PRODUCT MODIFICATION SUMMARY EXPLANATION

A product modification summary is a history of the modifications made to an instrument after the initial instrument design. Only modifications which affect replaceable parts are described (for example, one cannot purchase a bare circuit board, only a completely assembled and tested board, therefore changes to bare circuit boards are not described in a mod summary). These changes may have occurred for a number of reasons: components may no longer be manufactured by the vendor, product improvement, product enhancement, to facilitate product manufacture, etc.

A product modification summary consists of two parts: (1) index pages and (2) summary pages. The index pages lists the modifications, in serial number sequence, with a description of each. The summary pages provide additional details, if required. The index pages indicate the location of the appropriate summary pages.

Shown below is an example of the header which appears at the top of each page in a mod summary and the header which appears above each description on the index pages. Following the example, are descriptions of each of the terms in the headers.

PRODUCT MODIFICATION SUMMARY

2465 OSCILLOSCOPE

INDEX PAGE: 1 TITLE: PROCESSOR AND DIGITAL CONTROL

SERIAL NUMBER	CLASS	CHANGE NUMBER	PAGE	KIT PN	KIT PAGE

INDEX PAGE

INDEX PAGE should not be construed as a page number, but rather as a section number within the mod summary. The number which appears after INDEX PAGE (1 in the example above) refers to the number, within the diamond, on the tab of each schematic page in the instrument service manual. Thus, a mod summary will generally have several INDEX PAGEs, with each referring to a single schematic page in the instrument service manual.

For those service manuals without diamonds on the tabs, the INDEX PAGE numbers are arranged according to the order of the schematics in the instrument service manual, with the first INDEX PAGE corresponding to the first schematic in the manual.

Some service manuals arrange the schematics by circuit boards. In these cases, one INDEX PAGE per circuit board is provided, even though the circuit board may have more than one schematic page.

If numerous modifications have been made to the circuit represented by a schematic, an INDEX PAGE may actually consist of several pages. Since each page refers to the same schematic, the INDEX PAGE number for each of the pages will be the same, as

will the title. To differentiate between such pages, a page number is placed at the bottom, right-hand corner of each page. Using 10.2 as an example of one such page number, note that this number has two parts. The first part of the page number is 10. This number refers to the INDEX PAGE to which the page belongs, and hence the schematic number, to which the modifications on the page apply. The second part of the page number, separated from the first by a period, is 2 . This means it is the second page in the sequence, within those pages which share the same INDEX PAGE number. As an example, suppose INDEX PAGE 10 consists of 5 pages, those pages would be numbered as follows: 10.1, 10.2, 10.3, 10.4, and 10.5.

Three additional INDEX PAGEs are included - Miscellaneous, Modification Kits, and Parts Replacement Kits. Detailed information about these pages is provided below.

TITLE

The index page title corresponds to the schematic page tab in the service manual.

SERIAL NO.

The modifications are arranged by instrument serial number with the highest serial number being the most recent modification. If specific serial number information is not appropriate or not available, "NA" is listed under SERIAL NO. Modifications with an NA under SERIAL NO. will be listed in order of the CHANGE NO. Some modifications may not affect all instrument configurations (options). Information listed to the right of the serial number details these exceptions.

CLASS

The classification (CLASS) defines the urgency of field installation. The classifications are as follows:

1 - Required

2 - Recommended

3 - Information Only

A Required modification (1) is one that should be installed in every instrument. It usually involves operator safety or instrument damage. In most cases, a special modification kit is provided.

A Recommended modification (2) is one that has been recommended for installation during routine maintenance in the instrument.

An Information Only modification (3) is one which is neither required nor necessarily recommended. In most cases, these modifications do not need to be installed unless the instrument has problems in the area indicated by the modification.

CHANGE NO.

CHANGE NO. is a number assigned to the modification for internal tracking purposes. Occasionally, for clarity of explanation, a index entry for a product modification will be separated into sections. To indicate this, a suffix number will be assigned to each index entry (for example, M45078-1 and M45078-2) to allow for discrete handling of each section of the modification.

PAGE

PAGE indicates where additional information for the modification can be found. The first digit of the page number indicates SECTION. The next two digits, immediately to the left of the decimal, indicate INDEX PAGE. The two digits to the right of the decimal indicate SUMMARY PAGE (see below).

SECTION - This number is usually "1". A product modification summary may have more than one section, when supplemental service manual(s) are available or more than one instrument is combined in one modification summary, for example, 8000 Series Emulators (in this case a table of contents is provided).

INDEX PAGE - This is the number of the index page and usually is taken from the associated schematic diagram.

SUMMARY PAGE - This number is assigned in numerical order when the change information is inserted. Each index page may have from XXX.01 to XXX.99 summary pages.

The summary pages are arranged according to the SECTION first, INDEX PAGE second and the SUMMARY PAGE last. Page 112.21, for example, indicates SECTION ONE, INDEX PAGE twelve, and SUMMARY PAGE twenty-one.

All Section 1 pages are located at the front of the summary pages. All summary pages for each index page are grouped together. The summary pages are arranged according to the numerical order of the two numbers after the decimal point.

If a summary page is required for a modification that affects more than one index page, the summary page number is assigned from the first index page on which the change appears.

KIT PN

KIT PN is the part number of a Modification Kit or Parts Replacement Kit affected by the change. A kit initially set up by a modification is listed as XXX-XXXX-00. Each subsequent change to the parts contained in the kit is listed with the corresponding suffix change, for example, XXX-XXXX-01, XXX-XXXX-02, etc. Each version is listed with the entry which effected that change. Usually, only the most current version of the kit is included in the modification summary.

KIT PAGE

This is the summary page on which the latest version of the kit can be found.

Description of Modification

A description of the modification appears on the index page under each header. It includes information about the problem being solved and components being changed. If the affected circuit board part number changes, this also is indicated. Additional information, if necessary, is found on the indicated summary page.

MISCELLANEOUS INDEX PAGE

This page includes all changes to the product that cannot be referenced on another INDEX PAGE. This page generally lists (though it is not limited to) mechanical hardware changes.

MODIFICATION KIT PAGE

This page lists the most current version of the modification kits applicable to the product. A modification kit includes parts and instructions used to improve reliability, to provide instrument enhancement, or to facilitate field installation of a catalog option.

USEABLE SN RANGE

Serial number range of the product into which the kit can be installed.

KIT TITLE

The kit title is taken from the modification kit title.

PAGE NO.

This is the summary page on which a copy of the kit can be found.

LABOR TIME

The time required for kit installation.

KIT NUMBER

The part number of the kit. Kits are listed in numerical order.

PARTS REPLACEMENT KIT PAGE

This page lists the latest version of the Parts Replacement Kits. A Parts Replacement Kit is a kit of parts and instructions (a copy of which is included in the summary pages) to replace a part for which a direct replacement is no longer available. Please refer to the MODIFICATION KIT INDEX PAGE above for an explanation of each column.

REVISION DATE EXPLAINED

Every page of the mod summary index has a date at the bottom of the page. If every entry on a page has been entered on the same date then, by definition (established here), no revision has taken place. The date at the bottom of the page is formatted, for example, DEC 1984.

Whenever new entries are added to a page which already has entries, revision markers, "|", will be placed along the right margin, next to the most recent revision. Any previously existing revision markers are removed from the page. When a revision has occurred, the date at the bottom of the page is changed to correspond to the date the revision was entered.

If a page has no entries, the date the mod summary for that product was established is referenced at the bottom of the page, for example, DEC 1984. However there are exceptions. The word processing system originally used to produce the mod summaries has been replaced by a newer system. As a result, the date listed at the bottom of the mod summaries, for products which were in existence prior to the introduction of the new word processing system, actually reflects the date the mod summary was converted from the old system to the new. For products introduced after the new word processing system came on-line, the date at the bottom of the page reflects the date the mod summary for the instrument was established, provided there are no revision markers in the right margin.

PRODUCT MODIFICATION SUMMARY
PM203 PERSONALITY MODULE

INDEX PAGE: 1 TITLE: A1 BUFFER BOARD

SERIAL NUMBER	CLASS	CHANGE NUMBER	PAGE	KIT PN	KIT PAGE

NO MODIFICATIONS

PRODUCT MODIFICATION SUMMARY
PM203 PERSONALITY MODULE

INDEX PAGE: 2 TITLE: A2 CONFIGURATION BOARD (68000/68010)

SERIAL NUMBER	CLASS	CHANGE NUMBER	PAGE	KIT PN	KIT PAGE

NO MODIFICATIONS

PRODUCT MODIFICATION SUMMARY
PM203 PERSONALITY MODULE

INDEX PAGE: 3 TITLE: A3 CONFIGURATION BOARD (68008)

SERIAL NUMBER	CLASS	CHANGE NUMBER	PAGE	KIT PN	KIT PAGE
B020000	3	M55513			

To correct a design error which shorted the BAS and /UDS signals together and caused the processor to halt, the run connected between J5, pin 7, and J5, pin 15, was cut on the solder side of the circuit board. The part number of the Configuration circuit board (A3) was changed from 670-8505-00 and 670-8505-01.

PRODUCT MODIFICATION SUMMARY
PM203 PERSONALITY MODULE

INDEX PAGE: 4 TITLE: A4 CONFIGURATION BOARD (68000/68010)

SERIAL NUMBER	CLASS	CHANGE NUMBER	PAGE	KIT PN	KIT PAGE

NO MODIFICATIONS

PRODUCT MODIFICATION SUMMARY
PM203 PERSONALITY MODULE

INDEX PAGE: 5 TITLE: A5 PERSONALITY BOARD

SERIAL NUMBER	CLASS	CHANGE NUMBER	PAGE	KIT PN	KIT PAGE
B020000	3	M55514	105.01		

To prevent the Pm203 from indicating FLUSH cycles erroneously, the delay in the Buffer CPU clock path was reduced by adding a wire strap. The part number of the Personality circuit board (A5) was changed from 670-8500-00 to 670-8500-01.

PRODUCT MODIFICATION SUMMARY
PM203 PERSONALITY MODULE

INDEX PAGE: 6 TITLE: A10 067-1049-XX UPPER BOARD

SERIAL NUMBER	CLASS	CHANGE NUMBER	PAGE	KIT PN	KIT PAGE

NO MODIFICATIONS

PRODUCT MODIFICATION SUMMARY
PM203 PERSONALITY MODULE

INDEX PAGE: 7 TITLE: A11 067-1049-XX LOWER BOARD

SERIAL NUMBER	CLASS	CHANGE NUMBER	PAGE	KIT PN	KIT PAGE

NO MODIFICATIONS

PRODUCT MODIFICATION SUMMARY
PM203 PERSONALITY MODULE

INDEX PAGE: 8 TITLE: A12 067-1049-XX PGA ADAPTER BOARD

SERIAL NUMBER	CLASS	CHANGE NUMBER	PAGE	KIT PN	KIT PAGE

NO MODIFICATIONS

PRODUCT MODIFICATION SUMMARY
PM203 PERSONALITY MODULE

INDEX PAGE: 9 TITLE: A13 067-1049-XX 68008 ADAPTER BOARD

SERIAL NUMBER	CLASS	CHANGE NUMBER	PAGE	KIT PN	KIT PAGE

NO MODIFICATIONS

PRODUCT MODIFICATION SUMMARY
PM203 PERSONALITY MODULE

INDEX PAGE: 10 TITLE: MISCELLANEOUS

SERIAL NUMBER	CLASS	CHANGE NUMBER	PAGE	KIT PN	KIT PAGE

NO MODIFICATIONS

PRODUCT MODIFICATION SUMMARY
PM203 PERSONALITY MODULE

MODIFICATION KITS

USABLE SN RANGE	KIT TITLE	PAGE NO.	LABOR TIME	KIT PN
	NONE			

PRODUCT MODIFICATION SUMMARY
PM203 PERSONALITY MODULE

PARTS REPLACEMENT KITS

USABLE SN RANGE	KIT TITLE	PAGE NO.	LABOR TIME	KIT PN
	NONE			

CLOCK CIRCUIT IMPROVED

Effective SN: B020000

To prevent the PM203 from indicating FLUSH cycles erroneously, the delay in the Buffer CPU clock path was reduced as follows:

1. The lead of R139, a 47Ω resistor, that has a wire attached was lifted (wire was left attached to the lifted lead).

2. A 0.5 inch piece of insulated wire was soldered between the pads for R139 on the solder side of the circuit board.

For further information, refer to the Remove/Add list and schematic diagram below.

PARTS REMOVED:

A5	1 ea	670-8500-00	Circuit board, Personality

PARTS ADDED:

A5	1 ea	670-8500-01	Circuit board, Personality

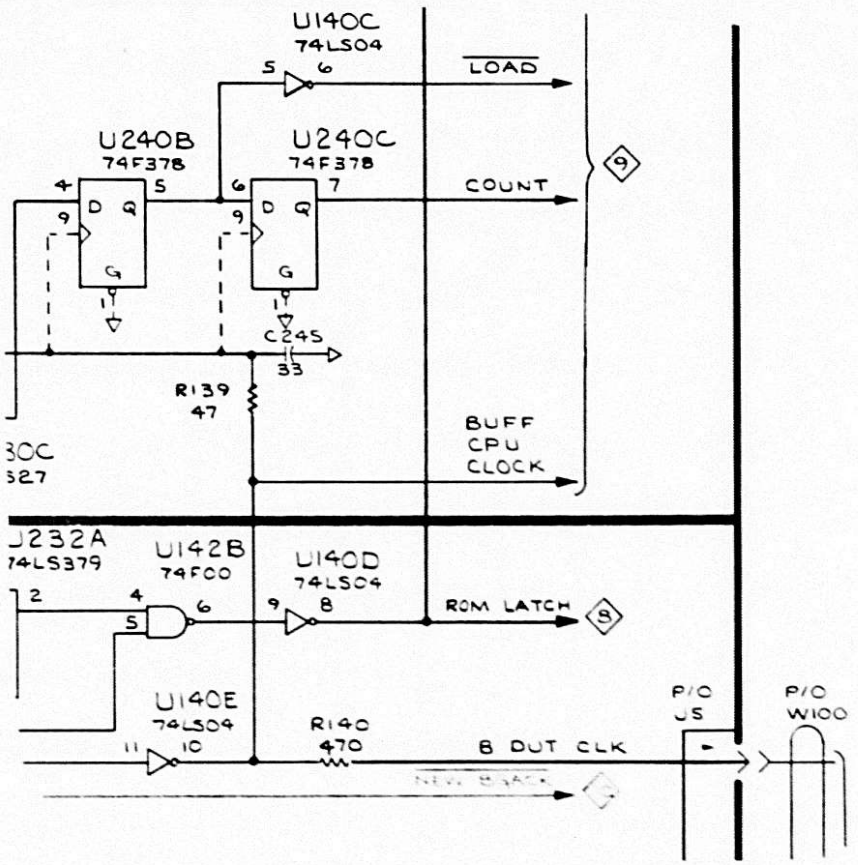
The new Personality circuit board, pn 670-8500-01, is the same as the old Personality circuit board, pn 670-8500-01, except for the following:

PARTS REMOVED:

NONE

PARTS ADDED:

0.042 ft	175-2054-05	Wire, elec, solid, 30 AWG, green kynar



Partial Schematic 7 - TIMING GENERATOR