

High Performance Fiber Optic Brushless Electric Micromotor System

# Ti-Max NLX nano Ti-Max NLX nano

# **OPERATION MANUAL**

Please read this Operation Manual carefully before use, and file for future reference.





# Original Operation Manual

**English** 

■Classification of equipment

Type of protection against electric shock:

- Class II equipment :

Degree of protection against electric shock :

- Type B applied part : 🐧

Method of sterilization or disinfection recommended by the manufacture :

- See 7. STFRII IZATION

Degree of safety of application in the presence of a flammable anesthetic mixture with air or with oxygen or nitrousoxide:

EQUIPMENT not suitable for use in the presence of a flammable anaesthetic mixture with air or with oxygen or nitrousoxide. Mode of operation :

- Continuous operation

# ? Cautions for handling and operation

- ■Read these safety cautions thoroughly before use and operate the product properly.
- ■These instructions will show you how to operate the product safely and prevent danger to you or others. They are classified by the degree and/or severity of danger. All contents relating to safety should be observed.

Classification	Degree and severity of danger or damage	
↑ WARNING Provides an instruction where personal injury or physical damage may occur.		
↑ CAUTION Provides an instruction where minor to medium injury or physical damage may occur.		
<u> </u>	Provides an instruction that should be observed for safety reasons.	

# ⚠ WARNING

- TO PREVENT ELECTRIC SHOCK Do not unplug the power cord with wet hands.
- · TO PREVENT ELECTRIC SHOCK Be sure to prevent water on the Control Box.
- TO PREVENT ELECTRIC SHOCK Do not unplug the power cord roughly.
- TO PREVENT ELECTRIC SHOCK Use an electrical outlet that is grounded.
- · If you feel any abnormality such as vibration, heat generation, abnormal noise, etc., prior or during use of the unit, stop using it immediately.
- · Use the fuse of specified rating. [AC120V: T1.6A 250V (Ref No.FU100, FU101), AC230V: T800mA 250V (Ref No. FU100, FU101)

# 

- · When operating this system always consider the safety of the patient.
- · The product is designed only for clinical dental use by qualified personnel.
- · Every connection must be firmly connected. If it is not firmly connected, it is because an air/water leak or LED does not on.
- Do not allow any impact on to the Product. Do not drop the Product. It may cause a malfunction.
- This system can be used with ISO 9168, type B or type C type hose connector.
- The system functions normally in the environment where the temperature is at 0-40°C (32-104°F), humidity at 10-85% RH, atmospheric pressure at 700-1060hPa, and no moisture condensation in the Control Unit. Operating at outside of these limits may cause malfunction.
- · When you install Control Box or Motor, DO NOT bend or twist the tubing or the cord. No unnatural force is needed to do the installation
- $\cdot \, \text{Do not use contaminated air (by dust or moisture)}. \, \text{If the air contains water or dust, it might cause a malfunction or overheat.}$
- · Do not connect NLX nano micromotor to Ti-Max NL400. It will prevent the LED from working properly.

# ⚠ CAUTION

#### Unit

- Grasp cord by plug to remove from outlet. DO NOT pull or yank on the cord itself. It may cause a wire disconnection or malfunction.
- · Care should be taken not to place the AC Cord near a gas burner. Never attempt to repair a burned motor cord. Always replace it with a new cord.
- · Prior to use, always check for vibration, noise and overheatin, If any abnormalities are detected, stop using immediately and contact your authorized NSK Dealer.
- · Be careful not to spill water onto the Unit as this may result in a fire or an electric shock due to a short-circuit.

#### Motor, Handpieace (Option)

- · Do not use this product under strong stress for long time. It is cause overheat
- · Do not connect or disconnect the cord until the drive motor has completely stopped.
- · Do not connect / disconnect the handpiece during operation.
- · Verify that the Speed Control Switch is adjusted within the allowable speed before use.
- · Connect only 4-hole, 5-hole or 6-pin tubing.
- Air Requirements: dry, free from contamination and oil. Use a compressor with a dry air system. Install an air filter if necessary. Blow out the lines before installation.
- · Do not Autoclave (or any other high temperature Sterilization) Control Box, AC Adapter, Motor Code.
- The user shall be responsible for operation, maintenance and operation.
- The operator is responsible for correct operational control, maintenance and inspection.

#### ∧ NOTICE

- During rotation, the motor and the motor cord may affect computer and LAN cable. Noise could be heard during operation near a radio receiver.
- · After treatment, immediately turn off the power switch and shut off the air supply.Remove the power cord if the unit box is not to be used for a long time.
- · Responsibility for operating and maintaining Medical Devices belongs to the user.
- Store the system in the place where the temperature is at -10-60°C (14-140°F), humidity at 10-85%RH, atmospheric pressure at 500-1060 hPa, and the system is not subject to air with dust, sulfur, or salinity.

# 1. Specification

#### Control Box

Model	NLX nanoU (NE278)
Rated input	AC28V 50/60 Hz
Drive Air Pressure	0.4MPa (4.0kgf/cm <sup>2</sup> )
Dimensions	W127 x D149 x H54 mm

#### Motor

Model	NLX nano
Rotation Speed	2,000 - 40,000 min <sup>-1</sup>
Dimensions	DØ22 x H70 mm

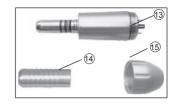
#### AC Adaptor

Model	AC Adaptor(NE180)	
Rated input	AC120V 50/60Hz 41VA AC230V 50/60Hz 41VA	
Output	AC28V 1.3A	
2 3 4 4 3 3	AC120V TR5-T C1 250V	
Fuse	19372 T1.6A	
	AC230V TR5-T C1 250V	
	800mA	
Dimensions	W100 x D178 x H64 mm	

# 2. Component Names

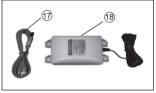


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- 1 Control Box
- (2) Indicator

10

(9)

- 3 Gear Ratio Lamp
- (4) Gear Ratio Select Key
- ⑤ FWD/REV Select Key
- 6 Rotation Speed Adjustment Key
- (7) M1 Key
- 8 M2 Key
- Power Switch
   Output
   Description
   Power Switch
   Description
   Power Switch
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- (10) AC Adapter Connector
- 11) Motor Cord Connector
- (12) Turbine Hose Connector
- (13) Motor
- (14) Autoclave Plug
- 15 Motor Cap
- (6) Motor Cord (Unshielded 2.2m)
- (17) AC Cord (Unshielded 2.0m)
- (18) AC Adaptor (Unshielded cord 5.0m)

# 3. Operating Control Box

# **!** CAUTION

- · Be sure that there is no air or water coming from Turbine Hose when connecting to control box.
- · Hand tighten the Nut properly without unnatural force, when you plug into Turbine Hose Connector and Motor Cord Connector.

# 3-1 Connect the handpiece tubing from the delivery unit you are using

Fit the Turbine Hose Plug of the delivery unit to the Turbine Hose Connector piping and tighten completely. (Fig. 1)



- $\cdot$  Do not use it other than the hose which we appointed.
- · Do not use wet or contaminated air.
- · Install an air filter if necessary. Blow out the lines before installation.

#### 3-2 Connecting the Motor

Connect the motor by aligning the Motor Cord Plug and insert firmly. Tighten it completely. (Fig. 2)

#### 3-3 Connecting the AC adapter

Insert the AC adapter plug into the AC adapter connector before pugging into wall outlet. (Fig. 3)



Never use the AC Adapter for other than the Control Box of this product.

#### 3-4 Connecting the Power Cord

Insert the Power Cord into the Inlet of AC Adapter. (Fig. 4)

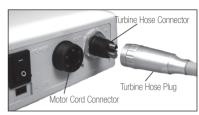


Fig.1



Fig.2



Fig.3



Fig.4

# 4. Handling the Motor

# 4-1 Connecting / disconnecting the motor and the motor cord

Align and insert firmly the Motor Pin into the pin holes of the Motor Cord Connector, and fasten the Motor Cord Nut securely. (Fig. 5)

To remove the Motor Cord from the Motor, unscrew and detach the motor cord nut, and gently pull out the motor cord connector.

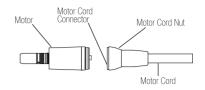


Fig.5

#### 4-2 Connectioning / disconnecting the motor and the handpiece

To insert the E-type handpiece in the Motor Insert, align handpiece and motor, then turn those until its click. (Positioning pins are aligned)

To remove the handpiece, simply pull out the handpiece from the motor.

\*Handpiece (not included in NLX nano set.)

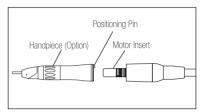


Fig.6

### CAUTION

- · Care should be taken when using any handpiece attachment which requires lubrication (E Type Micromotor). Following lubrication stand the handpiece attachment vertically until the excess solution drains. Wipe the handpiece then attach it to the Micromotor.
- · Do not connect or disconnect the handpiece until the motor has completely stopped.

# 5. Operation Section

5-1 Insert the Power Cord Plug in AC outlet and turn the Power Switch on. When you turn on the Power Switch, lamps and Indicator will come on.

Power Switch Symbol Mark	0	ı
Function	OFF	ON

- 5-2 Before using this system, make sure to do the Foot Air Calibration function. (See 6-1 Foot Air Calibration)
- 5-3 Push the Gear Ratio Select Key to indicate the speed of the attachment you will use. (Fig. 7)
  - \*During Speed Setting, Indicator display "Speed". For detail display, check table below.

Display	

Handpiece Gear Ratio	Indicator	Speed (min <sup>-1</sup> (rpm))
16:1	1 - 25	100 - 2,500
1:1	2 - 40	2,000 - 40,000
1:5	1 - 20	10,000 - 200,000



Fig.7

5-4 Set the maximum speed using the Rotation Speed Adjustment Key  $(\blacktriangle \blacktriangledown)$  . (Fig. 8)



Fig.8

5-5 Select FWD/REV rotation using the FWD/REV Select Key. (Fig. 9)
Lamp ON → REV
Lamp OFF → FWD

5-6 The micromotor operation will be controlled by the air switch/Foot Pedal of the delivery unit.



Fig.9

# 6. Convenient Functions

# 6-1 Foot Air Calibration (Unit of Display = kgf/cm<sup>2</sup>)

By using this function, it enables you to use the maximum speed, 40,000 min<sup>-1</sup>(rpm), even though the air pressure of the delivery system is not high enough, by setting upper and lower limit of the air pressure.



Do this adjustment function after your purchase. Once it is adjusted, it will be memorized, and there is no need to do this everytime.

- 1) Press M2 key and Rotation Speed Adjustment Key(A) at the same time for more than 3 seconds.
- 2) With alarm sound, Indicator will change to "C1" (Lower air pressure limit setting mode).
- 3) By pressing the FWD/REV Rotation key, Speed Indicator shows "0.0" and "Eb" mutually.
- 4) By stepping the Foot Pedal of the delivery unit, Indicator shows the present air pressure.



# NOTICE

- $\cdot$  The displayed air pressure is only a guideline. Measure the correct air pressure with the air gauge.
- $\cdot$  The unit of displayed air pressure is "kgf/cm2". For other unit, refer the bellow.

ex) 0.1 = 0.01MPa

1.0 ≒ 0.1MPa

3.0 = 0.3MPa.

5) Control the Foot Pedal of the delivery unit, and maintain the air pressure between "0.3" - "1.0". Press M2 key for more than 3 seconds to memorize the lower limit of the air pressure.



- $\cdot$  Default value is set to "0.5" .
- · When the air pressure is not between "0.3" "1.0", it is displayed "Eb", and will not be memorized

- 6) After setting lower limit, press Gear Ratio Select Key. Indicator will change to "C2" (Upper air pressure limit setting mode).
- 7) By pressing the FWD/REV Rotaion Key, Indicator shows "0.0" and "Ec" mutually.
- 8) By stepping the Foot Pedal of the delivery system, Indicator shows the current air pressure.



The displayed air pressure is only a guideline. Measure the correct air pressure with the air meter.

9) Control the Foot Pedal of the delivery system, and maintain the air pressure between "2.0" - "4.0". Press M2 key until it beep (more than 3 seconds) to memorize the upper limit of the air pressure.



- · Default value is set to "3.0".
- · When the air pressure is not between "2.0" "4.0", it is displayed "Ec", and will not be memorized.
- 10) Press both M2 key and Speed Adjustment Key(**A**) at the same time until it beep (more than 3 seconds), once again. When it alarmed, this setting has completed. By setting Indicator by pressing Rotation Speed Key to " 40", and now it is ready to use at the maximum speed, 40,000 min<sup>-1</sup>(rpm).

#### 6-2 Light Brightness Adjusting Function

#### (Unit of Display = V)

Brightness of the Fiber Optic can be adjusted from this function.

- 1) Press M2 Key and Speed Adjustment Key(\( \blacktriangle \) at the same time until it beep (more than 3 seconds).
- 2) With alarm sound, Indicator will change to "C1". Pressing the Gear Ratio Select key can change the Indicator and Gear Ratio Lamp (C1→C2→C3→C1····) Set indicator in C3 (Light Brightness adjustment mode). Press FWD/REV Rotation Key to proceed.
- 3) When Indicator changed to "3.5"(Default value), press Speed Adjustment Key( ) Avand adjust the brightness.



- · Default value is set to " 3.5".
- · Adjustable between "1.6" "3.6".
- 4) Press M2 key until it beep (more than 3 seconds) to set the brightness.
- 5) Press M2 key and Speed Adjustment Key(**A**) at the same time for more than 3 seconds, once again. When it alarmed, this setting has completed.

#### 6-3 Program Function

It is possible to memorize settings (Speed, Gear Ratio, Forward/Reverse Direction) After the setting, you can use your settings by pressing M1, M2 Key.

- 1) Set the values for Speed, Gear Ratio, Forward/Reverse Direction.
- 2) Press M1 Key or M2 Key until it beep (more than 3 seconds). When it alarmed, this setting has completed.

# 7. Sterilization

Sterilize the motor only.

For the sterilization method, we recommend the autoclave sterilization method.

Sterilization is required first time you use and after each patient as noted below.

#### Autoclaving

- 1) Turn off the Power.
- Detach the motor from the Motor Cord. (Refer to 4-1 Connecting / disconnecting the Motor and the Motor Cord)
- Clean the surface of the motor with brush etc. (Do not use the metal brush), and wipe it with the cotton moistened with disinfecting alcohol.



- 5) Insert into an autoclave pouch. Seal the pouch.
- 6) Autoclavable up to max. 135°C. ex.) Autoclave for 20 min. at 121°C, or 15 min. at 132°C.
- 7) Keep the Motor in the autoclave pouch to keep it clean until you use it.
- ★Sterilization at 121°C for more than 15 minutes is recommended by EN13060 or EN ISO17665-1.



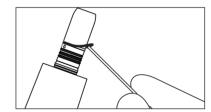
### CAUTION

- · Do not Autoclave (or any other high temperature Sterilization) Control Box, AC Adapter, Motor Cord.
- · Do not lubricate the motor.
- · Do not wipe nor immerse the system in acidic water or acidic solutions.
- · Do not sterilize with dirt on the surface. It might cause rust.

# 8. Maintenance

If the O-Ring became depleted, such as difficult to connect the handpiece or air or water might leak, replace the O-Ring.

(1) Changing the Oring Remove the O-Ring at the Motor Insert with a pointed tool, and mount the new O-Rings into the groove.



Autoclave Plug

Fig.11

Tighten

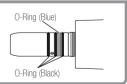
Fig.10

Motor Cap



# CAUTION

There are 4 0-Rings on the Motor Insert. Blue one is thinner than other 3 pieces. Make sure to order it.





It might happen if the O-Ring becomes depleted.

- · Air/Water leak
- · Air/Water does not came off
- Vibration
- · Difficult to connect/disconnect the handpiece

# 9. Error Code

If the motor stops due to an abnormality such as a malfunction, overload, break or incorrect usage, it automatically checks the state of the Control Box and detects the cause of the abnormality and displays an error code on the Indicator. If an error code is displayed, turn on the power again and check whether the same error code is displayed. If the same error code is displayed, take action by referring to the instructions provided in the "Check/Remedy" column in the following table.

Error Code	Trouble	Cause	Check/Remedy
E0	Overcurrent error. (In circuit)	Detected overcurrent in the circuit.	Contact your dealer.
E1	Overcurrent error. (In software)	Detected overcurrent in the software.	Contact your dealer.
E2	Retry Error	Motor stopped by the overload, and not able to restart.	Contact your dealer.
E3	ITRIP Error	Faulty Motor or Internal circuit.	Contact your dealer.
E5	Overvoltage Input Error	Overvoltage is given to the Control Box.	Contact your dealer.
E6	LED voltage Error	Overvoltage is given (more than 3.7V) from the Internal circuit.	Contact your dealer.
E8	Overheat Error	High temperature safe system is functioning, due to long-time use at a high load.	Cool it down for a while, and try again.
E9	Motor Start Error	Motor didn't reach the preset speed in a prescribed period of time.     Break down of a motor cord wire, or internal circuit malfunction.	Contact your dealer.
EA	LED voltage Error	Voltage for the LED didin't reach the preset speed in a prescribed period of time.	Contact your dealer.
Eb	Air Offset Error	Lower than preset " Lower limit of the air pressure"	Displayed by Foot Air Calibration function. Not a malfunction.
Ec	Air Full Scale Error	- Higher than preset "Upper limit of the air pressure".  - Air pressure higher than 0.4MPa (4.0kgf/cm²) is given.	Displayed by Foot Air Calibration function. Not a malfunction.
EE	EEPROM Error	Malfunction of the memory for the setting values.	Contact your dealer.

# 10. Troubleshooting

When trouble is found, check the following again before consulting NSK dealer. If none of these is applicable or the trouble is not remedied even after action has been taken, a failure of this product is suspected.

Check/Remedy	Cause	Solution
Pilot Lamp does not light.	Power Switch is OFF.	Turn ON the switch.
	AC Adapter is not connected correctly.	Check the connection.
	Internal Fuse is blown, due to some reason.	Contact your dealer.
Motor does not run	Tubing, Motor Cord, AC Adapter is not connected correctly.	Check the connection.
	Air pressure is not given, or not proper from the delivery unit.	Check the air pressure of the delivery system.
	Check the ERROR CODE in the Indicator.	Refer to 9. ERROR CODE.
The rotation speed does not rise.	Air pressure is not given, or not proper from the delivery unit.	Check the air pressure of the delivery system.
	Air pressure of the delivery unit is lower than the "Lower limit of the air pressure".	Do "6-1 Foot Air Calibration".
It beeps when turn on the switch.	You are stepping on the Foot Pedal when turning on the power switch. (Safety function)	Do not step the Foot Pedal, and turn on the power switch.
LED does not light.	Reached the end of life expectancy.	Contact your dealer.
Motor heats up abnormally during rotation.	Coolant air is not given, or not proper from the delivery unit.	Check the air pressure of the delivery system.
Water leakage	Tubing, Motor Cord is not connected correctly.	Contact your dealer.
	If it is from Control Box, something is wrong within the Control Box.	Check the connection.
When turned on, the setting values are different from what used to be when turned off.	Turned off the motor while rotating.	Turn off after the Motor has stopped.

# 11. Warranty

Manufacturer warrants its products to the original purchaser against defects in material and workmanship under normal practices of installation, use and servicing. are expendable components, and are not covered by this warranty. In case the product fails within 30 days from the date of installation, immediately report with the proof of your purchase to the dealer you purchased from.

# 12. Disposing Product

Consult with dealer from whom you purchased it about waster despoil.

#### Guidance and manufacturer's declaration - electromagnetic emissions

The NLX nano is intended for use in the electromagnetic environment specified below. The customer or the user of the NLX nano and manual should assure that is used in such an environment.

Emissions test	Emissions test	Electromagnetic environment - guidance	
RF emissions CISPR11	Group 1	The NLX nano 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 emmissions CISPR11	class B	The NLX nano is suitable for use in all establishments, including domestic estabilishments and those	
Harmonic emissions IEC61000-3-2	olass A	connected to the public low-voltage power supply network that supplynetwork that spplies buildings used for domestic purposes.	
Voltage fluctuations/flicker	Complies	(")This applies to the AC230V system. For AC120V system, this is "Not applicable".	

#### Guidance and manufacturer's declaration - electromagnetic immunity

The NLX nano is intended for use in the electromagnetic environment specified below. The customer or the user of the NLX nano and manual should assure that it is used in such an environment.

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Immunity test	IEC60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC61000-4-2	±6kV contact ±8kV air	±6kV contact ±8kV 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 IEC61000-4-4	±2kV for power supply lines ±1kV for input/output	±2kV for power supply lines No input/output line	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC61000-4-5	±1kV line(s) to line(s) ±2kV line(s) to earth	±1kV line to line ±2kV lines to earth	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 IEC61000-4-11	<5% Ut (>95% dip in Ut) for 0.5 cycle 40% Ut	<5% Ut (>95% dip in Ut) for 0.5 cycle 40% Ut (60% dip in Ut) for 5 cycles 70% Ut (30% dip in Ut) for 25 cycles <5% Ut (>95% dip in Ut) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the NLX nano requires continued operation during power mains interruptions, it is recommended that the NLX nano be powered from an uninterruptible power supply or a battery.
Power frequency (50/60Hz) magnetic field IEC61000-4-8	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: Ut is the a.c. mains voltage prior to application of the test level.

#### Guidance and manufacturer's declaration - electromagnetic immunity

The NLX nano is intended for use in the electromagnetic environment specified below. The customer or the user of the NLX nano and manual should assure that it is used in such an environment.

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Immunity test	IEC60601 test level	Compliance level	Electromagnetic environment - guidance	
Conducted RF IEC61000-4-6	3Vrms 150 kHz to 80MHz	3Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the NLX nano, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.	
Radiated RF IEC61000-4-3	3V/m 80MHz to 2.5 GHz	3V/m	Recommended separation distance $d=1.2\sqrt{F}$ $d=1.2\sqrt{F}$ 80MHz to 800MHz $d=2.3\sqrt{F}$ 800MHz to 2.5GHz Where $\sqrt{F}$ is the maximum output power rating of the transmitter in watts (Wlaccording to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters as determined by an electromagnetic site survey*, should be less than the compliance level in each frequency range*, Interference may occur in the vicinity of equipment marked with the following symbol: ((v))	

NOTE 1 At 80MHz and 800MHz, 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 mobiles 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 NLX nano is used exceeds the applicable RF compliance level above, the NLX nano should be observed to verity normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the NLX nano.

b Over the frequency range 150kHz to 80MHz, field strengths should be less than 3 V/m.

#### Recommended separation distances between portable and mobile RF communications equipment and the NLX nano

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

	Separation distance according to frequency of transmitter		
Rated maximum output power of transmitter W	150kHz to 80MHz d=[3.5/P]√P	80MHz to 800MHz d= [3.5]√P	800MHz to 2.5GHz $a = \begin{bmatrix} \frac{7}{2} \\ \frac{1}{2} \end{bmatrix} \sqrt{P}$
	α=[ γ₁ ]ν,	0-1 E1 JV	0- L E1 JV
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	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.

**C** € The EU directive 93/42/EEC was applied in the design and production of this medical device. NSK America Corp

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