Sheet: Monitor

File: Monitor.sch

Sheet: Controller

File: Controller.sch

Schematic diagram — Sheet: /Monitor/, File: Monitor.sch

Key components and labels visible:

- J2 — TE_3.5mm_Screwless_P2, +12V_M, GND
- U2 — LM7805_TO220 (VI, GND, VO), +5V_M
- C8 100nF, C5 100uF 50V, C7 100nF – 100V
- C9 100nF – 100V, R35 10k
- U3 — XPRESS-40, USB
  - Left pins: RE3, RA0, RA1, RA2, RA3, RA4, RA5, RE0, RE1, RE2, VDD, GND, RA7, RA6, RC0, RC1, RC2, RC3, RD0, RD1
  - Right pins: TGDAT, TGCLK, RB5, RB4, RB3, RB2, RB1, RB0, VDD, GND, RD7, RD6, RD5, RD4, RC7, RC6, RC5, RC4, RD3, RD2
- C11 100nF – 100V
- PROG_CONN, J4 — Conn_01x08, nMCLR_M
- R33 470, R34 470
- ICSPDAT_M, ICSPCLK_M
- SCL, SDA
- R8 470, R10 470, LCD_SCL_M, J6 — I2C Interface LCD_M, LCD_SDA_M
- C13 100nF – 100V
- S1 — MPXV5004DP (VS, GND, Vout)
- R1 470, PTR2
- C1 100nF – 100V, C4 1uF
- MIC, MEAS_12V, PTR4
- R24 22k, D4 1N4007, R25 10k, C20 1uF, +12V_M, +5V_M
- J3 — RX, TX, UART_M
- J1 — TE_3.5mm_Screwless_P2
- D1 1N4007, C6 1uF, Q1 STP24NF10, R6 50, SV1
- C2 1uF
- R9 10k, R11 10k, R12 470
- ALARM_LED, ALARM_MUTE, ALARM_HISTORY, BUZZER
- J14 MUTE, J15 HISTORY, J5 BUZZER
- MK1 Microphone, R2 10k, R5 220k, U1A LM358, U1B LM358, R3 220k, R4 10k, C3 1uF
- U1C LM358, C21 100nF – 100V
- S2 — MPXV5004DP (VS, GND, Vout), C12 100nF – 100V
- R7 470, C10 1uF
- TP1 TestPoint, TP2 TestPoint, TP3 TestPoint, TP4 TestPoint, TP9 TestPoint_Alt

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Rev:
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J7
TE_3.5mm_Screwless_P2

+12V_C

U4
LM7805_TO220

+5V_C

+5V_C

+5V_C

+5V_C

+5V_C

+5V_C

+5V_C

PROG_CONN

+5V_C

+5V_C

I2C Interface LCD_C

+12V_C

VI VO

GND

R27
10k

C19
100nF - 100V

U5
XPRESS-40

C30
100nF - 100V

J24
Conn_01x08

nMCLR_C

R15
470

R17
470

LCD_SCL

J12

GND

C14
100nF

C15
100uF 50V

C16
100nF - 100V

C26
1uF

USB

+5V_C

LCD_SDA

+5V_C

C29
100nF - 100V

GND

GND

GND

GND

GND

R28
10k

GND

GND

GND

+5V_C

nMCLR_C

GND

SCL

SDA

GND

100V

S?
MPXV5010DP

RE3   TGDAT   ICSPDAT_C
RA0   TGCLK   ICSPCLK_C
RA1   RB5
RA2   RB4
RA3   RB3
RA4   RB2
RA5   RB1
RE0   RB0
RE1   VDD
RE2   GND
VDD   RD7
GND   RD6
RA7   RD5
RA6   RD4
RC0   RC7
RC1   RC6
RC2   RC5
RC3   RC4
RD0   RD3
RD1   RD2

R18 R19 R20 R21 R22 R23
10k 10k 10k 10k 10k 10k

R16
470

J18
BREATH

+5V_C

+5V_C

C17
100nF - 100V

R13
470

PR_MAIN

+5V_C

C18
1uF

R?
10k

J10
BPM

J19
EP

J16
IP

J20
+

J17
-

GND

GND

POWEROFF
J?

RX_C
TX_C

GND

+12V_C

+12V_C

J13
BUZZER_C

SV2
J8

D2
1N4007

C24
1uF

R14
50

SV2

PR_AUX

GND

S4
MPXV5004DP

+5V_C

R? R30 R31 R32
10k 10k 10k 10k

C22
1uF

Q2
STP24NF10

GND

J11
UART

R29
470

C28
100nF - 100V

J21
VOL_MIN

J23
VOL_MAX

GND

C27
1uF

GND

+12V_C

+12V_C

TP10   TP11   TP12   TP13
TestPoint TestPoint TestPoint TestPoint

J22
VOL

SV3
J9

D3
1N4007

C25
1uF

GND

J?
PMAX

C23
1uF

Q3
STP24NF10

R26
50

SV3

GND

TP5   TP6   TP7   TP8
TestPoint TestPoint TestPoint TestPoint

GND

GND

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