```
------------------ MODULE BoundedChannel ------------------
EXTENDS Integers, Sequences
 
ISeq(S) == [(Nat \ {0}) -> S]
 
ITail(iseq) == [i \in (Nat \ {0}) |-> iseq[i+1]]
 
IHead(iseq) == iseq[1]
 
CONSTANT N, Msg, Input
 
ASSUME /\ N \in Nat \ {0}
       /\ Input \in ISeq(Msg)
 
(***************************************************
--algorithm BChan {
   variables in = Input, out = << >>, ch = << >> ;
   process (Send = 0) {
      s: while (TRUE) {
         await Len(ch) # N ;
         ch := Append(ch, IHead(in)) ;
         in := ITail (in) } }
   process (Rcv = 1) {
      r: while (TRUE) {
         await Len(ch) # 0 ;
         out := Append(out, Head(ch)) ;
         ch := Tail (ch) } } }
***************************************************)
=============================================================
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CLOSE