Media Control Systems

UDT-3006A

Operation Guide

P/N. 950-0024-02 Version 2.0

Media Control Systems

1050 Pioneer Way, Suite Q
El Cajon, CA 92020
Ph. 619-599-1050 Fax 619-599-1051
www.mediacontrolsystems.com

Table of Contents

CHAPTER 1 INTRODUCTION

1.1 Important Notice

Like any other piece of complex equipment, the UDT-3006A Universal Delay Timer Module will perform as designed only if it is installed, used, and serviced in accordance with the manufacturer's instructions.

All individuals who have, or will have the responsibility for installing, using, and servicing the product must carefully read this manual.

The warranties made by Media Control Systems, with respect to this product are void if the equipment is not installed, operated, and maintained in accordance with the instructions in this manual. Please protect you and your employees by following these instructions.

1.2 Features

- Six Independent Pulse Delay Timers
- Inputs Selectable for Positive or Negative Edge Trigger
- Inputs 5-12V TTL / Outputs Open Collector
- Outputs Selectable Positive or Negative Pulse
- Outputs Selectable Pulse or Length-of-Delay Duration
- Selectable Timer Reset and Output Disable Functions
- Delay Adjustable from One Second to 30 Minutes
- Compatible with Other Media Control Systems Modules/Systems

1.3 Module Description

The UDT-3006A is a universal delay timer module which has been designed for the utmost in flexibility. Six totally independent timers are contained on a single Media Control Systems 3000 series module. Each timer features internal jumpers which:

- Allow the timer to accept either a positive or negative edge trigger.
- Allow the timer output to be either a delayed 40ms pulse or a pulse of the delay length in duration
- Allow either a positive or negative going output.
- Allow a remote timer reset, output disable, or both.

  It is configured as a standard 3000 series module and is designed to occupy one module space in either a CMF-3000B 3.5" by 19" rack mount frame or a CMF-1000A 1.75" by 19" rack mount frame.

The module is approximately 6.25" x 1.25" x 3.5" (L x W x H). All connections to the module are made by means of a 20-pin card-edge connector which mates with the circuit board. All controls and indicators required for normal operation are mounted on the front panel of the module.

CHAPTER 2 INSTALLATION

This Section provides instructions on unpacking and inspecting the module, mounting it and making electrical connections. Note that if the module is purchased as part of a custom engineered system, it will already be installed. If it is purchased separately, the module must be installed according to the instructions given in this section.

2.1 Initial Inspection

Examine the shipping container for signs of damage which may have occurred in transit. Carefully inspect the components for damage. If damage to the equipment or a shortage in the shipment is noted, notify the carrier promptly. Make the proper claim with the carrier and contact Media Control Systems immediately.

2.2 Installation Requirements

The UDT-3006A Delay Timer module is normally provided as part of a factory assembled control system and no installation of the module is required. However, when ordered individually, it must be mounted by the purchaser in a Media Control Systems CMF-3000B, or CMF-1000A Mounting Frame. The UDT-3006A module is supplied with a mating 20-pin card-edge connector (J1) and a rectangular aluminum frame adapter. Mounted on the frame adapter is a 12 pin Phoenix connector, which provides a means of interfacing external signals to the inputs and outputs of the delay timer modules.

2.3 Installation Procedure

Wire +5VDC to Pin 2 on the card edge connector and Return (Ground) to Pin 1.

Refer to Table 2-1 to identify the pins used for the six inputs, six outputs, and six reset/disable lines.

Table 2-1

Edge Connector Pin Out			
A	Timer #3 Reset	1	Ground
B	Timer #4 Start Input	2	+5 VDC Input
C	Timer #4 Output	3	Timer #1 Start Input
D	Timer #4 Reset	4	Timer #1 Output
E	Timer #5 Start Input	5	Timer #1 Reset
F	Timer #5 Output	6	Timer #2 Start Input
H	Timer #5 Reset	7	Timer #2 Output
J	Timer #6 Start Input	8	Timer #2 Reset
K	Timer #6 Output	9	Timer #3 Start Input
L	Timer #6 Reset	10	Timer #3 Output

2.4 Jumper Positioning

Refer to Table 2-2, to identify the jumpers associated with each timer and to Table 2-3 for the location of each jumper on the module.

Note that all jumper pin numbers are determined by viewing the module with the component side up and the edge connector facing to your left. With the module in this position, all jumper pin numbering begins with pin 1 being either the topmost (vertical jumpers) or the leftmost (horizontal jumpers) pin in each group.

To properly setup the jumpers for your particular requirements, refer to Table 2-2 and Table 2-3 to perform the following procedures:

Input Polarity Select (J1, J7 ,J13, J19, J25, J31)
     a. For negative (low-going) edge triggering: Jump pins 1-2 and 3-4.
     b. For positive (high-going) edge triggering: Jump pins 2-3 and 4-5.

Delay Range Adjustment (Coarse) (J2, J8, J14, J20, J26, J32)
     c. For delays between one second and 60 seconds: Remove jumper.
     d. For delays between one minute and 30 minutes: Jump pins 1-2.

     NOTE: Fine adjustments of the delay time is obtained by adjusting the appropriate potentiometer. (See Table 2-2)

Reset Timer Select (J3, J9, J15, J21, J27, J33)
    NOTE: All reset signals must be Negative (Ground) pulses or closures. Separate jumpers on each timer allow a signal to : 1) Reset the timer (with an output pulse being generated at the time of reset), 2) Disable any output, or 3) Both reset the timer and disable any output.
     a. To RESET timer: Jump pins 1-2.
     b. To DISALLOW any RESET: Remove jumper.

Disable Time Select (J4, J10, J16, J22, J28, J34)
    NOTE: All disable signals must be Negative (Ground) pulses or closures. Separate jumpers on each timer allow a signal to: 1) Reset the timer (with an output pulse being generated at the time of reset), 2) Disable any output, or 3) Both reset the timer and disable any output.
     c. To ENABLE any output when the timer is reset: Jump pins 1-2.
     d. To DISABLE any output when the timer is reset: Jump pins 2-3.

Output Pulse Select (J5, J11, J17, J23, J29, J35)
     a. To obtain an output pulse which begins at the same time as the input pulse and ends at the delay timeout: Jump pins 2-3.
     b. To obtain an output pulse which begins at the delay timeout and lasts 40ms: Jump pins 1-2.

Output Polarity Select (J6, J12, J18, J24, J30, J36)
     c. For a Negative (low-going) output: Jump pins 1-2.
     d. For a Positive (high-going) output: Jump pins 3-4.

**Table 2-2. UDT-3006A Universal Delay Timer Module
Pinout / Jumper Table**

Timer	Input Pin	Output Pin	Reset/ Disable Pin	Input Polarity Select	Delay Range Select (Coarse)	Delay Adjust (Fine)	Reset Timer	Disable Output	Output Pulse Select	Output Polarity Select
1	3	4	5	J1	J2	R4	J3	J4	J5	J6
2	6	7	8	J7	J8	R9	J9	J10	J11	J12
3	9	10	A	J13	J14	R13	J15	J16	J17	J18
4	B	C	D	J19	J20	R18	J21	J22	J23	J24
5	E	F	H	J25	J26	R23	J27	J28	J29	J30
6	J	K	L	J31	J32	R27	J33	J34	J35	J36

Table 2-3. Jumper and Timer Locations

5

Table 2-4. Simplified Block Diagram

Input

Input Parity Select Jumper

IF Input Jump Pins 1-2 and 3-4

IF Input Jump Pins 2-3 and 4-5

Pulse Shaper

Reset Timer
Jump Pins 1-2

Pulse width Adjust
(Fine)

Variable Timer

**Reset /
Disable**

Enable Output
Jump Pins 1-2

Pulse width Adjust
(Course)

+5 VDC

Pulse Shaper

Disable Output
Jump Pins 2-3

Output Pulse
Width Select

For a Output Pulse the
same length as the delay
Jump Pins 2-3

For a 40ms Output Pulse
Jump Pins 1-2

Input Polarity Select Jumper

Positive going Pulse
Jump Pins 2-3

Negative going Pulse
Jump Pins 1-2

Output
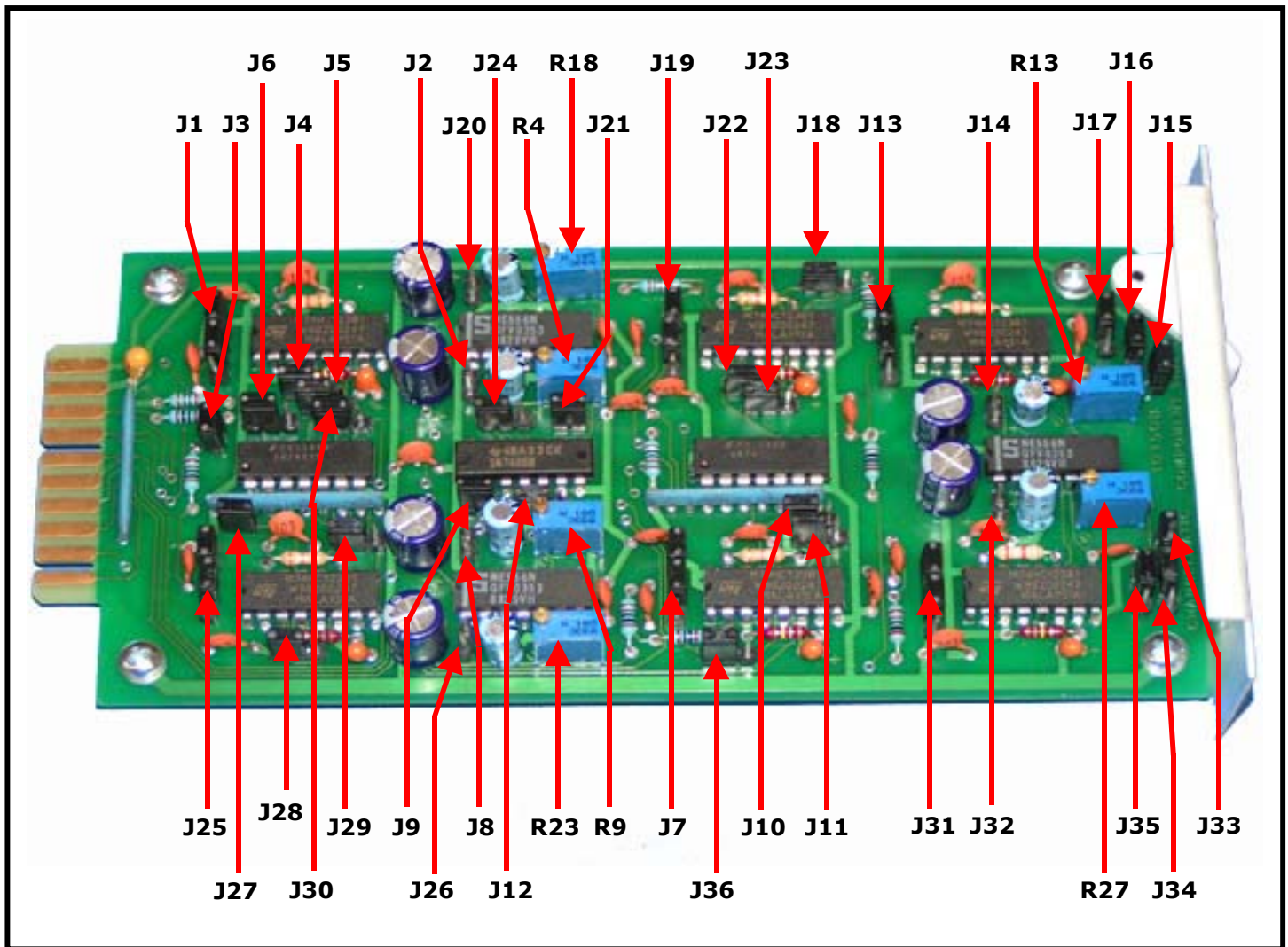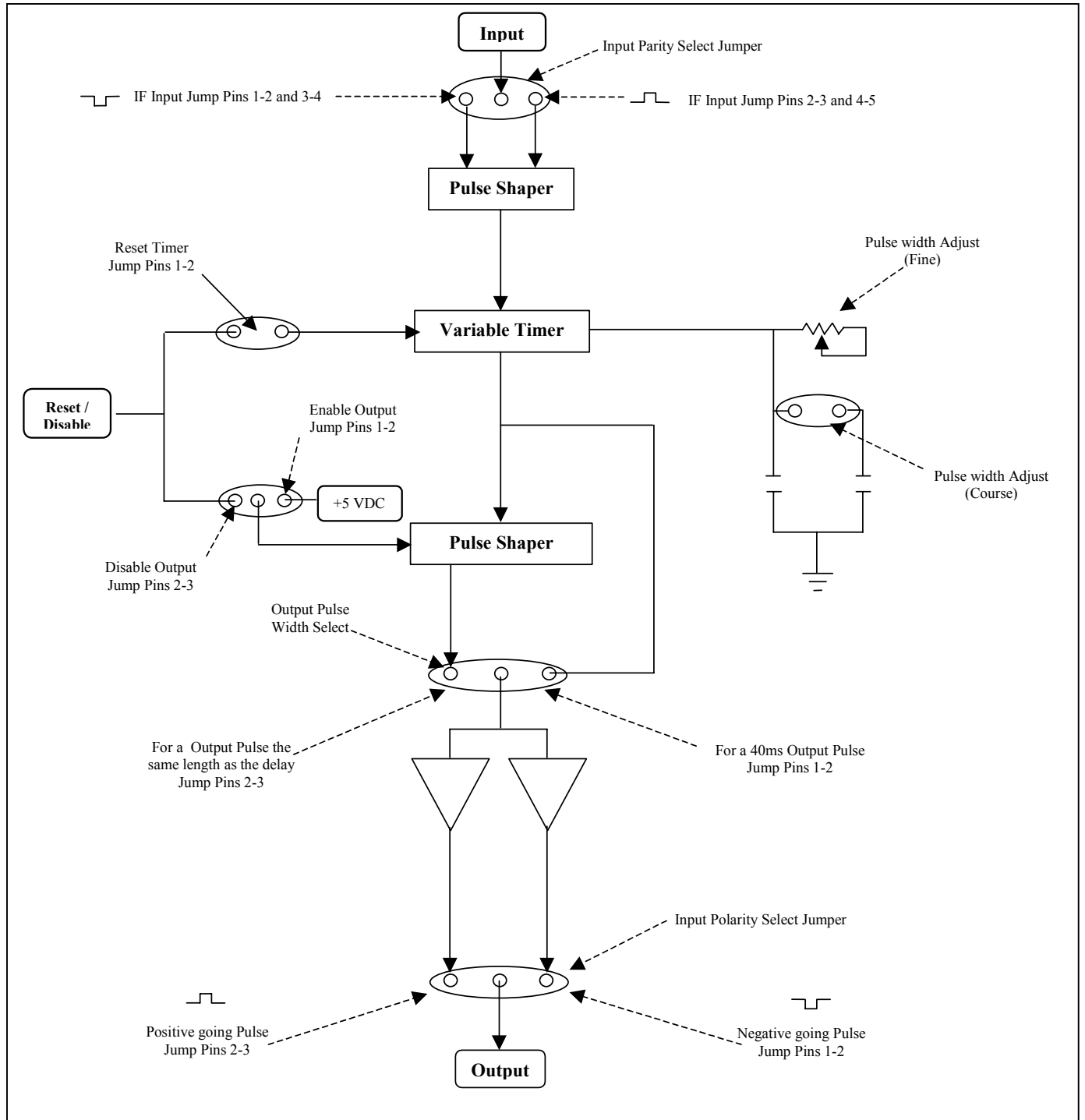
6

LIMITED WARRANTY

MEDIA CONTROL SYSTEMS, LLC, Warrants each new product manufactured by it to be free of defective materials and workmanship, and agrees to remedy any such defect by repair or replacement at no extra charge for a period of one (1) year from the original date of purchase.

This warranty does not extend to any MCS product subject to misuse, neglect, accident, improper wiring or installation, or used in violation of MCS instructions. Nor does it extend to equipment that has been altered outside MCS's factory without prior written approval, nor to equipment that has had the serial number removed, nor to accessories used herewith, which were not manufactured by MCS. Fuses and batteries are specifically excluded from this Warranty. Equipment sold by but not manufactured by MCS is warranted by the original equipment manufacturer.

The owner must deliver equipment covered by this warranty with all transportation charges prepaid, to the MCS factory for examination. If examination discloses, by MCS's judgement, that this is thus defective, the equipment will be repaired or replaced at no charge. Equipment returned prepaid under warranty and repaired in MCS's factory will be returned with all transportation charges, surface freight only, paid by MCS. Units that fail under conditions cited above, as being outside of the warranty extension will be repaired on a time-and-material basis after notification to and approval by owner. All freight incurred in repairing equipment not under warranty will be the responsibility of the owner.

In respect to any and all equipment furnished by MCS, this warranty is in lieu of any other warranty, obligation, or liability expressed or implied including warranty of merchantability or fitness for a particular purpose. No person, including a company representative, is authorized to assume for MCS any other liability in connection with the sale of its products.

Under no circumstances shall MCS be liable in contracts or in tort for any economic loss, including any loss of profits, or for any special or consequential damage.

All inquires relating to either product operation or warranty service should be directed to:

<div align="center">

Media Control Systems
1050 Pioneer Way, Suite Q
El Cajon, CA 92020
Ph. 619-599-1050
Fax 619-599-1051
www.mediacontrolsystems.com

</div>