PRECISION DMX USER GUIDE

The Precision DMX is the world's smallest DMX controllable theatrical floodlight. This RGB fixture is smaller than a fist yet packs comparable punch to traditional fixtures several times its size! No other fixture on the market comes close to the compactness of this fixture with all the internal circuitry and intelligence built in. The Precision DMX is a microprocessor based intelligent lighting fixture that can be controlled to generate a wide range of vivid colors. Tunable preset functions allow the user to generate various patterns without complex signaling. A built-in flicker generator can create unique and realistic flame, surge, and lightning effects with ease. Standalone operation is achievable when the fixture is configured with our free DMX Programmer iOS app, making the Precision DMX a fully color and effects tunable floodlight that can operate without signal. The user simply sets the desired look of the Precision DMX with the DMX Programmer iOS app and the output settings will be stored in the fixture's memory. Afterward, the Precision DMX may be unplugged from DMX signal and simply powered on; the fixture will output according to the stored settings. This is an excellent feature for applications that need a fully configurable light without DMX cabling.

Features

o   Full color control via DMX512 or free DMX Programmer iOS app
o   7 channel DMX control
o   Built-in functions: flicker, strobe, blink, fade, color change, master dimming, color macro
o   Standalone mode allows set and forget operation without DMX signal (requires free DMX Programmer app for iOS and Android)
o   DMX address and configuration stored in memory
o   Low voltage and minimal heat for improved safety over incandescent sources
o   Internal constant current driver gives highly efficient and consistent output
o   Minimal maintenance required with over 50,000 hour lamp life
o   IP65 rated for indoor and outdoor use with occasional liquid exposure

| Product Name	Item Number	
	GoCable Connector Version	Pro Cable Connector Version
Precision DMX	PR41	GP141

POWER   AND WIRING REQUIREMENTS

The Gantom One has a maximum fixture wattage of 4.8W and an operating voltage of 12V DC. For recommended power supplies check http://www.gantom.com/power-supplies/

Gantom's standard DMX controllable light fixtures have a 2.1mm DC barrel jack for power and a 3.5mm TRS jack for the control signal. Additionally, screw terminal adapters are included with every fixture to simplify custom wiring. You can screw bare wires directly into these adapters

Rather than using a typical XLR cable for carrying the DMX signal, standard Gantom fixtures use 3.5mm TRS cables. Gantom makes an XLR 5 Pin to 3.5mm TRS adapter (product number CB51) that is perfect for connecting Gantom products to an XLR based DMX environment.

BARE WIRE PINOUT		
Power	+	RED
	-	BLUE
DMX signal	D+	GREEN
	D-	YELLOW
	COM	BLACK
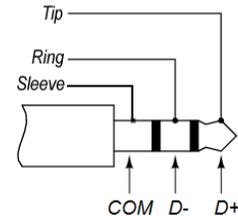
3.5mm TRS Plug

The Gantom One is also available in our Gantom Pro configuration. This version has a single locking connector which combines both power and data into one cable. This version is compatible with our G8 Power/Data Distribution Box and Pro Cable system. A single cable for power and data greatly simplifies installation and the locking connector gives a secure connection for long term use. The Gantom Pro series is recommended for permanent installations.

245mm Min

45.5mm

Ø19mm
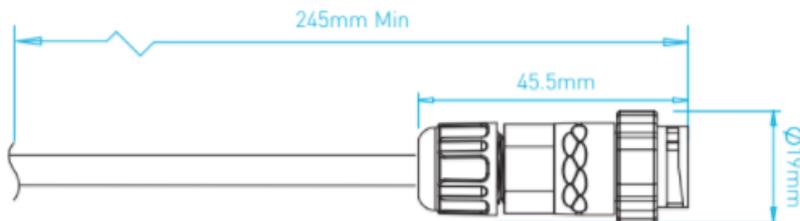
5 Pin Locking Chogori Connector

CONFIGURING YOUR PRECISION DMX

Due to its compact size, the Precision DMX cannot use a physical DIP switch for addressing. Instead, the Precision DMX is programmed using the DMX Programmer App by Gantom. In addition to setting the DMX starting address for the fixture, the app allows you to save a default color, brightness, and special effect for the fixture if the application does not require any DMX control.
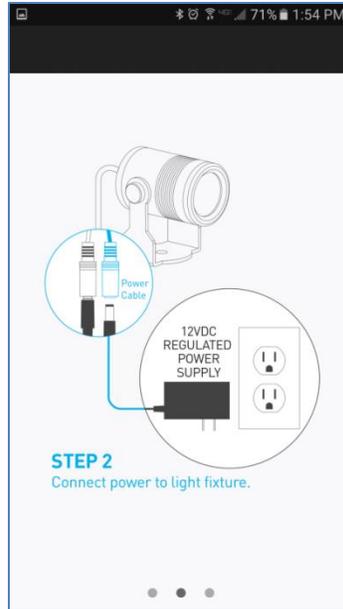
What you need:

- An Android or iOS device for running the Gantom Programmer app. Please note that a headphone port is required to connect to the device to the fixture. The iPhone7 does work with, but you will need to use the headphone port adapter that is included with the phone.
- A male-to-male 3.5mm audio cable. This is the same type of cable that you would use to connect your Android or iOS device to headphones or to an AUX port.
- Power supply for the fixture. All Gantom fixtures accept 12v DC power. We recommend using one of our PowerPak Mini units if you are just going to power a single fixture.
- The free **DMX Programmer** app by Gantom. This can be found by searching "Gantom" in iTunes for an Apple device or Google Play for an Android device.
- If you have a Gantom Pro series fixture, you will also need the CB107 Pro Cable Programming Adapter
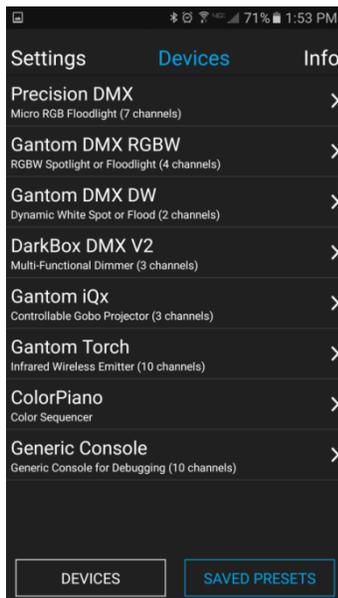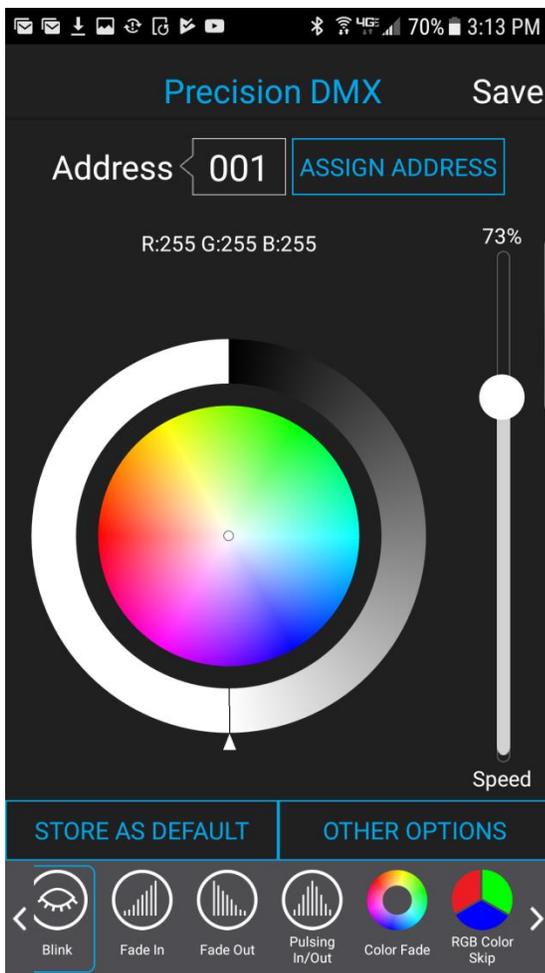

First, open the **DMX Programmer** app by Gantom. The app will open to the screen you see here. From this screen, select the Precision DMX.

The app will then provide you instructions on how to connect the light fixture to the tablet or smartphone. Please note the order in which the cables should be connected. First connect the headphone cable to the light fixture and to the tablet/smartphone. Next, connect the power to the fixture. When prompted by the app, tap the "Next" button and you will be taken to the control screen.

STEP 1
Connect male to male audio cable between light fixture and phone.

STEP 2
Connect power to light fixture.

STEP 3
Once signal and power cables are connected, tap "Next" to control device.

STEP 2
Connect power to light fixture.

CONTROL SCREEN

Precision DMX   Save

Address 001 ASSIGN ADDRESS

R:255 G:255 B:255   73%

Speed

STORE AS DEFAULT   OTHER OPTIONS

Blink   Fade In   Fade Out   Pulsing In/Out   Color Fade   RGB Color Skip

o **Address** – This box shows the address that will be assigned to the fixture if you hit the "Assign Address" button

o **Assign Address** –This button will assign the selected address to the fixture. The light fixture should blink in response to having a new address assigned.

o **Save button** – this will allow you to save a settings profile into the app. Use this if you need to configure many fixtures to have the exact same settings. Please note that this button DOES NOT save the current profile or address to the fixture.

o **Color Palette** – the color palette will allow you to set the light to any RGB color. This is useful if you do not need live DMX control and would like to set the fixture to a default color at startup.

o **Store as Default** – hitting this will save the current color and brightness to be the default state for the light when it turns on. If the light does not see DMX signal when it is powered on, it will go to this state.

o **Pre-Defined Macros** – Selecting this button will bring up a set of basic colors that can be selected without using the color palette. A more detailed description of each effect is in the following section.

o **Speed Slider** – selects speed of the pre-defined macro

PRE-DEFINED MACROS

Blink: Causes the fixture to blink on and off with a constant speed.

Fade In: Causes the fixture to gradually fade up from 0% to 100% brightness repeatedly.

Fade Out: The fixture will gradually fade down from 100% to 0% brightness repeatedly.

Pulsing In/Out: the fixture will gradually fade up from 0% to 100%, then gradually fade back down to 0% brightness repeatedly.

Color Fade: The fixture smoothly fades through RGB colors continuously.

RGB Color Skip: The fixture jumps from solid red to solid green to solid blue repeatedly with no fade between colors.

6 Color Skip: Similar to the RGB Color Skip, the 6 color skip jumps from solid color to solid color for the following 6 colors: red, yellow, green, aqua, blue, and magenta

Candle Flicker: Causes the fixture to have a slight flicker as though it were a candle flame. Intensity of the flickering can be adjusted using the "Speed" slider

Color Presets: There are also color presets for the following colors: red, yellow, green, aqua, blue, magenta, white

OTHER OPTIONS SCREEN

If you hit the "Other Options" button on the control screen, the following menu appears:
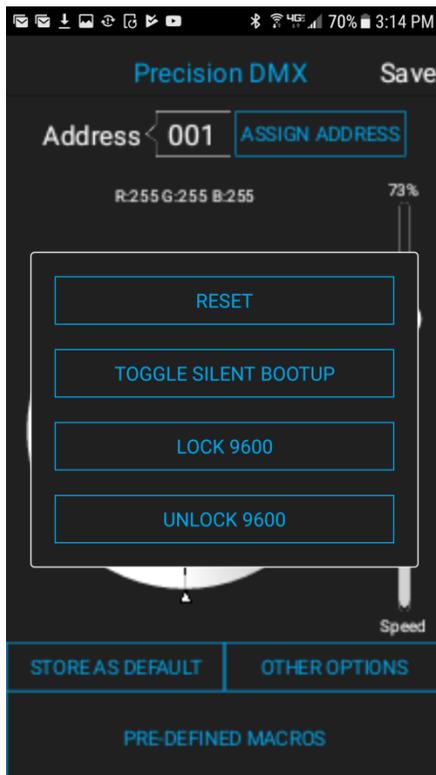
o   **Reset** - selecting this will reset the fixture to its default factory settings. Do this if you are running into programming issues.

o   **Toggle Silent Bootup** – By default, the fixture will flash to report its DMX address when it is powered on. Hitting the "Toggle Silent Bootup" setting will turn address reporting at startup on or off.

o   **Lock/Unlock 9600** – The Precision DMX fixture can listen to either a standard DMX signal OR to the special control signal that comes from the app. Lock 9600 will turn OFF the fixture's ability to listen to DMX and ONLY allow it to be controlled through the app interface. For most applications it is recommended that you keep "UNLOCK 9600" selected.

BOOT SEQUENCE FLASHING

When the fixture first receives power, before it enters normal operation, it will first report its channel mapping profile and second report its DMX address through a sequence of flashes.

By default, the DMX starting address will be 1. The Precision DMX will flash several times when it is powered on to indicate its starting address. If the Precision DMX is assigned to address 245 it will report its address by flashing red 2 times, then flashing green 4 times, then flashing blue 5 times. If it is assigned to DMX address 038, it will flash red 0 times, then flash green 3 times, then flash blue 8 times.

TURN OFF/ON boot sequence flashing: You may not want your fixture to report its channel mapping profile and address every time it receives power. In order to toggle the boot sequence flashes on/off, follow these steps. With the fixture connected to the app as previously outlined, tap the "Other Options" button on the Precision DMX profile. Tap the "Silent Bootup" button. The light should blink to indicate that it has received this new setting.

STANDALONE OPERATION

Some applications may not require live DMX control. In order to configure your Precision DMX for standalone operation, all you must do is use the sliders on the Precision DMX control screen to set the desired intensity, special effect macro, and special effect speed. Once the light has the desired output, tap the "STORE AS DEFAULT" button at the lower left portion of the screen to save this setting directly into the light fixture. Now, when the light fixture receives power it will automatically go to this newly saved DEFAULT setting once it's boot sequence is complete. Please note that if DMX signal is passed to the fixture while it is operating in standalone mode, the DMX signal will override the standalone setting.

DMX CONTROLLED OPERATION

The Precision DMX was designed for use with standard DMX512 control systems. The Precision DMX occupies seven DMX channels and can be given any DMX starting address from 1-506. Please note that the Precision DMX does not feature any RDM functionality.
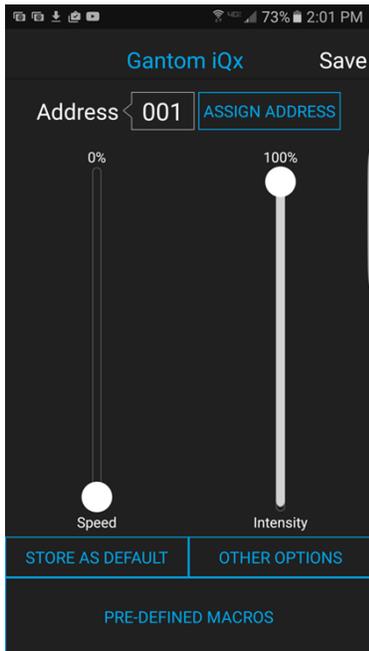
ADDRESSING YOUR FIXTURE

To set the DMX address, first connect the Precision DMX to the DMX Programmer app by Gantom as was outlined earlier in this document. With the Precision DMX control screen open, you should have full control of the fixture through the channel sliders. If the light fixture is connected to the app but is not responding, try power cycling the light fixture.

Once you have verified that the light fixture is responding to control signal from the app, tap the number field next to the word "Address". A new screen will pop up, prompting you to enter a DMX address. After you enter your desired DMX address, the app will return to the Generic Console screen. Finally, you must hit the ASSIGN ADDRESS button in order to save the new address into the fixture. Hitting the "Save" button will not save anything to the light fixture's memory.

DMX CHANNEL MAPPING

DMX Channel Descriptions

Channel	Name	Level	Description
Ch 1-3	RGB Level	0-255	Controls RGB levels
Ch 4	Color Macro	32-255	Overrides Ch 1-3 with preset color
Ch 5	Speed	/	If Ch 6 is 0, Ch 5 controls strobe speed of selected color. If non zero, Ch 5 controls speed of sequence
Ch 6	Built-In Functions	32-71	Fade in (at least one of Ch 1-3 must be non-zero)
		72-111	Fade out (at least one of Ch 1-3 must be non-zero)
		112-151	Pulsing (at least one of Ch 1-3 must be non-zero)
		152-191	Smooth color fade
		192-231	Red, Green, Blue color change
		232-250	6 color change
		251-255	Flicker (color based on Ch 1-3 or Ch 4)
Ch 7	Master Dimmer	0-255	Bright to dim

Product Support:

We hope that this guide has been effective for learning how to use your Precision DMX light fixture. However, if you run into a wiring issue, a bug in the software, or just a light that doesn't seem to want to cooperate, we at Gantom are ready to help you out! Just send an email to Support@GANTOM.com and we will get back to you as soon as possible.