

# **Model 306C Addendum**

**to**

**Model 306**

**TECHNICAL  
MANUAL**

**CENTRONICS**

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## MODEL 306C ADDENDUM

### SCOPE

This addendum when used with the Model 306 Printer Technical Manual (No. 37400040 Rev. H and above) and the Series 300 Operators Manual (No. 37400231) describes the operation of Centronics Model 306C printer.

The organization of the Model 306C Addendum is the same as that of the Model 306 Technical Manual, which is grouped into the following sections:

- SECTION 1 - INTRODUCTION
- SECTION 2 - INSTALLATION
- SECTION 3 - OPERATION
- SECTION 4 - THEORY OF OPERATION
- SECTION 5 - REMOVAL, REPLACEMENT AND ADJUSTMENT PROCEDURES
- SECTION 6 - MAINTENANCE
- SECTION 7 - ELECTRICAL DRAWINGS AND LISTS OF MATERIALS
- SECTION 8 - MECHANICAL DRAWINGS AND LISTS OF MATERIALS
- APPENDICES - A - LOGIC BOARD TIMING  
B - PARALLEL INTERFACE SPECIFICATION

Instead of covering the difference between these two models (306C and 306) on a page by page basis, differences are described as they affect the various sections.



A  
of Data  
Model 31  
Series

## SECTION 1 GENERAL DESCRIPTION

The main difference between the Model 306 and 306C is the Model 306C has the capability of printing condensed as well as normal characters. The four available character densities are 10, 12, 15 and 16.5 characters per inch. A 306C can be configured to print any two of these four character densities. Selection between the two character densities is accomplished remotely via control code (octal 022), and locally by a switch located on the operator panel. Reception of a condensed character control code, selects the alternate character density, i.e., the density not specified by the switch. After the line of characters is printed, the character density returns to that selected by the switch.

For a full line of characters, the Model 306C prints at a rate of 55 lines per minute. The optional SINGLE/DOUBLE LINE FEED switch on the 306 is replaced by a NORMAL/CONDENSED print switch on a 306C. All other features described in Section 1 of the Model 306 Technical Manual apply to both the 306 and 306C.

## SECTIONS 2 AND 3 INSTALLATION AND OPERATION

The installation and operation procedures described in the Model 306 Technical Manual and the Series 300 Operators Manual also apply to the Model 306C printer.

### Note

*To print a line of data containing fewer than 132 characters, a CR code must be included after the last character in that line, otherwise, the data will be printed only after the 132nd character is received.*

## SECTION 4 THEORY OF OPERATION

Section 4 of the Model 306 Technical Manual (Rev. H and above) covers the operation of the new Logic/Power Supply board (No. 63060416) also used in the Model 306C. Specific timing applicable to a Model 306C with this new board is shown in Appendix A of the 306 manual.

To accommodate the maximum number of characters per line for all print densities, the 306C has a 132-character buffer. To initiate a print command prior to receiving the 132th character, a Carriage Return code (octal 015) must follow the last character in the line.

Also not covered in the 306 manual is the dual-channel Video Amplifier used in the Model 306C. This dual-channel video amplifier (shown in Section 7) is comprised of an optic pick-up assembly CR1, CR2, Q1, Q2 and operational amplifier ME1 and ME2.

The video amplifiers Q1 and Q2 convert light energy monitored through the timing fence into electrical energy. As the carriage moves, the light source CR1 or CR2 is interrupted by opaque bars on the timing fence, causing a pulsating output. Potentiometers R4 and R10 are set to provide a 50 per cent duty cycle at the output by adjusting the threshold at ME2 and ME4 pin 2. Thus a light signal at Q1 or Q2 provides a low VIDEO 1 or 2 output. VIDEO 1 output is the signal derived from the top section of the timing fence and VIDEO 2 is derived from the lower section.

## SECTION 5

### REMOVAL, REPLACEMENT AND ADJUSTMENT PROCEDURES

The slower print speed in the Model 306C affects the following major mechanical assembly in the Model 306 Technical Manual: (1) Drive Mechanism AD, (Part 1 of 2).

Due to the condensed character capability of the Model 306C two other mechanical assemblies are affected in the Model 306 Technical Manual: (1) Timing Fence (2) Operators Panel. All other assemblies are identical in both the 306 and 306C printers.

The operation, removal and replacement procedures for these assemblies are generally the same in the 306C and 306, but the actual assemblies differ as described in Section 8 of this addendum.

## SECTION 6

### MAINTENANCE PROCEDURES

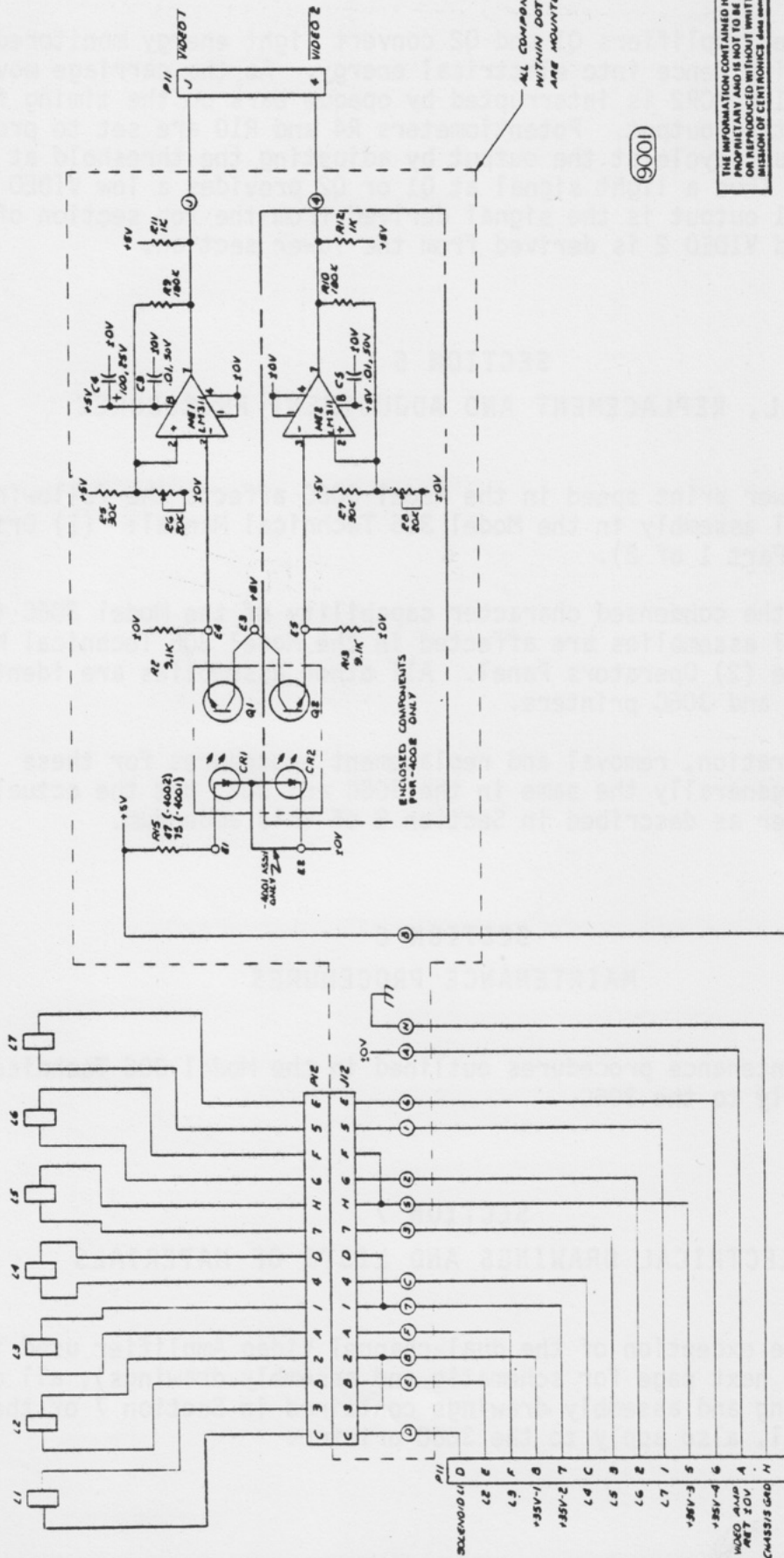
All maintenance procedures outlined in the Model 306 Technical Manual also apply to the 306C.

## SECTION 7

### ELECTRICAL DRAWINGS AND LISTS OF MATERIALS

With the exception of the dual-channel Video Amplifier used in the Model 306C (see next page for schematic and assembly drawings), all other schematic, wiring and assembly drawings contained in Section 7 of the 306 Technical Manual, also apply to the 306C printer.

REV	DATE	BY	REASON
1	10/15/64	WJ	REVISED PER ECO 1340221 (GERMAN) H17415AW

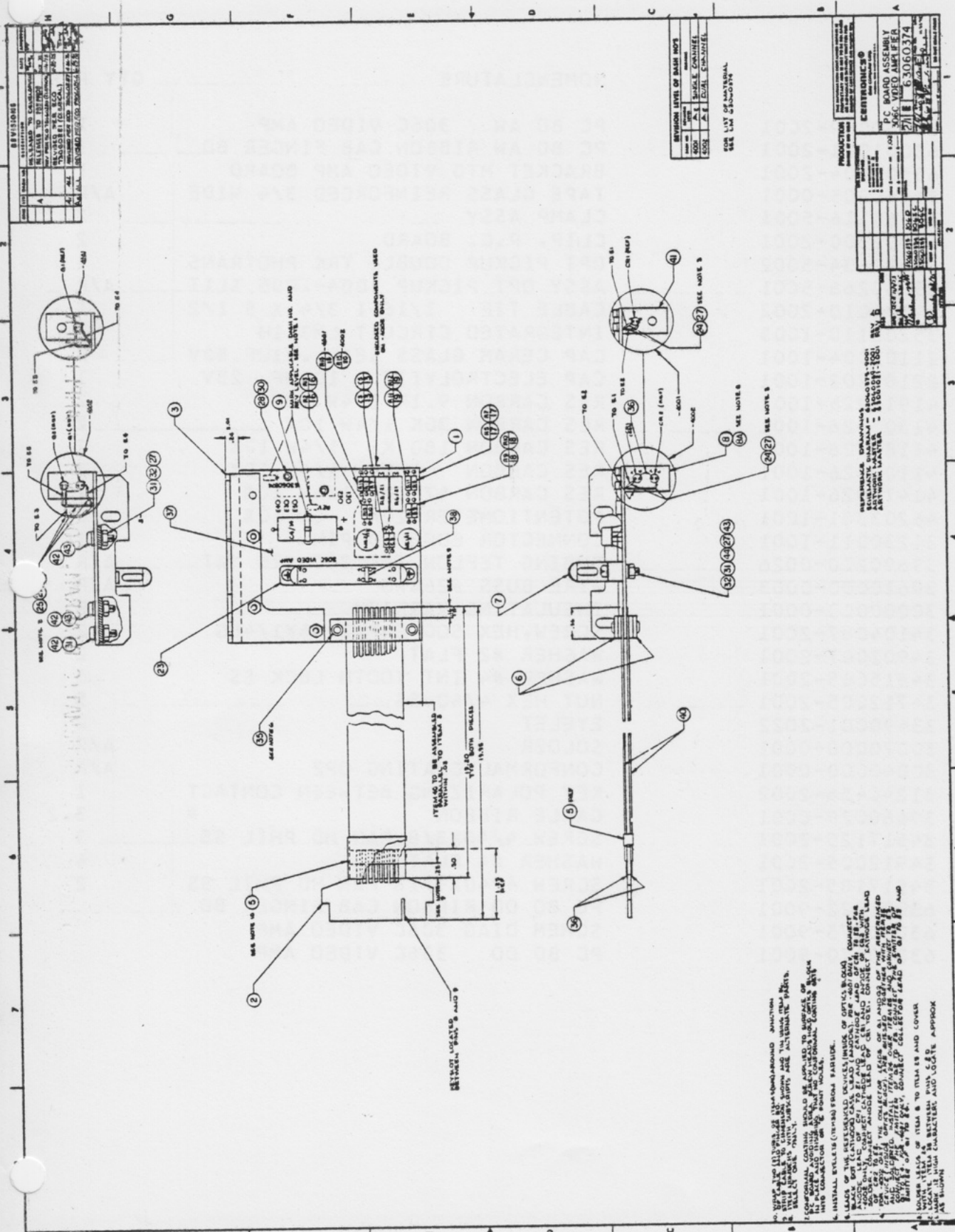


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306C VIDEO AMPLIFIER  
63060375 REV. A

Figure 7-7. SCHEMATIC DIAGRAM, 306C VIDEO AMPLIFIER





1. REMOVE THE (1) VOLTAGE REGULATOR AND ANTI-SURGE  
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 44. REMOVE THE (1) VOLTAGE REGULATOR AND ANTI-SURGE

Figure 7-16. P.C. BOARD ASSEMBLY, 306C VIDEO AMPLIFIER

LIST OF MATERIALS  
 COMPONENT BOARD ASSEMBLY  
 DUAL CHANNEL VIDEO AMPLIFIER  
 (REF. ASSY 63060374 - 4002 REV. A2)

ITEM	PART NO.	NOMENCLATURE	QTY PER
1	63060069-2001	PC BD AW 306C VIDEO AMP	1
2	63001021-2001	PC BD AW RIBBON CAB FINGER BD	1
3	63508104-2001	BRACKET MTG VIDEO AMP BOARD	1
5	35360005-0001	TAPE GLASS REINFORCED 3/4 WIDE	A/R
6	63060116-5001	CLAMP ASSY	2
7	63002300-2001	CLIP, P.C. BOARD	2
8	63002634-5002	OPT PICKUP DOUBLE TRK PHOTRANS	1
8A	63060266-5001	ASSY OPT PICKUP .004-.005 SLIT	A/R
9	39690010-2002	CABLE TIE 1/16-1 3/4 X 5 1/2	1
11	35203110-1003	INTEGRATED CIRCUIT LM311H	2
13	21103004-1001	CAP CERAM GLASS SEAL .01UF 50V	2
14	22107002-1001	CAP ELECTROLYTIC 100UF 25V	1
16	41912926-1001	RES CARBON 9.1K 1/4W 10%	2
17	41303926-1001	RES CARBON 30K 1/4W 10%	2
18	41184926-1001	RES CARBON 180 K 1/4W 10%	2
19	41102926-1001	RES CARBON 1 K 1/4W 10%	2
20	41470926-1001	RES CARBON 47 OHM 1/4W 10%	1
21	46203381-1001	POTENTIOMETER 20K 1W 10%	2
23	31230011-1001	CONNECTOR EDGE 20 PIN	1
24	39690200-0026	TUBING TEFLON TFT 200 #26 NAT	A/R
25	39610000-0003	WIRE BUSS #26AWG	A/R
27	30000000-0001	INSULATING VARNISH	A/R
28	34104087-2001	SCREW, HEX SOC CAP, 2-56X1/4LG	2
30	34902007-2001	WASHER #2 FLAT	2
31	34815005-2001	WASHER #4 INT TOOTH LOCK SS	6
32	34712005-2001	NUT HEX 4/40 SS	5
35	33490001-2022	EYELET	2
36	30070000-0001	SOLDER	A/R
37	30040000-0001	CONFORMAL COATING OP2	A/R
38	31240456-2002	KEY POLARIZING BETWEEN CONTACT	1
40	39660029-0001	CABLE RIBBON *	3.2
42	34517125-2001	SCREW 4/40X3/8 PAN HD PHIL SS	3
43	34912005-2001	WASHER #4 FLAT SS	4
44	34517185-2001	SCREW 4/40X9/16 PAN HD PHIL SS	2
REF	63001022-9001	PC BD DD RIBBON CAB FINGER BD	
REF	63060375-9001	SCHEM DIAG 306C VIDEO AMP	
REF	63060070-9001	PC BD DD 306C VIDEO AMP	