

PROCESSOR TYPE All

**G836-00001 CODE: D CS: B ETCH: C**

DEC-70 - PROBLEM 1: Overload protection is necessary.  
CORRECTION 1: Add IN4001 diodes ( D13, D14, D15, and D16 ) to limit base current in output stages.  
PROBLEM 2: Unit does not regulate properly.  
CORRECTION 2: Change values of resistors R2, R3, R17, and R19 to allow Zener diodes to regulate properly.  
PROBLEM 3: Unit oscillates.  
CORRECTION 3: Change values of capacitors C2 and C8.  
In-plant effectivity -03 rework immediately

**G836-A0002 CODE: F CS: C ETCH: D**

MAR-71 - PROBLEM 1: Power resistors R12, R13, R26, and R28 can burn etch board.  
CORRECTION 1: For revision "B" and "C" boards, place resistors R12 and R26 1/4 inch above etch board; do not change R13 and R28. For revision "D" boards change wattage of R12, R13, R26, and R28; add turret solder terminals on each lead of R12 and R26.  
PROBLEM 2: Heat sinks for transistors Q2 and Q4 are too small.  
CORRECTION 2: Change from DEC 70-07488 to DEC 74-08587.  
PROBLEM 3: Base resistors R11 and R27 are too small for proper operation.  
CORRECTION 3: Change R11 and R31 from 33 ohms, 1/2W, 10% ( DEC 13-00196 ) to 68 ohms 1/2W, 10% ( DEC 13-00220 ).  
PROBLEM 4: When a fuse blows, unit does not shut down properly.  
CORRECTION 4: Add resistors, 2.2K 1/4W, 5%, from the base of transistor Q1 to ground and from the base of transistor Q3 to ground.  
PROBLEM 5: New transistor in VR14 power supply pass element will cause module to oscillate.  
CORRECTION 5: Change capacitors C2 and C8 from 100 pfd 100 VDM to 330 pfd 100 VDM.  
PROBLEM 6: 400V line on etch board is exposed.  
CORRECTION 6: For revision "B" and "C" boards, add 3/4 inch by 1 inch piece G10 material over exposed area. For revision "D" boards, change layout to cover 400V lines.  
PROBLEM 7: Diodes added in previous ECO not added to etch.  
CORRECTION 7: For revision "B" and "C" boards, diodes have been added. For revision "D" boards, change layout to add diodes.  
PROBLEM 8: Layout does not meet production standards.  
CORRECTION 8: Layout board to production standards; do not change location of large eyelets; place diodes near eyelets as on revision "B" and "C" boards.

NOTE 1: The module is to be replaced in the field; no field reworking is to be done.

NOTE 2: This FCO must be installed in conjunction with FCO's G838-B0001 and VR14-A0005.

NOTE 3: See FCO's G836-C0003 and G836-A0004 which are supplemental to this FCO.

In-plant effectivity -03 rework immediately  
Field effectivity -Exchange all G836's in VR14's  
( Time To Install And Test .3 Hour. ) ( Kit Contents -FCO/Prints And Parts ) FCO's G836-C0003 and G836-A0004 will also be included in the kit.

**G836-C0003 CODE: DF**

JUL-71 - PROBLEM: Transistors Q2 and Q4 can thermally run away.  
CORRECTION: Change Q2 from 2N4920 to MJE 2955 and Q4 from 2N4923 to MJE 3055. Change values of resistors R10 and R27 from 150 ohms to 10 ohms and R9 and R24 from 1K to 220 ohms.

NOTE: This FCO is a supplement to FCO G836-A0002 and the changes will have been made to the exchange module included in the kit for FCO G836-A0002.

In-plant effectivity -02 phase-in  
Field effectivity -Exchange all G836's as defined by FCO G836-A0002.  
( Kit Contents -FCO Only ) NOTE: This FCO is included in the FCO G836-A0002 kit.

**G836-A0004 CODE: DF**

SEP-71 - PROBLEM 1: Wrong part number called out on Parts List for heat sink.  
CORRECTION 1: Change part number to 55-09718.  
PROBLEM 2: Wrong part number called out on Parts List for 80 ohm 10W 1% resistor.  
CORRECTION 2: Change part number to 13-10701.

NOTE: This FCO is a supplement to FCO G836-A0002.  
In-plant effectivity -06 documentation change only  
Field effectivity -Correction to G836-A0002 documentation.  
( Kit Contents -FCO Only ) NOTE: This FCO is also included in FCO G836-A0002 kit.

**G836-A0005 CODE: F CS: D**

MAR-72 - PROBLEM: Plus and minus regulated supply voltages are too high.  
CORRECTION: Change resistors R2 and R17 from 1.62 K to 1.78 K ohms, thus reducing the supply voltages to plus or minus 21.5 volts.  
In-plant effectivity -03 rework immediately  
Field effectivity -Rework all G836's in VR14's and VR20's  
( Time To Install And Test 1.0 Hour ) ( Kit Contents -FCO/Prints And Parts )

**G836-A0006 CODE: F CS: E**

DEC-72 - PROBLEM: Characters are distorted when a VR14 is used in a GT40.  
CORRECTION: Delete C2, a 330 pfd capacitor, across resistor R3. Replace C8, a 330 pfd capacitor, across resistor R19 with a 180 pfd capacitor.

NOTE: This FCO is not required for VR14's used in POINT PLOT MODE only, PDP-12, LAB-8/E, LAB-11, and PDP-15.  
In-plant effectivity -03 rework immediately  
Field effectivity -Rework all G836's in VR14's on GT40 systems.  
( Time To Install And Test 1.5 Hours. ) ( Kit Contents -FCO/Prints And Parts )

**G836-C0007 CODE: F CS: F ETCH: E**

FEB-73 - PROBLEM: Power supply oscillates at cold temperature.  
CORRECTION: Add a 330 pfd capacitor across resistor R3. Change the value of capacitor C8 from 180 pfd to 330 pfd. Change capacitors C11 and C6 to two 22 ufd 50 V S Tant, two for C11 and two for C6.

NOTE: See continuation supplement FCO G836-C007A.  
In-plant effectivity -03 rework immediately  
Field effectivity -Rework all G836's in VR14-LC and VR14-LD.  
( Time To Install And Test 1.0 Hour. ) ( Kit Contents -FCO/Prints And Parts )

**G836-C007A CODE: F**

MAR-73 - PROBLEM: Change to G836 requires new drawing.  
CORRECTION: Create sheet 1-2 of the G836 Circuit Schematic to include Parts List and overlay.  
In-plant effectivity -Unchanged  
Field effectivity -Unchanged

**G836-A0008 CODE: F CS: H**

OCT-73 - PROBLEM: CRT arcing damages G836 and W684 modules, which causes phosphor burning in the CRT.  
CORRECTION: Add R43, a 1K ohm resistor, to limit current through the voltage transient suppressor. This FCO should be implemented in conjunction with FCO's W684-A0004 and 7009357-A0001 for complete arc suppression. The rework procedure is as follows: Drill a #54 hole thru etch from G2 eyelet as close as possible to C15. Cut etch between drilled hole and G2. Connect one end of R43 to G2 eyelet. Connect the other end of R43 to etch leaving drilled hole.  
In-plant effectivity -Rework G836's immediately  
Field effectivity -Rework G836's in all GT40's, VR14L's, and in all VR14's where necessary. VR14L's require also FCO's W684-A0004 and 7009357-A0001; all other VR14's require FCO 7009357-A0001.  
( Time To Install And Test 1.0 Hour. ) ( Kit Contents -PF1079 - FCO/Prints And Parts )