User's manual

SHIPMATE RS 6100

Navtex
receiver
system

SHIPMATE ✚
MARINE ELECTRONICS ®

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User's manual

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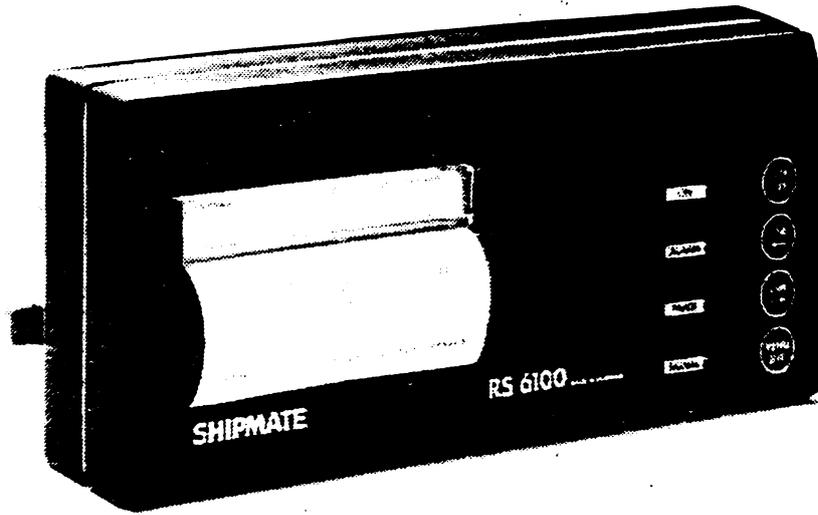
1. INTRODUCTION OF NAVTEX

1.1 THE NAVTEX SYSTEM

Navtex is an international automatic transmitter system, providing you with navigation and weather information, gale warnings and ice reports. Navtex can best be described as an updated news service for all ships in coastal waters.

The transmitted information is relevant for all types and sizes of ships. Having selected the types of messages wanted for your sailing area, it is possible to program the receiver to reject everything else.

At present approx. 50 Navtex transmitters are in operation all over the world. By 1990 the system will be worldwide and cover all busy coastal waters. The range of a transmitter station is typically 200-400 nautical miles and it broadcasts 10 minutes every 4 hour.

1.2 THE NAVTEX CONCEPT

On the below drawing is shown collection, coordination and broadcasting of Navtex messages.
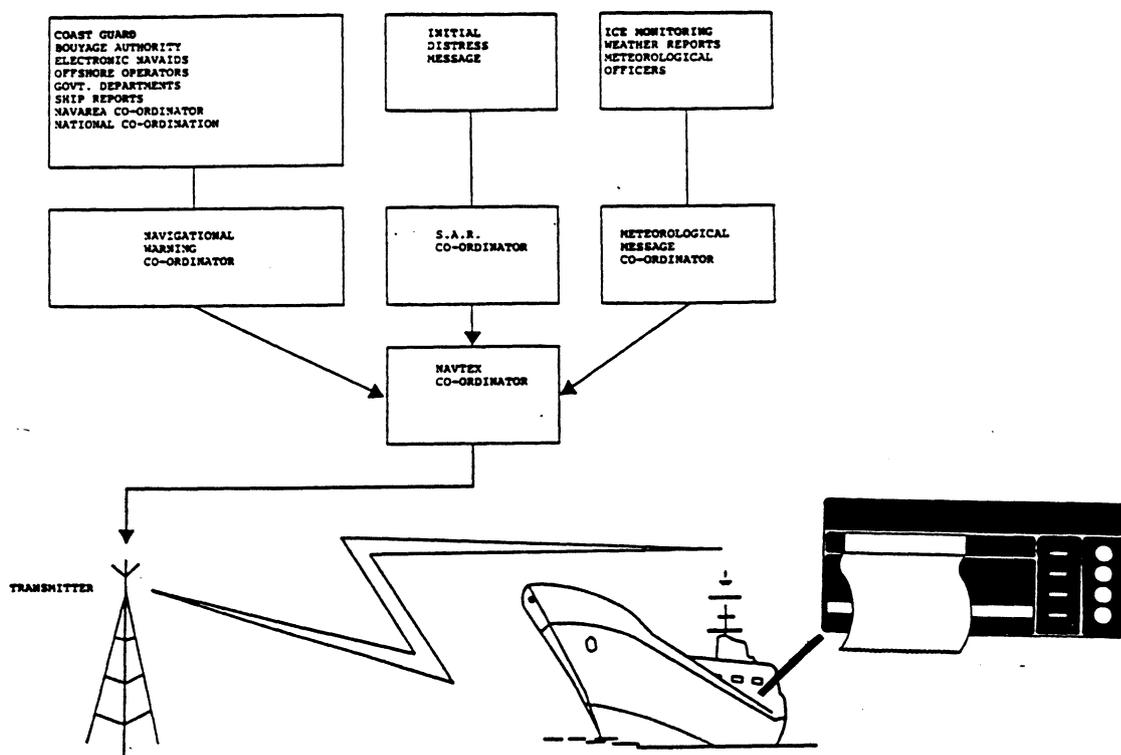
1.3   NAVAREAS

All Navtex transmitters broadcast on the frequency
518 kHz and to ensure that the transmitters do not
disturb each other, a geographical as well as a
temporal division have been made.
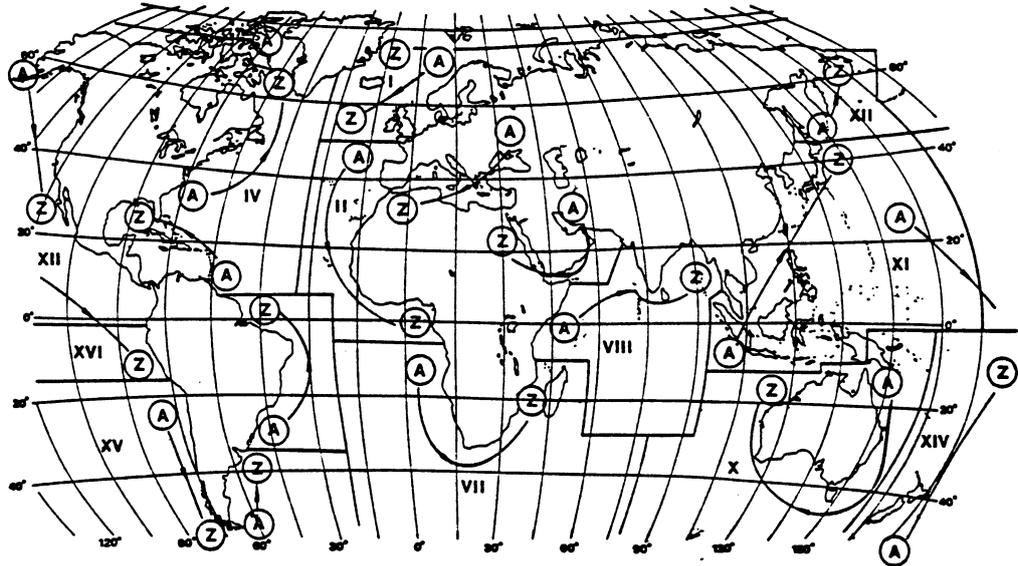
In the different navareas each transmitter has an
identification letter from A to Z. E.g. Cullercoats
radio transmitter in navarea 1 has the letter G.
This letter will be included in all messages from
the station.

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TIME SCHEDULE GMT

Code

H	Härnösand	0000	0400	0800	1200.
S	Lands End	0018	0418	0818	1218
U	Tallinn	0030	0430	0830	1230
G	Cullercoats	0048	0448	0848	
F	Brest-le-Conquet	0118	0518	0918	1318
O	Portpatrick	0130	0530	0930	1330
L	Rogaland	0148	0548	0948	1348
T	Oostende	0248	0648	1248	
R	Reykjavik	0318	0718	1118	1518
J	Stockholm	0330	0730	1130	1530
P	Scheveningen	0348	0748	1148	1548

NAVAREA 1

7

SHIPMATE:K
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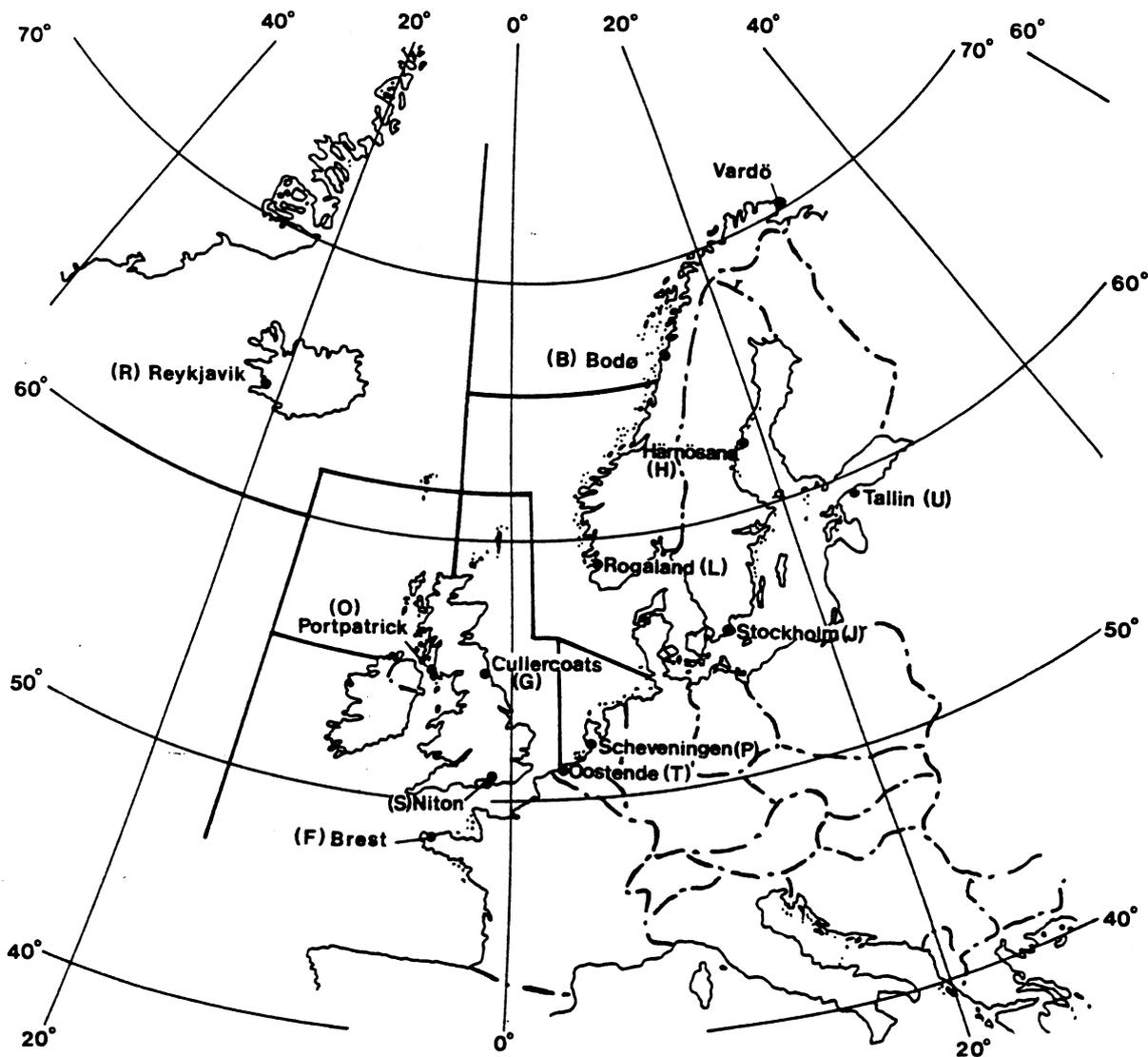
1.4 EXAMPLE OF A TYPICAL MESSAGE

Start of message
/ Code of the transmitter station (Oostende)
/ Type of message (navigational warning)
— Number of message

```
SHIPMATE NAVTEX
ZCZC TA43
251545 UTC NOV =
OSTENDERADIO INFO 145/85 =
51 14 25 N 02 53 05 E SHIPPING IS
INFORMED THAT IN ABOVE MENTIONED
POSITION A DREDGING PIPE IS LOST
POSITION IS MARKED BY 3 UNLIT
DIPSEYS SHIPPING IS REQUEST TO KEEP
WELL CLEAR OF THIS POSITION +
NNNN
END OF NAVTEX MESSAGE
```

End of message

1.5 TYPES OF MESSAGES

Information in the Navtex system is divided into different types which will appear from the print-out on the Navtex receiver.

A = Navigational Warnings *
B = Meteorological Warnings *
C = Ice Reports **
D = Search and Rescue Information *
E = Meteorological Forecasts
F = Pilot Service Messages
G = Decca Messages
H = Loran Messages
I = Omega Messages
J = Satnav Messages
K = Other Electronic Navaid Messages
L = Navigational Warnings - additional to A
Z = No messages on hand

*   Cannot be rejected by receiver (cf. paragraph 3.3)

** Ice reports are only broadcast by the stations where this information is of interest.

1.6   CONTENTS OF MESSAGES

A   : Will typically include messages of buoys out of position, unlit buoys, new wrecks, floating debris, oil rig moves, naval exercises etc. Such messages cannot be rejected when programming a Navtex receiver.

B   : Gale warnings - these are broadcast immediately on receipt. Such messages cannot be rejected when programming a Navtex receiver.

C   : Ice reports - are broadcast in the relevant areas - the Baltic, Iceland and Norway.

D   : Distress alerting. The first details of any distress situation will be broadcast on receipt. Subsequent information will not be transmitted as all distress traffic takes place on the international distress frequency. Such messages cannot be rejected when programming a Navtex receiver.

E   : General weather forecasts of the same type as the ones broadcast from the coastal stations.

F   : Messages will be issued under this category to advise mariners of unscheduled alterations to offshore pilot station facilities, e.g. due to stress of weather.

G,H,I,J,K : Warnings of irregularities in the transmission of the Decca Navigator chains, Loran C chains, Omega and Transit satellite systems.

L   : Is used when the numbers from 01-99 in type A have been used up.

Z   : Can be used by the transmitter stations to confirm correct function of both transmitter and receiver by transmitting the signal at fixed hours when there are no messages.

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1.7   <u>NUMBERING OF MESSAGES</u>

Each message within a type has a number between 01
and 99, which identifies the message. When 99 mes-
sages have been broadcast they will start from 01
again. When broadcasting type D messages, typically
00 will be used. As messages of current interest will
be repeated, the messages will not always be broadcast
consecutively.

2.   OPERATION

2.1   SURVEY

OPERATING KEYS
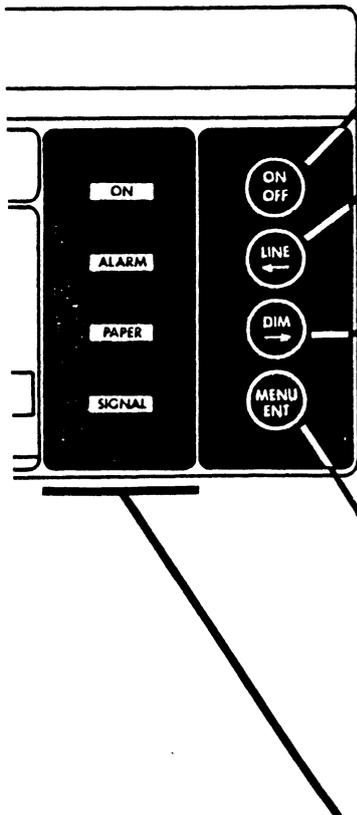
ON/OFF:			cf. page 12
LF	:	Line feed	cf. page 12
←	:	Moves the printer head 1 character to the left (in menu mode)	cf. page 12
DIM	:	Dims light in operating keys and indicator lamps	cf. page 13
→	:	Moves the printer head max. 1 step to the right in menu mode	cf. page 13
MENU	:	Prints out the 1st part of the menu	cf. page 13
ENT	:	Carries out the function at which the printer head is pointing	cf. page 13

INDICATOR LAMPS

ON   : Is lit when the
         device is switched
         on

ALARM : Flashes when receiving
         an alarm message
         (alarm is set by the
         transmitter station) cf. page 17

PAPER : Is lit when the roll
         of paper is empty or if
         the paper gets stuck.
         Press MENU/ENT to switch off
         the lamp

Will light
for a short
period when
switching
on the
RS 6100.

SIGNAL: Is lit when receiving
         a message

2.2   FUNCTION

2.2.1   START UP

When the RS 6100 is connected correctly (cf. chapter
5. MOUNTING), it is switched on by pressing the ON/OFF
key.

Setting of stations, types of messages etc. will be
memorized from the last time the RS 6100 was in use.
By the first start up the setting will be the facto-
ry's test setting.

2.2.2   OPERATION

KEYS

**ON
OFF**

ON/OFF

At the first press of the key, the RS 6100
will be switched on and the ON lamp will be
lit.

At the second press (approx. 0.5 sec.) of
the key, the RS 6100 and the ON lamp will be
switched off.

NOTE:
After a power cut, the RS 6100 must be
switched on by pressing the ON/OFF key.

**LINE
←**

LINE FEED/MOVING OF PRINTER HEAD

A press of the key will give 4 line feeds
unless MENU/ENT has been activated first.

If the key MENU/ENT has been activated befo-
re LINE FEED, the function ← will move
the printer head 1 step to the left (the
function is used when you want the printer
head to point at a desired menu).

DIM →

DIMMER/MOVING OF PRINTER HEAD

Pressing the key, the dimmer function will
be activated unless MENU/ENT has been acti-
vated first. If the key is pressed more than
1 second, the speaker will be switched on
until the key is released again.

The dimmer has 4 stages, i.e. 3 light inten-
sities and switched off. If MENU/ENT has
been activated before DIM, the function →
will move the printer head max. 1 step to
the right (the function is used when you
want the printer head to point at a desired
menu).

MENU ENT

MENU/ENT

The key is activated when a print out of the
main menu is wanted and when a command is to
be carried out. Messages received after
start of operation will be printed out 20
seconds after the MENU/ENT key has been ac-
tivated.

MENU ENT   **ON OFF**

If both keys are pressed simultaneously af-
ter the device has been switched off, the RS
6100 will be reset (press MENU/ENT first).

3.   <u>MENU</u>

3.1 SURVEY OF MENU

MAIN MENU

HELP, ECON, STAT, MESS, ST-ID,

INTFA, SPEC, SILEN, AUDIO, TEST

AUTO, IF-1/2, A-4, A-3, A-2, A-1

HELP FUNCTION

PRINT OUT:
SHORT DESCRIPTION
OF MAIN MENU
FUNCTIONS

ECON (ECONOMY)

ECONOMY FUNCTION
ON/OFF

STAT (STATUS)

- AUTO → PRINT STATUS
- INTFA → PRINT STATUS
- NAV → PRINT STATUS

MESS (MESSAGE TYPE)

- MANUAL SETUP
  - A,B,C,D,E,F
  - G,H,I,J,K,L
  - M,N,O,P,Q,R
  - S,T,U,V,X,Y,Z
- ALL TYPES

ST-ID (STATIONS-ID)

- MANUAL SETUP
  - A,B,C,D,E,F
  - G,H,I,J,K,L
  - M,N,O,P,Q,R
  - S,T,U,V,X,Y,Z
- ALL STATIONS

INTFA INTERFACE FOR NAVIGATORS

- INTERFACE 1
  - OTHER NAVIGATORS
    - BAUDRATE
    - DATABIT
    - PARITY
    - REVERSE PRINT-OUT
  - AUTOMATIC INTERFACE SETTING OF RS 4000, RS 4001, RS 5000 AND RS 5100 NAVIGATORS
- INTERFACE 2
  - OTHER NAVIGATORS
    - BAUDRATE
    - DATABIT
    - PARITY
    - REVERSE PRINT-OUT
  - AUTOMATIC INTERFACE SETTING OF RS 4000, RS 4001, RS 5000 AND RS 5100 NAVIGATORS

SPECIAL FUNCTIONS

- NEW-A
- ID-INFO
  - ON
  - OFF
- ED-A-4, ED-A-3, ED-A-2, ED-A-1
  - A,B,C,D,E,F
  - G,H,I,J,K,L
  - M,N,O,P,Q,R
  - S,T,U,V,X,Y,Z

SILEN STORING OF MESSAGES

SILEN ON/OFF

AUDIO

- LOUDSPEAKER AUTO ON OFF
- HEADPHONE TELEX

TEST FUNCTION

TEST PASSED OR TEST FAILED

AUTO

- AUTO-CHOICE
  - 4ID
  - 3ID
  - 2ID
  - 1ID
  - AUTO IS SELECTED
- AUTO OFF
- AUTO ON

IF-1/2 **A-4** **A-3** **A-2** **A-1**

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3.2 MENU GENERAL

SELECTION OF MENU BY MEANS OF THE PRINTER HEAD

The printer head is used as cursor (pointer) when a menu is to be selected. It must be situated above the desired menu.

The printer head will always be situated at the right side of the paper when a menu is called.

— PRINTER HEAD

— PAPER
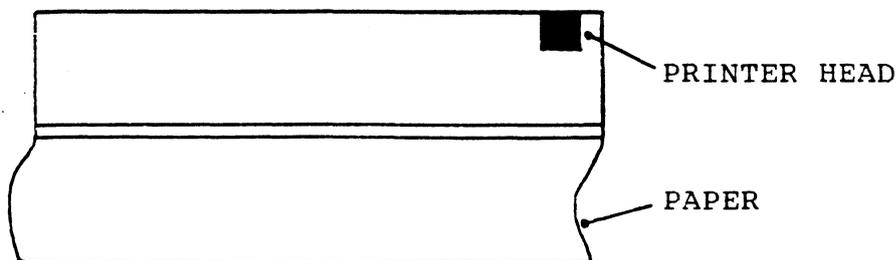
The printer head is moved by means of the keys ← → when the MENU/ENT key has been activated.

NOTE:
The printer head can only be moved 1 step to the right.

NEXT

When NEXT is selected, RS 6100 prints out the next text belonging to the selected menu.

EX

Is a "regret function" or stop function. Is used if you want to leave a menu without changing anything.

MAIN MENU

The first part of the main menu is printed out when pressing:

MENU ENT

```
EX  HELP  ECON  STAT  MESS  ST-ID  NEXT
      MOVE CURSOR AND PRESS ENT
```
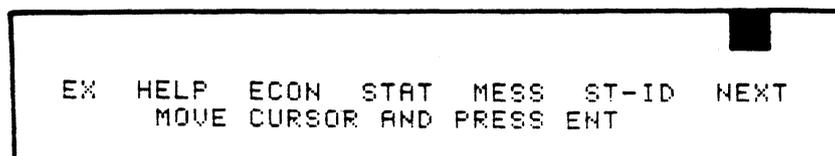
The second part of the main menu is printed out when
pressing:

MENU ENT

```
EX INTFA  SPEC  SILEN AUDIO  TEST   NEXT
       MOVE CURSOR AND PRESS ENT
```

(The printer head was situated above NEXT which makes
it possible to continue in the menu).

The third part of the main menu is printed out when
pressing:

MENU ENT

```
EX  AUTO IF-1/2 A-4  A-3  A-2  A-1 NEXT
       MOVE CURSOR AND PRESS ENT
```

(The printer head was situated above NEXT which makes
it possible to continue in the menu).

ALARM

The alarm lamp will be lit when an alarm message is
received and can be switched off again by pressing the
MENU/ENT key.

3.3   THE INDIVIDUAL PARTS OF THE MAIN MENU

ST-ID (Station identity)

Each station within a navarea has a letter as identi-
fication and in this menu the individual stations are
selected from which messages are wanted, or all sta-
tions at the same time. By means of the arrow keys the
cursor is positioned above ST-ID, then ENT is pressed
and the following status shows how the receiver is

set,

either:

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│    ABCDEFGHIJKLMNOPQRSTUVWXYZ                    │
│    A : SELECTED       A : NOT SELECTED          │
│                                                 │
└─────────────────────────────────────────────────┘
```

if single stations are selected. [A] means that messa-
ges are received from the station in question,

or:

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│                                                 │
│    ALL   STATIONS   SELECTED                    │
│                                                 │
│                                                 │
└─────────────────────────────────────────────────┘
```

if messages are received from all stations.

Then the menu is printed out:

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│    EX SET-S-Z SET-M-R SET-G-L SET-A-F   ALL     │
│          MOVE CURSOR AND PRESS ENT              │
│                                                 │
└─────────────────────────────────────────────────┘
```

SET-A-F means that stations with the identification
letters A to F can be selected.

Manual set-up of stations

The cursor is moved to SET-A-F by pressing the arrow
key and ENT:

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│    EX   NEXT  A    B    C    D    E    F        │
│    MOVE CURSOR.REVERSE ST-ID BY ,ENT            │
│                                                 │
└─────────────────────────────────────────────────┘
```

By moving the cursor so that it is situated above a
station and pressing ENT, the status of the station
will change, i.e. station not selected (A) becomes
station selected ([A]) and vice versa. In the shown
menu stations C and E are selected. Pressing ENT, the
printer head will (after a short delay) move to the
next letter in the menu.

NOTE:
When the whole menu is terminated, a new status is
printed out so that the user can check whether the
setting is correct.

It is possible to continue through the menu by selec-
ting NEXT and pressing ENT.

```
EX  NEXT  G    H    I    J    K    ■
MOVE CURSOR.REVERSE ST-ID BY ENT
```

```
EX  NEXT  M    N    O    P    Q    R
MOVE CURSOR.REVERSE ST-ID BY ENT
```

```
EX  S    T    U    V    W    X    Y  Z
MOVE CURSOR.REVERSE ST-ID BY ENT
```

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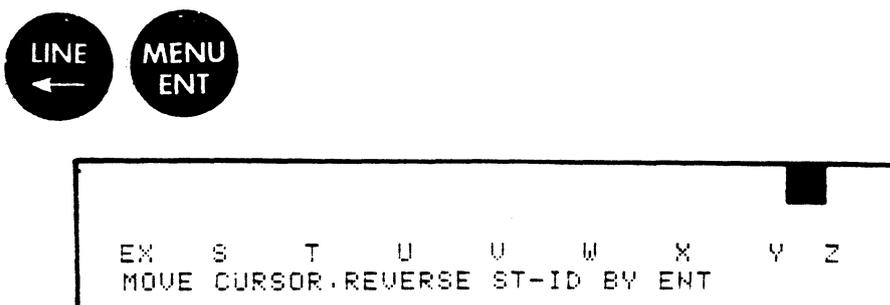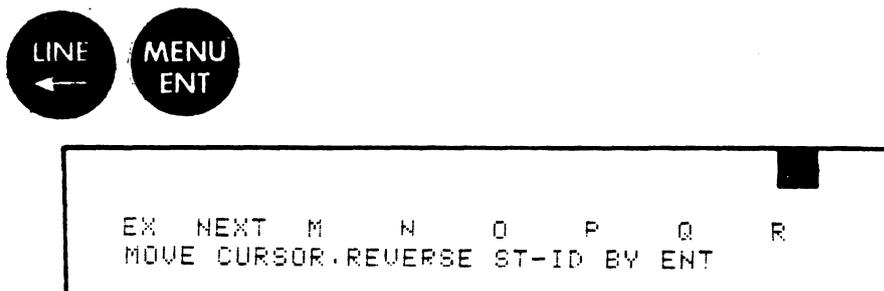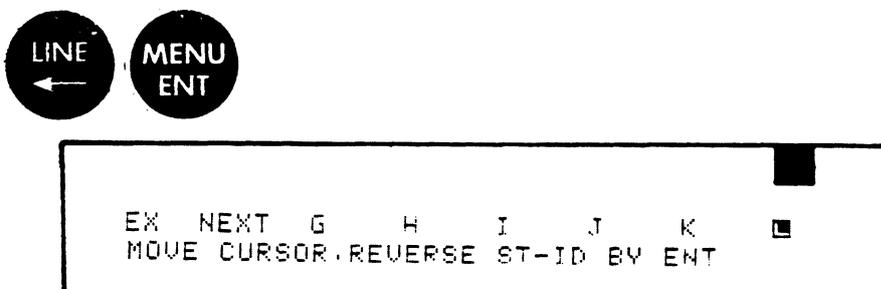
To leave a menu, the cursor is moved to EX, after which ENT is pressed.

NOTE:
It is not necessary to continue through the whole menu if you only want to make corrections in e.g. the first line. By pressing EX you can always leave the menu.

The new status will always be printed out when the menu is left.

```
NEW STATUS: ABCDEFGHIJKLMNOPQRSTUVWXYZ
```

ALL (all stations)

ALL means that the RS 6100 receives messages from all stations within range.

```
EX SET-S-Z SET-M-R SET-G-L SET-A-F  ALL
        MOVE CURSOR AND PRESS ENT
```

As the printer head is situated above ALL, ENT is pressed, after which the new status is printed out.

```
ALL  STATIONS  SELECTED
```

NOTE:
To get out of ALL mode, enter manual mode (e.g. SET--A-F), move the cursor to EX and press ENT. The former set-up is now present and will be written out as NEW STATUS.

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Example of manual selection of stations

You want to listen to the stations A, B, E and exclude station C.

(MENU ENT)

```
┌──────────────────────────────────■──┐
│                                      │
│  EX  HELP  ECON  STAT  MESS  ST-ID  NEXT │
│       MOVE CURSOR AND PRESS ENT      │
│                                      │
└──────────────────────────────────────┘
```

(LINE ←)

```
┌─────────────────────────■────────────┐
│                                      │
│  EX  HELP  ECON  STAT  MESS  ST-ID  NEXT │
│       MOVE CURSOR AND PRESS ENT      │
│                                      │
└──────────────────────────────────────┘
```

(MENU ENT)

```
┌──────────────────────────────────■──┐
│                                      │
│  EX SET-S-Z SET-M-R SET-G-L SET-A-F  ALL │
│        MOVE CURSOR AND PRESS ENT      │
│  ABCDEFGHIJKLMNOPQRSTUVWXYZ          │
│   ▣ : SELECTED      A : NOT SELECTED │
└──────────────────────────────────────┘
```

(LINE ←)

```
┌──────────────────────────■───────────┐
│                                      │
│  EX SET-S-Z SET-M-R SET-G-L SET-A-F  ALL │
│        MOVE CURSOR AND PRESS ENT      │
│  ABCDEFGHIJKLMNOPQRSTUVWXYZ          │
│   ▣ : SELECTED      A : NOT SELECTED │
└──────────────────────────────────────┘
```

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MENU ENT

```
                                                 ▓

    EX  NEXT  A    B    ▣    D    ▣    F
    MOVE CURSOR.REVERSE ST-ID BY ENT
```

Press until the cursor is above C.

LINE ←

```
                              ▓

    EX  NEXT  A    B    ▣    D    ▣    F
    MOVE CURSOR.REVERSE ST-ID BY ENT
```

C is excluded by pressing ENT.

The cursor is automatically moved to B.

```
                         ▓

    EX  NEXT  A    B    ▣    D    ▣    F
    MOVE CURSOR.REVERSE ST-ID BY ENT
```

B is selected by pressing ENT. Note that the change
will not be shown until all changes have been made and
a new status is printed out.

MENU ENT

The cursor is automatically moved to A.

```
                    ▓

    EX  NEXT  A    B    ▣    D    ▣    F
    MOVE CURSOR.REVERSE ST-ID BY ENT
```

A is selected by pressing ENT.

MENU
ENT

As no stations further down in the menu are to be changed, the cursor is moved to EX and ENT is pressed. Leaving the menu the new status will be printed out.

```
NEW STATUS:  ABCDEFGHIJKLMNOPQRSTUVWXYZ
```
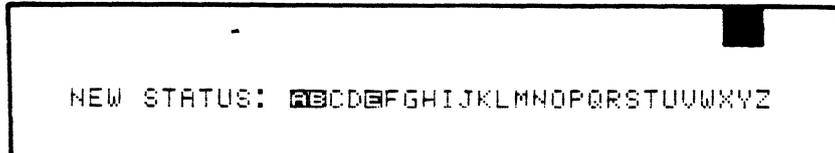
MESS (types of messages)

Each type of message has an identification letter (A to Z). It is not possible to exclude the types A, B and D (cf. chapter 1 INTRODUCTION). In this menu one type of message or all messages are selected.

In the main menu the cursor is moved by means of the arrow keys, and situated above MESS, ENT is pressed and a status is printed out stating the setting of the receiver,

either:

```
ABCDEFGHIJKLMNOPQRSTUVWXYZ
A : SELECTED      A : NOT SELECTED
```
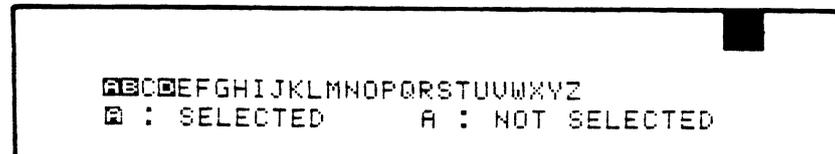
if single types of messages are selected. [A] means that this type is printed out,

or:

```
ALL   MESSAGE   TYPES   SELECTED
```
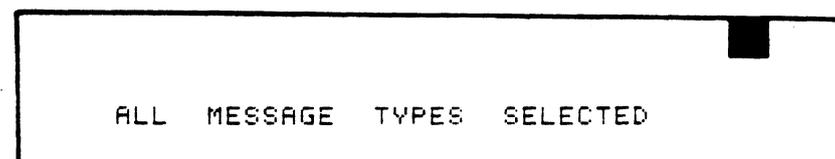
if all types of messages are received.

After that the menu will be printed out:

```
    EX SET-S-Z SET-M-R SET-G-L SET-A-F   ALL
           MOVE CURSOR AND PRESS ENT
```

SET-A-F means that message types with identification letters A to F can be selected.

Manual set-up of types of messages

The cursor is moved to SET-A-F by pressing:

LINE ←

```
    EX SET-S-Z SET-M-R SET-G-L SET-A-F   ALL
           MOVE CURSOR AND PRESS ENT
```

The menu will appear by pressing:

MENU ENT

```
    EX  NEXT  A    B    C    D    E    F
    MOVE CURSOR.REVERSE ST-ID BY ENT
```

By moving the cursor so that it is situated above a type and then press ENT, the status of the type will change, i.e. type not selected becomes type selected and vice versa. In this menu the types A, B and D have been selected. Pressing ENT, the printer head will (after a short delay) move to the next letter in the menu, except for A, B and D, where ← must be used.

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NOTE:
When the menu is terminated a new status is printed
out so that the user can check whether the setting is
correct.

Continue through the menu by selecting NEXT and then
press ENT.
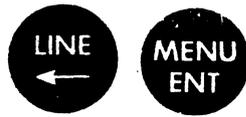
(LINE ←) (MENU ENT)

```
EX  NEXT  G    H    I    J    K    L
MOVE CURSOR.REVERSE ST-ID BY ENT
```

(LINE ←) (MENU ENT)

```
EX  NEXT  M    N    O    P    Q    R
MOVE CURSOR.REVERSE ST-ID BY ENT
```

(LINE ←) (MENU ENT)

```
EX   S    T    U    V    W    X    Y   Z
MOVE CURSOR.REVERSE ST-ID BY ENT
```

To leave the menu the cursor is moved to EX, after
which ENT is pressed.

NOTE:
It is not necessary to continue through the whole me-
nu, if you only want to make corrections in e.g. the
first line. By selecting EX you can always leave the
menu.

The new status will always be printed out when leaving
the menu.

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│                                                 │
│      NEW STATUS: ABCDEFGHIJKLMNOPQRSTUVWXYZ      │
│                                                 │
│                                                 │
└─────────────────────────────────────────────────┘
```

ALL (all types of messages)

ALL means that all types of messages are printed out.

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│      EX SET-S-Z SET-M-R SET-G-L SET-A-F  ALL    │
│             MOVE CURSOR AND PRESS ENT           │
│                                                 │
└─────────────────────────────────────────────────┘
```

As the printer head is situated above ALL, ENT is
pressed, after which the new status is printed out.

MENU ENT

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│                                                 │
│      NEW STATUS: ALL MESSAGE TYPES SELECTED     │
│                                                 │
└─────────────────────────────────────────────────┘
```

NOTE:
To get out of ALL mode, enter manual set-up (e.g. SET-
A-F). Move the cursor to EX and press ENT. The pre-
vious set-up is now present and will be written out as
NEW STATUS.

Example of manual selection of type

Besides the types A, B and D (which cannot be exc-
luded) the type G is wanted.

MENU ENT

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│      EX  HELP  ECON  STAT  MESS  ST-ID  NEXT    │
│             MOVE CURSOR AND PRESS ENT           │
│                                                 │
└─────────────────────────────────────────────────┘
```

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Move the printer head so that it is situated above
MESS.

LINE ←

```
EX  HELP  ECON  STAT  MESS  ST-ID  NEXT
      MOVE CURSOR AND PRESS ENT
```

MENU ENT

```
EX SET-S-Z SET-M-R SET-G-L SET-A-F   ALL
         MOVE CURSOR AND PRESS ENT
ABCDEFGHIJKLMNOPQRSTUVWXYZ
A : SELECTED       A : NOT SELECTED
```

Move the cursor to SET-G-L.

LINE ←

```
EX SET-S-Z SET-M-R SET-G-L SET-A-F   ALL
         MOVE CURSOR AND PRESS ENT
```

MENU ENT

```
EX  NEXT  G   H   I   J   K    L
MOVE CURSOR.REVERSE MESSAGE TYPE BY ENT
```

Move the cursor to G.

LINE ←

```
EX  NEXT  G    H     I     J     K     L
MOVE CURSOR.REVERSE MESSAGE TYPE BY ENT
```

MENU ENT

G is now selected.

Move the cursor to EX.

LINE ←

```
EX  NEXT  G    H     I     J     K     L
MOVE CURSOR.REVERSE MESSAGE TYPE BY ENT
```

MENU ENT

```
NEW STATUS: ABCDEFGHIJKLMNOPQRSTUVWXYZ
```

STAT (status)

When status has been selected, the RS 6100 will print
out the stations and types of messages selected and
the last 30 message identifications, and status for
AUDIO, SILENCE and INTERFACE. STAT is selected by
means of the arrow key and ENT.

```
EX   STAT-AUTO      STAT-INTFA STAT-NAV
          MOVE CURSOR AND PRESS ENT
```

The 3 print-outs are shown below.

```
              NAVTEX STATUS
STATIONS SELECTED:
ALL   STATIONS   SELECTED

MESSAGE TYPES SELECTED:
ALL   MESSAGE   TYPES   SELECTED

▣ : SELECTED      A : NOT SELECTED

LAST RECEIVED STATIONS:

NAVTEX ID-INFO     : OFF
HEADPHONE/TELEX    : HEAD-PH
LOUD-SPEAKER       : SPEAK-OFF
SILEN              : OFF
ST-ID INPUT        : ALL
        SHIPMATE  NAVTEX  RS6100
```

```
              INTERFACE STATUS
INTFA ACTIVE       : INTERFACE 1

INTERFACE SETUP :
INTERFACE 1        : RS400X
INTFA 1 PRINT DIR.: REVERSE
INTERFACE 2        : RS5100
INTFA 2 PRINT DIR.: REVERSE
SOFTWARE VER.      : 1.15        SEPT '86
        SHIPMATE  NAVTEX  RS6100
```

```
┌─────────────────────────────────────────────────■───┐
│  ████████████ AUTO   STATUS ████████████████████████ │
│  STATIONS SELECTED IN AUTO  :                        │
│   ABCDEFGHIJKLMNOPQRSTUVWXYZ                          │
│                                                      │
│  STATIONS SELECTED IN AREA 1:                        │
│   ABCDEFGHIJKLMNOPQRSTUVWXYZ                          │
│                                                      │
│  STATIONS SELECTED IN AREA 2:                        │
│   ABCDEFGHIJKLMNOPQRSTUVWXYZ                          │
│                                                      │
│  STATIONS SELECTED IN AREA 3:                        │
│   ABCDEFGHIJKLMNOPQRSTUVWXYZ                          │
│                                                      │
│  STATIONS SELECTED IN AREA 4:                        │
│   ABCDEFGHIJKLMNOPQRSTUVWXYZ                          │
│                                                      │
│     ▣ : SELECTED      A : NOT SELECTED               │
│  ████████████ SHIPMATE  NAVTEX   RS6100 ███████████  │
└──────────────────────────────────────────────────────┘
```

ECON (economy function)

When activating ECON, the RS 6100 will be inactive ex-
cept for the periods with reception and printing out
of messages. The ON lamp will be switched off when u-
sing the ECON function, except in the above mentioned
periods, and to reactivate the RS6100 the ON/OFF key
must be pressed. When ECON is activated the RS 6100
will write:

```
┌─────────────────────────────────────────────────■───┐
│                                                      │
│     ECON MODE                                        │
│        PRESS ON/OFF KEY FOR REACTIVATION             │
│                                                      │
└──────────────────────────────────────────────────────┘
```

HELP (short description of menu contents)

When this function is selected, the printer will print
out a short description of all the functions of the
main menu and the operating keys.

HELP is selected from the main menu by means of the
printer head, after which the functions will be prin-
ted out:

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DESCRIPTION OF MENU CONTENTS

ST-ID:
  IS USED FOR SELECTION OF THE TRANSMIT-
  TERS FROM WHICH RECEPTION IS WANTED.
  THE TRANSMITTERS ARE IDENTIFIED WITH
  LETTERS FROM A TO Z.

MESS:
  IS USED FOR SELECTION OF THE TYPES OF
  MESSAGES TO BE PRINTED OUT. THE TYPES
  ARE IDENTIFIED WITH LETTERS FROM
  A TO Z. THE TYPES A,B AND D CANNOT
  BE EXCLUDED.

STAT:
  PRINTS OUT THE STATIONS AND THE TYPES
  OF MESSAGES SELECTED.THE LAST 30 MES-
  SAGE IDENTIFICATIONS AND SETTINGS OF
  ID-INFO,HEADPHONE/TELEX,LOUDSPEAKER,
  INTERFACE,SILEN AND SOFTWARE VER.

ECON:
  THE RS6100 IS INACTIVE EXCEPT WHEN
  RECEIVING AND PRINTING OUT MESSAGES.

TEST:
  INTERNAL TEST OF THE RS6100.

AUDIO:
  CONNECTS/DISCONNECTS INTERNAL LOUD-
  SPEAKER AND HEADPHONE OUTPUT.

SILEN:
  OMITS PRINT-OUT AND STORES RECEIVED
  MESSAGES. (MAX 7000 CHARACTERS)

SPEC:
  SETTINGS OF NAVTEX ID-INFO
  AND NEW-A.

INTFA:
  IS USED FOR PRESETTING OF INTERFACE
  WHEN THE RS6100 AT THE SAME TIME
  SHALL FUNCTION AS PRINTER FOR
  NAVIGATORS.

A-1,A-2,A-3,A-4:
  AREA 1,2,3 OR 4 SELECTED
  CHANGED BY NEW-A IN SPEC MENU.

IF-X:
  CHANGE THE INTERFACE INPUT.

```
AUTO:
   SETTINGS OF AUTO FUNCTIONS.

NEXT:
   PRINTS OUT THE NEXT LINE OF A MENU.

EX:
   IS A 'REGRET' OR STOP FUNCTION WHICH
   MAKES IT POSSIBLE TO LEAVE OR STOP
   BEFORE A MENU IS TERMINATED.

DESCRIPTION OF OPERATING KEYS:

ON/OFF:
   IS USED TO SWITCH THE RS6100 SUPPLY
   ON AND OFF

LINE + ARROW:
   WILL GIVE 4 LINE FEED UNLESS
   'MENU/ENT' HAS BEEN ACTIVATED FIRST.
   IN THIS CASE THE FUNCTION 'ARROW'
   WILL MOVE THE PRINTER HEAD 1 STEP
   TO THE LEFT.

DIM + ARROW:
   WILL DIM THE PAPER LIGHT UNLESS
   'MENU/ENT' HAS BEEN ACTIVATED FIRST.
   IN THIS CASE THE FUNCTION 'ARROW'
   WILL MOVE THE PRINTER HEAD 1 STEP
   TO THE RIGHT.
   IF DIM KEY IS PRESSED MORE THAN
   1 SEC.THE SPEAKER WILL BE SWITCHED
   ON UNTIL RELEASING THE KEY.

MENU/ENT:
   THE KEY IS ACTIVATED WHEN A PRINT
   OUT OF THE MAIN MENU IS WANTED AND
   WHEN A COMMAND IS TO BE CARRIED OUT.
   END   OF   HELP   TEXT
```

— TEST

Test is selected from the main menu by means of the printer head and ENT. No sub-menues are printed out. RS 6100 automatically executes a test from the antenna to the microprocessor. If the test is carried out and

the printer unit is o.k., RS 6100 prints,

either:

```
                                                    ■
                     TEST  PASSED


```

if the test is o.k,

or:

```
                                                    ■

                     TEST  FAILED

```

If there is a fault.

NOTE:
If a fault is found, call in a service technician.

AUDIO (loudspeaker ON/OFF, headphone)

In this menu 2 things can be set:

    1) Function of the internal loudspeaker.
    2) Headphone or telex input.

AUDIO is selected from the main menu by means of the arrow keys and ENT. The following sub-menu is printed out:

```
                                                    ■

        EX HEAD-PH TELEX-IN SP-OFF SP-ON SP-AUT
              MOVE CURSOR AND PRESS ENT

```

1. Internal loudspeaker

SP AUT   : means that the built-in loudspeaker
               beeps whilst receiving a message, and
               otherwise it is silent.

SP ON   : means that the loudspeaker beeps whilst
                 receiving a message, and otherwise a
                 whizzing is heard.

SP OFF   : means that the loudspeaker is OFF.

2. Headphone or telex

When HEAD-PH is selected, a headphone can be connected
in which the received signals can be heard.

When TELEX-IN is selected, the RS 6100 will print out
telex messages from a telex receiver. The telex input
can receive telex messages according to CCIR format
476.2 FEC. After a switch-off, the RS 6100 will always
start in Navtex mode.

NOTE:
THE RS 6100 IS NOT ABLE TO RECEIVE OR PRINT OUT
NAVTEX MESSAGES WHEN TELEX-IN HAS BEEN SELECTED.

SILEN (storing of messages)

If you do not want the messages to be printed out at
once, e.g. at night or in port, the RS 6100 can store
the received messages in the memory. The messages will
automatically be printed out when SILEN is switched
off again. The memory can store 7000 characters equal
to continuous print-out of 6 minutes. SILEN is selec-
ted from the main menu by means of the arrow keys and
ENT. The following sub-menu is printed out:

```
┌─────────────────────────────────────────■──┐
│                                             │
│      EX          SILEN-OFF          SILEN-ON│
│              MOVE CURSOR AND PRESS ENT       │
│                                             │
└─────────────────────────────────────────────┘
```

SILEN ON   : means storing of messages.

SILEN OFF   : prints out stored messages. If the number
               of messages exceeds the capacity of the
               memory, the oldest and least current mes-
               sages are excluded.

SPEC (special functions)

If SPEC is selected from the main menu, the print-out will be:

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│    EX        NEW-A                  ID-INFO      │
│           MOVE CURSOR AND PRESS ENT             │
│                                                 │
└─────────────────────────────────────────────────┘
```

Press ENT:

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│    EX       ID-INFO-OFF            ID-INFO-ON    │
│           MOVE CURSOR AND PRESS ENT             │
│                                                 │
└─────────────────────────────────────────────────┘
```

Press ENT.

ID-INFO is now ON.

If ID-INFO is ON, the RS 6100 will make a print out informing that a message is received from a station which has been rejected, e.g.:

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│      ███████ PA02   REJECTED ST-ID/MESS   ██    │
│                                                 │
└─────────────────────────────────────────────────┘
```

where station P has been rejected.

Furthermore the RS 6100 will make a print-out, if a message has already been received.

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│      ██████ JE02 MESSAGE ALREADY RECEIVED ██    │
│                                                 │
└─────────────────────────────────────────────────┘
```

By ID-INFO OFF, no print out is made.

NEW-A

If no navigator is installed and if you are frequently
sailing in one or more areas, e.g. the North Sea, the
function NEW-A makes it possible to listen to trans-
mitters in these areas.

When selecting NEW-A, the RS 6100 will write:

```
┌─────────────────────────────────────────■──┐
│                                             │
│   EX  ED-A-4    ED-A-3    ED-A-2    ED-A-1   │
│        MOVE CURSOR AND PRESS ENT            │
│                                             │
└─────────────────────────────────────────────┘
```

The stations are keyed in in the same way as ST-ID
(cf. this paragraph).

The selection is made in the main menu. Place the cur-
sor above the desired area, e.g. A-1, and press
MENU/ENT.

```
┌─────────────────────────────────────────■──┐
│                                             │
│   EX   SET-S-Z  SET-M-R  SET-G-L  SET-A-F   │
│         MOVE CURSOR AND PRESS ENT           │
│   ABCDEFGHIJKLMNOPQRSTUVWXYZ                 │
│   ■ : SELECTED       A : NOT SELECTED       │
└─────────────────────────────────────────────┘
```

INTFA (interface for navigators)

Two different navigators can be connected to the RS
6100, as there is a separate setting possibility for
each navigator. The setting is made by means of INTFA
1 or 2. If the navigator is a Shipmate e.g. RS 5100,
RS 5000, RS 4000 or RS 4001, the interface setting is
made automatically by placing the cursor above the na-
vigator in question and then press ENT. Using other
navigators, the function OTHER is used. After selec-
tion of the navigator, the RS 6100 will ask whether
direct or reverse print out is wanted (cf. explanation
on page 38). INTFA is selected from the main menu by
using the arrow keys and ENT. The following sub-menu
will be printed out:

```
┌─────────────────────────────────────────■──┐
│                                             │
│   EX            INTFA2            INTFA1     │
│         MOVE CURSOR AND PRESS ENT           │
│                                             │
└─────────────────────────────────────────────┘
```

INTFA 1 or 2: Is used for selecting the set-up which
is to control data from navigator X.
INTFA 1 or 2 will give the following
sub-menu:

```
┌─────────────────────────────────────────■──────┐
│                                                 │
│   EX    OTHER    RS5100    RS5000    RS400X      │
│         MOVE CURSOR AND PRESS ENT                │
│                                                 │
│                                                 │
└─────────────────────────────────────────────────┘
```

NOTE:
Using the navigators RS 4000 or RS 4001, the cursor
must be placed above RS 400X.

If OTHER is selected, the RS 6100 will print out a
status for the interface setting.

```
┌──────────────────■──────────────────────────────┐
│                                                 │
│   EX    OTHER    RS5100    RS5000    RS400X      │
│         MOVE CURSOR AND PRESS ENT                │
│                                                 │
│                                                 │
└─────────────────────────────────────────────────┘
```

and after that new values can be selected. The follo-
wing menu is printed out:

```
┌───────────────────────────────────■─────────────┐
│                                                 │
│  EX  PRINT-DIR PARITY   DATABIT    BAUDRATE      │
│          MOVE CURSOR AND PRESS ENT               │
│   1200    BAUD   . EVEN  PARITY .7 DATABIT        │
│   INTERFACE      STATUS                           │
└─────────────────────────────────────────────────┘
```

Selecting an item in the menu to be changed, the RS
6100 will always write out the next item after termi-
nation of the selected item. BAUDRATE is selected and
the following sub-menu is printed out:

```
┌───────────────────────────────────■─────────────┐
│                                                 │
│                                                 │
│   EX    110    300    600    1200    NEXT         │
│         MOVE CURSOR AND PRESS ENT                │
│                                                 │
└─────────────────────────────────────────────────┘
```

The selected baudrate is pointed out and terminated by
ENT, after which the databit menu is printed out:

```
    EX    7-DATABIT      8-DATABIT      NEXT
           MOVE CURSOR AND PRESS ENT
```

Databit is selected and terminated by ENT, after which
the parity menu is printed out:

```
    EX      NONE     ODD      EVEN       NEXT
            MOVE CURSOR AND PRESS ENT
```

Parity is selected and terminated by ENT, after which
the RS 6100 asks whether you want a direct print-out
(DIRECT PRINT) like the Navtex messages, or a reverse
print-out (REV PRINT) reverse of the Navtex messages.

```
    EX        DIRECT-PRINT          REV-PRINT
              MOVE CURSOR AND PRESS ENT
```

Print direction is selected and terminated by ENT, af-
ter which the new status is printed out:

```
    NEW    INTERFACE      STATUS
    1200   BAUD   . EVEN  PARITY .8 DATABIT
```

By means of IF-1/2 is selected the navigator from
which position for automatic selection of stations is
wanted.

```
EX  AUTO IF-1/2 A-4  A-3  A-2  A-1 NEXT
        MOVE CURSOR AND PRESS ENT
```

Example of setting of interface

A printer has the following interface data:

        Data input   : 1
        Baudrate   : 300
        Databit   : 8
        Parity   : EVEN
        Interface   : 1

Direct print-out is selected. INTFA is selected from
the main menu:

MENU ENT

```
EX INTFA  SPEC  SILEN AUDIO  TEST   NEXT
         MOVE CURSOR AND PRESS ENT
```

Place the cursor above INTFA.

LINE ←

```
EX INTFA  SPEC  SILEN AUDIO  TEST   NEXT
         MOVE CURSOR AND PRESS ENT
```

MENU ENT

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The following menu is shown.

```
┌─────────────────────────────────────────────■──┐
│                                                 │
│   EX              INTFA2            INTFA1       │
│          MOVE CURSOR AND PRESS ENT              │
│                                                 │
```

The interface menu is shown:

```
┌─────────────────────────────────────────■──────┐
│                                                 │
│   EX    OTHER    RS5100    RS5000    RS400X      │
│          MOVE CURSOR AND PRESS ENT              │
│                                                 │
```

Place the cursor above OTHER.

LINE ←

```
┌────────■────────────────────────────────────────┐
│                                                  │
│   EX    OTHER    RS5100    RS5000    RS400X       │
│          MOVE CURSOR AND PRESS ENT               │
│                                                  │
```

MENU ENT

```
┌───────────────────────────────────────■─────────┐
│                                                  │
│   EX  PRINT-DIR PARITY  DATABIT  BAUDRATE         │
│          MOVE CURSOR AND PRESS ENT               │
│    1200   BAUD   . EVEN  PARITY .7 DATABIT        │
│   INTERFACE      STATUS                           │
```

The cursor is situated above BAUDRATE.

MENU ENT

```
┌───────────────────────────────────────■─────────┐
│                                                  │
│   EX    110    300     600     1200    NEXT       │
│          MOVE CURSOR AND PRESS ENT               │
│                                                  │
```

LINE
←

```
          ■
EX    110    300    600    1200    NEXT
      MOVE CURSOR AND PRESS ENT
```

MENU
ENT

The next part of the menu is shown.

```
                                  ■
EX    7-DATABIT        8-DATABIT      NEXT
      MOVE CURSOR AND PRESS ENT
```

Place the cursor above the correct databit.

LINE
←

```
                        ■
EX    7-DATABIT        8-DATABIT      NEXT
      MOVE CURSOR AND PRESS ENT
```

MENU
ENT

The next part of the menu is shown.

```
                                  ■
EX    NONE    ODD    EVEN        NEXT
      MOVE CURSOR AND PRESS ENT
```

The rest of the menu is correctly set. It is possible
to continue through the menu by selecting NEXT, or to
jump directly out of the menu by means of EX. In this
example the last choice is selected.

Press

LINE
←

until the cursor is situated above EX.

```
┌──────■────────────────────────────────────────┐
│                                                │
│   EX     NONE      ODD      EVEN       NEXT     │
│          MOVE CURSOR AND PRESS ENT             │
│                                                │
└────────────────────────────────────────────────┘
```

A new status for INTFA is printed out.

MENU
ENT

```
┌──────────────────────────────────────■─────────┐
│                                                 │
│   NEW    INTERFACE     STATUS                    │
│   300    BAUD  . EVEN  PARITY .8 DATABIT         │
│                                                 │
└─────────────────────────────────────────────────┘
```

Finally the RS 6100 must be informed from which navi-
gator, print-out is wanted.

Select IF-1/2 from the main menu, press ENT and the
following will be printed out:

```
┌───────────────────────────────■────────┐
│                                         │
│   INTERFACE 1 ACTIVE                     │
│                                         │
│   EX   AUTO IF-1/2 A-4  A-3  A-2  A-1 NEXT│
│        MOVE CURSOR AND PRESS ENT        │
└─────────────────────────────────────────┘
```

If interface 2 is active, repeat the procedure.

AUTO

By means of the AUTO function it is possible to decide
whether the RS 6100 automatically shall select the

stations to be received. Max. 1 to 4 stations can be selected in AUTO mode. This is carried out as follows:

The connected navigator, e.g. RS 400X, calculates the position of the ship after which the RS 6100 will locate the nearest stations within a range of 200 nautical miles from the position (all stations in operation have been coded into the RS 6100). When selecting AUTO, the following will be printed out:

```
┌──────────────────────────────────────────■──┐
│                                              │
│   EX   AUTO-CHO        AUTO-OFF   AUTO-ON     │
│          MOVE CURSOR AND PRESS ENT            │
│                                              │
└──────────────────────────────────────────────┘
```

AUTO-CHOICE: Selection of the desired number of stations. AUTO-CHOICE will write 4ID, 3ID, 2ID, 1ID when selected (4ID = 4 stations).

                 NOTE:
If stations are selected by means of AUTO-CHOICE, AUTO ON will be activated (cf. AUTO ON).

AUTO OFF   : Switches off the automatic selection of stations. The RS 6100 will then return to the manual station selection used last.

AUTO ON   : Automatic selection of stations according to the position. When activating AUTO it is recommended to send a position from the navigator to the RS 6100 to enable the latter to select the correct transmitters.

In AUTO mode the position of the ship is printed out from the connected navigator. The RS 6100 prints out from the navigator providing information of position, i.e. if a RS 4000 radio navigator is connected to the RS 6100, the position from this device will be printed out.

NOTE:
The interval between the print-outs must be set on the navigators (cf. user's manual for navigators regarding printer function). If no position is received from the navigator within 3 hours, the RS 6100 will switch over to "ALL MODE". When connecting a navigator, make sure

to set the belonging interface 1 or 2 in order to get
a print-out from the RS 6100 (cf. paragraph INTFA).

Example of print-out of position from a navigator

If a connected navigator is set to print out the posi-
tion, the print-out will be as follows:

```
▮▮▮▮▮▮  SHIPMATE  NAVTEX  RS6100 ▮▮▮▮▮▮▮
    LAT  56 52.00 N
F LON   9 50.53 F
▮▮▮▮▮▮  END OF INTERFACE 1 MESSAGE ▮▮▮▮▮
```

NOTE:
As long as messages are received from the same trans-
mitter, only the position is printed out. If a "new"
transmitter is nearer than an "old" transmitter, the
identification of the transmitter will be printed out
as well.

Error codes in AUTO mode

If the RS 6100 cannot receive messages from the trans-
mitters or if something is wrong with the connected
navigator, the RS 6100 will print out a message to in-
form the user.

If the RS 6100 is in AUTO mode and cannot receive from
one of the automatically selected transmitters, it
will print out the following message:

```
       ▮▮▮▮▮ NO ST-ID FOUND .  ALL ST-ID SELEC
```

after which it will automatically select all transmit-
ters. The user himself must switch the RS 6100 back to
AUTO mode again.

If the RS 6100 is in AUTO mode, and is not receiving a
position from the connected navigator, the print-out
will be:

```
████████ NO POS RECEIVED , ALL ST-ID SELEC
```

after which it will automatically select all transmit-
ters. The user himself must switch the RS 6100 back to
AUTO mode again.

Station ID in AUTO mode

In AUTO mode the RS 6100 will print out the stations
from which it receives. The print-out may look as
follows:

```
███████ SHIPMATE   NAVTEX   RS6100 ████████
   LAT   56 52.00 N
F LON    9 50.53 E
███████ END OF INTERFACE 1  MESSAGE ████████

███ ST-ID:JL    LAT:056 52 N LON:009 50
```

In this case stations with ID-code J and L are recei-
ved.

This message will be printed out each time the posi-
tion of the RS 6100 has changed so much that messages
come from another station.

IF - 1/2

This function makes it possible to decide whether the
Navtex shall receive signals from interface 1 or 2. If
e.g. a RS 4000 radio navigator is connected to inter-
face 1 and a RS 5100 satellite navigator to interface
2 and IF - 1/2 is set to interface 1, the RS 6100 will
use the position from the RS 4000 and, if desired,
print out the position.

Interface 1 or 2 must be selected when starting the RS
6100.

<u>A-1 to A-4</u>

When one of the areas ED-A-1 to ED-A-4 is wanted, the
RS 6100 will receive signals from the area in que-
stion. (For keying in of areas, please see SPECIAL
FUNCTIONS).

SHIPMATE

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4.   MECHANICAL LAY-OUT

Holes for mounting bracket on back plate

5 4x30 mm screws

Snap-lock for fastening to the backplate

Cabinet

Receiver pcb

Chassis plate

Computer pcb

Interface 2

Front

Printer

8 plastic stays for assembling of pcb and chassis plate
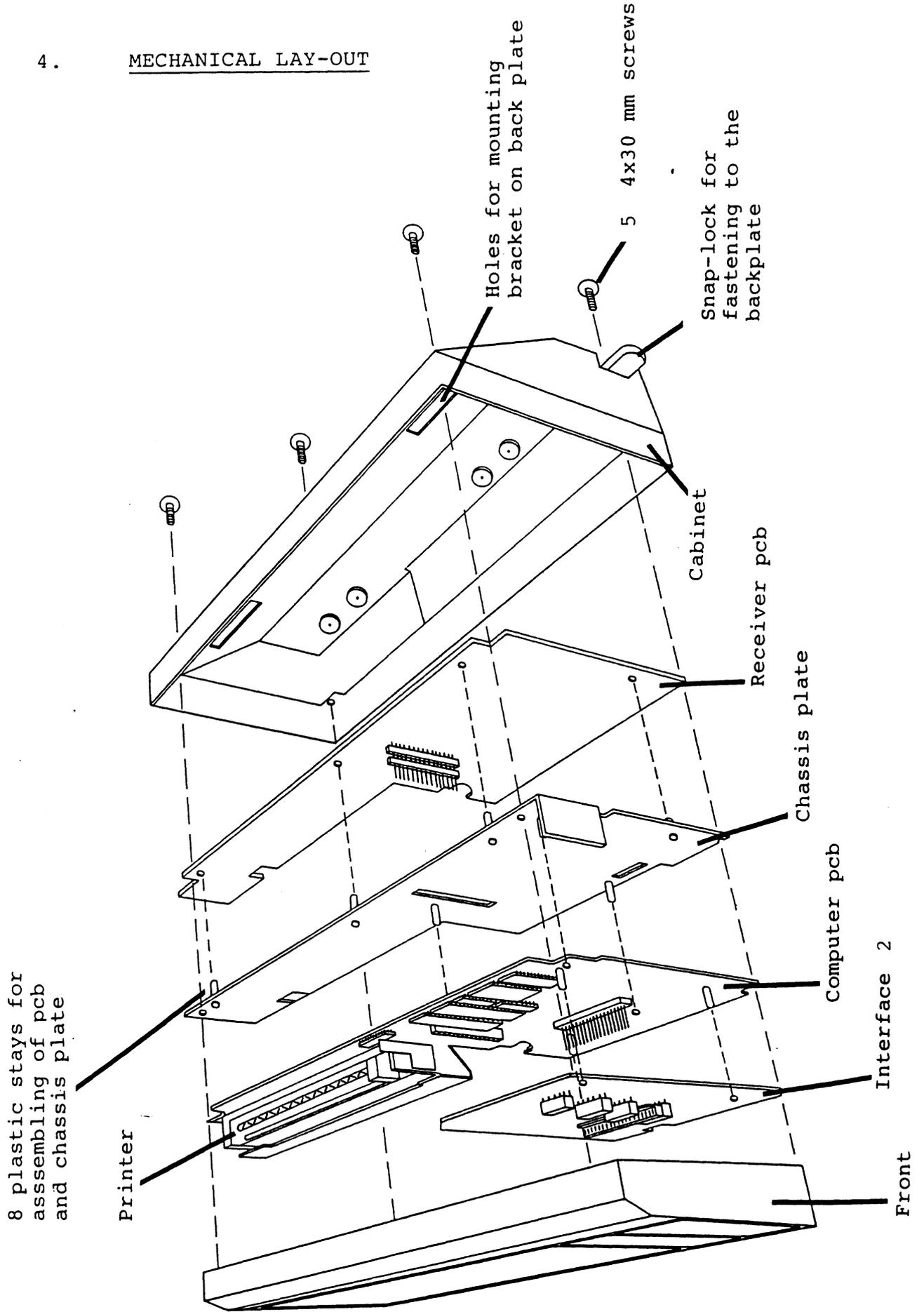
5.   MOUNTING

5.1   MOUNTING OF MOUNTING BRACKET

The RS 6100 can be mounted on console, bulkhead or
deckhead by means of the mounting bracket which can be
fixed in 3 different angles.
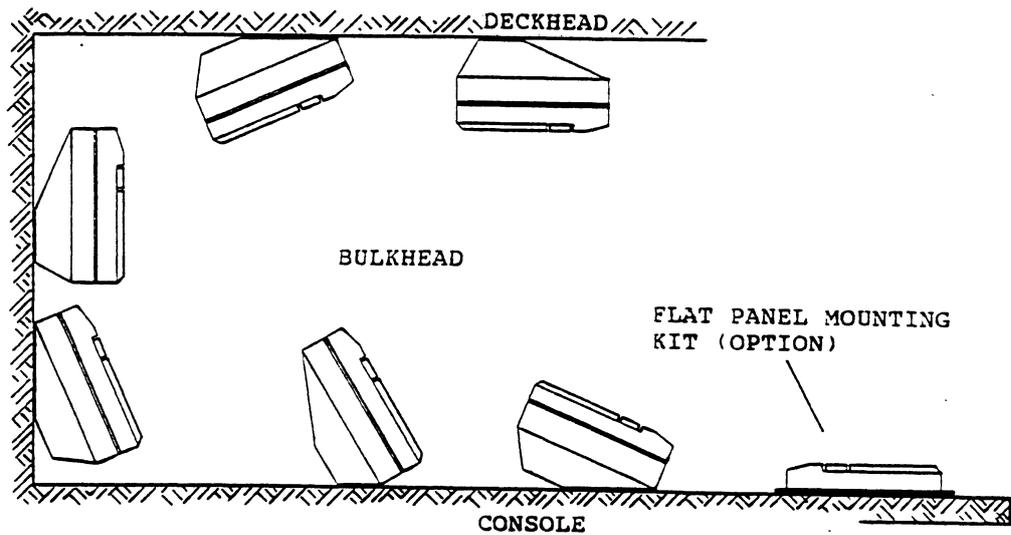
The mounting bracket is fastened by means of screws in
the holes marked ① .
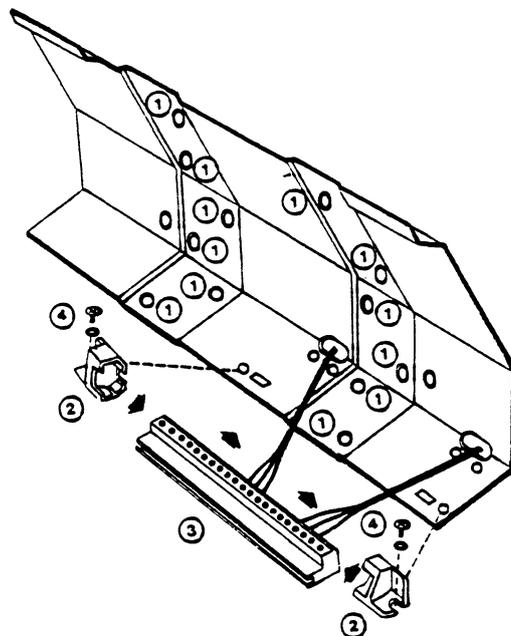
The RS 6100 is delivered with the mounting bracket at-
tached and the retainers mounted.

5.2 NAVTEX ANTENNA RS6142

TYPE	Active whip
FREQUENCY	518 KHz
LENGTH	935 mm/37.5"
DIAMETER max	48 mm/1.8"
WEIGHT	550 g
MOUNTING	Vertical or horizontal tube
	28 - 50 mm/1.2 - 2" Ø tube
CABLE not incl.	RG 58 U max 100m/300ft

INSTALLATION

ANTENNA SITE   High and free of metal obstructions and electrical interference.
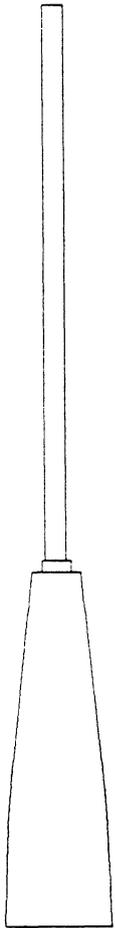
1. Unscrew the antenna house top from the base.

2. Guide the antenna cable through the rubber gland in the base part, and connect it to the terminal and the clamp of the amplifier.
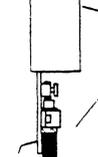
3. Put the amplifier back into the base, observing the upper side of the amplifier (holes for adjustment) is pointing in the same direction as the mounting bracket.

4. Fix the antenna top and tighten by hand only.
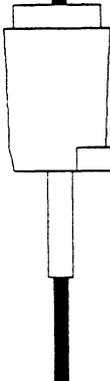
5. Fix the mounting clamp to the mounting bracket with the four incl. bolts and nuts. Can be fixed for vertical or horizontal tube mount.

EARTHING

It is most important to establish a good connection to earth, either by the mounting clamp directly to the steel construction or via a separate lead to sufficient earth.

5.3   CONNECTION OF TERMINAL STRIP

When the mounting bracket has been fastened, the ter-
minal strip can be connected. Guide the wire through
the holes as shown on the drawing in paragraph 5.1.

Connect the terminal strip as shown on the below dra-
wing (a label with the same information is attached
to the mounting bracket).

NOTE:
The power supply output must be 3A in peak current.
(3A is used when the print-out begins). It is recom-
mendable to use an installation cable for the power
supply of minimum 1.5 mm². Wires which are too thin
(too big a voltage drop) may cause the print-out to
stop.

CONNECTION WITH HEADPHONES

REAR CONNECTION

Connection of wires from 24VDC adapter on mounting bracket.

Connect the red wire to pin # 13 on terminal strip and
the black wire to pin # 12.

SHIPMATE

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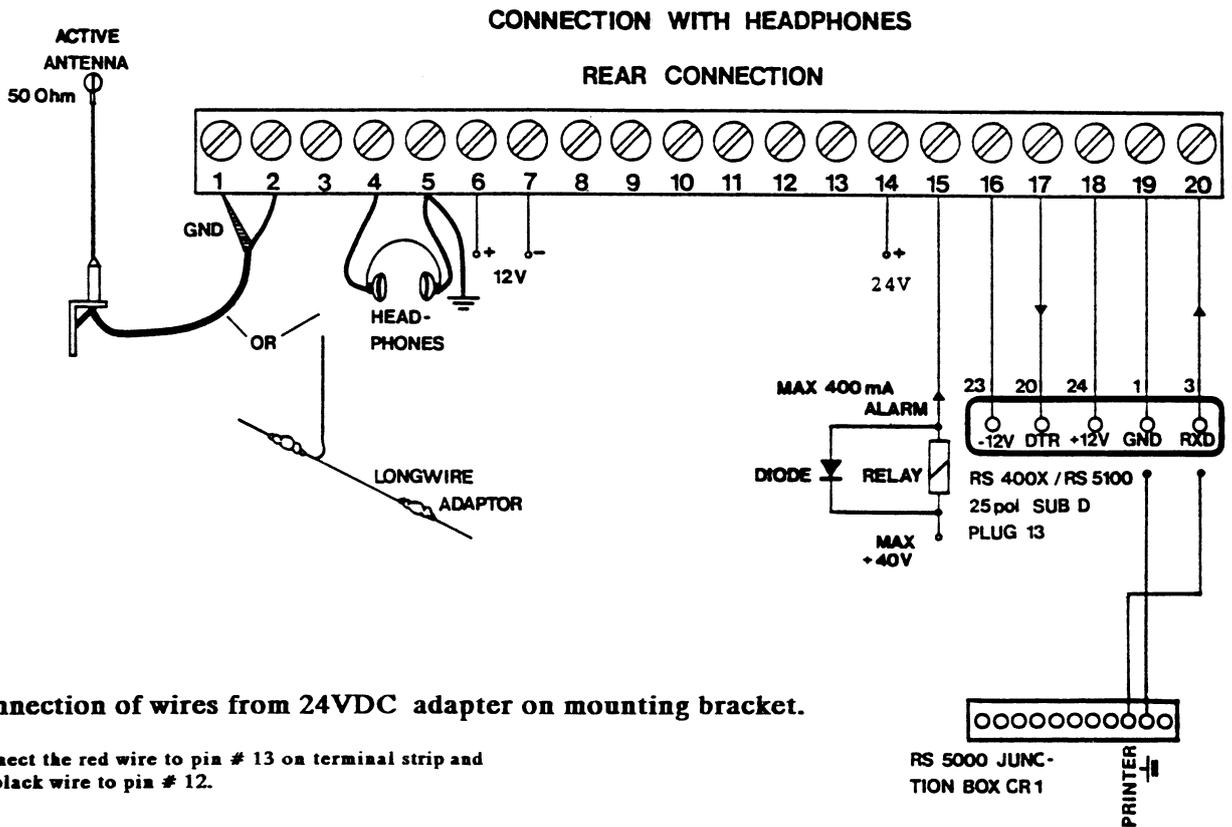
WIRING DIAGRAM FOR TELEX INPUT

REAR CONNECTION
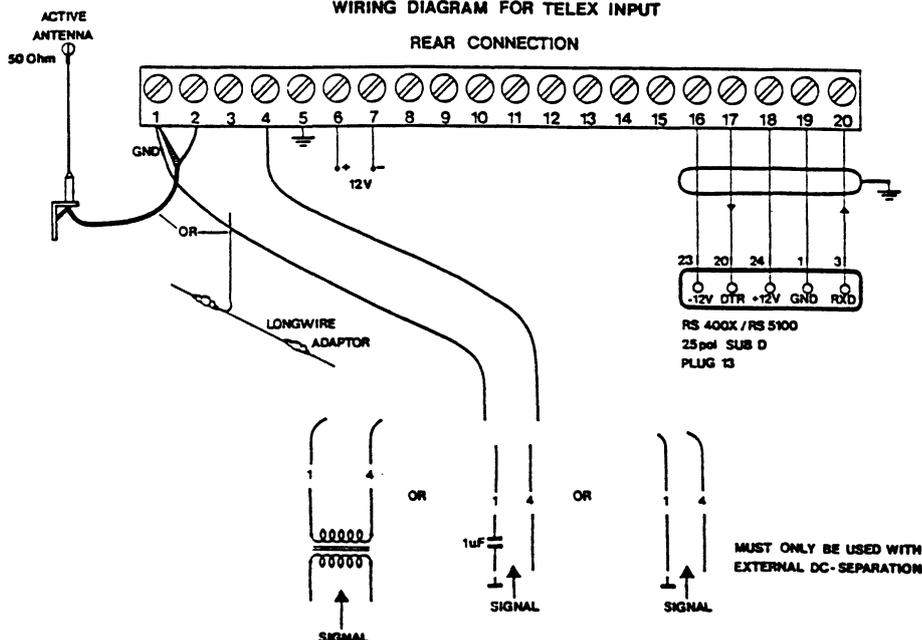
Terminal 1 (GND) and terminal 7 (-) are connected internally DC-wise. It is important that screen from an active antenna is connected to terminal 1.

Terminal 5 (ground) must be connected to the ground of the ship for optimum function of the device. This is especially important when using a longwire antenna.

External alarm relay. Coil voltage is selected according to the supply voltage. Headphone (100 ohm - 5 kohm, nom. 600 ohm). Telex input: terminals 1 and 4.

RS 61xx INTERFACING
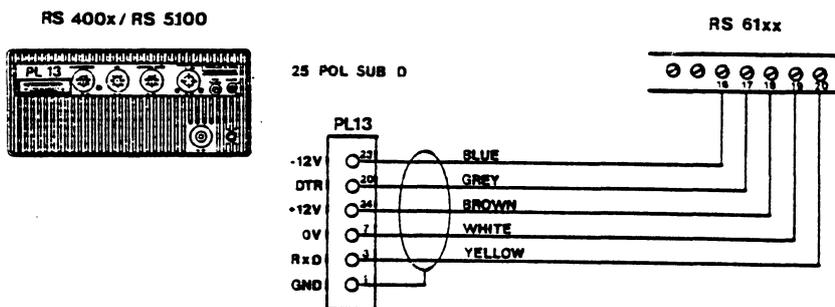
CABLE (OPTION): no.:104.1006

TWO-CORE SCREENED CABLE

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SHIPMATE
MARINE ELECTRONICS ®
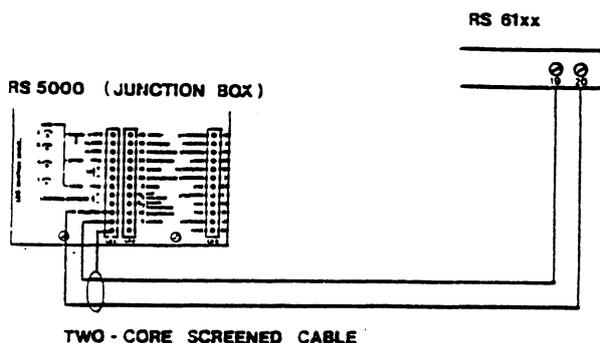
CONNECTION OF RS 400X + RS 4030 + RS 61XX

If RS 400X is connected to RS 4030 via a
connection block, RS 61XX shall be connected
as shown below.
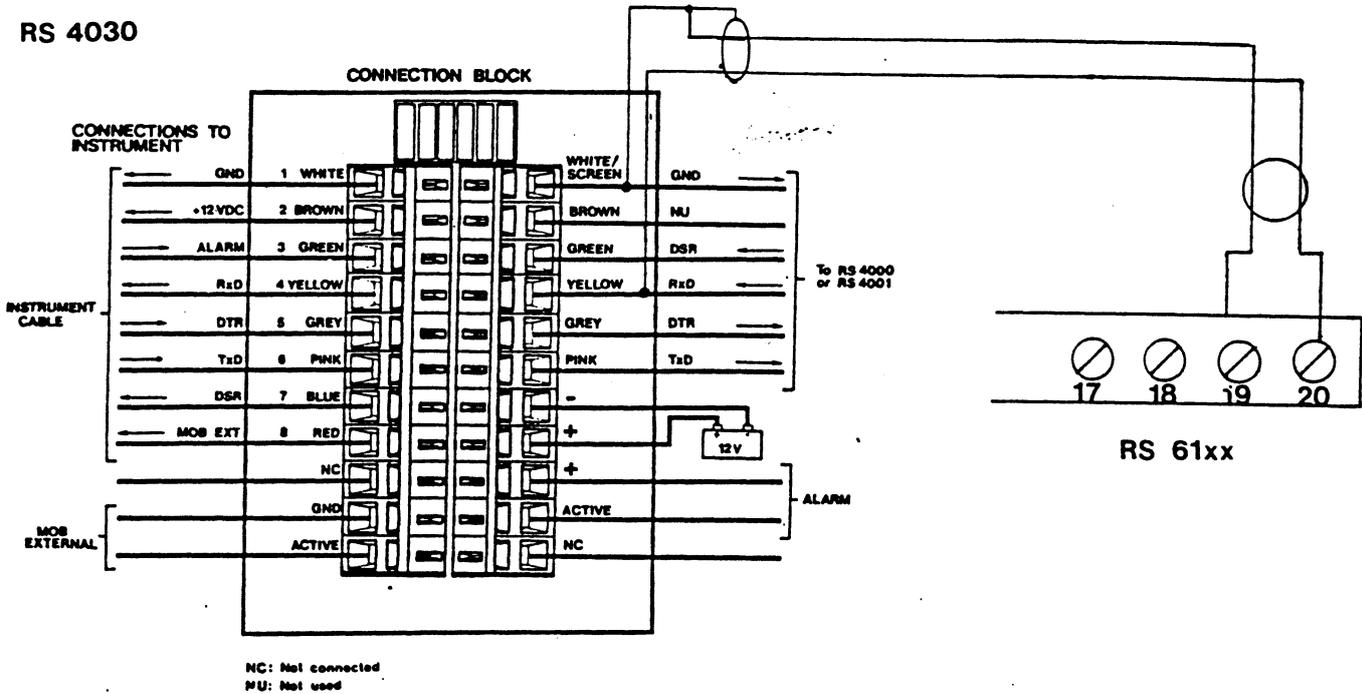
RS 4030

RS 4030 + RS 4031

If RS 4030 is connected to RS 400X via
RS 4031, RS 61XX shall be connected as
shown below.
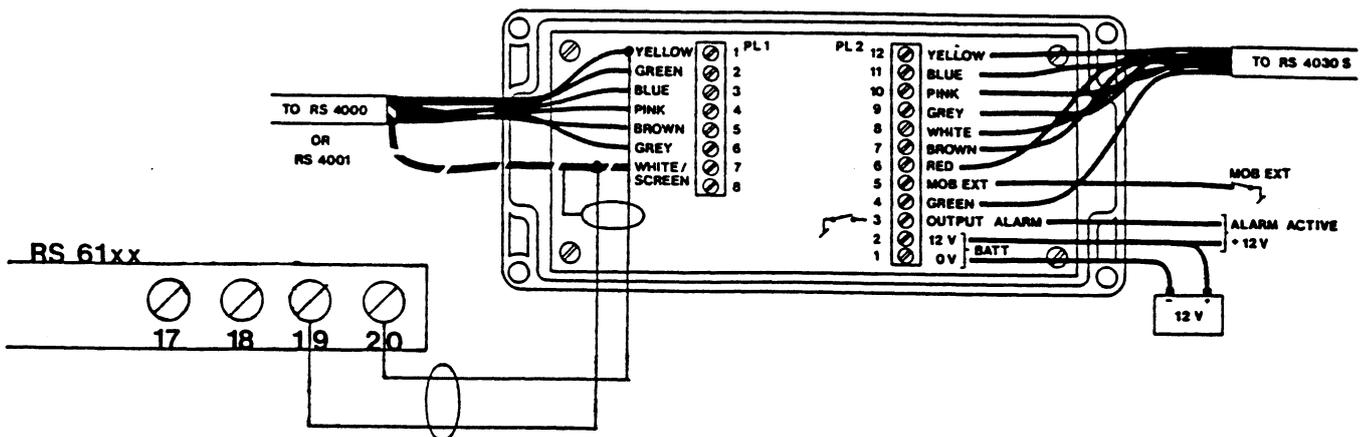
RS 4030 is to be modified as shown.

SHIPMATE
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ICl must be of the type SFH600. In earlier model
HllAA2 was utilized.

Dl is cut off.
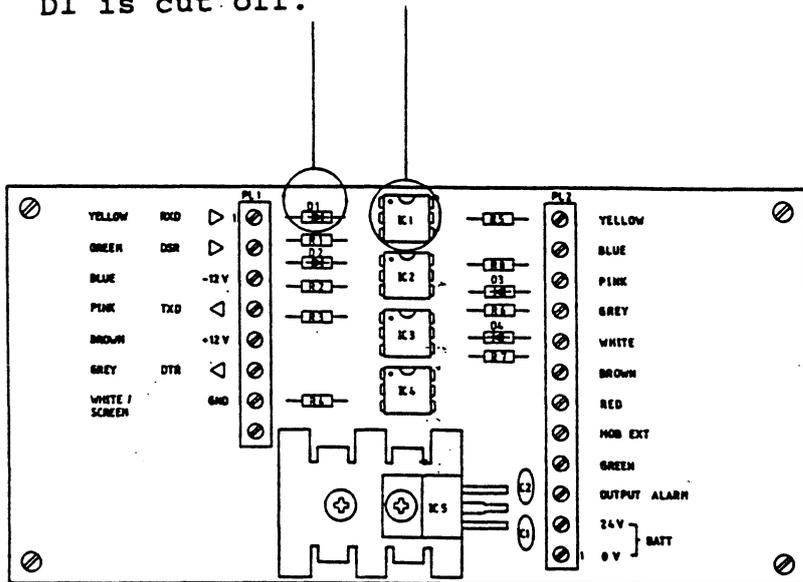
SIGNAL TO INTERFACE PCB ▷ ⊘
SIGNAL FROM INTERFACE PCB ◁ ⊘

RS 4031 INTERFACE 2960 B
DRAWING No. 80.2960

RS4500

RS6100 J1	RS4500 terminal strip
pin 19 ⟶	pin 5 return
pin 20 ⟵	pin 4 signal

RS5300

RS6100 J1	RS5300 port 1
pin 19 ⟶	pin 1 return
pin 20 ⟵	pin 6 data

RS5300 B and C

RS6100 J1	RS5300 B/C interface
pin 19 ⟶	pin 13 return
pin 20 ⟵	pin 25 data

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SHIPMATE

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INTERFACE FORMAT : RS 232 C , 1200 BAUD, 7 DATABIT,
EVEN PARITY
SET UP RS 2000 = RS 4000
— RS 4000 = NORMAL OPER.
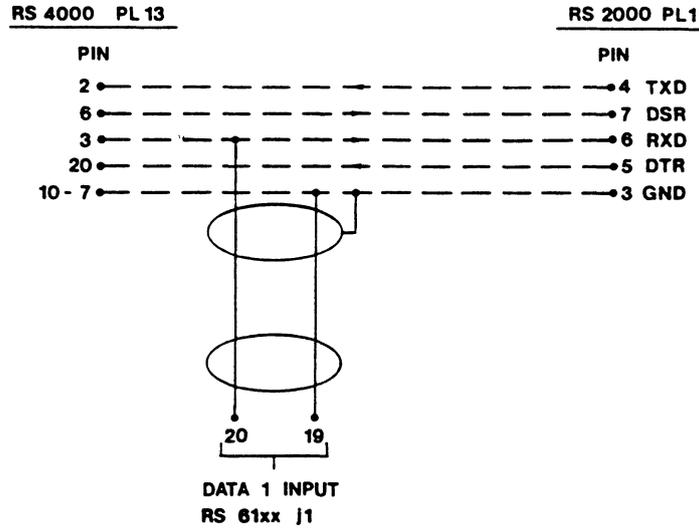
RS 4000 PL 13   **RS 2000 PL1**

PIN   PIN

2	4 TXD
6	7 DSR
3	6 RXD
20	5 DTR
10 - 7	3 GND

20   19

DATA 1 INPUT
RS 61xx J1

INTERFACE FORMAT : NMEA 180 . 1200 BAUD . 8 DATABIT (BIT 7 = 1).
ODD PARITY
SET UP RS 2000 = NMEA 180
— RS 400x = NORMAL OPER.

RS 400x PL 14   **RS 2000 PL 4**
PIN   PIN

| 4 | 1 DATA |
| 3 | 2 DATA RETURN |

RS 400x PL 13   **RS 61xx J1**
PIN   PIN

23	16 – 12 V
20	17 DTR
24	18 + 12 V
7	19 0 V
3	20 RxD
GND 1	
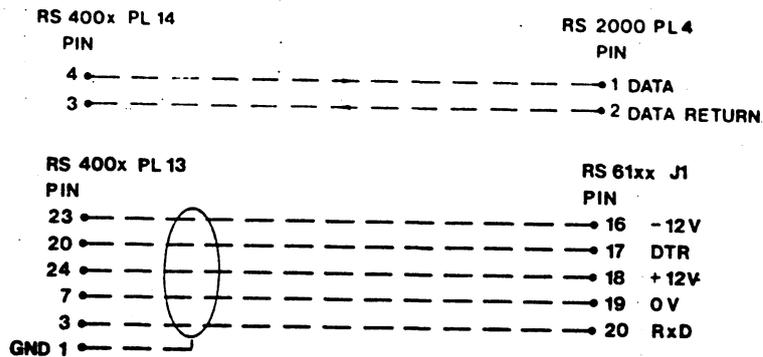
CONNECTION OF RS 403X - RS 400x - RS 2000 - RS 61xx
INTERFACE FORMAT : NMEA 180 , 1200 BAUD , 8 DATABIT (BIT 7 = 1)
ODD PARITY
SET UP RS 2000 = NMEA 180
— RS 400x = NORMAL OPER.

RS 400x PL 14   **RS 2000 PL 4**
PIN   PIN

| 4 | 1 DATA |
| 3 | 2 DATA RETURN |
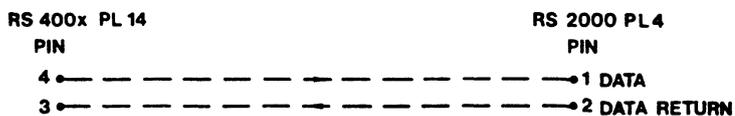
FOR CONNECTION TO RS 61xx , SEE PAGE   52 , WHICH SHOWS
CONNECTION OF RS 4030 AND RS 61xx

5.4   HOW TO DISENGAGE THE DEVICE

The RS 6100 is secured to the mounting bracket by 2 snap-locks.

The RS 6100 seen from above   Pawl
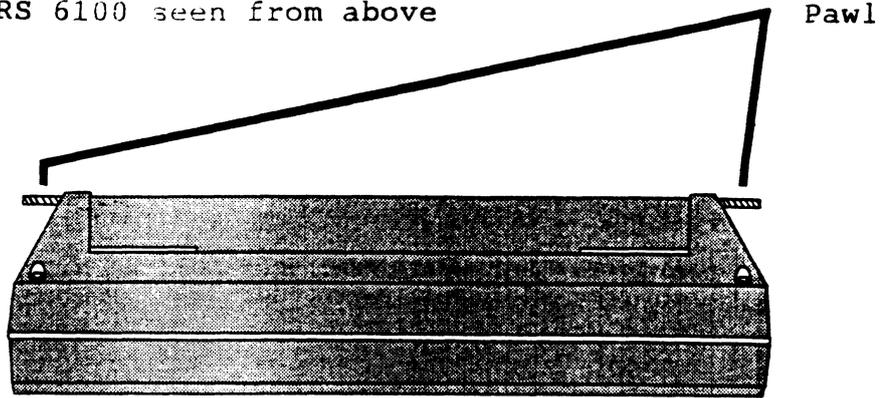
1. Push the 2 black pawls upwards and the RS 6100 will be disengaged.
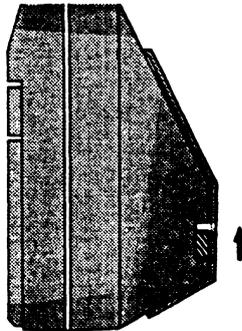
2. Pull the device out and away from the mounting bracket and lift it free from the hinges at the top.

Hinges
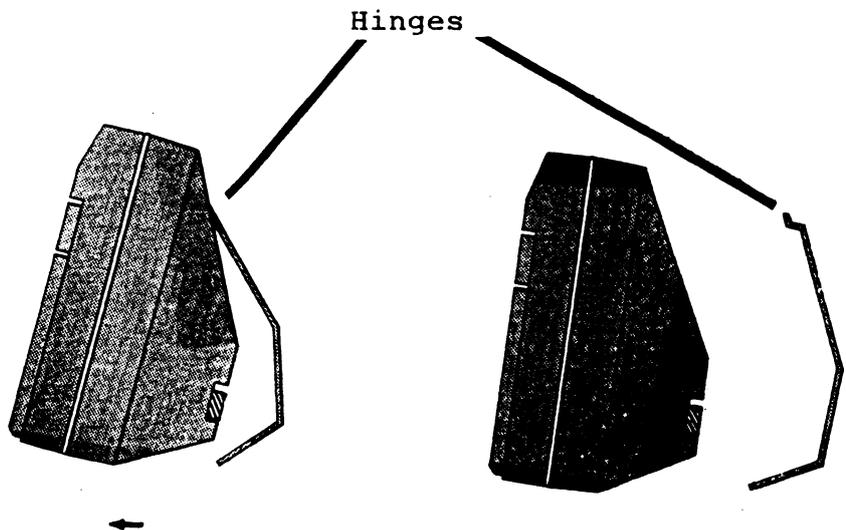
3. When mounting the device again, it is done in reverse order as when dismounting the device. However, it is not necessary to touch the pawls as the lock is thrown into mesh by a light pressure at the bottom of the device.
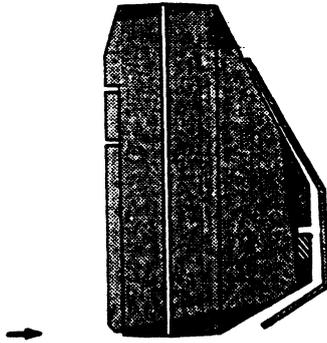
5.5   INSERTION OF PAPER ROLL

1. Press upwards and turn the lid.
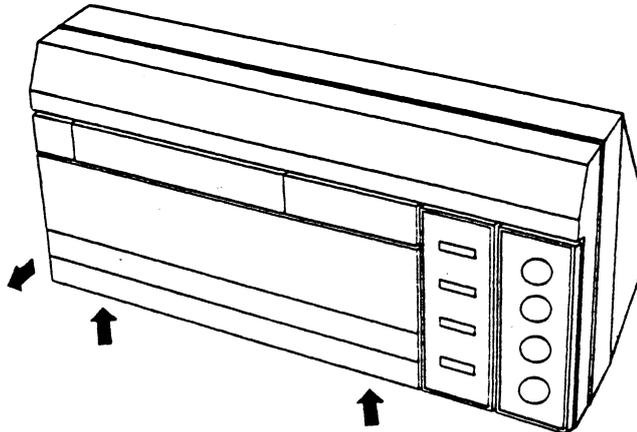
2. When the lid is turned approx. 45° it can be disengaged.
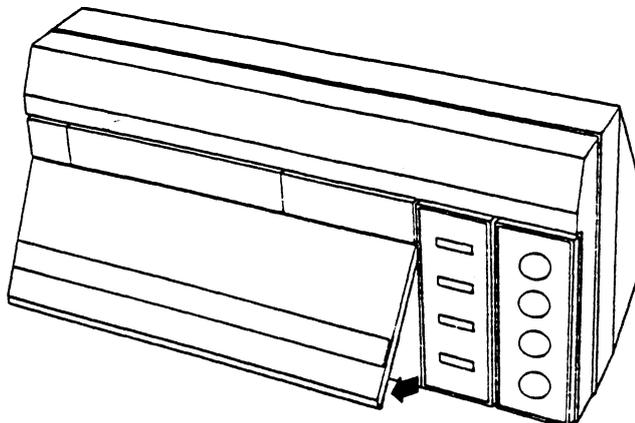
3. The empty paper axle is loosened by pressing the retaining springs marked ① .
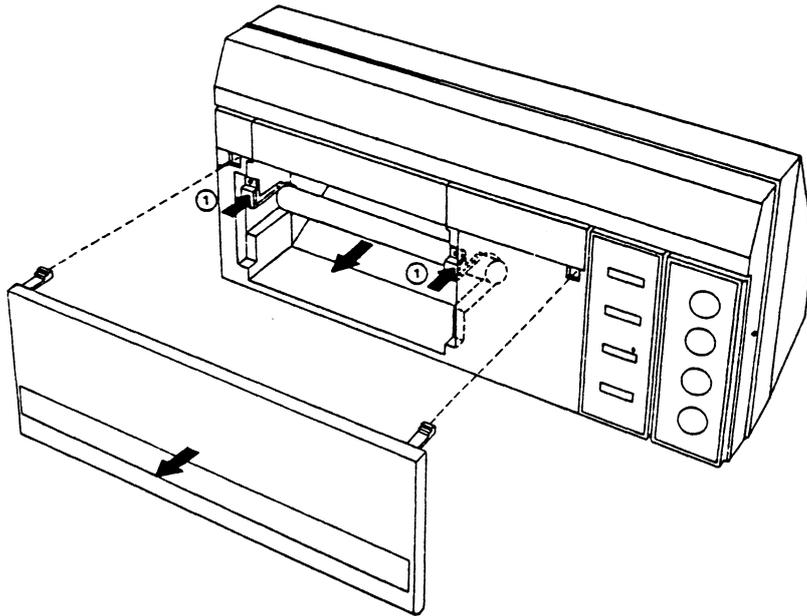
4. Guide the paper into the slit at the top of the paper magazine and press LINE. (The paper must not be frayed at the edge. Be careful to guide the paper perpendicularly into the slit). The printer will now pull forward the paper length. If the paper is not pulled completely forward, press LINE again.

   NOTE:
   If the paper is pulled in crookedly, it may get stuck, and the device must then be disassembled to get the paper out.

   Insert the axle in the new roll of paper, which can now be pushed back on its place. Put on the lid.

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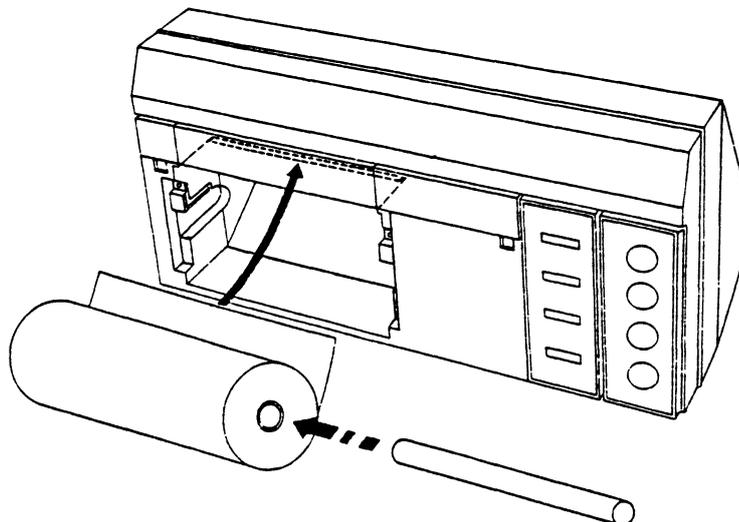
6.   CIRCUIT DESCRIPTION

6.1   COMPUTER 3028

By pressing the ON button current is led through R1
and R2. The voltage drop across R1 makes Q1 conduct
and IC1 then opens the series regulator Q2. Releasing
the ON button, the computer will ensure that Q1 is
held open by means of IC24 pin 10, which goes low. D2
ensures that "RX ON" (J4 pin 2) is not held low con-
stantly.

A separate 5 V voltage regulator is used for the cry-
stal oscillator and divider as the oscillator for the
receiver must operate in economy mode.

OVERVOLTAGE

At a voltage above approx. 20 V, IC23 pin 1 is trigge-
red and the 5 V regulator closes (IC24 pin 10 high).

VOLTAGE DETECTOR

PCF 1251 triggers if +5 V drops below 4.5 V adjusted
at P1. After the triggering, pin 2 goes low and the
TRAP on the µP 8085 is activated.

An interrupt routine now stores all the information.
After this the µP 8085 is reset after an interval
(approx. 3 ms) determined by C40.

PRINTER

The Tacho impulse (J5 pin 3) triggers the input of the
timer circuit (IC6 pin 2). The printer head will be
active when the timer is active. The duration is among
other things determined by the NTC resistor R41 and
will be longest at low temperatures. The µP 8085 is
interrupted via IC7 pin 1 and will carry out the prin-
ter routine. As printer head driver is used a LB 1256
or a LB 1258.

MOTOR DRIVER

The motor driver is also integrated (LB 1630) and the voltage of the motor is 5 V. The input capacitors C20 and C21 are important for correct function. End-stop is detected by IC13 pin 4.

PRINTER ILLUMINATION

The illumination is controlled by the constant-current generator Q6. The dimmer function is carried out when the voltage to Q6 is cut off a few milliseconds by means of IC23 pin 4.

PAPER DETECTOR

If there is paper in the device, the light from the photodiode in IC12 will be reflected to the phototransistor, which conducts. If the paper is removed, the change of voltage will be detected by IC23 pin 4.

CRYSTAL OSCILLATOR

The Colpitt oscillator Q5 oscillates on the frequency 4.1304 MHz. The following frequencies are obtainable from the divider:

$$4.1304/2^3 = 516.3 \text{ kHz (local oscillator)}$$
$$4.1304/2^{11} = \text{approx. 2 kHz (alarm tone)}$$
$$4.1304/2^{12} = \text{approx. 1 kHz (interrupt signal)}$$

4.1304 MHz is also used as µP 8085 clock frequency.

KEYBOARD

The keyboard consists of 4 keys with J7 pin 2 as joint pin.

INTERFACE

Data I/O consists of 2 optocouplers according to a standard similar to RS 232.

6.2 RECEIVER 3019

The receiver is a straight receiver on the frequency 518 kHz with a -3 dB bandwidth of 300 Hz. The pre-selectivity consists of 2 tuned circuits TR1 and TR2.

The resulting voltage amplification is 3 times. The PTC-resistor R3 in the antenna input acts as overvoltage protection and the secondary side of TR1 is short-circuited by Z1 at too high voltages. There is DC on the 50 ohm antenna output by means of the circuit Q2. Q2 is a constant-current generator which limits at 20 mA. A voltage of approx. 7.5 V can be expected at 10 mA on the antenna output.

The HF-amplifier consists of a dual-gate MOS-fet with delayed AGC. The HF-stage is regulated at antenna signals > approx. 50 µV. After the crystal filter at 518 kHz, the signal is amplified in the IF-part of IC1 (IC1 pin 12). After this the signal is led into a filter at 518 kHz (TR3). It is then led into the mixer part of IC1 pins 1 and 2. In the mixer 516.3 kHz (IC1 pin 5) is mixed with 518 kHz ± 85 Hz. LF output (IC1 pin 15) is 1700 Hz ± 85 Hz.

An LF-filter consisting of C26, R33 and C30 has been inserted just before the line driver IC2. The function of IC3 is solely to determine whether "AUDIO" (J3 pin 2) shall function as input or output.

In normal Navtex position the route of the signal is as follows:

IC3 pins 4 and 3, IC2 pins 2 and 1, IC3 pins 1 and 2, IC4 pin 2.

In this position the line driver IC2 also acts as headphone output. The noise filter consists of C37, L4 and C38. The switches in IC3 are controlled by Q6.

The phase detector compares the signal from the free-running VCO on 1700 Hz in IC4 with the LF-signal 1700 Hz ± 85 Hz (IC4 pin 2). The variable DC caused by the 170 Hz shift is detected by the comperator in IC4. Output from the comperator is found on pin 7 IC4. After this the signal is processed in the computer 3028.

The signal testing generator consists of the switch IC5 pins 8, 9 and 10 and it is connected to 516.3 kHz, the buffer IC5 pins 11, 12 and 13 is connected to 1700 Hz ± 85 Hz, which is generated by the computer. The

signals are connected to the mixer diode D7. The rest
of the IC5 controls the relay. The buzzer is driven by
the push-pull amplifier IC6 pins 4, 5 and 6, and IC6
pins 1, 2 and 3. From the computer is selected whether
the alarm tone of 2 kHz (IC6 pin 13) or the monito-
ring signal (IC6 pin 10) shall be heard. The power
supply is controlled from the computer. The following
is carried out when starting up:

D10 is grounded and Q14 and Q15 open. IC7 gives an
output of 5 V to the basis of Q13. Q13 opens and the
power supply is switched on. The voltage 8.5 V can be
adjusted by means of P2. The overvoltage protection
consists of Q16 and Q17. The basis of Q14 goes high by
means of Q16 at too high a voltage on the output
(approx. 12 V). The power supply is switched off by
means of Q11.

6.3   INTERFACE II 3030

The interface consists of 5 constant-current genera-
tors for indicators and keyboard light. Interface II
has 2 interface inputs.

SHIPMATE
MARINE ELECTRONICS ®

7. ADJUSTING PROCEDURE

7.1 COMPUTER PCB

Adjust C18 to the frequency 4,1304 MHz ± 10 Hz. The frequency is measured at TP3. Connect the RS 6100 to a variable power supply 4-12 V, minimum 1 A.

Regulate the voltage from the power supply to 4.5 V between TP1 and TP2 while pressing the ON button. Connect a voltmeter to IC18 pin 6. Adjust P1 until IC18 pin 6 just goes high.

Vary the voltage on the power supply and check that IC18 pin 6 just goes high when the voltage at TP1 is slowly varied from 5 V to 4.5 V.

7.2 RECEIVER PCB

Adjust P2 to 8.5 V measured on the collector of Q15. Connect a signal generator (frequency 518 kHz ± 100 Hz CW) to the 50 ohm antenna input. Adjust TR1, TR2 and TR3 to maximum voltage at TP1. Repeat the adjusting of TR1 and TR2. TR4 shall not be adjusted.

Select TELEX-IN via the menu system of the RS 6100. Short-circuit pins 2 and 10 on IC4 and adjust P1 until obtaining 1700 Hz ± 2 Hz at TP2. The measurement must be carried out by means of a probe 10 M ohm // maximum 15 PF.

7.3 ERROR CHECK

TEST is a built-in test program which tests the receiver, detector and computer. If the test is OK, these parts are functioning correctly. TEST is selected via the menu system.

Select SP-ON via the menu system, and when no Navtex messages are received, disconnect the antenna. If the noise level in the built-in loudspeaker falls, there is every probability that antenna and receiver input are OK.

8.   <u>DRAWINGS</u>
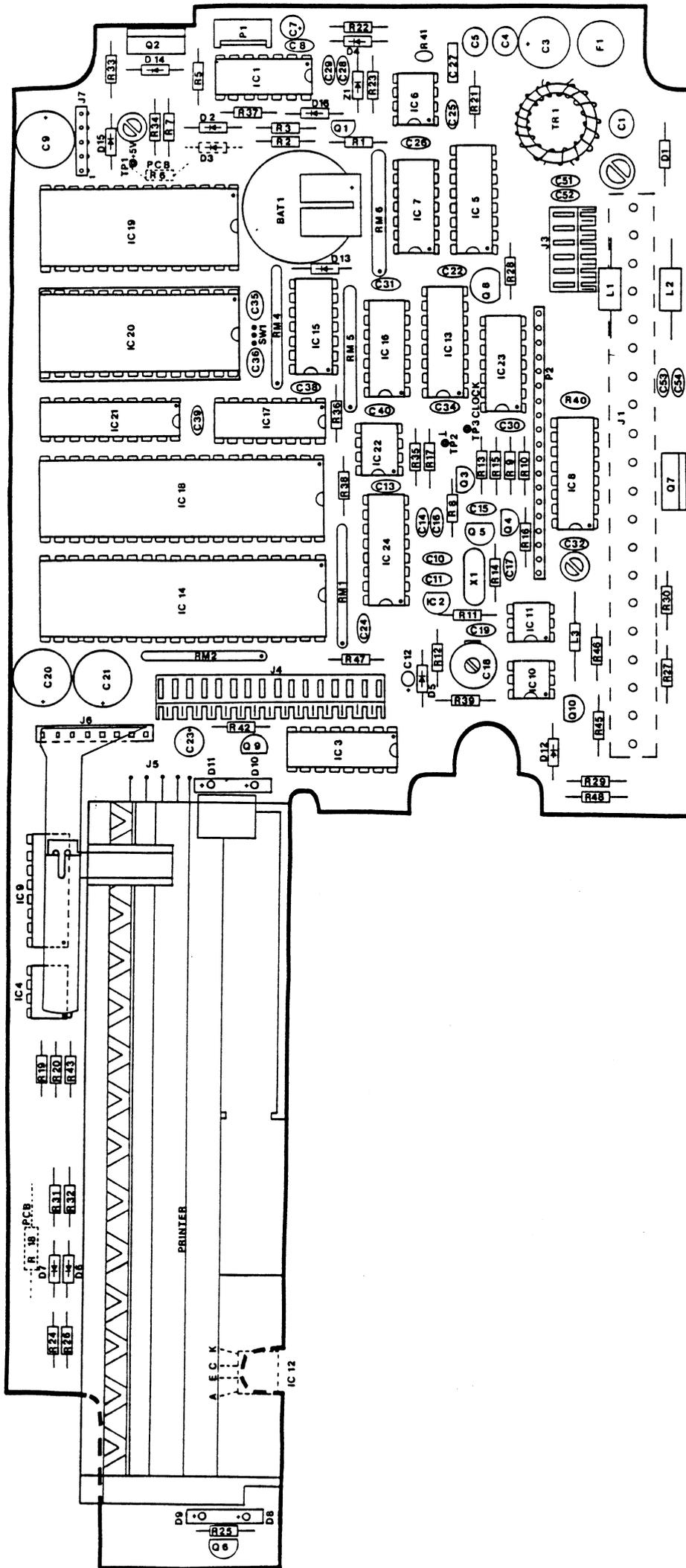
COMPUTER BOARD 3028 D

DRAWING No.: 80.3028.
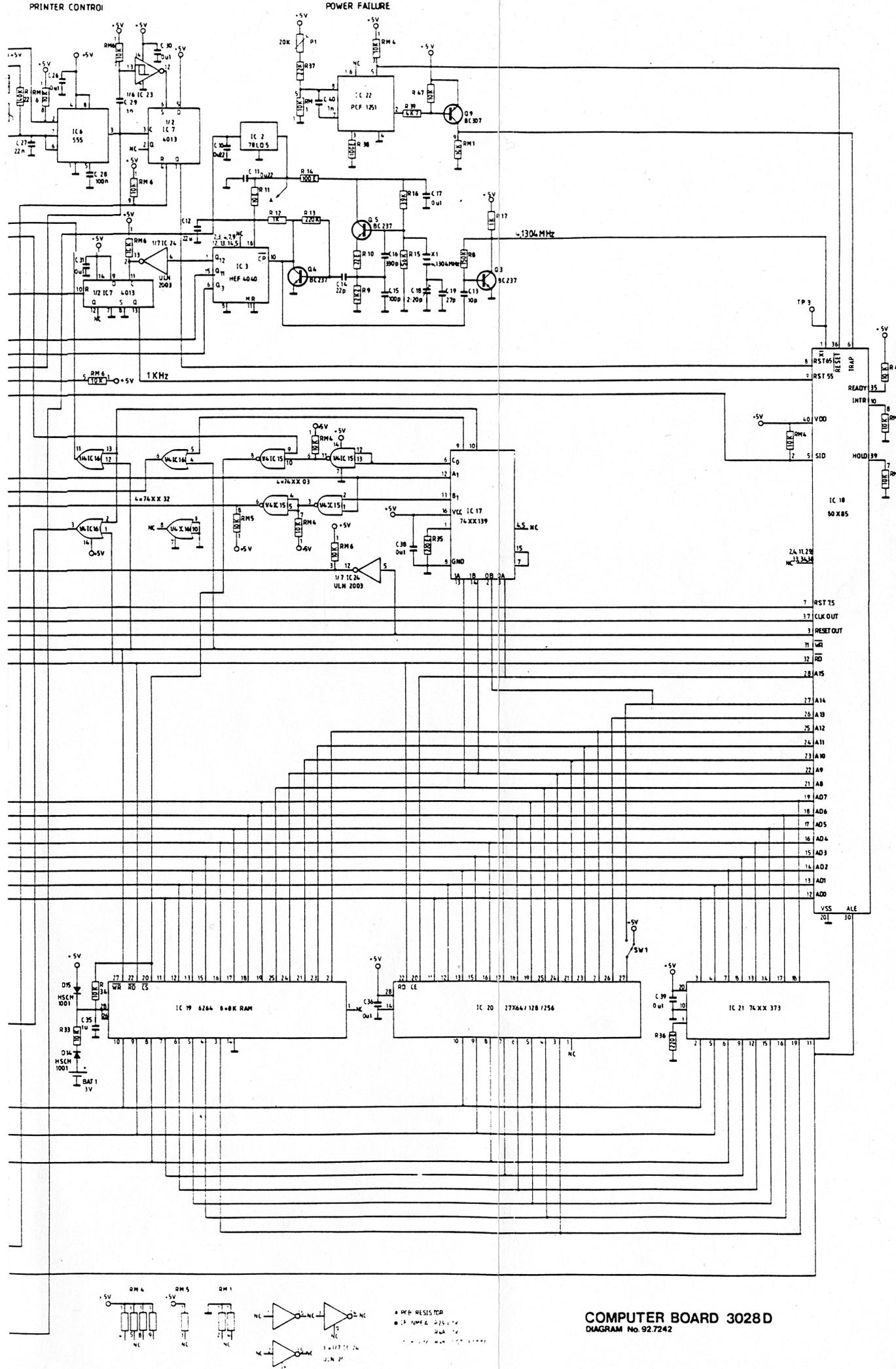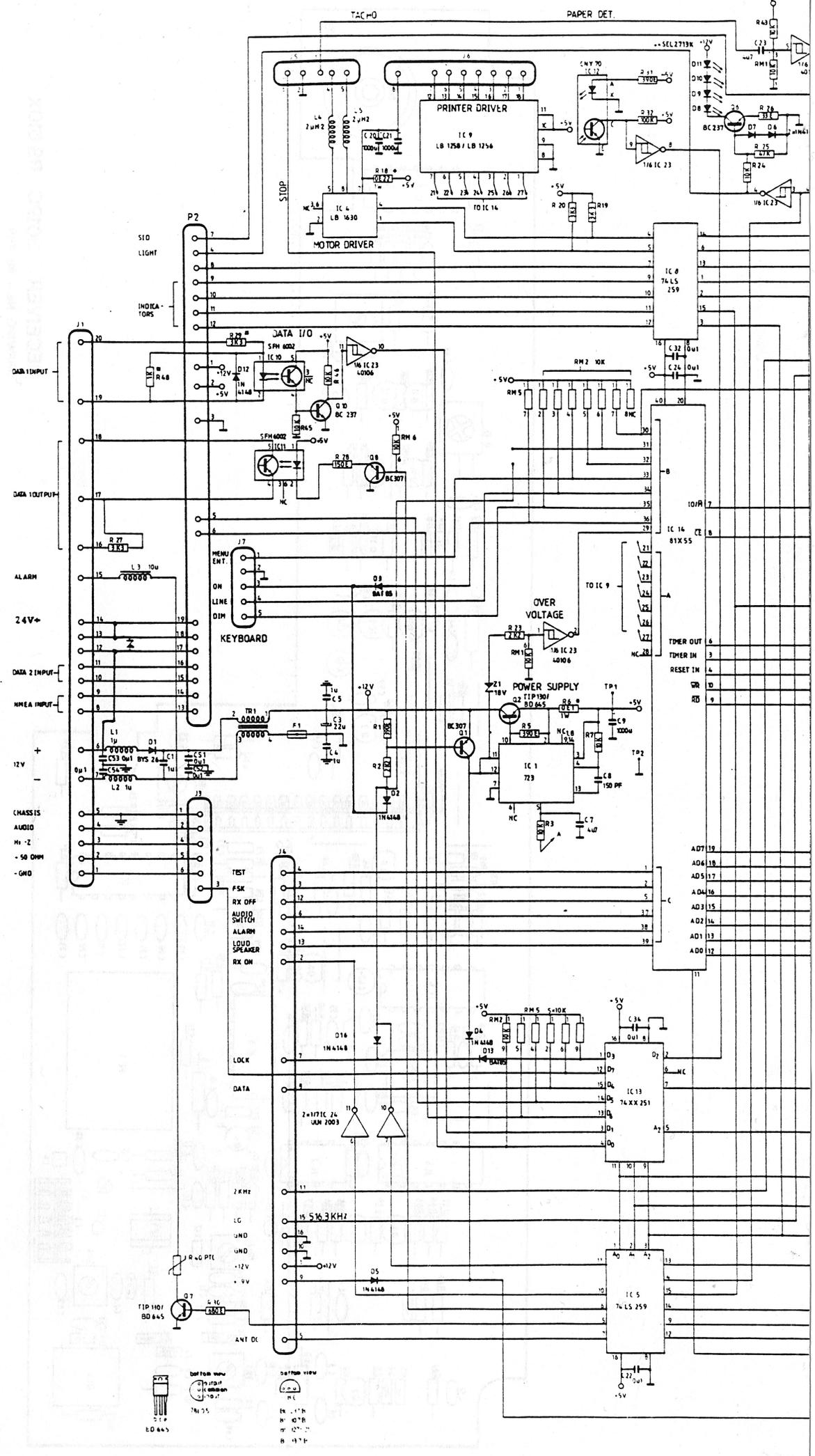
COMPUTER BOARD 3028 D
DIAGRAM No. 92.7242
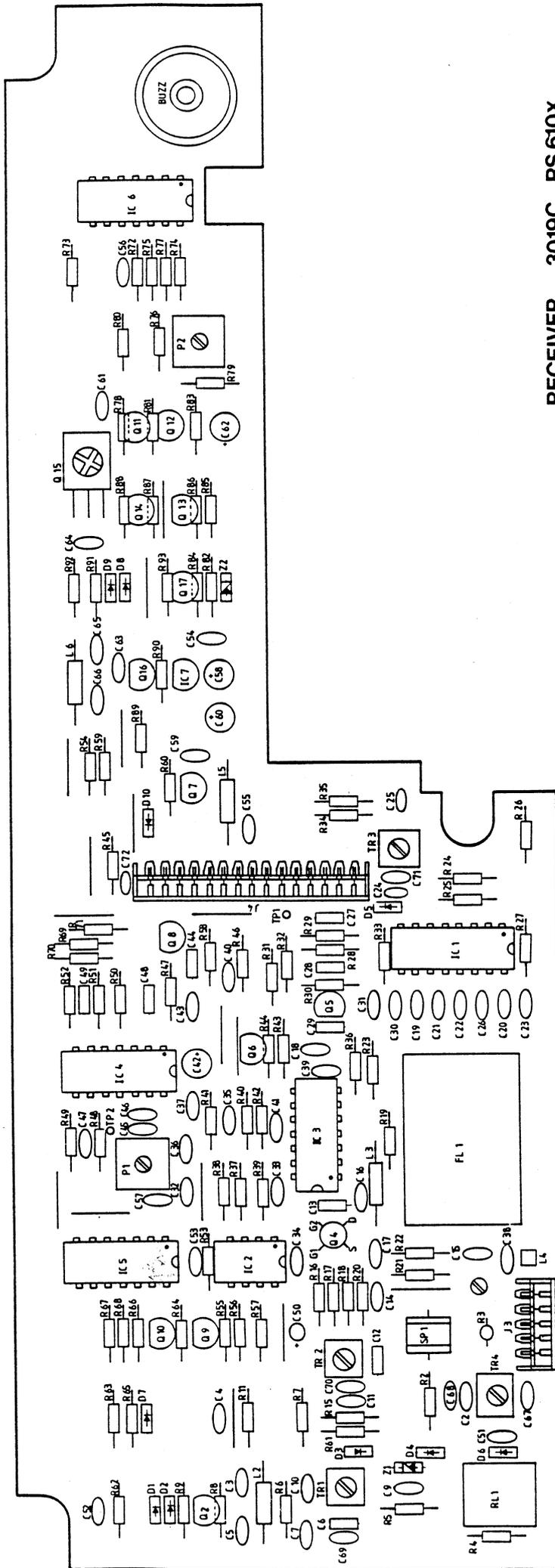
RECEIVER 3019C RS 610x

DRAWING No.: 80.3019
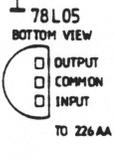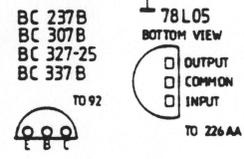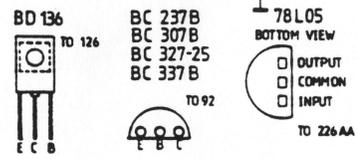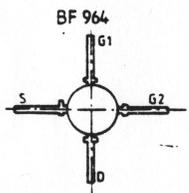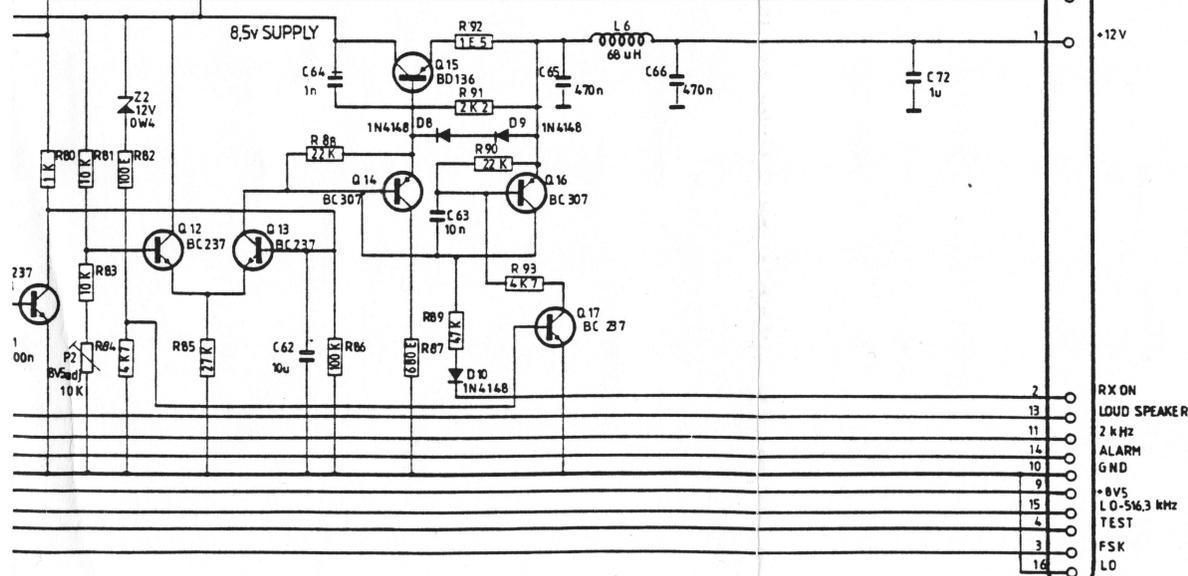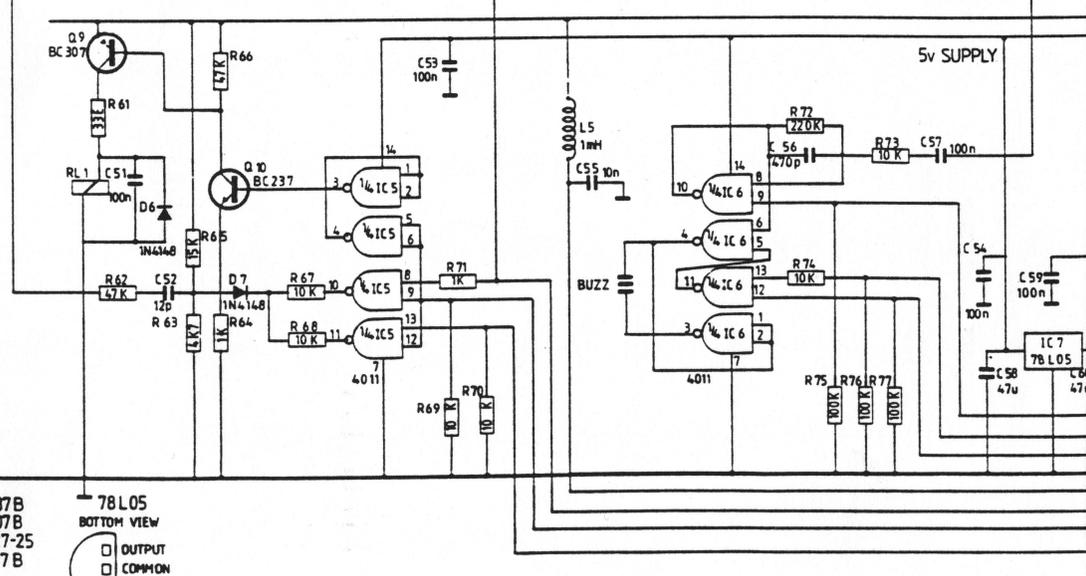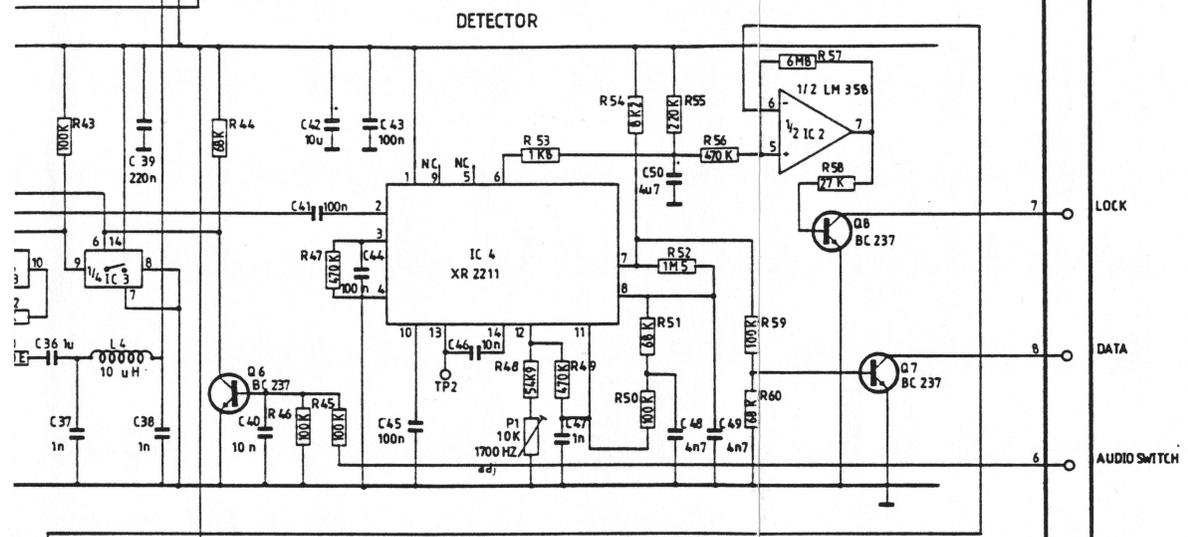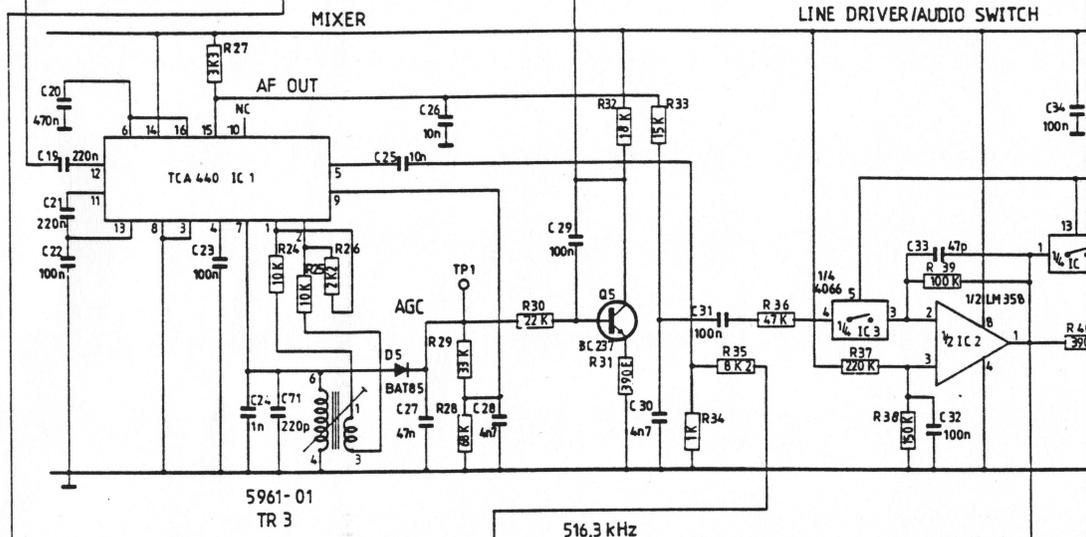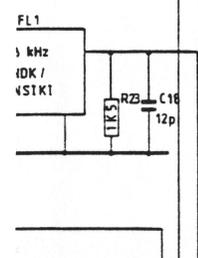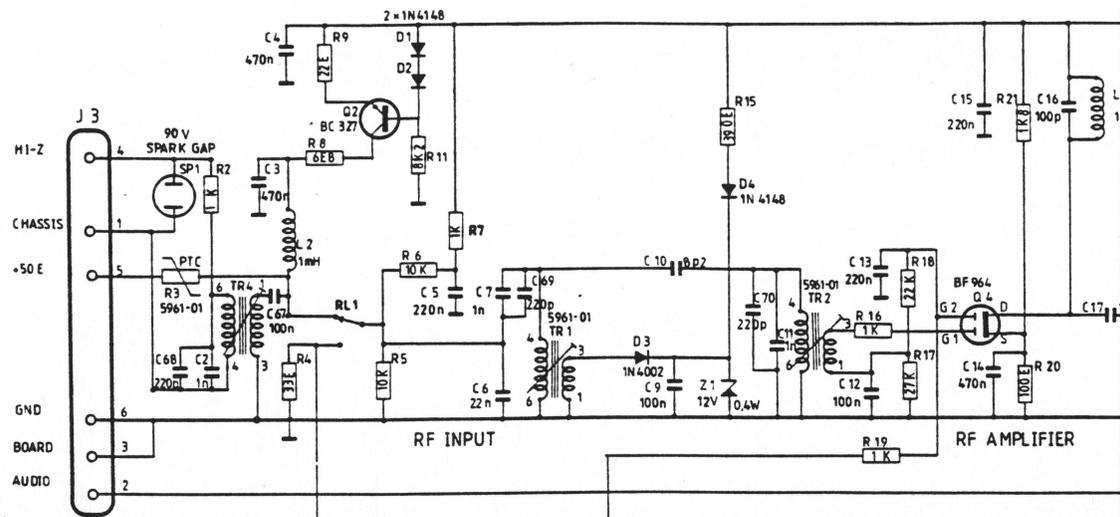
RECEIVER 3019C RS 610X
DIAGRAM No. : 92.7241

RECEIVER

ANTENNA

HEADPHONE

ANT. POWER PROTECTION SWITCH

518 KHz

RF AMP

X-TAL FILTER 518 KHz

518 KHz

TEST GEN.

5V

PS

8.5V

PLL

516,3KHz

COMPUTER

KEYBOARD

PRINTER

DIVIDER

X-TAL OSC.

4,1304 MHz

MOTOR DRIVER

PRINTER HEAD DRIVER

PRINTER CONTROL

+24V OR +12V

GND

POWER SUPPLY

+5V

Interrupt

CONTROL LOGIC

CPU

PAPER DET.

DATA

INTERFACE

I/O TIMER

RAM

PROM

3V

ALARM

ALARM

PAPER LIGHT

POWER RESET/ FAULT

INTERFACE I / II

INDICATORS

DATA

(Only I.F II)
Opto couplers
FILTERS

KEYBOARD LIGHT

BLOCKDIAGRAM RS 610X
DIAGRAM No. : 92.7260

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D2 Q3 D1
R14 R13 LED D18
IC 3 R31
R11 IC 2 R10 R9
R7 Q2
LED D15
RM1
C15
C13
IC 4
LED D 12
R4 J 2
IC 1 R1
LED D9
R2 Q1
R3 D8

R29
Q8 R30
R 28 R 18
D17 D6 LED
D16
R26
Q7 R27
R25
D14
D13
R23
Q6 R24
R22
D11
D10
D5 LED
C14 Q4
R16 Q4
R17 R15
R20
Q5 R21 D3
R19 D7
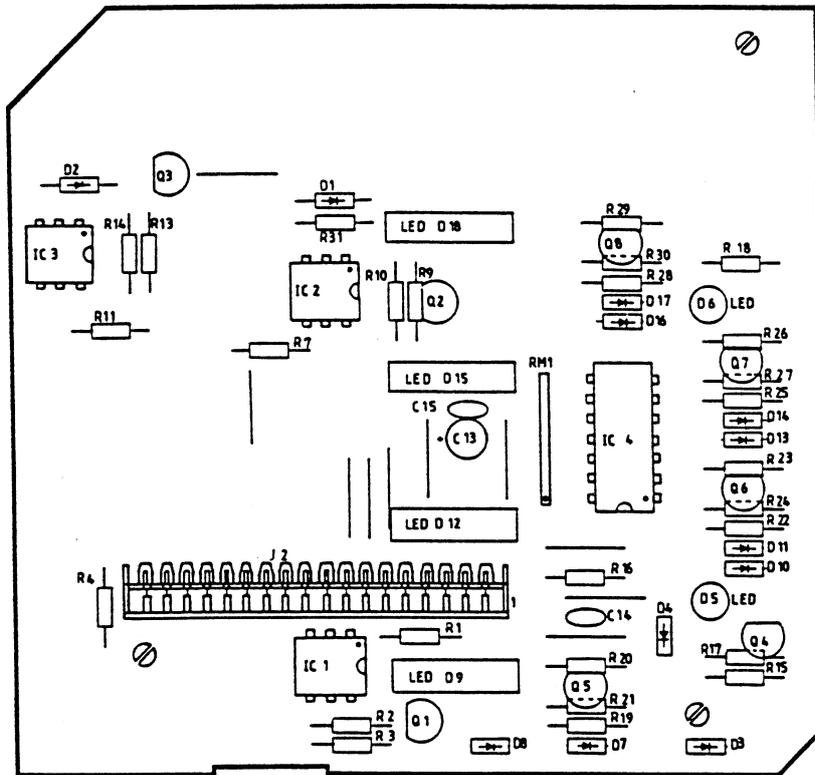
INTERFACE 2   3030B   RS 6100
DRAWING No. : 80.3030

70

OPTION

RS6100   518KHz
ANTENNA AMPLIFIER   6142

P1
OUTPUT
5-20VDC

Q2
BC557

Q1
2N5485

R4
1K

R6
68Ω

L3
100µH

C4
1n

R5
270E

L2

C3
100n

C2
6p8

C6
100p

C7
1p

C5
2-10p

C1
68p

G1

R2
100Ω

ANTENNA

L1
1mH

GND

SHIPMATE
MARINE ELECTRONICS ®
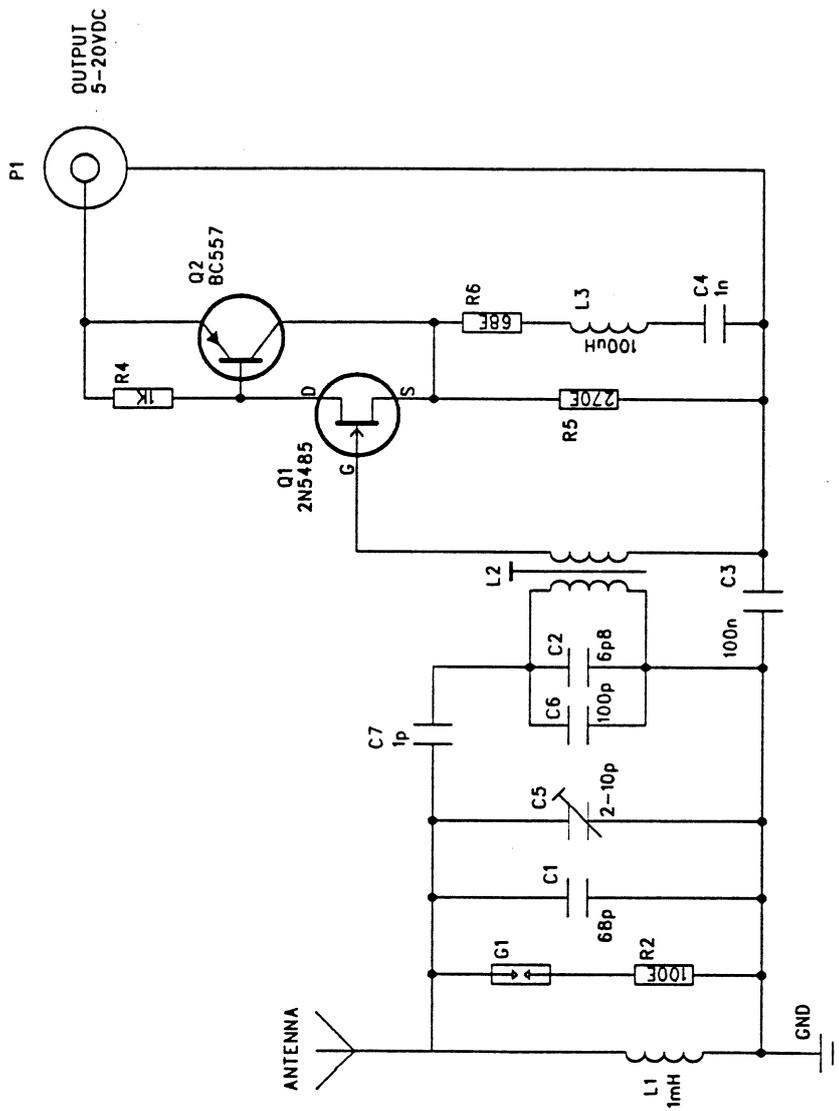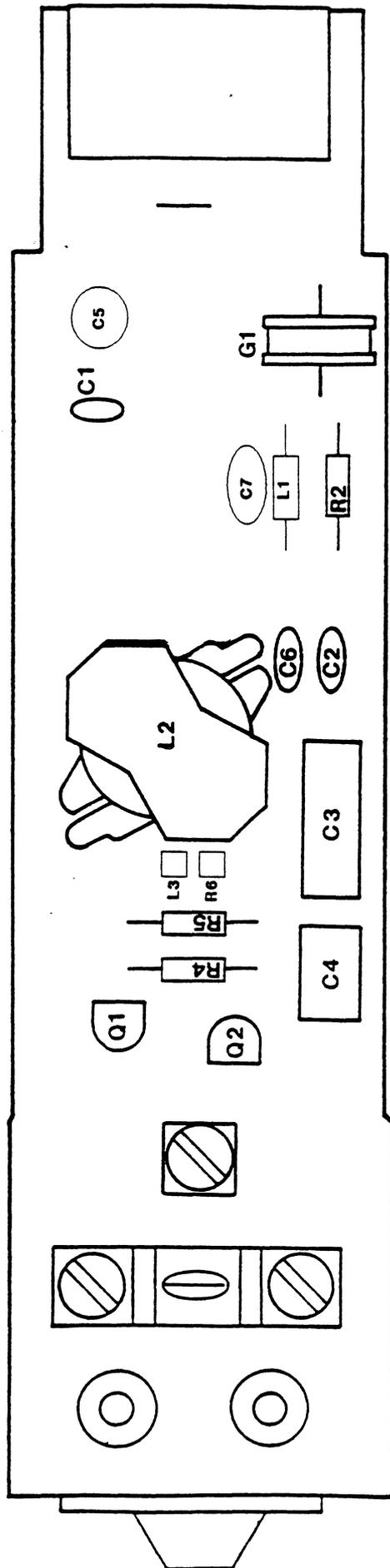
RS6100 518KHz
ANTENNA AMPLIFIER 6142

9. SPECIFICATIONS
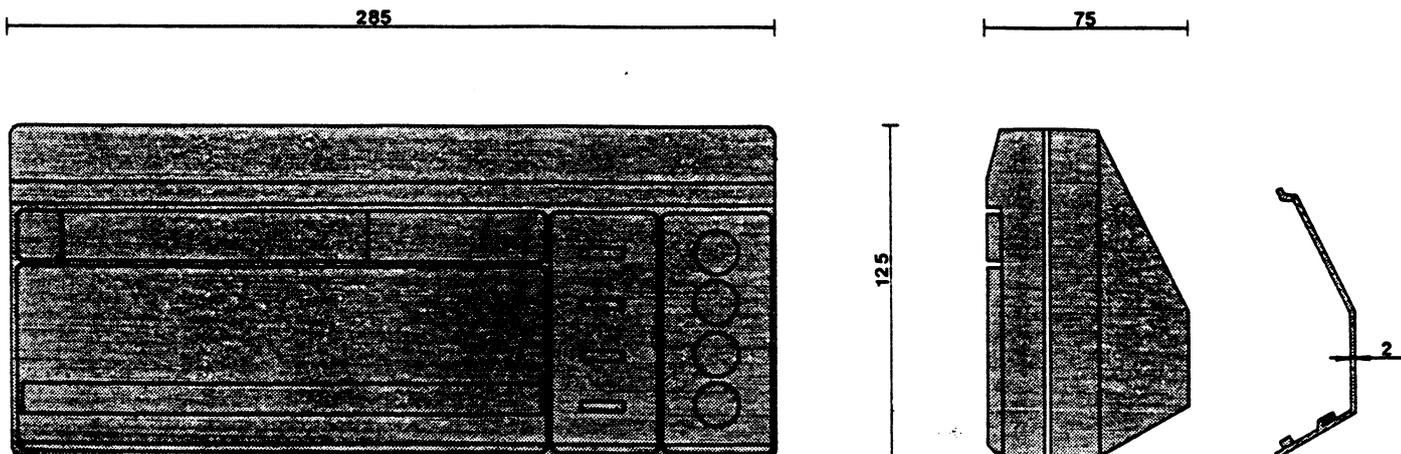
RS 6101 BASIC

Receiver frequency	: 518 kHz
Receiver sensitivity	: <1μV EMF (50 ohm) at 0% error. <5μV EMF (longwire) at 0% error.

All additional receiver specifications meet the requirements of CEPT, FTZ, PTT etc.

Alarm	: Built-in audible and visual alarm. External alarm output max. 0.4 A. Visual alarm for end of paper.
Keyboard	: Easy touch with light and dimmer.
Printer	: 40 character thermal printer. Width of paper 80 mm. Length of paper 40 m. Paper illumination with dimmer.
Internal storage capacity	: 30 identification codes; deleted 72 hours after reception. 8 k byte character memory.

Status/self-test	:	Selected via menu.
Mains voltage	:	12 VDC or (-10% to +30%) 24 VDC
Power consumption	:	1 W Economy 5 W Stand-by 11 W Printing
Battery back-up	:	Typically 5 years.
Input/output	:	Data input 1 RS 4000/ RS 5100/RS 4001/RS 5000. Audio input 1700 ±85 Hz 600 ohm -25 to +10 dBm. Format CCIR 476-2. Audio output 1700 ±85 Hz 600 ohm (headphone) approx. 0 dBm.
Area shift	:	Manually via menu.
Message selections	:	Manually via menu.
Dimensions	:	H:125, W:285, D:75 mm
Cabinet	:	Impact-proof polycarbonate.
Installation	:	Console, bulkhead or deckhead.
Weight	:	1.5 kg
Temperature range	:	-15°C to +55°C
Humidity	:	0-95% rel.
Vibration	:	0-50 Hz, 1 g.
Life for printer head at in-door temperature, typically	:	3 years by daily use for reception of Navtex messages.
Life for printer mechanism at in-door temperature, typically	:	5 years by daily use for reception of Navtex messages.

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RS 6100 AUTOMATIC

The same specifications as RS 6101 plus the
following extra facilities:

Area shift   : Automatic when connected
                            to RS 4000, RS 5100,
                            RS 5000 and RS 4001.

Input   : Data input 2.
                            An extra printer input
                            so that 2 navigators can
                            be connected simul-
                            taneously.

RS 6150

Printer version alone (no receiver).

Input   : Data input.

Baudrate, parity, stopbit : Setting via menu.

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10.

INTERNATIONAL WARRANTY

SHIPMATE warrants that every SHIPMATE product shall be free of failures resulting from materials and workmanship for a period of 12 months from date of purchase.

WARRANTY SERVICE is available through your local authorized service dealer or distributor. Products returned will either be repaired or replaced free of charge. Charges for transportation of a defective product to an authorized service shop are the responsibility of the purchaser whereas the return of the product will be free of charge.

ON BOARD SERVICE by an authorized technician can be arranged by the local distributor on the request of the purchaser, who will be responsible for all expenses in connection with the service call.
Labour charges, replacement of defective modules and parts will be free of charge providing a valid warranty is confirmed by the dealer from whom the product was purchased or by the factory Shipmate International A/S.

VALIDITY: This warranty shall be void unless installation and operation of equipment is carried out in accordance with the unit's manual.
This warranty will not apply to any part which has become inoperative due to misuse, accident, neglect or unauthorized repair.

This warranty is granted in lieu of and to the exclusion of all other remedies including claims for consequential damages, indirect loss or the like.

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11.   **SHIPMATE AGENTS**

AUSTRALIA	Quin Marine Pty. Ltd., Port Adelaide, Ph: 618-471277, Fax: 3410567
BAHRAIN	Maritronics, Manama, Ph: 973-593409, Fax: 593352
BELGIUM	Martin & Co., Antwerpen, Ph: 323-2250383, Fax: 2326167
BRAZIL	OL Naval Ltda., Lapa Rio de Janeiro, Ph: 5521-2225667, Fax: 2427934
CHILE	Mera Vennik Van Spronsen Ltda., Talcahuano, Ph: 5641-541752, Fax: 543489
CYPRUS	K.J. Electronics Ltd., Larnaca. Ph: 3574-636360, Fax: 4635427
DENMARK	Shipmate Danmark A/S, Copenhagen, Ph: 45-43714900, Fax: 43714848
EGYPT	United Electronics, Port Said. Ph: 20-66-23879
FINLAND	Nores Oy, Helsinki, Ph: 358-0520311, Fax: 05022696
FRANCE	SDM Electronique, Paris, Ph: 33-139146833, Fax: 139133022
GERMANY	Shipmate-Robertson GmbH & Co. KG, Emden, Ph: 494921-66066, Fax: 66077
GIBRALTAR	Electro-Med, Marina Bay. Ph: 350-77077, Fax: 72051
GREECE	Selmar Electronics Ltd., Piraeus, Ph: 301-4119521, Fax: 4119588
HOLLAND	Holland Nautic Apeldoorn BV, Apeldoorn, Ph: 3155-412122, Fax: 422696
HONG KONG	Samsonic Co. Ltd., Aberdeen, Ph: 852-5521140, Fax: 8735547
ICELAND	Fridrik A. Jönsson HF, Reykjavik, Ph: 3541-614135, Fax: 27327
INDONESIA	p.t. Cakra Engitronindo, Jakarta, Ph: 6221-4303255, Fax: 498858
IRAN	Sea Vision, Tehran. Ph & Fax: 9821-656658
ITALY	EMC S.P.A., Modena, Ph: 3959-826160, Fax: 333342
ITALY	Marangoni & C., Milano, Ph: 392-313346, Fax: 341011
JAPAN	Shipmate Japan Co. Ltd., Yokohama, Ph: 8145-2120770, Fax: 2120771
KOREA	Turn-On Electronic Co., Pusan, Ph: 8251-4623930, Fax: 4623089
MALTA	Medcomms Ltd., Gzira, Ph: 356-335521, Fax: 2120771

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NETHERLANDS ANTILLES	Radio Holland Caribbean N.V., Sint Maarten, Ph & Fax: 599-5-22589
NORWAY	Shipmate Norge A/S, Oslo, Ph: 4767-564740, Fax: 564744
PERU	Equipos Navales S.A., Lima, Ph & Fax: 51-14-335441
PORTUGAL	Nautel-Electronica Maritima Lda., Lisboa, Ph: 351-13970085, Fax: 13970084
SINGAPORE	Jason Electronics (Pte.) Ltd., Singapore, Ph: 65-2730211, Fax: 2734431
SINGAPORE	Radio Holland BV, Singapore, Ph: 65-8622218, ax: 8622430
SPAIN	Video Acustic SL, Gandia-Valencia, Ph: 346-2879944, Fax: 2870498
SWEDEN	Robertson-Shipmate AB, Gothenburg, Ph: 46-31299320, Fax: 31299328
SWITZERLAND	Res-Mar SA, Chiasso, Ph: 4191-445159, Fax: 445778
THAILAND	Scan Pacific Co. Ltd., Bangkok, Ph: 662-594273-6, Fax: 2594274
TURKEY	Promar International Trading & Representation Co. Ltd., Istanbul, Ph: 901-3460894, Fax: 3461493
TURKEY	Özsay, Istanbul, Ph: 901-3467616, Fax: 3469532
UAE	Maritronics, Dubai, Ph: 971-4523255, Fax: 4521550
UK	Shipmate Marine Electronics Ltd., Birmingham, Ph: 4421-5521718, Fax: 5445488
USA	Shipmate Inc., New York, Ph: 1516-231-3000, Fax: 231-3178

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12.   STANDARD PACKAGE

- RS6100 Navtex receiver complete with fittings
  for mounting.

- 1 roll of paper 80mm   No. 174.131.002

- 2 screws 3 x 5mm   No. 163.405

- 4 Selfcutting screws
  3/4 x 8mm   No. 161.188.

- 2 Washers 3.2 x 7 x 1mm   No. 141.148

- 1 holder for plug (right)   No. 141.315.

- 1 holder for plug (left)   No. 141.316.

- 1 plug   No. 156.193.

- 2 cable ties   No. 174.100.

- 2 x 1.5 m cable for power
  supply without plug   No. 104.3500

- User's manual   No. 183.2012.100

- List of Navareas   No. 183.2012.009

SHIPMATE

NAVAREAS

183.2012.009 Rev. D

OPERATIONAL AND PLANNED NAVTEX SERVICE

NAVAREA Coast Station	Transmitter identification character (B1)	Position	Transmission times (UTC)	Language used	Remarks (No remark means: OPERATIONAL)	YOUR REMARKS PLEASE
Planning NAVTEX service						■
NAVAREA I						
Belgium						
Oostende radio	T	3°21'E/51°06'N	0248,0648,1048,1448,1848,2248	English		
Iceland						
Reykjavik radio	R	21°51'W/64°05'N	0318,0718,1118,1518,1918,2318	English	Pre-operational	
Netherlands						
Coastguard Ijmuiden	P		0348,0748,1148,1548,1948,2348	English		
Norway						
Bodø	B	14°23'E/67°16'N	0018,0418,0818,1218,1618,2100	English		
Rogaland	L	5°34'E/58°48'N	0148,0548,0948,1348,1748,2148	English		
Vardoe	V	31°06E/70°22'N	0300,0700,1100,1500,1900,2300	English		
BALTIC SEA						
Sweden						
Haernoesand radio	H	21°36'E/64°28N	0000,0400, 0800 (weather forecast), 1200 (ice report) 1600,2000 (weather forecast)	English		
Stockholm radio	J	14°19'E/55°29'N	0300,0730 (weather broadcast) 1130 (ice report), 1530 1930 (weather forecast, 2330	English		
United Kingdom						
Cullercoats	G	1°26'W/55°02'N	0048,0448,0848,1248,1648,2048	English		
Niton	S		0018,0418,0818,1218,1618,2018	English		
Portpatrick	O	5°07'W/54°51'N	0130,0530,0930,1330,1730,2130	English		

OPERATIONAL AND PLANNED NAVTEX SERVICE

NAVAREA / Coast Station / Planning NAVTEX service	Transmitter identification character (B1)	Position	Transmission times (UTC)	Language used	Remarks (No remark means: OPERATIONAL)	YOUR REMARKS PLEASE
USSR						
Murmansk	C	33°05'E/68°58'N	0120,0520,0920,1320,1720,2120	English		
Arkhangelsk	F	40°32'E/64°33'N	0200,0600,1000,1400,1800,2200	English		
Tallin	U	24°46'E/59°24'N	0030,0430 0830 (weather forecast) 1230 (ice report) 1630,2030 (weather forecast)	English		
NAVAREA II						
Cameroon						
Douala	-	-	-	-	Planned	
France						
Le Conquet	A	4°42'W/48°20'N	For normal operation 0000,0400,0800,1200,1600,2000	English and French (trial)	Planned	
Brest (for trial purposes until Le Conquet is operational)			0118,0518,0918,1318,1718,2118		-	
Portugal						
Lisbon (Monsanto)	R	9°10'W/38°44'N	0250,0650,1050,1450,1850,2250	English and Portuguese (trial)		
Azores (Horta)	F	28°38'W/38°32'N	0050,0450,0850,1250,1650,2050	English and Portuguese (trial)		
Spain						
Finisterre	D	9°16'W/42°54'N	0030,0430,0830,1230,1630,2030	English and Spanish (trial)	Planned	
Canary Islands	I		0100,0500,0900,1300,1700,2100	English and Spanish (trial)	Planned	
NAVAREA III						
Bulgaria						
Varna (also broadcasts on behalf of Romania)	J		0130,0530 (weather forecast), 0930,1330,1730 (weather forecast), 2130	English		

OPERATIONAL AND PLANNED NAVTEX SERVICE

NAVAREA Coast Station Planning NAVTEX service	Transmitter identification character (B1)	Position	Transmission times (UTC)	Language used	Remarks (No remark means: OPERATIONAL)	YOUR REMARKS PLEASE
Cyprus						
Troodos	M		0200,0600,1000,1400,1800,2200	English		
Egypt						
Alexandria	N	29°52'E/31°12'N	0210,0610,1010,1410,1810,2210	English	Planned	
Ismailia (Serapeum)					On trial using Alexandria characteristics until Alexandria re-equipped	
Malta	O		0220,0620,1020,1420,1820,2220	English	Trials commenced 1 Nov'90	
France						
Toulon	-			English and French	Planned 1992	
Greece						
Limnos	L	25°04'E/39°52'N	0150,0550,0950,1350,1750,2150	English and Greek		
Iraklion	H	25°07'E/35°20'N	0110,0510,0910,1310,1710,2110	English and Greek		
Kerkyra	K	19°55'E/39°37'N	0140,0540,0940,1340,1740,2140	English and Greek		
Israel						
Haifa	-	-	-	-	Late 1990	
Italy						
Ancona (Adriatic Sea)	-			English and Italian	By 1990	518 kHz
Augusta (Sicily)	-			English and Italian	By 1990	" "
Cagliari	-			English and Italian	By 1990	" "
Roma	-			English and Italian	By 1993	" "
Spain						
Tarifa	G	5°33'W/36°03'N	0100,0500,0900,1300,1700,2100	English and Spanish	Planned	
Cabo La Nao	Z	0°11'E/38°43'N		English and Spanish	Planned	

OPERATIONAL AND PLANNED NAVTEX SERVICE

NAVAREA Coast Station Planning NAVTEX service	Transmitter identification character (B1)	Position	Transmission times (UTC)	Language used	Remarks (No remark means: OPERATIONAL)	YOUR REMARKS PLEASE
Turkey						
Izmir	I	27°10'E/38°24'N	0120,0520,0920,1320,1720,2120	English		
Samsun	E	36°20'E/41°17'N	0040,0440,0840,1240,1640,2040	English		
Istanbul	D	28°57'E/41°04'N	0030,0430,0830,1230,1630,2030	English		
Antalya	F	30°42'E/36°53'N	0050,0450,0850,1250,1650,2050	English		
USSR						
Odessa	C	30°44'E/46°29'N	0230,0630,1030 (weather forecast),1430,1830 (weather forecast, ice report),2230	English		
Marinpol	B	37°33'E/47°06'N	0100,0500 (weather forecast), 0900 (ice report),1300,1700 (weather forecast),2100	English		
Novorossisk	A		0300,0700,1100 (weather forecast),1500,1900 (weather forecast, ice report),2300	English		
Yugoslavia						
Split radio	Q		0250,0650,1050,1450,1850,2250	-	Operational from 1 Jan 1989	
NAVAREA IV						
Bermuda						
St. Georges	B		0100,0700,1300,1900	English	Planned January 1988	
Canada						
Sydney, Nova Scotia	K		0140,0540,0940,1340,1740,2140	English	Under trials (on air)	
United States						
Boston	F	70°30'W/41°42'N	0445,1045,1645,2245	English		
New Orleans	G	89°55'W/29°53'N	0300,0900,1500,2100	English		
Portsmouth	N	76°20'W/36°47'N	0130,0730,1330,1930	English	Pre-operational (on air)	
Miami	A	80°23'W/25°30'N	0000,0600,1200,1800	English	Pre-operational (on air)	
San Juan, Puerto Rico	R	15°43'W/27°47'N	0415,1015,1615,2215	English	Pre-operational (on air)	

OPERATIONAL AND PLANNED NAVTEX SERVICE

NAVAREA / Coast Station / Planning NAVTEX service	Transmitter identification character (B1)	Position	Transmission times (UTC)	Language used	Remarks (No remark means: OPERATIONAL)	YOUR REMARKS PLEASE
NAVAREA V						
Uruguay						
Colombia		57°51'W/34°28'S			)	
Laguna del Sauce		55°06'W/34°51'S			)	
La Paloma		54°09'W/34°40'S			) Planned	
Montevideo		56°12'W/34°54'S			)	
Punta del Este		54°56'W/34°58'S			)	
Salto		57°58'W/31°23'S			)	
NAVAREA VI						
Argentina						
Bahia Blanca	D	62°06'W/38°43'S	1410,2010,0210,0810	English and Spanish	1.2.1992	
Buenos Aires	F	58°37'W/34°27'S	1110,1710,2310,0510			
Comodoro Rivadavia	C	67°25'W/45°51'S	1240,1840,0040,0640			
Mar del Plata	E	57°32'W/38°03'S	1310,1910,0110,0710			
Rio Gallegos	B	65°03'W/51°37'S	1340,1940,0140,0740			
Rosario	G		1210,1810,0110,0610			
Ushuaia	A		1440,2040,0240,0840			
NAVAREA VII						
NAVAREA VIII						
India						
Madras	P		0230,0630,1030,1430,1830,2230		Planned on 4209.5 kHz	
Bombay	G		0100,0500,0900,1300,1700,2100		Planned on 4209.5 kHz	
NAVAREA IX						
Bahrain						
Hamala		60°28'E/26°09'N			Planned	

Jq

OPERATIONAL AND PLANNED NAVTEX SERVICE

NAVAREA Coast Station Planning NAVTEX service	Transmitter identification character (B1)	Position	Transmission times (UTC)	Language used	Remarks (No remark means: OPERATIONAL) YOUR REMARKS PLEASE
Republic of Korea					Planned not later than 1.8.93
Thailand					Under consideration
United States					
Guam	V	144°50'E/13°34'N	0100,0700,1300,1900		Trial Nov 1989
NAVAREA XII					
United States					
San Francisco	C	122°42'W/37°55'N	0400,1000,1600,2200	English	Planned March 1990
Astoria	W		0130,0730,1330,1930	English	Planned March 1990
Long Beach	Q		0445,1045,1645,2245	English	Planned March 1990
Kodiak	J		0300,0900,1500,2100	English	Planned May 1990
Honolulu	O	158°09'W/21°22'N	0040,0640,1240,1840	English	Trial November 1989
Adak	X		0000,0500,1200,1745	English	Planned May 1990
NAVAREA XIII					
USSR					
Vladivostok	A	131°53'E/43°07'N	0000,0400,0800,1200,1600,2000		)
Kholmsk	B	142°03'E/47°02'N	0010,0410,0810,1210,1610,2010		)
Petropavlovsk	C	158°40'E/53°00'N	0020,0420,0820,1220,1620,2020		)Ecperimental 1991
Megadan	D		0030,0430,0830,1230,1630,2030		)
Beringovskiy	E		0040,0440,0840,1240,1640,2040		)
Providence	F		0050,0450,0850,1250,1650,2050		)
NAVAREA XIV					

OPERATIONAL AND PLANNED NAVTEX SERVICE

NAVAREA Coast Station Planning NAVTEX service	Transmitter identification character (B1)	Position	Transmission times (UTC)	Language used	Remarks (No remark means: OPERATIONAL)	YOUR REMARKS PLEASE
						—
						▪

NAVAREA XV

__Chile__

Valparaiso	B	71°29'W/32°48'S	0010,0410,0810,1210,1610,2010			
Antofagasta						
Talcahuano						
Puerto Montt						
Punta Arenas						

NAVAREA XVI

__Peru__

Paita	S		0300,0700,1100,1500,1900,2300		Planned	
Callao	U		0320,0720,1120,1520,1920,2320		Planned	
Mollendo	W		0340,0740,1140,1540,1940,2340		Planned	

SHIPMATE ⚑

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®

SHIPMATE INTERNATIONAL A/S

ØSTRE ALLÉ 6
DK 9530 STØVRING
DENMARK

PHONE: 98 37 34 99
TELEX: 69838 SHIPMA
TELEFAX: 98 37 38 07