

PACKAGE ID - 001314IBMPC00 NMR DATA TAKING SW

KWIC TITLE - Instrument Control and Data Acquisition for
NMR Experiments

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LIMITATION CODE -COPY **AUDIENCE CODE** - LIM

COMPLETION DATE - 06/06/1999 **PUBLICATION DATE** - 06/06/1969

DESCRIPTION - This is a software program which is intended to do some instrument control and data acquisition for NMR experiments. The basic purpose of the program is to allow a user of the NMR system to create a list of instructions which tells the program what steps should be done, the stat the data taking program and let the system run by itself (depending on the type of sample and the type of experiment being run, it can take from several minutes to many hours to do a data collection run).

PACKAGE CONTENTS - Media Directory; Software Abstract; Program Manual;
Media Includes Source Code;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 3 3.5 Diskettes

METHOD OF SOLUTION - The program uses the GPI and RS-232 bus to communicate with instruments. The program loops through a list of instructions to set up and utilize the equipment, start the experiment, collect the data, and store it to a file. It uses instrument drivers to allow more instruments to be added in the future

COMPUTER - IBM PC

OPERATING SYSTEMS - Windows 95 or Windows NT

PROGRAMMING LANGUAGES - LabView

SOFTWARE LIMITATIONS - The limits on the number of points collected is set by the type of oscilloscope attached to the computer (varies by model). The speed of data collection is limited by the speed of the GPIB bus and the instrument attached to <1.5 Mbytes/sec.

SOURCE CODE AVAILABLE (Y/N) - Y

UNIQUE FEATURES - This program is designed to work with the NMR spectrometers that are used in our laboratory (which were home built). Software to communicate with and control these instruments on an IBM PC is not commercially available, which necessitated the writing of this software.

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UNIQUE FEATURES - (CONT)

OTHER PROG/OPER SYS INFO - The software is intended to communicate with and control oscilloscopes and pulse programmers and requires a GPIB card (along with its driver software) and an RS-232 port to do so. An external oscilloscope and pulse programmer is also required for operation of the software.

HARDWARE REQS - 486 processor or higher. 16 Mbytes of RAM.

TIME REQUIREMENTS - The program runs fairly quickly. In actual use most of the delays are due to waiting for external equipment to collect and send data to the computer. A simple experiment can be run in a few minutes.

ABSTRACT STATUS - Released AS-IS 10/12/1999.

SUBJECT CLASS CODE - Z

KEYWORDS -

COMPUTER PROGRAM DOCUMENTATION
N CODES
DATA

EDB SUBJECT CATEGORIES -
990200

SPONSOR - DOE/DP

PACKAGE TYPE - AS - IS