TAW Visual Stylet

Product Manual for

Operation, Maintenance, and Technical Instructions

SourceMark Medical

• Caution: Federal law restricts this device to sale by or on the order of a licensed healthcare practitioner.

Please read all the information carefully! If not following the instructions correctly may lead to serious surgical consequences!

Product name: TAW Visual Stylet

Type(s)/model(s):

Cable	TAW Visual Stylet	Matched SourceMark VLMA Display
Universal Cable (FS-B3-17)	VS10	
	VS20	
Universal Cable (FS-B3-17)	VS40	UE-M10S

Thank you for purchasing our products.

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This product can only be used by licensed physicians and healthcare professionals with operational training.

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Please read this manual carefully before using this device and keep it well for future use.

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When using the device, please carefully read the operating instructions and carry out proper maintenance, which will greatly reduce the occurrence of malfunctions and extend the service life of the device.

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The paragraph marked "A" should be read and executed carefully to avoid injury or damage to the device, operators, or patients.

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If there is a problem with the device during use, please contact your local dealer or the company for help. Commitment: When dealing with failures, we promise to provide users with the necessary and more detailed technical information if needed.

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This manual describes the ideal procedure for preparing and checking the device before use. It does not specify how to perform the procedures for clinical use, nor is it intended to familiarize beginners with the technology and medical knowledge of the laryngeal mask.

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Due to the continuous improvement of the products, the appearance or specifications of the products provided by the company may be different from this manual without prior notice.

🗥 Warning

This product cannot be used in places where there is a risk of fire.

This product cannot be used in the presence of a mixture of flammable anesthetic gas and air or a mixture of nitrous oxide.

There are special parts inside this device, users are not allowed to disassemble or modify this device by themselves.

The light at the front of the device cannot be shined into patients' or other persons' eyes.

The battery is located inside the device. Keep away from fire, sunlight, or excessive heat, as this may result in equipment damage or reduced service life.

This device can only be used with SourceMark Video Laryngeal Mask Airway produced by our company.

A spare product that is ready to be called at any time can ensure that it can be replaced in time and continue to be used in the event of equipment failure.

The waterproof level of the insertion part of the TAW Visual Stylet is IPX6, the Cables are not waterproof. Please prevent water or other liquids from entering the device to avoid damage to the device.

Do not insert the TAW Visual Stylet directly into the type-C port of the SourceMark VLMA Display.

▲Safety Advice

This device must be protected from any external adverse effects such as strong electromagnetic radiation or high temperatures.

This product should be handled with care during transportation and use to prevent shock, severe vibration and moisture.

This device can only be charged with the charger provided by our company. The charger should meet the requirements of IEC 60601-1.

The device should only be repaired by the personnel authorized by our company. In case of any breakdowns or malfunctions, please contact our service department in time.

ACautions

Do not use excessive force when using the product, and do not bend it over an angle.

Check the product before use to ensure that it is free of rust, no indentation, no scratches, no sharp edges or protrusions, and the SourceMark VLMA Display can be turned on and display the screen normally.

Please follow the disinfection method in the manual before use. When wiping the insertion tube of the TAW Visual Stylet, avoid excessive force.

Hold the TAW Visual Stylet with the round handle part. Do not hold the insertion tube of the TAW Visual Stylet directly during operation.

Avoid using petroleum-based lubricants.

Please check if the device is in good condition before use, and if there's any damage or performance defects, do not use it before troubleshooting.

Before use, please check if the battery power is sufficient or the power cable is connected. Otherwise, it may cause inconvenience or accident due to battery exhausted.

Before use, connect to the SourceMark VLMA Display to confirm that the camera can work normally and the image is clear. Use a cotton swab to clean the camera when the image is blurred.

When the product is not used for a long time, it should be charged once 2-3 months.

This device has a certain period of service life and there is a risk of use outside of this period. After the service

life is exceeded, please disassemble and scrap it according to the requirements of environmental regulations, or return to your local dealer or the factory to check whether it can still be used. UE Medical is not responsible for the adverse consequences caused by continued use without identification.

Zhejiang UE Medical Corp. reserves the right of final interpretation.

Contraindications:

None

Part 1

1.1 Intended use

The TAW Visual Stylet is used together with SourceMark Display, Universal Cable, and SourceMark Video Laryngeal Mask Airway to realize whole process visualization.

1.2. Performance:

Discharge type that the device belongs to: internal power supply.

Type of the device: Type-BF.

Application part of the device: the insertion part of the TAW Visual Stylet.

The device is not waterproof.

The device is portable.

Item	Technical name	Technical indicators	
	Angular resolution $r_{\alpha}(d)$	0.9C/(°)	
	Angel of view	90°±15%	
	Depth of field	3~100mm	
TAW Visual	Bending angle	up≥90°, down≥90°	
Stylet	Battery life	>3h	
-	Battery capacity	3.7V/7000mAh	
	Input power	DC 5V-3A ,15W	
	Waterproof level	IPX0	
	Illuminance	≥400LUX	
	Monitor size	10.1 inch	
	Screen type	TFT LCD with Touch Panel	
	Resolution	1920*1200 pixels	
	Storage capacity	128 G	
SourceMark VLMA	Signal interface	10 Pin aviation plug*2 14 Pin aviation plug*1	
Display	Data interface	USB / TYPE-C / HDMI	
	Charging interface	DC Connector	
	Battery life	>5h	
	Battery capacity	7.2V/6700mAh	
Power	Input	AC 100-240V, 50-60 Hz	
Adapter	Output	DC12V,4A,48W	
Ononatina	Temperature	5~40°C	
Operating Environment	Humidity	10%~90%	
Environment	Atmospheric pressure	860hpa~1060hpa	

Transportatio	Temperature	-40°C~+55°C
n and storage	Humidity	≤93%
environment	Atmospheric pressure	500hpa~1060hpa

Part 2

2.1 Product description

Insert the TAW Visual Stylet into the observation channel of the SourceMark Video Laryngeal Mask Airway, then the camera on the TAW Visual Stylet will output the image to the SourceMark VLMA Display in real time to observe the patient's oral cavity condition.

2.2 Structure

The TAW Visual Stylet works with a SourceMark VLMA Display, a Universal Cable, a Power Adapter and Software.



Figure 1. Connection structure of TAW Visual Stylet, SourceMark VLMA Display, and other accessories 1- SourceMark VLMA Display, 2- Universal Cable, 3-TAW Visual Stylet

	No.	Part	Function description
	1	Shell	Main body
	2	Touch Screen	Operation, display
	3	Indiantor light	Indicate product on/ff and
	3	Indicator light	charging status
$1 t_2 t_3$	4	USB interface	Data interaction

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		TYPE	
	5	TYPE-C	Data interaction/system
		interface	updating
	6	HDMI	Image output of HDMI
10 0	0	interface	signal
	7	LAN interface	Support Network
13 S	8	Charging interface	Product charging
15	9	Handheld	Portable product
Here too	10	Microphone	Supports sound
16-17-18-19-	10	hole	collection
	11	Switch on/off	Power on, power off, and
		button	screen lock
	12	Volume button	Adjust the volume
	13	Aviation plugs	product image signal
		interface 1	input
		Aviation plugs	product image signal
	14	interface 2	input
	15	Aviation plugs	product image signal
	15	interface 3	input
	16	Label	Product information
	10	Laber	description
	17	Non-slip pad	Anti-slip
	18	Support frame	Supporting the product
	19	Back hanger	Expand to carry the
		2	trolley from UE Medical

2.3 System parameters

Built-in battery	Rechargeable lithium-ion battery
Battery specification	6700mAh/7.2V (48.24Wh)
Stand-by time	>300mins

Display screen	10.1-inch with touch function
Screen resolution	1920*1200
Screen type	TFT LCD
Angle of view	Full view
Storage	128 G
Storage format	Image: JPG, Video: MP4
Power adapter input	100-240V~, 50/60Hz
Power adapter output	DC12V,4A

2.4 Instructions for use:

Switch button: hold the switch button for 1-2 seconds to start the SourceMark VLMA Display, and repeat the operation for shutting it down.

Working status: during normal operation, the LCD power indicator stays green, and the battery power left can be viewed through the battery icon on the screen. Please charge the device in time when the battery is insufficient.



Figure 2 SourceMark VLMA Display structure (UE-MS10)

Charging: when the device needs to be charged, insert one end of the power adapter into a properly grounded power socket, and insert the DC plug located at the other end into the power socket of the SourceMark VLMA display. When charging, the power indicator light is orange-yellow. Once the charging is complete, the light turns green, and the battery indicator icon shows full marks.

Photo taking: first turn on the display, press the photo button on the small handle of the Universal Cable, a photo

symbol flashes on the top of the display screen, indicating that the photo is taken successfully. View the photos in device by connecting the display to computer with the data cable provided.

Video recording: first turn on the display, long press the video recording button on the small handle of the Universal Cable for 1-2s, a flashing red dot appears on the top of the display screen, indicating that video recording is in progress. Long press the video recording button for 1-2s again, the recording completion reminder appears on the display screen, indicating that the video recording is quit., After connecting the display to computer with the data cable provided, video in the device can be viewed.

Data reading: copy the pictures, videos and other data stored in the device by connecting the device to the computer. When the device is powered on, use the USB data cable to connect the device to the computer. After being recognized, the icon of the device's USB flash disk will appear in "my computer". Double click to enter and perform relevant operations.

The SourceMark VLMA Display has 128 G memory and can take more than 400,000 photos or record for 16 hours. After the TF card is fully stored, it will only give a prompt instead of storing circularly. Connect the display to a computer for data deletion.

2.5 Operation



Figure 3. Connection of TAW Visual Stylet, SourceMark VLMA Display, and other accessories

Preparation and Operation

Place the SourceMark VLMA Display in a position suitable for viewing, insert one end of the Universal Cable into the SourceMark VLMA Display, and connect the other end to the TAW Visual Stylet or Embed camera. Make sure that there is no large gap between the joints and the connection is stable.

Check whether the surface of the insertion tube of the TAW Visual Stylet is scratched or any glue falls off. Check whether the glue at the camera part is scratched or not. Do not use if there is any damage.

Long press the power button, the boot screen and the waiting screen appear for about 1-2s, then the scene

captured by the high-definition camera will be displayed on screen.

The operator connects the TAW Visual Stylet and the Universal Cable together, and holds the SourceMark Video Laryngeal Mask Airway in the left hand and the round handle part of the TAW Visual Stylet in the right hand. Then insert the TAW Visual Stylet straight into the observation channel of the SourceMark Video Laryngeal Mask Airway (the part with indicator • is the observation channel) until the round handle part is aligned and locked in the positioning groove of the connector, and the lower surface of the round handle part is almost flat against the plane of the laryngeal mask. Then please make sure the camera of the TAW Visual Stylet is close to the observation window of the laryngeal mask, and the front contour of the laryngeal mask can be clearly displayed on the SourceMark VLMA Display.

During the operation, if the patient's cough or spontaneous breathing causes the mist or saliva on the observation window of the SourceMark Video Laryngeal Mask Airway or the observation window is contaminated by a large amount of blood or secretions in the oral cavity, please use a syringe without a needle to inject gas or saline solution through the cleaning channel of the laryngeal mask.

When pulling out the TAW Visual Stylet, hold the handle part of the TAW Visual Stylet and turn it to the left until it cannot be turned, then release the handle part to make it pop out naturally, and then pull it upwards.

Part 3

3.1 Factors affecting the use:

Failure to read the operating instructions in detail or lack of experience in use.

The ambient temperature is too low, or strong sunlight outdoor.

The endotracheal tube is not well lubricated.



3.2 Precautions for clinical application:

The operation technology of the TAW Visual Stylet requires your special attention:

Strong sunlight will reduce the display of the throat structure on the SourceMark VLMA Display, and it is not recommended to be used in an outdoor environment with strong sunlight.

When using the TAW Visual Stylet, if necessary, please use water-soluble medical-grade lubricants such as medical silicone oil for lubrication. Please be aware that petroleum-based lubricants such as olive oil, lidocaine ointment or other lubricants containing petroleum and petroleum jelly cannot be used.

3.3 Maintenance, Cleaning, and Disinfection:

1. Cleaning of the TAW Visual Stylet

Wipe the TAW Visual Stylet with a small amount of 75% medical alcohol.

The device is non-waterproof; immersion disinfection is strictly prohibited. The SourceMark VLMA Display can be cleaned with Clinelle Universal Range wipes, Cavi wipes, and Sani-Cloth.

It is not recommended to use strong acid and strong oxidizing disinfectant, and it is not recommended to use other disinfection methods that exceed the requirements of the working environment of the product.

Cleaning and disinfecting that are not in accord with the specifications may cause cross-infection.

The TAW Visual Stylet cannot be sterilized by ultrasonic, high temperature nor high pressure sterilization.

Part 4

4.1 Troubleshooting:

Trouble	Cause	Solution
	The camera is fogging	Preheat or remove mist
The image is not clearly	The camera is blurred	Remove dirt on the camera with
		medical alcohol
	There are water droplets or color Stop using it and send it	
	bars in the field of view	distributor or factory for repair
Unable to start up	Battery off	Charging

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	Creak on bottom, failung	Ston wing it and and it to the
	Crash or battery failure	Stop using it and send it to the
		distributor or the factory for repair
	Poor connection between the TAW	Unplug the Universal Cable and
	Visual Stylet and Universal Cable,	reconnect.
	or poor connection between	
	the Universal Cable and the	
	SourceMark VLMA Display	
		Stop using it and send it to the
		distributor or the factory for repair
No image on the SourceMark VLMA Display	The system is crashed	
	The TAW Visual Stylet or	
	the Universal Cable or the	
	SourceMark VLMA Display may	
	be damaged	

4.2 Product recycling

Treatment of the TAW Visual Stylet and its accessories at the end of use: non-degradable objects.

Suggestion: the TAW Visual Stylet and accessories at the end of use shall be handed over to the special environmental protection department for recycling.

4.3 Warranty:

This product is guaranteed for 1 year from the date of sale.

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Note: In order to prevent infection and to ensure the safety of all maintenance personnel, the equipment should be completely cleaned and disinfected before being returned to our company for maintenance. If the equipment has been used by HA positive patients or other infectious patients, please inform us in advance.

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Note: The TAW Visual Stylet has a certain period of service life, there is a risk of use outside of this period.

4.4 Storage and Transportation:

During transportation, it shall be kept clean and free from pollution, and it is strictly prohibited heavy pressure and to immerse in rain and snow.

Handle with care during transportation to avoid fierce collision.

It should be stored in a well-ventilated room without corrosive gas, and please away from fire.

Icon	Indication	Icon	Indication	Icon	Indication
\triangle	Caution	5	Stack limit	LOT	Batch code
×	Keep away from sunlight		Fragile, handle with care	M	Date of manufacture
Ť	Keep dry	5	Use-by Date	EU REP	European Representative
	Refer to instructions for use	ίΠ)	Battery indicator	Q	Low battery
*	BF type device		Direct current	X	Waste electrical and electronic equipment shall be treated separately (please observe local laws and regulations)
U	Switch button	***	Manufacturer	MD	Medical device
US REP	U.S. Agent	Rx only	Prescription Use Only		

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4.5 Production date and Service life:

Production date: See product label for details

Service life: The service life of the SourceMark Display is 5 years. The service life of the TAW Visual Stylet is 2 years or 5,000 times of use.

Date of Compilation (Revision) of Instruction Manual: May, 2025

PART 5

5.1 Customer Service:

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US REP



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Appendixes: EMC Performance Index

Mode	Description
Operating Mode	The SourceMark VLMA Display has sufficient battery power, and use the designated Universal Cable to connect to the camera connector, which can display the screen captured by the camera in real-time.
Charging Mode	Connect the SourceMark VLMA Display to a charger, when the battery is not full, the indicator light will light up in orange.
Data Transmission Mode	Use a data cable to connect the SourceMark VLMA Display and a computer, then the computer will successfully read the data of the TF card in the SourceMark VLMA Display.

Basic Performance of the Product

For the device, special precautions regarding electromagnetic compatibility (EMC) are required, and it must be installed and used in accordance with the EMC information specified in this manual. Portable and mobile radio frequency communication equipment may affect this device.

The following cables must be used to meet electromagnetic emission and anti-interference requirements:

Cable type	Length
Charger connection cable	1.5 m
Universal Cable	2.5 m
Data cable	1.5 m

Except for cables (transducers) sold as spare parts for internal components, using accessories and cables (transducers) that are not specified may increase the emission of the device or system or reduce the immunity.

The device or system should not be used close to or stacked with other equipment. If it must be used close or stacked, it should be observed to verify that it can operate normally under the configuration used.

Guidelines and Statement of the Manufacturer-Electromagnetic Emission

Guidelines and Statemen	t of the Manufacturer-I	Electromagnetic Emission
The display shall be used ensure that it is used in th	e	environment specified below, and the purchaser or user should rironment
Emission Experiment	Conformance	Electromagnetic Environment – Guideline
RF Emission CISPR11:2016	Group 1	The display only uses radio-frequency energy for its internal function. Therefore, its radio frequency emission is very low and has a low possibility for causing interference to nearby electronic equipment.
RF Emission CISPR11:2016	Class A	The display is suitable for use in non-domestic and all facilities that are not directly connected to the public low-
Harmonic Emission IEC61000-3-2(ed	N/A	voltage power supply network of domestic residences.

5.0):2018	
Voltage	
Fluctuation/Flicker	
Emission	N/A
IEC61000-3-3(ed	
3.1):2017	

Guidelines and Statement of the Manufacturer-Electromagnetic Immunity

Guidelines and Statement o	f the Manufacturer-Electromagnetic Im	munity	
The display shall be used ir	the electromagnetic environment spec	cified below, and the purchaser or	user should ensure that it
is used in this electromagne	tic environment		
Immunity Test	IEC 6060 Test Level	Conformity Level	Electromagnetic
			Environment-Guideline
Electrostatic Discharge	±8 kV Contact Discharge	±6 kV Contact Discharge	The floor should be
IEC61000-4-2:2008	±15 kV Air Discharge	±8 kV Air Discharge	wood, concrete or
			ceramic tiles. If the floor
			is covered with synthetic
			material, the relative
			humidity should be at
			least 30%.
Electrical Fast Transient	±2kV for Power Supply line		The network power
Burst IEC61000-4-4:2012	±1kV for Input/Output line	±2kV for Power Supply line	supply should be of the
		±1kV for Input/Output line	quality used in a typical
			commercial or hospital
			environment.
Surge IEC61000-4-	\pm 1kV line to line		The network power
5:2017	± 2 kV line to ground	\pm 1kV line to line	supply should be of the
			quality used in a typical
			commercial or hospital environment.
IEC61000-4-11:2017		<5% UT, lasting for 0.5 cycle	
IEC01000-4-11.2017	< 5% UT, lasting for 0.5 cycle		The network power supply should be of the
Voltage dips, short	(In UT, >95% Temporary	(In UT, >95% Temporary Reduction)	quality used in a typical
interruptions, and voltage	Reduction)	40% UT, lasting for 5 cycles	commercial or hospital
variations	40% UT, lasting for 5 cycles	(In UT, 60% Temporary	environment. If the user
on the power input line	(In UT, 60% Temporary Reduction)	Reduction)	needs continuous
IEC61000-4-11:2017	70% UT, lasting for 25 cycles	70% UT, lasting for 25 cycles	operation during the
	(In UT, 30% Temporary Reduction)	(In UT, 30% Temporary	power interruption, it is
	<5% UT, lasting for 5 seconds	Reduction)	recommended that the
	(In UT, >95% Temporary	< 5% UT, lasting for 5 seconds	display needs to be
	Reduction)	(In UT, >95% Temporary	powered by an
L		17 / 20	

		Reduction)	uninterruptible power
			supply or battery
IEC61000-4-8:2009	30A/m	30A/m	
			The power frequency
Power Frequency			magnetic field should
Magnetic Field			have the power
(50Hz/60Hz) IEC61000-			frequency magnetic
4-8:2009			field level
			characteristics of a
			typical place in a typical
			commercial or hospital
			environment.
Note: UT refers to the volta	ge of the AC network before the imple	mentation and test of voltage.	

Guideline and Statement of the Manufacturer-Electromagnetic Immunity

Guideline and Statement of the Manufacturer-Electromagnetic Immunity

The display shall be used in the electromagnetic environment specified below, and the purchaser or user should
ensure that it is used in this electromagnetic environment

Immunity Test	IEC 6060 Test Level	Conformity Level	Electromagnetic Environment-
			Guideline
	3	3V (Valid Value)	Portable and mobile radio
RF conduction	3V (Valid Value)	3V/m	frequency communication
IEC61000-4-6:2013	150 kHz-80kHz	80MHz-2.7GHz	equipment should not be used
RF radiation	3V/m	80% AM at 1kHz	closer to any part of the display
IEC61000-4-3:2010	80MHz-2.7GHz		than the recommended isolation
		3V/m	distance, includes the cable. The
		80MHz-2.7GHz	distance should be calculated by
		80% AM at 1kHz	the formula corresponding to the
			transmitter frequency.
			Recommended isolation distance:
			$d=1.2 \sqrt{P}$
			$d=1.2\sqrt{P}$
			80MHz-800MHz
			d=2.3 \sqrt{P} 800MHz-2.5GHz
			In the formula:
			PAccording to the maximum
			rated output power of the
			transmitter provided by the
			transmitter manufacturer, in watts
			(W);
			dRecommended isolation
			distance, in meters (m)

	The field strength of the fixed
	transmitter is determined by
	surveying the electromagnetic field
	a, and in each frequency range b
	should be lower than the
	coincidence level.
	Interference may occur in the
	vicinity of equipment marked with
	the following symbols.
	(((•)))

Note 1: If the frequency point is 80MHz and 800MHz, the higher frequency band formula should be used. Note 2: These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and emission from buildings, objects and humans.

Fixed transmitters, such as base stations for wireless (cellular/cordless) telephones and ground mobile radios, amateur radio, AM and FM radio broadcasting, and television broadcasting, etc., whose field strength cannot be accurately predicted in theory. In order to assess the electromagnetic environment of fixed radio frequency transmitters, the survey of electromagnetic fields should be considered. If the measured field strength of the place where the display is located is higher than the above applicable RF compliance level, the display should be observed to verify its normal operation. If abnormal performance is observed, supplementary measures may be necessary if the direction or position of the display is readjusted.

If the entire frequency range is 150kHz-80MHz, the field strength should be less than 3V/m..

Recommended isolation distance between portable and mobile RF communication equipment and the display			
Recommended isolation distance between portable and mobile RF communication equipment and the display			
The display should be used in an electromagnetic environment where radio frequency radiation disturbances			
are controlled. According to the maximum rated output power of the communication device, the purchaser of			
user can prevent electromagnetic interference by maintaining the minimum distance between the portable and			
mobile radio frequency communication device (transmitter) and the display as recommended below.			

Maximum Rated	Isolation Distance Corresponding to Different Frequencies of the Transmitter/m		
Output Power of the Transmitter W	150kHz-80MHz $d= 1.2^{\sqrt{P}}$	80MHz-800MHz d= $1.2\sqrt{P}$	800MHz-2.5GHz d= $2.3\sqrt{P}$
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 the maximum rated output power of the transmitter not listed in the above table, the recommended isolation

distance d, in meters (m), can be determined by the formula in the corresponding transmitter frequency column, P is the maximum rated output power of the transmitter provided by the transmitter manufacturer, in watts (W). Note 1: If the frequency point is 80MHz and 800MHz, the higher frequency band formula should be used. Note 2: These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and emission from buildings, objects and humans.