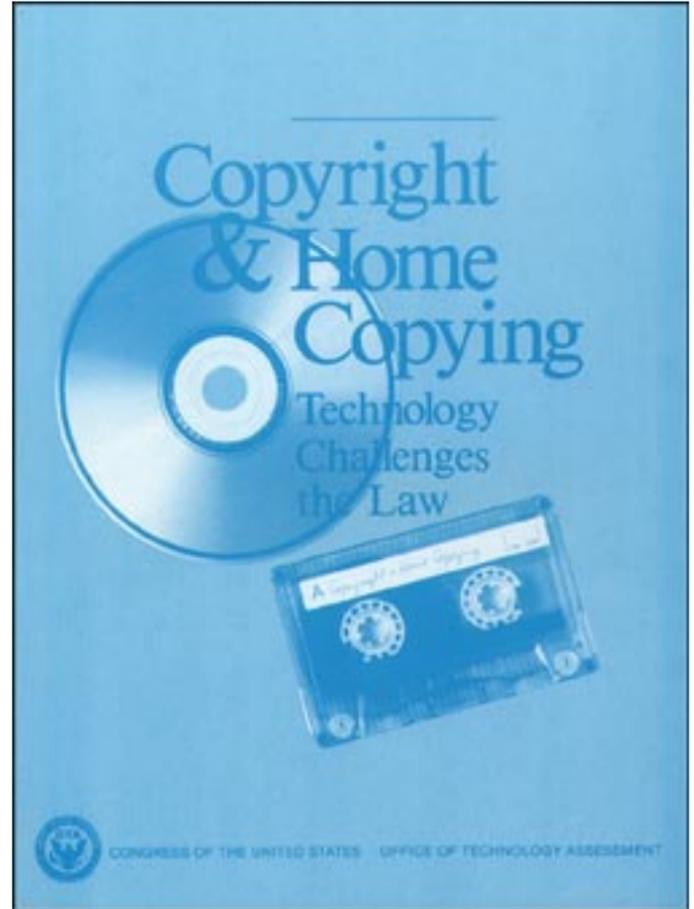


*Copyright and Home Copying: Technology  
Challenges the Law*

October 1989

NTIS order #PB90-151309

GPO stock #052-003-01169-7



**Recommended Citation:**

U.S. Congress, Office of Technology Assessment, *Copyright and Home Copying: Technology Challenges the Law*, OTA-CIT-422 (Washington, DC: U.S. Government Printing Office, October 1989).

**Library of Congress Catalog Card Number 89-600714**

**For sale by the Superintendent of Documents  
U.S. Government Printing Office, Washington, DC 20402-9325  
(Order form can be found in the back of this report)**

# Foreword

Today's consumer electronics allow the average citizen to make very good copies of recorded music, television shows, movies, and other copyrighted works for private use at home. Soon, as digital recording equipment comes into widespread use, homemade copies will not just be very good—they can be perfect reproductions of the originals. Home copying *is* becoming much more common; for instance, the proportion of people who make home audiotapes has doubled in the last 10 years. Copyright owners are concerned, and claim that home copying displaces sales and undermines the economic viability of their industries. They fear that the ability to make perfect copies will increase home copying even more.

This report first examines home recording technologies. Then—focusing primarily on audiotaping—we examine the ambiguous legal status of home copying. Our report considers the economic effects that home audiotaping may have on the recording industry, contrasted to the effects that restricting home taping might have on consumers. Finally, we identify a range of actions that either Congress or the industry might pursue.

Included in our report are the results of a national survey of home taping and copying behavior conducted for OTA in the autumn of 1988. In this survey, 1,500 members of the public responded to a range of questions about their own audio- and video-taping behaviors and their attitudes toward various policy approaches related to home taping. The Subcommittee on Courts, Intellectual Property and the Administration of Justice of the House Committee on the Judiciary and the Subcommittee on Patents, Copyrights and Trademarks of the Senate Committee on the Judiciary initially requested the report. This request was joined by the Ranking Minority of the House Committee on the Judiciary. Interest in the study was also expressed in a letter from the Chairman of the House Committee on Energy and Commerce and the Chairman of the Subcommittee on Commerce, Consumer Protection and Competitiveness of the House Committee on Energy and Commerce.

OTA appreciates the participation of the advisory panel, survey working group, Federal agency officials, and interested citizens without whose help this report would not have been possible. The report itself, however, is the sole responsibility of OTA, not of those who so ably assisted us in the assessment and its critical review, or of the congressional committees who requested or endorsed the undertaking of the study.

  
JOHN H. GIBBONS  
*Director*

# Copyright and Home Copying Advisory Panel

Robert W. Crandall (Chairman)  
Senior Fellow, Economic Studies Program  
The Brookings Institute

Jason S. Berman  
President  
Recording Industry Association of America

Brenda Dervin  
Chairman  
Department of Communications  
Ohio State University

David Fishman  
Senior Staff Consultant  
Arthur D. Little, Inc.

Jack Golodner  
Director  
Department of Professional Employees  
AFL-CIO

Michael H. Hammer  
Director  
Communications Policy Development  
Time Incorporated

Glen H. Hoptman  
Editor-in-Chief, Optical Publishing  
Smithsonian Institution

Judith K. Larsen  
Director of Primary Research  
Dataquest

Judith Lichtenberg  
Research Scholar  
Center for Philosophy and Public Policy  
University of Maryland

William Livingstone  
Contributing Editor  
Stereo Review Magazine

Peter Menell  
Associate Professor of Law  
Georgetown University Law Center

David Mouon  
Chairman  
Music Production and Engineering  
Berklee College of Music

Peter Rothbart  
Assistant Professor of Electronic Music  
Ithaca College School of Music

Gary J. Shapiro  
Staff Vice President  
Government and Legal Affairs  
Consumer Electronics Group  
Electronic Industries Association

Mark Silbergeld  
Director of Washington Office  
Consumers Union

Russell M. Solomon  
President  
MTS, Inc.

Patrick A. Weber  
Director/R&D  
MCA Records

NOTE: OTA appreciates and is grateful for the valuable assistance and thoughtful critiques provided by the advisory panel members. The panel does not, however, necessarily approve, disapprove, or endorse this report. OTA assumes full responsibility for the report and the accuracy of its contents.

# OTA Project Staff–Copyright and Home Copying

John Andelin, *Assistant Director, OTA  
Science, Information, and Natural Resources Division*

James W. Curlin, *Program Manager<sup>1</sup>  
Communication and Information Technologies Program*

Fred W. Weingarten, *Program Manager<sup>2</sup>  
Communication and Information Technologies Program*

## ***Project Staff***

Joan D. Winston, *Project Director<sup>3</sup>*

Karen G. Bandy, *Analyst<sup>4</sup>*

Mark Nadel, *Analyst<sup>5</sup>*

Darlene Wong, *Research Analyst*

## ***Congressional Research Service Contributor***

Douglas R. Weimer  
American Law Division

## ***Administrative Staff***

Elizabeth Emanuel, *Administrative Assistant*

Karolyn Swauger, *Secretary*

Jo Anne Price, *Secretary*

<sup>1</sup> As of 4/89

<sup>2</sup> Senior Associate as of 1/89

<sup>3</sup> As of 8/88

<sup>4</sup> Project Director 2/88-8/88, on leave 8/88-12/88

<sup>5</sup> As of 3/89

## Survey Working Group

Brenda Dervin  
Chairman  
Department of Communications  
Ohio State University

Martin Fishbein  
Department of Psychology  
University of Illinois

Judith Larsen  
Director of Primary Research  
Dataquest

Mark Levy  
Professor  
College of Journalism  
University of Maryland

Lewis Lipnick  
Principal  
Your Silent Partner

Steve MacGregor  
Vice President  
Diagnostic Research, Inc.

Robert Schwartz  
Attorney  
McDermott, Will & Emery

Philip Wirtz  
Associate Professor  
Department of Management  
Science

George Washington University

## Reviewers and Contributors

Robbin Ahrold  
Broadcast Music, Inc.

Joe Alen  
Copyright Clearance Center

David E. Altschul  
Warner Bros. Records, Inc.

Wilhelmus Andriessen  
Conseil Europeen de l'Industrie  
de la Bande Magnetique

Russ Bach  
CEMA - Capitol Records

Lew Bachman  
The Songwriters Guild

James Barrett  
Barrett's Audio & Video

James A. Berkovec  
University of Virginia

Paul Berry  
Canadian Musical Reproduction  
Rights Agency Limited

Peter Beruk  
Software Publishers Association

Stan Besen  
Columbia University

Marv Bornstein  
A&M Records

Timothy J. Brennan  
George Washington University

Yvonne Burckhardt  
International Federation  
of Musicians

Robert Cassler  
Copyright Royalty Tribunal

Ralph E. Cousino  
Capitol Industries EMI, Inc.

Michael Cover  
Recording Industry Association  
of America, Inc.

Paula Cranston  
SESAC, Inc.

Jeff Cunard  
Debevoise & Plimpton

Linda B. Cutler  
Eidak Corp.

Donald P. Dulchinos  
National Cable Television  
Association

Joe Finney  
National Center for Health  
Statistics

Ronald Freed  
Music Publishers' Association  
of the U.S.

Ray Gianchetti  
National Association of  
Recording Merchandisers

James L. Goldberg  
Abram, Westermeier, Goldberg,  
P.C.

National Association of Retail  
Dealers of America

Michael Greene  
National Academy of Recording  
Arts and Sciences

Jill Grisco  
The Washington Post

Michael Grubbs  
Tandy Electronics

Dan Hochvert  
NYNEX

Brad Kingsbury  
Peter Norton Computing, Inc.

David E. Kronemyer  
Capitol Records, Inc.

Stan Liebowitz  
Department of Economics and  
Business  
North Carolina State University

Sandra Lockhart  
Car Audio Specialists Association

John W. Lyons  
National Institute of Standards  
and Technology

Frannie Martis  
MTS, Inc.

James Massey  
National Center for Health  
Statistics

John T. McGuire  
Screen Actors Guild

Al McPherson  
Warner Bros. Records, Inc.

Gloria Messinger  
American Society of Composers,  
Authors, and Publishers

Edward D. Murphy  
Harry Fox Agency

Dave Newberg  
Capitol Records

Ian Novos  
University of Southern  
California

Kevin Odegard  
National Association of  
Songwriters

Joseph Oldham  
Popular Mechanics

Edwin Outwater  
Warner Bros. Records, Inc.

Marybeth Peters  
Office of the Registrar  
U.S. Copyright Office

Skip Pizzi  
National Public Radio

David Pushic  
Optical Disc Mastering

Helen Rena  
Legal Department  
American Federation of  
Musicians

Irene Robadey  
International Secretariat of Arts,  
Communications Media and  
Entertainment Trade Unions–  
FIET

Hilary B. Rosen  
Recording Industry Association  
of America, Inc.

Garth Saloner  
Sloan School of Management  
Massachusetts Institute of  
Technology

David Sappington  
Bell Communications Research

Erich Schulze  
GEMA

Eric Schwartz  
U.S. Copyright Office

Steven Schwartz  
Music Distribution Service

Molly Seagrave  
International Cablecasting  
Technologies

Carl Shapiro  
Woodrow Wilson School  
Princeton University

Cary H. Sherman  
Arnold & Porter

Rick Shoemaker  
MCA Music

Gregory Sidak  
Federal Communications  
Commission

Cathy Slesinger  
NYNEX

Ken Small  
University of California  
at Irvine

David Stebbings  
CBS Records Technology  
Group

Jeffrey M. Sydney  
Polygram Records

Doug Talley  
Digital Radio Laboratories, Inc.

Ana Thorne  
Peter Norton Computing

Jean Loup Tournier  
SACEM/SDRM

Kenneth Train  
Cambridge Systematic

Harold Vogel  
Merrill Lynch Capital  
Markets

Michael Waldman  
University of California at  
Los Angeles

Howard L. Wattenberg  
Marshall Morris Wattenberg  
& Platt

George David Weiss  
The Songwriters Guild

Clifford Winston  
The Brookings Institution

Sanford Wolff  
American Guild of Musical  
Artists

## Contractors

John Boyle, Principal Investigator  
Schulman, Ronca, & Bucavalas,  
Inc.

William Johnson  
University of Virginia  
Michael Katz

University of California at  
Berkeley

Fred Mannering  
University of Washington

Ian Novos  
University of Southern California

Carl Shapiro  
Princeton University

Leigh Tripoli  
Editor

### Referees for Economic Analyses

James A. Berkovec  
University of Virginia

Stan Liebowitz  
North Carolina State University

Garth Saloner  
Massachusetts Institute of  
Technology

David Sappington  
Bell Communications Research

Ken Small  
University of California at Irvine

Kenneth Train  
Cambridge Systematic, Inc.

Michael Waldman  
University of California at  
Los Angeles