

contraves

Contraves Goerz Corporation

Rotating Chair Program Parameters
Program Versions
104, 106, 107, and 108
IM-2398A
September, 1980

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CHAPTER 1

Purpose

The purpose of this document is to describe procedures whereby various characteristics of the Rotating Chair Test may be temporarily or permanently modified by the system operator.

Chapter 2 contains a summary of the parameters available for modification. Permanent parameter modifications may be made by following the instructions in Chapter 3; temporary parameter modifications may be made by following the instructions in Chapter 4.

Appendix A provides information which is required to locate specific parameters during either of the above procedures.

A thorough index is provided to assist the reader in locating specific parameters.

CHAPTER 2

Parameter Description

Rotating Chair program parameters are contained in a file on the program disk entitled IDENT1.REF.

This file is divided into 32 separate records, the first nine of which are available for program parameter storage.

Two record types are utilized. The first is a series of 32 integer values. Records 1, 2, 3, 8, and 9 are integer records. The second record type is a string of up to 64 characters. Records 4, 5, 6, and 7 are character records. A further description of each record follows:

a. Record 1: Patient file information such as file length, number of files per disk, etc. These parameters are normally permanently set at the factory and should not be modified without consultation with factory personnel.

b. Record 2: Patient calibration parameters

1. The calibration amplitude for each trial.

2. The calibration frequency for each trial.

3. The number of calibration cycles for each trial.

4. The calibration mode for each trial, set for either

a). Chair stationary with the patient responding to alternately lighting Light Emitting Diodes (LED's) on the calibration bar.

b). Chair stationary with the patient responding to operator commands to look alternately at the right and left calibration marks.

c. Record 3: Nominal values of normal patient test results for use in

plotting output data.

d. Record 4: Clinic name for output page headings.

e. Record 5: Clinic street address (reference only).

f. Record 6: Clinic city, state, zip (reference only).

g. Record 7: A series of Y's (Yes) and N's (No) which determine:

1. Questions which will be asked of the operator during the acquisition of a patient's history.

2. Patient history line items which will be printed on the patient's test result comment page.

3. Output pages which will be automatically copied during RECORD mode while KEEP is active.

h. Record 8: Patient test parameters:

1. The test amplitude for each trial.

2. The test frequency for each trial.

3. The number of test cycles for each trial.

4. Phase corrections for each trial.

i. Record 9: Program control and chair calibration parameters.

CHAPTER 3

Procedure for Permanent Parameter Modifications

Turn-On Procedure

1. Apply power to the system in accordance with the Operator's Manual.
2. Install a program disk in the left floppy disk drive (DX0).
3. Enable the computer by flipping up the DC POWER switch to the ON position.

Procedure to Examine/Change Program Parameters

1. The computer responds with 'RT-11SJ V02C-02.' Prior to proceeding, determine the locations of all parameters that must be changed by referring to the instructions on page A-2.
2. Type R IDENT1<CR>. Computer: 'ENTER RECORD NO. (0 = STOP).'

3. OPERATOR: 1<CR>, or 2<CR>, or ..., or 9<CR>. Computer responds by displaying the selected record's present contents and asking the question 'DO YOU WISH TO CHANGE RECORD X CONTENTS?.' If your answer at this point is anything except YES<CR>, the program will request a new record number as above.

NOTE: The number typed at this point may be any integer number from 1 through 32; however, only records 1-9 contain program parameters. Entering a 0<CR> at this point will halt the IDENT1 program.

4. If the operator's response at step 3 was 'YES', the computer will request that he enter the new record contents. Two types of records exist within IDENT1: Character records and integer number records.

To change a character record (numbers 4, 5, 6, and 7), type the new entry followed by a carriage return. (The entire line of characters must be retyped if any are changed).

To change an integer record (numbers 1, 2, 3, 8, and 9), type each integer number followed by a <CR>. Two <CR>'s in succession will terminate entry changes. For a detailed example of changing an integer record's contents, see TP-2368, Procedure for TEYES.

NOTE: The 32 integer valued parameters are displayed in four rows of eight parameters each. The parameters are numbered 1 thru 8 in the first row, 9 thru 16 in the second row, 17 thru 24 in the third row, and 25 thru 32 in the last row.

CHAPTER 4

Procedure for Temporary Parameter Modifications

Temporary modifications to the CHAIR program parameters may be made only while in the RECORD mode.

NOTE: Any modifications made to program parameters while in the RECORD mode remain in effect only until the operator returns to the main program menu. Selection of any other menu item or re-selection of RECORD mode will initialize all parameters to their permanent values as set in Chapter 3.

Preliminary

Follow the instructions contained in the Operator's Manual to turn on the system, start program CHAIR, and enter RECORD mode.

Procedure

1. This procedure should be performed only after a thorough operating knowledge has been acquired of the RECORD mode.

Parameter changes are made by issuing the EXAMINE command in response to any of the normal test sequence prompts. Prior to proceeding, determine the locations of all parameters that must be changed by referring to the instructions on page A-2.

2. Issue the EXAMINE command.

3. In response to the prompt from Examine, the word EXAMINE:, type PARAMETER<CR>. The program will then request that you enter the record number which contains the parameter to be changed. (Determined in step 1).

4. Type the desired record number. The program will then request that you enter the number of the desired parameter. (Determined in step 1).

5. Enter the parameter number. The program will display the parameter's present value and request a new value.

6. Enter the new value followed by

<CR>. To leave the parameter unchanged enter <CR> only. The program will return to the 'EXAMINE:' prompt.

7. To change additional parameters, go back to step 3. To return to the RECORD mode enter <CR> only.

APPENDIX A
COMMON FILES

This appendix describes the variables stored in a program storage area named "FILES." The majority of variables stored in this area are read from file "IDENT1.REF" referred to in Chapter 2. Variables in this area which are read from IDENT1.REF are grouped in 32 word Fortran single-dimensioned arrays named RECOR1, RECOR2, etc., which correspond to Record 1, Record 2, etc. of IDENT1.REF.

In preparation for changing parameters, determine the record number and parameter number of all parameters to be changed by referring to the list of parameters contained in Appendix A.

E.G. To set the frequency for test 3, locate the variable FREQ(5) in Appendix A by first referring to the Index under "Test frequencies". The record number is then determined to be 8 since FREQ(5) is listed as part of RECOR8(32).

The parameter number within Record 8 corresponds with its position in the table. FREQ(5) occupies positions 6, 7, 8, 9, 10 which in turn correspond to the frequencies for tests 1, 2, 3, 4, and 5. The frequency for the third test is therefore contained in parameter number 8, within record number 8.

COMMON FILES

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<u>Variable Name</u>	<u>Type</u>	<u>Bytes</u>	<u>Use</u>
FNME(15)	LOG*1	15	Storage for coded form of the patient's disk filename.
SYSFIL(15)	LOG*1	15	Storage for the internal filename which corresponds to the contents of FNME. This filename is used for actual disk access and is not available to the operator.
IOK	INT*2	2	Flag used by file access sub-programs to transmit error codes.
NREC2	INT*2	2	Record number variable used during accesses to logical unit #2.
NREC3	INT*2	2	Record number variable used during accesses to logical unit #3.
RECOR1(32)	INT*2	64	An integer array of program parameters from IDENT1 including: <ol style="list-style-type: none">1. NUMFIL - The total number of patient files available for use on the patient disk.2. NUMPAT - The total number of patient files used to date on the patient disk.3. NUMREC - The total number of records per patient file.4. LENREC - The length of each patient file record. NOTE: Each patient file begins with one 1x1024 record which contains patient identifying information. Data records are in powers of 2 sub-multiples of 1024.5. IRATE - Reserved for future use.6. NSAMPL - The number of data samples taken per patient test trial.7. ITYPE - Integer designating the hardware configuration the program was used with.8. IVERSN - Integer designating the program version.9. thru 32. ISAV1(24) - Reserved for future use.

COMMON FILES

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<u>Variable Name</u>	<u>Type</u>	<u>Bytes</u>	<u>Use</u>
RECOR2(32)	INT*2	64	<p>An integer array of recording calibration parameters read from IDENT1.REF including:</p> <p>1. thru 5. CALAMP(5) - Peak-to-peak calibration amplitude in degrees x 100.</p> <p>6. thru 10. CALFRQ(5) - Calibration frequencies in Hertz times 10000.</p> <p>11. thru 13. CALCYC(6) - Number of calibration cycles. (Logical*1 with last one extra).</p> <p>1st word: Lo order = number of cycles in test 1. Hi order = number of cycles in test 2 times 256. (Add to lo order).</p> <p>2nd word: Lo order = number of cycles in test 3. Hi order = number of cycles in test 4 times 256. (Add to lo order).</p> <p>3rd word: Lo order = number of cycles in test 5. Hi order = not used.</p> <p>14. thru 18. CALBAR(5) - Calibration mode. 1 = Calibration bar to be used for calibration. 0 = no calibration bar.</p> <p>19. thru 32. ISAV2(14) - Reserved for future use.</p>
RECOR3(32)	INT*2	64	<p>Integer array of reference values for plotting.</p> <p>1. thru 5. PLNOM(5).</p> <p>6. thru 10. PLHLIM(5).</p> <p>11. thru 15. PLLIM(5).</p> <p>16. thru 20. DPNOM(5).</p> <p>21. thru 25. DPHLIM(5).</p> <p>26. thru 30. DPLIM(5).</p> <p>31. thru 32. ISAV3(2) - Reserved for future use.</p>
RECOR4(32)	INT*2	64	Contains one logical*1 array of clinic name called CLINIC(64).

COMMON FILES

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<u>Variable Name</u>	<u>Type</u>	<u>Bytes</u>	<u>Use</u>
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RECOR7(32)	INT*2	64	Logical*1 flags used as follows:
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1. USELIN(24) - Flags to indicate which questions are to be asked of the operator during acquisition of patient history:

USELIN(1): Patient name. *
(2): Social security number. *
(3): Test date. *
(4): Operator's name.
(5): Office file number.
(6): Patient's birthdate.
(7): Patient's age. *
(8): Patient's height.
(9): Patient's weight.
(10): Patient's handedness.
(11): Referring physician.
(12): Attending physician.
(13): Not used.
(14): Not used.
(15): Not used.
(16): Not used.
(17): Not used.
(18): Comment line #1.
(19): Comment line #2.
(20): Comment line #3.
(21): Comment line #4.
(22): Comment line #5.
(23): Comment line #6.
(24): Comment line #7.

Those items followed by an asterisk must be YES's (Y's).

2. PRTLIN(24) - Flags to control which patient information is to be printed.

PRTLIN(1): Patient's name.
(2): Social security number.
(3): Test date.
(4): Operator's name.
(5): Office file number.
(6): Patient's birthdate.
(7): Patient's age.
(8): Patient's height.
(9): Patient's weight.
(10): Patient's handedness.
(11): Referring physician.
(12): Attending physician.
(13): Not used.
(14): Not used.
(15): Not used.
(16): Not used.
(17): Not used.
(18): Comment line #1.

COMMON FILES

<u>Variable Name</u>	<u>Type</u>	<u>Bytes</u>	<u>Use</u>
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- (19): Comment line #2.
- (20): Comment line #3.
- (21): Comment line #4.
- (22): Comment line #5.
- (23): Comment line #6.
- (24): Comment line #7.

3. USEPAG(16) - Flags to indicate desired data output pages while recording or processing. (Only effective during KEEP).

- USEPAG(1): Comment sheet.
- (2): Calibration raw data.
- (3): Calibration data.
- (4): Raw data collection.
- (5): Reserved for future use.
- (6): Reserved for future use.
- (7): Reserved for future use.
- (8): Reserved for future use.
- (9): Reserved for future use.
- (10): Reserved for future use.
- (11): Reserved for future use.
- (12): EXAMIN data.
- (13): LIST data from PRODAT.
- (14): Eye position/velocity recorded data.
- (15): Averaged velocity data.
- (16): Final plot.

RECOR8(32) INT*2 64 An integer array of recording test parameters read from IDENT1.REF including:

1. thru 5. AMPL(5) - Test amplitudes in degrees/sec x 100. Includes sign bit for direction. (+ = cw chair motion, - = ccw chair motion).

6. thru 10. FREQ(5) - The test frequency for each trial in Hertz times 10000.

11. thru 13. CYCLES(6) - Number of test cycles for each trial. (Logical*1 with last one extra).

1st word: Lo order = number of cycles in test 1.

Hi order = number of cycles in test 2 times 256. (Add to lo order).

2nd word: Lo order = number of cycles in test 3.

Hi order = number of cycles in test 4 times 256. (Add to lo order).

COMMON FILES
Variable Name

PAGE A-7

<u>Type</u>	<u>Bytes</u>	<u>Use</u>
		<p>3rd word: Lo order = number of cycles in test 5. Hi order = not used.</p> <p style="text-align: center;">58</p> <p>14. thru 18. CORPAS(5) - A phase correction for each test frequency (determined by running TEYES - See TP2368, <u>Procedure for TEYES</u>).</p> <p>19. thru 32. ISAV8(14) - Reserved for future use.</p>
RECOR9(32)	INT*2	<p>64 An integer array of recording test parameters read from IDENT1.REF including:</p> <p>1. CALREQ - Flag to determine whether or not the patient will be calibrated for each test: 1 = calibrate for all tests, 2 = calibrate only for test #1. (Not used).</p> <p>2. AUTO - Flag to determine whether program or operator will decide upon calibration data validity: 1 = automatic decision by the program, 2 = operator decision. (Not used).</p> <p>3. OUTPUT - Flag to determine if optional (troubleshooting) output pages will be displayed: 1 = display, 0 = no display.</p> <p>4. thru 8. NYSTAG(5) - Nystagmus detector limits for each test. (Not used).</p> <p>9. ITCEYE - Time constant correction: Set to reciprocal of the eye electronics' RC time constant (x 1000).</p> <p>10. CCORR - Command gain correction (x 1000). (Not used).</p> <p>11. CZEROF - Command zero offset correction in unscaled counts. (Not used).</p> <p>12. TCORR - Tachometer feedback gain correction (x 1000). (Not used).</p> <p>13. TZEROF - Tachometer feedback zero offset correction in unscaled counts.</p>

<u>Variable Name</u>	<u>Type</u>	<u>Bytes</u>	<u>Use</u>
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(Not used).

14. EGLIM - Eye gain limit for use during calibration in unscaled counts.

15. NSHFT - The number of places to shift the test eye signal during TEYES mode in order to simulate negative phase shift. (Not used).

16. EYECH - a/d channel number from which the eye signal should be read.

17. EYELIM - The number of counts (x 10) to be used as the criterion for the amplifier zero test.

18. HOLD - Set to one to use sample/hold circuit during TEYES.

19. TESTER - Set to one to use patient connections for TEYES.

20. CHSET - Set to 0, 8, 16, or 24 depending on the group of a/d channels used for device. Zero = (0-7), eight = (8-15), 16 = (16-23), and 24 = (24-31).

21. CHINV - Set to 1 to read channels in reverse order: (7-0), (15-8), (23-16), and (31-24).

22. RTCVEC - Set to real time clock vector address. (Version 104 only).

23. thru 32. ISAV9(10) - Reserved for future use.

APPENDIX B

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