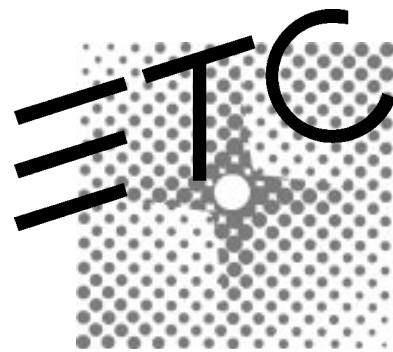


Obsession

**Memory
Upgrade Guide**



Obsession

Lighting Control Console Memory Upgrade Guide

Contents

Obsession memory upgrade procedure	5
Before you begin	5
AC line voltage:	5
Static safety:	5
Replacing socketed components	6
Hardware installation	7
Console upgrade	7
Processor Unit upgrade	8
Rev. C Serf board drawing	9
Rev. D Serf board drawing	10
Rev. E Serf board drawing	11

Obsession memory upgrade procedure

This document explains how to install the Obsession Memory Upgrade for 1,536 channel systems (part number 4052S1009).

Before you begin

Before proceeding ensure you have a clear workspace. You will need the following tools to install this upgrade kit:

- ▼ A Phillips screwdriver
- ▼ A small, flat blade screwdriver or DIP removal tool
- ▼ A grounded antistatic wrist strap

The hardware installation requires you to remove and install components, set jumpers, and install the included software. Read and understand the following instructions before you begin. General guidelines for removing static-sensitive components are outlined below.

If problems arise while installing or removing components, contact ETC's Technical Services department.

AC line voltage

Warning: Remove all cables connected to the unit before proceeding. Failure to do so may expose the operator to hazardous voltages.

Static safety

Warning: The PCB assemblies contain static sensitive components which can be damaged by static electricity. Therefore, leave the components included in this upgrade kit in their protective container until you are ready to install them. Do all unpacking and installation on a grounded antistatic mat. You should also wear an antistatic wristband, grounded at the same point as the antistatic mat.

Show and I/O configuration files

Warning: Please back up your current show and I/O configuration before you start. The upgrade requires you to clear the show and I/O configuration memory.

Replacing socketed components

Follow these steps to remove a socket component:

1. Locate the component to be removed.
2. Verify the component is installed in a socket.
3. Gently insert a DIP chip removal tool or the blade of a screwdriver horizontally between the socket and the component at one end.
Note: The screwdriver should not be resting on the PCB in any way.
4. Using a rocking motion, pry the component from the socket. Repeat the previous step at the other end of the component.
5. Remove the component and place on an anti-static pad.

Follow these steps to install a socketed component:

1. Locate the socket into which the component is to be inserted. Verify that the number of pins on the chip matches the number of pins in the socket.
2. Remove the chip to be installed from its protective foam. Verify alignment of the component pins.
3. Locate the notch at one end of the component to be installed. Align this with the notch located at one end of the socket.
4. Gently press one row of pins into the corresponding sockets.
5. Guide the other row of pins into their corresponding sockets.
6. Firmly press the component into place. Verify the orientation of the component. Verify each pin is firmly seated in its socket, not bent under.

Hardware installation

Console upgrade

1. Turn the console power off.
2. Check to ensure all cables have been removed from the back panel, including the power cord.
3. Loosen the two screws under the front bumper of the console. Open the console until the face panel is securely latched in place.
4. Locate U99 on the Rev. C, or U45 on the Rev. D or E Serf PCB (4052B5011). Use the drawings at the back of the manual to assist in locating this part.
5. Remove this part from its socket. See *Replacing socketed components* on page 6 for assistance.
6. Locate the component marked U45-1058 or U99-1015 in your upgrade kit.
7. Install this part in place of the previously removed U45 or U99.
8. Locate U69 through U72 and U94 through U97 on the Rev. D or E Serf PCB (4052B5011). For Rev. C Serf PCBs, these are U91 through U98. Use the drawings at the back of the manual to assist in locating these parts.
9. Remove these parts from their sockets. See *Replacing socketed components* on page 6 for assistance.
10. Locate the four components marked HM628512LP in your upgrade kit.
11. On Rev. D or E Serf PCBs, install these parts in place of the previously removed U69, U70, U94, and U95. Leave the sockets for U71, U72, U96, and U97 empty. For Rev. C Serf PCBs, install these parts at U91, U92, U95, and U96. Leave the sockets for U93, U94, U97, and U998 empty. See *Replacing socketed components* on page 6 for assistance.
12. Locate the jumper header J19 on the Rev. D or E Serf PCB (4052B5011). For Rev. C Serf PCBs, this is J18. Use the drawings at the back of the manual to assist in locating this part.
13. On Rev. E PCBs, remove the jumpers from positions D, F, H, and J and reinstall them in positions C, E, G, and I. On Rev. D PCBs, remove the jumpers from positions 4, 6, 8, and 10 and reinstall them in positions 3, 5, 7, and 9. On Rev. C Serf PCBs, remove the jumper from position 4 and reinstall it in position 3.
14. Close the console and reconnect all previously removed cables.

Processor Unit upgrade

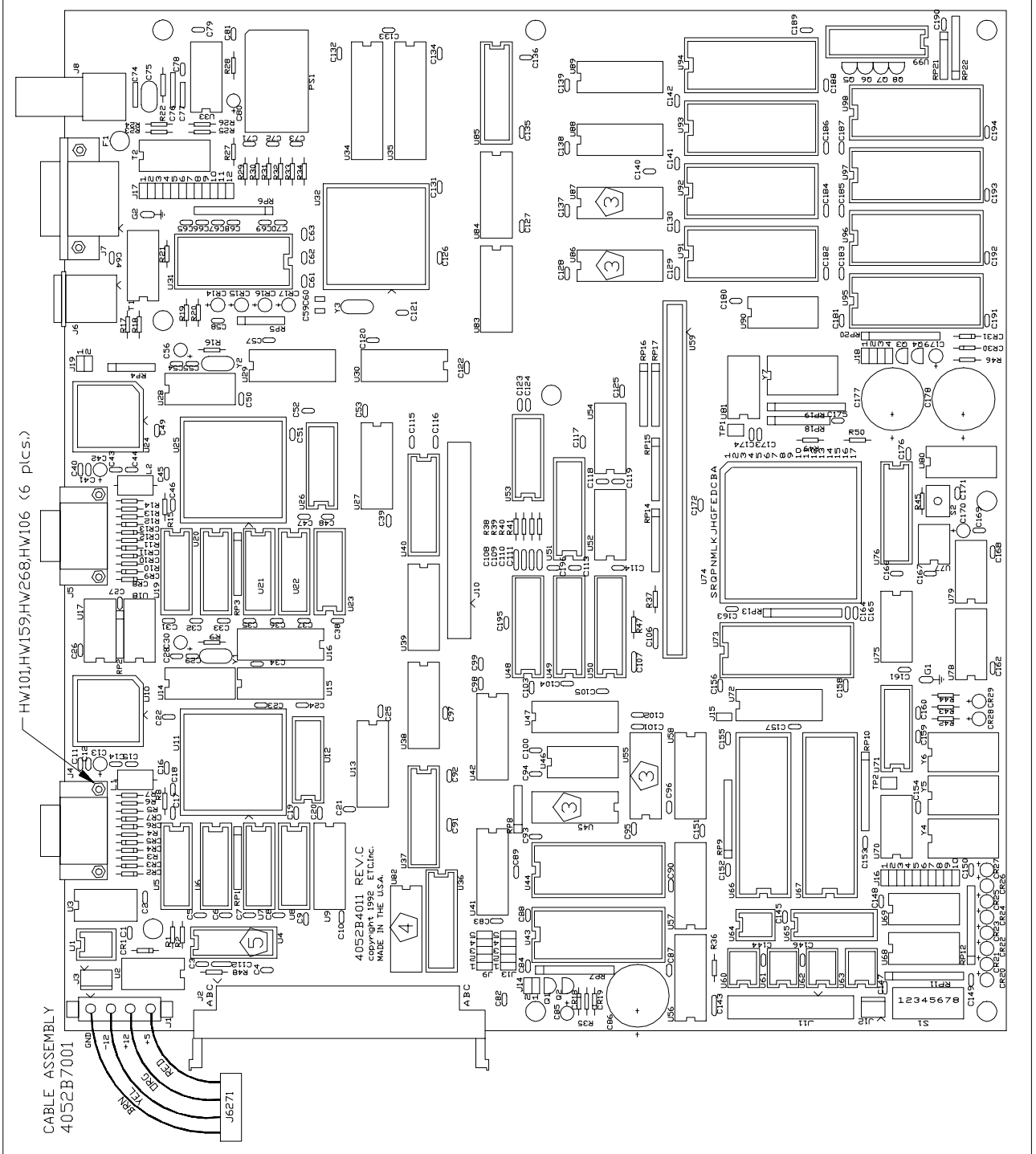
Turn the Processor Unit power off.

2. Check to ensure all cables have been removed from the back panel, including the power cord.
3. Loosen the four screws on the Processor Unit back panel brackets and remove the four screws on the front panel.
4. Remove the Processor Unit from the tower enclosure.
5. Place the unit top side up on a flat, antistatic work surface.
6. Remove the screws and top panel to gain access to the Serf board.
7. Locate U99 on the Rev. C, or U45 on the Rev. D or E Serf PCB (4052B5011). Use the drawings at the back of the manual to assist in locating this part.
8. Remove this part from its socket. See *Replacing socketed components* on page 6 for assistance.
9. Locate the component marked U45-1058 or U99-1015 in your upgrade kit.
10. Install this part in place of the previously removed U45 or U99.
11. Locate U69 through U72 and U94 through U97 on the Rev. D or E Serf PCB (4052B5011). For Rev. C Serf PCBs, these are U91 through U98. Use the drawings at the back of the manual to assist in locating these parts.
12. Remove these parts from their sockets. See *Replacing socketed components* on page 6 for assistance.
13. Locate the four components marked HM628512LP in your upgrade kit.
14. On Rev. D or E Serf PCBs, install these parts in place of the previously removed U69, U70, U94, and U95. Leave the sockets for U71, U72, U96, and U97 empty. For Rev. C Serf PCBs, install these parts at U91, U92, U95, and U96. Leave the sockets for U93, U94, U97, and U998 empty. See *Replacing socketed components* on page 6 for assistance.
15. Locate the jumper header J19 on the Rev. D or E Serf PCB (4052B5011). For Rev. C Serf PCBs, this is J18. Use the drawings at the back of the manual to assist in locating this part.
16. On Rev. E PCBs, remove the jumpers from positions D, F, H, and J and reinstall them in positions C, E, G, and I. On Rev. D PCBs, remove the jumpers from positions 4, 6, 8, and 10 and reinstall them in positions 3, 5, 7, and 9. On Rev. C Serf PCBs, remove the jumper from position 4 and reinstall it in position 3.
17. Reinstall the top panel on the Processor Unit and reinstall the Processor Unit in the tower.
18. Reconnect all previously removed cables.

SYM	DESCRIPTION	DATE	BY	APP

NOTES:

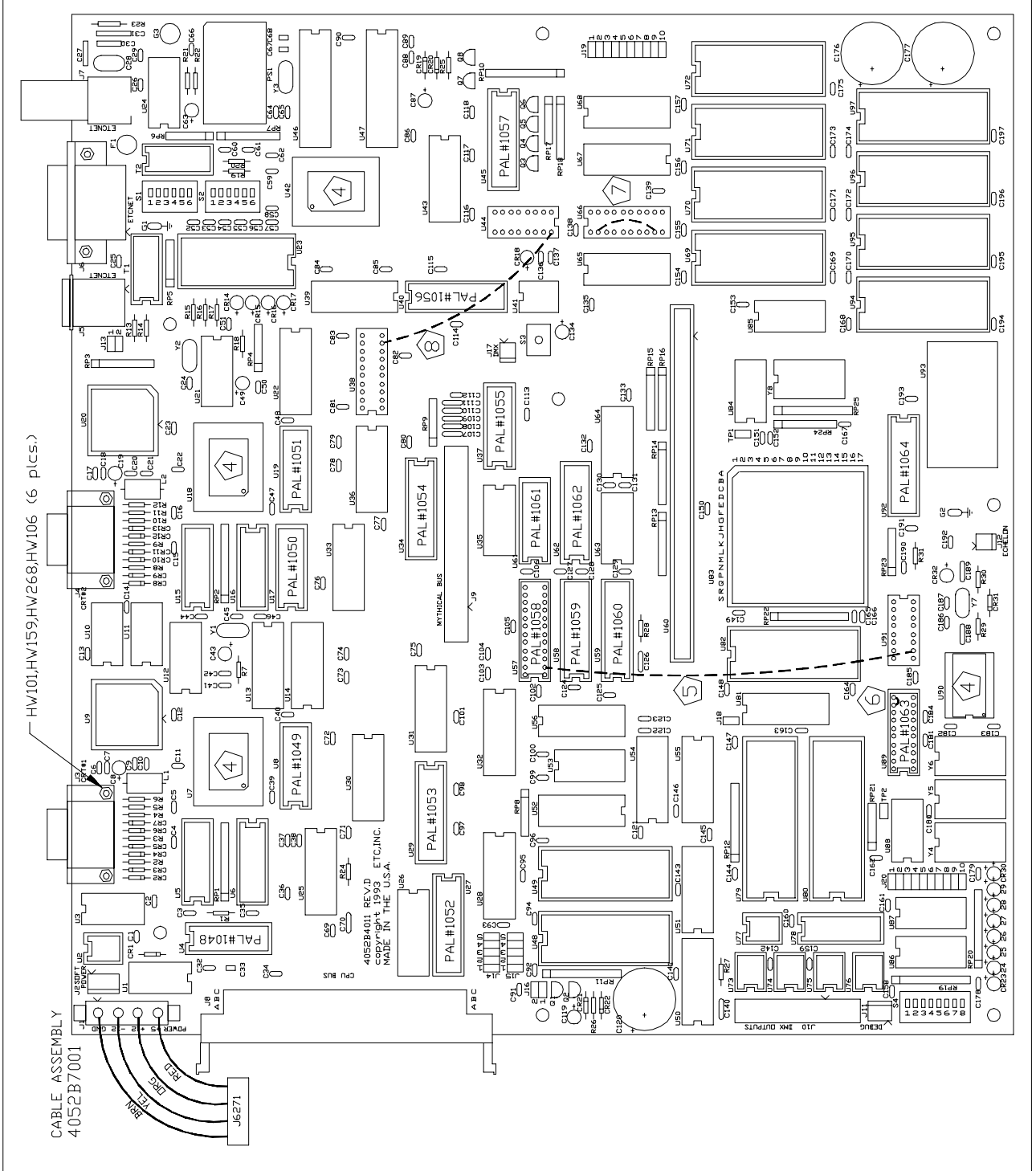
- TAPE FOR WAVE SOLDERING: J1, J4-J8, and U59.
- TACK FOR WAVE SOLDERING: J11 and J12.
- BEFORE INSTALLING U45, U55, U86, and U87: CUT PIN 1 OFF I.C. SO IT DOES NOT TOUCH THE BOARD. LEAVE ENOUGH OF THE LEG ON I.C. SO A MOD WIRE CAN BE ATTACHED AFTER WAVE SOLDERING. ATTACH MOD WIRE FROM PIN 1 TO PIN 20 OF I.C. ON COMP SIDE OF BOARD.
- ON SOLDER SIDE OF BOARD: ATTACH ONE LEAD OF R51 (47ohm) TO U82 PIN 10. ATTACH REMAINING LEAD OF R51 TO ONE SIDE OF C197 (47pF). ATTACH OTHER SIDE OF C197 TO U82 PIN 11.
- ATTACH MOD WIRE FROM U4 PIN 10 TO U4 PIN 11 ON COMPONENT SIDE OF BOARD.



SYM	DESCRIPTION	DATE	BY	APP

DATE: 10-12-93
 BY: J. Gajmrac
 APP:

DRAWING NUMBER: 4052B5011-D1.DWG
 4052B5011
 REVISION SERF BOARD ASSEMBLY
 SHEET 1 OF 2



NOTES:

- 1 TAPE FOR WAVE SOLDERING: J1, J3-J7, and U60.
 - 2 TACK FOR WAVE SOLDERING: J2, J8-J11, AND ALL MACHINE TOOL SOCKETS.
 - 3 PLACE MYLAR TAPE UNDER Y1-Y3.
 - 4 U7, U18, U42, AND U90 ARE SURFACE MOUNT COMPONENTS AND MUST BE INSTALLED FIRST.
- MAKE THE FOLLOWING MODS:
- 5 CONNECT U91 pin 10 TO U57 pin 2.
 - 6 CUT TRACE RUNNING TO U89 pin 11 ON COMPONENT SIDE. CONNECT U89 pin 11 TO U89 pin 12.
 - 7 CUT TRACES RUNNING TO U66 pin 2 ON SOLDER SIDE AND ON COMPONENT SIDE. CONNECT U66 pin 2 TO U66 pin 9.
 - 8 CONNECT U44 pin 1 TO U38 pin 9.



ELECTRONIC THEATRE CONTROLS, INC.
 3030 LAURA LANE
 MIDDLETON, WI 53562
 PHN: 608-831-4116
 FAX: 608-836-1736

THIS DOCUMENT AND THE SPECIFICATIONS DESCRIBED THEREIN ARE THE EXCLUSIVE PROPERTY OF ELECTRONIC THEATRE CONTROLS, INC. ISSUED IN THE STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED OR USED WITHOUT PRIOR WRITTEN PERMISSION OF ELECTRONIC THEATRE CONTROLS, INC.

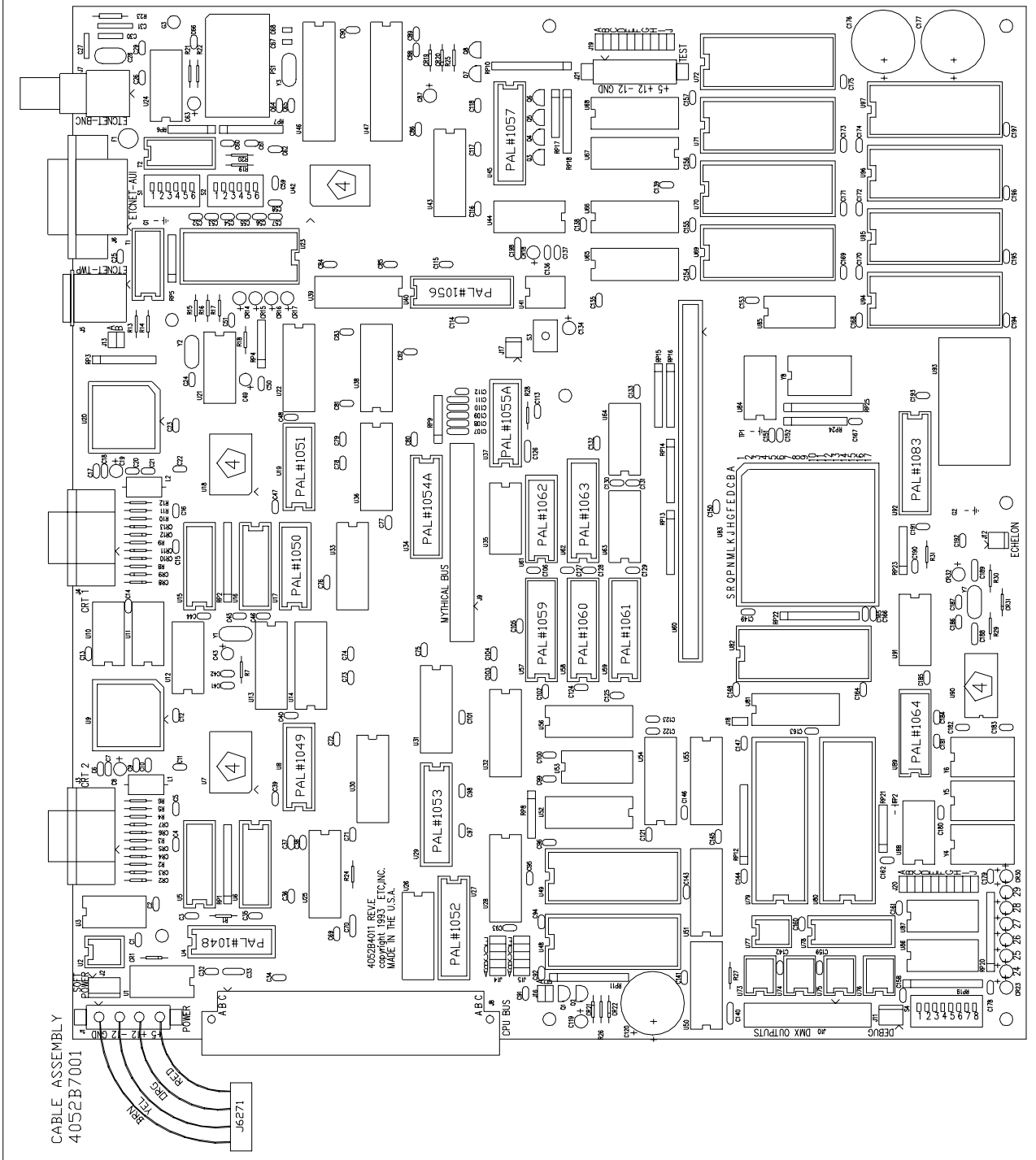
DATE: 12-26-94
 BY: J. G. Gajewski
 APP: [Signature]
 © 1994 ETC, Inc.

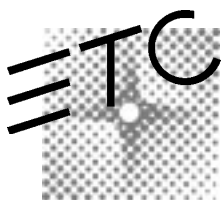
DRAWING NUMBER: 4052B5011-E1.DWG
 4052B5011
 DBSESSION SERF BOARD ASSEMBLY
 SHEET 1 OF 2

PCB# 4052B4011 REV. E	SCH# 4052B3011 REV. E
-----------------------	-----------------------

REV.	DATE	BY	APP	DESCRIPTION
E	12-26-94	JMG		ECD# 1666 REV. D TO REV. E MODIFICATIONS

- NOTES:**
- ① TAPE FOR WAVE SOLDERING:
J1 and J3-J7.
 - ② TACK FOR WAVE SOLDERING:
J2, J8-J11, AND ALL MACHINE
TOOL SOCKETS.
 - ③ PLACE MYLAR TAPE UNDER
Y1-Y3.
 - ④ U7, U18, U42, AND U90 ARE
SURFACE MOUNT COMPONENTS
AND MUST BE INSTALLED
FIRST.





Electronic Theatre Controls

North America 3030 Laura Lane • Middleton, Wisconsin 53562 • USA • Tel: (+1) 608 831 4116 • Fax: (+1) 608 836 1736

Europe 5 Victoria Industrial Estate • Victoria Road • London W3 6JU • Tel: (+44) 181 896 1000 • Fax: (+44) 181 896 2000

Asia Room 1619-20 • 16/F Metro Centre II • 21 Lam Hing Street • Kowloon Bay • Hong Kong • Tel: (+852) 2799 1220 • Fax: (+852) 2799 9325

Home Page <http://www.etcconnect.com> • **Email** mail@etcconnect.com

Copyright 1996. Specifications subject to change. 4052M1017. Revised 6/96