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## Important Information

Please take the time to read this user manual before use the Product, it contains all notes and important information regarding your wireless HD video transmission system.

Our limited warranty applies when the products is handled properly for intended use, in accordance with its operating instruction.

However, the warranty may be void in the following cases:

- Repairs or product modification have been executed by unauthorized service personnel.
- The damages are caused by accidents including but not limited to, lighting, exposed to rain or water and moisture.
- Use of a DC adaptor not compatible with the product and its voltage rating range
- The model number on the product has been modified or the warranty tag has been removed



### **Warning**

- This product should not be exposed to dripping or splashing.
- Place receiver/transmitter on a flat, hard and stable surface
- Ventilation: Do not block the ventilation slots on the receiver/transmitter or place any heavy object on the top cover
- Put the receiver/transmitter in a properly ventilated area, away from direct sunlight or any source of heat.
- Water Exposure: To reduce the risk of fire or electric shock, do not expose the receiver/transmitter to rain or moisture.
- Our company has the right to modify this document without any notice.

## **Special Notice:**

- Use of this product in the following locations may result in abnormal video and audio output(noise, blocked image... etc.)
  1. Product installed in the walls made of concrete.
  2. Product is situated near the refrigerator or metal fitment.
  3. A cluttered room where the wireless signals may be blocked.
- This product has been tested and manufactured to comply with each country's safety rules. However, there is no guarantee that interference will not occur in some installation scenario. If the interference happens, increase the distance between the transmitter and receiver.

## **Introduction**

LINK-MI LM-WX500T This equipment is designed to replace the current widely used cable in the live broadcasting and production environment, it can be used in film production, live broadcasting as well as many application which requires good quality wireless video connection. An intercom with TALLY system is also embedded, let the cameraman and director can talk easily.

## Product Details

LM-WX500T is main consist of one Transmitter (TX) and one Receiver (RX).



## Specification

ITEM	SPECIFICATION
Frequency range	5.1-5.9(GHz)*Subject to different RF regulations in different regions.
	2.4-2.483GHz with ISM band

Modulation method and Bandwidth	OFDM/40MHz for video
	GFSK/1MHz for intercom system
Video Formats Supported	1080p 23.98/24/25/30/50/60 1080psf 23.98/24/25 1080i 50/59.94/60 720p 50/59.94/60 576p 576i 480p 480i
Audio Formats Supported	PCM, DTS-HD, Dolby TrueHD
Time Code	SMPTE-12M
Transmission Range	Up to 2000ft(Line of sight)
Transmitter	
Antenna	External Antenna 5G × 2pcs
	External Antenna 2.4G x1pcs
Transmission Power	17dBm
Functional Interface	HDMI Input; SDI Input; SDI Loop Output; Mini USB; LEMO Power IN; Antenna RPSMA Socket; Power ON/OFF,3.5mm HP/MIC socket TALLY output for Wrist
Mounting Structure	1/4" Hot-shoe connection
OLED Display	Channel Info; Video status; Battery capacity; Status Menu, Audio Volume
Power Source	9-18V for DC input, F550/F970 battery
Power Consumption	7.5-8.5W
Net Weight(with antenna)	400g
Dimensions	142.5×76×24.3mm
Temperature	-10-50℃(Operating); -40-80℃(Storage)
Receiver	
Antenna	External Antenna 5G × 5pcs
	External Antenna 2G x1pcs

Receiving Sensitivity	-70dBm
Functional Interface	SDI Dual Output; HDMI Output; Mini USB; LEMO Power IN; Antenna RPSMA Socket; Power ON/OFF, 3.5mm HP/MIC socket; 3.5mm TALLY socket; LEMO 6 needle
Locating Structure	1/4" Hot-shoe connection
OLED Display	Channel Info; Signal Strength; Power Info; TALLY indicator
Power Source	9-18V for DC input; SONY V-mount battery
Power Consumption	7.5-8.5W
Net Weight(with antenna)	800g
Dimensions	169.5×122×25.2mm
Temperature	-10-50°C (Operating); -40-80°C (Storage)

\*Since the product's improving process, all the performance, design and specifications of our products are subject to minor change without prior notice.

## Products Features:

- **Uncompressed 3G/HD/SD-SDI and HDMI transmission**  
Up to 1080p 50/60 uncompressed SDI&HDMI.
- **Less than 1 frame latency**  
There is no discernible video delay and you can use it as real time on-location monitoring.
- **Up to 2000ft transmission distance (Line of sight)**  
The transmission distance may be different, depend on surroundings, radio wave conditions, buildings block, etc.

- **Multicast support**  
Support one transmitter to multi receivers. User can set channel to pair the transmitter and receivers.
- **License free operation frequency**  
The wireless frequency is 5.1-5.9GHz and 2.4G ISM band, license free operated.
- **Built-in fan**  
TX side built-in high efficiency ventilation fan with very small noise.
- **Fan control**  
When the temperature is below 25 °C TX side built-in fan will automatically shut down. User can manually turn off the fan when the temperature is higher than 25°C.
- **TX side temperature display.**  
User can get transmitter inside temperature in real time by TX side OLED display.
- **Manually transmission power adjust**  
In order to reduce mutual interference while using multiple set of products in a small environment. User can manually decrease the TX transmission power.
- **AES 128 Encryption**
- **Front and rear TALLY indicator.**  
A 3.5mm JACK TALLY output for external Wrist(not provide, and maximum output current is 20mA)
- **6pin- LEMO connector for intercom system**
- **All-Metal Shell**  
Both transmitter and receiver adapt metal shell which is durable and solid.
- **Simple connection**  
The wireless system is plug-and-play designed, without any software configuration.

**Remark:**

1. Fix the three antennas to the transmitter and arrange them to be a angle as below figure to get better performance.



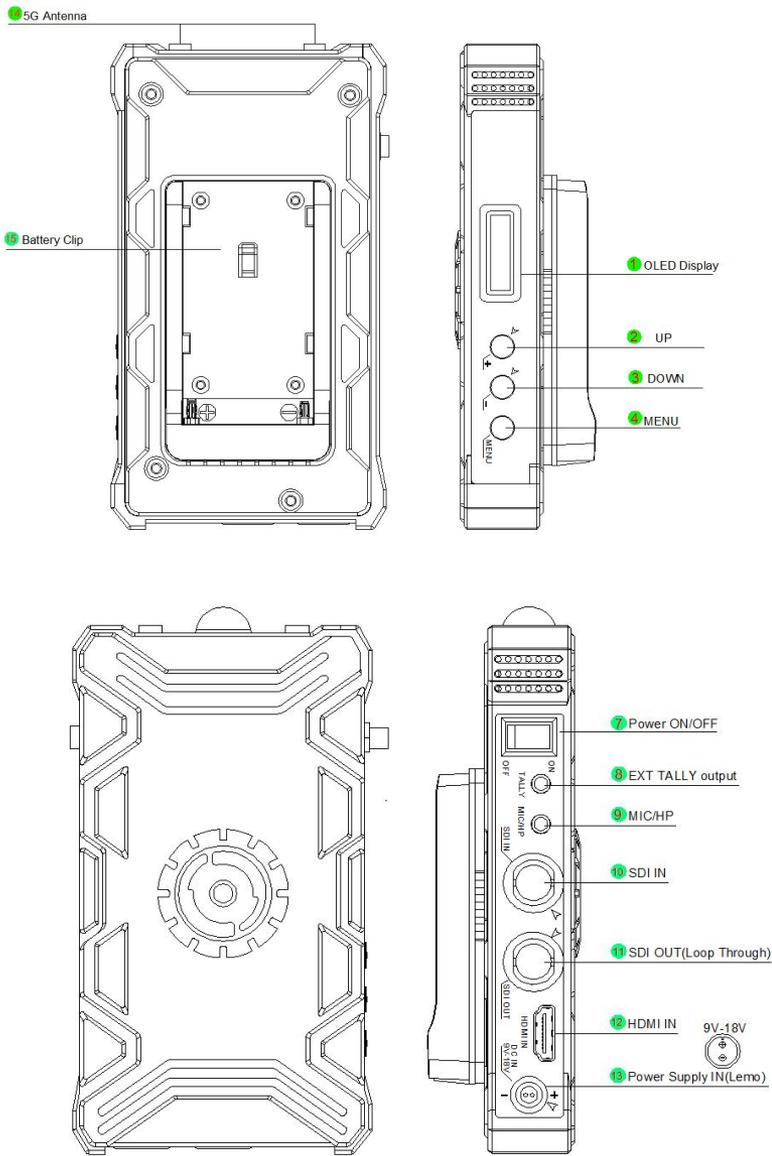
2. On transmitter side, when both SDI and HDMI source are inputted, the transmitter will automatically select the SDI source for transmission
3. Fix the six antennas to receiver and arrange them to a angle as figure to get better performance.



4. Set the receiver higher will enhance the transmission distance.

# Mechanic Information

## Transmitter(TX)

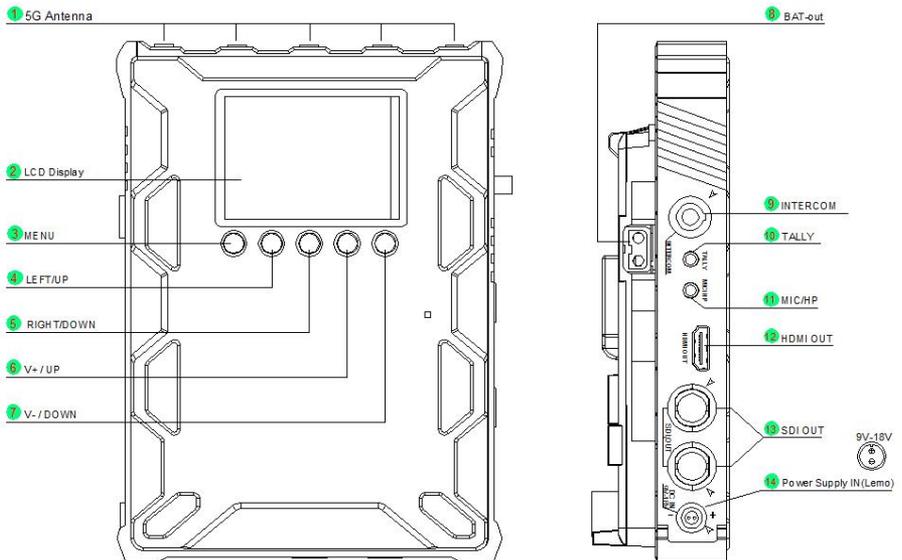


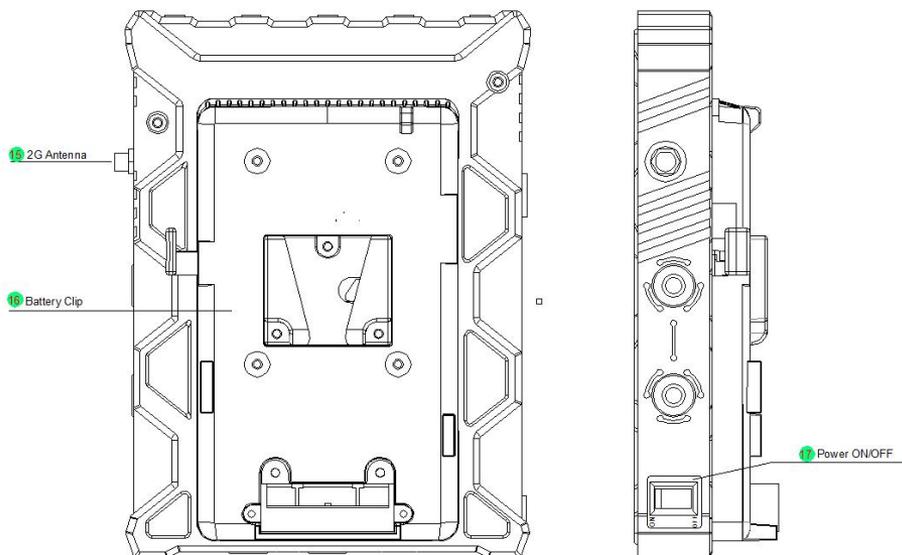
## STRUCTURE

1	OLED Display
	Displays information of channel, Video status, signal strength; Battery voltage indicator, inside temperature, MENU information
2	VOL +/UP Button
	Normally, it is a Volume +. It will be UP function when system is in MENU mode
3	VOL -/DOWN Button
	Normally, it is a Volume -. It will be DOWN function when system is in MENU mode
4	MENU Button
	MENU select, it is also be confirmed function when one MENU was selected
7	Power ON/OFF
	Power ON or OFF the Transmitter
8	3.5mm External TALLY Output Interface
	Its maximum output current is 20mA, i.e, it just drive a LED
9	3.5mm MIC/HP Interface
	Connect to an external headphone
10	SDI IN
	Connect to Video Source which supports 3G-SDI, HD-SDI,SD-SDI
11	SDI OUT(Loop Through)
	Connect to other SDI equipment if need
12	HDMI IN
	Connect to HDMI video source

13	DC power IN(Lemo)
	Support 9-18V
14	5G Antenna Connectors
	RPSMA connectors for 5G antennas
15	Battery Clip
	Battery compartment, for F550/F970 battery
	2G Antenna Connector
	SMA connector for 2.4G antenna

## Receiver(RX)





## STRUCTURE

1	5G Antenna Connectors
	RPSMA connectors for antennas
2	OLED Display
	Channel, signal strength, battery voltage, audio Volume and MENU.
3	MENU Button
	Unlock and Confirm the Selection
4	LEFT/UP Button
	Select Channels
5	RIGHT/DOWN Button
	Select Channels
6	V+/UP Button

	Volume +
7	V-/DOWN Button
	Volume -
8	BAT-OUT
	Provide DC power from the battery for external device
9	INTERCOM
	6pin LEMO for Tally and Intercom system
10	3.5mm External TALLY Output Interface
	Its maximum output current is 20mA, i.e, it just drive a LED
11	3.5mm MIC/HP Interface
	Connect to an external headphone
12	HDMI OUT
	Video output, connect to HDMI receiver or device
13	SDI OUT
	Video output(the video output is same from the two SDI interface), connect to SDI receiver or device
14	DC Power IN(Lemo)
	Support 9-18V
15	2.4G Antenna Connector
	SMA connector for 2.4G antenna
16	Battery Clip
	V-Mount(default) battery plate
17	Power ON/OFF
	Power ON or OFF the receiver

# Uses your equipment

## For Transmitter

1. Fix the three antennas(5G x2, 2.4G x1)respectively
2. Connect SDI or HDMI video source to the “SDI IN”/”HDMI IN” of transmitter (when both SDI and HDMI video are inputted, it will auto select the SDI video for transmission)
3. If need, you can connect the SDI out(loop through) to other equipment as well
4. Connect the DC power to the transmitter or put F550/F970 battery into battery plate
5. Power on the transmitter
6. Set the channel if need

## For Receiver

1. Fix the six antennas( 5Gx5, 2.4Gx1)
2. Connect the “SDI OUT”/”HDMI OUT” port of receiver to monitor or other device.
3. Connect DC power via power cable or put V-type battery into the battery plate
4. Power on the receiver
5. Set the Channel (must set both transmitter and receiver to the same channel)
6. After 5-10s, the transmitting video will be shown on monitor

## Fan control

1. Hold “UP” and “DOWN” button simultaneously for 5 seconds.
2. Press “UP” or “DOWN” button to choose turn on or turn off the fan.
3. Press “MENU” button to confirm.

## Use your TALLY and intercom system



Step1 、 After above connected, power on both Transmitter and Receiver.

Step2、 On Transmitter side, you just hear the sound from broadcast director when you do not press down the button “TALK” on converter box;

Step3 、 When the “TALK” button is pressed and held on, both broadcast director and operators can conversation normally.

Step4 、 The broadcast director can hear “call sound” when the operators on Transmitter side pressed down the button “ CALL” on CALL box.

Step5 、 When TALLY is triggered by broadcast director via a professional broadcast switcher , the OLED area on receiver will light on red. At same times, the “TALLY” LED will be also lighted on Transmitter(You can also insert your wrist indicator per your need).

Note:

1、 The external TALLY ( wrist LED) interface just provide [3.3V@20mA](#). In other word, it just driver a normal LED, please be noted.

## Channel setting

Both Transmitter and Receiver were set to same channel in Manufactory.

In case, you want to change to a new channel, please follow the below:

Remark: Both transmitter and receiver must be set to same one

## **TX channels changing**

Step1: Power on the Transmitter

Step2: Press “MENU” button first, then press “UP” or “DOWN” button to choose “Channel Set” on screen, press “MENU” again to confirm.

Step3: Press “Up” or “DOWN” button to choose channel, then press “MENU” to confirm.

Step4: Transmitter channel setting accomplished.

## **RX channels changing**

Step1: Power on the Receiver

Step2: Press “MENU” button until display unlock icon  .

Step3: Click Left or Right button to choose channel, then click “MENU” to confirm.

Step4: Receiver channel setting accomplished.

## **Intercom system pairing**

Step1: Transmitter(TX) side: Press “MENU” button first, then press “UP” or “DOWN” button to choose “Talk Pair” on screen and press “MENU” button again to confirm.

Step2: Receiver(RX) side: Press “VOL-” button first, then press “RIGHT” button to start intercom pairing.

Step3: Transmitter(TX) side will be auto restart, Receiver(RX) side should manual restart.

Step4: When both side are restarted, Intercom system pairing accomplished.

## **Trouble-shooting**

If the Receiver failed to output the video correctly, the possible causes are as below, please find the solution from following chart:

<b>TROUBLES&amp;POSSIBLE REASONS:</b>		<b>SOLUTION:</b>
<b>OSD Information on TV</b>	<b>Displaying “Waiting for connection...” for a long time</b>	
	Transmitter is not powered up.	Power on the transmitter.
	Transmitter or receiver is not placed correctly.	Place the TX or RX correctly.
	The transmitter and receiver are too far away.	Move the receiver closer to the transmitter.
	Several solid wall partition on TX and RX.	Reduce the number of solid walls between TX and RX.
	There are so many obstacles between TX and RX.	Move the receiver closer to the transmitter.
	Other transmitter is working on the same or adjacent channel.	Turn off other transmitter, or change channel.
	<b>No Video Signal received</b>	
	Transmitter and video source are not connected.	Connect the transmitter to video source by SDI/HDMI cable.
	The video source is turned OFF	Power ON the video source.
Bad contact of cable of transmitter.	Remove and then re-plug the transmitter	
Abnormal working of transmitter	Reboot the transmitter	
Problem with cable between TX and video source	Change the SDI/HDMI cable	
Player NOT support the output resolution format.	Switch the output video resolution to other modes.	
The TV/Monitor NOT support HDCP authentication	Replaced with HDCP-certified TV/Monitor.	
<b>Image</b>	<b>No signal input to Receiver or TV/Monitor</b>	
	Receiver is turned OFF	Power on receiver.
	Receiver and TV are not connected.	Connect receiver and TV/Monitor via SDI/HDMI input.
TV/Monitor NOT switched to SDI/HDMI input.	Switch TV/Monitor to SDI/HDMI input.	

Bad contact of the cable of receiver or TV/Monitor.	Remove then re-plug the SDI/HDMI cable.
TV/Monitor turn into standby mode.	Switch the TV/Monitor to normal operation mode.
Abnormal working of receiver.	Reboot the receiver.
<b>No image appear on TV/Monitor</b>	
Bad contact of receiver or cable.	Re-plug the cable of the receiver or TV/Monitor.
Abnormal working of receiver.	Reboot the receiver.
Receiver failure.	Please contact your retailer.
<b>Abnormal color on TV screen</b>	
Bad contact of cable of receiver or TV/Monitor.	Unplug and then plug the HDMI cable of the receiver or TV.
Bad contact of cable of transmitter or video source.	Unplug and then plug the HDMI cable of the TX and player.
Abnormal working of transmitter or receiver.	Reboot the transmitter and receiver.

## FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio

communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: -Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help. To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example use only shielded interface cables when connecting to computer or peripheral devices).

## **FCC Radiation Exposure Statement**

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

## **Cautions!**

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.