



Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Center – WO66-G609  
Silver Spring, MD 20993-0002

GE Healthcare  
% Mr. Bryan Behn  
Regulatory Affairs Manager  
9900 Innovation Drive  
WAUWATOSA WI 53226

January 29, 2015

Re: K143452  
Trade/Device Name: LOGIQ P9 and LOGIQ P7  
Regulation Number: 21 CFR 892.1550  
Regulation Name: Ultrasonic pulsed doppler imaging system  
Regulatory Class: II  
Product Code: IYN, IYO, ITX  
Dated: December 1, 2014  
Received: December 2, 2014

Dear Mr. Behn:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Industry and Consumer Education at its toll-free number (800) 638 2041 or (301) 796-7100 or at its Internet address

<http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>. Also, please note the regulation entitled, “Misbranding by reference to premarket notification” (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH’s Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address

<http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,

A handwritten signature in black ink that reads "Robert A. Ochs". The signature is written in a cursive style. Behind the signature, there is a faint, light-colored watermark of the FDA logo.

Robert Ochs, Ph.D.  
Acting Director  
Division of Radiological Health  
Office of In Vitro Diagnostics  
and Radiological Health  
Center for Devices and Radiological Health

Enclosure

## Indications for Use

510(k) Number (if known)

**K143452**

Device Name

LOGIQ P9 and LOGIQ P7

Indications for Use (Describe)

The device is intended for use by a qualified physician for ultrasound evaluation of Fetal; Abdominal; Pediatric; Small Organ (breast, testes, thyroid); Neonatal Cephalic; Adult Cephalic; Cardiac (adult and pediatric); Peripheral Vascular; Musculo-skeletal Conventional and Superficial; Urology (including prostate); Transrectal; Transvaginal; and Intraoperative (abdominal, thoracic, vascular).

Type of Use (Select one or both, as applicable)

Prescription Use (Part 21 CFR 801 Subpart D)

Over-The-Counter Use (21 CFR 801 Subpart C)

### CONTINUE ON A SEPARATE PAGE IF NEEDED.

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GE Healthcare  
510(k) Premarket Notification Submission

**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 Ultrasound System**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>	N	N	N	N	N	N	N	N	N	N	5,6
Abdominal <sup>[1]</sup>	N	N	N	N	N	N	N	N	N	N	3,5,6
Pediatric	N	N	N	N	N	N	N	N	N	N	3,5,6
Small Organ <sup>[2]</sup>	N	N	N	N	N	N	N	N	N	N	3,5,6
Neonatal Cephalic	N	N	N	N	N	N	N	N	N	N	5,6
Adult Cephalic	N	N	N	N	N	N	N	N	N	N	5,6
Cardiac Adult & Pediatric	N	N	N	N	N	N	N	N	N	N	
Peripheral Vascular	N	N	N	N	N	N	N	N	N	N	3,5,6
Musculo-skeletal Conventional	N	N	N	N	N	N	N	N	N	N	3,5,6
Musculo-skeletal Superficial	N	N	N	N	N	N	N	N	N	N	3,5,6
Other <sup>[4]</sup>	N	N	N	N	N	N	N	N	N	N	3,5,6
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>	N	N	N	N	N	N	N	N	N	N	3,5,6
Transvaginal	N	N	N	N	N	N	N	N	N	N	3,5,6
Transurethral											
Intraoperative <sup>[8]</sup>	N	N	N	N	N	N	N	N	N	N	3,5,6
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging - Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D/4D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostics and Radiological Health (OIR)

Prescription User (Per 21 CFR 801.109)



**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with C1-5-RS Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>	P	P	P	P	P	P	P	P	P	P	5,6
Abdominal <sup>[1]</sup>	P	P	P	P	P	P	P	P	P	P	3,5,6
Pediatric	P	P	P	P	P	P	P	P	P	P	3,5,6
Small Organ <sup>[2]</sup>											
Neonatal Cephalic											
Adult Cephalic											
Cardiac Adult & Pediatric											
Peripheral Vascular	P	P	P	P	P	P	P	P	P	P	3,5,6
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>	P	P	P	P	P	P	P	P	P	P	3,5,6
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>											
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA (K141639, K141261)

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging - Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D/4D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostics and Radiological Health (OIR)

Prescription User (Per 21 CFR 801.109)



**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with 4C-RS Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>	P	P	P	P	P	P	P	P	P	P	5,6
Abdominal <sup>[1]</sup>	P	P	P	P	P	P	P	P	P	P	3,5,6
Pediatric	P	P	P	P	P	P	P	P	P	P	3,5,6
Small Organ <sup>[2]</sup>											
Neonatal Cephalic											
Adult Cephalic											
Cardiac Adult & Pediatric											
Peripheral Vascular	P	P	P	P	P	P	P	P	P	P	3,5,6
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>	P	P	P	P	P	P	P	P	P	P	3,5,6
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>											
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA (K141639)

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging - Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D/4D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostics and Radiological Health (OIR)

Prescription User (Per 21 CFR 801.109)



**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with 9L-RS Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>											
Abdominal <sup>[1]</sup>	P	P	P		P	P	P	P	P	P	3,5,6
Pediatric	P	P	P		P	P	P	P	P	P	3,5,6
Small Organ <sup>[2]</sup>	P	P	P		P	P	P	P	P	P	3,5,6
Neonatal Cephalic											
Adult Cephalic											
Cardiac Adult & Pediatric											
Peripheral Vascular	P	P	P		P	P	P	P	P	P	3,5,6
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>											
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>											
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA (K133533)

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging - Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D/4D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostics and Radiological Health (OIR)

Prescription User (Per 21 CFR 801.109)



**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with ML6-15-RS Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>											
Abdominal <sup>[1]</sup>											
Pediatric	P	P	P		P	P	P	P	P	P	3,5,6
Small Organ <sup>[2]</sup>	P	P	P		P	P	P	P	P	P	3,5,6
Neonatal Cephalic	P	P	P		P	P	P	P	P	P	
Adult Cephalic											
Cardiac Adult & Pediatric											
Peripheral Vascular	P	P	P		P	P	P	P	P	P	3,5,6
Musculo-skeletal Conventional	P	P	P		P	P	P	P	P	P	3,5,6
Musculo-skeletal Superficial	P	P	P		P	P	P	P	P	P	3,5,6
Other <sup>[4]</sup>											
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>											
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA (K141639, K141261)

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging - Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D/4D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostics and Radiological Health (OIR)

Prescription User (Per 21 CFR 801.109)



**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with E8C-RS Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>	<b>P</b>	<b>P</b>	<b>P</b>		<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	5,6
Abdominal <sup>[1]</sup>	<b>P</b>	<b>P</b>	<b>P</b>		<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	
Pediatric											
Small Organ <sup>[2]</sup>											
Neonatal Cephalic											
Adult Cephalic											
Cardiac Adult & Pediatric											
Peripheral Vascular											
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>	<b>P</b>	<b>P</b>	<b>P</b>		<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	3,5,6
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>	<b>P</b>	<b>P</b>	<b>P</b>		<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	3,5,6
Transvaginal	<b>P</b>	<b>P</b>	<b>P</b>		<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	3,5,6
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA (K133533)

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging - Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D/4D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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**Concurrence of CDRH, Office of In Vitro Diagnostics and Radiological Health (OIR)**

Prescription User (Per 21 CFR 801.109)



**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with L8-18i-RS Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>											
Abdominal <sup>[1]</sup>											
Pediatric	P	P	P		P	P	P	P	P	P	5,6
Small Organ <sup>[2]</sup>	P	P	P		P	P	P	P	P	P	
Neonatal Cephalic	P	P	P		P	P	P	P	P	P	
Adult Cephalic											
Cardiac Adult & Pediatric											
Peripheral Vascular	P	P	P		P	P	P	P	P	P	3,5,6
Musculo-skeletal Conventional	P	P	P		P	P	P	P	P	P	3,5,6
Musculo-skeletal Superficial	P	P	P		P	P	P	P	P	P	3,5,6
Other <sup>[4]</sup>											
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>											
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>	P	P	P		P	P	P	P	P	P	3,5,6
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA (K133533)

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging - Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D/4D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostics and Radiological Health (OIR)

Prescription User (Per 21 CFR 801.109)



**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with P8D Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>											
Abdominal <sup>[1]</sup>											
Pediatric											
Small Organ <sup>[2]</sup>											
Neonatal Cephalic											
Adult Cephalic			N	N							
Cardiac Adult & Pediatric			N	N							
Peripheral Vascular			N	N							
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>											
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>											
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA

Notes: [1] Abdominal includes Renal, GYN/Pelvic.

[2] Small organ includes breast, testes and thyroid

[3] Elastography Imaging - Elasticity.

[4] Other use includes Urology/Prostate

[5] 3D/4D Imaging mode

[6] Needle guidance imaging

[7] Includes infertility monitoring of follicle development

[8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)

[\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostics and Radiological Health (OIR)

Prescription User (Per 21 CFR 801.109)



**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with RAB2-6-RS Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>	P	P	P		P	P	P	P	P	P	5,6
Abdominal <sup>[1]</sup>	P	P	P		P	P	P	P	P	P	5,6
Pediatric											
Small Organ <sup>[2]</sup>											
Neonatal Cephalic											
Adult Cephalic											
Cardiac Adult & Pediatric											
Peripheral Vascular											
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>	P	P	P		P	P	P	P	P	P	5,6
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>											
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA (K141639)

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging - Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D/4D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with L6-12-RS Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>											
Abdominal <sup>[1]</sup>	P	P	P		P	P	P	P	P	P	3,5,6
Pediatric	P	P	P		P	P	P	P	P	P	3,5,6
Small Organ <sup>[2]</sup>	P	P	P		P	P	P	P	P	P	3,5,6
Neonatal Cephalic											
Adult Cephalic											
Cardiac Adult & Pediatric											
Peripheral Vascular	P	P	P		P	P	P	P	P	P	3,5,6
Musculo-skeletal Conventional	P	P	P		P	P	P	P	P	P	3,5,6
Musculo-skeletal Superficial	P	P	P		P	P	P	P	P	P	3,5,6
Other <sup>[4]</sup>											
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>											
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA (K133034)

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging - Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D/4D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostics and Radiological Health (OIR)

Prescription User (Per 21 CFR 801.109)



**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with 12L-RS Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>											
Abdominal <sup>[1]</sup>	P	P	P		P	P	P	P	P	P	3,5,6
Pediatric	P	P	P		P	P	P	P	P	P	3,5,6
Small Organ <sup>[2]</sup>	P	P	P		P	P	P	P	P	P	3,5,6
Neonatal Cephalic											
Adult Cephalic											
Cardiac Adult & Pediatric											
Peripheral Vascular	P	P	P		P	P	P	P	P	P	3,5,6
Musculo-skeletal Conventional	P	P	P		P	P	P	P	P	P	3,5,6
Musculo-skeletal Superficial	P	P	P		P	P	P	P	P	P	3,5,6
Other <sup>[4]</sup>											
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>											
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA (K133533)

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging - Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D/4D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Prescription User (Per 21 CFR 801.109)



**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with 8C-RS Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>											
Abdominal <sup>[1]</sup>	P	P	P		P	P	P	P	P	P	5
Pediatric	P	P	P		P	P	P	P	P	P	5
Small Organ <sup>[2]</sup>	P	P	P		P	P	P	P	P	P	5
Neonatal Cephalic	P	P	P		P	P	P	P	P	P	5
Adult Cephalic											
Cardiac Adult & Pediatric											
Peripheral Vascular											
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>											
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>											
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA (K133533)

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging – Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostics and Radiological Health (OIR)

Prescription User (Per 21 CFR 801.109)



**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with 3Sc-RS Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>											
Abdominal <sup>[1]</sup>	P	P	P	P	P	P	P	P	P	P	5,6
Pediatric	P	P	P	P	P	P	P	P	P	P	5,6
Small Organ <sup>[2]</sup>											
Neonatal Cephalic											
Adult Cephalic	P	P	P	P	P	P	P	P	P	P	
Cardiac Adult & Pediatric	P	P	P	P	P	P	P	P	P	P	
Peripheral Vascular											
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>											
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>											
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA (K133533)

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging – Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of In Vitro Diagnostics and Radiological Health (OIR)

Prescription User (Per 21 CFR 801.109)



**Diagnostic Ultrasound Indications for Use Form**  
**GE LOGIQ P9 and LOGIQ P7 with 6S-RS Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application <i>Anatomy/Region of Interest</i>	Mode of Operation										
	B	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes*	Harmonic Imaging	Coded Pulse	Other [Notes]
Ophthalmic											
Fetal / Obstetrics <sup>[7]</sup>											
Abdominal <sup>[1]</sup>											
Pediatric	P	P	P	P	P	P	P	P	P	P	
Small Organ <sup>[2]</sup>											
Neonatal Cephalic	P	P	P	P	P	P	P	P	P	P	
Adult Cephalic											
Cardiac Adult & Pediatric	P	P	P	P	P	P	P	P	P	P	
Peripheral Vascular											
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>											
<i>Exam Type, Means of Access</i>											
Transesophageal											
Transrectal <sup>[8]</sup>											
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA (K133533)

- Notes:
- [1] Abdominal includes Renal, GYN/Pelvic.
  - [2] Small organ includes breast, testes and thyroid
  - [3] Elastography Imaging – Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [8] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV)
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Section 5: 510(k) Summary

LOGIQ P9 and LOGIQ P7

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### 510(k) Summary

In accordance with 21 CFR 807.92 the following summary of information is provided:

Date: Dec. 1, 2014

Submitter: GE Healthcare  
9900 Innovation Dr  
Wauwatosa, WI 53226

Primary Contact Person: Bryan Behn  
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Regulatory Affairs Leader  
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GE Ultrasound Korea, Ltd.  
T: +82 31 740 6307

Device: Trade Name: LOGIQ P9 and LOGIQ P7 Ultrasound System

Common/Usual Name: LOGIQ P9 and LOGIQ P7

Classification Names: Class II

Product Code: Ultrasonic Pulsed Doppler Imaging System, 21CFR 892.1550 90-IYN  
Ultrasonic Pulsed Echo Imaging System, 21CFR 892.1560, 90-IYO  
Diagnostic Ultrasound Transducer, 21 CFR 892.1570, 90-ITX

Predicate Device(s): K141261 LOGIQ S7 Diagnostic Ultrasound System  
K133533 LOGIQ e Diagnostic Ultrasound System  
K141639 Voluson S6/S8 Diagnostic Ultrasound System  
K133034 LOGIQ F Series Diagnostic Ultrasound System

Device Description: The LOGIQ P9 and LOGIQ P7 is a full featured, general purpose diagnostic ultrasound system which consists of a mobile console approximately 53 cm wide, 69 cm deep and 157 cm high that provides digital acquisition, processing and display capability. The user interface includes a computer keyboard, specialized controls, 10.4-inch LCD touch screen and color 21.5-inch LCD image display.

Intended Use: The device is intended for use by a qualified physician for ultrasound evaluation of Fetal; Abdominal; Pediatric; Small Organ (breast, testes, thyroid); Neonatal Cephalic; Adult



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Cephalic; Cardiac (adult and pediatric); Peripheral Vascular; Musculo-skeletal Conventional and Superficial; Urology (including prostate); Transrectal; Transvaginal; and Intraoperative (abdominal, thoracic, vascular).

Technology: The LOGIQ P9 and LOGIQ P7 employs the same fundamental scientific technology as its predicate devices

Determination of Substantial Equivalence: The LOGIQ P9 and P7 systems are substantially equivalent to the predicate devices with regard to intended use, imaging capabilities, technological characteristics and safety and effectiveness.

#### Comparison to Predicate Devices

	Proposed Device LOGIQ P9/ LOGIQ P7	Predicate Device LOGIQ S7 (K141261)
Indications and Clinical Applications:		
• Fetal/Obstetrics;	✓	✓
• Abdominal	✓	✓
• Pediatric	✓	✓
• Small Organ (breast, testes, thyroid);	✓	✓
• Neonatal Cephalic;	✓	✓
• Adult Cephalic;	✓	✓
• Cardiac (adult and pediatric);	✓	✓
• Peripheral Vascular;	✓	✓
• Musculo-skeletal Conventional and Superficial;	✓	✓
• Urology (including prostate);	✓	✓
• Transesophageal;		✓
• Transrectal;	✓	✓
• Transvaginal;	✓	✓
• Intraoperative (abdominal, thoracic, and vascular).	✓	✓
Contact Type		
• Surface, Cavitory	✓	✓



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<p>Image modes:</p> <ul style="list-style-type: none"> <li>B, M, Color M, Color &amp; Power Doppler, Pulsed &amp; CW Doppler and various combinations: B/M, B/PW, Color/Pwr/PW. Harmonic, Coded Pulse, Realtime 3D &amp; Multi-plane, Elastography Imaging, B-flow</li> </ul>	✓	✓
Transducers		
<ul style="list-style-type: none"> <li>C1-5-RS</li> </ul>	✓ <sup>1</sup>	✓*
<ul style="list-style-type: none"> <li>4C-RS</li> </ul>	✓ <sup>1</sup>	
<ul style="list-style-type: none"> <li>8C-RS</li> </ul>	✓ <sup>2</sup>	✓*
<ul style="list-style-type: none"> <li>E8C-RS</li> </ul>	✓ <sup>2</sup>	
<ul style="list-style-type: none"> <li>9L-RS</li> </ul>	✓ <sup>2</sup>	✓*
<ul style="list-style-type: none"> <li>12L-RS</li> </ul>	✓ <sup>2</sup>	
<ul style="list-style-type: none"> <li>L6-12-RS</li> </ul>	✓ <sup>3</sup>	
<ul style="list-style-type: none"> <li>ML6-15-RS</li> </ul>	✓ <sup>1</sup>	✓*
<ul style="list-style-type: none"> <li>L8-18i-RS</li> </ul>	✓ <sup>2</sup>	✓*
<ul style="list-style-type: none"> <li>RAB2-6-RS</li> </ul>	✓ <sup>1</sup>	
<ul style="list-style-type: none"> <li>3Sc-RS</li> </ul>	✓ <sup>2</sup>	
<ul style="list-style-type: none"> <li>6S-RS</li> </ul>	✓ <sup>2</sup>	✓*
<ul style="list-style-type: none"> <li>P8D</li> </ul>	✓ (equivalent to P6D on predicate LOGIQ S7)	
<ul style="list-style-type: none"> <li>P6D</li> </ul>		✓
<p>Transducer notes:</p> <p>✓<sup>1</sup> – cleared on predicate Voluson S6/S8 K141639          ✓<sup>2</sup> – Cleared on predicate LOGIQ e K133533          ✓<sup>3</sup> – Cleared on predicate LOGIQ F Series K133034          ✓* - Identical transducer cleared on predicate with different (-D) connector</p>		
<p>Processing &amp; Display features:</p> <ul style="list-style-type: none"> <li>Image mapping (color &amp; gray scale), Motion/time &amp; spatial filtering and enhancement, TGC, 3D, Harmonic Imaging, Coded Excitation, B-Flow, Pulsatile-Flow and Extended FOV (Field of View), Auto Optimization. X-beam (spatial compounding), SRI (speckle reduction imaging), TVI/TVD Doppler, Realtime 3D/4D, surface rendering, rotation view, multi-angle/slice view, VCI volume contrast imaging, Tru3D, B Steer +</li> <li>Digital Alphanumeric Keyboard Digital TGC My Page My Trainer</li> </ul>	✓	✓



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Measurement and Analysis: <ul style="list-style-type: none"> <li>Distance/depth, Circumference, Area, Volume, Slope, Angle, HR, Time and Velocity measurements; and Cardiac, OB, Vascular &amp; Volume Analysis, Thickness measurement for IMT, Quantitative Analysis, Breast Measure Assistant; OB Measure Assistant, Auto EF</li> </ul>	✓	✓
Tested to meet Electrical Safety, EMC and Biocompatibility Standards	✓	✓
Track 3 (within FDA limits)	✓	✓

#### Summary of Non-Clinical Tests:

The device has been evaluated for acoustic output, biocompatibility, cleaning and disinfection effectiveness as well as thermal, electrical, electromagnetic, and mechanical safety, and has been found to conform to applicable medical device safety standards. LOGIQ P9 and LOGIQ P7 and its applications comply with voluntary standards:

1. AAMI/ANSI ES60601-1, Medical Electrical Equipment – Part 1: General Requirements for Safety
2. IEC60601-1-2, Medical Electrical Equipment – Part 1-2: General Requirements for Safety – Collateral Standard: Electromagnetic Compatibility Requirements and Tests
3. IEC60601-2-37, Medical Electrical Equipment – Part 2-37: Particular Requirements for the Safety of Ultrasonic Medical Diagnostic and Monitoring Equipment
4. NEMA UD 3, Standard for Real Time Display of Thermal and Mechanical Acoustic Output Indices on Diagnostic Ultrasound Equipment
5. ISO10993-1, Biological Evaluation of Medical Devices- Part 1: Evaluation and Testing



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6. NEMA UD 2, Acoustic Output Measurement Standard for Diagnostic Ultrasound Equipment
7. ISO14971, Application of risk management to medical devices: Second edition
8. NEMA Digital Imaging and Communications in Medicine (DICOM) Set. (Radiology)

The following quality assurance measures are applied to the development of the system:

- Risk Analysis
- Requirements Reviews
- Design Reviews
- Testing on unit level (Module verification)
- Integration testing (System verification)
- Final Acceptance Testing (Validation)
- Performance testing (Verification)
- Safety testing (Verification)

Transducer materials and other patient contact materials are biocompatible.

Summary of Clinical Tests:

The subject of this premarket submission, LOGIQ P9 and LOGIQ P7, did not require clinical studies to support substantial equivalence.

Conclusion: GE Healthcare considers the LOGIQ P9 and LOGIQ P7 to be as safe, as effective, and performance is substantially equivalent to the predicate device(s).