Design Calculations

The Probes were originally designed by Teledyne Analytical USA.

Teledyne is an ISO certified company, which has been manufacturing for the Medical Devices market for many years.

Original manufacturers Probes were reverse engineered and "Re-designed" using the same materials and specifications.

The design drawings were then used by UDT, who have been a manufacturer of several types of Pulse Oximeter Probes, for several original Probe manufacturers for many years. UDT is possibly the third largest manufacturer of Pulse Oximeter Probes in the world today.

The above has enabled the compatible Probes to be designed and manufactured to exacting standards by companies with a proven history of Medical Device design and manufacture.

In order to improve accuracy, and tracking, between the original manufacturers Probes and the Teledyne compatible generic, the use of generic diodes was not allowed.

Each manufacturer's Probe had the diodes examined for wavelength and output, and the compatible uses matched diodes and detectors. This becomes apparent in the electronic testing.

There are a limited number of diodes being used by the original manufacturers, and this has allowed a colour coding system to be introduced into the Probe, for easy identification.

All the Probes use the same method of mounting and assembly.

All new Probes are designed by the "reverse engineering" method.

Compiled: February 1997

Design History

The original idea came from Teledyne in 1996. UDT, were approached by Teledyne, as they had been manufacturing Pulse Oximeter probes, including Disposable Probes, for original manufacturers for many years.

In November 1996, the clip was designed in the presence of E. Avila, J Moore Teledyne and J.S. Lamb Viamed, and a timetable was set.

January 1997 – Final Design
April 1997 – UDT to confirm the final design
April 15th – prototypes to be available – May 1st – release the product
May 14th – Product Launch
May 30th – European Sales Seminar – product launch in Europe.

January 1997 meeting: As UDT had historically manufactured many types of probes, including Disposables, and had access to many types of LED's, they were using close tolerance LED's, which meant they did not need coding resistors in Nellcor and Ohmeda probes.

However, they were not aware that both the Nellcor and Ohmeda instruments required resistors to work. JS Lamb and D. Lamb were present, and overnight had the effect proved in the UK by S. Hardaker.
April – Teledyne withdrew from the project.
Viamed could not manufacture, and UDT did not want to be nominated manufacturer.
MCI became involved, as nominated USA manufacturer
July – discussions on product progress – no problem with UDT Quality (ISO 9000)

The procedure for a new probe is based on the ability to disassemble any probe, evaluate the components, especially the LED's, and, using standard parts – reverse engineer the product.

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TELEDYNE ANALYTICAL INSTRUMENTS
A business unit of Teledyne Electronic Technologies

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P.O. BOX 1580, CITY OF INDUSTRY, CA 91749-1580
TELEPHONES: (213) 283-7181 & (818) 961-9221
(818) 961-2538 or (818) 961-1044

CCJSL

DATE: 10/7/96 FAX NO: 44 1535635582 MSG: ___

TO: UIA LIMITED COUNTRY: UK PAGE ___ OF ___

ATTN: JOHN LOMAS FROM: ED ANJILA

SUBJECT:

JOHN,

THERE IS A GOD . . . I HAD A WONDERFUL MEETING THIS MORNING WITH UOT ATTACHED PORTIONS OF THEIR CAPABILITY THEY ARE THE THIRD BIGGEST MANUFACTURER OF PULSE OXIMETER SENSORS NO 1 NELCOR NO 2 OHMEDA NO 3 UOT. THE MANUFACTURE FOR CRITICARE DATASCOPE etc. NOT ONLY FINGER SENSORS BUT ALSO DISPOSABLES.

THEIR PRICES ARE ALMOST 1/2 EPIC PRICES TO TELEDYNE.

THESE DISPOSABLES AND OTHER PRODUCTS ARE MADE OUTSIDE THE US. THEIR WARRANTY OF THE PRODUCT IS 1 YEAR, NOW SOMETHING INTERESTING, THEY SAY THE PROBLEMS THEY ENCOUNTER IN WARRANTY RETURN IS CAUSE BY CABLES BUT IT IS A VERY VERY 0% LESS DONE 1%.

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DATE: 2 FAX NO: _____ MSG: ____

TO: _____ COUNTRY: _____ PAGE___ OF____

ATTN: _____ FROM: _____

SUBJECT: .

THEY DO NOT REPAIR RETURNS BUT AUTO-MATICALLY REPLACE.

THE ORIGINAL NELCOR PROBES WERE MADE BY THEM UNTIL NELCOR DECIDE TO MAKE IT THEMSELVES.

ALSO ON "MOSIMO" THEY ARE THE ONES MAKING THE BOARDS & THE PROBES FOR HIS NEW PULSEOXIMETER CO.

THINK ABOUT THIS, CALL YOU TOMORROW -

(LV)

WE DISCUSS A LOT OF POSSIBILITIES

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