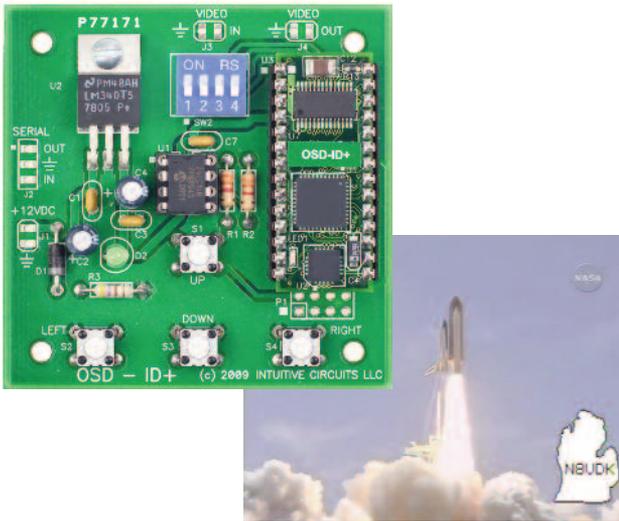


OSD-ID+™ with Carrier Board

Standalone static character and graphic composite video overlay

Version 1.00



Description

OSD-ID+™ is a single channel, standalone static character and graphic composite video overlay circuit. This user programmable device can display up to 30 columns by 12 rows (NTSC) or 15 rows (PAL) of text and imported graphics such as logos directly onto an incoming composite video source. If no video input source is available then OSD-ID+™ overlays text and graphics onto a self-generated background screen. The overlay can be configured to always display, appear on a configurable timer (e.g. every 10 minutes for 30 seconds), or appear on an external button press.

Included with OSD-ID+™ is font editing software. OSD-ID+™ firmware upgrades are supported via a PC connection.

Specifications

Dimensions:	2.5" L x 2.5" W x .7" H
Weight:	0.9 oz.
RoHS compliant:	Yes
Input voltage:	7.0 to 14.0 volts DC (150 ma max.)
Operating temperature:	-40C to +85C (extended temperature range standard)
Text area:	30 columns by 13 rows (NTSC) or 16 rows (PAL) Due to monitor over-scan a minimum of 26 columns and 12 rows (NTSC) or 15 rows (PAL) are visible
Character set:	256 definable characters. 12 x 18 pixels per character. Black, white, and transparent color.
Character attributes:	Blinking, inverted, and background frame
Graphic sprite max size:	27,648 pixels (e.g. 162 x 162 pixels)
Video format:	Composite video
Video level:	1 volt peak to peak
Video impedance:	Input 75 ohm, output 75 ohm resistively terminated

Installation

Connecting Solder Pads:

Solder Pads: +12VDC (J1)

Pad	Description
+12VDC	7.0 to 14.0 volts DC input
GND	Ground

Solder Pads: SERIAL (J2)

Pad	Description
OUT	OSD-ID+™ serial output (PC hookup attach to female DB-9 pin 2)
GND	Ground (PC hookup attach to female DB-9 pin 5)
IN	OSD-ID+™ serial input (PC hookup attach to female DB-9 pin 3)

Solder Pads: VIDEO IN (J3)

Pad	Description
VIDEO IN	Video input (optional)
GND	Ground

Solder Pads: VIDEO OUT (J4)

Pad	Description
VIDEO OUT	Video output
GND	Ground

Solder Pads: External Buttons (P1)

Note: P1 solder pad block is wired in parallel to the **Up**, **Down**, **Left**, and **Right** buttons

Dip Switch Configuration

OSD-ID+™ comes from the factory configured for NTSC video format. To re-configure settings OSD-ID+™ has 4 internal dip switches.

Note: DIP switch inputs are only checked during power-up.

DIP #	Description
1	UNUSED
2	UNUSED
3	NTSC or PAL video format OFF = NTSC ON = PAL
4	Firmware flash update OFF = Do nothing ON = Enter OSD-ID+™ firmware flash update

On-Screen Menu Configuration

During normal operation press the **Left + Right** buttons simultaneously to enter the on-screen menu configuration.

The **Up** and **Down** buttons move the menu selection cursor up and down. The **Right** button performs the action of the selected menu item. All configuration information is stored in non-volatile memory so information is retained even with loss of power to OSD-ID+™.

Main Menu:

Menu Option	Action / Setting
Overlay	Enable the on-screen overlay <ul style="list-style-type: none">• ON - Display the overlay text and graphics• OFF - Pass video through without displaying the overlay text and graphics
Screen Editor...	Enter the screen editor (see below)
Options Menu...	Display the Options Menu (see below)
Sprite Selection Menu...	Display the Sprite Selection Menu (see below)
Download From PC...	Display the Download Menu (see below)
Adjust Screen Position...	Adjust the screen position horizontal and vertical pixel offsets (see below)
Save Changes and Exit	Save changes and exit the Main Menu (hour glass appears during save)
Discard Changes and Exit	Discard changes and exit the Main Menu

Options Menu

Menu Option	Action / Setting
Overlay Mode	Overlay mode <ul style="list-style-type: none">• Always On - Always display the text and graphics overlay• On Timer - Display the text and graphics overlay at a specified interval• On Button - Display the text and graphics overlay when the Up button is pressed
Display Every __ Minutes	How often the text and graphics overlay is displayed if the "On Timer" mode is selected (01 - 99 minutes)
Display For __ Seconds	How long the text and graphics overlay is displayed if the "On Timer" mode is selected (01 - 60 seconds)
Display Instructions	Display instructions when entering screen editor, adjusting screen position, etc. <ul style="list-style-type: none">• ON - Display instructions• OFF - Do not display instructions
Clear Screen	Clear the entire screen with spaces
Main Menu	Return to the Main Menu

Sprite Selection Menu

Graphic images (such as logos) can be imported to create on-screen sprites using the font editor utility. A sprite is assigned to a range of characters in the font. Please see the font editor for details.

Menu Option	Action / Setting
Draw Sprite	Draw a graphic sprite on-screen. Sprites are configured in the font editor. <ul style="list-style-type: none">• ON - Display the sprite• OFF - Do not display the sprite
Sprite #	Sprite number to draw (0-15)
Horz Position	Horizontal screen position to draw the sprite <ul style="list-style-type: none">• Left, Center, or Right
Vert Position	Vertical screen position to draw the sprite <ul style="list-style-type: none">• Top, Center, or Bottom
Main Menu	Return to the Main Menu

Download Menu

Menu Option	Action / Setting
Download Font/Sprites...	Download font and sprites using the font editor utility
Download Screen Layout...	Download the screen layout using the optional PC screen layout utility
Main Menu	Return to the Main Menu

Screen Position Adjustment Instructions

Button(s)	Action
Left	Move the screen left one pixel
Right	Move the screen right one pixel
Up	Move the screen up one pixel
Down	Move the screen down one pixel
Up + Down	Reset screen offsets to default positions
Left + Right	Save screen position adjustments and exit

Screen Editor

The four button keypad allows users to program the screen overlay information with up, down, left, and right cursor movements. The tables below explain the button press combinations and actions.

Screen Editor Commands

Button(s)	Action
Left	Move the cursor left one position
Right	Move the cursor right one position
Up	Move the cursor up one position
Down	Move the cursor down one position
Left + Right	Enter character entry mode (see below)
Up + Down	Select character attribute settings (see below)
Up + Down + Right	Set the current character attributes (e.g. blinking)
Down + Left	Copy current character to the clipboard
Down + Right	Paste the character from clipboard and advance to the next cursor position
Up + Left	Shift the entire line that is right of the cursor left by 1 column
Up + Right	Shift the entire line that is right of the cursor right by 1 column
Up + Down + Left + Right	Exit the screen editor

Character Entry Mode Commands

Button(s)	Action
Up	Cycle through the character set (ascending)
Down	Cycle through the character set (descending)
Right	Save character and advance to next cursor position
Up + Down	Erase character with space and advance to next cursor position
Left + Right	Exit character entry mode

Character Attributes Settings

Menu Option	Action / Setting
Blinking	Character blinking state <ul style="list-style-type: none">• ON - Blink on• OFF - Blink off
Background Frame	Character background frame state <ul style="list-style-type: none">• ON - Background frame on• OFF - Background frame off
Inverted	Character invert state <ul style="list-style-type: none">• ON - Invert on• OFF - invert off

Default Font

Below is the default OSD-ID+™ font. Use the supplied font editor software to modify or create your own font and graphic image sprites (e.g. logos). Do not modify the empty character at position 0. It is recommended to not remove the characters highlighted in red. These characters can be modified but they are used in the OSD-ID+™ on-screen menu configuration.

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
0	X	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1	0	1	2	3	4	5	6	7	8	=	↑	↓	←	→	□	■	
2		!	"	#	\$	%	&	'	()	*	+	,	-	.	/	
3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?	
4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
5	P	Q	R	S	T	U	V	W	X	Y	Z	[\]	^	_	
6	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	
7	p	q	r	s	t	u	v	w	x	y	z	{		}	~		
8	[Empty Row]																
9	[Vertical Bars]																
A	[Icons: Square, Circle, Triangle, Gear, etc.]																
B	[Icons: Folder, Trash, Search, Copy, Paste, etc.]																
C	[Icons: Arrows, Circle, Plus, etc.]																
D	[Icons: L-shaped, U-shaped, etc.]																
E	[Icons: Checkmark, Text, etc.]																
F	[Icons: Heart, Plus, Fractions, etc.]																

OSD-ID+ Font Editor Download Instructions

To download the OSD-ID+™ Font Editor PC Utility go to the Intuitive Circuits secure download page at http://www.icircuits.com/store/downloads_secure.php

Login: contact Intuitive Circuits
Password: contact Intuitive Circuits

Please do not share the login and password with others.

- Download the Font Editor.zip file then unzip the file into a temporary folder
- Run setup.exe
- After the installation is complete the temporary folder can be removed
- The program shortcut is located on the computer desktop and in the Start>>Programs>>Intuitive Circuits folder.

PC System Requirements: Microsoft Windows 2000 operating system or later with minimum 1024 x 768 video screen resolution and one RS-232 serial port (or USB to RS-232 converter).

Trouble Shooting Tips

Problem	Solution
Green LED off (won't power up)	<ul style="list-style-type: none">• Verify power supply polarity is correct• Verify power supply output is 7.0 to 14.0 volts DC when attached
On-screen text and graphics skewed	<ul style="list-style-type: none">• Verify good quality video input source

Warranty & Service

If the product fails to perform as described in our product description or specification, within 1 year from the date of shipment to the buyer, we will repair or replace the product and/or accessories originally supplied. Failure due to improper installation, misuse, abuse or accident is not covered by this warranty. Incidental and consequential damages are not covered by this warranty. The buyer must first obtain a Return Material Authorization number by calling (248) 588-4400, or send email to support@icircuits.com. Ship the defective product (with RMA number) to Intuitive Circuits, 3928 Wardlow Ct., Troy, MI 48083, freight prepaid.

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