

ZETEC

P21 93244

2957

Russell Murphy

RMCB

504-2710

June 1, 1993

Dear *Eddyner*[®] Customer:

We have discovered, and have corrected, an anomaly in the mixing algorithm used to calculate and display simple two frequency mixes.

While investigating the potential difference in mix residuals which might be attributed to probe speed variations and/or the material used for the tube support ring included with most calibration standards, we discovered a subtle mathematical error in the *Eddyner* mixing algorithm. The error was found in an algorithm intended to reduce the mix residual by pre-processing the raw digital prior to calculating the mixing coefficients and prior to displaying the mixed signal. This algorithm has been corrected and the "New"² algorithm will be included in Version 22 of our *Eddyner* Analysis program(s). The "New" mixing technique should, in some instances, provide improved detection of small signals by reducing the noise component associated with the mix residual.

In the *Eddyner* file structure, the mixing coefficients used to evaluate the data are commonly stored in the xxx.setup file associated with each cal group. The mixing coefficients stored in xxx.setup files created by "Old" versions of the *Eddyner* program are incompatible with the "New" mixing algorithms and, therefore, will not be capable of being used with the "New" programs.

In order to provide our customers with the revised algorithms, we will:

1. Issue Version 22 of *Eddyner* based on HP-UX Release 8.07 for HP 700 Series computers and HP-UX Release 8.0 for HP 300 and 400 Series computers which include the "New" mixing algorithms. Subsequent *Eddyner* versions will be based on the HP-UX Release 9.0.
2. Provide the capability of restoring "Old" setups and displaying the mix signals using the "Old" mix algorithms. This program will be a "Review Only" version of the Version 21 "eddy" program and be started by typing "eddy -r". This program will allow the user to recall previously analyzed flaw signals and display those signals as they were seen when the data was analyzed. This review program will not have the capability to store analysis setup's and, thus, prevent inadvertent use of an outdated and subsequently corrected mix technique.

¹ *Eddyner* is a registered trademark of Zetec Inc.

² "New" programs, versions, algorithms etc. refer to *Eddyner*[®] Version 22 and subsequent
"Old" programs, versions, algorithms etc. refer to *Eddyner*[®] Version 21 and prior

ZETEC, INC.
1370 NW Mall Street
PO Box 140
Issaquah WA 98027-0140
USA
Telephone (206) 392-5316
Telefax (206) 392-2088
Telex 15 2592

3. Provide a revised "eddy" program with the "New" mix algorithms. If a xxx.setup file created by the "Old" program is encountered, the "New" program will erase the "Old" mix coefficients and the calibration curve associated with that channel to prevent the user from displaying an incorrect mix signal. This erasure will occur in memory only and, thus, not destroy the previously saved setup files. The user can, if desired, create a "New" mix using the "New" program and save the coefficients by storing a "New" setup file. These "New" setup files will be named xxx.nsetup to provide the user with the ability to distinguish "Old" (xxx.setup) from "New" (xxx.nsetup) files. These "New" setup files will be coded in a way that will prevent them from being used by an "Old" version of *Eddyner*.

Version 22 of *Eddyner* is now being tested in-house and we are making every attempt to expedite that process prior to release. We expect to complete that testing and have updated versions available by June 14, 1993. This version will be provided free of charge upon your request for a copy. As is our policy, you will be responsible for shipping charges and the return of the optical disc (or a replacement disc).

Sincerely,



Zetec Inc.
Howard Houserman
General Manager