

TransCell 1900TM

Description Per 47 CFR 2.1033(c)

Document No. Xy

February 16, 2001

Revision –



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TransCell 1900TM
Description Per 47 CFR 2.1033(c)

February 16, 2001



REVIEW AND CONCURRENCE

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TABLE OF CONTENTS

| <u>Section</u> | | <u>Page</u> |
|--|--|-------------|
| 1.0 47 CFR 2.1033(C) REQUIREMENTS..... | | 1 |
| 1.1 MAILING ADDRESS | | 1 |
| 1.2 FCC IDENTIFIER | | 1 |
| 1.3 INSTALLATION AND OPERATION MANUALS | | 1 |
| 1.4 TYPE OF EMISSION..... | | 1 |
| 1.5 FREQUENCY RANGE | | 1 |
| 1.6 POWER LEVELS AND POWER CONTROL | | 1 |
| 1.7 MAXIMUM POWER LEVEL | | 1 |
| 1.8 DC CURRENT AND VOLTAGE SUPPLIED TO PA, OPERATIONAL RANGE | | 1 |
| 1.9 TUNE UP PROCEDURE..... | | 2 |
| 1.10 SCHMATICs AND RF SHAPING..... | | 2 |
| 1.11 FCC LABEL SUBMISSION..... | | 2 |
| 1.12 PHOTOGRAPHS OF TRANSCell 1900TM..... | | 4 |
| 1.13 DIGITAL MODULATION | | 7 |
| 1.14 47 CFR SECTIONS 2.1046 THROUGH 2.1057 | | 7 |
| 1.15 EXTERNAL TRANSMIT AMPLIFIER | | 8 |
| 1.16 AM GENERATOR..... | | 8 |
| 1.17 COMPOSITE APPLICATION | | 8 |

LIST OF ILLUSTRATIONS

| <u>Figure</u> | | <u>Page</u> |
|---|--|-------------|
| FIGURE 1. MAXIMUM RF OUTPUT POWER PER CARRIER..... | | 1 |
| FIGURE 2: FCC LABEL, REMOTE..... | | 3 |
| FIGURE 3: FCC LABEL PLACEMENT, REMOTE ENCLOSURE DOOR..... | | 4 |
| FIGURE 4: HUB CHASSIS..... | | 5 |
| FIGURE 5: REMOTE CHASSIS..... | | 5 |
| FIGURE 6: PAPS AT REMOTE ENCLOSURE | | 6 |
| FIGURE 7: TRANSMITTER POWER AMPLIFIER RACK..... | | 6 |
| FIGURE 8: REMOTE ENCLOSURE, FRONT AND REAR VIEW | | 7 |

LIST OF TABLES

| <u>Table</u> | | <u>Page</u> |
|--|--|-------------|
| TABLE 1. DC SUPPLY PARAMETERS AT POWER AMPLIFIER | | 2 |

1.0 47 CFR 2.1033(C) REQUIREMENTS

Each requirement of paragraph (c) is handled separately below.

1.1 MAILING ADDRESS

The full mailing address and recipient of the grant are covered in 1900TM.PDF.

1.2 FCC IDENTIFIER

The FCC Identifier, OOJTCCELL1900TM, is covered in 1900TM.PDF.

1.3 INSTALLATION AND OPERATION MANUALS

Draft copies of the O&M and installation manuals have been furnished by Transcept as Exhibit D.

1.4 TYPE OF EMISSION

The type of emission for Part 24 is TDMA. The Part 15 emission is spread spectrum at 5.8 GHz.

1.5 FREQUENCY RANGE

The TransCell 1900TM Part 24 emissions are located in the PCS bands A-F. The Part 15 emissions are in the ISM 5.8 GHz band.

1.6 POWER LEVELS AND POWER CONTROL

The control of transmit power levels is discussed in document #1000483, SEM and HUI User manual, as furnished by Transcept. Operational power level for the Part 24 transmitter is 10 Watts per carrier, as measured at the antenna port. The Part 15 transmitter operational power is 27.5 dBm, at the antenna port.

1.7 MAXIMUM POWER LEVEL

The transCell 1900TM maximum power per channel using the Part 15 transmitter, measured at antenna port, is 27.5 dBm +/- 2.5 dB. The TransCell 1900TM maximum power per channel using the Part 24 transmitter, measured at antenna port, prior to automated shutdown (as discussed in section 4 of the O&M manual entered in Exhibit D) is given by the following equation.

$$\begin{aligned} P &= (\text{Max Power Shutoff Level}) + (\text{Detector Error}) + (\text{Path Loss Error}) \\ &= 43 \text{ dBm} + 1 \text{ dB} + 1.5 \text{ dB} = 36 \text{ Watts / Channel} \end{aligned}$$

Figure 1. Maximum RF Output Power Per Carrier, Part 24.

1.8 DC CURRENT AND VOLTAGE SUPPLIED TO PA, OPERATIONAL RANGE

The voltages and currents supplied to the final amplification stage of the TransCell 1900TM part 24 transmitter are given in Table 1. Table 2 shows the Part 15 data.

Table 1. DC Supply Parameters at Power Amplifier

| Supply Parameter | Min | Nominal | Max |
|------------------|------|---------|--------|
| DC Voltage | 20 V | 24 V | 29 V |
| DC Current | --- | 14.8 A | 25.7 A |

Table 2. DC Supply Parameters at DLM Amplifier

| Supply Parameter | Min | Nominal | Max |
|------------------|------|---------|--------|
| DC Voltage | 11 V | 12 V | 12.2 V |
| DC Current | --- | 0.5 A | 0.7 A |

1.9 TUNE UP PROCEDURE

Procedures regarding tuning of RF channels can be found in documents #1000483 “SEM and HUI User Manual”, and the O&M Manual as provided by Transcept. The TransCell 1900TM system will automatically recover from a prime power reset to the last channel values set by the operator, with any previously active Transmitter Power Amplifiers being enabled at the last step of the recovery process.

1.10 SCHMATIC AND RF SHAPING

The schematics of each CCA are submitted as Exhibit B. Power levels are maintained via system software during normal operation. Each individual Transmitter Power Amplifier is over-power protected by an autonomous shutdown activated when its RF detector reads 43 dBm, as measured at the antenna port. This shutdown is discussed in the O&M Manual provided by Transcept.

1.11 FCC LABEL SUBMISSION

The following figures show the submitted label and its placement.



Figure 2: FCC Label, Remote.



Figure 3: FCC Label Placement, Remote Enclosure Door.

1.12 PHOTOGRAPHS OF TRANSCELL 1900TM

Many photos of the modules and their placements are included in the draft O&M Manual in Exhibit D. The following figures are additions to the original draft sent to NTS.

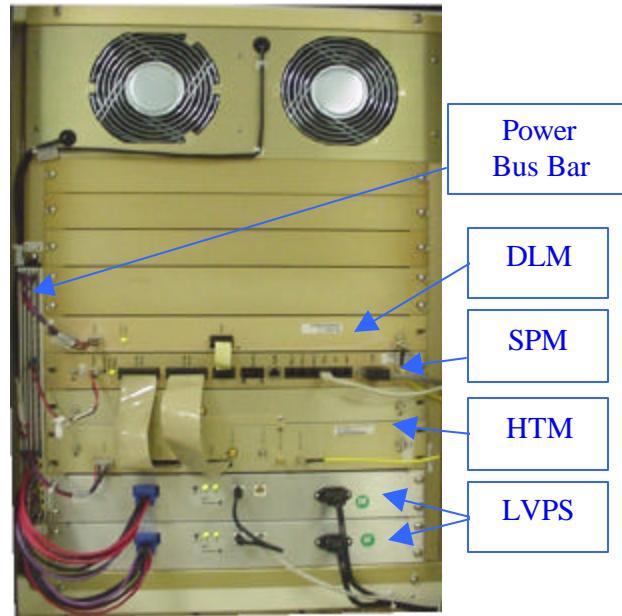


Figure 4: Hub Chassis.



Figure 5: Remote Chassis.

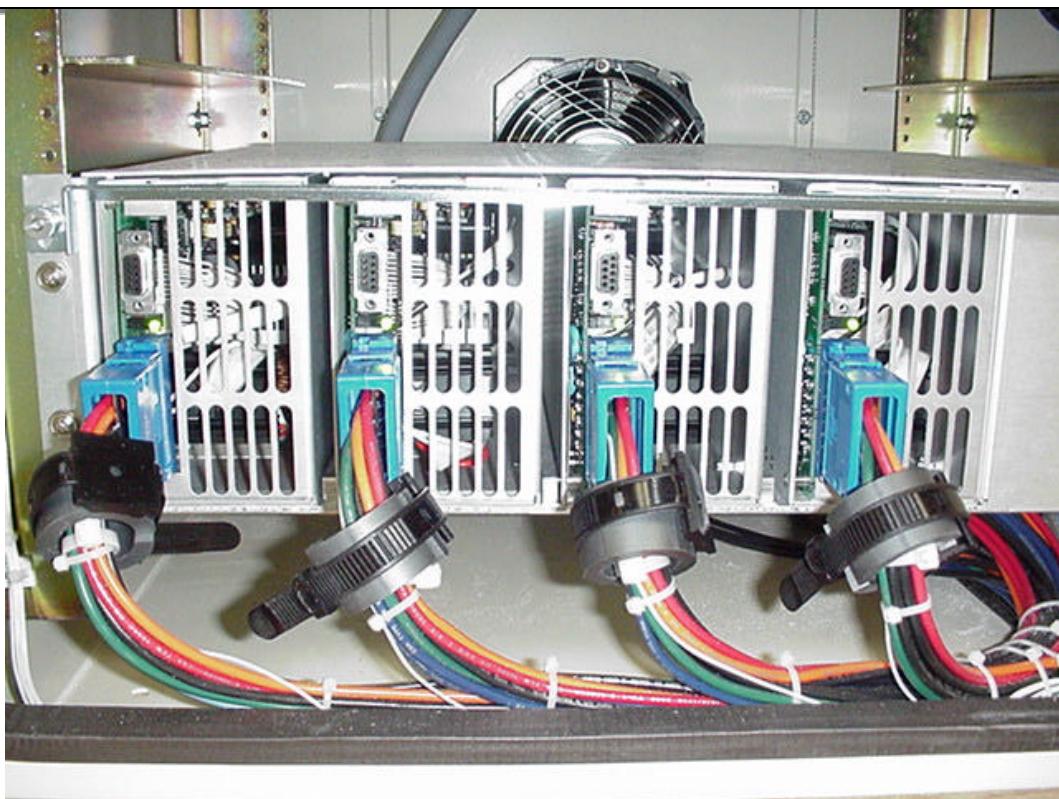


Figure 6: PAPS at Remote Enclosure.

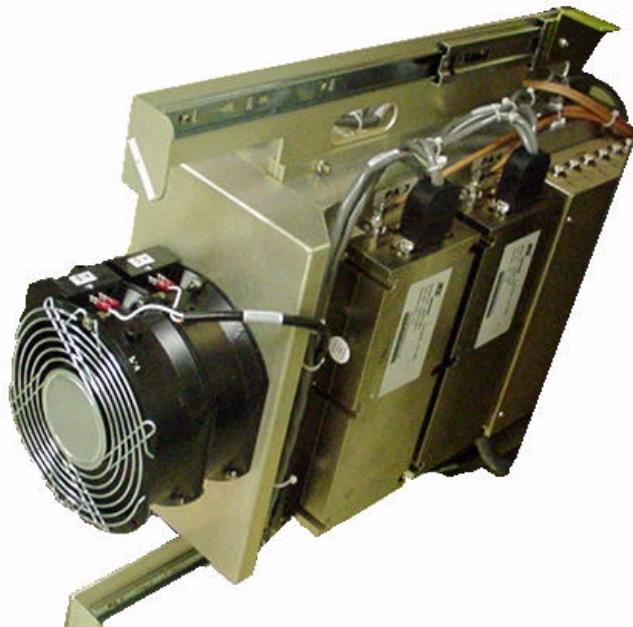


Figure 7: Transmitter Power Amplifier Rack

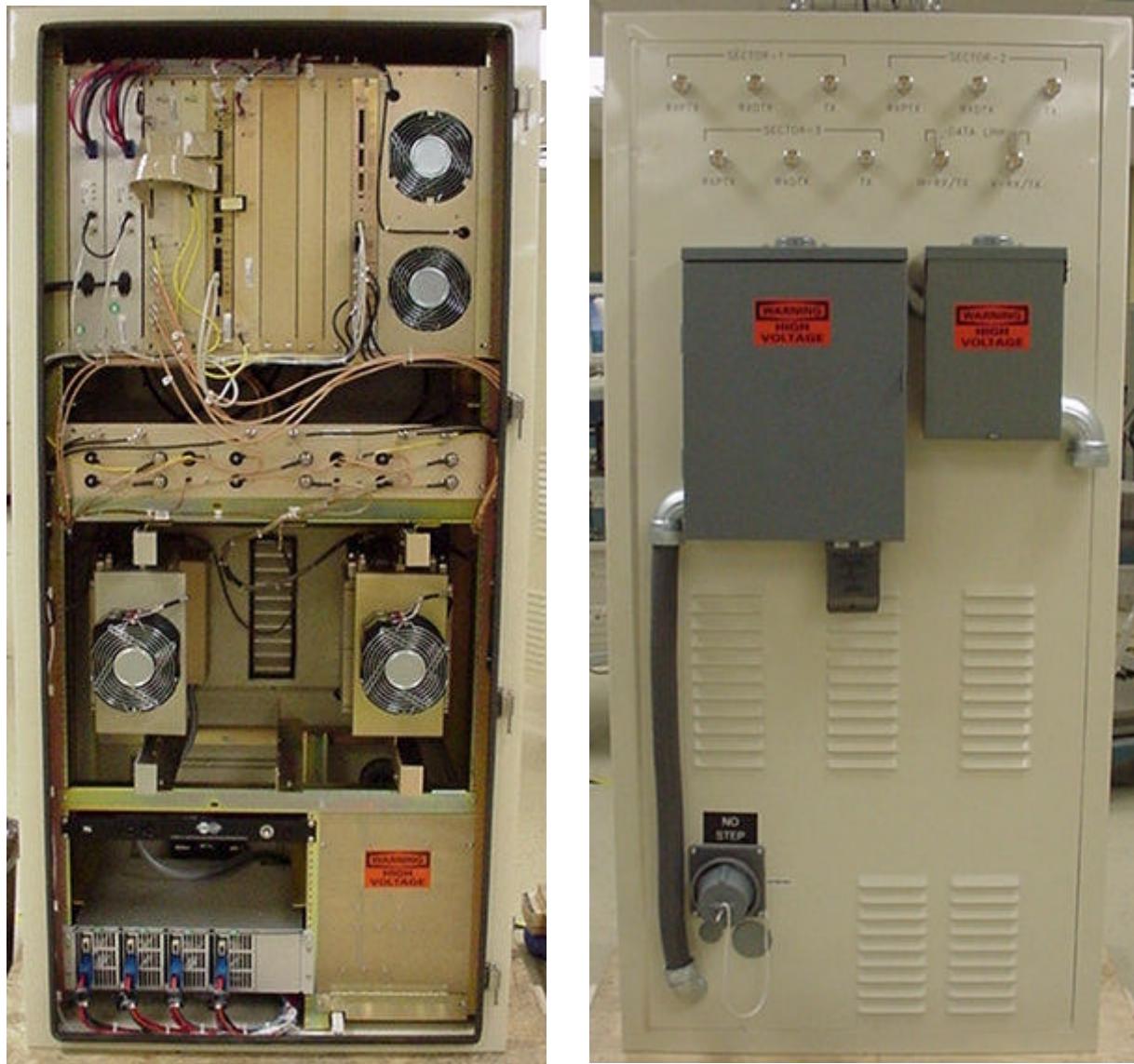


Figure 8: Remote Enclosure, Front and Rear View.

1.13 DIGITAL MODULATION

See Exhibit B and Exhibit E for a technical description of Part 15 spread spectrum output.

1.14 47 CFR SECTIONS 2.1046 THROUGH 2.1057

Data pertaining to 47 CFR sections 2.1046 through 2.1057, as applicable, has been compiled by NTS and Transcept in accompanying documentation. See 47CFR2_10XX.PDF.

1.15 EXTERNAL TRANSMIT AMPLIFIER

Not Applicable.

1.16 AM GENERATOR

Not Applicable.

1.17 COMPOSITE APPLICATION

This is a composite device. However, Elite has instructed Transcept to submit two applications: One for 47CFR 24; the other for 47CFR 15. Exhibit A is submitted as identical for both rule parts.

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