	68	70	73
				4	97.3	55	63	80	89	71	77	76	64	64	72	81	82	78	85	89	87	86	88	88	85	83	80	81	75	72	70	69	65	66	68	70
			4	1	96.4	54	57	77	89	70	78	91	85	87	85	79	86	81	79	79	79	80	80	76	78	74	74	71	69	69	66	64	61	61	67	59
				2	80.4	43	45	58	68	57	68	62	64	74	68	67	73	69	69	65	63	64	67	65	65	62	61	57	59	56	54	54	53	54	56	52
				3	85.8	42	45	61	75	61	69	79	74	76	76	74	74	73	69	70	71	70	69	66	65	65	61	60	62	59	55	54	54	54	60	53
				4	97.1	41	53	74	85	67	81	92	87	87	86	88	87	82	79	78	80	79	77	77	78	74	72	70	69	67	64	63	62	62	65	60
			5	1	84.6	49	45	65	76	59	71	81	72	73	69	68	72	67	67	68	67	68	65	65	65	61	61	64	62	60	61	53	52	50	50	47
				2	83.3	43	44	61	72	55	64	74	69	69	68	71	72	72	72	73	71	67	68	67	69	68	66	69	67	65	64	59	58	53	53	51
				3	79.2	37	43	57	70	55	62	74	70	70	65	67	68	67	62	62	62	59	58	59	56	52	52	53	50	48	49	42	42	42	42	41
				4	85.5	55	55	67	78	61	71	80	74	74	70	70	71	72	71	74	71	70	67	64	63	58	57	55	53	52	53	45	45	43	42	42
			6	1	82.1	47	46	62	74	60	68	77	69	72	72	69	69	67	65	63	63	62	59	55	54	52	51	51	49	49	49	45	45	44	44	40
				2	79.5	49	54	60	72	58	64	73	67	68	66	69	68	67	66	64	62	62	61	59	58	56	54	56	57	54	52	50	49	46	44	40
				3	80.4	48	45	60	72	55	63	75	71	71	68	67	69	67	63	62	59	57	53	53	51	47	47	46	45	43	43	39	40	39	38	40
				4	81.5	54	54	61	73	64	67	76	71	72	72	69	66	68	66	66	62	56	58	58	57	54	51	53	53	49	50	44	44	42	41	42
			7	1	99.4	67	65	77	87	70	80	87	85	85	86	85	89	88	87	86	87	90	90	85	85	85	80	82	79	76	75	76	75	80	74	75
				2	88.0	50	51	67	78	57	70	73	74	73	74	75	77	75	76	78	77	75	74	72	79	69	67	68	64	66	65	63	61	58	57	57
				3	98.1	49	51	68	79	63	75	83	79	82	84	84	86	89	89	90	87	88	88	84	84	81	76	73	72	72	70	67	62	62	60	59
				4	96.5	50	49	67	77	65	70	79	80	82	84	88	85	84	86	90	87	85	82	81	77	74	73	72	70	69	70	68	64	62	59	62

TABLE 10.- SUMMARY OF ONE-THIRD OCTAVE-BAND SOUND PRESSURE LEVELS FOR THE MODIFIED SH-3A HELICOPTER – Concluded

Air-speed, knots	Alti-tude, m	Item	Micro-phone position	Run	Sound pressure level, dB, at octave-band center frequency, Hz, of –																															
					OA	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	6300	8000	10 000
Take-off																																				
		10	8	1	88.6	50	53	65	76	62	71	78	75	74	75	79	80	78	79	78	76	70	73	69	67	67	68	69	71	72	61	59	60	59	61	56
				2	78.6	53	51	63	72	51	62	66	67	68	67	68	67	65	63	61	58	58	61	60	67	58	59	60	57	54	56	54	50	49	49	42
				3	85.2	45	47	64	74	60	65	72	72	74	75	75	78	77	74	74	71	65	61	60	59	58	56	55	57	54	54	50	47	46	45	42
				4	85.1	44	44	60	69	52	66	75	76	75	75	76	75	77	73	72	64	62	64	63	61	61	59	62	62	58	56	51	49	46	44	41
			9	1	84.0	49	52	61	72	54	67	71	69	69	72	73	76	76	72	70	68	69	68	68	68	64	64	62	61	63	64	63	60	62	64	65
				2	73.6	53	47	61	70	58	57	59	61	62	60	62	59	58	55	55	52	47	48	49	55	49	46	47	44	44	42	42	39	37	38	40
				3	79.8	40	45	54	65	56	62	70	66	69	70	71	69	73	70	66	62	56	55	53	53	51	46	44	47	44	41	39	36	34	34	37
				4	79.8	48	53	58	66	55	64	72	69	69	69	74	68	68	68	66	60	55	52	50	47	48	43	44	46	43	40	38	35	32	33	36
			10	1	94.2	55	55	69	81	69	74	82	76	83	84	79	90	86	82	73	70	74	76	77	75	74	73	73	70	67	68	62	61	62	62	62
				2	95.6	85	76	88	90	86	84	82	82	83	80	73	79	75	74	67	69	70	71	71	68	67	66	65	63	64	64	61	61	60	61	61
				3	94.2	49	52	68	79	67	68	79	80	83	80	81	90	85	77	73	75	78	81	80	79	76	74	73	72	70	68	64	63	63	64	63
				4	94.9	59	59	69	79	69	71	82	83	84	84	87	88	83	80	80	78	79	82	81	79	76	74	75	72	68	69	64	63	62	66	63
			11	1	84.6	60	57	66	76	60	65	68	64	70	72	70	81	75	69	66	63	65	66	65	67	64	63	63	63	59	60	57	55	52	51	47
				2	83.4	43	46	65	75	57	64	69	64	73	68	64	68	68	64	59	57	62	68	72	75	75	72	70	67	62	64	60	58	53	52	47
				3	84.1	55	52	61	70	66	62	69	70	72	72	73	81	76	67	63	59	57	60	63	63	62	61	63	63	59	56	53	50	50	49	47
				4	85.9	50	44	62	74	57	64	74	77	76	74	76	79	74	70	69	65	64	68	69	72	69	69	69	64	59	61	56	56	53	51	48
			12	1	81.7	54	61	64	71	63	63	69	66	70	70	67	78	73	63	62	57	57	57	56	54	54	52	50	51	49	48	45	45	41	43	44
				2	80.1	43	46	65	74	54	60	63	64	67	63	64	66	66	66	69	67	67	69	67	66	65	66	64	62	58	56	56	51	47	46	44
				3	80.9	43	45	60	72	56	59	72	68	68	71	70	75	71	65	61	59	57	56	57	56	54	55	55	57	55	54	51	48	46	44	44
				4	82.2	44	47	60	71	57	60	70	72	72	71	71	75	72	68	66	63	63	63	63	64	62	62	63	63	59	57	55	52	49	46	44

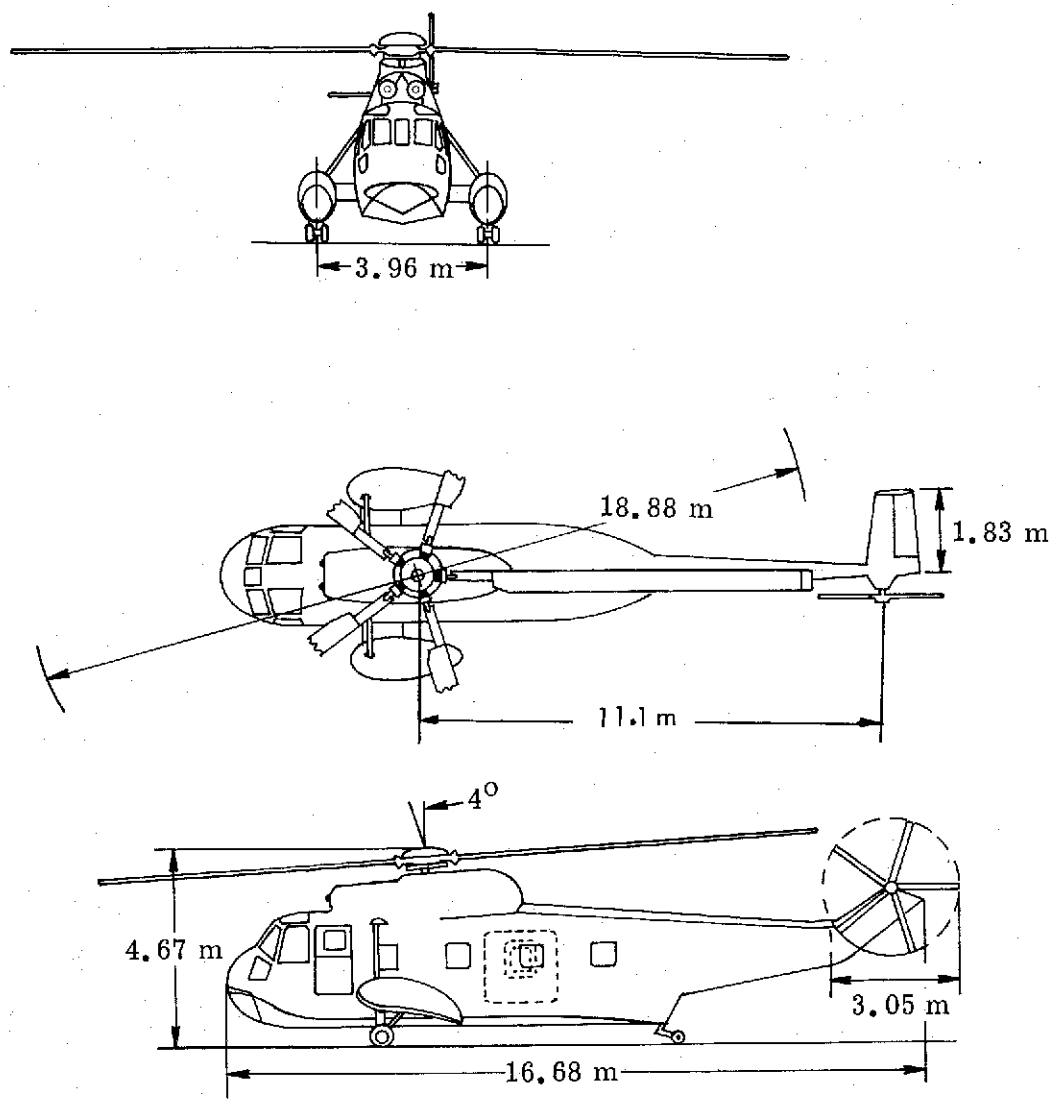
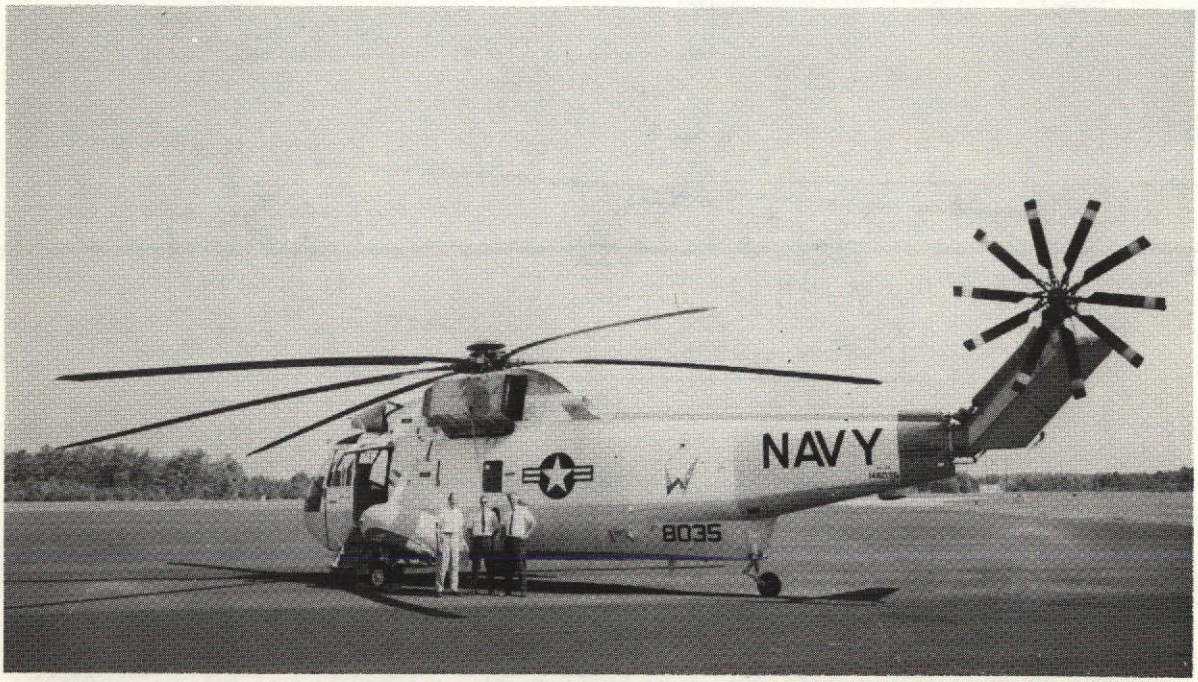


Figure 1.- Three-view drawing of the Sikorsky SH-3A turbine helicopter.

L-73-6821

Figure 2.- Standard SH-3A helicopter.



L-73-6822

Figure 3.- Modified SH-3A helicopter.

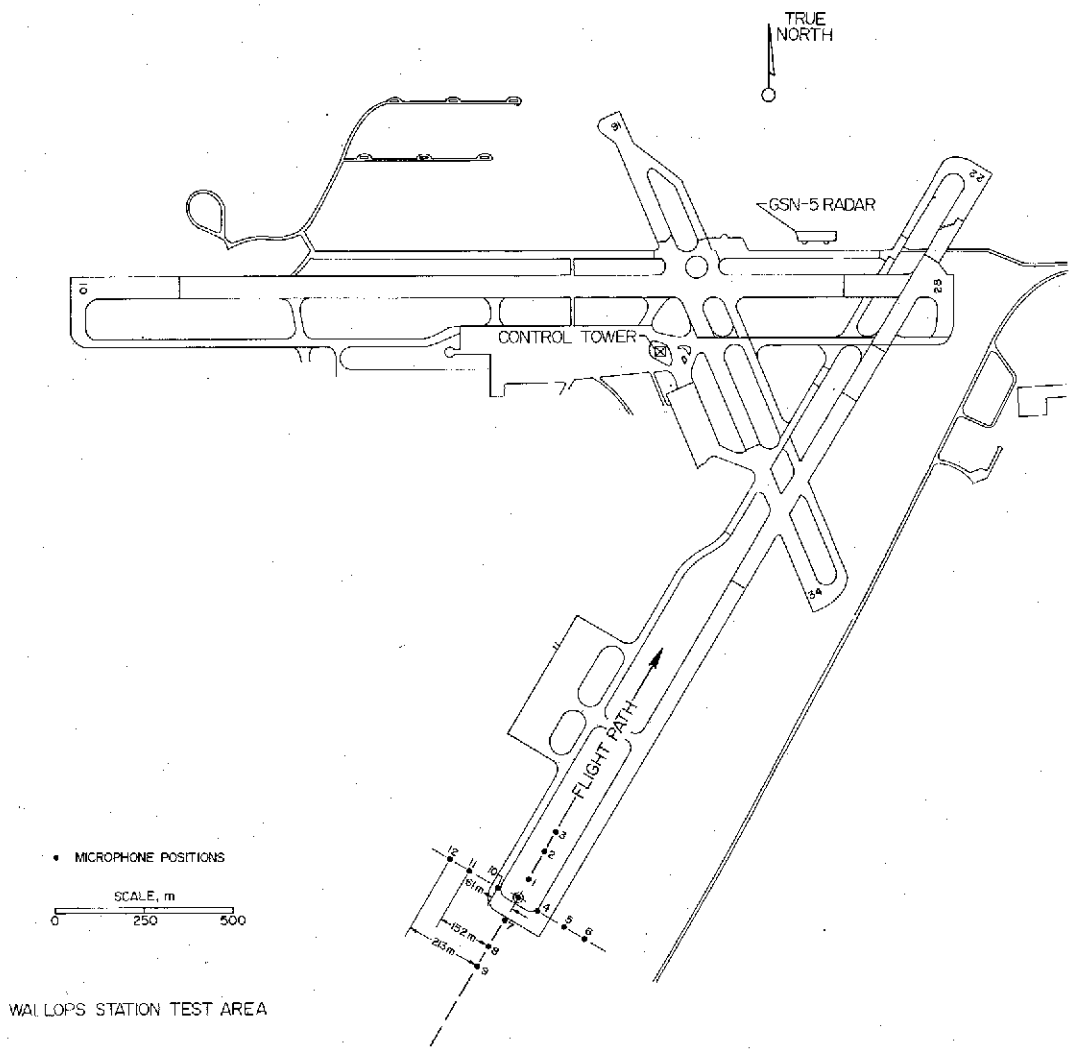
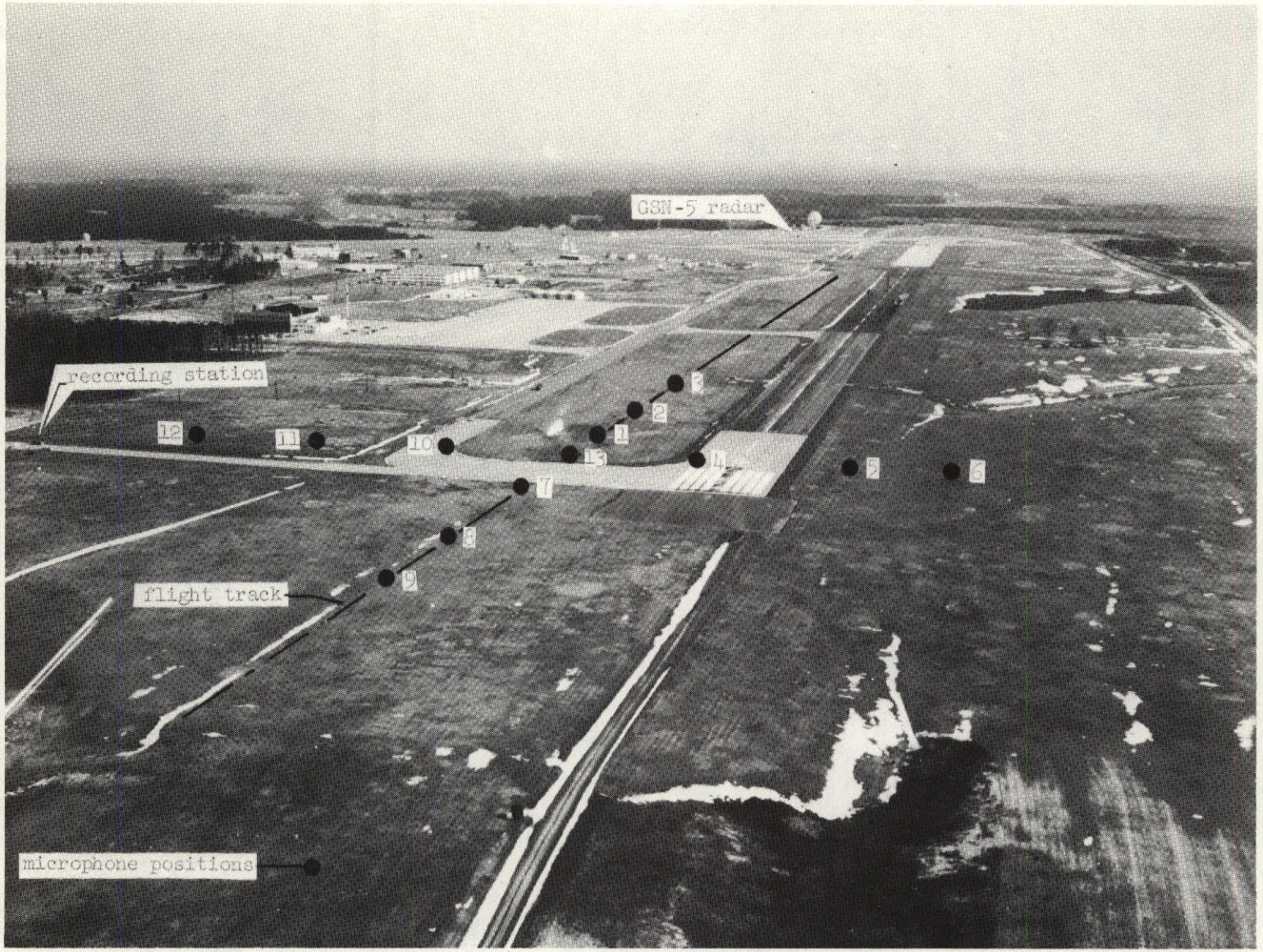


Figure 4.- Map of test area showing location of flight track and microphone array.



L-73-6823

Figure 5.- Aerial photograph showing terrain, flight path, and microphone array; north view from end of runway 4-22.

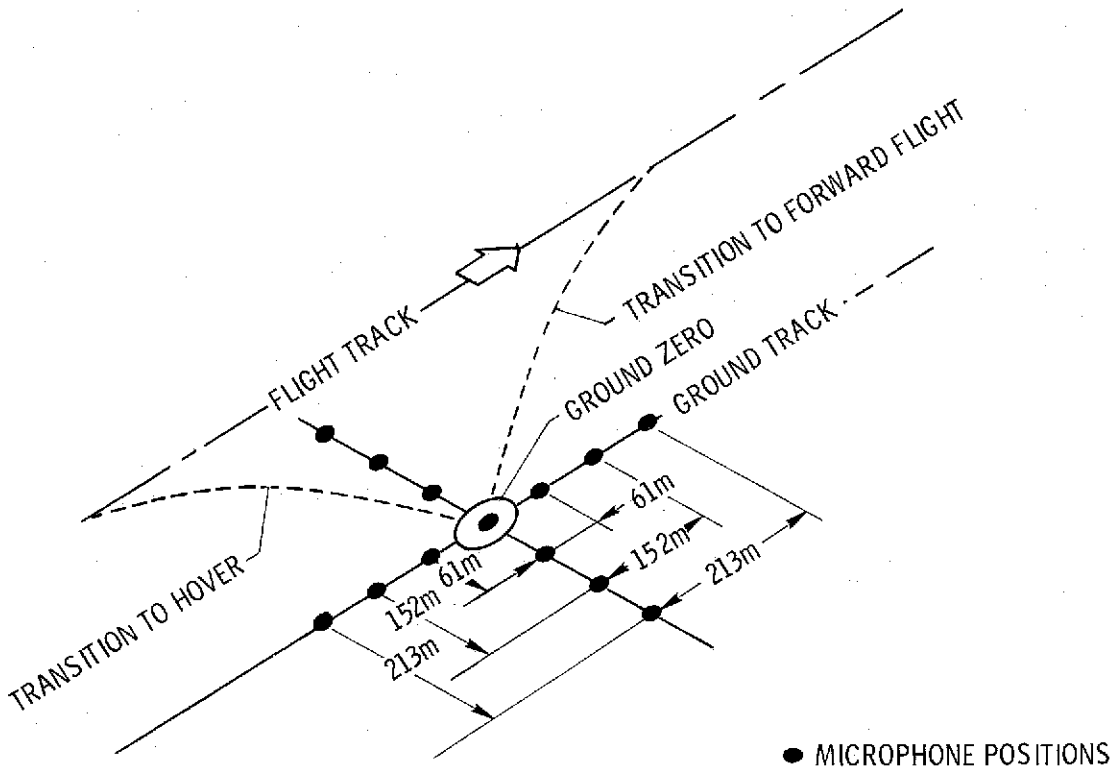


Figure 6.- Diagram of the microphone array illustrating the microphone position for noise measurement during helicopter hover, landing, take-off, and flyby operations.

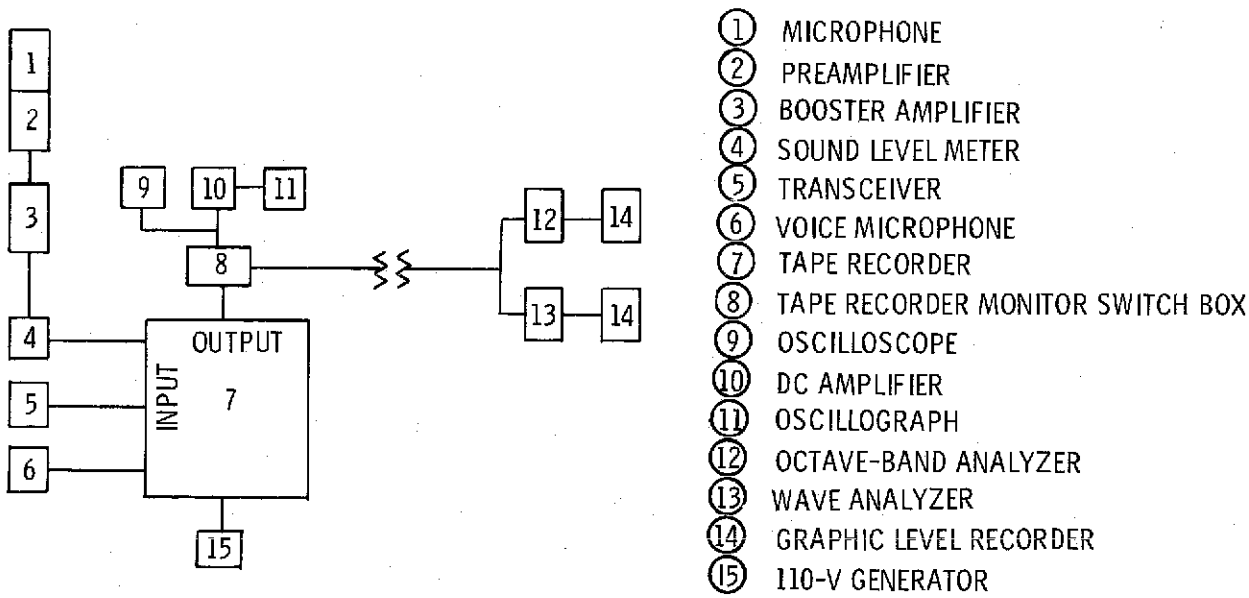


Figure 7.- Block diagram showing typical system layout for noise data acquisition and preliminary reduction.

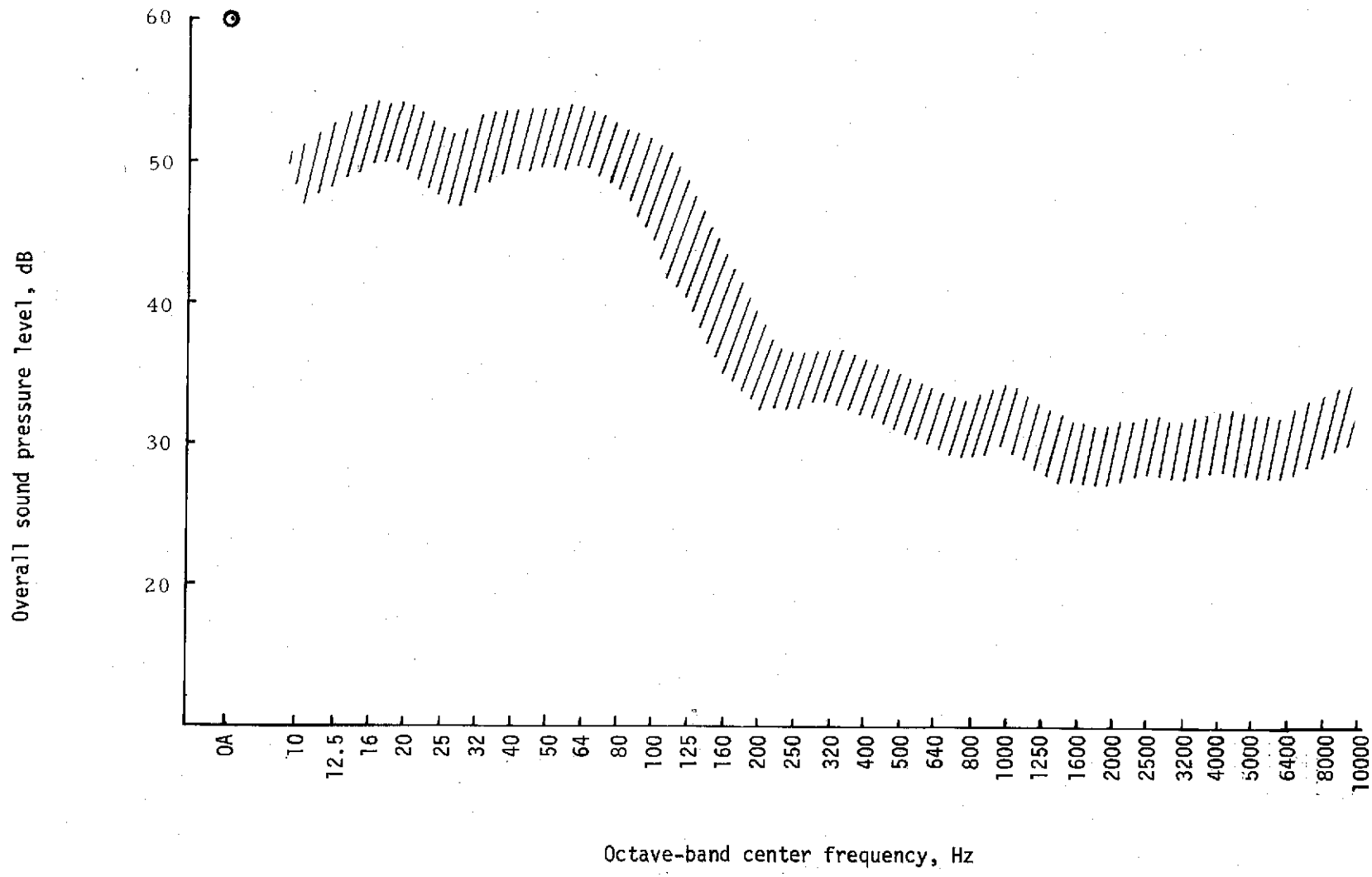


Figure 8.- One-third octave-band analysis of ambient noise levels existing in the test area.

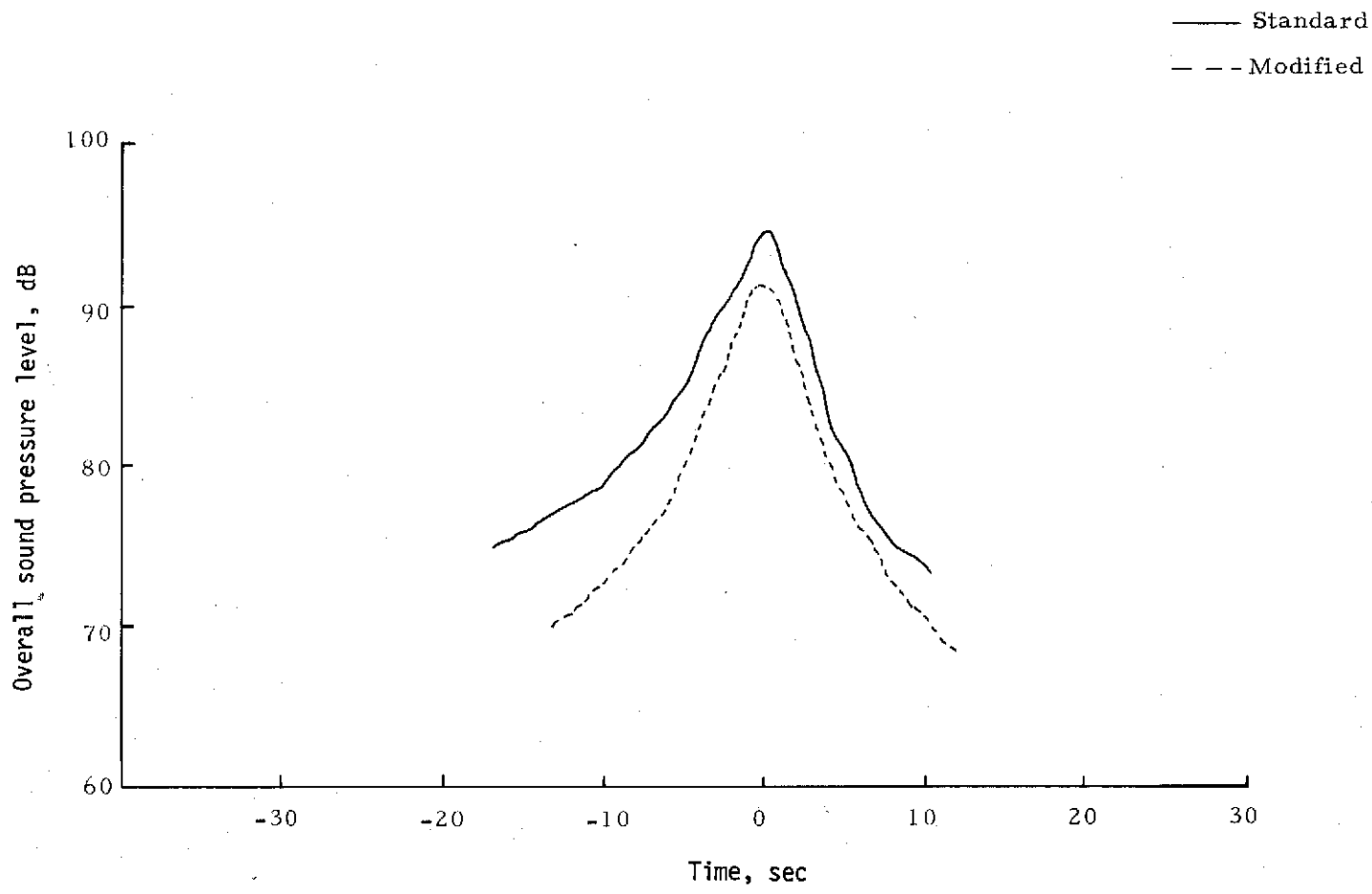
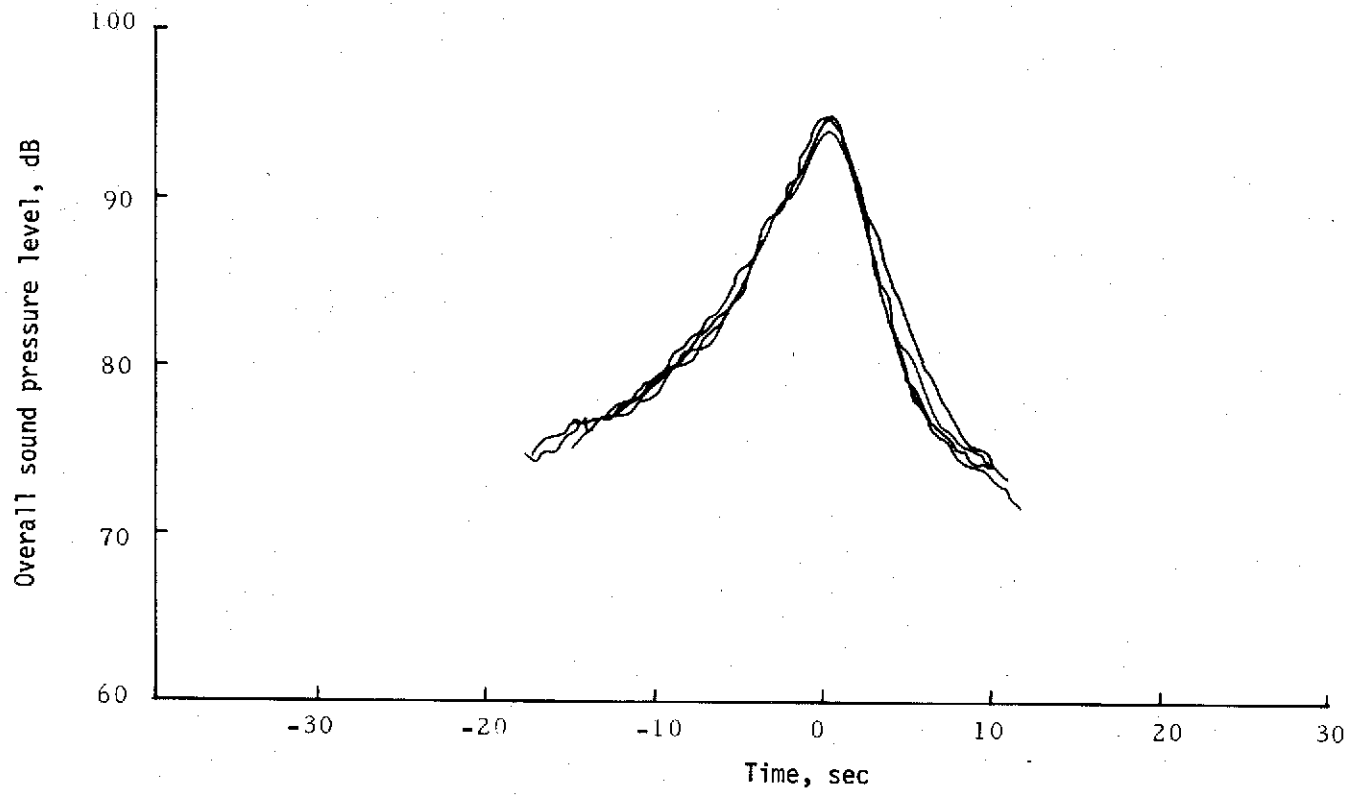
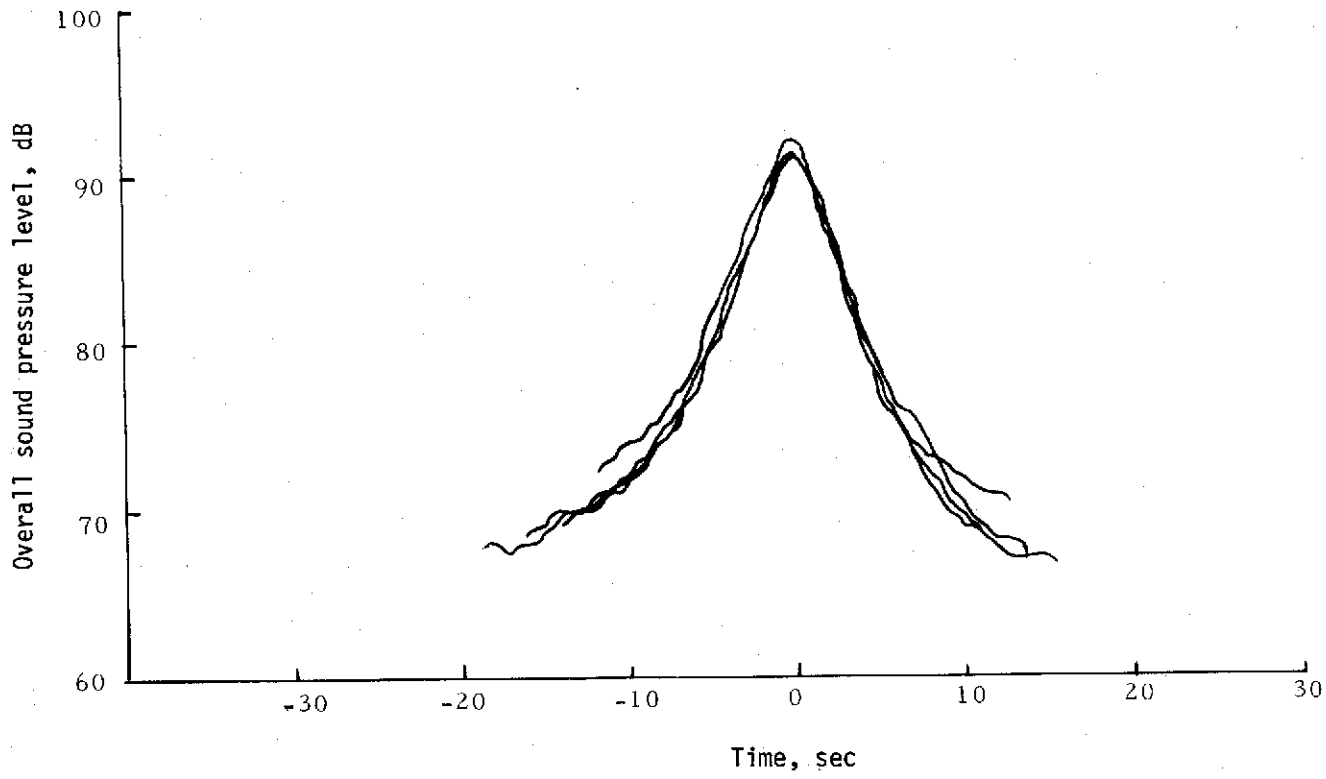


Figure 9.- Average time history of sound pressure level as obtained on-track during flyover noise test of SH-3A helicopter at 70 knots and altitude of 61 m.



(a) Standard helicopter.

Figure 10.- Sample of four time histories of sound pressure levels obtained on-track during flyover tests at 70 knots and 61 m.



(b) Modified helicopter.

Figure 10.- Concluded.

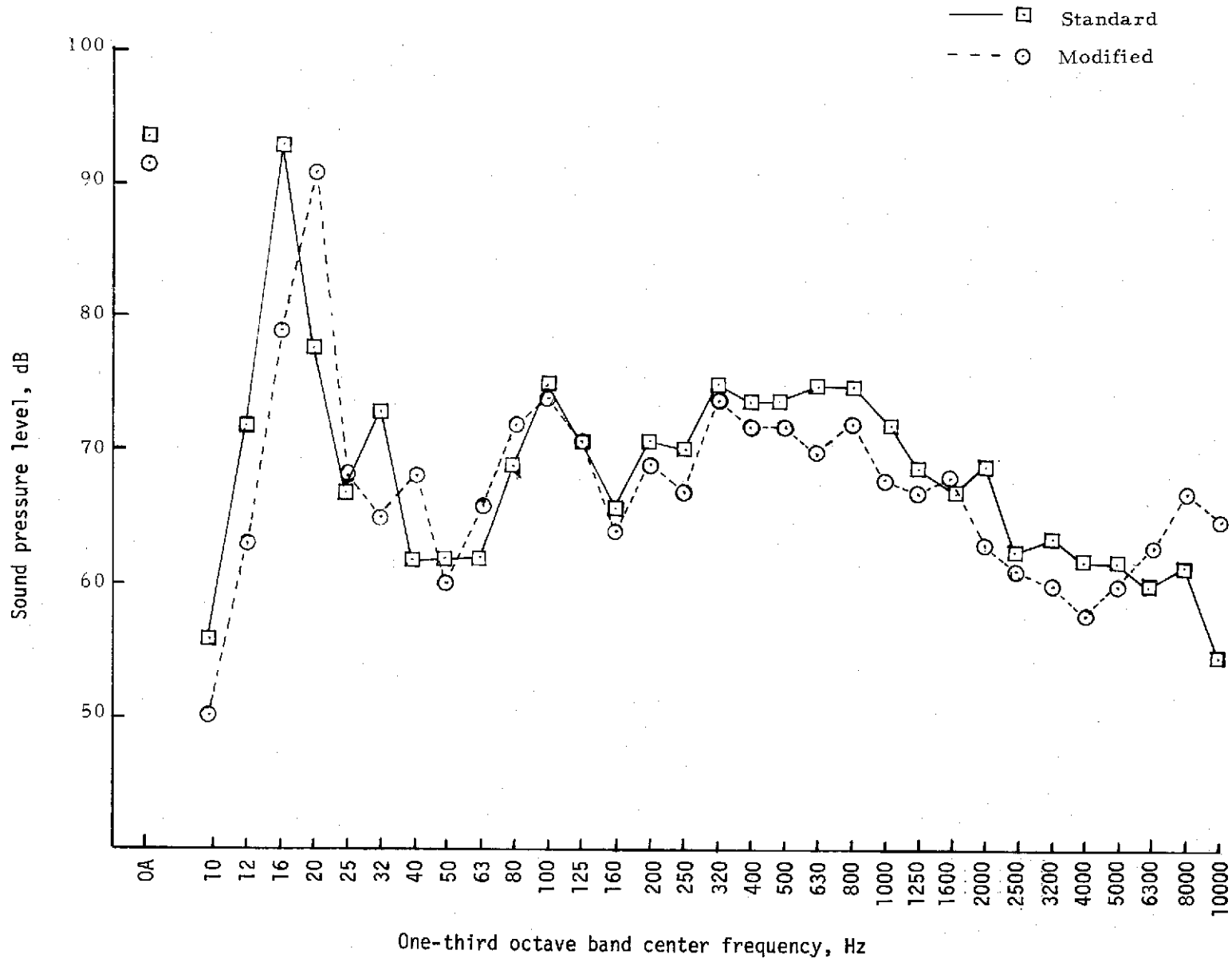


Figure 11.- On-track flyover noise spectra at 70 knots and 61 m.

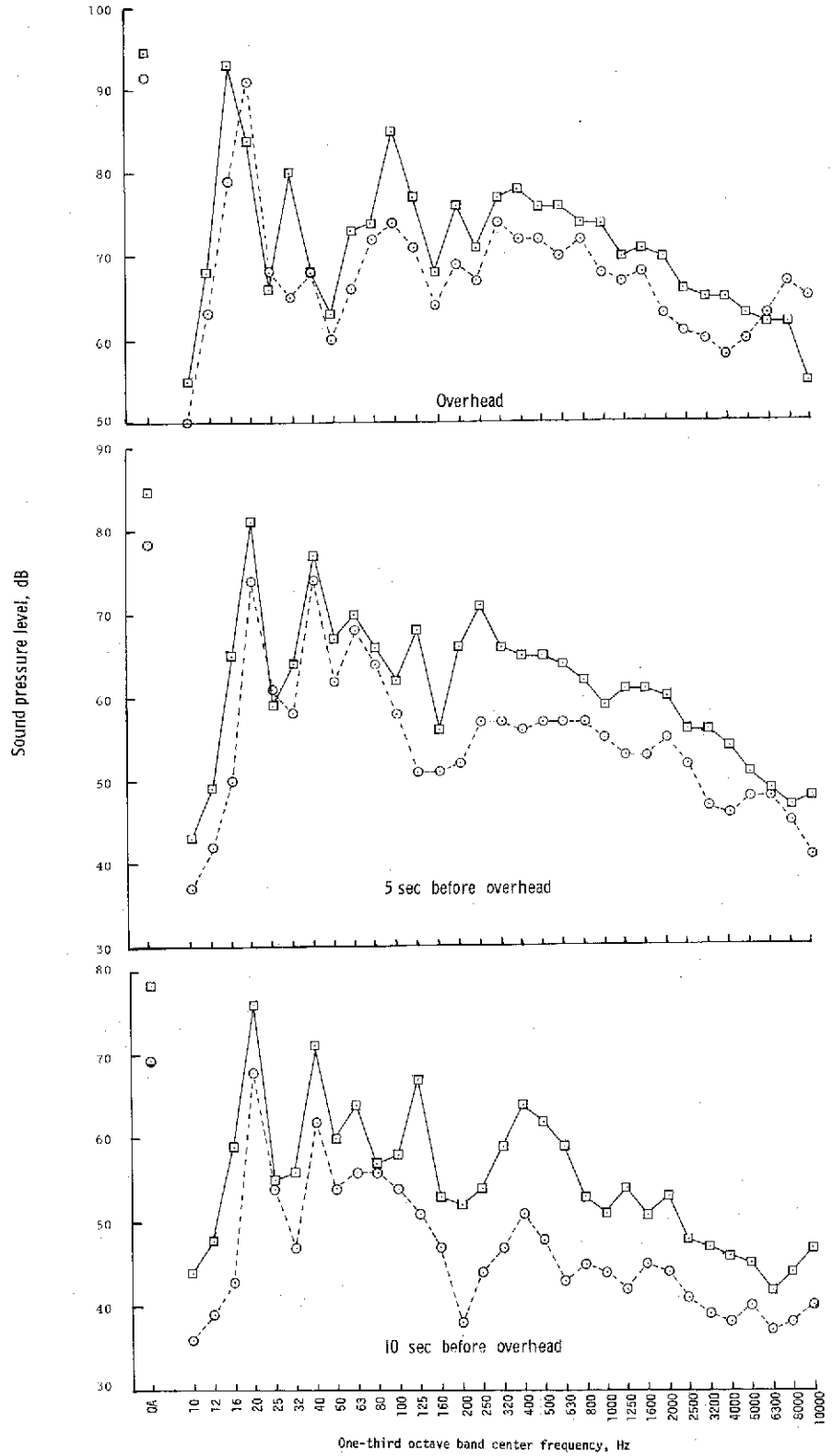


Figure 12.- On-track noise spectra obtained at various times at 70 knots and 61 m.

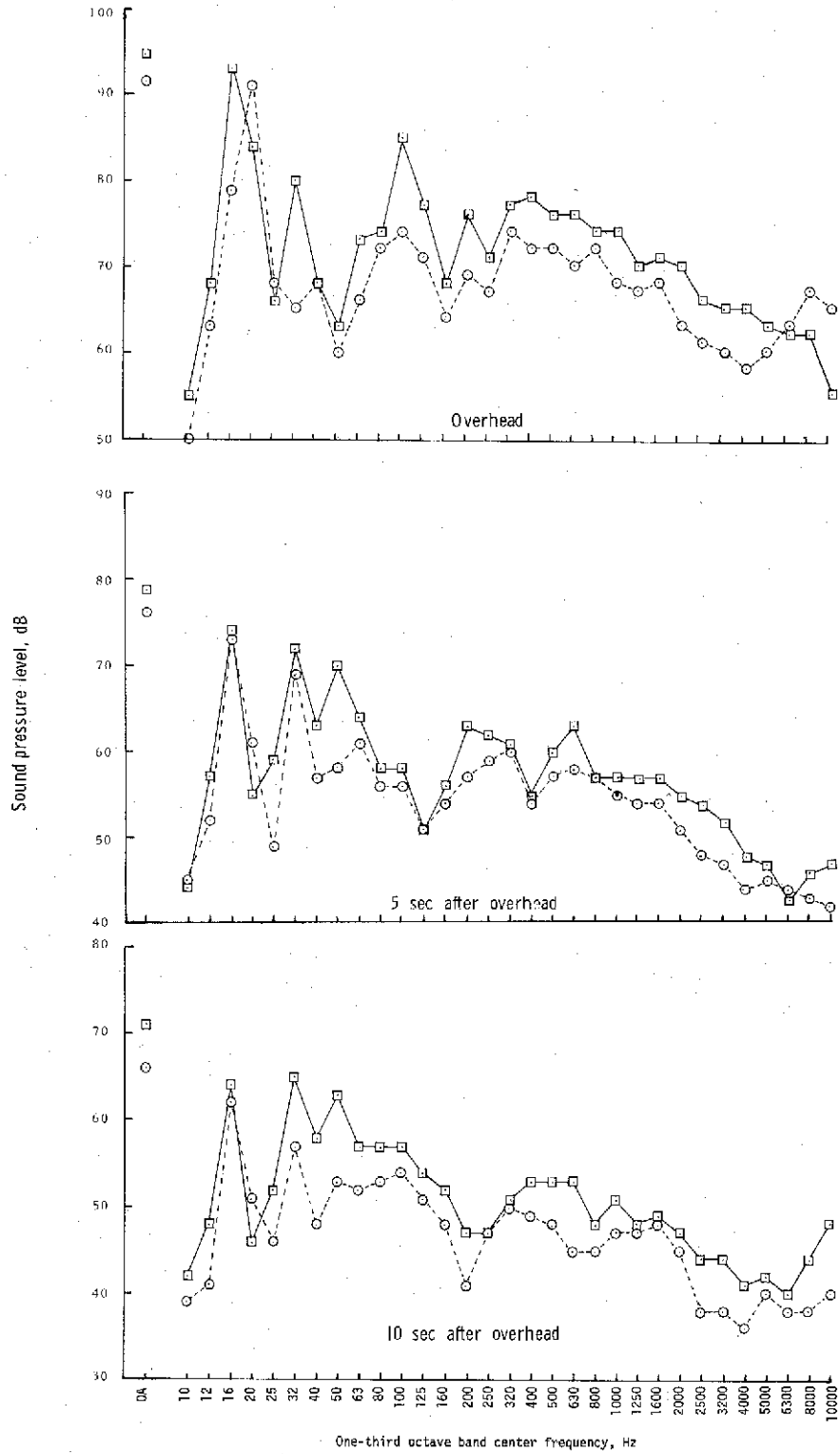


Figure 12.- Concluded.

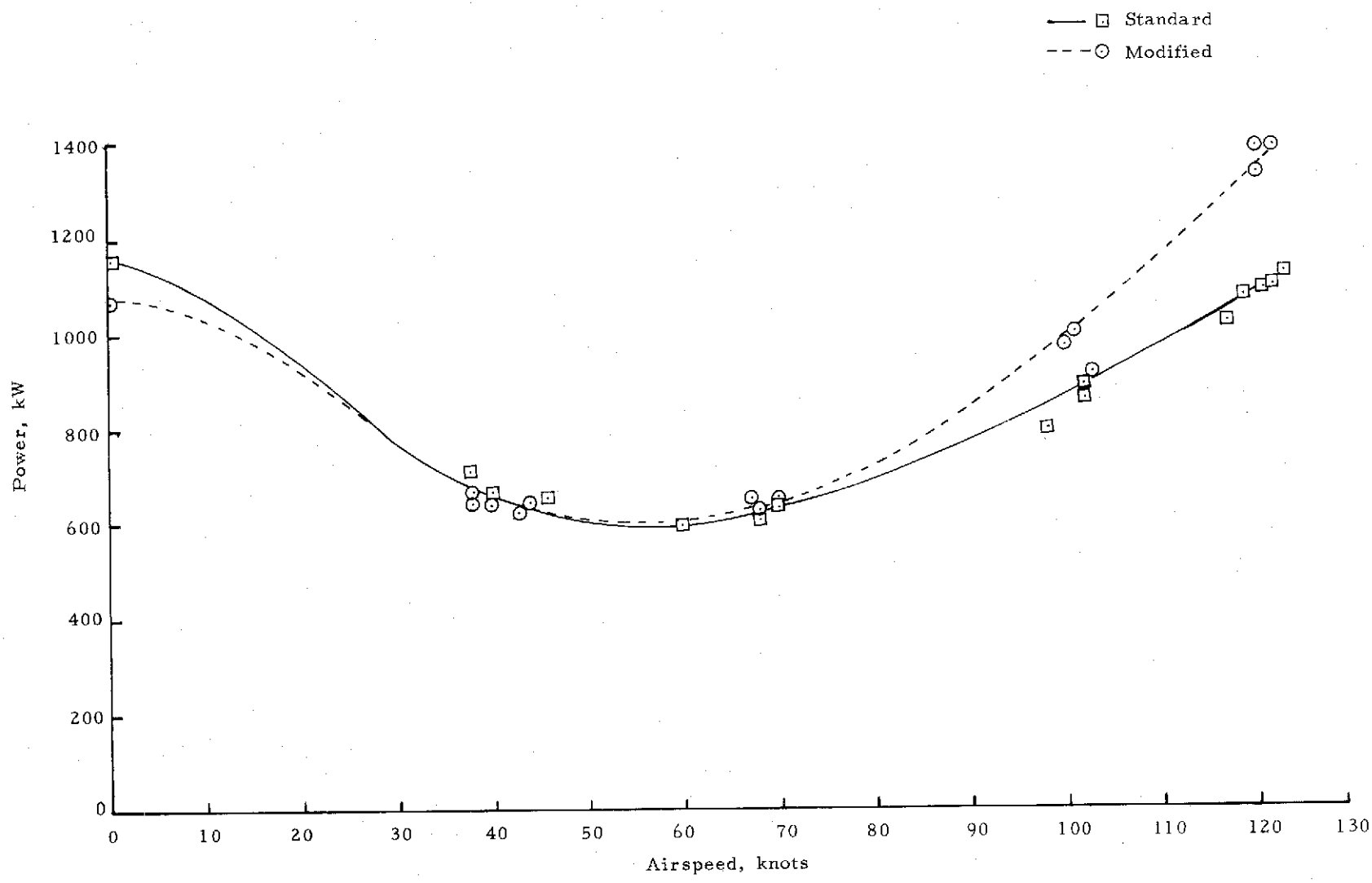


Figure 13.- Power required for the standard and modified SH-3A helicopter at a weight of approximately 7000 kg.

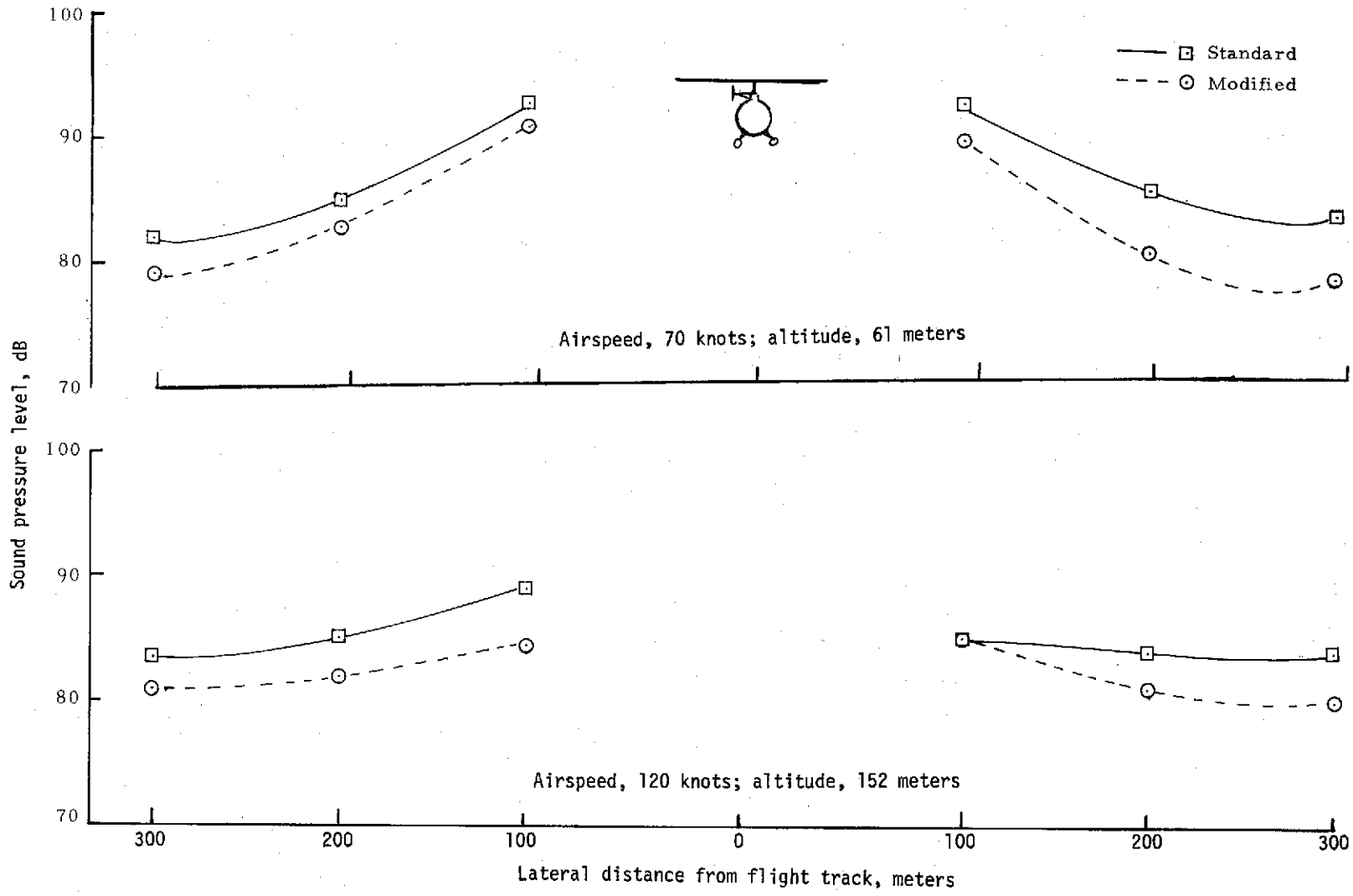


Figure 14.- Average noise levels as measured at various lateral distances from flight track during level flight of the SH-3A helicopter.

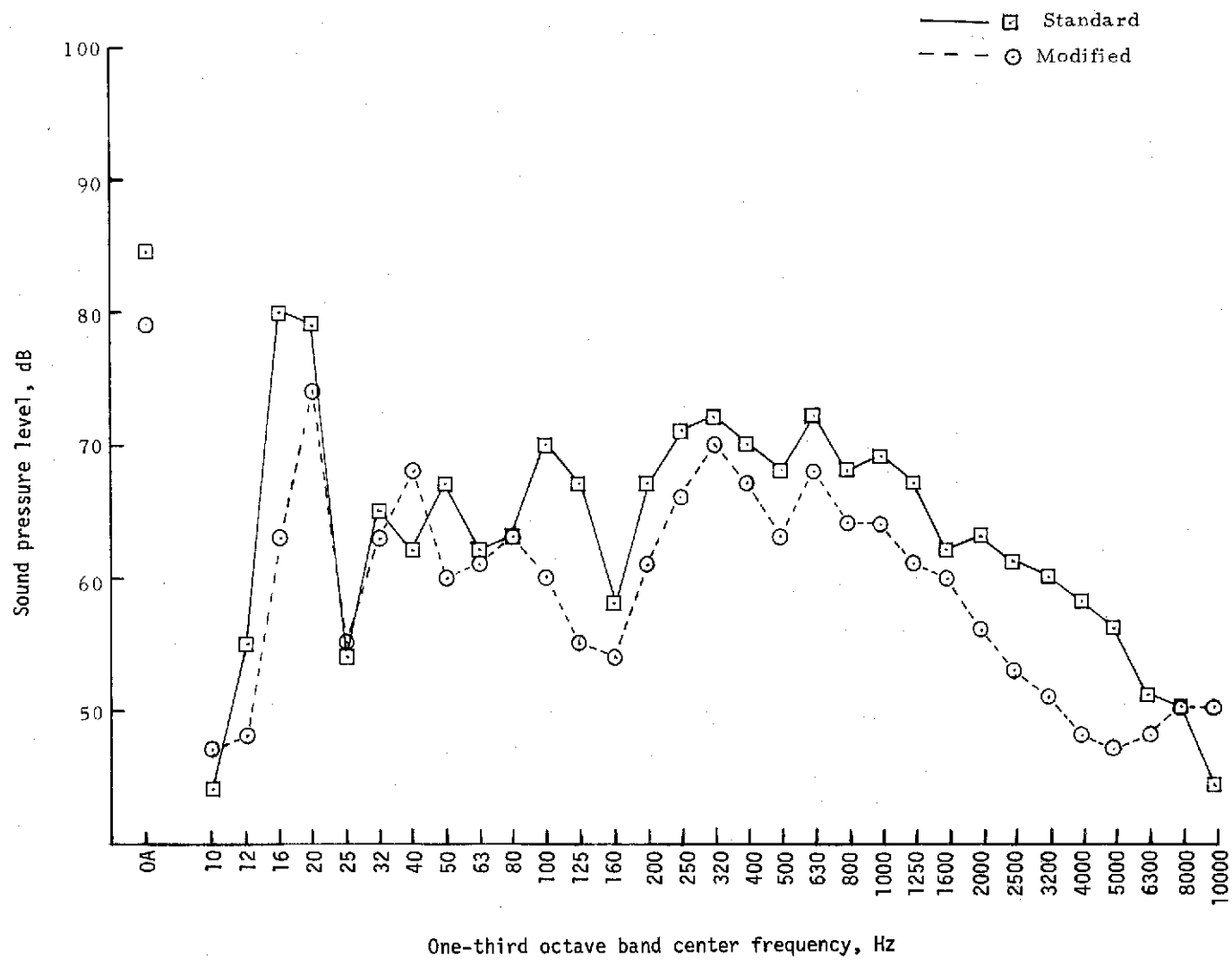
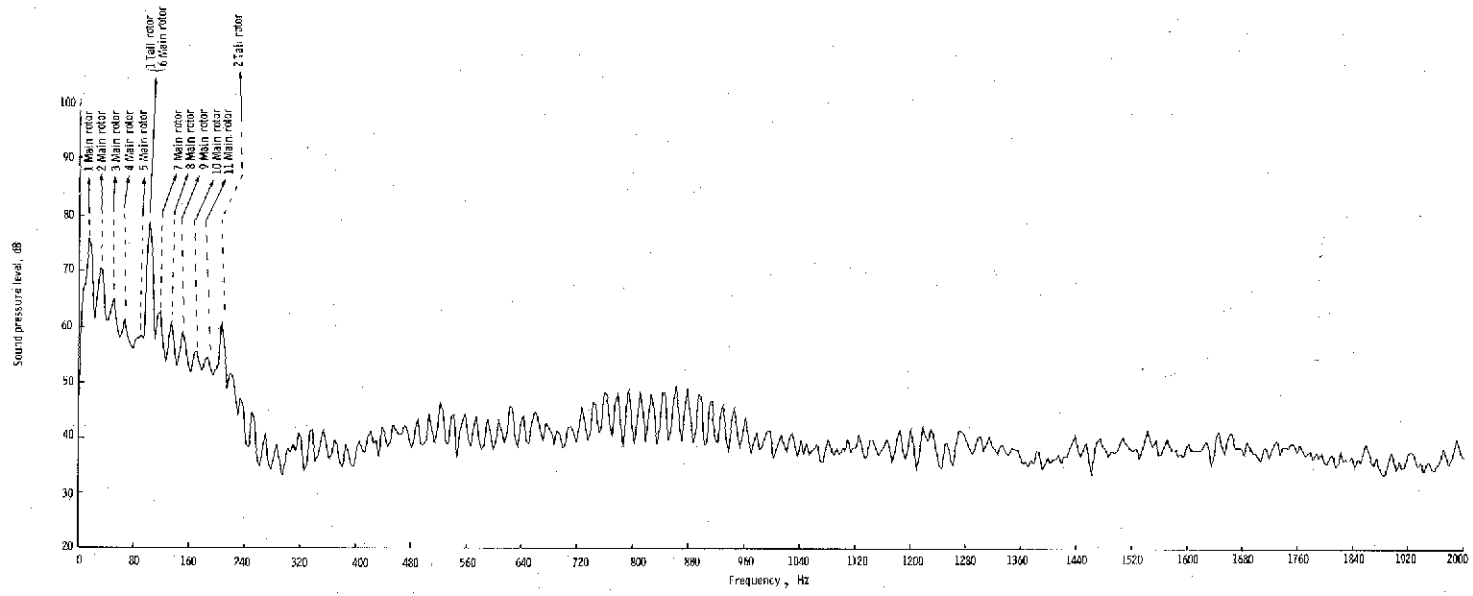
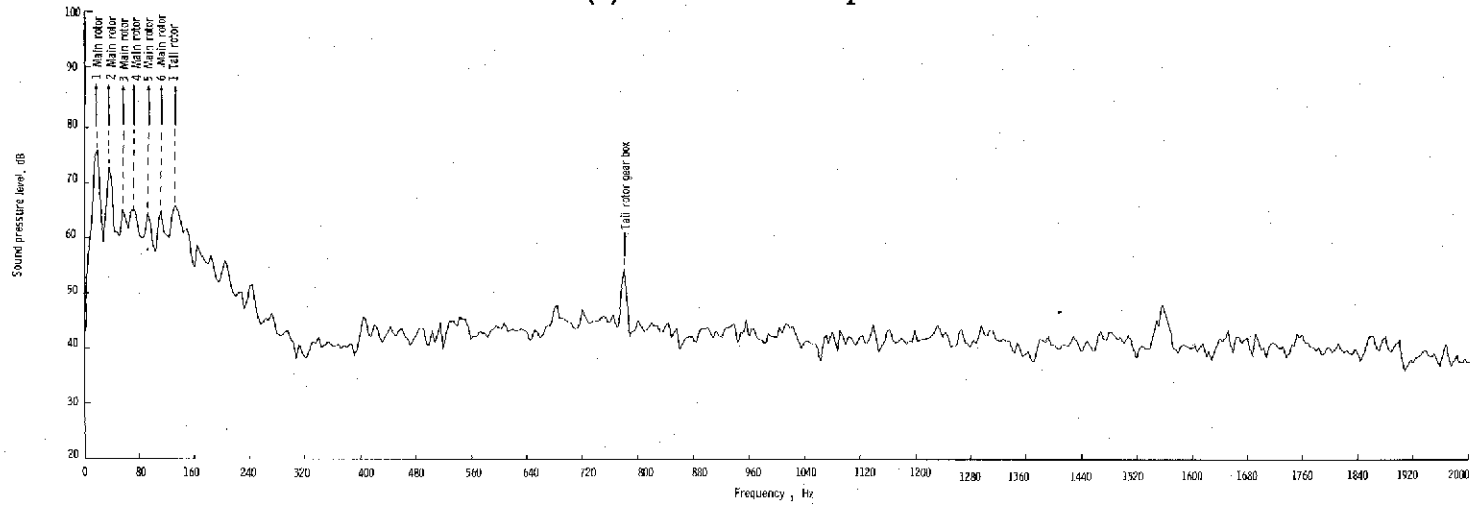


Figure 15.- Measured flyover noise spectra obtained at an airspeed of 70 knots and altitude of 61 m at a lateral distance of 213 m from flight track.



(a) Standard helicopter.



(b) Modified helicopter.

Figure 16.- Narrow-band spectra of the standard and modified SH-3A helicopters hovering at 3.1 m.

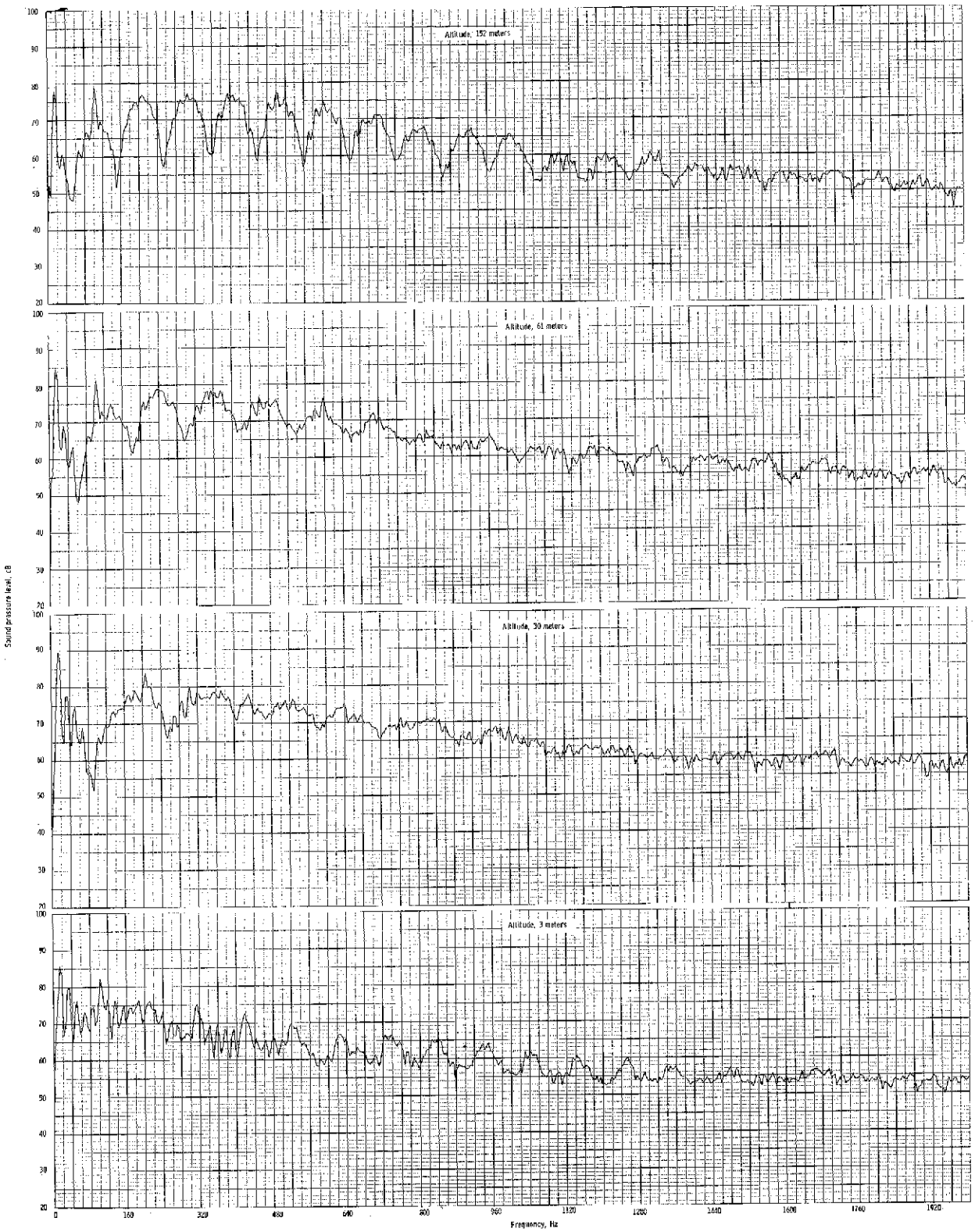
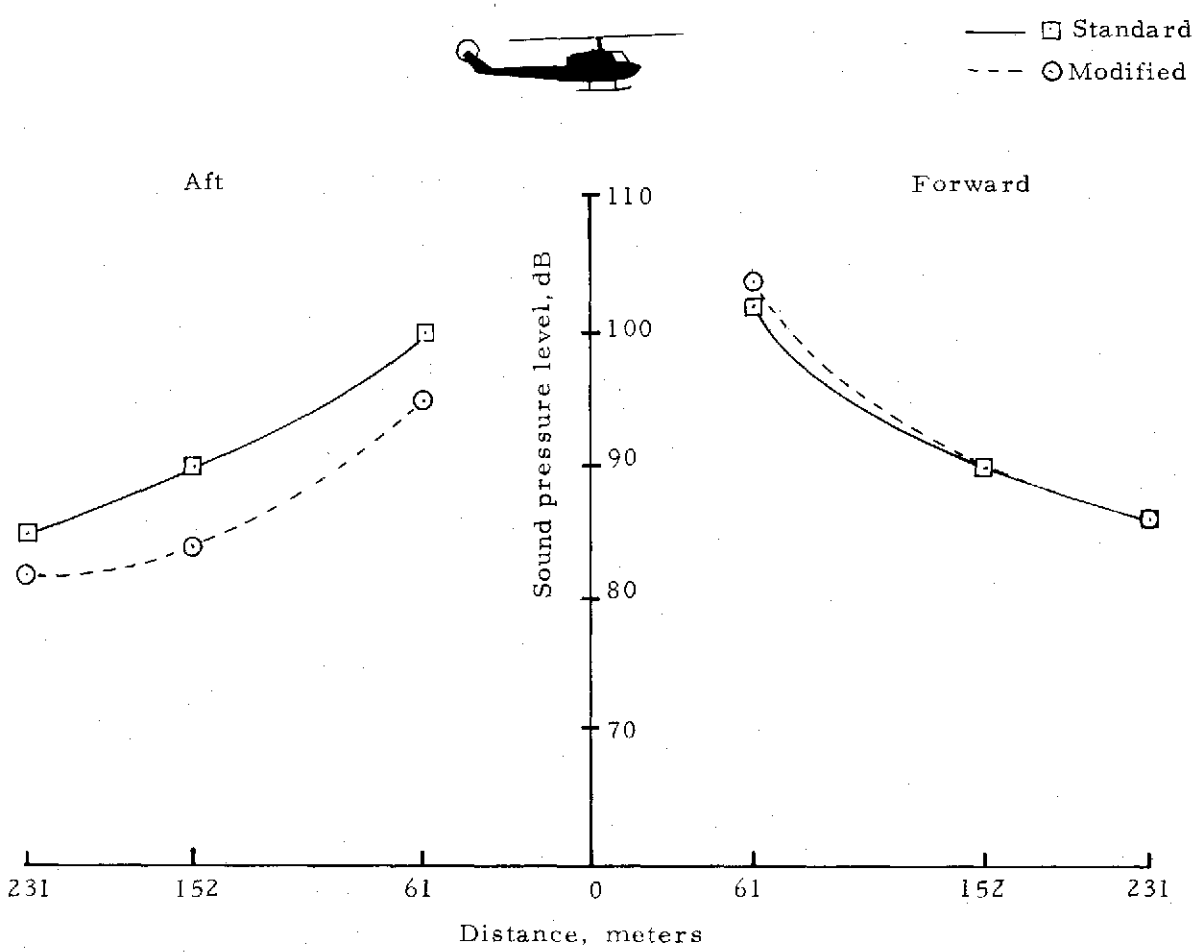
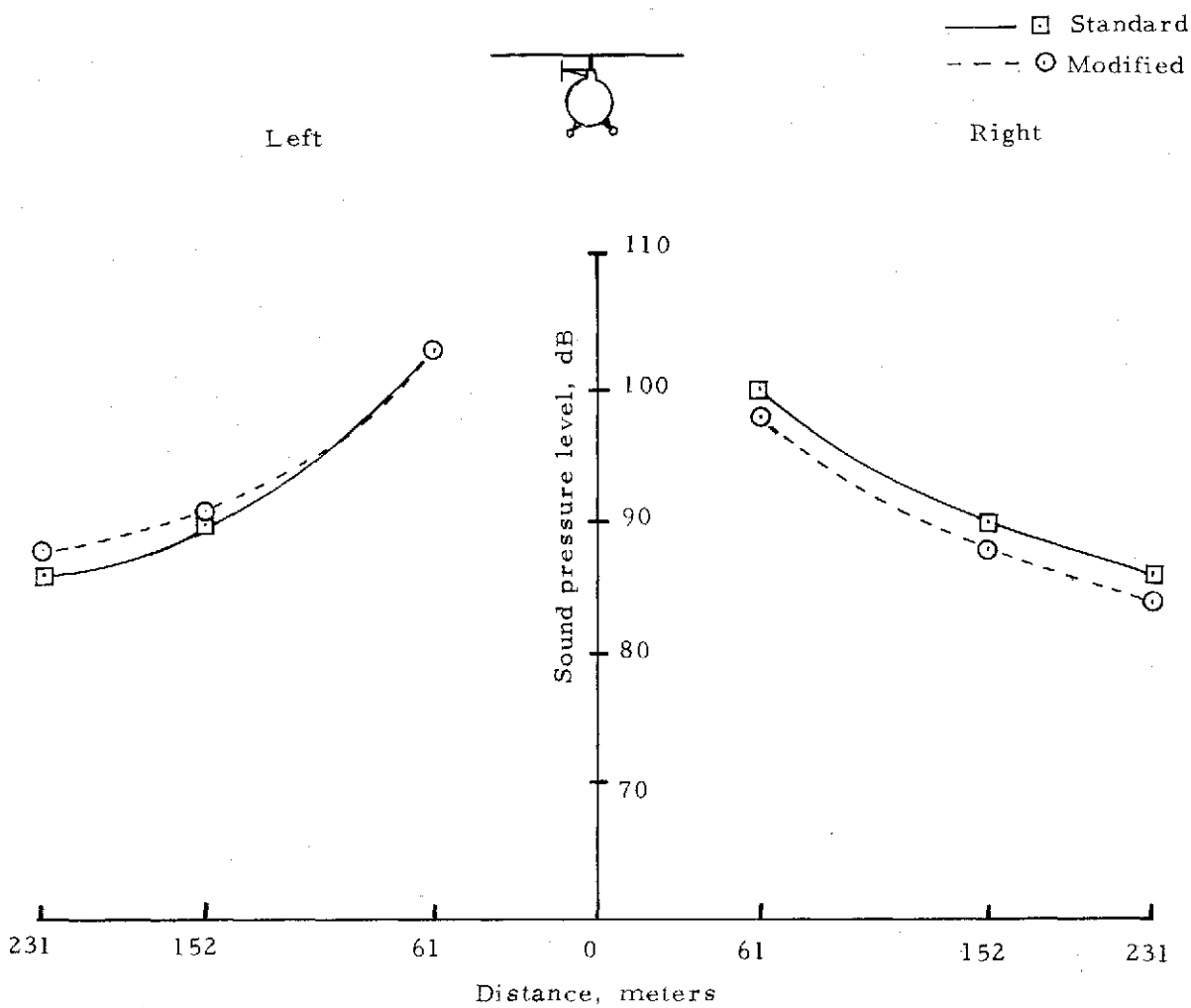


Figure 17.- Typical example of microphone interference for the SH-3A helicopter hovering at four altitudes.



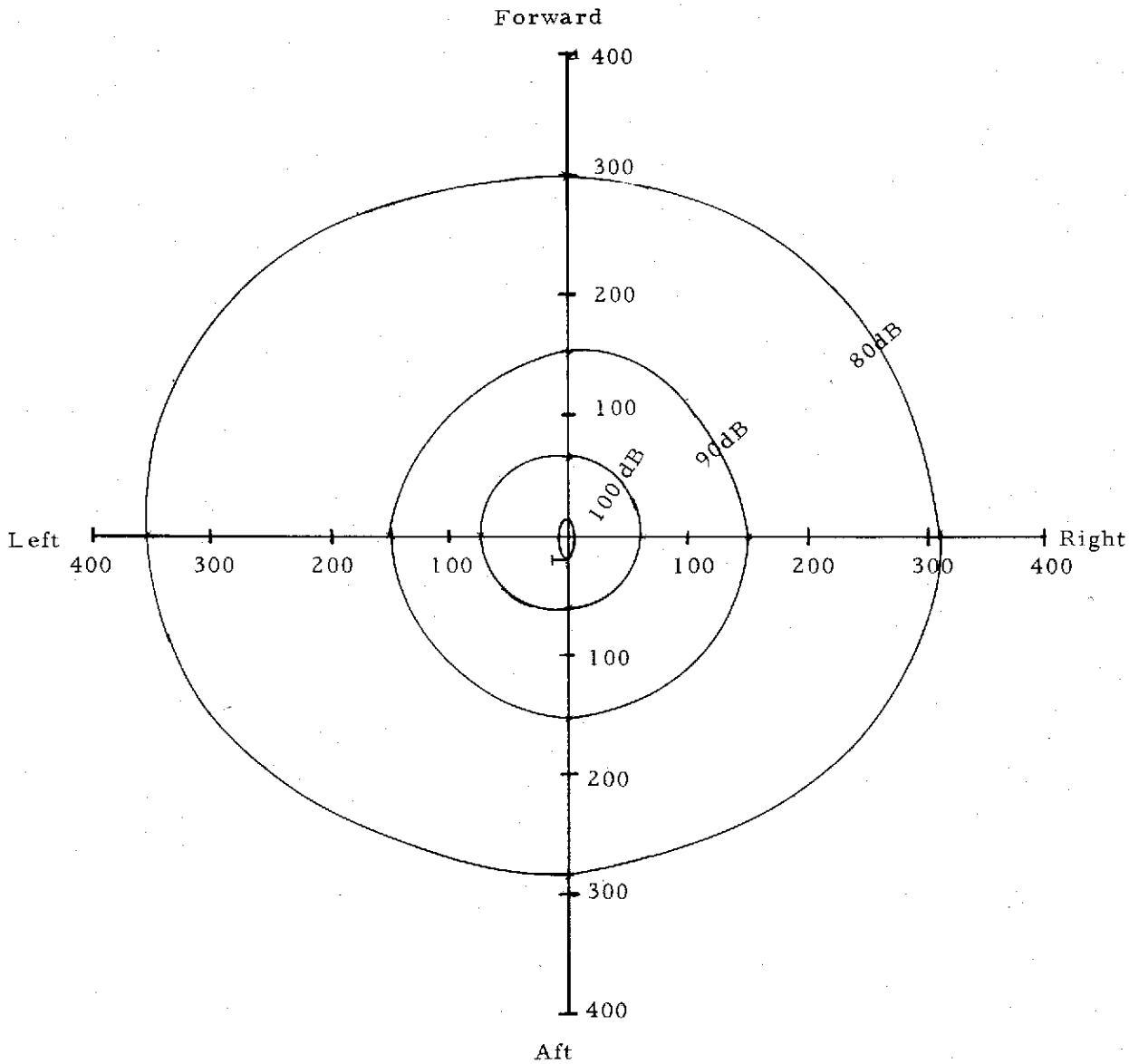
(a) Longitudinal noise measurements.

Figure 18.- Average sound pressure levels at a hover altitude of 31 m taken at positions around the helicopter.



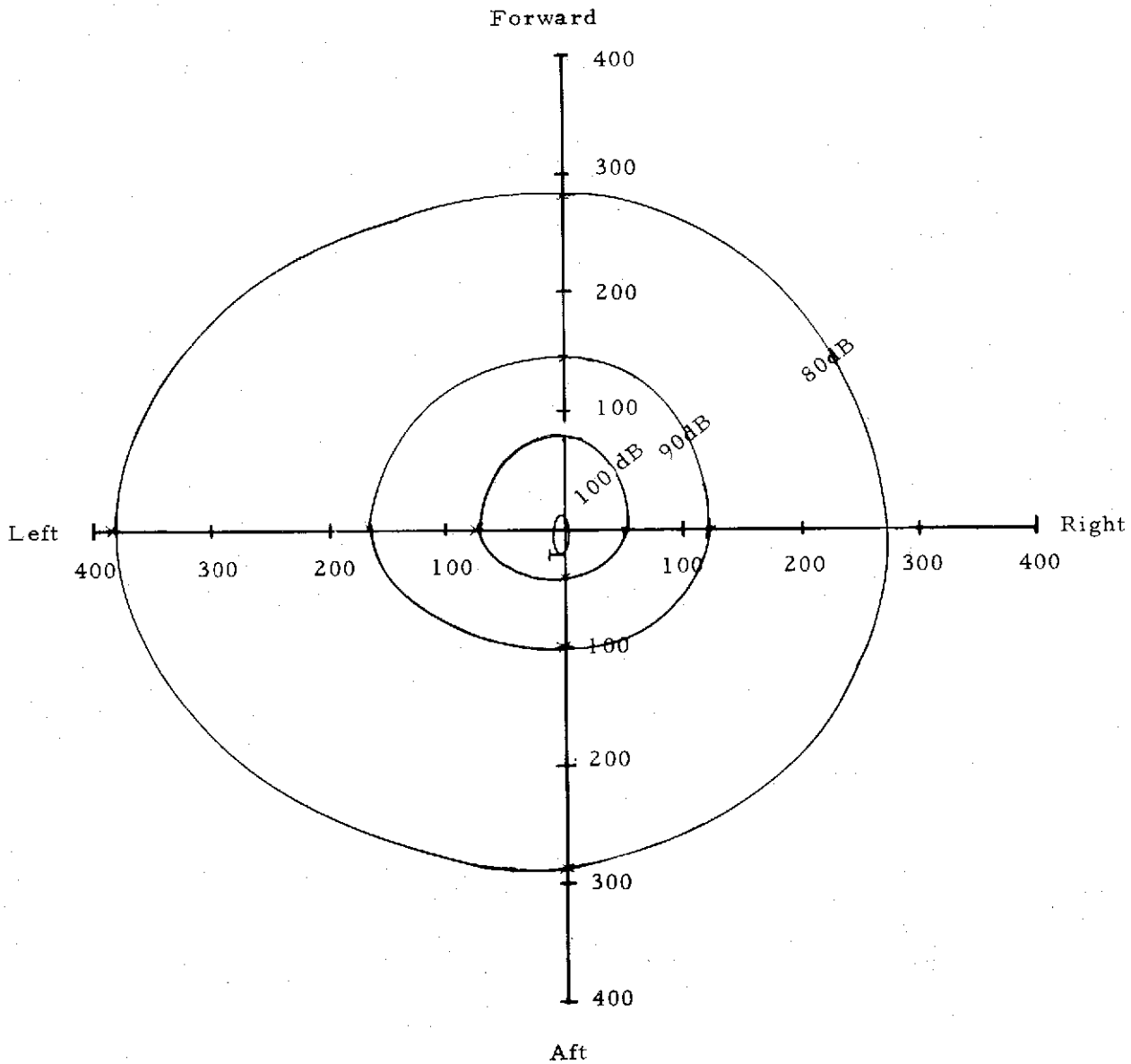
(b) Lateral noise measurements.

Figure 18.- Concluded.



(a) Standard helicopter.

Figure 19.- Average noise contours of the standard and modified SH-3A helicopter hovering at an altitude of 31 m.



(b) Modified helicopter.

Figure 19.- Concluded.

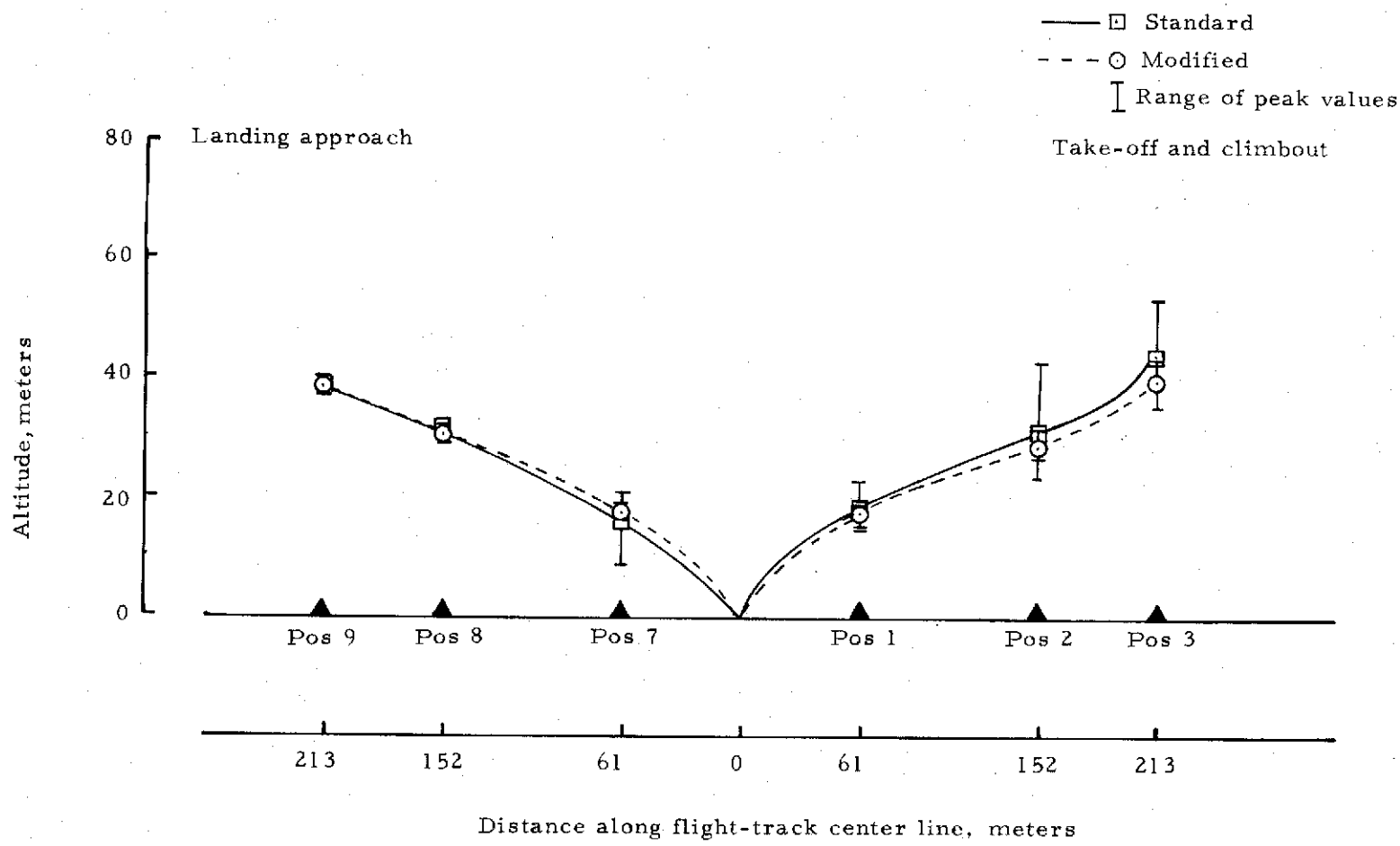
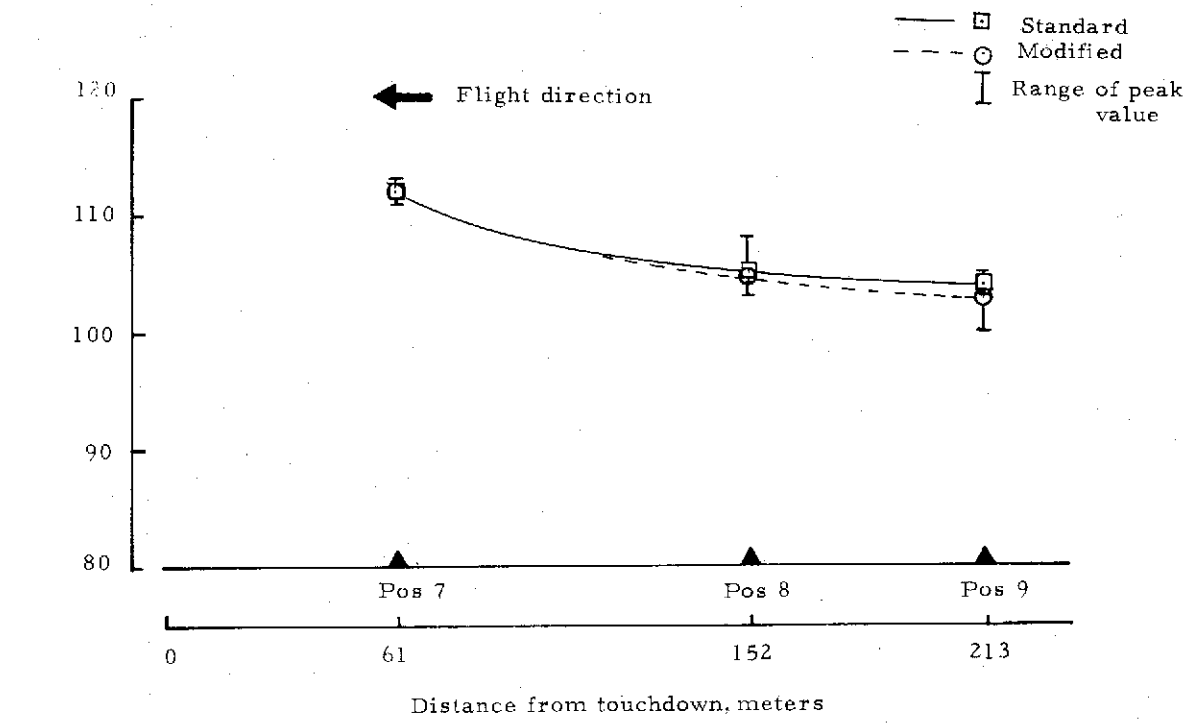
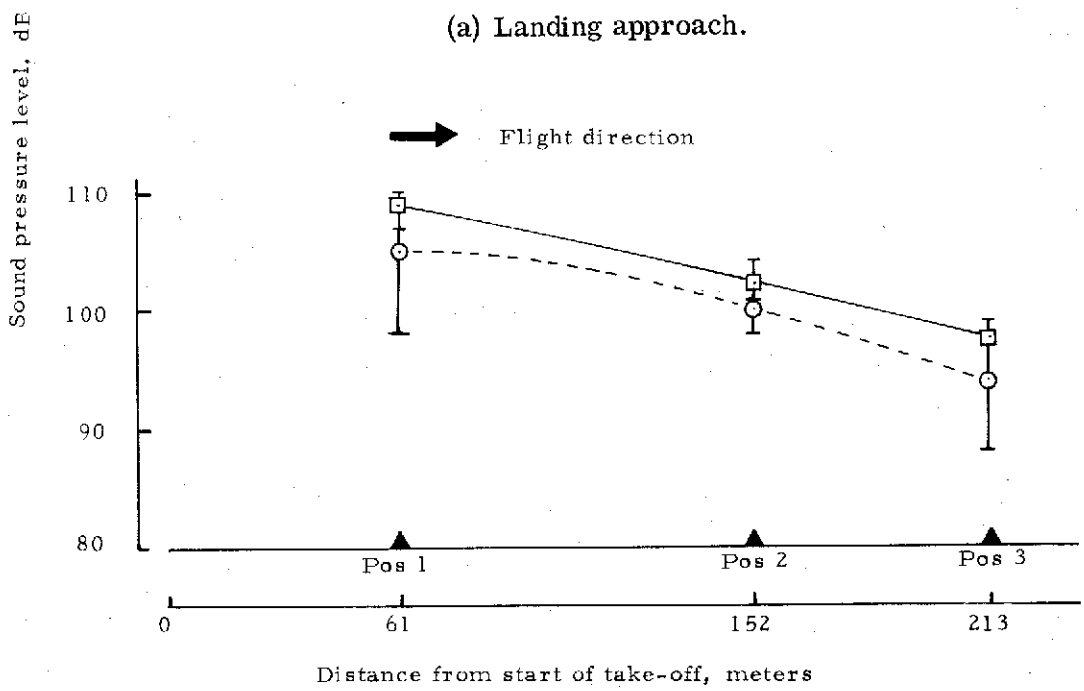


Figure 20.- Altitude-distance profile for landing approach and for take-off and climbout of the SH-3A helicopter.



(a) Landing approach.



(b) Take-off and climbout.

Figure 21.- Noise levels as measured along the ground track for the SH-3A helicopter during landing and take-off operations.