

Projekt I2C-Funksteckdose (ELRO AB440 Funksteckdosen über I2C steuern)

www.greinert-dud.de (01-2009)

| AB440R | SW | 1 | 2 | 3 | 4 | 5 | A | B | C | D | Sender Empfänger | | | |
|----------|------------|---|---|---|---|---|----|----|----|----|------------------|----|----|----|
| AB440S | SW | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | BIT | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| A | AN | x | x | x | x | x | ON | z | z | z | z | NC | | 1 |
| | AUS | x | x | x | x | x | ON | z | z | z | z | NC | | 0 |
| B | AN | x | x | x | x | x | z | ON | z | z | z | NC | | 1 |
| | AUS | x | x | x | x | x | z | ON | z | z | z | NC | | 0 |
| C | AN | x | x | x | x | x | z | z | ON | z | z | NC | | 1 |
| | AUS | x | x | x | x | x | z | z | ON | z | z | NC | | 0 |
| D | AN | x | x | x | x | x | z | z | z | ON | z | NC | | 1 |
| | AUS | x | x | x | x | x | z | z | z | ON | z | NC | | 0 |

ELRO Vorgaben

| PT2262 | PIN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 16 | 13 | | |
|----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|--|--|
| | Bes. | A0 | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | | TE | D0 | | |
| MCP23017 | PIN | 21 | 22 | 23 | 24 | 25 | 1 | 2 | 3 | 4 | 5 | | 7 | 8 | | |
| | Bit | 0 | 1 | 2 | 3 | 4 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
| | Port | A | | | | | B | | | | | | | | | |

I2C Anbindung

Legende x = z oder 0 0 = Ground z = Tristate **ON = 0**
 NC = Nicht verwendet

| IO_Data | Bit | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------|----------|-----------|-----------|-----------|-----------|-----------|---|------------|-----------|
| Port | A | A0 | A1 | A2 | A3 | A4 | | | |
| Port | B | A5 | A6 | A7 | A8 | A9 | | /TE | D0 |

MCP23017 I2C-Datensatz-Beschreibung zum steuern der Funk-Box

| I2C Byte | Reg. | Port | Wert | Beschreibung |
|----------|----------|--------------|----------|---|
| 1 | | | 0 | MCP23017 Start auf Register (0) setzen |
| 2 | 0 | IODIR | A | 255 Port als Eingang |
| 3 | 1 | IODIR | B | 255 Port als Eingang |
| 4 | 2 | IPOLA | A | 0 |
| 5 | 3 | IPOLA | B | 0 |
| 6 | 4 | GPINTEN | A | 0 |
| 7 | 5 | GPINTEN | B | 0 |
| 8 | 6 | DEFVALA | A | 0 |
| 9 | 7 | DEFVALA | B | 0 |
| 10 | 8 | INTCONA | A | 0 |
| 11 | 9 | INTCONA | B | 0 |
| 12 | 10 | IOCON | A | 0 |
| 13 | 11 | IOCON | B | 0 |
| 14 | 12 | GPPUA | A | 0 keine Pullup Widerstände (Tristate) |
| 15 | 13 | GPPUA | B | 0 keine Pullup Widerstände (Tristate) |
| 16 | 14 | INTFA | A | 0 |
| 17 | 15 | INTFA | B | 0 |
| 18 | 16 | INTCAPA | A | 0 |
| 19 | 17 | INTCAPA | B | 0 |
| 20 | 18 | GPIOA | A | 0 Ausgänge auf Null |
| 21 | 19 | GPIOA | B | 0 Ausgänge auf Null |
| 22 | 20 | OLATA | A | 0 |
| 23 | 21 | OLATA | B | 0 |

| |
|--------------------------|
| 1 = IN = Tristate |
| 0 = OUT = NULL |