

KSA-12

Industrial Keypad Controller

For the Sprite media player

FW version 1.0

Manual version 1.00



Note that this manual may change periodically

Please go to www.MedeaWiz.com for the latest version

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Introduction

The KSA-12 keypad allows you to play up to 99 video or audio files on the Sprite® media player. It is plug-N-play for the Sprite with only a change in the Sprite Setup Menu. It uses a commercial / industrial grade sealed keypad from Storm. This keypad is rated for 2 million presses for each button. The heavy wall plastic housing provides screw holes and may be mounted on a surface or behind a panel. The assembly is water resistant, and may be used outdoors. It could be further sealed for harsh environments. It comes with an approximately 15 foot cord installed. The KSA-12 uses a version of our 8X78 circuit board. The Microchip PIC 18F23K22 processer can be custom programmed by us or by you for special requirements.

With the Sprite you can have a looping video and control other videos to play by pressing the buttons. Once the commanded video ends, the looping video will play again until a new button press command is received. You can choose to allow an interrupt from a new button press, or not to allow an interrupt, by an internal jumper switch.

The KSA-12 is powered by the Sprite over the included 3.5mm 4 pole plug-in cable. The cable can be replaced easily in the field if it becomes damaged.

Quick Start Guide

Enter the Sprite's Setup Menu using the remote control.

Make settings as follows:

Play Mode = Video Control Mode (for video files) OR Audio Control Mode (for audio files)

Control Mode = Serial Mode

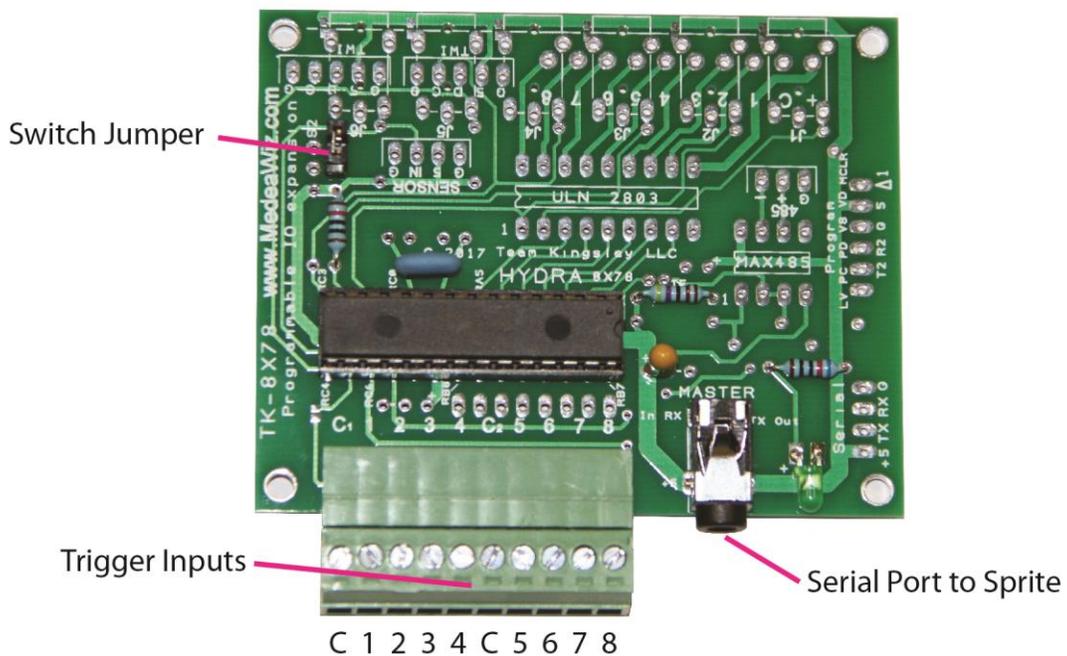
Baud Rate = 9600

On your SD or USB drive, you must have a loop file named 000.

Then add up to 99 files named 001 up to 099.

Press one or two digits then press the green "enter" key to play the file.

Pressing the red "clear" key will clear any digit entered.



8X78 PCBA inside of the KSA-12

Trigger input terminal block is not installed for the KSA-12 assembly

Switch Jumper S1 installed = no interrupt. Removed = interrupt on new trigger.

See the Cable Replacement section below to access the jumper setting.

KSA-12 Options

The KSA-12 comes pre-programmed to play up to 99 files plus the 000 looping file. Contact us for a quote on a custom program to meet your special requirements.

The KSA 12 can be re-programmed by anyone. The Program Port allows direct programming of the PIC processor using available third-party tools such as the PICKit™ 3. Free software development tools are available from <http://www.microchip.com/>

Cable Replacement / Weather sealing

The 3.5mm 4 pole serial cable can be replaced easily in the field. Remove the rear cover of the housing using a cross-point Philips screwdriver. Unplug the old cable and insert the new one. Replace the housing cover.

The Storm keypad is rated at IP65 water and dust resistant. It is sealed to our housing with a rubber gasket. Our housing is not sealed at the cable entry point to allow easily changing the cable. If the keypad is mounted in a normal manner no water will enter. The cable entry area could be sealed using silicone RTV caulking.

Processor IO Port / Pin Usage

8X78 Port Pin Usage Chart

PIC I/O	8 Pushbutton	Matrix input ³	USART	Sinking Outputs	Slave Sprite Ports	Option Jumpers	TWI Port	485 Port	Sensor Port
RA0				1	J1 TX				
RA1				2	J2 TX				
RA2				3	J3 TX				
RA3				4	J4 TX				
RA4				5	J5 TX				
RA5				6	J6 TX				
RA6 ¹									
RA7 ¹									
RB0	1	x							
RB1	2	x							
RB2	3	x							
RB3	4	x							
RB4	5	x							
RB5	6	x							
RB6	7	x	TX2					TX	
RB7	8	x	RX2					RX	
RC0				7	J1 RX				
RC1				8	J2 RX				
RC2					J3 RX	S1		TE ²	
RC3					J4 RX	S2	SCL		
RC4		x			J5 RX		SDA		
RC5		x			J6 RX				x
RC6			TX						
RC7			RX						

1) RA6 and RA7 are used for the installed resonator. They can be used for I/O if the internal oscillator is used.

2) The Transmit Enable of the 485 port must be connected by jumper to RC2 or any other unused I/O pin.

3) Matrix inputs may be from 2x3 to 5x5. The 5x5 option requires adding pull-up resistors and solder gap bridges for RC4 and RC5, and trace cuts at C₁ and C₂.

What's included

The KSA-12 comes as pictured on the cover with

- 1) Pre-programmed PIC processor installed
- 2) 3.5mm 4 pole plug to plug cable, for direct plug connection to the Sprite.

Support

We do our very best to answer your calls and emails in a timely manner. We generally return calls and emails within 2 hours or less during business hours. We do monitor emails in the evenings and weekends and will try to respond outside of business hours.

Please read the entire manual. If we have a good manual then we will get fewer calls. Let us know where we can improve it to help others in the future.

If you are still having trouble, or need technical support for some other application, please email or call us. We are here to help when you need it.

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Custom Orders

We can offer:

Bare circuit boards

Custom programming

Please email sales@MedeaWiz.com or your Distributor for a quote.