FCC COMPLIANCE TEST REPORT

for

Electromagnetic Emissions

of

Aladdin 2000

Model Number: A-2000
Serial Number: Prototype
FCC ID: DFCTELA2000
FCC ID: DFCTELA2000C

Prepared for:

TELEVIDEO, INC.
2345 Harris Way
San Jose, CA 95131

Prepared by:

Underwriters Laboratories Incorporated
11825 Niles Canyon Road
Sunol, CA 94586
(925) 862-9051

REPORT DATE: January 11, 2001

FCC Part 15, Subpart B Class B
And
FCC Part 15, Subpart C
COMPLIANCE TEST REPORT

FOR

Aladdin 2000
A-2000

Prepared for:

TELEVIDEO, INC.
San Jose, CA 95131

Prepared by: Underwriters Laboratories Inc.

	Signature	Date
TEST TECHNICIAN	Wayne Fisher	1-19-01
LABORATORY SUPERVISOR	Daryl Smith	1-19-01

LIST OF REVISIONS

REVISION NUMBER AND DATE	PAGE CHANGED	PAGE SUBSTITUTED	PAGE ADDED

REPRODUCTION CLAUSE

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

VERIFICATION OF COMPLIANCE

Equipment Under Test: Aladdin 2000

Model Number: A2000

Serial Number: Prototype

Company: TeleVideo, Inc.
2345 Harris Way
San Jose, CA 95131

Test Specification: CFR 47, Part 15, Subpart B, Class B (ANSI C63.4, 1992)
CFR 47, Part 15, Subpart C (ANSI C63.4, 1992)

Type of Test: Conducted 450 kHz - 30 MHz
Radiated 30 MHz - 5 GHz

Performance Criteria: FCC CFR 15.231

Date Tested: October 16, 2000

Tested By: Wayne Fisher/Kent Chesley

The above equipment was tested by Underwriters Laboratories Inc., for compliance with the requirements set forth in the FCC Class B Rules and Regulations. This said equipment in the configuration described in the report, shows that maximum emission levels emanating from the equipment are within the compliance requirements.

GENERAL INFORMATION

Customer:	TeleVideo, Inc. 2345 Harris Way San Jose, CA 95131
Contact Person:	Kil Chung
Phone Number:	(408) 955-7796
Equipment Under Test:	Aladdin
Model Number:	A2000
Serial Number:	Prototype
FCC ID Number:	DFCTELA2000 DFCTELA2000C
Test Specification:	CFR 47, Part 15, Subpart B, Class B (ANSI C63.4, 1992) CFR 47, Part 15, Subpart C (ANSI C63.4, 1992)
Type of Test:	Conducted 450 kHz - 30 MHz Radiated 30 MHz - 5 GHz
Performance Criteria:	FCC CFR 15.231
Deviation:	None
Test Results:	Line Conducted --N/A – EUT is Battery Powered Radiated--Radiated scans ranged from 30 MHz to 5 GHz in both the horizontal and the vertical antenna polarization. All radiated emissions were within the FCC Class B requirements for compliance.

SYSTEM DESCRIPTION

Equipment Under Test

Aladdin 2000

Support Equipment

Simulator Box

DC Power Supply

EUT Test Program: Aladdin 2000 handheld remote unit sent an alarm signal to the base unit, the base unit via the shock sensor; sent an alarm signal back to the remote unit. This cycle was repeated throughout the test.

LETTER OF AUTHORIZATION

(See Attached)

PRODUCT INFORMATION

Description of Equipment Under Test: The ALADDIN 2000 is a two-way remote vehicle starting and security system. The status of the vehicle can be monitored any time with the bi-directional remote control. It gives instantaneous warning when anyone tampers with the vehicle, in visual and audible vibration.

The Aladdin 2000 consists of a base unit and a handheld remote unit.

The base unit installs in the vehicle and consists of a main control module, communication module, dual stage shock sensor , siren and external relay.

Main Control Module
This module is the main computer of the Vehicle Alarm System. It is usually installed under the bottom of the vehicle dashboard.

Communication Module
Transmits and receives RF signals with the Remote Control status LED Lamp and a Valet button is built into the Module. At the left side is a tuning screw for adjusting the range of Proximity door unlock sensing. (See 6-9 Page ?). It mounts to the window blind of the driver's seat with a clip.

Shock Sensor
It senses the impact to the vehicle body. When an impact is applied to the vehicle, the sensor signals the Main Control Module to set off the Horn/Siren alarm sound and to activate the Remote Control's audio and visual warning signals.

Siren
If installed, alarm sound is set off form the siren when the vehicle is attacked. You can select your personal sound from five different modes. (See 8-1 Page ?)

The vehicle battery powers the base unit.

Remote Control
The Remote Control consists of TX/RX electronic circuits, LCD screen, quartz clock, melody buzzer and a vibrator. Three rectangular buttons at the bottom of the LCD screen are used to program the system. The three lower round buttons are used to operate each function of the system.

An AAA 1.5vdc internal battery powers the remote unit.

The ALADDIN 2000 and/or support equipment was received at EMC Technology Services, Inc. on July 27, 2000 in good condition.

PRODUCT INFORMATION (Continued)

Housing Type: Plastic
Power Supply: Base Unit – Vehicle Battery
Remote Unit – (1) AAA 1.5vdc Internal Battery

Specification:

RF Carrier	FSK two-way
Frequency	433 MHz
Antenna Impedance	50 ohm
Output Power	0.1 mW
Sensitivity	120 dBm
Operating Temperature	-30°C to +80°C

I/O PORT TYPE	CONNECTED TO
1) Battery	2ft Wire to 12vdc Power Supply
2) Ignition Key	2ft Wire to Simulator Box
3) Trunk Release	3ft Wire Unterminated
4) Right Turn Signal	3ft Wire Unterminated
5) Left Turn Signal	3ft Wire to Simulator Box
6) Door Locks (all)	3ft Wire Unterminated
7) Auxiliary 1,3,4,5	3ft Wire Unterminated
8) Auxiliary 2	1ft Wire to Simulator Box
9) Starter	3ft Wire Unterminated
10) Glow Plug	3ft Wire Unterminated
11) Trunk Pin Switch	3ft Wire Unterminated
12) Hood Pin Switch	3ft Wire Unterminated
13) Hand Brake	3ft Wire Unterminated
14) Door Pin	3ft Wire to Simulator Box
15) Door Pin	3ft Wire Unterminated
16) Brake	3ft Wire Unterminated
17) Tachometer	3ft Wire Unterminated
18) Key-in Signal	2ft Wire to 12vdc Power Supply
19) Siren/Horn	6ft Wire to Siren
20) Communication Module	3ft Wire to Model
21) Shock Sensor	3ft Wire to Sensor

FCC ID LABEL

(See Attached)

FCC ID LABEL PLACEMENT

(See Attached)

BLOCK DIAGRAMS OF EUT

(See Attached)

SCHEMATICS

(See Attached)

OPERATION MANUAL

* SEE SEPARATE ENCLOSURE FOR THE OPERATION MANUAL.

The enclosed manual is for the ALADDIN 2000. As you will notice on Page 1 of this manual is the FCC WARNING about radio and television interference as per the requirement set forth in Part 15 of the FCC Rules.

LIST OF MODIFICATIONS

(See Following Page)

TEST SUMMARY

Equipment Under Test: Aladdin 2000

Requirements: FCC CFR 15.231

Modifications Made to EUT: Yes (See Page 17)

Test Results:

Requirement	Results
15.231(a)	Passed
15.231(a)(1)	Passed
15.231(a)(2)	N/A
15.231(a)(3)	N/A
15.231(a)(4)	N/A
15.231(b)(1)(2)	Passed
15.231(b)(3)	Passed
15.231(c)	Passed
15.231(d)	N/A
15.231(e)	N/A
15.107	N/A
15.108	Passed

TEST RESULTS

FCC 47 CFR Part 15 Subpart C

Aladdin 2000 Base Transmitter and Remote Transmitter

15.231(a) **Periodic operation in the band 40.66-40 .70 MHz and above 70MHz**

Aladdin 2000 operates at 434MHz

Transmission signal types: Control signals (See Manual)

15.231(a)(1) **A manually operated transmitter shall employ a switch that will automatically deactivated the transmitter within not more than 5 seconds of being released.**

The base unit was triggered by the remote unit and its output signal was measured using a spectrum analyzer.

Base unit on time = 3.35 seconds. (See Page56)

The remote unit was triggered by hand using the push bottom and its output was measured using a spectrum analyzer

Remote unit on time = 0.2 seconds (See Page 55)

15.231(a)(2) **N/A** **EUT is not automatically activated**

15.231(a)(3) **N/A** **EUT does not operate at regular predetermined intervals**

15.231(a)(4) **N/A** **EUT is not for emergency use**

TEST RESULTS (Continued)

15.231(b)(1)(2) Emission field strength limit of fundamental frequency

Base Unit

The base unit was placed on a wooden table 0.8 meters high located on a 3 meter open field test site.

A wiring harness was connected to the base unit

A shock sensor and Siren were connected to the base unit

A simulator box was used for the car ignition, door switch and dome light

The hand held remote unit was used to arm the base unit

Vibration and shock sensor was used to trigger the base unit

The fundamental frequency of the base unit was found to be within the limits. (See Page 59)

Remote Unit

The remote unit was handheld 3 meters from the antenna and was triggered by hand using the arm/disarm buttons. This was done many time in order to capture the signal.

Base unit was found to be within the limits. (See Page 57)

TEST RESULTS (Continued)

15.231(b)(3) Emission Field Strength of Spurious Emissions

Base Unit

The base unit was placed on a wooden table 0.8 meters high located on a 3 meter open field test site.

A wiring harness was connected to the base unit

A shock sensor and Siren were connected to the base unit

A simulator box was used for the car ignition, door switch and dome light

The hand held remote unit was used to arm the base unit

Vibration and shock sensor was used to trigger the base unit

The base unit was found to be within the limits. (See Pages 59 and 60)

Remote Unit

The remote unit was handheld 3 meters from the antenna and was triggered by hand using the arm/disarm buttons. This was done many times in order to capture the signal.

A scan was taken up to 5 GHz measuring spurious emissions from the remote unit each time the unit was triggered

The remote unit was found to be within the limes. (See Pages 57 and 58)

15.231(c) Bandwidth shall be no wider than 0.25% of the center frequency at the 20dB down points

Center frequency = 433.9 MHz

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0.25% = 1.08 MHz

Base Unit = 328 kHz (See Page 53)

Remote Unit = 275 kHz (See Page 54)

Both units are within the 0.25% BW limit

TEST RESULTS (Continued)

15.231(d) **N/A** **EUT Operates at 433 MHz**

15.231(e) **N/A** **EUT does not operate at a periodic rate exceeding that specified in paragraph (a)**

Aladdin 200 Base Receiver and Remote Receiver

15.107 **N/A** **EUT is battery powered**

15.108 **Field Strength of Radiated Emission (Class B)**

The base unit was placed on a wooden table 0.8 meters high, located on a 3 meter open field test site.

A wiring harness was connected to the base unit

A shock sensor and siren were connected to the base unit.

A simulator box was used for the car ignition, door switch and dome light.

The base unit was not armed.

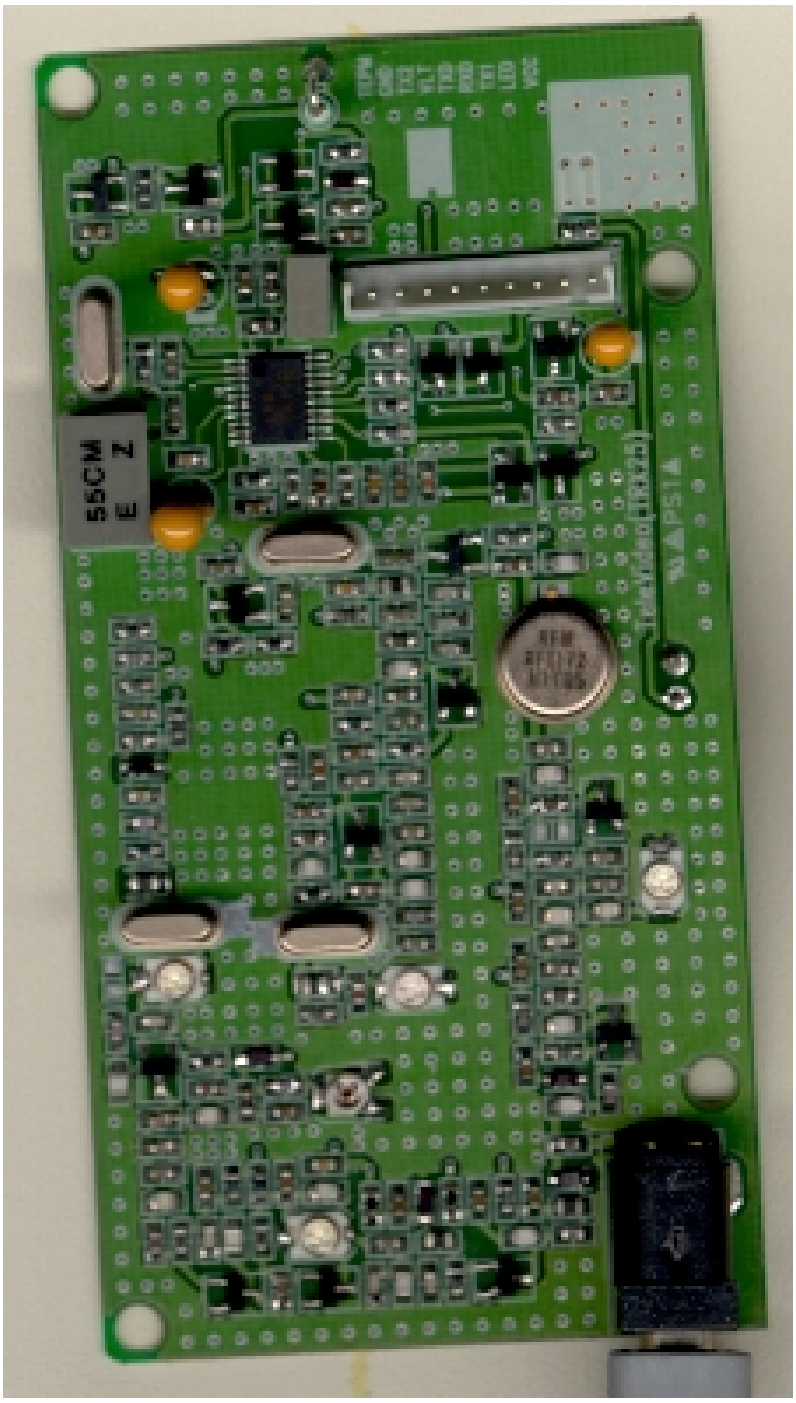
Remote unit was placed on the table next to the base unit.

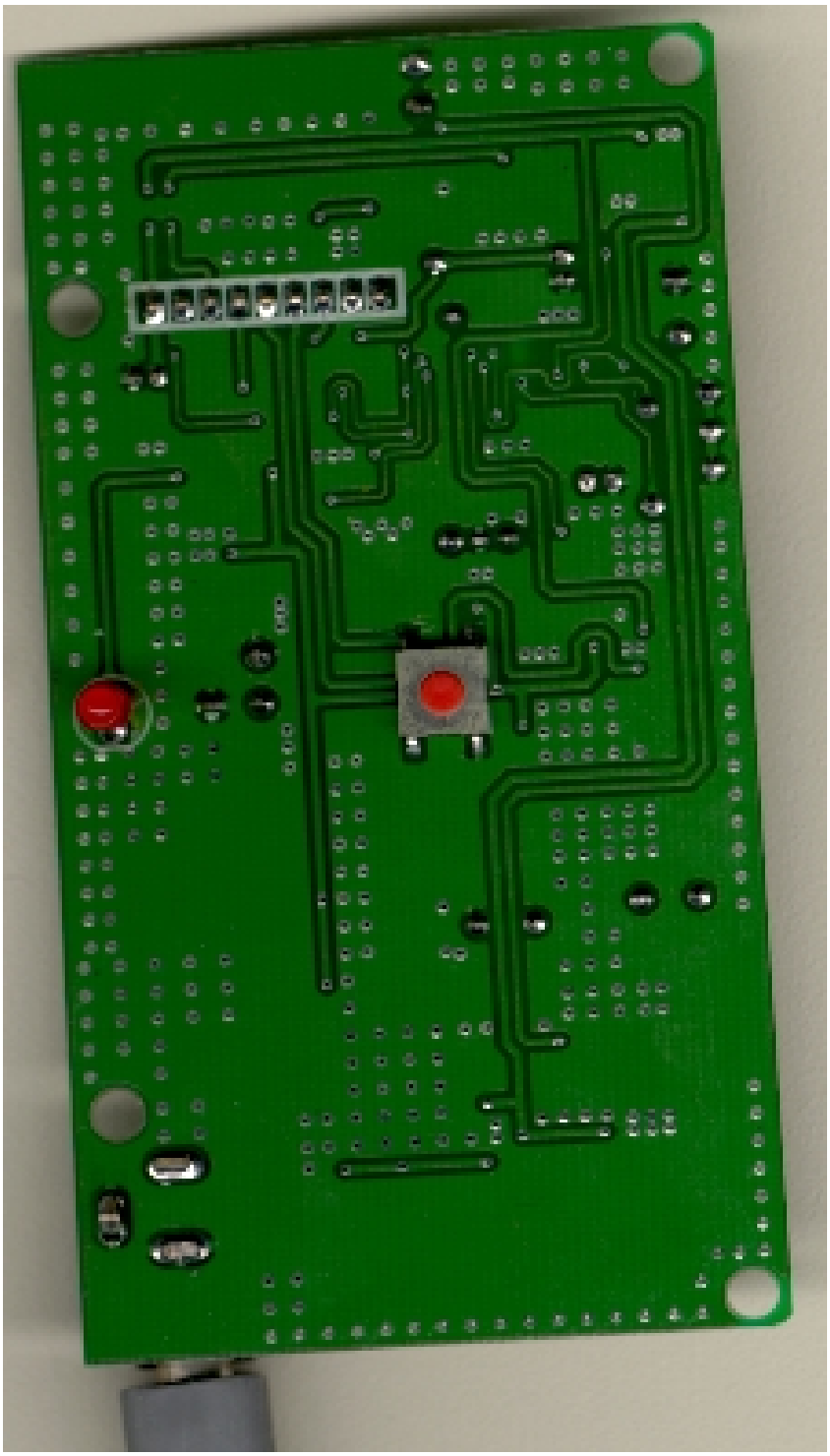
Both units were turned on and a scan was taken up to 5 GHz measuring the emission from each unit simultaneously.

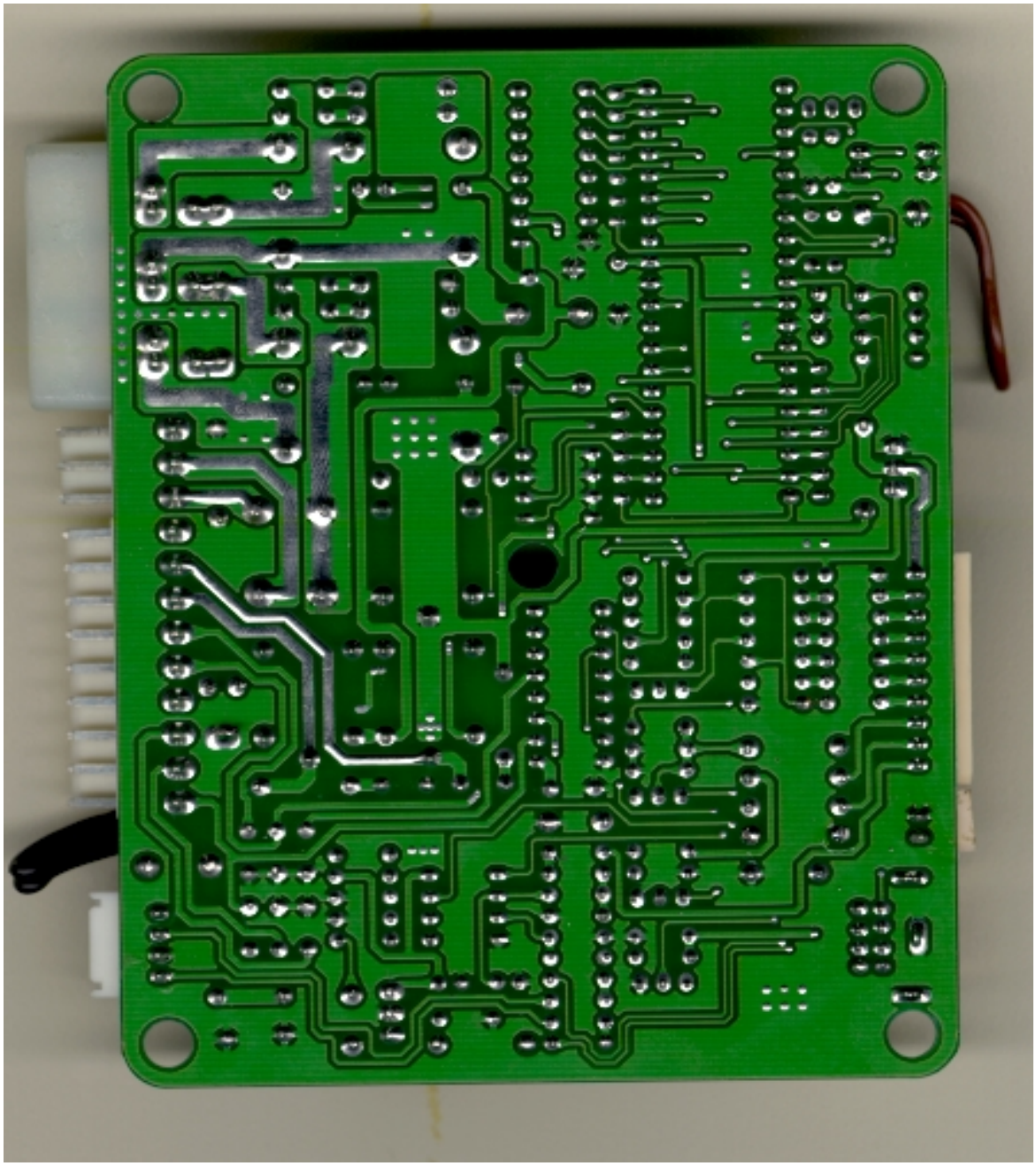
No emissions were seen. (See Page 61).

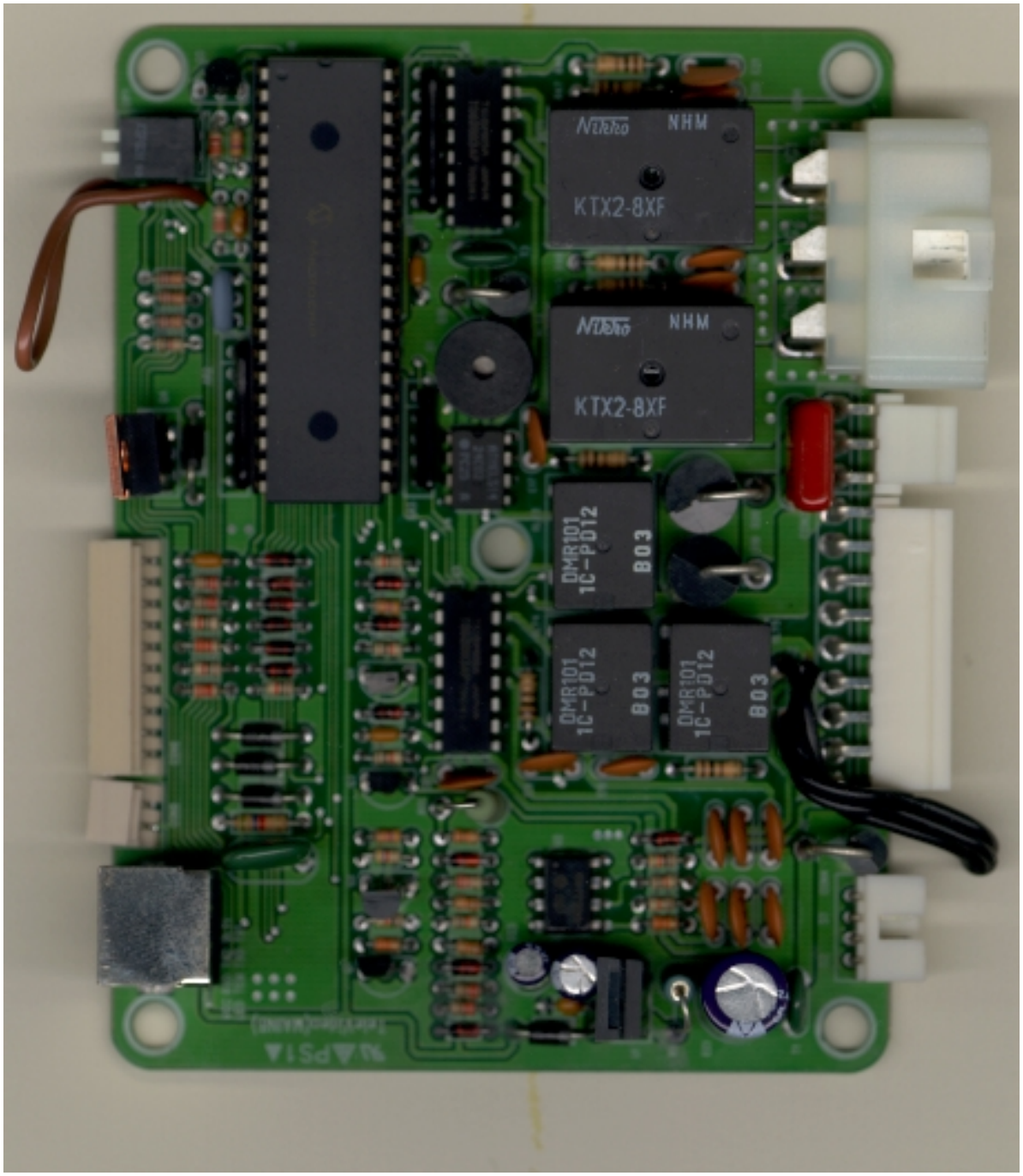
APPENDIX A

PHOTOGRAPHS








NHM
KTX2-8XF
NHM
KTX2-8XF
DMR101
1C-PD12
B03
DMR101
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DMR101
1C-PD12
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