

Rev.	ECO	Description	Checked	Approval	Date
01	85-112	Initial Release			

PWB Design Rules

VOILA

MIT Circuit Board

Dwg. No. 85-30324.010103

Revision A
June 2, 2004



1.0 Scope

This document defines the PWB design requirements for the VOILA MIT Circuit Board.

2.0 Requirements

2.1 Component Mounting

All components to be mounted on the top side. If space is not available the following groups of preferred components may be mounted on the bottom beginning with Group A:

Group A
C102 thru C113, C303, C304, R317, R318.

Group B
C203, C206A, C206B, C207 thru C211, C301, C302.

Group C
C403 thru C408, C501 thru C505, C601 thru C603.

Group D
R110 thru R114, R123, R124, D213, R214, R307 thru R316
R414 thru R416, R605, R608, R613, R616, R618

2.2 Test Points (TPxx)

Test points are VIAs. Drill size to fit 0.032" probe. Pad diameter should be 0.064" minimum.

2.3 "H" pads are potential connections. They can be the standard "VIA" size.

2.4 Layers, 6 recommended

1	Signals, "+3.3V", "+5V", "+12V", "+12VB"
2	"GND", "6V_MKR_RTN", "MTB_RTN", "6V_MKR_PWR"
3	Signal
4	Signal
5	"GND", "6V_MKR_RTN", "MTB_RTN", "6V_MKR_PWR"
6	Signal

2.5 Marker Box Circuit Considerations

6V provides power and ground for the Marker Boxes. See Schematic 85-03020.2403. The items in the circuit associated with higher currents (C303, C304, R317 and U303) should be kept close to the input/output connector J4. The remainder of the components can be located where convenient. Low current 6V also feeds the housekeeping Mux and Front panel LED and does not need to be a large track.

Assuming 1oz. Copper, the following tracks should be 0.1" (5A):

"6V_MKR_PWR" - except to R507,1 (Mux) & R531,1 (LED).
"6V_MKR_RTN"
"MTB_RTN" - except to C305,1.

3.0 DESIGN STANDARDS

PCB design shall be per "IPC-2221" and "IPC-2222".

