RTS™ Digital Matrix Intercom Systems

RVON-I/O

Release

Notes

CHAPTER 1

Issues

Since the release of the RVON-I/O card, a few issues have surfaced pertaining to the original card. This document covers these issues and how to fix the existing RVON-I/O board to solve these issues.

Issues

1. Crosstalk on the same channel. The output to the matrix is being heard on the channel's input.
2. When the RVON-I/O GPIO is connected to a dual Master Controller in an Adam chassis, the RVON-I/O GPO is not able to drive both MCIIe GPI.
3. When the RVON-I/O is connected to a Master Controller in a Cronus chassis, the RVON-I/O GPO is not able to drive Cronus GPI.

RVON-I/O Card Old and New

The RVON-I/O card once these changes take place will go from 9030-7772-000 Rev A to 9030-7772-000 Rev B.

Crosstalk on the same channel

The output to the matrix is being heard on the same channel's input. The input to the Codec need to be AC coupled. To fix the crosstalk on the same channel, you must remove 16 resistors (150Ohm) - **R12**, **R14**, **R17**, **R18**, **R324 - R327**, **R355 - R358**, **R402 - R405** and replace with 16 capacitors (part number **102881-880**, 0.47 uF 16V) in **R12**, **R14**, **R17**, **R18**, **R324 - R327**, **R355 - R358**, **R402 - R405**. For replacement positions, see figure 1.

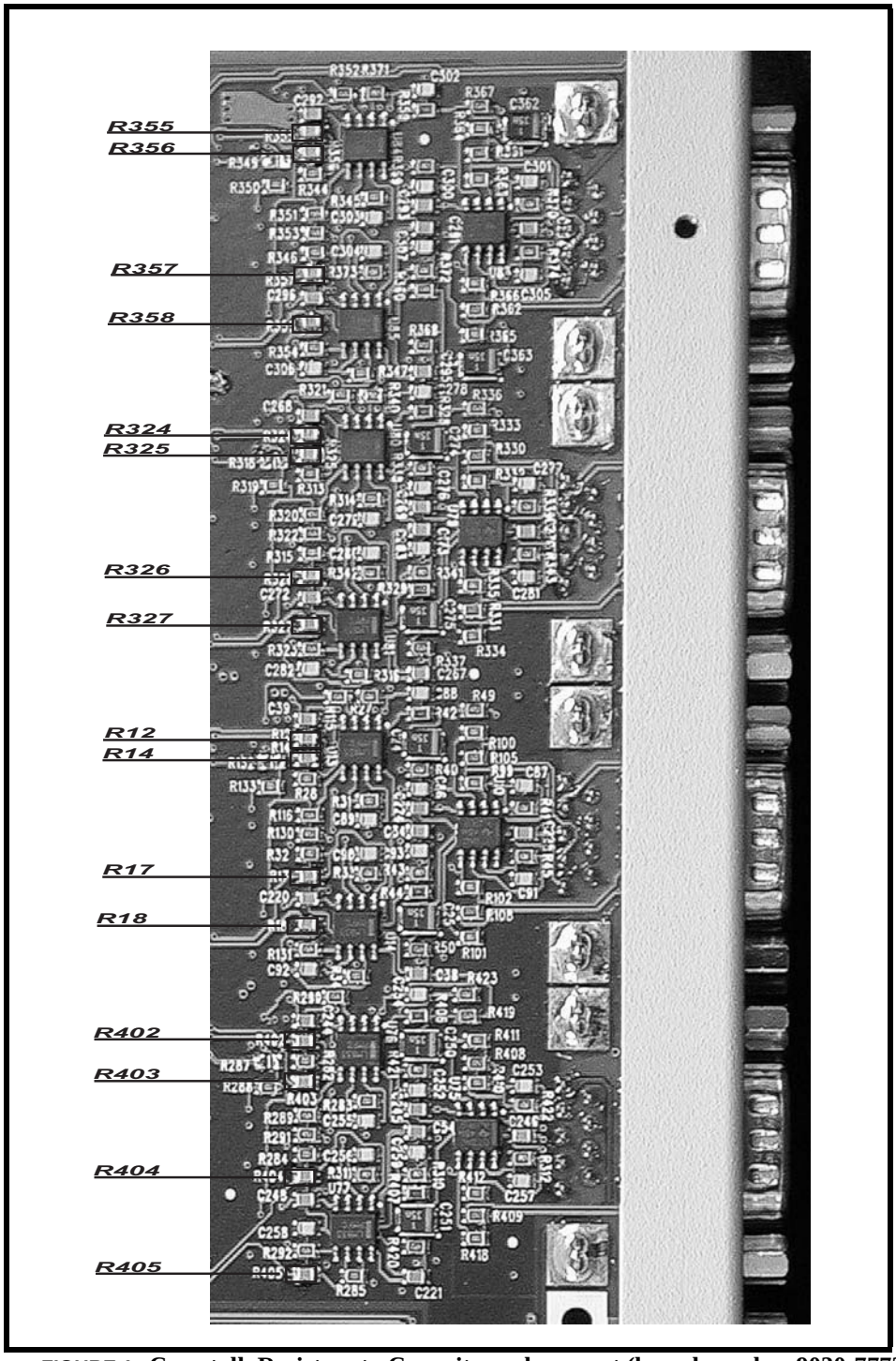

FIGURE 1. Crosstalk Resistors to Capacitors placement (board number 9030-7772-000).

When the RVON-I/O GPIO is connected to an ADAM frame with Redundant Controller Cards Installed, the RVON-I/O GPO is not able to drive both MCIIe GPI

The GPO transistor can't handle the current load for a dual Master Controller chassis. The GPO transistor's input resistors need to be reduced to increase the base current. This will increase the collector current's load.

To fix this issue, change the 3 input resistors of each GPO from 22.1K to 2K. This increases the collector current from ~10 mA to ~60 mA. The transistor can handle 200 mA.

Also, remove 24 resistors, **R146 through R169** and replace them with 2K resistors (part number **102515-229**). See figure 2 for resistor placement.

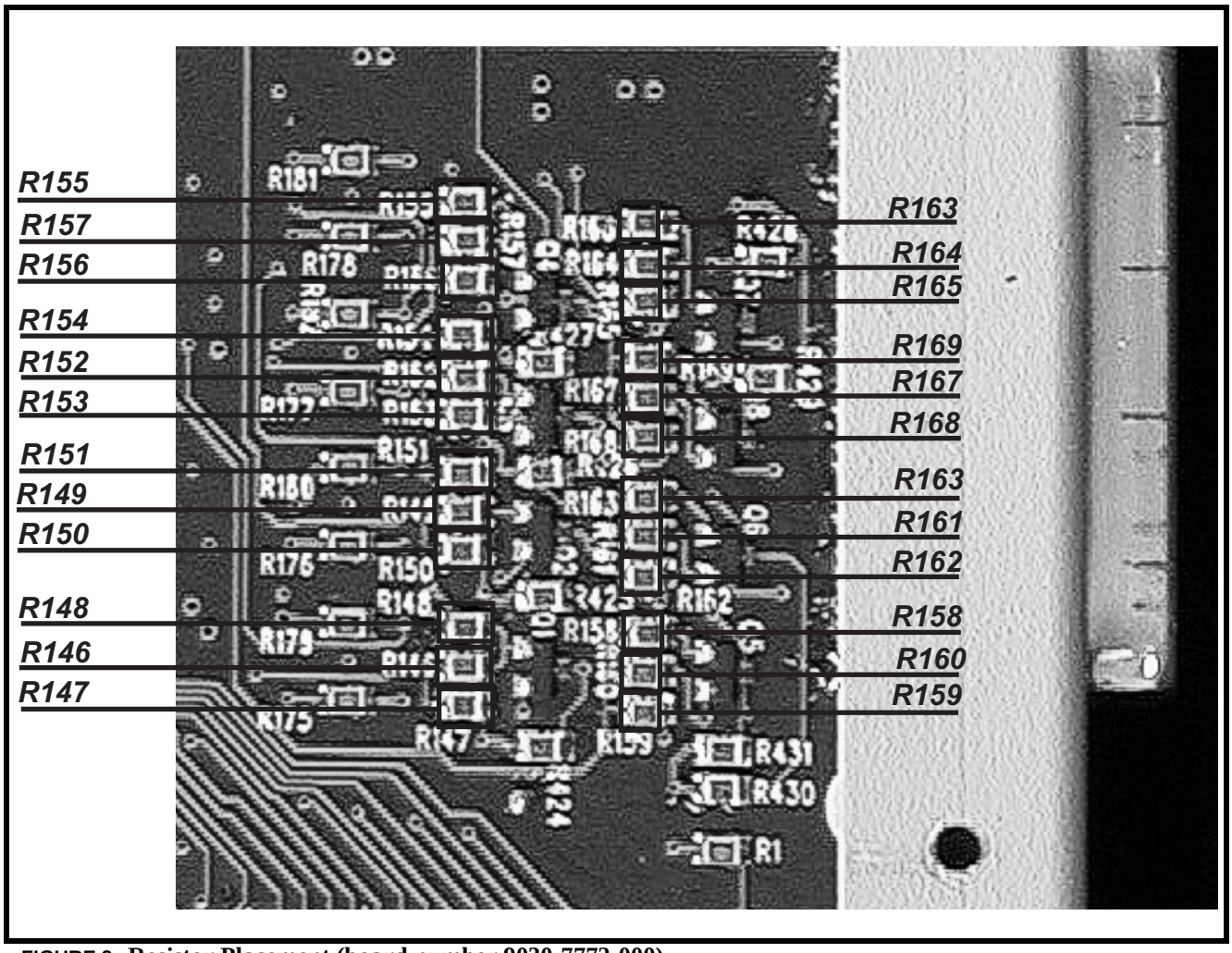

FIGURE 2. Resistor Placement (board number 9030-7772-000).

When the RVON-I/O is connected to a Master Controller in a Cronus chassis, is not able to drive the Cronus GPI

NOTE: **The Cronus Master Controller backcard will go from 9030-7788-001 Rev A to 9030-7788-001 Rev B**.

NOTE: These instructions are also detailed in the Cronus Release Notes CRN-Rev. E or later.

The RVON-I/O's voltage drop across the GPO output resistor is too large for the Cronus photo coupler GPI. The Cronus series resistor to the photo-coupler is also too large. The voltages drops across both resistors prohibit operation.

To fix this issue, change the RVON-I/O GPO Output from 22.1K to 6.19 K on the RVON-I/O card and replace four resistors (R11 through R14) from 3 K to 470 Ohms.

1. On the RVON-I/O card, remove 8 resistors (**R424 through R431**) and replace with 6.19 K resistors (part number **102515-276**). See figure 3 for resistor placement.

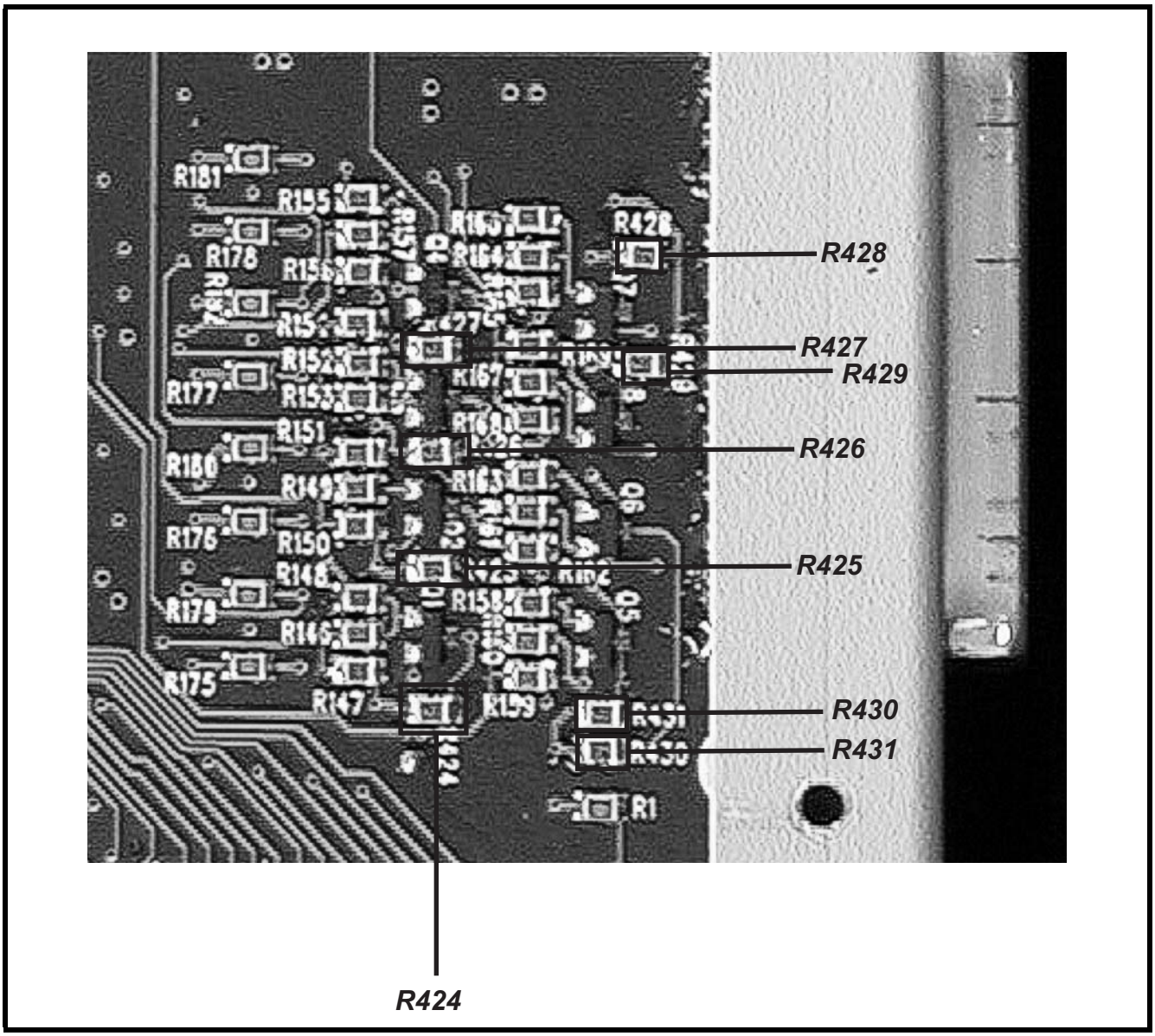

FIGURE 3. Resistor Changes

2. On the Cronus MC Back card, remove the 3K resistors (**R11 through R14**).
3. Replace with 470 Ohm resistors (part number **102513-471**).

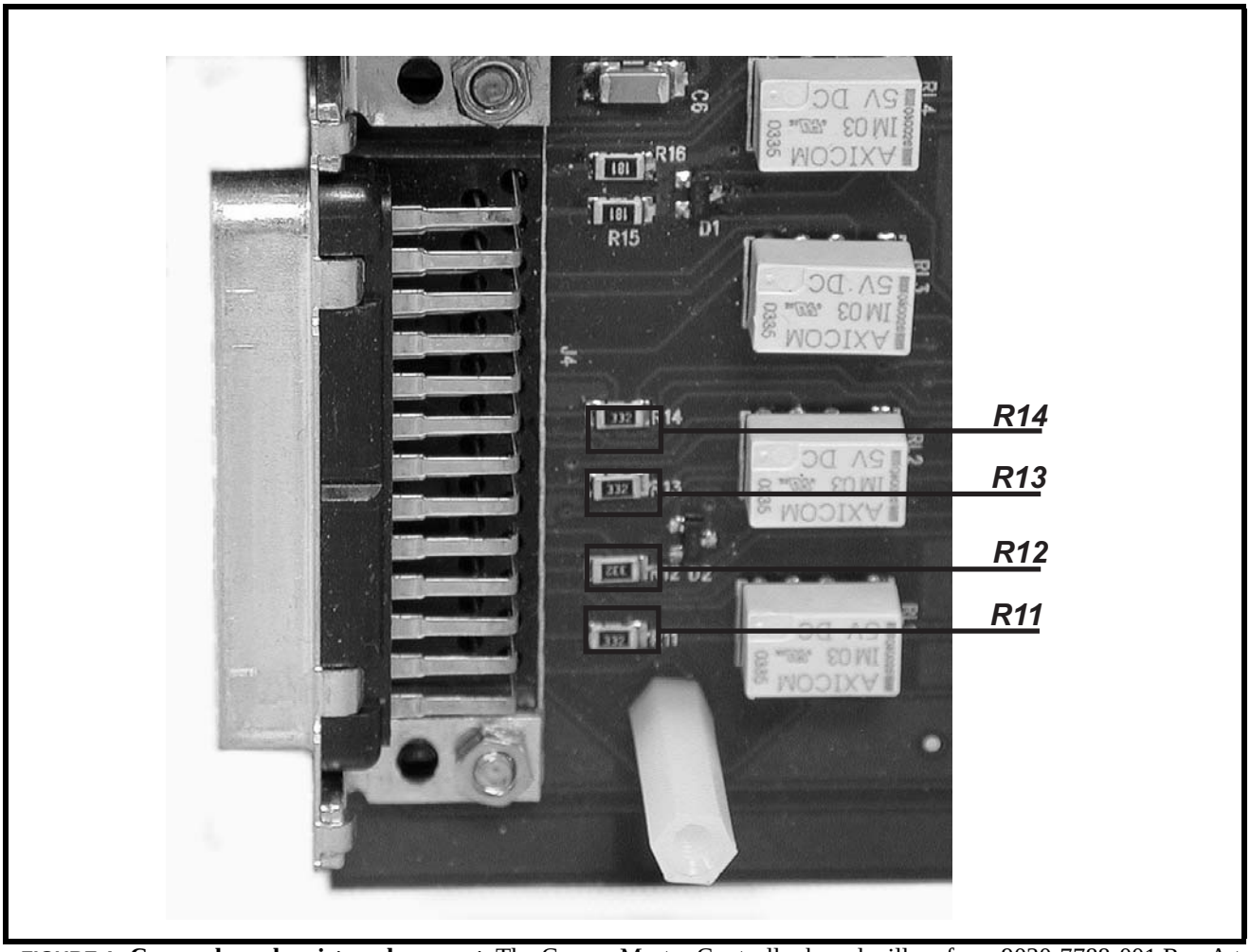

FIGURE 4. Cronus board resistor placement. The Cronus Master Controller board will go from 9030-7788-001 Rev A to 9030-7788-001 Rev B