

# ITC Adjustment System

ITC 调整系统

VS-6130 ITC

## Outline

This system is designed for Color Picture Tube ITC production; Tube Size is up to 36" (16:9)

## Features

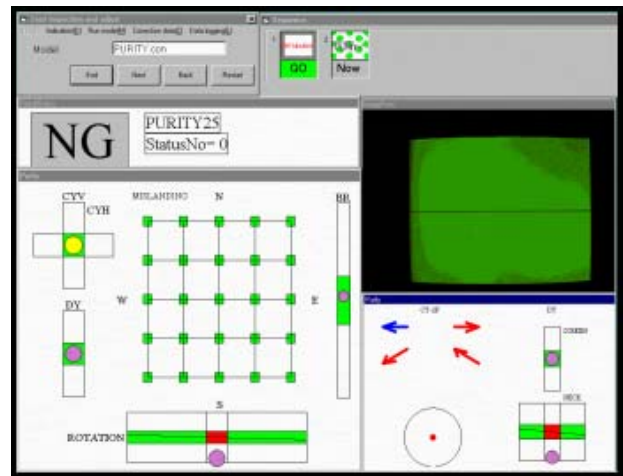
1. **"Single 3CCD Camera System"**  
is used for CRT size up to 36"(16:9)
2. **"One Station provides All ITC Functions"**
  - 25 points of Purity
  - Rotation & VRS
  - 25 points of Convergence;
  - Geometry Distortion Auto inspection;
3. **"Compact & integrated design improve system Reliability"** --- The system consists of
  - Industrial PC
  - Panasonic Digital CRT Power supply
  - 3CCD camera & Matrox Image Process card
  - Standard 19"rack with glass door
4. **"User friendly and easy operation under Windows Graphical User Interface"**
  - OS: Window 2000, or Window NT
5. **"Cost Effective"**
  - Minimum maintenance required.
6. **"Fully Computer Control Digital Power Supply"**
  - Fully digital remote control from an external computer via a single optical cable with an RS-232-C interface.
7. **"DNTSC/DPAL Support"**
  - An internal video signal generator can generate NTSC, PAL, D\_NTSC and D\_PAL RGB TV signal.
8. **"100 Setting of PS Conditions Storage"**
  - A build-in microprocessor allows 100 different types of power supply condition storage.
9. **"Modular Construction"**
  - Modular construction simplifies maintenance and makes future performance upgrades a matter of simply swapping modules.



# Functions

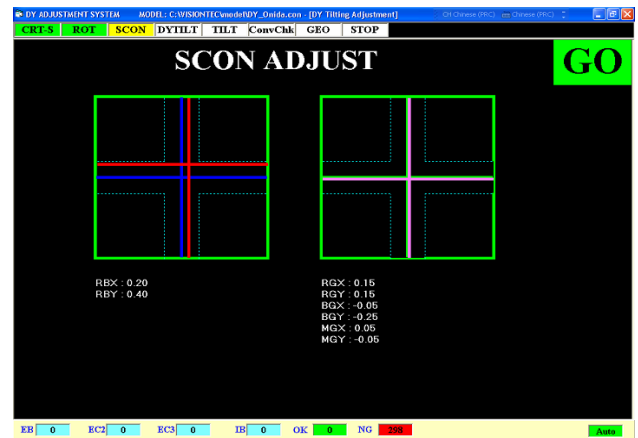
## 1. Purity & Rotation Adjustment

- Indicate 25 points of Purity Measurement with the Tolerance of Specification.
  - Maximum is up to 25 points of purity measurement
  - The measurement position is anywhere on the screen and the location is programmable.
  - Indicate the CYH, & DY Position, & DY Rotation with the tolerance of specification;
- $$CYH = (P9+P13)/2$$
- $$DY = (P9-P13)/2$$
- Each point of Reading can be calibrated by Visual or other landing equipment;



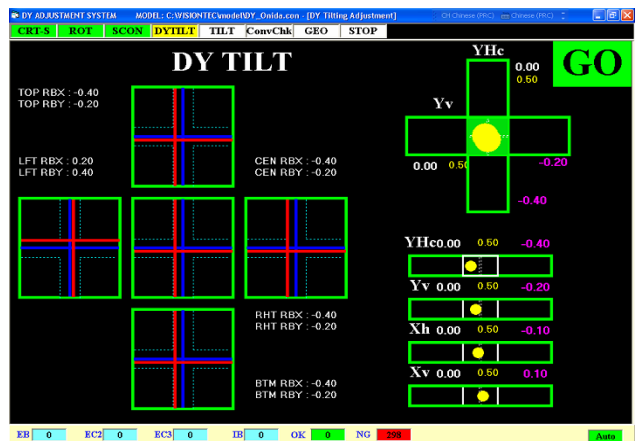
## 2. Static Convergence Adjustment

- With a Diamond screen signal, a 4P magnet is used to adjust the center convergence for Red/Blue into the specification.
- A 6P magnet is then used to adjust Red/Blue being close to Green.
- Camera can search this position automatically.
- Position of CRT can be  $\pm 15$ mm.
- Supporting software is useful for fresh operator.



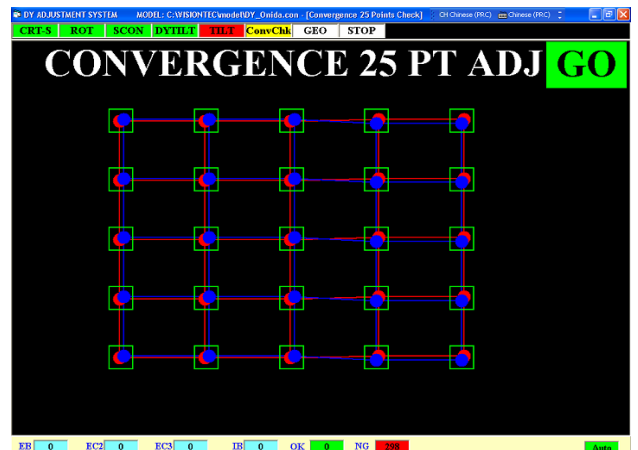
## 3. DY Title Adjustment

- Based on the convergence data at clock 12', 3', 6', and 9', the following parameter will be calculated & displayed:
- Yh, Yv, Xh, Xv & customized formula;
- The convergence RBX, RBY at clock 12, 3, 6, & 9;
- The parameter for DY tilting in H direction & V direction will be selected from above parameters based on the CRT & DY's characteristic;
- The Specification & Tolerance of each parameter were displayed graphically;



## 4. 25 points of Convergence Checking

- The position of each measurement point is programmable;
- Each measurement point can be calibrated individually by Visual or CC-110;
- The specification & tolerance of each point can be set differently & individually;
- All convergence data: RGX, RGY, BGX, BGY, RBX, RBY can be saved into hard disk with CRT's serial number #.



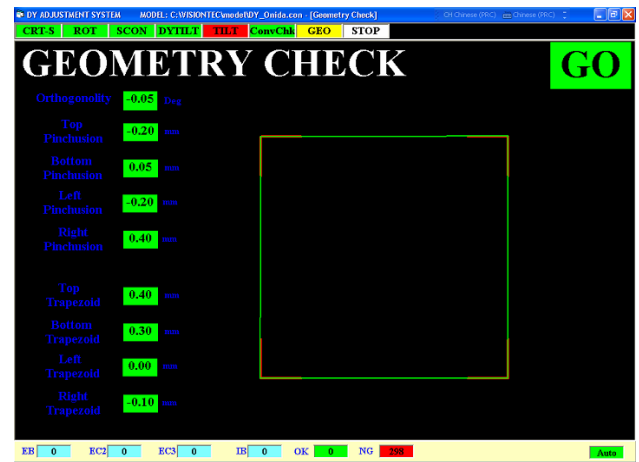


## 5. Auto Geometry Checking

-- Using a crosshatch signal pattern, the program provides high accuracy & high speed distortion measurements;

-- Following parameters are measured:

- H Size & V size;
- H Position & V Position;
- Keystone;
- Parallel;
- Linearity;
- Pincushion.



## 6. Digital CRT Power Supply Soft Control Panel

--- All following parameter can be set & read on the computer monitor:

Setting of Voltage & Auto IK current;

Deflection Amplifier's setting;

Actual voltage & current monitoring;

Setting of Video Signal generator;

Setting of Dynamic Focus unit

Setting of Digital Pincushion;

Setting of Video Amplifier ( G1 Driver);

others.

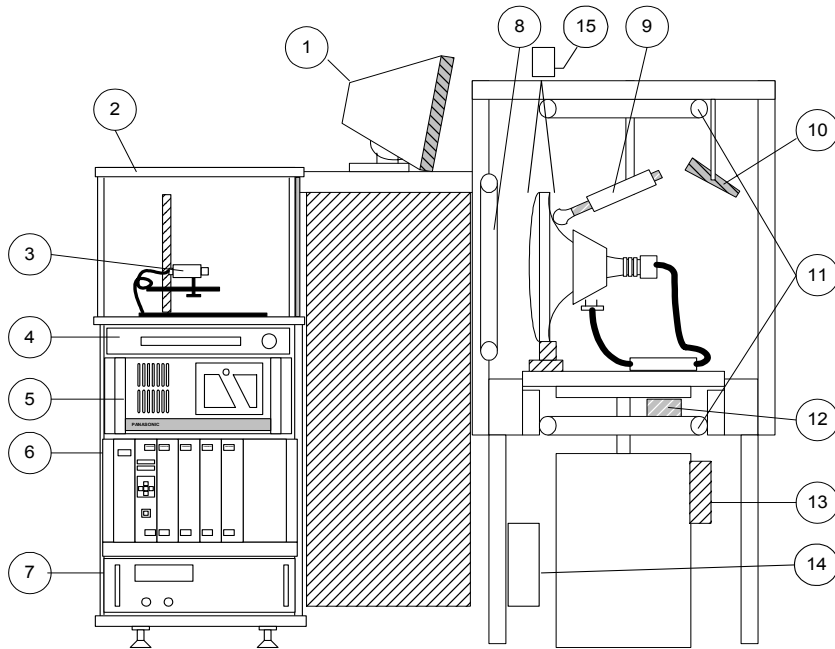


## Technical Specification

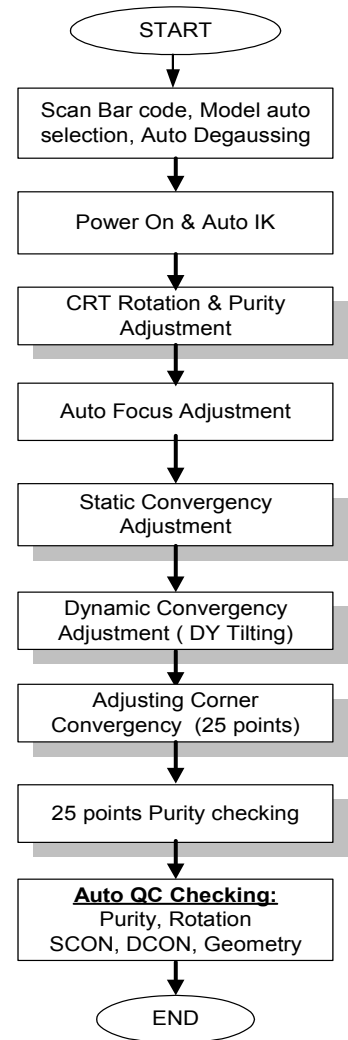
### Measurement Accuracy

Purity	+/- 3um @ 0 --- 30um range; +/- 5um @ 30 --- 60um range
Rotation	+/- 0.5mm
Auto Focus	+/-100V @ Best Focus +/-1KV range;
Static Convergence	+/- 0.05mm @ range 0--0.2mm range;
Dynamic Convergence	+/- 0.1 mm @ range 0 -- 2.0 mm Range
Computer	Industrial Computer: Pentium IV / 2.6MHz, O/S: Window 2000
Camera	Single 3CCD camera
Others	Camera Height: Adjustable 1250 ± 200mm Distances CPT to Camera: 1200mm (for 29" CPT with standard Lens) Tube Position Tolerance: ± 10mm on X, Y, Z axis.
Power Supply	AC 230V, 50Hz
Optional	Barcode scanner & Date collection software Production Monitoring software & LAN system

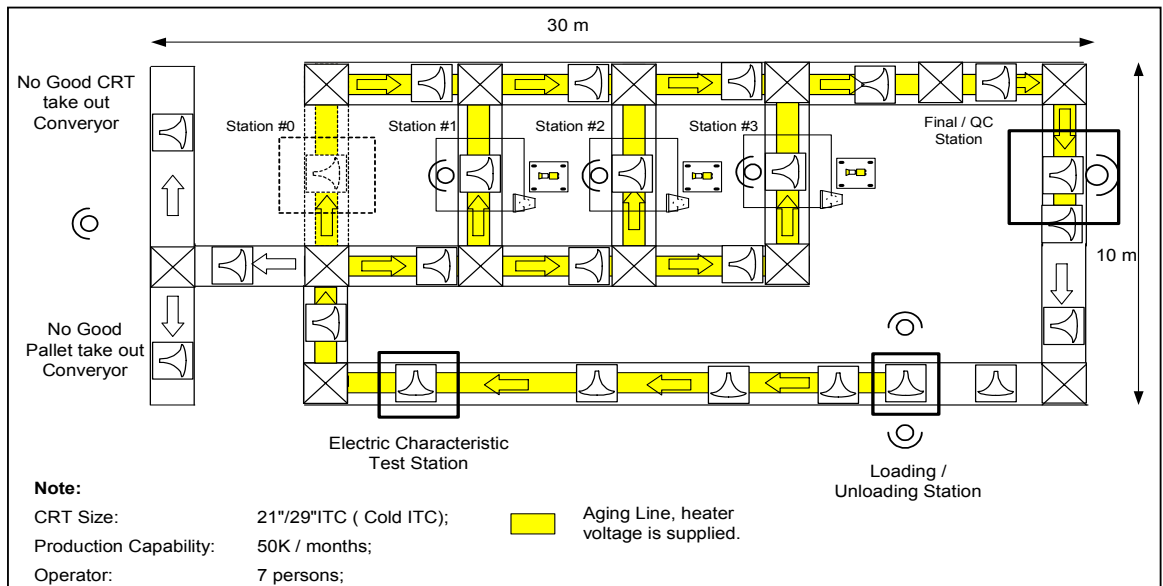
# System Configuration & Adjustment Procedure



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|--|-------------------|----------------------|
| 1 Display Monitor                        | 8 Degaussing Coil | 14 HV Discharge Unit |
| 2 Mecha Rack                             | 9 Anode Contact   | 15 Barcode scanner   |
| 3 3CCD Camera                            | 10 Operator Box   |                      |
| 4 Key Board                              | 11 Wobbling Coil  |                      |
| 5 Industrial PC with image process cards | 12 Pop up Unit    |                      |
| 6 CRT Power Supply                       | 13 Cathod Driver  |                      |



# Production Line layout



For future information, please contact:	Manufactory: <span style="float: right;">(Reg. No. 200312647N)</span> <h2 style="text-align: center; margin: 0;">VISIONTEC</h2> <p style="margin: 0;"><b>Industrial Vision Technology (S) Pte Ltd</b>          Blk 67, #06-22/23, Ayer Rajah Crescent          Singapore 139950          Tel: +65 6563 6110 Fax: +65 65631556          email: <a href="mailto:sales@visiontec.com.sg">sales@visiontec.com.sg</a></p>
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