Subassemblies of machine

Dear subscribers

Our company has developed the new model of painting jammer:

🔗 Pretty outlook. The outlook and internal construction design have obtained national Patents

🔗 You can replace the painting according to your favorite

🔗 The working situation can be monitored by computer

🔗 Easily operating with the irRemoter controller which can be used to switch on and off the machine as well as adjust each channel output power for a certain area that you want to cover

🔗 Our product has obtained the certification of the quality test center of national safety department and the certification of the electronic test center of Shenzhen, as well as the certification of the magnetism transmission safety product test center of Guangdong

🔗 Our company has gone through ISO9001:2000 quality management system

🔗 Open the package case and check the subassemblies as below:

One painting jammer
One irRemote controller
Two installation screws
Two installation expand stuffer
One the use' guide
One the sheet of check out
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1. Introduction

1.1 Main view

1.2 Side view

1.3 Bottom view
2. Features

2.1 Specifications

<table>
<thead>
<tr>
<th>OUTPUT PORT</th>
<th>FREQUENCY BAND</th>
<th>OUTPUT POWER</th>
<th>CHANNEL OUTPUT POWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDMA</td>
<td>850~894MHz</td>
<td>36dBm</td>
<td>5dBm/30KHz</td>
</tr>
<tr>
<td>GSM</td>
<td>945~960MHz</td>
<td>35dBm</td>
<td>1dBm/30KHz</td>
</tr>
<tr>
<td>DCS</td>
<td>1880~1900MHz</td>
<td>33dBm</td>
<td>-5dBm/30KHz</td>
</tr>
<tr>
<td>PHS</td>
<td>1900~1990MHz</td>
<td>33dBm</td>
<td>-8dBm/30KHz</td>
</tr>
<tr>
<td>3G</td>
<td>2400~2170MHz</td>
<td>33dBm</td>
<td>-5dBm/30KHz</td>
</tr>
</tbody>
</table>

Antenna gain: 7.5dBi
Shield area: 5"x80m
Side: 47.3x33.3x3.5cm
Power supply: AC110~220V/DC5V
Total consumption: 45W
Weight: 2Kg

(In the table: "channel output power" means maximum output power per each 30kHz)

2.2 Technique characteristics

- Taking use of interfering technique with super-high frequency.
- Higher of the antenna gain (7.5dBi), obtain larger area shielded.
- One case style include in antenna, main machine and power supply, with high efficiency
- Just interfere downlink signal and cause no interception to base station
- High quality imported components, soft start up design of circuit. These components can maintain the stable operation condition with integration

3. User guide

3.1 Switch on and switch off

Open the cover of power case on the bottom of the machine, put out the power line and connect electricity plug to AC 220v socket.

Switch on
Put the switcher on the side bottom in "I" position.

Switch off
Put the switcher on the side bottom in "O" position.

Standby
Put the key of the irRemote controller " ● "; the machine is in standby situation, put the key of the irRemote controller " ● "; the machine is in working situation.

3.2 Start work

3.2.1 When switch on jammer, all the power control LEDS are light, which means the output power for all systems are maximum

3.2.2 Put the key of ( ) to decrease the output power for each system, one time put one close LED will increase for correspond system.

3.2.3 Aim the irRemote controller at the irRemote receiver on the side bottom off you machine, put the key of ( ▲ ) to increase the output power for each system, one time put one light LED will increase for correspond system.
3. User’ guide

3.2.4 Comparison of power LEDs and output power

<table>
<thead>
<tr>
<th>Maxmun output power</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CDMA output port</td>
<td>GSM output port</td>
</tr>
<tr>
<td>5dBm/30KHz</td>
<td>1dBm/30KHz</td>
</tr>
<tr>
<td>DCS output port</td>
<td>PHS output port</td>
</tr>
<tr>
<td>-5dBm/30KHz</td>
<td>-8dBm/30KHz</td>
</tr>
<tr>
<td>3G output port</td>
<td>-5dBm/30KHz</td>
</tr>
</tbody>
</table>

Put the key of irRemote controller as shown in right

<table>
<thead>
<tr>
<th>High output power</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CDMA output port</td>
<td>GSM output port</td>
</tr>
<tr>
<td>3dBm/30KHz</td>
<td>-1dBm/30KHz</td>
</tr>
<tr>
<td>DCS output port</td>
<td>PHS output port</td>
</tr>
<tr>
<td>-7dBm/30KHz</td>
<td>-10dBm/30KHz</td>
</tr>
<tr>
<td>3G output port</td>
<td>-7dBm/30KHz</td>
</tr>
</tbody>
</table>

Put the key again, the LEDs are shown as right picture

<table>
<thead>
<tr>
<th>Middle output power</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CDMA output port</td>
<td>GSM output port</td>
</tr>
<tr>
<td>0dBm/30KHz</td>
<td>-4dBm/30KHz</td>
</tr>
<tr>
<td>DCS output port</td>
<td>PHS output port</td>
</tr>
<tr>
<td>-10dBm/30KHz</td>
<td>-13dBm/30KHz</td>
</tr>
<tr>
<td>3G output port</td>
<td>-10dBm/30KHz</td>
</tr>
</tbody>
</table>

3. 3 Special notice

The frequency bands of each mobile System mentioned above are:

CDMA: 869~894MHz
GSM: 915~960MHz
DCS: 1805~1900MHz
PHS: 1900~1990MHz
3G: 2100~2170MHz

The bands can be changed according to subscriber’ s requirements, in this case, the each channel output power will vary some how accordingly. Jammer must be installed in front of the area which you want to shield.
4. Jammer shield properties

4.1 According as theoretic

Wireless communication is effectively completed by ensuring adequacy carrier signal density to a certain noise density during transmission. A same frequency distortion signal is used to increase the ratio of carrier signal and noise (NF) for shutting off the communication between the base station and mobile phone.

The output power of jammer is given, the shield radius in the situation of free space is confirmed according to the receiving signal lever from base station and free space attenuation in pass through. The below is given a formula of confirming shielding radius and a table of comparison of distance and pass through, based on carrier receiving power from base station, output power of jammer as well as gain of antenna:

\[ P_{ch} + G_{at} - L + FAT \geq Pr_x \]

In the formula:
- \( P_{ch} \): Minimum of carrier output power of jammer
- \( G_{at} \): Gain of antenna
- \( L \): Attenuation in pass through
- \( FAT \): Amending Figure of pass through, choosing 6db for 1.8G
- \( Pr_x \): Maximum of carrier output power of base station

4.2 Comparison of distance and pass through attenuation

<table>
<thead>
<tr>
<th>Distance (m)</th>
<th>LCDMA/GSM=32+20logd+FAF</th>
<th>LCDS/PHS/3G=32+20logd+FAF</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>69 44</td>
<td>66 74</td>
</tr>
<tr>
<td>1</td>
<td>59 40</td>
<td>59 70</td>
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<tr>
<td>2</td>
<td>49 35</td>
<td>49 66</td>
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<tr>
<td>3</td>
<td>40 27</td>
<td>40 54</td>
</tr>
<tr>
<td>4</td>
<td>50 40</td>
<td>50 66</td>
</tr>
<tr>
<td>5</td>
<td>52 36</td>
<td>52 66</td>
</tr>
<tr>
<td>6</td>
<td>44 33</td>
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<td>8</td>
<td>46 33</td>
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<tr>
<td>9</td>
<td>48 33</td>
<td>48 66</td>
</tr>
<tr>
<td>10</td>
<td>49 33</td>
<td>49 66</td>
</tr>
</tbody>
</table>

5. Cautions

1. Don't put jammer in water and near fire to avoid using in bad conditions of overwet, overhot, high voltage as well as high magnetism.

2. Before connecting power supply is in "O" position. After connecting power supply, put the switcher in "I" position.

3. Install the jammer in a position with good ventilation. Avoid big block curtain off the disturbing signal in order to get good efficiency.

4. To avoid great nock the machine. Don't damage with pen, knife as well as acuity thing.

5. The effect of irRemote controller is not obvious, please check the hole of irRemoter on the side bottom of the machine whether it is blocked. Don't put the controller in wet. Please replace the batteries of the controller if it is out of work.

6. Please carefully clean the painting jammer with dishcloth with a little water, and don't use any other chemical.

7. Don't put the jammer near TV, computer etc in order to decrease the interfere coming from the jammer.

8. Not open the jammer without permission. Any ruin and disrepair operation and disassembly will be excluded from the repair with free of charge.

9. Main equipment, antenna and power supply are in one case. Please put the painting in front of the area which you want shield when installation.