

DESIGNED FOR EDUCATION

**MP780ST** + POINTDRAW™ PEN  
 Future Proof • Excellent Image Quality • Affordable



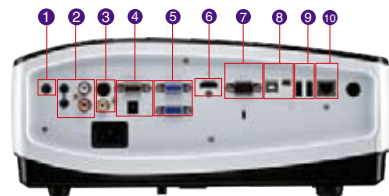
**PointDraw™ Interactive Pen**



**Top / Front-Left View**



**Input and Output Terminals**



- 1 Audio-Out x1
- 2 Audio In & MIC-In
- 3 S-Video/Video
- 4 RGB Output/12V Trigger
- 5 RGB Input/Component x2
- 6 HDMI x1
- 7 RS-232 x1
- 8 USB Type B and Mini B
- 9 USB Type A x2
- 10 RJ45 x1 (Control & Display)

**Specifications**

**EDUCATION**

Native Resolution	WXGA (1280 x 800)
Brightness	2500 ANSI Lumens
Contrast Ratio	3000:1 (Full on/Full off)
Keystone	Auto Keystone; Manual Vertical +/- 40 Degree
Aspect Ratio	16:10 Native; 4:3 Selective
Color	Full 16.7 Million colors palette
Lens	F = 2.6
Zoom Ratio	Fixed
Image Size (Diagonal)	48" - 300"
Throw Ratio	0.5 : 1 (95" @ 3.3 Feet)
Lamp Life	185W, 3000/4000 hours (Normal/Economical Mode)
PC Compatibility	VGA (640 x 480) to UXGA (1600 x 1200)
HDTV Compatibility	480i, 480p, 576i, 576p, 720p, 1080i, 1080p
Video Compatibility	NTSC, PAL, SECAM
Horizontal Frequency	31-93 kHz
Vertical Scan Rate	48-120 Hz
Input Terminals PC/AV	Analog RGB/Component: D-Sub 15 Pin x2 LAN Networking: RJ45 x1 (LAN Display) USB (Type A) x2 (Reader) USB (Type B Mini) x1 (Display) HDMI (v1.3) x1 S-Video: Mini Din 4 Pin x1 Composite Video: RCA x1 Microphone: Built-In Stereo Min-Jack x1 Audio L/R: RCA x2 Stereo Mini-Jack x1
Output Terminals PC/AV	Component: D-Sub 15 Pin x1 Variable Audio Out: Stereo Mini-Jack x1 Speaker: 10W x2, 12V Trigger
Control Terminals	Serial Connector: RS-232 9 Pin (Male) RJ45 x1 (LAN Control) USB Connector: Type B (PointDraw™), Type Mini B (Page Up/Down)
Dimensions (W x H x D)	12.97" x 5.11" x 9.78"
Weight	8.38 lbs (3.8 kg)
Power Supply	100 to 240 VAC, 50/60 Hz
Power Consumption	280W (Typical), Standby <1W
Noise Level	27/25 dBA (Normal/Economical Mode)
Display Languages	Bulgarian/Croatian/Czech/Danish/Dutch/English/Finnish/French/German/Hungarian/Italian/Japanese/Korean/Norwegian/Polish/Romanian/Russian/Simplified Chinese/Spanish/Swedish/Turkish/Thai/Traditional Chinese
Picture Mode	Dynamic Mode/Presentation Mode/sRGB Mode/Cinema Mode/User 1 Mode/ User 2 Mode
Functions	PointDraw™/3D Ready/LAN Control/LAN Display/USB Display/USB Reader/Built-In 20W Speaker and Microphone Jack/Digital Zoom 2x/Closed Captioning/Panel Key Lock/Window 7 Compatible/Wireless Display (Optional)
Accessories (Standard)	User Manual (CD)/Quick Start Guide/VGA Cable/Power Cord/ Remote Control with Battery
Accessories (Optional)	PointDraw™ Pen/Wireless Dongle/Presentation Plus/Spare Lamp Kit/Ceiling Mount/0.6 Wall Mount/Soft Carrying Case
Lamp P/N	5J.J0605.001
Limited Warranty	3-Years Parts/Labor / 1-Year or 2000 hours of lamp life

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# Education Matters

## Interactive Projector Technology Enhances The Learning Environment Of The Classroom

Designed For Education...

- Future Proof • Affordable • Excellent Quality



**BenQ America Corp.**  
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**BenQ**  
 Enjoyment Matters



Projector  
 MP780ST  
 With PointDraw® pen.

**BenQ**  
 Enjoyment Matters



## Mary Hewett Said: “In Summary, We Believe That The BenQ Mp780ST Pointdraw™ Projector Has Completely Changed The Learning Environment In The Classroom”.

### Situation And Challenge:

Today’s media savvy youth are so connected that they consume content at an increasingly faster pace. In the meantime, the classroom

experience has become simply an exercise of balancing classroom culture, curriculum, participation, pace and schedule with little room for innovation and attention to student engagement. A teacher using typical tools available in the classroom must compete with Call of Duty, Halo 3, Rock Band and Just Dance. Add Facebook, texting, television, movies, iPad content, Netflix, Apple TV, 3D movies and Blu-ray, then whole challenging picture of student engagement comes into focus.

How can our communities expect teachers, in the era of decreasing budgets, greater restrictions, noisy media from every direction and larger class sizes to accomplish their education goals with all these challenges? Furthermore, there is continuing pressure from the state and civic authorities to raise test scores, which increases stress for even our best instructors.

The traditional technology implementation within the classroom has helped. However, the usual way technology gets utilized is one-to-one or is simply a monitor type display, which tends to offer too little group inter activity and be too small to engage the entire class.

### The School District:

As in most school districts, for 4,200 teachers of the Plano, TX Independent school district (ISD), keeping over 55,400 students engaged is a priority. As early as 2008, Plano ISD was able to preview a Texas Instrument innovation that allowed a projector to integrate inter activity using the fast speed DLP chipset. It was obvious even at that early junction a greater interactive experience could play a pivotal role in engagement and sustained learning.

Plano teachers had the desire for interactive white board-like technologies, which would fit well into the current model of projectors with wireless keyboards/mice and annotation software. The addition of SmartDraw technology would add that extra built-in inter activity. Other districts started adopting interactive white boards, but Plano ISD decided not to go in that direction given that teachers are constrained by the interactive white board itself. In addition, interactive white boards did not provide flexibility and natural flow around the classroom.

Many schools and districts have experimented with a variety of projectors. Projection systems can vary widely in brightness, clarity, throw distances, resolution, inputs and maintenance. Plano ISD planned to add projectors in their elementary school classrooms, and during this research they discovered the BenQ PointDraw™ system.

Plano ISD is one of the 14th largest districts in the state of Texas, and carries influence nationally as one of the most progressive districts with respect to incorporating technology. The school district encompasses approximately 100 square miles and includes 69 campus sites. Furthermore, Plano ISD continues to add new students each year.

### What The Research Showed:

Before deciding to use the new interactive projector technology, Plano ISD worked with various brands to pilot the PointDraw™ technology in the classroom. The BenQ MP780ST was installed in two elementary classrooms for testing. Plano ISD has completed installation in 11 elementary schools and will install in 32 more elementary campuses before fall. To complete the learning experience, in addition to installing interactive projectors, Plano ISD is also equipping each classroom with a quality document camera. Furthermore, Plano ISD is able to utilize SAFARI Montage to support video conferencing using the same document camera.

### The Results Of The School District’s Research:



Mary Hewett, Executive Director of Instructional Technology commented “This interactive technology has changed the classrooms and enhanced the learning experience for teachers and students. The interaction happens anywhere in the classroom. The pen can be used on any wall or from

## “The Real Value However, Is The Incredible Learning Curve Students Have Enjoyed”.



any location in the classroom. In addition, traditional interactive board solutions are quite expensive. The price for an interactive white board is roughly twice the cost of the BenQ MP780ST interactive projector and it does not even include the projector.”

There has been plenty of published research around the use of interactive technology, showing that kids learn better, are engaged longer and the teacher has greater flexibility. In reality, learning is facilitated by enabling a learning environment within the classroom. The BenQ MP780ST allows the teacher to change the strategy on how teaching happens within the classroom. As the teaching strategy changes then learners and the atmosphere within the whole class culture changes. The BenQ MP780ST pen projector and PointDraw™ pen, which allows for a collaboration partnership anywhere in the classroom, provide this two-way learning environment.

### Ultimately They Chose BenQ:



The district extensively researched the projector vendors using an interactive engine. The BenQ brand kept coming out on top in relationship to the desired standards and issues, such as:

1. Exceptional visual performance
2. Overall product quality
3. Comfortable pen design and recharge capabilities
4. Smooth pen operation, meaning low pen latency when interacting with the material
5. Little to no learning curve for the instructor
6. Low maintenance
7. Competitive price

The BenQ Q-Draw software package, which is bundled with the projector came out ahead of all competing vendors. Plano ISD ultimately chose to acquire a district license, which included the rights to share with parents and students at home. BenQ was flexible, listened to their specific needs and provided a customized solution for Plano ISD. BenQ’s education division provided excellent local customer support during the process and deployment.



### Project Execution:

When installing technology into existing facilities, there is always an on site learning curve, such as the kind of construction, how the school is wired and all of the other details needed in a successful installation. BenQ projectors made the integration process much easier.

The model MP780ST is a short throw projector, meaning that the projector can be placed much closer to the projection screen or surface, which makes running signaling and power cabling simpler. Since each classroom is different, installation maps were done on a classroom by classroom basis. During this project, BenQ designed a custom ceiling mount for the projector to accommodate each of the installation hurdles encountered. The district is currently evaluating the use of chalk boards for some of the rooms as the BenQ MP780ST has a feature called wall color correction. This feature allows color compensate so that a black board can be used to display an image. This implementation could save hundreds of dollars per classroom by reusing existing equipment.

### In Summery:

According to Juan Alvarez, Director of US Education for BenQ, “Plano ISD selected BenQ for its superior product, high video quality, interactive pen and premier technical/administrative service they received. However, the real value is the incredible learning curve students have enjoyed. Ultimately the Plano ISD plans on equipping over 2000 classrooms with BenQ’s PointDraw™ interactive technology.”

