



INSTRUCTION MANUAL  
TWIN ZONE U.V. CARD  
DITECH 967A

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1. GENERAL

The Ditech 967A contains two identical independent circuits (zones) which are used for the control and monitoring of U.V. Detectors type Swordflash 2 (Graviner) and/or 7600 (Detronics).

Each zone has the facility to automatically test the detector over a preset selectable time interval. The duration of the test is also selectable. A front panel test button (per zone) is provided to enable an independent of the test interval settings. If the detector(s) fails to respond to the test the zone(s) will indicate a fault condition.

## 2. CARD INPUTS AND OUTPUTS

All input and output connections are made to the card via a 64 way DIN 41612 edge connector with a 3 micron gold plating.

### 2.1. Power Supplies

Each zone requires a nominal 24v d.c. (20v - 32v) The power inputs are reverse polarity protected and over voltage protected. If the peak input voltage exceeds 33v the power fuses will rupture.

ZONE 1      +24v = Pin A1, B1  
              0v = Pin A2, B2  
              F1 = Input Fuse Rating 2A

ZONE 2      +24v = Pin A32, B32  
              0v = Pin A31, B31  
              F3 = Input Fuse Rating 2A

### 2.2. Inputs

These are all active low (0v)

#### a) Accept Alarm

An 0v input will cause the flashing alarm LED to go to a steady state.

ZONE 1 Pin 7A  
ZONE 2 Pin 26A

#### b) External Isolate

An 0v input will inhibit all alarm outputs and the zone(s) will indicate a fault condition.

ZONE 1 Pin 11A  
ZONE 2 Pin 22A

#### c) External Reset

An 0v input will reset any fault or alarm condition.

ZONE 1 Pin 10A  
ZONE 2 Pin 23B

### NOTE

A reset will initialize the test interval timing and test will occur after the time selected has expired. This can be used to stagger the test times of say a full rack of cards.

d) 1 Second Input

This input requires a square wave period 1 second to control the flash rate of the alarm LEDs and is normally driven from the Ditech 952 Audio Card.

ZONE 1 Pin 7B  
ZONE 2 Pin 26B

2.3. Card Outputs

a) Fault Relay

This is a normally energised N/C single pole C/O and is de-energised on a fault condition.

ZONE 1 Pin 6A, 6B  
ZONE 2 Pin 27A, 27B

Contact Rating 240v a.c. 10w  
Max I 0.5A

b) Alarm Relay

This is a double pole C/O and is energised on an alarm condition

ZONE 1	COM	-	PIN B14
	NO	-	PIN B9
	NC	-	PIN B11
	COM	-	PIN B15
	NO	-	PIN B10
	NC	-	PIN B12

ZONE 2	COM	-	PIN B21
	NO	-	PIN B17
	NC	-	PIN B19
	COM	-	PIN B20
	NO	-	PIN B16
	NC	-	PIN B18

Contact Rating 240v a.c. 10w  
I Max 0.5A

#### Module Isolated

This output is normally high (+12v) and changes to active low (0v) when the zone(s) are isolated.

ZONE 1 Pin 12A  
ZONE 2 Pin 21A

#### d) Test Enabled

This output is normally high (+12v) and changes to active low (0v) when the zone(s) switch is in the test position.

ZONE 1 Pin 12B  
ZONE 2 Pin 22B

#### Facility Update Outputs

There are two outputs per zone which are used in conjunction with the Ditech 952 Audio Card in order to provide an update of the fault and alarm conditions. These outputs are open collector drivers driving a simple CR network which produces an active low (0v) pulse.

ZONE 1	Alarm pulse output	Pin B8
	Fault pulse output	Pin B5
ZONE 2	Alarm pulse output	Pin B25
	Fault pulse output	Pin B28

#### Alarm Flash Output

This output is capable of sinking 300mA and is a facsimile of the front panel Alarm LED.

ZONE 1 Pin 8A  
ZONE 2 Pin 25A

Note this output is not inhibited by EXT ISOLATE or FRONT PANEL SWITCH ISOLATE position.

#### Alarm Logic Output

This output is normally high (+12v) and changes to active low (0v) on ALARM condition

ZONE 1 Pin 9A  
ZONE 2 Pin 24B

## 2.4. DETECTOR INPUTS AND OUTPUTS

The detector will require 4 connection wires as follows

- 1) Detector supply +VE
- 2) Detector supply -VE
- 3) Detector signal
- 4) Detector test

### Detector Supply +VE

This output provides a short cct protected nominal 24v DC.

A short cct condition will de-energise the fault relay and illuminate the fault LED. A reset will re-activate the output after the fault condition has been removed

ZONE 1 Pin 4B  
ZONE 2 Pin 29B

### Detector Supply -VE

ZONE 1 Pin A3, B3  
ZONE 2 Pin A30, B30

### Detector Signal

ZONE 1 Pin 4A  
ZONE 2 Pin 29A

Note see Diagram 1 for UV Connection

### Detector Test

This output provides the test signal and is protected by an onboard fuse.

ZONE 1 F2 rating 0.5A  
ZONE 2 F4

An onboard link determines the test Output Voltage

ZONE 1	LK C 1,2,	=	+24v
	LK C 2,3	=	0v
ZONE 2	LK D 1,2	=	+24v
	LK D 2,3	=	0v

Note

SWORDFLASH 2	=	+24v
7600 DETRONICS	=	0v



3. FRONT PANEL INDICATORS

Each zone has 4 LED indicators

a) Alarm LED (Red)

This LED will light up on an alarm condition and will flash until an except input is received.

b) Fault LED (Yellow)

This LED will light up on a fault condition and will extinguish only after the fault condition is removed and a reset applied.

c) Test LED (Green)

This LED will light up for the duration of the test period and will extinguish only after a signal is received from the detector.

d) Pilot LED

This LED will normally be on and will extinguish on any fault condition.

4. FRONT PANEL CONTROLS

Each zone has the following

- a) Lamp Test/Reset Push Button
- b) Manual Test Push Button
- c) Test/N/Isolate Toggle Switch

- a) Lamp Test Reset

This enables a test of the front panel LEDs and also a reset of alarm and fault conditions.

- b) Manual Test

This will initiate a test of the detector when operated.

Note 1

If used when toggle switch is in TEST POSITION all alarm outputs will be activated.

Note 2

The alarm LED will momentarily flash indicating a successful test.

- c) Test/N/Isolate

This switch is normally left in the N position. In any other position a fault condition is activated.

Isolate Position

Alarm relay and logic outputs are inhibited when in this position and are also non latching

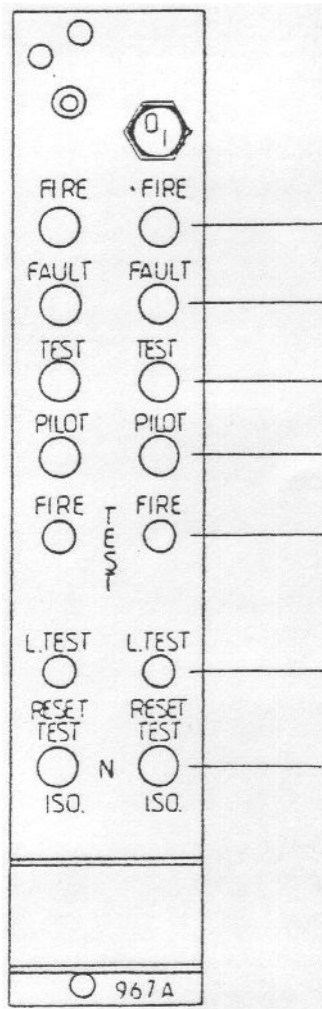
### Test Position

Alarm relay and logic outputs are not inhibited when in this position and are latching.

A Man Test will also actuate the alarm relay and logic outputs.

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TWIN ZONE U.V CARD  
 DITECH 967A  
 FRONT PANEL LAY-OUT



See 3A

See 3B

See 3C

See 3D

See 4B

See 4A

See 4C

5. AUTO TEST TIMING CONTROLS

The Test duration times and the Test interval times are preselected by means of an On Board DIL Switch.

Test Duration

ZONE 1	LKA 1	=	1 sec
	LKA 2	=	3 secs
	LKA 3	=	7 secs
	LKA 4	=	15 secs

ZONE 2	LKE 1	=	1 sec
	LKE 2	=	3 secs
	LKE 3	=	7 secs
	LKE 4	=	15 secs

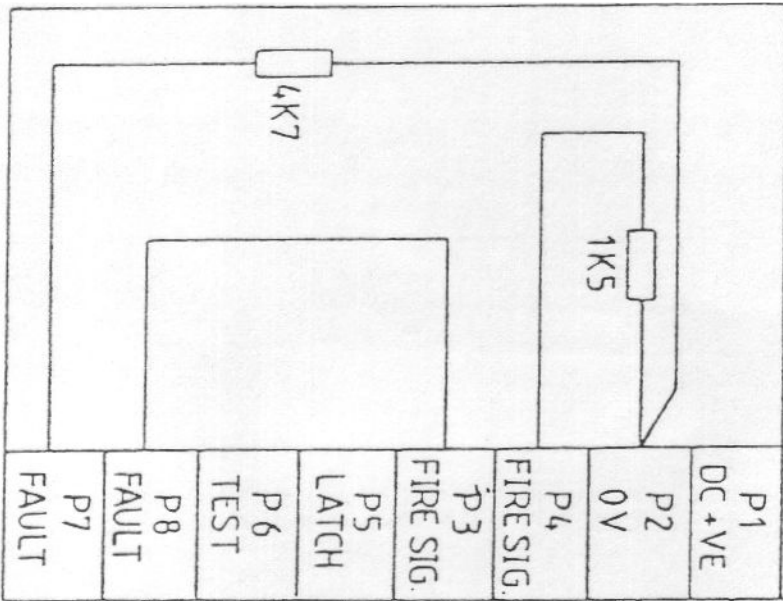
Test Interval

ZONE 1	LKB 1	=	15 minutes
	LKB 2	=	30 minutes
	LKB 3	=	1 hour
	LKB 4	=	8hours

ZONE 2	LKF 1	=	15 minutes
	LKF 2	=	30 minutes
	LKF 3	=	1 hour
	LKF 4	=	8 hours

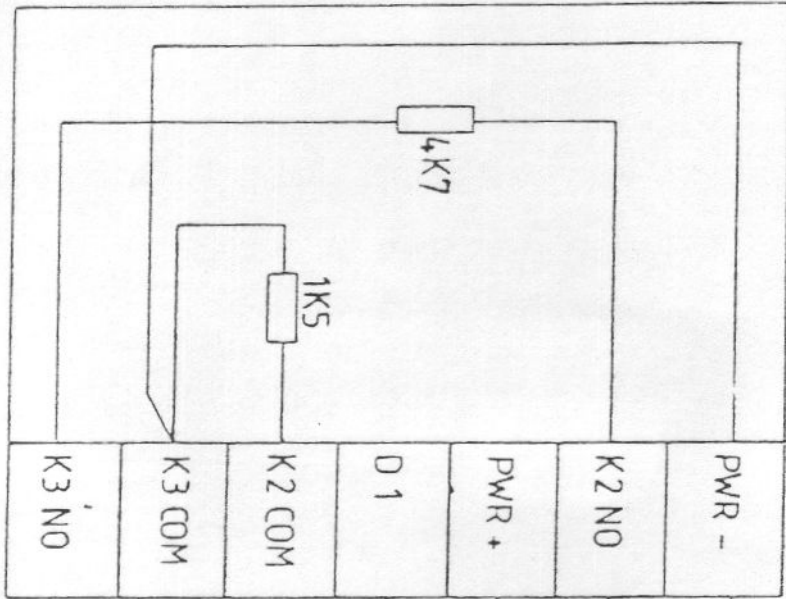
DIAGRAM 1A

GRAVINER SWORDFLASH 2



UV TWIN ZONE	FIRE	CARD	
3A0	DS-VE	ALARM A O/P	N/C
4A	DS+VE	ALARM A O/P	N/O
4B	D+VE	ALARM A O/P	COM
5A	AUDIO TEST O/P	ALARM B O/P	N/C
5B	PULSE ALARM	ALARM B O/P	N/O
5B	PULSE FAULT	ALARM B O/P	COM
10A	EX RESET	FLASHING ALARM	9A
70	1 SEC L/P	FLASHING ALARM	8A
		FAULT COMMON	60
12A	MOD ISOLATED	FAULT N/C	6A
11A	EX SOLATE	0V	2A0
7A	EX ACCEPT	24V	1A0
12B	TEST ENABLED		
ZONE 2			
30A0	DS--VE	ALARM A O/P	N/C
29A	DS+VE	ALARM A O/P	N/O
29B	D+VE	ALARM A O/P	COM
28A	AUDIO TEST O/P	ALARM B O/P	N/C
250	PULSE ALARM	ALARM B O/P	N/O
20B	PULSE FAULT	ALARM B O/P	COM
23B	EX RESET	CONT ALARM L/GC	24B
26B	1 SEC L/P	FLASHING ALARM	7A
		FAULT COMMON	20
71A	MOD ISOLATED	FAULT N/C	7A
77A	EX SOLATE	0V	31A
76A	EX ACCEPT	24V	31A
22B	TEST ENABLED		32A B

DET-TRONICS 7600



UV	TW	ZONE	FIRE	CARD	
3A0	DS-VL			ALARM A O/P. NIC	11B
4A	DS+VL			ALARM A O/P. N/O	90
5B	U+VE			ALARM A O/P. COM	140
5A	AUTO TEST O/P			ALARM B O/P. NIC	120
6B	PULSE ALARM			ALARM B O/P. N/O	100
7D	PULSE FAULT			ALARM B O/P. COM	150
7A	EX. RESET			ALARM B O/P. L.G.C.	7A
7B	1 SEC. L.P.			FLASHING ALARM	8A
14A	EX. ACCEPT			FAULT COMMON	60
11A	EX. ACCEPT			FAULT NIC	6A
7A	EX. ACCEPT			24V	2A0
12B	TEST ENABLED			24V	1A0
ZONE 2					
30A0	U5-VL			ALARM A O/P. NIC	19B
29A	U5+VE			ALARM A O/P. N/O	170
27D	U+VE			ALARM A O/P. COM	210
28A	AUTO TEST O/P			ALARM B O/P. NIC	18A
25D	PULSE ALARM			ALARM B O/P. N/O	16B
28B	PULSE FAULT			ALARM B O/P. L.G.C.	200
23B	EX. RESET			CONT. ALARM L.G.C.	24B
26B	1 SEC. L.P.			FLASHING ALARM	25A
71A	MOD. ISOLATED			FAULT COMMON	270
77A	EX. ACCEPT			FAULT NIC	21A
76A	EX. ACCEPT			24V	310
22B	TEST ENABLED			24V	32AB

DIAGRAM 13