

Onstate Technologies			Bill of Materials:	Bargraph Meter		
www.OnstateTech.com		file: BOM CIR-ARCM8 ISD1900 R-P		PCB Version: 1	Date: Sept. 17/17	
Note: All resistors are, 5%, 1/8W, axial, CF						
Part #:	Qty.	Value:	Description:	Note	Digikey #:	MFG #
R1, R2	2	2.2k	2.2k (1.0k-4.7k) ohm resistor	LED brightness	2.2KEBK-ND	CFR-12JB-52-2K2
R3	1	56k	56k ohm resistor	sample freq oscillator	56KEBK-ND	CFR-12JB-52-56K
R4, R5	2	4.7k	4.7k ohm resistor	match MIC1 for 1/2V	4.7KEBK-ND	CFR-12JB-52-4K7
R6, R7, R8	3	10k	10k ohm resistor	audio in/out load	10KEBK-ND	CFR-12JB-52-10K
		103	0.01uF cer cap parallel R8 for audio out filter	optional LP filter, 0.2"	478-4862-ND	SR215C103KAR
R12	1	56k	56k ohm resistor	IC1 audio out load (optional)	56KEBK-ND	CFR-12JB-52-56K
D1	1	1N4001	diode, 1.0A, generic (DO-41)	input DC power polarity	1N4001GOS-ND	
D2, D3	1	1N4148	diode, 200mA, generic (DO-35)	audio out AC clamp	1N4148FS-ND	
C1,C3,C7,C8	4	224	0.22uF (224) X7R cer. cap ±10%, 0.1"	DC power load/noise filter	445-173137-1-ND	FG14X7R1H224KNT06
C2	1	220uF	220uF(100-470uF, 16-35V) alu ele cap 20%, 0.2"	DC power load/noise filter	493-6097-1-ND	UVR1E221MPD1TA
C5	1	100uF	100uF (22-220uF) alu ele cap 20%, 0.1"	DC power load/noise filter	399-6545-ND	ESH107M016AE3AA
C6	1	10uF	10uF (4.7-47uF) alu ele cap 20%, 0.1"	DC power filter (optional)	any	
C12	1	475	4.7uF (475, 2.2-6uF) X5R, cer. cap, 0.1"	MIC AGC delay	445-5337-ND	FK16X5R1C475K
C9,C10,C11, C13, C14	5	224	0.22uF (224) X7R cer. cap ±10%, 0.1"	Audio AC filtering	445-173137-1-ND	FG14X7R1H224KNT06
VR1	1	10K	10k (103) trimmer resistor, 3362P, 3362U=inline pin	Audio volume adjust	3362P-103LF-ND	3362P-1-103LF
IC1	1	ISD1932SYI	ISD IC 8-CH voice REC/PLAY, PMW speaker out	32s, SOIC-28	ISD1932SYI-ND	ISD1932SYI1
		ISD1932SYI01	ISD IC 8-CH voice REC/PLAY, aux audio out	32s, SOIC-28	ISD1932SYI01-ND	ISD1932SYI01
		ISD1964SYI	ISD IC 8-CH voice REC/PLAY, PMW speaker out	64s, SOIC-28	ISD1964SYI-ND	ISD1964SYI1
		ISD1964SYI01	ISD IC 8-CH voice REC/PLAY, aux audio out	64s, SOIC-28	ISD1964SYI01-ND	ISD1964SYI01
REG1	1	7805	5V regulator, 1A, TO-220	5V any.	7805	
H1	1	CONN	2-POS term block, PCB, 0.15" (3.81mm)	DC input conn	609-3918-ND	YO022150000G
H2	1	HD-8	8-pin header, open, 0.1"	Ext. SW control	any	
H3	1	HD-6	6-pin header, 2x3, open, 0.1"	MSG config.	any	
H4, H6, H7	3	HD-3	3-pin header, 0.1"	Function ctrl	any	
H5	1	HD-2	2-pin header, 0.1"	FT mode	any	
JP	6	shunt	2-pos shunt jumper, 0.1"	setting ctrl	any	STC02SYAN
SW1-SW8	8	SPST	SPST-NO tactile switch	MSG SW	EG2512-ND	TL1107BF130WQ
LED1, LED2	2	LED	red, green, 5mm LED, 0.1"	LED	any	
NOTE: PCB silkscreen LED2 label is reversed. Insert/solder LED2 reverse to get correct polarity.						
MIC1	1	microphone	electret condenser microphone	any 2.2k 2-10V	668-1296-ND	AOM-6738P-R
		conn	option MIC on 0.1" 2-pin socket/header			
		103	optional 0.01uF, LP audio speech filter	solder parallel to MIC1		
PCB	1	ARCM8	8-CH RED/PLAY module	PCB	PCB-ARCM8	ONSTATE
Audio Power Amplifier (for SYI01 IC)						
R9	1	10k	10k ohm resistor	gain gnd.	10KEBK-ND	CFR-12JB-52-10K
R10	1	100k	100k ohm resistor	gain+ x10	100KEBK-ND	CFR-12JB-52-100K
R11, R12	2	56k	56k ohm resistor	op-amp offset	56KEBK-ND	CFR-12JB-52-56K
		103	0.01uF cap parallel R12 for audio LP filter	optional LP filter, 0.2"		
C4	1	105	1.0uF (105) X5R cer. Cap, 0.1"	DC power load (optional)	445-173257-1-ND	FG18X5R1H105KRT06
C15, C16	1	224	0.22uF (224) X7R cer. cap ±10%, 0.1"	amp LP filter	445-173137-1-ND	FG14X7R1H224KNT06
C17	1	220uF	220uF (100-470uF, 16-35V) alu ele cap 20%, 0.2"	audio out AC load	493-6097-1-ND	UVR1E221MPD1TA
H1	1	CONN	2-POS term block, PCB, 0.15" (3.81mm)	DC input conn	609-3918-ND	YO022150000G
IC2	1	LM1875T	IC Audio Amp. 20W MONO TO220-5	TDA2030A	296-35115-5-ND	LM1875T/LF03
		102	1.0nF (102, 101-222) cer cap IN+/- audio HF filter	HF noise filter (optional)		
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PCB specifications:						
FR4, 2 layers PCB. Through hole plating. SMOBC (tin, HASL finish), Lead-free						
Size = 2.28"x2.16"+/-0.01", Mounting holes = 4x 95mil at 2.0"x1.90"						