MODEL 2008C

MICROPHONE STATION CONTROL CARD

The Model 2008C Microphone Station Control Card is a component of the IED 200 Series UDAPS™. It performs all functions necessary to power and control 8 remotely located IED microphone stations or telephone interfaces. These functions consist of 1., supplying short circuit protected +30 VDC for phantom powering of microphone stations, 2., individually reading and controlling all functions of microphone stations, and 3., reporting microphone station status, and 4., indication of status and access.

Each card has three LED indicators. As viewed from the front of the mainframe, the upper green LED indicates CPU access, the second green LED indicates that the internal phantom power supply is on and functioning, and the lower red LED indicates the existence of a fault in the on-board CPU.

The digital control information to and from the microphone station is modulated on the +30 VDC. Control data is transferred at a 19.2 kBaud rate.

The 2008C mounts in the 2012M Mainframe. All card connections, except for the optional RS232/RS422 interface, are made through the 96-pin euro connector to the mother board. All microphone station connections are made via compression-type screw terminal connectors on the rear of the mainframe. The optional RS232/RS422 connections are made through 9-pin sub D connectors on the front edge of the card. For an RS232 link , a single 9-pin sub D connector is used. For an RS422 link, the input connector is male and the output is female.

A momentary push-type reset switch is provided to reset the on-board CPU, if required. The reset switch is located on the front edge of the card.

The block diagram, Figure 1, illustrates the control functions of the 2008C card.

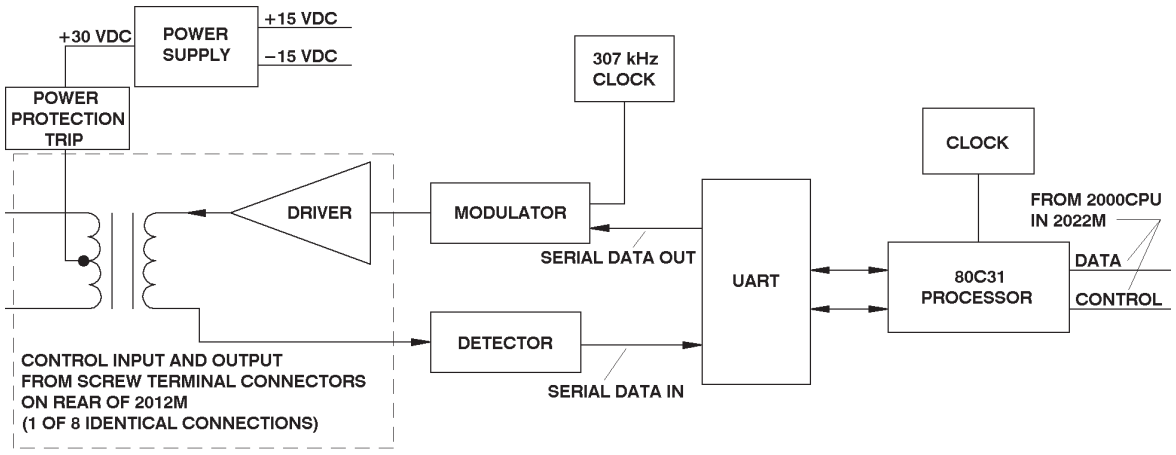

Figure 1 - 2008C Block Diagram

IED®
Innovative Electronic Designs

SPECIFICATIONS

ELECTRICAL, ANALOG

1. Power Supply
   Supply Voltage Range
   +15 V Supply . . . . . 14.25 V to 15.75 V
   – 15 V Supply . . . . . –14.25 V to –15.75 V
   +5 V Supply . . . . . 4.75 V to 5.25 V
   Supply current
   (2008C card, only. For current drain of microphone stations, see Table 1.)
   V= +15 V . . . . . 40 mA
   V= –15 V . . . . . 40 mA
   V= +5 V . . . . . 180 mA
2. Phantom Power supplied to Microphone Stations . . . . . 30 V, ±5%
   '+' and '–' terminals are both positive with respect to 'S' terminal
3. Phantom Power Supply Overload Protection Trip Point . . . . . 3.04 A
4. Individual Microphone Station phantom power protection trip point . . . . 380 mA

ELECTRICAL, DIGITAL

1. Number of Control Inputs 8
2. Control Signal Data Transmission Rate
   Standard . . . . . 19.2 kBaud
   Optional . . . . . 9.6 kBaud
3. Modulation Level . . . . . ®1V
4. Carrier Frequency
   Standard . . . . . 307 kHz
   Optional . . . . . 150 kHz

CONTROLS

1. Reset . . . . . Momentary Push Switch

INDICATORS

1. Card access . . . . . Green LED (top)
2. MPU fault . . . . . Red LED (middle)
3. 30 V phantom power present . . . . . Green LED (bottom)

CONNECTORS

1. 96-pin Euro connector (male) . . . . . AMP 650973-5
   For card connector pin connections see Table 2, page 4.

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com

MECHANICAL

1. Size (maximum overall dimensions as viewed from front)
   - Height . . . . . (11.9 cm) 4.68"
   - Width . . . . . (3.43 cm) 1.35"
   - Depth . . . . . (33.1 cm)13.02"
2. Weight . . . . . (406 gm) 0.894 lb

ENVIRONMENTAL

1. Operating Temperature Range . . . . . (+32 °F - +104 °F) 0 °C - +40 °C
2. Storage Temperature Range . . . . . (–40 °F - +158 °F) –40 °C - +70 °C

SUPPLY	500FMH	508FMH
+15 V	110 mA	110 mA
–15 V	110 mA	110 mA

Table 1 - Added Load Current per Microphone Station

Note: Microphone stations with handsets (FMH types) represent the maximum current drain. The drain for other microphone types is slightly less.

Total Current = Supply Current (see ELECTRICAL, ANALOG, Item 1, page 2) + N x added load current, where N = the number of microphone stations connected, and the added load currents are values given in Table 1, above.

Pin No.	Function	Pin No.	Function	Pin No.	Function
1	Analog Ground	33	Channel 8 –	65	Channel 7 –
2	Analog Ground	34	No Connection	66	No Connection
3	Analog Ground	35	Channel 8 +	67	Channel 7 +
4	No Connection	36	No Connection	68	No Connection
5	Analog Ground	37	Analog Ground	69	Analog Ground
6	+30 V	38	+30 V	70	+30 V
7	Analog Ground	39	Channel 6 –	71	Channel 5 –
8	– 15 V	40	– 15 V	72	– 15 V
9	Analog Ground	41	Channel 6 +	73	Channel 5 +
10	– 15 V	42	– 15 V	74	– 15 V
11	Analog Ground	43	Analog Ground	75	Analog Ground
12	+15 V	44	+15 V	76	+15 V
13	Analog Ground	45	Channel 4 –	77	Channel 3 –
14	+15 V	46	+15 V	78	+15 V
15	Analog Ground	47	Channel 4 +	79	Channel 3 +
16	+5 V	48	+5 V	80	+5 V
17	Analog Ground	49	Analog Ground	81	Analog Ground
18	+5 V	50	+5 V	82	+5 V
19	Analog Ground	51	Channel 2 –	83	Channel 1 –
20	+5 V	52	+5 V	84	+5 V
21	Analog Ground	53	Channel 2 +	85	Channel 1 +
22	Digital Ground	54	Digital Ground	86	Digital Ground
23	Digital Ground	55	Digital Ground	87	Digital Ground
24	SDOB (P-1)	56	CS3 [3]	88	CS1 [3]
25	SDOA (P-1)	57	BS0 [2]	89	CS0 [3]
26	Spare	58	BS1 [2]	90	CS2 [3]
27	SSYNCB[4]	59	BS2 [2]	91	SCLK7B[4]
28	AD0 [1]	60	BS3 [2]	92	Spare
29	AD2 [1]	61	UAS	93	AD1 [1]
30	AD4 [1]	62	LAS	94	AD3 [1]
31	AD6 [1]	63	RD	95	AD5 [1]
32	ACK	64	WR	96	AD7 [1]

Notes: 1. CPU address lines. 2. Mother board (mainframe) select lines. 3. Card slot select lines. 4. Optionally, these signals can be generated by this card.

Table 2 - 2008C Card Connector Pin Connections

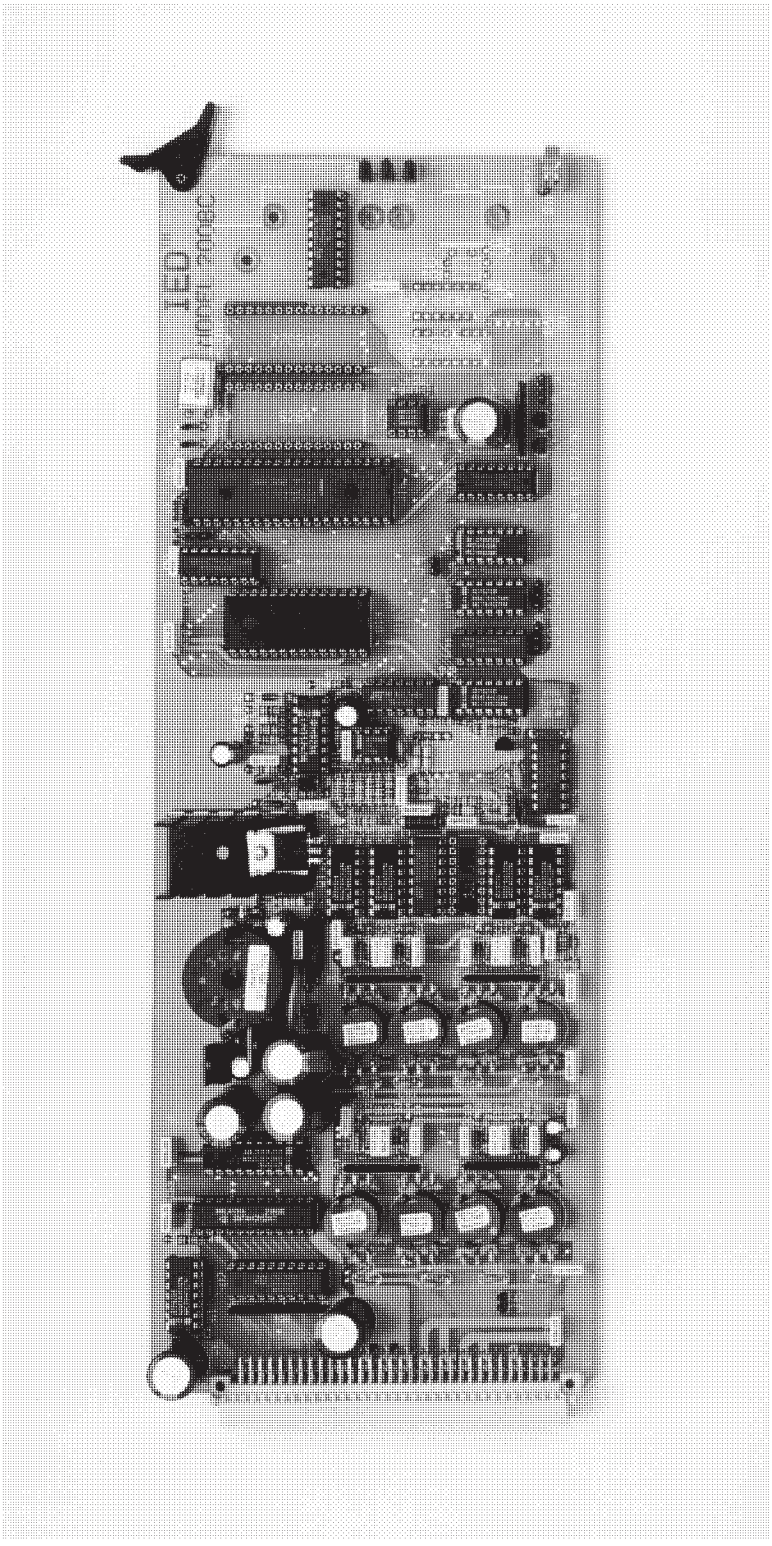

Figure 2 - 2008C Microphone Station Control Card

This page left blank intentionally

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com