SIEMENS

ACUSON Sequoia
Electromagnetic Emissions and Immunity:
Guidance and Manufacturer's Declaration

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Siemens Medical Solutions USA, Inc.

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Electromagnetic Emissions and Immunity: Guidance and Manufacturer's Declaration

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CE Declaration

This product is provided with a CE marking in accordance with the regulations stated in Council Directive 93/42/EEC of June 14, 1993 concerning Medical Devices. Siemens is certified by Notified Body 0123 to Annex II.3. Full Quality System.

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Electromagnetic Compatibility

The Electromagnetic compatibility (EMC) testing of this system was performed according to the international standard for EMC of medical devices (IEC 60601-1-2: 2001). This IEC standard has been adopted in Europe as the European Norm standard (EN 60601-1-2: 2001). The ultrasound system from Siemens meets the requirements of the standard. Compliance with test limits does not guarantee that a particular installation will be free from electromagnetic interference.

Avoiding Electromagnetic Interference

⚠ **WARNING:** Operating the ultrasound system in close proximity to other equipment can cause reciprocal interference. You should observe and ensure normal operation of the ultrasound system and other equipment.

Medical devices either generate (emit) or receive electromagnetic interference. The EMC standards describe tests for both emitted and received interference. Emission tests address interference generated by the device being tested. The ultrasound system from Siemens meets the standard for radiated emissions.

Radio frequency (RF) is a form of electromagnetic energy tested by the EMC standards. Ultrasound systems and ultrasound transducers operate in the range of RF frequencies and are therefore susceptible to interference generated by other RF energy sources. Sources of RF interference include medical devices, information technology products, and radio/television transmission towers. To reduce interference from an RF energy source:

- Increase the separation (distance) between the ultrasound equipment and the interfering device (RF energy source).
- Connect the ultrasound equipment and the interfering device (RF energy source) to separate outlets on separate circuits, if possible.

In some environments, it is difficult to identify the source of radiated interference. To identify the source of the interference, determine the answers to these questions and then contact your service representative with the information you have collected.

- Is the interference intermittent or constant?
- Is the interference present with only one transducer or with several transducers?
- Do two different transducers operating at the same frequency have the same problem?
- Is the interference present if the ultrasound system is moved to a different location in the facility?
- Is the interference mode-dependent? That is, does the interference occur only in one mode, such as during Doppler?
- Can the EMC coupling path be attenuated? For example, does placing a transducer close to an ECG cable increase electromagnetic interference? Does moving the cable or other medical equipment away from the transducer result in reduced electromagnetic interference?

Electrosurgical Units

Electrosurgical units (ESUs) and other devices intentionally introduce radio frequency electromagnetic fields or currents into patients. Because ultrasound imaging frequencies are coincidentally in this radio frequency range, ultrasound transducer circuits are susceptible to radio frequency interference. When an ESU is in use, expect the ultrasound image to experience severe interference that may make the image unusable. This interference stops as soon as the ESU is powered off.

Restrictions for Use

If RF interference is detected, then the physician must determine if an artifact caused by the interference will negatively impact image quality and the subsequent diagnosis.

Immunity Level Test Results

Immunity is defined in the standard as the ability of a system to perform without degradation in the presence of electromagnetic disturbance. The EMC standards require manufacturers of patient-coupled equipment to specify immunity levels for their systems. The standards recognize that ultrasound equipment is designed to receive and amplify low-level signals in the same bandwidth as the interference. Therefore, it is reasonable to expect image noise during electromagnetic disturbance.

EMC Note: Operating the ultrasound system in close proximity to sources of strong electromagnetic fields, such as radio transmitter stations or similar installations, as well as portable and mobile RF (radiated frequency) may lead to interference visible on the monitor screen. However, the device has been designed and tested to withstand such interference and will not be permanently damaged.

When comparing immunity levels of different ultrasound systems, recognize that although the EMC standard does define the test methodology, it does not specify the criteria to assess degradation. Degradation assessment may vary by manufacturer.

A qualitative assessment of degradation in image quality is subjective. Noting when the first sign of an artifact is seen in the image minimizes the issue of subjectivity and also provides for stringent test results.

The results of emissions testing and immunity testing are provided in the accompanying tables. The standards used in testing are also provided in the tables. Testing was performed on a typical ultrasound system configuration. The values in the compliance level column of the tables specific to transducers is the level at which the RF interference is no longer discernable from the ambient background noise.

Supplemental Information for System Symbols

Symbol	Explanation
	Intentional transmitter of non-ionizing radiation.

Transducers, Accessories, and Cables

⚠ **WARNING:** Accessory equipment connected to the analog and digital interfaces must be certified according to the respective EN and IEC standards (for example, EN 60950 and IEC 60950 for data processing equipment and EN 60601-1 and IEC 60601-1 for medical equipment). Furthermore, all configurations shall comply with the system standards EN 60601-1-1 and IEC 60601-1-1. Anyone who connects additional equipment to any signal input or signal output ports configures a medical system and is therefore responsible that the system complies with the requirements of the system standards EN 60601-1-1 and IEC 60601-1-1. Siemens can only guarantee the performance and safety of the devices listed in your system's operating instructions. If in doubt, contact your local Siemens representative.

⚠ **WARNING:** You must only use the transducers, accessories, cables, and replacement parts for internal components specified by Siemens to reduce the risk of increased RF (radio frequency) emissions or decreased immunity of the ultrasound system.

User-Accessible Cables

Cable Type	Shielded	Length (m)	Ferrite
AC Mains Input (system power)	No	5 m	None
Footswitch	Yes	2 m	None
Ethernet	No	7.5 m	None
Headphone	No	2.2 m	None
Microphone	No	2.2 m	None
BNC – (6 each)	Yes	3 m	None
ECG	Yes	3 m	None
Resp	Yes	1.7 m	None
Phono	Yes	2.5 m	None
Pulse	Yes	2.5 m	None
DC Connection	Yes	4 m	None
Parallel Printer	Yes	1 m	None
AC Accessory Power (4 each)	No	2 m	None
RGB Output	Yes	1.8 m	None
S-VHS	Yes	1 m	Yes
RS232	Yes	3 m	None

Cable Type	Shielded	Length (m)	Ferrite
Transducer Cables:			
15L8	Yes	≤ 3 m	None
15L8w	Yes	≤ 3 m	None
3V2c	Yes	≤ 3 m	None
4C1	Yes	≤ 3 m	None
4V1	Yes	≤ 3 m	None
5V2c	Yes	≤ 3 m	None
6C2	Yes	≤ 3 m	None
6L3	Yes	≤ 3 m	None
10V4	Yes	≤ 3 m	None
4V1c	Yes	≤ 3 m	None
7V3c	Yes	≤ 3 m	None
8C4	Yes	≤ 3 m	None
8L5	Yes	≤ 3 m	None
8V5	Yes	≤ 3 m	None
AUX CW	Yes	≤ 3 m	None
EV-8C4	Yes	≤ 3 m	None
TE-V5M	Yes	≤ 3 m	None
TE-V7B	Yes	≤ 3 m	None
TE-V7M	Yes	≤ 3 m	None
8L5T	Yes	≤ 3 m	None
8V3	Yes	≤ 3 m	None
EC10C5	Yes	≤ 3 m	None
8F10	Yes	≤ 3 m	None

List of Equipment

PAL Documentation Devices

- B&W Video Printer, 895MD/A, Sony
- Color Printer, 51MDU/A, Sony
- Color Printer, UP-21MD, Sony
- Color Printer, CP800E, Mitsubishi
- VCR, S-VHS, 9500, Sony
- VCR, HS-MD3000E, Mitsubishi

NTSC Documentation Devices

- B&W Video Printer, 895MD/A B/W printer, Sony
- B&W Video Printer, UP960 B/W printer, Sony
- Color Printer, 51MDU/A, Sony
- Color Printer, UP-21MD, Sony
- Color Printer, CP800UM, Mitsubishi
- VCR, S-VHS, 9500, Sony
- VCR, HS-MD3000U, Mitsubishi

Table 1. Guidance and manufacturer's declaration – electromagnetic emissions for the ACUSON Sequoia

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.		
Emissions Test	**Compliance**	**Electromagnetic Environment – Guidance**
RF emissions CISPR 11	Group 1	The ACUSON Sequoia system uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The ACUSON Sequoia system is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Complies	

Table 2. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system independent of transducer type

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.			
Immunity Test	**IEC 60601-1-2 Test Level**	**Compliance Level**	**Electromagnetic Environment - Guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines ±1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	±1 kV differential mode ±2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % U_T (>95 % dip in U_T) for 0.5 cycle	<5 % U_T (>95 % dip in U_T) for 0.5 cycle	Mains power quality should be that of a typical commercial or hospital environment. If the user of the ACUSON Sequoia system requires continued operation during power mains interruptions, it is recommended that the ACUSON Sequoia system be powered from an uninterruptible power supply or a battery.
	40 % U_T (60 % dip in U_T) for 5 cycles	40 % U_T (60 % dip in U_T) for 5 cycles	
	70 % U_T (30 % dip in U_T) for 25 cycles	70 % U_T (30 % dip in U_T) for 25 cycles	
	<5 % U_T (>95 % dip in U_T) for 5 sec	System goes to normal power down condition.	For extended mains power outages without the use of an uninterruptible power supply or a battery, the system will shut down normally. Operator intervention is normal to reboot.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: U_T is the a.c. mains voltage prior to application of the test level.			

Table 3. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 7V3c

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 4)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 1.07 MHz 8.8 MHz to 80 MHz V_1 = 1 Vrms 1.07 MHz to 3.9 MHz V_1 = 0.04 Vrms 3.9 MHz to 5.3 MHz 7.6 MHz to 8.8 MHz V_1 = <0.04 Vrms 5.3 MHz to 7.6 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

NOTE 3: Where < 0.04 Vrms is indicated, the actual susceptibility level was not determined. It can be assumed that any transmissions at these frequencies may cause noise in the ultrasound image.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 4. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 7V3c

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W (watts)	**Separation distance according to frequency of transmitter m (meters)**					
	5.3 MHz to 7.6 MHz $d=\left[\frac{3.5}{V_1}\right]\sqrt{P}$	**3.9 MHz to 5.3 MHz 7.6 MHz to 8.8 MHz** $d=\left[\frac{3.5}{V_1}\right]\sqrt{P}$	**1.07 MHz to 3.9 MHz** $d=\left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 1.07 MHz 8.8 MHz to 80 MHz** $d=\left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d=\left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d=\left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	>9	9	0.4	0.12	0.12	0.23
0.1	>28	28	1.1	0.38	0.38	0.73
1	>88	88	3.5	1.2	1.2	2.3
10	>277	277	11.1	3.8	3.8	7.3
100	>875	875	35	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 5. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 8V3

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 6)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 3.27 MHz 12.2 MHz to 80 MHz V_1 = 1 Vrms 3.27 MHz to 4.24 MHz V_1 = 0.05 Vrms 4.24 MHz to 12.2 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 6. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 8V3

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	4.24 MHz to 12.2 MHz	**3.27 MHz to 4.24 MHz**	**150 kHz to 3.27 MHz 12.2 MHz to 80 MHz**	**80 MHz to 800 MHz**	**800 MHz to 2.5 GHz**
	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	$d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	7	0.35	0.12	0.12	0.23
0.1	22	1.1	0.38	0.38	0.73
1	70	3.5	1.2	1.2	2.3
10	221	11.1	3.8	3.8	7.3
100	700	35	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 7. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 3V2c

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 8)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 3.3 MHz 4.28 MHz to 80 MHz V_1 = 1 Vrms 3.27 MHz to 4.24 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 8. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 3V2c

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**			
	3.27 MHz to 4.24 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 3.3 MHz** **4.28 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	0.35	0.12	0.12	0.23
0.1	1.1	0.38	0.38	0.73
1	3.5	1.2	1.2	2.3
10	11.1	3.8	3.8	7.3
100	35	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 9. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 8V5

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 10)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 505 kHz 50 MHz to 80 MHz V_1 = 0.04 Vrms 5.05 kHz to 4.73 MHz 10 MHz to 50 MHz V_1 = <0.04 Vrms 4.73 MHz to 10 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

NOTE 3: Where < 0.04 Vrms is indicated, the actual susceptibility level was not determined. It can be assumed that any transmissions at these frequencies may cause noise in the ultrasound image.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 10. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 8V5

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	4.73 MHz to 10 MHz	**505 kHz to 4.73 MHz 10 MHz to 50 MHz**	**150 kHz to 505 kHz 50 MHz to 80 MHz**	**80 MHz to 800 MHz**	**800 MHz to 2.5 GHz**
	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	$d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	>9	9	0.12	0.12	0.23
0.1	>28	28	0.38	0.38	0.73
1	>88	88	1.2	1.2	2.3
10	>277	277	3.8	3.8	7.3
100	>875	875	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 11. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): EV8C4

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 12)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 964 kHz V_1 = 0.04 Vrms 964 kHz to 3.8 MHz 4.24 MHz to 80 MHz V_1 = <0.04 Vrms 3.8 MHz to 4.24 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

NOTE 3: Where < 0.04 Vrms is indicated, the actual susceptibility level was not determined. It can be assumed that any transmissions at these frequencies may cause noise in the ultrasound image.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 12. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): EV8C4

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	3.8 MHz to 4.24 MHz	**964 kHz to 3.8 MHz 4.24 MHz to 80 MHz**	**150 kHz to 964 kHz**	**80 MHz to 800 MHz**	**800 MHz to 2.5 GHz**
	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	$d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	>9	9	0.12	0.12	0.23
0.1	>28	28	0.38	0.38	0.73
1	>88	88	1.2	1.2	2.3
10	>277	277	3.8	3.8	7.3
100	>875	875	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 13. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): TE-V5Ms

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 14)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 1.8 MHz V_1 = 1 Vrms 1.8 MHz to 2.8 MHz 46.7 MHz to 80 MHz V_1 = 0.04 Vrms 2.8 MHz to 46.7 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 14. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): TE-V5Ms

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	2.8 MHz to 46.7 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**1.8 MHz to 2.8 MHz 46.7 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 1.8 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	9	0.35	0.12	0.12	0.23
0.1	28	1.1	0.38	0.38	0.73
1	88	3.5	1.2	1.2	2.3
10	277	11.1	3.8	3.8	7.3
100	875	35	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 15. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 8L5T

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 16)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 547 kHz 64.2 MHz to 80 MHz V_1 = 1 Vrms 547 kHz to 3.2 MHz 25 MHz to 47 MHz 50 MHz to 64.2 MHz V_1 = 0.04 Vrms 3.2 MHz to 6 MHz 8.2 MHz to 25 MHz 47 MHz to 50 MHz V_1 = <0.04 Vrms 6 MHz to 8.2 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

NOTE 3: Where < 0.04 Vrms is indicated, the actual susceptibility level was not determined. It can be assumed that any transmissions at these frequencies may cause noise in the ultrasound image.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 16. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 8L5T

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W (watts)	**Separation distance according to frequency of transmitter m (meters)**					
	6 MHz to 8.2 MHz $d=\left[\frac{3.5}{V_1}\right]\sqrt{P}$	**3.2 MHz to 6 MHz 8.2 MHz to 25 MHz 47 MHz to 50 MHz** $d=\left[\frac{3.5}{V_1}\right]\sqrt{P}$	**547 kHz to 3.2 MHz 25 MHz to 47 MHz 50 MHz to 64.2 MHz** $d=\left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 547 kHz 64.2 MHz to 80 MHz** $d=\left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d=\left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d=\left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	>9	9	0.4	0.12	0.12	0.23
0.1	>28	28	1.1	0.38	0.38	0.73
1	>88	88	3.5	1.2	1.2	2.3
10	>277	277	11.1	3.8	3.8	7.3
100	>875	875	35	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 17. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): TE-V7M

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 18)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 1.4 MHz 28 MHz to 80 MHz V_1 = 0.5 Vrms 1.4 MHz to 5.3 MHz 8 MHz to 28 MHz V_1 = 0.04 Vrms 5.3 MHz to 8 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 18. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): TE-V7M

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	5.3 MHz to 8 MHz	**1.4 MHz to 5.3 MHz 8 MHz to 28 MHz**	**150 kHz to 1.4 MHz 28 MHz to 80 MHz**	**80 MHz to 800 MHz**	**800 MHz to 2.5 GHz**
	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	$d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	9	0.7	0.12	0.12	0.23
0.1	28	2.2	0.38	0.38	0.73
1	88	7	1.2	1.2	2.3
10	277	22	3.8	3.8	7.3
100	875	70	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 19. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 15L8w

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 20)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 426 kHz 27.3 MHz to 41 MHz 47 MHz to 80 MHz V_1 = 0.04 Vrms 426 kHz to 8.4 MHz 41 MHz to 47 MHz V_1 = <0.04 Vrms 8.4 MHz to 27.3 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

NOTE 3: Where < 0.04 Vrms is indicated, the actual susceptibility level was not determined. It can be assumed that any transmissions at these frequencies may cause noise in the ultrasound image.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 20. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 15L8w

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	8.4 MHz to 27.3 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**426 kHz to 8.4 MHz 41 MHz to 47 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 426 kHz 27.3 MHz to 41 MHz 47 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	>9	9	0.12	0.12	0.23
0.1	>28	28	0.38	0.38	0.73
1	>88	88	1.2	1.2	2.3
10	>277	277	3.8	3.8	7.3
100	>875	875	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 21. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 6C2

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 22)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 575 kHz 37.1 MHz to 80 MHz V_1 = 0.04 Vrms 575 kHz to 4.6 MHz 5.6 MHz to 37.1 MHz V_1 = <0.04 Vrms 4.6 MHz to 5.6 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

NOTE 3: Where < 0.04 Vrms is indicated, the actual susceptibility level was not determined. It can be assumed that any transmissions at these frequencies may cause noise in the ultrasound image.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 22. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 6C2

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	4.6 MHz to 5.6 MHz	**575 kHz to 4.6 MHz** **5.6 MHz to 37.1 MHz**	**150 kHz to 575 kHz** **37.1 MHz to 80 MHz**	**80 MHz to 800 MHz**	**800 MHz to 2.5 GHz**
	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	$d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	>9	9	0.12	0.12	0.23
0.1	>28	28	0.38	0.38	0.73
1	>88	88	1.2	1.2	2.3
10	>277	277	3.8	3.8	7.3
100	>875	875	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 23. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 6L3

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 24)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 4.4 MHz 55 MHz to 80 MHz V_1 = 0.04 Vrms 4.4 MHz to 5.7 MHz 6.5 MHz to 55 MHz V_1 = <0.04 Vrms 5.7 MHz to 6.5 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

NOTE 3: Where < 0.04 Vrms is indicated, the actual susceptibility level was not determined. It can be assumed that any transmissions at these frequencies may cause noise in the ultrasound image.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 24. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 6L3

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	5.7 MHz to 6.5 MHz	**4.4 MHz to 5.7 MHz 6.5 MHz to 55 MHz**	**150 kHz to 4.4 MHz 55 MHz to 80 MHz**	**80 MHz to 800 MHz**	**800 MHz to 2.5 GHz**
	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	$d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	>9	9	0.12	0.12	0.23
0.1	>28	28	0.38	0.38	0.73
1	>88	88	1.2	1.2	2.3
10	>277	277	3.8	3.8	7.3
100	>875	875	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 25. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 15L8

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 26)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 4.83 MHz 49 MHz to 56 MHz 67.5 MHz to 80 MHz V_1 = 0.04 Vrms 4.83 MHz to 7.2 MHz 13.2 MHz to 49 MHz 65.5 MHz to 67.5 MHz V_1 = <0.04 Vrms 7.2 MHz to 13.2 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

NOTE 3: Where < 0.04 Vrms is indicated, the actual susceptibility level was not determined. It can be assumed that any transmissions at these frequencies may cause noise in the ultrasound image.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 26. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 15L8

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	7.2 MHz to 13.2 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**4.83 MHz to 7.2 MHz** **13.2 MHz to 49 MHz** **65.5 MHz to 67.5 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 4.83 MHz** **49 MHz to 56 MHz** **67.5 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	>9	9	0.12	0.12	0.23
0.1	>28	28	0.38	0.38	0.73
1	>88	88	1.2	1.2	2.3
10	>277	277	3.8	3.8	7.3
100	>875	875	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 27. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 4C1

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 28)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 4.08 MHz 36.4 MHz to 80 MHz V_1 = 1 Vrms 4.08 MHz to 6 MHz 7 MHz to 25.6 MHz V_1 = 0.05 Vrms 6 MHz to 7 MHz 25.6 MHz to 36.4 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 28. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 4C1

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	6 MHz to 7 MHz **25.6 MHz to 36.4 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**4.08 MHz to 6 MHz** **7 MHz to 25.6 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 4.08 MHz** **36.4 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	7	0.35	0.12	0.12	0.23
0.1	22	1.1	0.38	0.38	0.73
1	70	3.5	1.2	1.2	2.3
10	221	11.1	3.8	3.8	7.3
100	700	35	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 29. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 4V1c

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 30)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 1.4 MHz 4.5 MHz to 80 MHz V_1 = 0.5 Vrms 1.4 MHz to 4.5 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 30. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 4V1c

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**			
	1.4 MHz to 4.5 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 1.4 MHz 4.5 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	0.7	0.12	0.12	0.23
0.1	2.2	0.38	0.38	0.73
1	7	1.2	1.2	2.3
10	22	3.8	3.8	7.3
100	70	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 31. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 8L5

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 32)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 448 kHz 50 MHz to 62 MHz 63 MHz to 80 MHz V_1 = 0.04 Vrms 448 kHz to 50 MHz 62 MHz to 63 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 32. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 8L5

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**			
	448 kHz to 50 MHz 62 MHz to 63 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 448 kHz 50 MHz to 62 MHz 63 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	8.75	0.12	0.12	0.23
0.1	27	0.38	0.38	0.73
1	87.5	1.2	1.2	2.3
10	277	3.8	3.8	7.3
100	875	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 33. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 10V4

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 34)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 3.9 MHz 34.6 MHz to 80 MHz V_1 = 0.04 Vrms 3.9 MHz to 34.6 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 34. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 10V4

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W (watts)	**Separation distance according to frequency of transmitter m (meters)**			
	3.9 MHz to 34.6 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 3.92 MHz 34.6 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	8.75	0.12	0.12	0.23
0.1	27	0.38	0.38	0.73
1	87.5	1.2	1.2	2.3
10	277	3.8	3.8	7.3
100	875	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 35. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 4V1

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 36)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 2 MHz 49 MHz to 80 MHz V_1 = 0.04 Vrms 2 MHz to 49 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 36. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 4V1

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**			
	2 MHz to 49 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 2 MHz 49 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	8.75	0.12	0.12	0.23
0.1	27	0.38	0.38	0.73
1	87.5	1.2	1.2	2.3
10	277	3.8	3.8	7.3
100	875	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 37. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 5V2c

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 38)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 2 MHz 45.8 MHz to 80 MHz V_1 = 0.04 Vrms 2 MHz to 3.3 MHz 4.8 MHz to 45.8 MHz V_1 = 0.01 Vrms 3.3 MHz to 4.8 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 38. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 5V2c

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	3.3 MHz to 4.8 MHz	**2 MHz to 3.3 MHz** **4.8 MHz to 45.8 MHz**	**150 kHz to 2 MHz** **45.8 MHz to 80 MHz**	**80 MHz to 800 MHz**	**800 MHz to 2.5 GHz**
	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	$d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	35	8.8	0.12	0.12	0.23
0.1	111	27.7	0.38	0.38	0.73
1	350	87.5	1.2	1.2	2.3
10	1,107	277	3.8	3.8	7.3
100	3,500	875	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 39. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 8C4

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 40)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 3 MHz 40.7 MHz to 80 MHz V_1 = 0.05 Vrms 3 MHz to 4.6 MHz 10.6 MHz to 40.7 MHz V_1 = <0.04 Vrms 4.6 MHz to 10.6 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

NOTE 3: Where < 0.04 Vrms is indicated, the actual susceptibility level was not determined. It can be assumed that any transmissions at these frequencies may cause noise in the ultrasound image.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 40. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 8C4

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	4.6 MHz to 10.6 MHz	**3 MHz to 4.6 MHz 10.6 MHz to 40.7 MHz**	**150 kHz to 3 MHz 40.7 MHz to 80 MHz**	**80 MHz to 800 MHz**	**800 MHz to 2.5 GHz**
	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	$d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	>8.8	8.8	0.12	0.12	0.23
0.1	>27.7	27.7	0.38	0.38	0.73
1	>87.5	87.5	1.2	1.2	2.3
10	>277	277	3.8	3.8	7.3
100	>875	875	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 41. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): V7B

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 42)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 3.2 MHz 36 MHz to 80 MHz V_1 = 0.04 Vrms 3.2 MHz to 5.8 MHz 9.5 MHz to 36 MHz V_1 = <0.04 Vrms 5.8 MHz to 9.5 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

NOTE 3: Where < 0.04 Vrms is indicated, the actual susceptibility level was not determined. It can be assumed that any transmissions at these frequencies may cause noise in the ultrasound image.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 42. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): V7B

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W (watts)	**Separation distance according to frequency of transmitter m (meters)**				
	3.2 MHz to 5.8 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**3.2 MHz to 5.8 MHz 9.5 MHz to 36 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 3.2 MHz 36 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	7	0.35	0.12	0.12	0.23
0.1	22	1.1	0.38	0.38	0.73
1	70	3.5	1.2	1.2	2.3
10	221	11.1	3.8	3.8	7.3
100	700	35	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 43. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): Ethernet

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 44)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 4 MHz 42 MHz to 80 MHz V_1 = 0.02 Vrms 4 MHz to 42 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 44. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): Ethernet

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**			
	4 MHz to 42 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 4 MHz** **42 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	17.5	0.12	0.12	0.23
0.1	55	0.38	0.38	0.73
1	175	1.2	1.2	2.3
10	553	3.8	3.8	7.3
100	1,750	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 45. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): ECG, Pulse, Resp, Phono

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 46)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 12 MHz V_1 = 0.15 Vrms 12 MHz to 33 MHz V_1 = 0.08 Vrms 33 MHz to 80 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 46. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): ECG, Pulse, Resp, Phono

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W (watts)	**Separation distance according to frequency of transmitter m (meters)**				
	33 MHz to 80 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**12 MHz to 33 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 12 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	4.4	2.3	0.12	0.12	0.23
0.1	13.8	7.4	0.38	0.38	0.73
1	43.8	23	1.2	1.2	2.3
10	138	74	3.8	3.8	7.3
100	438	233	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 47. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): AUX CW

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 48)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 1.97 MHz 2.01 MHz to 4 MHz V_1 = 1 Vrms 4 MHz to 9.7 MHz 10 MHz to 12.3 MHz V_1 = 0.05 Vrms 1.97 MHz to 2.01 MHz 9.7 MHz to 10 MHz 12.3 MHz to 80 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 48. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): AUX CW

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	1.97 MHz to 2.01 MHz 9.7 MHz to 10 MHz 12.3 MHz to 80 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**4 MHz to 9.7 MHz 10 MHz to 12.3 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 1.97 MHz 2.01 MHz to 4 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	8.8	0.35	0.12	0.12	0.23
0.1	27.7	1.1	0.38	0.38	0.73
1	87.5	3.5	1.2	1.2	2.3
10	277	11.1	3.8	3.8	7.3
100	875	35	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 49. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): 8F10

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 50)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 1.3 MHz 70 MHz to 80 MHz V_1 = 0.9 Vrms 1.3 MHz to 23 MHz 60 MHz to 70 MHz V_1 = 0.2 Vrms 23 MHz to 60 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 50. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): 8F10

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**				
	23 MHz to 60 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**1.3 MHz to 23 MHz 60 MHz to 70 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 1.3 MHz 70 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to 2.5 GHz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	1.8	0.4	0.12	0.12	0.23
0.1	5.5	1.24	0.38	0.38	0.73
1	17.5	3.9	1.2	1.2	2.3
10	55	12.	3.8	3.8	7.3
100	175	39	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Table 51. Guidance and manufacturer's declaration – electromagnetic immunity for the ACUSON Sequoia system with the following transducer(s): EC 10C5

The ACUSON Sequoia system is intended for use in the electromagnetic environment specified below. The customer or the user of the ACUSON Sequoia system should assure that it is used in such an environment.

Immunity Test	IEC 60601-1-2 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the ACUSON Sequoia system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance (*d*)** (See Table 52)
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	V_1 = 3 Vrms 150 kHz to 640 kHz 77 MHz to 80 MHz V_1 = 1 Vrms 640 kHz to 930 MHz V_1 = 0.04 Vrms 930 kHz to 5.5 MHz 21.2 MHz to 37 MHz 41 MHz to 77 MHz V_1 = <0.04 Vrms 5.5 MHz to 21.2 MHz	$d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	E_1 = 3 V/m 80 MHz to 2.5 GHz	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80 MHz to 800 MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). V_1 and E_1 = Compliance Level Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

NOTE 3: Where < 0.04 Vrms is indicated, the actual susceptibility level was not determined. It can be assumed that any transmissions at these frequencies may cause noise in the ultrasound image.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ACUSON Sequoia system is used exceeds the applicable RF compliance level above, the ACUSON Sequoia system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as changing transducers or transducer operating frequency, or re-orienting or relocating the ACUSON Sequoia system.

[b] Within the frequency range 150 kHz to 80 MHz, field strengths should be less than the compliance level (V_1).

Table 52. Recommended separation distances between portable and mobile RF communications equipment and the ACUSON Sequoia system with the following transducer(s): EC 10C5

The ACUSON Sequoia system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ACUSON Sequoia system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ACUSON Sequoia system as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter **W (watts)**	**Separation distance according to frequency of transmitter m (meters)**					
	5.5 MHz to 21.2 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**930 kHz to 5.5 MHz 21.2 MHz to 37 MHz 41 MHz to 77 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**640 kHz to 930 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**150 kHz to 640 kHz 77 MHz to 80 MHz** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	**80 MHz to 800 MHz** $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	**800 MHz to Hz** $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	>8.8	8.8	0.35	0.12	0.12	0.23
0.1	>27.7	27.7	1.1	0.38	0.38	0.73
1	>87.5	87.5	3.5	1.2	1.2	2.3
10	>277	277	11	3.8	3.8	7.3
100	>875	875	35	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.