

## 8.13 T2000-A66 Single Port UART Kit

The T2000-A66 single port UART kit allows computer control of a T2030, T2035 or T2040 Series II radio. With full remote control, either semi or fully automatic communication systems can be developed.

The following topics are covered in this Section:

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## 8.13.1 Components Required

The T2000-A66 kit contains the following components:

| Quantity | Description  |
|----------|--|
| 1        | T2000-A66 UART PCB assembly                                    |
| 1        | Data Interface Decoupling PCB assembly (refer to Section 7.17) |
| 2        | M2.5x10mm pan Pozi Taptite screws                              |
| 2        | M2.5 shakeproof washers  |
| 2        | M2.5 nuts  |
| 1        | locking screw kit (in plastic bag)                             |
| 2        | 4-40x¼ pan Pozi Taptite screws (black)                         |
| 20mm     | foam tape  |

## 8.13.2 Fitting

Refer to Figure 8.13.1.

1 Remove the top cover of the radio by unscrewing the four cover screws, unclip the D-range blanking plate in the rear of the T2000 radio, unscrew the logic PCB and fold out.

### 2 T2000-A66 Mounting

Position the T2000-A66 PCB on the top side of the logic PCB, as shown, matching P1 on the bottom side of the T2000-A66 PCB to the pads labelled 'P1' on the logic PCB.

Use the two M2.5x10mm screws, nuts and shakeproof washers to secure in place.

**Note:** The screws are fitted from the *bottom* of the logic PCB, and secured with the nuts and washers on the *top* side of the UART PCB.

Torque the screws to 2.5in.lb. This ensures that the pressure connector, P1, makes contact with the corresponding pads on the logic PCB.

**Caution:** Over-tightening the screws will cause the T2000-A66 PCB to bend, resulting in possible track damage.

### 3 T2000 Data Interface Decoupling PCB Mounting

Fit the decoupling PCB to the T2000 chassis, guiding the PCB through the hole provided.

Holes are provided in the T2000 chassis for the D-range locking screws. Use the two black 4-40 Taptite screws provided in the kit to form threads.

Open the locking screw kit, discard the nuts, then secure the D-range using the two locking screws and spring washers.

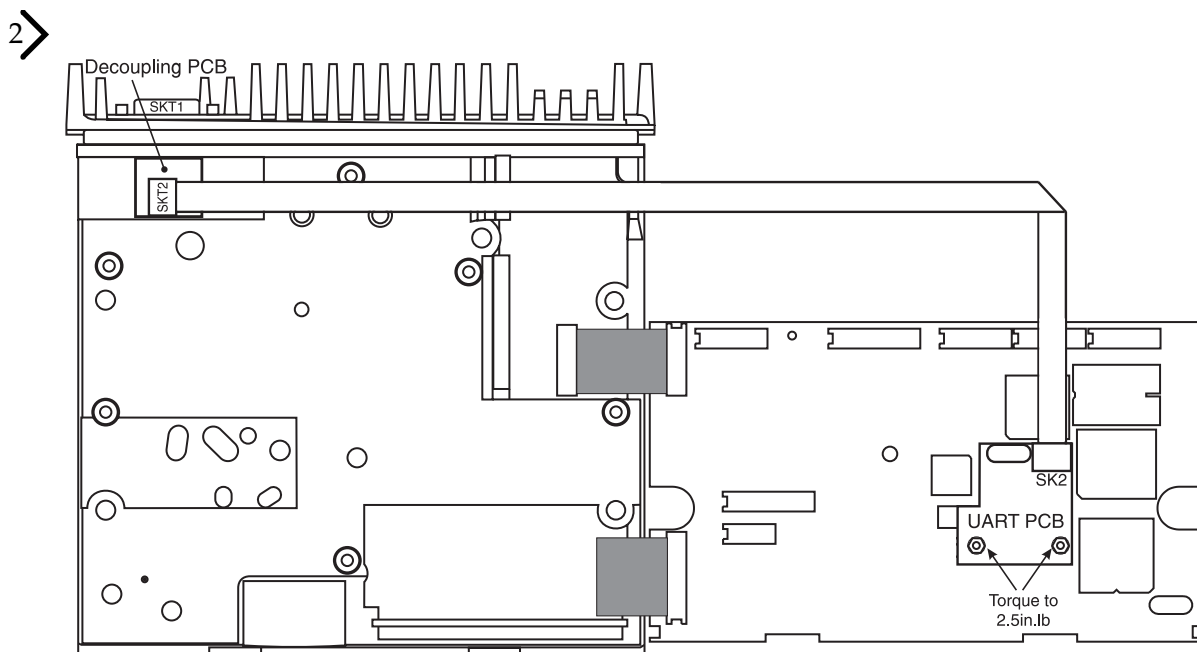


Figure 8.13.1 T2000-A66 Single Port UART PCB Mounting

- 4 Fold the T2000-A66 loom as shown, then plug into SKT2 on the decoupling PCB.
- 5 Fold the logic PCB back in position, and secure using the three logic PCB retaining screws and refit the top cover.

### 8.13.3 Signal Specifications

The following table describes the signals used on the decoupling PCB 9 way D-range connector (SKT1). The unused pins may be used for other signals, if required.

| SKT1 Pin No. | Signal | Description  |
|--------------|--------|--|
| 2            | TXD    | <b>Transmit data:</b> Serial data output from UART PCB. This signal complies with the electrical requirements of the RS-232 specification. |
| 3            | RXD    | <b>Receive data:</b> Serial data input to UART PCB. This signal complies with the electrical requirements of the RS-232 specification.     |
| 5            | DGND   | <b>Digital ground:</b> Ground reference for all digital signals.   |

The following diagram shows the pin designations of SKT1, viewed from the rear of the radio.

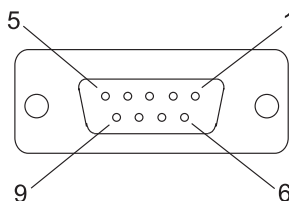
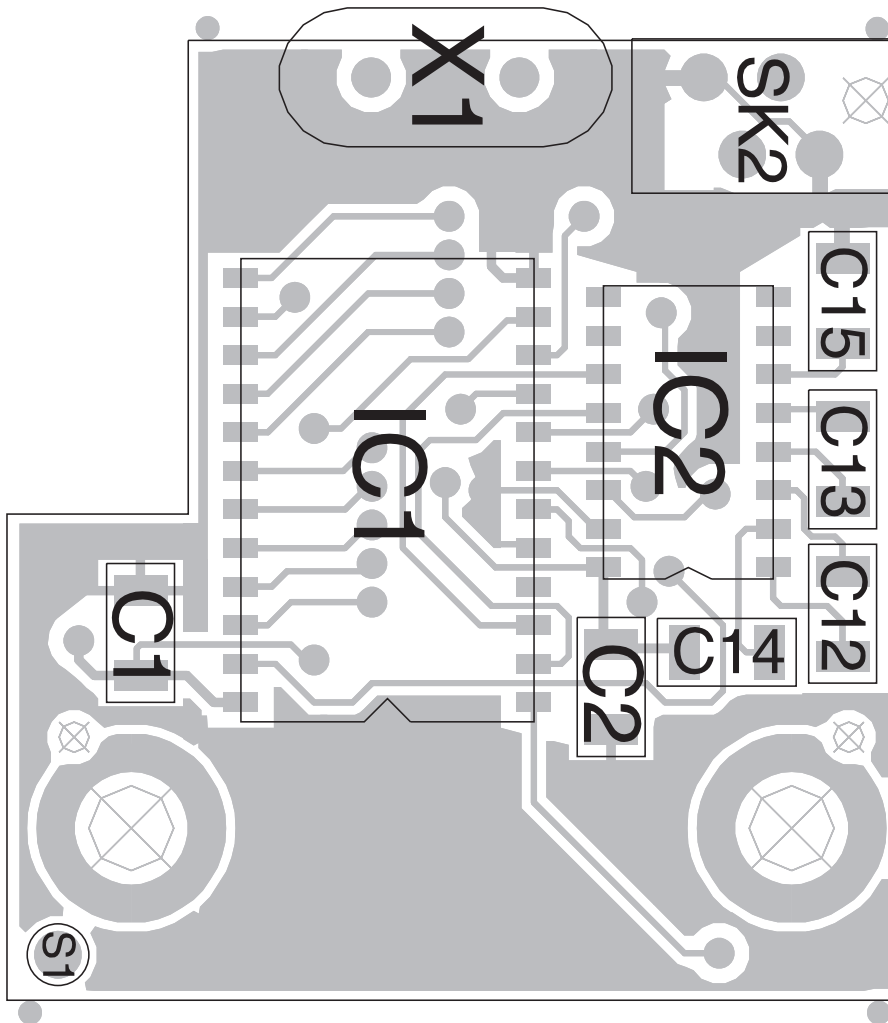


Figure 8.13.2 9 Way D-Range Connector (SKT1)

## 8.13.4 PCB Information

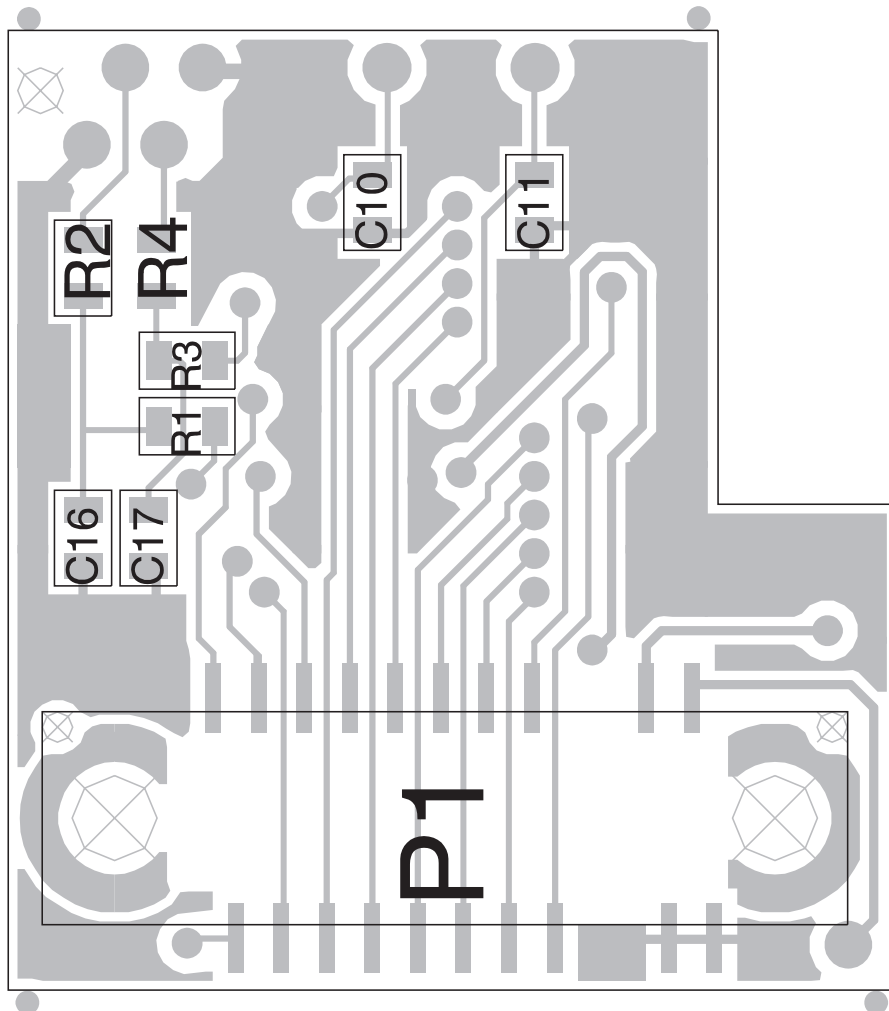
### T2000-A66 Parts List (IPN 220-01348-04)

| Ref | IPN          | Description  |
|-----|--------------|--|
| C1  | 015-06100-08 | CAP CER 1206 CHIP 100N 10% X7R 50V   |
| C2  | 015-06100-08 | CAP CER 1206 CHIP 100N 10% X7R 50V   |
| C10 | 015-22220-01 | CAP CER 0805 CHIP 22P 5% NPO 50V   |
| C11 | 015-22220-01 | CAP CER 0805 CHIP 22P 5% NPO 50V   |
| C12 | 015-06100-08 | CAP CER 1206 CHIP 100N 10% X7R 50V   |
| C13 | 015-06100-08 | CAP CER 1206 CHIP 100N 10% X7R 50V   |
| C14 | 015-06100-08 | CAP CER 1206 CHIP 100N 10% X7R 50V   |
| C15 | 015-06100-08 | CAP CER 1206 CHIP 100N 10% X7R 50V   |
| C16 | 015-24100-08 | CAP CER 0805 CHIP 1N 10% X7R 50V   |
| C17 | 015-24100-08 | CAP CER 0805 CHIP 1N 10% X7R 50V   |
| IC1 | 002-10269-10 | (LSH) IC SMD SCC2691 UART SOL24  |
| IC2 | 002-10020-20 | (LSH) IC SMD ADM202 RS-232 CONVERTOR SO-16                                   |
| P1  | 240-10000-10 | CONN SMD 20PIN SCREW DOWN PRICKLE CONTACT                                    |
| R1  | 036-12560-00 | RES M/F 0805 CHIP 56E 5%   |
| R2  | 036-12560-00 | RES M/F 0805 CHIP 56E 5%   |
| R3  | 036-12560-00 | RES M/F 0805 CHIP 56E 5%   |
| R4  | 036-12560-00 | RES M/F 0805 CHIP 56E 5%   |
| SK2 | 240-00021-20 | HEADER 4WAY PADDLE BRD STAGGERED PINS MICROMATC                              |
| X1  | 274-01056-00 | XTAL 3.6864MHZ AT-51 HOLDER C/W TEFLON INS                                   |
|     | 205-00010-53 | CABLE FLAT RBBN 4 CRE 16/7/0.1 GREY (SCAP FRM 16C)                           |
|     | 220-01348-04 | PCB T2000 SII UART   |
|     | 240-00026-22 | PLUG 4WAY 2ROW MICROMATCH IDC CABLE 0-215083-4                               |
|     | 345-00020-02 | SCREW M2.5*10MM PAN POZI BZ  |
|     | 349-00020-07 | (L) SCREW 4-40 X 5/16 PAN POZI TAPTITE BLACK                                 |
|     | 352-00010-04 | NUT M2.5 MACH HEX ST BZ  |
|     | 353-00010-04 | WASHER M2.5/M2.6 SHAKEPROOF INT BZ   |
|     | 354-01041-00 | FASTENER SCREW LOCK KIT (4-40 THREAD FOR DRANGE)                             |
|     | 356-00010-05 | TAG SOLDER 4MM LONG M MT   |
|     | 369-00020-35 | TAPE PVC FOAM 1 SIDE S/A 9*10MM INSEAL 5375<br>1x 20mm TOP SIDE PCB OVER IC1 |
|     | X2DC01       | T2000 INT FACE DE-COUPPING BOARD   |

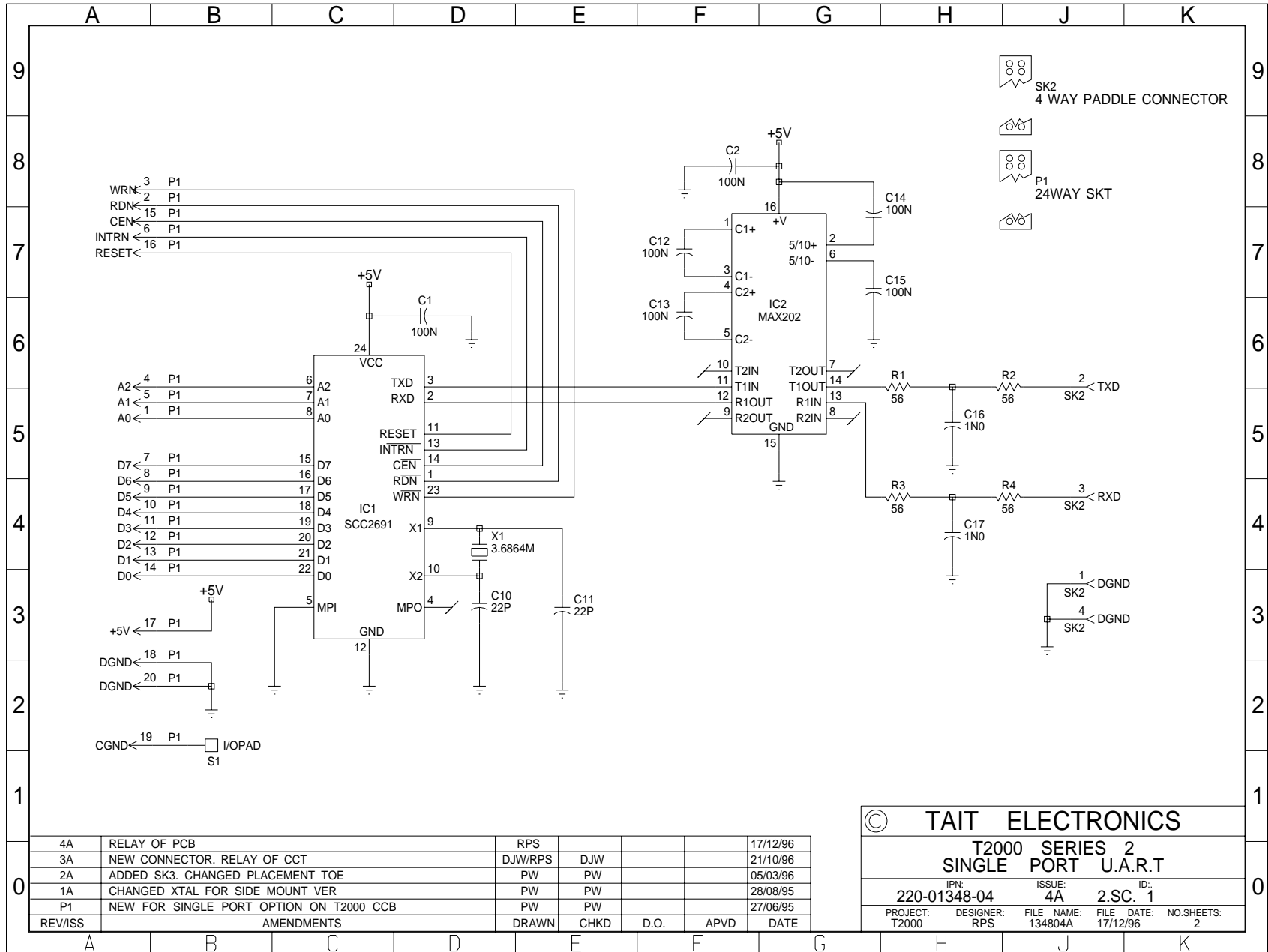


T2000-A66 Single Port UART PCB (IPN 220-01348-04) - Top Side

I



**T2000-A66 Single Port UART PCB (IPN 220-01348-04) - Bottom Side**



|         |   |         |      |      |           |
|---------|---|---------|------|------|-----------|
| 4A      | RELAY OF PCB                            | RPS     |      |      | 17/12/96  |
| 3A      | NEW CONNECTOR. RELAY OF CCT             | DJW/RPS | DJW  |      | 21/10/96  |
| 2A      | ADDED SK3. CHANGED PLACEMENT TOE        | PW      | PW   |      | 05/03/96  |
| 1A      | CHANGED XTAL FOR SIDE MOUNT VER         | PW      | PW   |      | 28/08/95  |
| P1      | NEW FOR SINGLE PORT OPTION ON T2000 CCB | PW      | PW   |      | 27/06/95  |
| REV/ISS | AMENDMENTS                              | DRAWN   | CHKD | D.O. | APVD DATE |

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T2000 SERIES 2  
SINGLE PORT U.A.R.T

IPN: 220-01348-04    ISSUE: 4A    ID: 1

PROJECT: T2000    DESIGNER: RPS    FILE NAME: 134804A    FILE DATE: 17/12/96    NO.SHEETS: 2

