EXHIBIT 7

INSTRUCTION MANUAL

7.0 Instruction Manual

Attached is a preliminary copy of the Instruction Manual.

The FCC information to user can be found in page 8 of this manual.

This manual will be provided to the end-user with each unit sold/leased in the United States.

FCC ID: NMTTHR128-01

MULTI-CHANNEL IN-OUT CABLE FREE THERMOMETER

MODEL: EMR899

USER'S MANUAL

INTRODUCTION

Congratulations on your purchasing the EMR-899 Multi-Channel In-Out Thermometer with 433MHz cable free sensor.

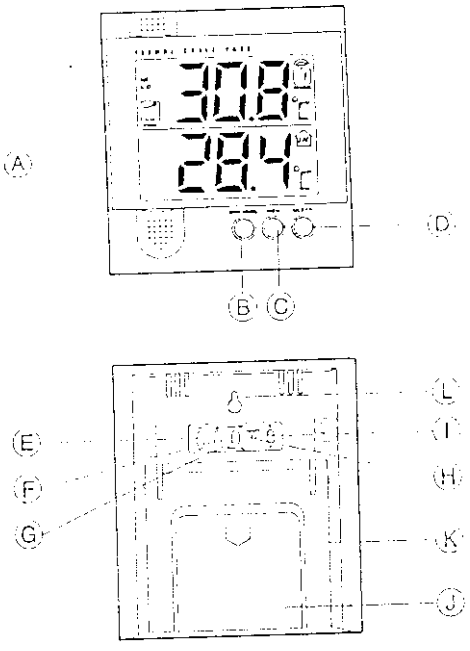
The EMR-899 is an easy-to-use, state-of-the-art thermometer. The basic package comes with a main unit, which is the temperature station, and a remote unit, the thermo sensor.

The main unit has extra-large read-outs for indoors temperature and that collected and transmitted by the remote unit. The main unit can support up to three remote units.

The main unit is capable of monitoring temperature changes of remote sites. You set the upper and lower temperature limits and the alarm will go off when those limits are exceeded. The maximum and minimum temperature of different sites can also be retrieved quickly.

No wire installation is required between the main and remote units. As the EMR-899 operates at 433MHz, it can be used in the U.S. and most places in Continental Europe.

MAIN FEATURES: MAIN UNIT



Ⓐ EXTRA LARGE TWO-LINE DISPLAY
Facilitates easy reading of remote and indoors temperatures

Ⓑ CHANNEL BUTTON
Selects among different channels

Ⓒ MEMORY (MEM) BUTTON
Recalls the maximum or minimum temperature of individual channels

Ⓓ CLEAR BUTTON
Clears the maximum and minimum temperatures of individual channels

Ⓔ HIGH (HI)/LOW (LO) BUTTON
Set the upper or lower temperature alarm limits of individual channels

Ⓕ ADVANCE (▲) BUTTON
Sets the readings for the upper or lower temperature of individual channels

Ⓖ TEMPERATURE ALARM (TEMP AL) ON/OFF BUTTON
Turns on or off the temperature alarm of individual channels

Ⓗ RESET BUTTON
Returns all settings to default values and erases temperature memories

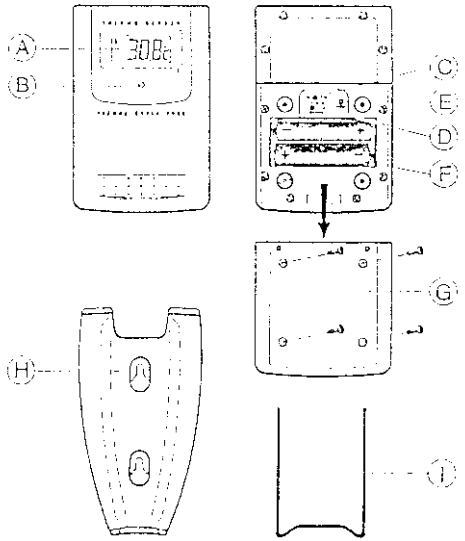
Ⓘ °C/°F SLIDE SWITCH
Selects between degree Centigrade (°C) and Fahrenheit (°F)

Ⓙ BATTERY COMPARTMENT
Accommodates two AA-size batteries

Ⓚ RETRACTABLE TABLE STAND
For standing the main unit on a flat surface

Ⓛ WALL-MOUNT RECESSED HOLE
For mounting the main unit on a wall

MAIN FEATURES: REMOTE UNIT



Ⓐ LCD
Displays the current temperature monitored by the remote unit

Ⓑ LED INDICATOR
Flashes when the remote unit transmits a reading

Ⓒ °C/°F SLIDE SWITCH
Selects between Centigrade (°C) and Fahrenheit (°F)

Ⓓ CHANNEL SLIDE SWITCH
Designates the remote unit Channel 1, Channel 2 or Channel 3

Ⓔ RESET BUTTON
Returns all settings to default values

Ⓕ BATTERY COMPARTMENT
Accommodates two AAA-size batteries

Ⓖ BATTERY DOOR

Ⓗ WALL-MOUNT HOLDER
Supports the remote unit in wall-mounting

Ⓘ REMOVABLE TABLE STAND
For standing the remote unit on a flat surface

BEFORE YOU BEGIN

For best operation,

1. Assign different channels to different remote units.
2. Insert batteries for remote units before doing so for the main unit.
3. Place the main unit as close as possible next to the remote unit, reset the main unit after installing batteries. This will ensure easier synchronization between the transmission and reception of signals.
4. Position the remote unit and main unit within effective transmission range, which, in usual circumstances, is 20 to 30 meters.

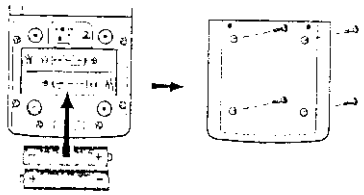
   Note that the effective range is vastly affected by the building materials and where the main and remote units are positioned. Try various set-ups for best result.

   Though the remote units are weather proof, they should be placed away from direct sunlight, rain or snow.

BATTERY AND CHANNEL INSTALLATION: REMOTE UNIT

The remote unit uses two AAA-size batteries. To install them,

1. Remove the screws on the battery compartment.
2. Select the channel number on the CHANNEL slide switch.
3. Select the temperature display unit on the °C/°F slide switch.



4. Insert the batteries strictly according to the polarities shown therein.
5. Replace the battery compartment door and secure its screws.

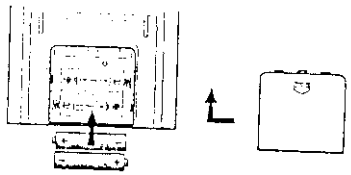
Replace the batteries when the low-battery indicator of the particular channel lights up on the main unit. (Repeat the steps described in section "BEFORE YOU BEGIN")

Note that once a channel is assigned to a remote unit, you can only change it by removing the batteries or resetting the unit.

BATTERY INSTALLATION: MAIN UNIT

The main unit uses two AA-size batteries. To install them,

1. Slide open the battery compartment door.
2. Insert the batteries strictly according to the polarities shown therein.



3. Replace the battery compartment door.

Replace the batteries when the low-battery indicator of the indoors temperature lights up. (Repeat the steps described in section "BEFORE YOU BEGIN")

GETTING STARTED

Once batteries are in place for the remote units, they will start transmitting temperature readings at 30-second intervals.

The main unit will also start searching for signals for about a minute once batteries are installed. Upon successful reception, the individual channel temperatures will be displayed on the top line and the indoors temperature on the bottom line. The main unit will automatically update its readings at about 30-second intervals.

If no signals are received, blanks "– – –" will be displayed and the kinetic wave icon will show " ". Press CHANNEL and MEM simultaneously to enforce another search for about 30 seconds. This is useful in synchronizing the transmission and reception of the remote and main units.

Repeat this step whenever you find discrepancies between the reading shown on the main unit and that on the respective remote unit.

HOW TO CHECK REMOTE AND INDOORS TEMPERATURES

The indoors temperature is shown on the bottom line of the display.

As for the remote sites or channels, press CHANNEL to go from one channel to another. The kinetic wave display on the channel number indicates the reception of that particular channel is in good order.

If no readings are received from one particular channel for more than two minutes, blanks "– – –" will be displayed until further readings are successfully searched. Check the remote unit is sound and secure. You can wait for a little while or press CHANNEL and MEM simultaneously to enforce an immediate search. Of course no reading will be shown if no remote unit is assigned to that channel.

The temperature trend indicator on the screen shows the trend of readings collected at that particular remote site. Three trends, rising, steady and falling, will be shown.

Arrow indicator			
Temperature Trend	Rising	Steady	Falling

If the temperature goes above or below than the temperature measuring range of the main unit or the remote unit (stated in specification), the display will show "HHH" or "LLL".

HOW TO READ THE KINETIC WAVE DISPLAY

The kinetic wave display shows the signal receiving status of the main unit. There are three possible forms:

The unit is in searching mode.	
Temperature readings are securely registered.	
No signals.	

MAXIMUM AND MINIMUM TEMPERATURES

The maximum and minimum recorded indoor temperatures and those of each channel will be automatically stored in memory. To display them,

1. Select the channel to be checked.
2. Press MEM once to display the maximum temperature and again the minimum temperature. The respective indicators, MAX or MIN will be displayed.

To clear the memory, press CLEAR. All segments of the display will light up for two seconds. The display will return to the last screen with maximum and minimum temperature erased from memory.

If you press MEM now, the maximum and minimum temperatures will have the same values as the current ones until different readings are recorded.

HOW TO USE TEMPERATURE ALARMS

The temperature alarms allow you to set the upper and lower limits of readings for individual channels. The alarm will go off if a limit is exceeded. To set the alarm,

1. Select the channel to be set.
2. Press the HI/LO button for the upper (HI) or lower (LO) limit. AN "OFF" message will be displayed if the alarm for that limit is turned off.
3. Use the ADVANCE (▲) button to set the upper or lower temperature.

   If this is the first time you set the limits, the lower limit will start from -50°C (-58°F) and the upper limit +70°C (158°F). Otherwise, the reading will start from the temperature last selected.

   Each press on the button will increase the temperature by one degree. Holding on the button will step up the increment to five.
4. Press TEMP AL ON/OFF button to switch off the "OFF" message. The set limit will be displayed.

5. Press HI/LO button to set another limit or return to normal display. The respective HI, LO or both indicators will light up to signify the status of the alarm.

When an alarm goes off, the display will switch to the respective channel with the display flashing. If undisturbed, the alarm will go off for a whole minute. Press any key to mute the alarm momentarily. The alarm will go off again if the temperature still exceeds the set limit.

To disable an alarm altogether, select the channel and use TEMP AL ON/OFF to turn it off.

If you have set the upper and lower temperatures for more than one channel and the limits are exceeded, the alarm will go off with the display switching from one channel to another at five seconds intervals.

DISCONNECTED SIGNALS

If without obvious reasons the display for a particular channel goes blank, press CHANNEL and MEM to enforce an immediate search. If that fails, check:

1. The remote unit of that channel is still in place.
2. The batteries of both the remote unit and main unit. Replace as necessary.

   Note that when the temperature falls below freezing point, the batteries of outdoor units will freeze, lowering their voltage supply and the effective range.

3. The transmission is within range and path is clear of obstacles and interference. Shorten the distance when necessary.

TRANSMISSION COLLISION

Signals from other household devices, such as door bells, home security systems and entry controls, may interfere with those of this product and cause temporarily reception failure. This is normal and does not affect the general performance of the product. The transmission and reception of temperature readings will resume once the interference recedes.

NOTE ON °C AND °F

The unit of temperature display is selected on the °C/°F slide switch. Select °C for Centigrade or °F for Fahrenheit.

Note that the remote temperature display on the main unit is dominated by the selection on the °C/°F slide switch of the main unit. Whatever the display units of the remote sensors are, they will be automatically converted to the chosen one of the main unit.

LOW BATTERY WARNING

When it is time to replace batteries, the respective low-battery indicator will show up when the respective channel is selected. The battery level of the main unit will be shown on the indoor temperature when it is running low.

HOW TO USE THE TABLE STAND OR WALL MOUNTING

The main unit has a retractable table stand, which when flipped open, can support the unit on a flat surface. Or you can flip close the stand and mount the unit on a wall using the recessed screw hole.

As for the remote unit, it comes with a wall-mount holder and a removable stand. Use either to hold the unit in place.

Main unit

Wall-mount

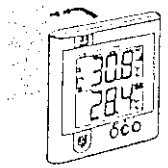
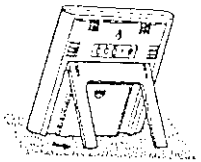


Table Stand



Remote unit

Wall-mount

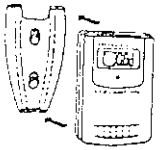
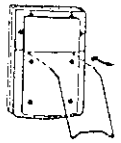


Table Stand



THE RESET BUTTON

This button is only used when the unit is operating in an unfavorable way or malfunctioning. Use a blunt stylus to hold down the button. All settings will return to their default values.

PRECAUTIONS

This product is engineered to give you years of satisfactory service if you handle it carefully. Here are a few precautions:

1. Do not immerse the unit in water.
2. Do not clean the unit with abrasive or corrosive materials. They may scratch the plastic parts and corrode the electronic circuit.
3. Do not subject the unit to excessive force, shock, dust, temperature or humidity, which may result in malfunction, shorter electronic life span, damaged battery and distorted parts.
4. Do not tamper with the unit's internal components. Doing so will invalidate the warranty on the unit and may cause unnecessary damage. The unit contains no user-serviceable parts.
5. Only use fresh batteries as specified in the user's manual. Do not mix new and old batteries as the old ones may leak.
6. Always read the user's manual thoroughly before operating the unit.

GB

SPECIFICATIONS

Temperature Measurement

Main unit

Indoor Temperature measurement

Displayed IN temperature range	: -9.9°C to +70.0°C (-9.9°F to 158.0°F)
Proposed operating range	: -5.0°C to +50.0°C (23.0°F to 122.0°F)
Temperature resolution	: 0.1°C (0.2°F)

Remote Temperature measurement

Displayed OUT temperature range	: -50.0°C to +70.0°C (-58.0°F to 158.0°F)

Proposed operating range	: -5.0°C to +50.0°C (23.0°F to 122.0°F)
Temperature resolution	: 0.1°C (0.2°F)
Remote unit	
Displayed range	: -50.0°C to +70.0°C (-58.0°F to 158.0°F)
Proposed operating range	: -20.0°C to +60.0°C (4.0°F to 140.0°F)
Temperature resolution	: 0.1°C (0.2°F)
RF Transmission Frequency	: 433 MHz
No. of Remote unit	: Maximum of 3
RF Transmission Range	: Maximum 30 meters
Temperature sensing cycle	: around 30 seconds

Power

Main unit	: use 2 pcs UM-3 or "AA" 1.5V alkaline battery
Remote sensing unit	: use 2 pcs UM-4 or "AAA" 1.5V alkaline battery

Weight

Main unit	: 250 gm
Remote sensing unit	: 100 gm

Dimension

Main unit	: 117 x 107 x 26 mm
Remote sensing unit	: 92 x 60 x 21 mm

NOTE ON COMPLIANCE

This product complies to standards and specifications of BZT, FCC and article number 334 of PTT.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ☐ Reorient or relocate the receiving antenna.
- ☐ Increase the separation between the equipment and receiver.
- ☐ Connect the equipment into an outlet on a circuit different from that to which the receiver is needed.
- ☐ Consult the dealer of an experienced radio/TV technician for help.

CAUTION

- The content of this manual is subject to change without further notice.
- Due to printing limitation, the displays shown in this manual may differ from the actual display.
- The manufacturer and its suppliers held no responsibility to you or any other person for any damage expenses, lost profits, or any other claim arise by using this product.
- The contents of this manual may not be reproduced without the permission of the manufacturer.

EXHIBIT 8

MISCELLANEOUS INFORMATION

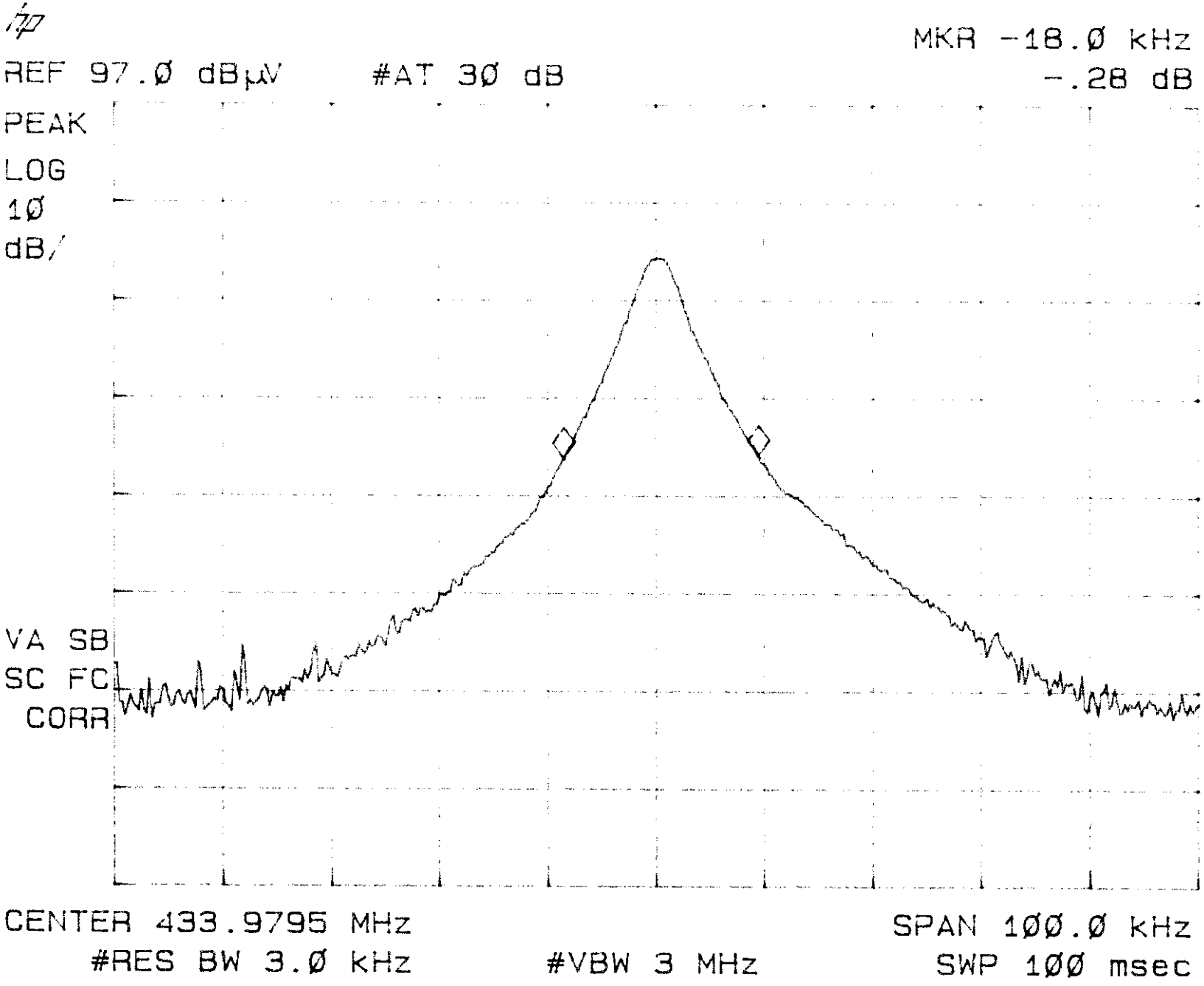
8.0 Miscellaneous Information

This miscellaneous information includes details of the measured bandwidth, the test procedure and calculation of factors such as pulse desensitization and averaging factor.

8.1 Measured Bandwidth

The plot on the following page shows the fundamental emission when modulated. From the plot, the bandwidth is observed to be 18 kHz, at 20 dB. The bandwidth limit is 1.1 MHz. Therefore, the unit meets the requirement of Section 15.231(c).

Figure 8.1 Bandwidth


MKR -18.Ø kHz
REF 97.Ø dBµV
#AT 3Ø dB
-.28 dB
PEAK
LOG
1Ø
dB/
VA SB
SC FC
CORR
CENTER 433.9795 MHz
SPAN 1ØØ.Ø kHz
#RES BW 3.Ø kHz
#VBW 3 MHz
SWP 1ØØ msec

8.2 Discussion of Pulse Desensitization

The determination of pulse desensitivity was made in accordance with Hewlett Packard Application Note 150-2, *Spectrum Analysis ... Pulsed RF*.

Pulse desensitivity was not applicable for this device. The effective period (T_{eff}) was approximately 1.5 ms for a digital "1" bit, as shown in the plots of Exhibit 8.3. With a resolution bandwidth (3 dB) of 100 kHz, the pulse desensitivity factor was 0 dB.

8.3 Calculation of Average Factor

Averaging factor in dB = 20 log (duty cycle)

The specification for output field strengths in accordance with the FCC rules specify measurements with an average detector. During testing, a spectrum analyzer incorporating a peak detector was used. Therefore, a reduction factor can be applied to the resultant peak signal level and compared to the limit for measurement instrumentation incorporating an average detector.

The time period over which the duty cycle is measured is 100 milliseconds, or the repetition cycle, whichever is a shorter time frame. The worst case (highest percentage on) duty cycle is used for the calculation. The duty cycle is measured by placing the spectrum analyzer in zero scan (receiver mode) and linear mode at maximum bandwidth (3 MHz at 3 dB down) and viewing the resulting time domain signal output from the analyzer on a Tektronix oscilloscope. The oscilloscope is used because of its superior time base and triggering facilities.

A plot of the worst-case duty cycle as detected in this manner are included in the following pages.

The duty cycle is simply the on-time divided by the period:

The duration of one cycle = 100ms
Effective period of the cycle = (5.6 + 1.5 x 24 + 3 x 3)ms = 50.6ms

DC = 50.6ms / 100ms = 0.506 or 50.6%

Therefore, the averaging factor is found by 20 $\log_{10}$ 0.506 = -5.9 dB

IDT

IDT Technology Limited

3 Sep 97

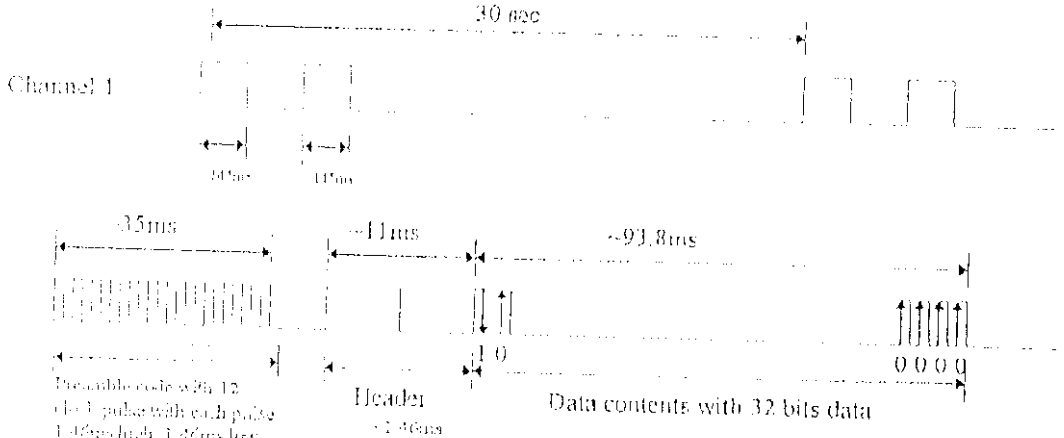
FACSIMILE COMMUNICATIONS

To	ITS	Date:	3 September, 1997
Attn.	H. M. Lam	Fax No.	27855487
From	Johnny Hon 3/Sept/97	Ref No.	
c.c.	Dennis Cheng, Tony Kwok, Mike Sze, BOB	Page	1 of 1
		FILE	DF/EMR899/A

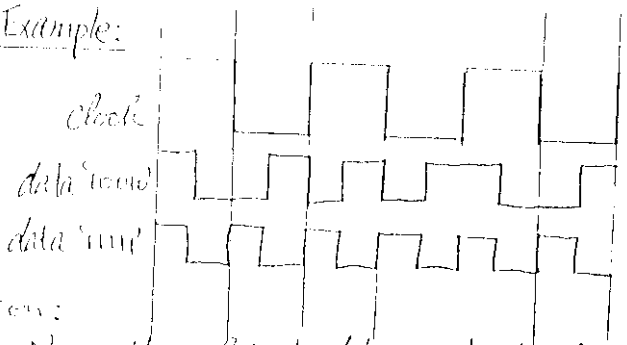
SUBJECT : THR128 Transmission Data Timing

With the conversation with you yesterday about the THR128 Transmission timing, the following are the timing you required. Since the data format is in Manchester encoding, the total time for the Transmission high is constant for each transmission, which is about 140ms per 30sec(for channel 1). If you have any other questions about the transmission timing, please feel free to ask us.

Transmission period of the THR128
Channel 1 30s
Channel 2 29s
Channel 3 31s

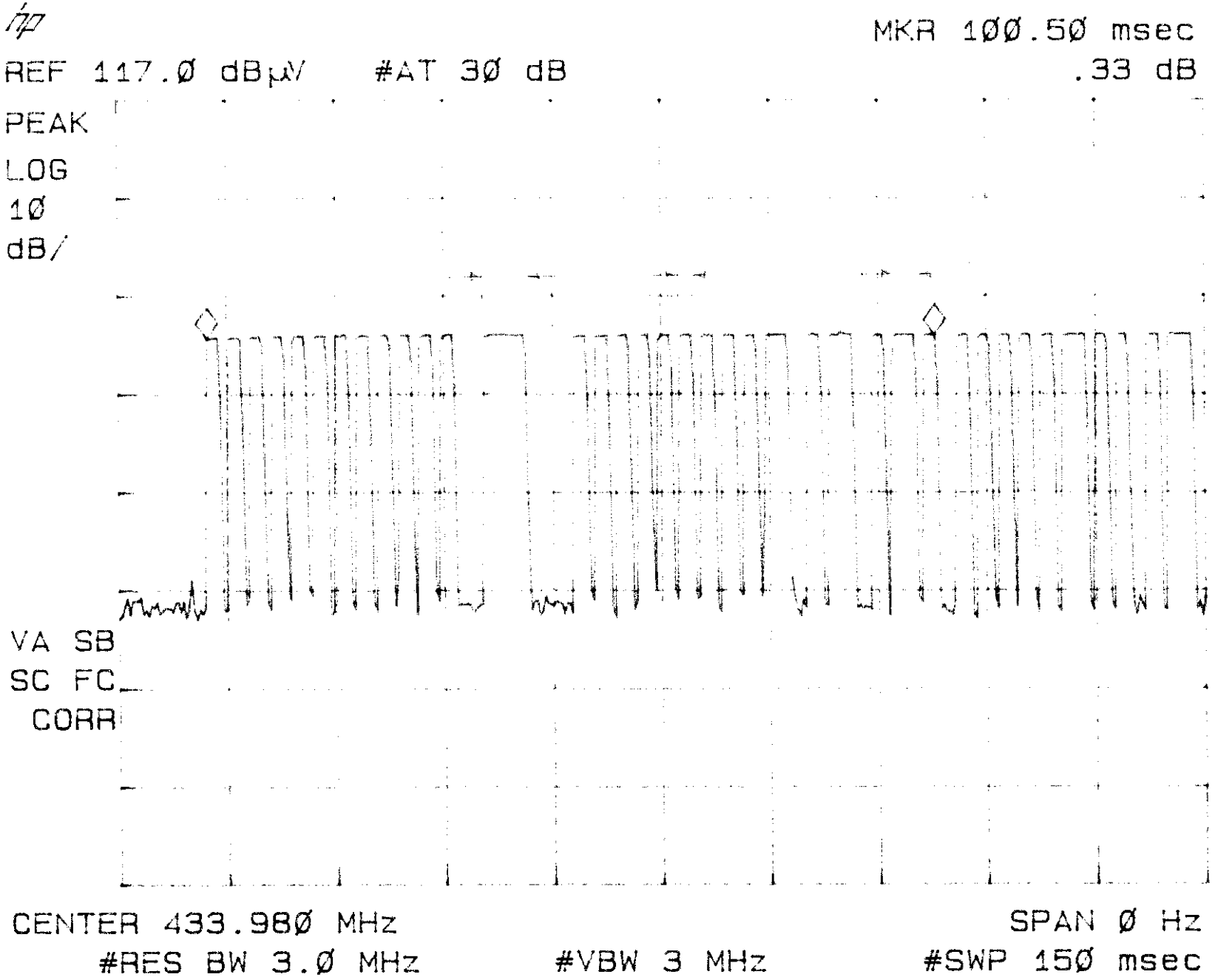


For Example:



Conclusion:

No matter what the data is, the total 'ON' is equal to total 'OFF' time


MKR 100.50 msec
REF 117.0 dBµV
#AT 30 dB
.33 dB
PEAK
LOG
10
dB/
VA SB
SC FC
CORR
CENTER 433.980 MHz
SPAN 0 Hz
#RES BW 3.0 MHz
#VBW 3 MHz
#SWP 150 msec

8.4 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services in the measurements of transmitters operating under Part 15, Subpart C rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.4 - 1992.

The transmitting equipment under test (EUT) is attached to a cardboard box and placed on a wooden turntable which is four feet in diameter and approximately one meter in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The cardboard box is adjusted through all three orthogonal axes to obtain maximum emission levels. The antenna height and polarization are varied during the testing to search for maximum signal levels.

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in Exhibit 8.3.

The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower. For line conducted emissions, the range scanned is 450 kHz to 30 MHz.

8.4 Emissions Test Procedures (cont'd)

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

Conducted measurements are made as described in ANSI C63.4 - 1992.

The IF bandwidth used for measurement of radiated signal strength was 100 kHz or greater below 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. A discussion of whether pulse desensitivity is applicable to this unit is included in this report (See Exhibit 8.2). Above 1000 MHz, a resolution bandwidth of 1 MHz is used.

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the forbidden bands and above 1 GHz, signals are acquired at a distance of one meter or less. All measurements are extrapolated to three meters using inverse scaling, but those measurements taken at a closer distance are so marked.