

ENGINEERING PRACTICE STUDY
PROJECT NUMBER: 5998-2010-039

TITLE:

Review of Non-Government Standard (NGS) IPC-NC-349
To Determine The Status Of Its DoD Adoption.

22 March 2010

FINAL REPORT

Prepared by:

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ATTCH 3

I. **OBJECTIVES:** The objective of this study was to evaluate the status of IPC–NC–349, "Computer Numerical Control Formatting for Drillers and Routers" in regards to its worth as a viable document for use by the Defense Standardization Program (DSP) using the following criteria:

- a. Determine the value and use of IPC–NC–349 as a DoD adopted document within the DSP.
- b. Evaluate the activities by the non-Government standard body (NGSB) regarding the document.
- c. Reviewing the actual notice of adoption on the ASSIST web site that is administered by the Document Automation and Production Service (DAPS) for accuracy and errors.

II. **BACKGROUND:** IPC–NC–349 was adopted on 24 October 1985 in FSC 5999 (attachment 1). The notice of adoption has not been revised since that date although the NGS should have been transferred to FSC 5998 when the FSC was established in 1988. IPC–NC–349 was developed and published its non-Government standard body (NGSB), the IPC – Association Connecting Electronics Industries. IPC–NC–349 has not been revised since it was issued in 1985. The NGSB committee responsible for IPC–NC–349 has not met in a number of years. However, DSCC has attended the meetings when the committee met to review the document for affirmation.

III. **RESULTS:** After a thorough review of IPC–NC–349, ASSIST, and the printed board industry, the answers to the questions posed in section I of this study are as follows:

- a. Use of the NGS in DoD documents: ASSIST revealed that there is no usage of IPC–NC–349 within DoD standardization documents. This fact is acceptable given the fact that IPC–NC–349 is primarily used by printed board designers and printed board manufacturers as a reference for the interchange of data used in the drilling of holes and routing of printed boards.
- b. NGSB activity: There is no activity to update this standard. DSCC-VAC has been monitoring the IPC's 2–11 committee, which is responsible for a new generation of documents for computer aided manufacturing (CAM).
- c. Status of the DoD Notice: A review of the actual notice of adoption that is on the ASSIST web site (attachment 2) uncovered mistakes. The following is a compilation of the errors in the adoption notice on the ASSIST web site:
 1. The title of NGS is incorrect.
 2. The NGSB address on the adoption notice is incorrect.
 3. The point of contact data for DSCC is also incorrect and needs to be updated.
 4. The Air Force custodian has changed from code 11 to code 85.
 5. The FSC is incorrect. The notice should be FSC 5998.

A proposed updated notice highlighting these errors is included as attachment 3.

IV. **CONCLUSION:** Based on its usage by design activities and printed board fabricators, IPC–NC–349 is a valued standardization document that benefits the DoD standardization program.

V. **RECOMMENDATION:** IPC–NC–349 should continue to be available for citing by DoD standardization documents and use by design and manufacturing activities. Therefore, an updated notice of adoption for IPC–NC–349 should be issued.

ACCEPTANCE NOTICE

This non-Government document was adopted on 24 October 1985, and is approved for use by the DOD. The indicated industry group has furnished the clearance required by existing regulations. Copies of the document are stocked by DOD Single Stock Point, Naval Publications and Forms Center, Philadelphia, PA 19120, for issue to DOD activities only. Contractors and industry groups must obtain copies directly from IPC, 3451 Church Street, Evanston, Illinois 60203.

Title of Document: Computer Numerical Control
Formatting for Drillers and Routers

Date of Specific Issue Adopted: August 1985

Releasing Industry Group: The Institute for Interconnecting
and Packaging Electronic Circuits

NOTICE: When reaffirmation, amendment, revision, or cancellation of this standard is initially proposed, the industry group responsible for this standard shall inform the military coordinating activity of the proposed change and request participation.

Custodians:
Army - ER
Navy - EC
Air Force - 17

Review activities:
Army - AR, MI
Navy - AS, SH
Air Force - 11, 85
NSA/S512
DLA - ES

User activities:
Navy - OS

Military Coordinating Activity:
Army - ER

Agent:
DLA - ES

(Project 5999-0166)

FSC 5999

ADOPTION NOTICE

IPC-NC349, "DRILLERS & ROUTERS, COMPUTER NUMERICAL CONTROL FORMATTING FOR", was adopted on 24-OCT-85 for use by the Department of Defense (DoD). Proposed changes by DoD activities must be submitted to the DoD Adopting Activity: Defense Supply Center Columbus, P.O. Box 3990, Attn: DSCC-VAI, Columbus, OH 43216-5000. Copies of this document may be purchased from the IPC - Association Connecting Electronics Industries 2215 Sanders Road Northbrook, Illinois, United States, 60062-6135. <http://www.ipc.org/>

Custodians:

Army - CR
Navy - EC
Air Force - 11

Adopting Activity:

DLA - CC

Reviewer Activities:

Army - AR, MI
Navy - AS, OS, SH

FSC 5999

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Custodians:
Army - CR
Navy - EC
Air Force - ~~14~~ 85
DLA - CC

Adopting Activity:
DLA - CC
Project: 5998-2010-000

Review Activities:
Army - AR, MI
Navy - AS, OS, SH

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.daps.dla.mil/>.